

# A Danish Diabetes Register

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# Chapter 1

## Dansk oversigt

### 1.1 Steno-algoritme

Her beskrives den algoritme til konstruktion af et diabetes register som vi (projektgruppen i afdelingen for Klinisk Epidemiologi, BxC & MaEJ) har brugt i forbindelse med et projekt (Daffodil) finansieret af Astra-Zeneca.

Den er blevet revideret et par gange, med input fra møde med Sundhedsdatastyrelsen (SDS), især med henblik på at få en algoritme som lå nærmere på den SDS anvender.

Det dannede diabetes register ligger som et SAS-datasæt under vores projekt under Danmarks Statistiks forskerordning (projektnummer 707655), og er således ikke tilgængeligt for andre end os. Den SAS-kode der danner registeret er dog naturligvis tilgængelig, således at enhver der har adgang til de samme registre (og SAS) kan danne in kopi af det reviderede register.

I det følgende omtales dette register som DMreg.

#### 1.1.1 Registre

Algoritmen der danner registeret er baseret på data fra:

- Landspatientregisteret, LPR (1977–2018)
- Lægemiddelstatistikregisteret, LMS (1995–2018)
- Sygesikringsregisteret, SSR (1990–2018)
- Dansk Voksen Diabetes Database, DVDD (2005–2018)
- Diabasen (øjen-screeningsdatabase for diabetikere), DiaB (2009–2018)

I forhold til RUKS anvender Stenos algoritme altså yderligere oplysninger om fodterapiydelse fra sygesikringsregisteret, oplysninger fra Dansk Voksendiabetesdatabase (DVDD) samt oplysninger fra DiaBasen.

Disse tre beskrives derfor nærmere her:

#### **Sygesikringsregistret: ydelse for fodterapi**

For at få registreret en dato for ydelse for diabetisk fodterapi kræves følgende:

1. Elektronisk henvisning fra praktiserende læge eller diabetesambulatorium til fodterapeut med ydernummer til diabetesspecifik fodterapi
2. Risikostratificering (inklusive vurdering af diabetisk øjensygdom) hos fodterapeut mhp. at fastlægge antallet af årlige fodbehandlinger:
  - Gruppe 1 - Lav risiko for fodsår: Ingen tilskudsberettigede behandlinger udover årlig fodstatus/risikovurdering.
  - Gruppe 2 - Mellem risiko for fodsår: Maksimalt fire tilskudsberettigede behandlingsydelser udover årlig fodstatus/risikovurdering.
  - Gruppe 3 - Mellem risiko for fodsår med særlige behov: Maksimalt ni tilskudsberettigede behandlingsydelser udover årlig fodstatus/risikovurdering.
  - Gruppe 4 - Høj risiko for fodsår: Tilskudsberettigede behandlingsydelser efter behov.
3. Gennemført biotesiometrisk undersøgelse specifik for diabetisk perifer neuropati.

Risikoen for fejlagtig registrering af personer uden diabetes som diabetikere anses at være ikke eksisterende (kræver fejl i henvisning + gennemført diabetesspecifik undersøgelse og risikostratifikation samt betalingsopkrævning hos den undersøgte person som diabetiker).

**Datoer** Der er omkring 9,4 mio. ydelser registreret, fordelt på ca. 263 000 personer. Den tidligste dato for hver person er udtrukket. Af rent administrative årsager (uenigheder mellem fodterapeuter og regionerne) er disse første datoer pr. patient *meget* ujævnt fordelt over årene; i årene 1991–2005 voksede det årlige antal nye patienter fra ca. 5000 til omkring 15 000, fra 2006–2010 var der omkring 1500 årlige første datoer, i 2011 35 000, og derefter falder tallet til omkring 12 000 pr. år.

**Fremtidige informationer** Der er inførst en særlig diabetes ydelse for de praktiserende læger som fra 2019 vil optræde som en ydelse i SSR. Det vil derfor være relevant at inkludere denne som kriterium.

### Dansk Voksendiabetesdatabase (DVDD)

DVDD er en landsdækkende klinisk kvalitetsdatabase for behandling af diabetes hos personer over 18 år. Databasen har eksisteret siden 2005 og indgår som en af tre diabetesdatabaser under regionernes kliniske kvalitetsdatabaser (RKKP). For den enkelte patient registreres dato for undersøgelse, diabetestype, debutår og årlig klinisk status.

Almen praksis har siden lukningen af Dansk Almen Medicinsk Database i september 2014 ikke indberettet data, og databasen er således kun komplet for hospitalsbehandlede diabetespatienter. Al type 1 diabetes i Danmark behandles imidlertid i hospitalsregi og defineres ud fra guidelines ved måling af antistoffer og residual insulinproduktion, og dermed udgør DVDD den mest valide kilde til identifikation af type 1 diabetes i Danmark. Se nedenfor for beskrivelse hvordan oplysingerne bruges i algoritmen.

Risikoen for fejlagtig registrering af personer uden diabetes som diabetikere i DVDD må anses for minimal.

Registeret indeholder pr. april 2018 ca. 870 000 records fra ca. 230 000 personer.

**Datoer** Indberetningerne til DVDD ligger fra 2005 og fremefter, men diagnose datoerne registreret for patienterne rækker noget længere tilbage; den ældste til 1890 (som nok er en kodefejl), men der er f.eks. 62 diagnose datoer i år 1900 (!).

Diagnose-datoerne (**diag\_dato**) er notorisk upræcise; 1. januar og 15. juni udgør 74% af alle registrerede diagnosedatoer. Dette må antages i realiteten blot at være en angivelse årstallet, hvor der tydeligvis forekommer en præference for årstallet 2000. I konstruktionen af indgangs-dato og -kriterium tages der højde for dette, se diskussionen nedenfor.

## DiaBasen

DiaBasen er den landsdækkende kliniske kvalitetsdatabase for screening af diabetisk retinopati og maculopati for såvel praktiserende oftalmologer som øjenafdelinger. DiaBasen har eksisteret siden 2009 og indgår som en af tre diabetesdatabaser under regionernes kliniske kvalitetsdatabaser (RKKP). For den enkelte patient registreres dato for undersøgelse og detaljeret beskrivelse af diabetiske øjenforandringer.

DiaBasen indeholder pr. april 2018 ca. 425 000 registreringer på ca. 170 000 patienter og er således ikke fuldstændig, men risikoen for fejlregistrering (dvs. inklusion af ikke-diabetikere) må også her anses for minimal.

### 1.1.2 Datoer i diabetes registeret

For hver person er defineret følgende datoer som anvendes i definition af personens eventuelle inklusion i registeret (en del af disse vil naturligvis være uoplyst for en given person):

- Datoer for hospitalsindlæggelse/ambulant besøg med aktionsdiagnose diabetes (ICD-10: E10, E11, E12, E13, E14; ICD-8: 24900, 24901, 24902, 24903, 24904, 24905, 24906, 24907, 24908, 24909, 25000, 25001, 25002, 25003, 25004, 25005, 25006, 25007, 25008, 25009)
- Datoer for hospitalsindlæggelse/ambulant besøg med aktionsdiagnose gestationel diabetes (ICD-10: O24, ICD-8: 64474, Y6449)
- Datoer for hospitalsindlæggelse/ambulant besøg med aktionsdiagnose PCOS (ICD-10: E282, ICD-8: 61520, 61521).
- Datoer for indløsning af metformin (ATC: A10BAx).
- Datoer for indløsning af andre ikke-insulin antidiabetika (ATC: A10Bxx bortset fra A10BAx).
- Datoer for indløsning af insulinpræparater (ATC: A10Axx)
- Datoer for ydelsen fodterapi for diabetikere (speciale=54xx).
- Registrerede diagnose datoer fra DVDD (subsidiært rapporteringsdatoen).
- Registrerede screeningsdatoer fra DiaBasen,

Rationalet er at inkludere personer som diabetikere med en inklusionsdato som den tidligste af ovenstående datoer (med undtagelse af GDM og PCOS diagnose datoer), dog med to undtagelser:

## 1. Gestationel diabetes (GDM):

Såfremt der foreligger flere LPR registreringer med gestationel diabetes (ICD-10: O24; ICD-8: 63474, Y6449). For at identificere den første GDM dato i hver graviditet fjernes GDM registreringer som ligger mindre end 200 dage efter den nærmest foregående. For de resterende GDM registreringer for en kvinde dannes et vindue fra 30 dage før til 365 dage efter GDM registreringsdatoen. Datoer fra LMS og LPR som falder i disse vinduer tælles ikke med i beregningen af inklusionsdato.

Det overvejes om disse perioder skal redefineres; noget tyder på at en stor del af GDM diagnoserne i LPR dateres ved fødslen. Det kunne således være relevant at få fat i den seneste GDM dato i hver graviditet og derefter udelukke inklusion i et vindue  $(-280, 30)$  date fra denne dato.

## 2. Polycystisk ovarie syndrom (PCOS):

Kvinder der lider af PCOS behandles ofte med metformin. Hvis der derfor foreligger LPR registreringer med PCOS (ICD-10: E282, ICD-8: 61520, 61521) tages den tidligste af disse datoer som PCOS debut dato.

For personer med PCOS ses bort fra metformin køb som ligger fra 30 dage før PCOS debut dato og indtil personens 40 års dag.

Hvis en kvinde udelukkende har indløst metformin (og ingen andre antidiabetika, herunder insulin) mellem alder 18 og alder 40 regnes personen som sandsynligvis værende PCOS i fertilitetsbehandling med metformin. I praksis betyder dette at metformin indløsninger hos kvinder mellem 18 og 40 år ikke medregnes i konstruktionen af datoen `doOAD`.

Med disse to undtagelser defineres så datoerne:

`doNPR` — dato for første LPR registrering med en diabetes diagnose (refererer til “National Patient Register”)

`doNPR2` — dato for anden LPR registrering

`doOAD` — dato for første indløsning af OAD

`doOAD2` — dato for anden indløsning af OAD

`doIns` — dato for første indløsning af insulin

`doIns2` — dato for anden indløsning af insulin

`doPod` — dato for første fodterapiydelse (“podiatry”)

`doDiaB` — dato for tidligste øjenundersøgelse i diabasen

`doDVD` — tidligste diagnose dato eller indberetnings dato rapporteret i DVDD, dog kun for personer der ikke har nogen anden dato oplyst. 83% af de rapporterede diagnose datoer i DVDD er enten 1 januar eller 15 juni, og er derfor ikke pålidelige.

I den officielle version defineres inklusionsdatoen `doDM` som den mindste af datoerne `doPod`, `doDVD`, `doDiaB` samt den næst-mindste af datoerne `doIns`, `doOAD`, `doNPR`, `doIns2`, `doOAD2` og



doNPR2. Det sidste svarer til RUKSs definition hvor patienter ikke inkluderes på baggrund af alene en recept eller en registrering i LPR.

Bemærk at den sidstnævnte dato (altså den næst-mindste af datoerne doIns, doOAD, doNPR, doIns2, doOAD2 og doNPR2) er datoen for opfyldelsen af kriteriet, og *ikke* som i RUKS, hver den *første* af datoerne for de to kriterier anvendes som inklusions dato.

DMreg anvender den anden af datoerne, altså den første data hvor det er verificeret at kriteriet er opfyldt, for at undgå hvad der kaldes “immortal time bias” ved dødelighedsopgørelser. Hvis inklusionsdatoen tilbagedateres til den første af datoerne vil personer pr. definition være udødelige i tidsrummet fra den første til den anden dato, og dødeligheden i det første stykke tid efter inklusion således være underestimeret. Hvis afstanden mellem de to datoer sædvanligvis er lille betyder dette næppe meget. Men så fald betyder der heller ikke meget om man vælger den første eller den anden dato. Hvis omvendt afstanden er stor vil man få en substantiel *underestimation* af dødeligheden umiddelbart efter inklusion ved brug af RUKS definitionen.

En mere liberal diabetes inklusionsdato (doDM1) kan defineres som den mindste af datoerne doNPR, doOAD, doIns, doPod, doDiaB og doDVD. Dette vil dels resultere i flere personer inkluderet og dels at nogen personer inkluderes på en tidligere dato, mulighvis også på et andet kriterium. Dette udvidede register findes som datasættet DMxreg.

Endelig suppleres diabetes registeret med personernes fødselsdato og eventuelle dødsdato.

### 1.1.3 Inklusionskriterium

Der er for datoen doDM 12 mulige inklusionskriterier afhængig af hvilket (sæt af) inklusionskriterium der først opfyldes, nemlig: Pod, DVD, Dia, I-I, I-O, I-N, O-I, O-O, O-N, N-I, N-O hhv. N-N. Bogstaverne referer til dato for køb af insulin (I) køb af andre antidiabetika (O) samt inklusion i landspatientregisteret (N); således betyder f.eks. O-N at de to første registreringer er 1) indløsning af OAD of 2) LPR-diagnose, og inklusionsdatoen vil være LPR-datoen. I RUKS ville det have været OAD-datoen.

I de fleste tabelleringer vil vi gruppere inklusionskriterier efter det **andet** kriterium der opfyldes, således at datoen doDM svarer til datoen for dette.

### 1.1.4 Registerets dækningsperiode

Da en væsentlig del af personerne inkluderes på baggrund af medicinkøb er registeret ikke anvendeligt til incidens- og prævalens opgørelser før efter 1 januar 1996 — et år efter Lægemiddelstatistikregisterets start, seks år efter sygesikrings registerets start og 19 år efter landspatientregisterets start. Inklusionsdatoer der ligger før 1. januar 1996 må anses at være behæftet med så stor usikkerhed at de ikke bør anvendes som datoer for første diabetesrelaterede kontakt med sundhedsvæsenet.

Det dannede register er således anvendeligt fra 1 januar 1996 og fremefter; og dækker p.t. en 23 års periode frem til d. 31. december 2018, både hvad angår prævalens, incidens og mortalitet.

DVDD starter i 2005, men oplysningerne vedrører patienter som er prævalente efter dette tidspunkt, og data fra DVDD bruges i alt væsentligt til at forfine klassifikation af T1 patienter; således er der ikke et væsentligt databrud omkring 2005 f.s.a. incidens eller prævalens.

DiaBasen bidrager med forholdsvis få nye inklusionsdatoer i begyndelsen da den lige som DVDD omfatter både nye og eksisterende diabetis patienter, så heller ikke denne giver

anledning til væsentligt databrud selv om den først starter fra 1 januar 2009.

### 1.1.5 Diabetes type

Der findes et antal forskellige undertyper af diabetes (T2, T1, LADA, MODY, ...), med T2 og T1 som de dominerende; i dette register defineres T1 patienter så præcist som muligt og alle andre kodes som T2.

Definitionen af T1 patienter baseres primært på registreringen i DVDD: En patient kan optræde flere gange i DVDD, stort set en gang om året, og hver registrering indholder en type-definition af personen. Hvis en person optræder med *over* halvdelen af sine registreringer som T1 (dvs. 4 ud af 8 er ikke nok — 4 ud af 7 eller 5 ud af 9 ville være nok) klassificeres patienten som T1 i variabelen `dvdtyp`. Tilsvarende for T2. Således efterlades nogen patienter uklassificerede fra DVDD, de kodes 'NA' i variabelen `dvdtyp`.

Yderligere har vi klassificeret patienternes enkelte *records* fra LPR som LPR-T1 (ICD-8: 249, ICD-10: E10) hhv. som LPR-T2 (ICD-8: 250, ICD-10: E11) eller ukendt (øvrige diagnoser inkluderet fra LPR). Ligesom for DVDD er patienterne blevet klassificeret som T1 i variabelen `nprtyp` hvis over halvdelen af NPR-records er klassificeret som T1, og tilsvarende for T2. Således efterlades nogen patienter uklassificerede fra LPR, de kodes NA. Vi er nødt til at bruge LPR-klassifikationen selv om den ikke er imponerende præcis, eftersom DVDD først er startet 2005, så personer som er døde før 2005 indgår ikke i DVDD.

Personer klassificeres som T1 i DMreg hvis mindst et af følgende kriterier er opfyldt:

- personen er klassificeret som T1 i DVDD
- personen er klassificeret som T1 i LPR, men *ikke* som T2 i DVDD
- personen har indløst insulin før 30 års alderen, og er *ikke* klassificeret som T2 i DVDD.

Personer der ikke efter disse kriterier klassificeres som T1, eller som aldrig har indløst insulin, vil blive klassificeret som T2. Bemærk at der faktisk er enkelte personer som efter de nævnte kriterier klassificeres som T1, men som aldrig har indløst insulin; disse omklassificeres til T2, da man ikke kan have T1 uden insulinbehandling.

Denne definition af type af diabetes har den konsekvens at personer i registeret kan ændre status ved opdateringer af de bagvedliggende registre. Tabelleringer af faktisk forekommende klassifikationer af enkelte patienter tyder dog på at dette vil være et forholdsvis begrænset fænomen. I figur ?? er vist hvordan disse definitioner spiller sammen — i figur 2.1 på side 12 er den samme figur på engelse inklusive antal klassificeret på hver sin måde.

### 1.1.6 Debutdato og diabetes varighed

Som nævnt ovenfor er debutdatoer registreret før 1 januar 1996 næppe pålidelige, men datoer efter 1996 må anses for at være anvendelige i epidemiologiske opgørelser. Det betyder at epidemiologiske analyser hvor diabetes-varigheden indgår bør begrænses til personer med debutdato efter 1 januar 1996.

### 1.1.7 Anvendte parametre

Der er i definitionen af registeret anvendt følgende (i realiteten arbitrært fastsatte) konstanter i definitionerne:

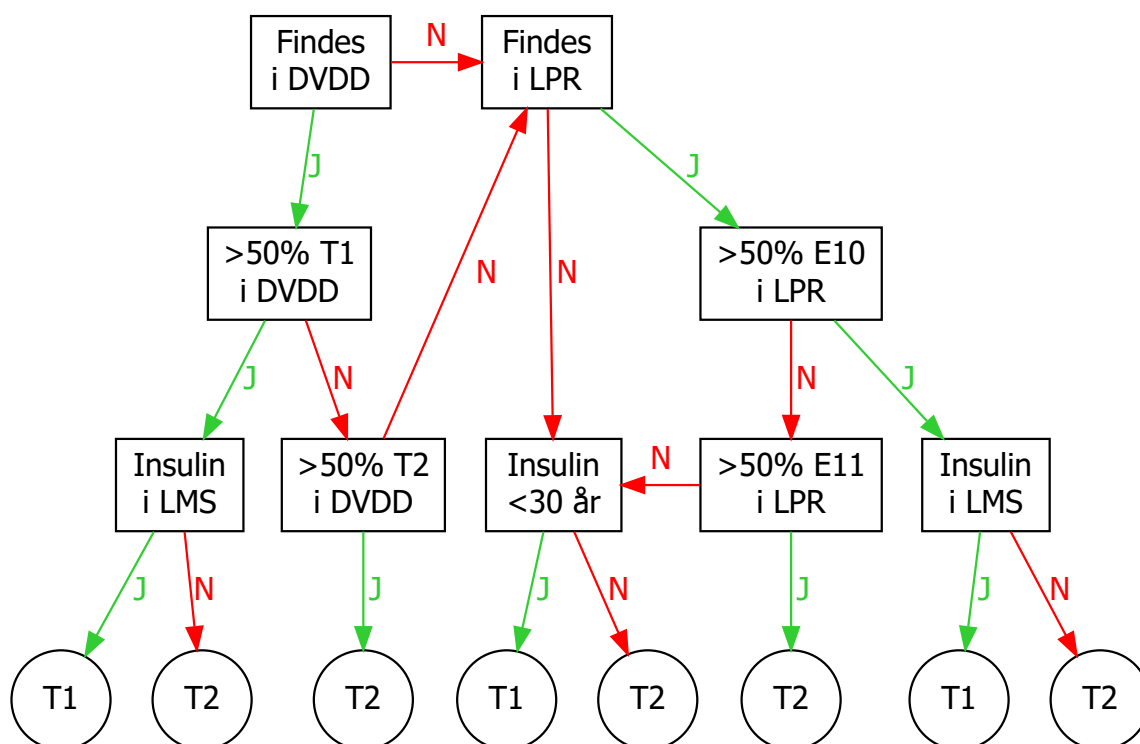


Figure 1.1: Flow diagram af type-bestemmelsen i DMreg.

- Interval mellem GDM diagnoser for at behandle dem som forskellige: 200 dage
- Interval omkring GDM til eksklusion:  $[-30, +365]$  dage
- Interval før PCOS diagnose:  $-30$  dage
- Alders interval for PCOS / metformin  $[18, 40]$  år
- T1 aldergrænse for insulin: 30 år

Registerindholdet vil naturligvis ændre sig en smule hvis man regulerer på disse parametre.

Aktuelt betyder disse grænser at der er et mindre hop i antallet af kvindelige diabetikere inkluderet i 40 års alderen, og et mindre dyk i antallet af T1 diabetikere ved 15 hhv. 30 års alderen. Begge dele er naturligvis artefakter, men sådanne vil være til stede uanset hvordan konstanterne defineres.

## 1.2 Antal patienter

Dannelsen af registeret ud fra de enkelte komponenter foretages i programmet 06-define, som også laver forskellige oversigts-tabeller hvori nedstående tal er hentet, se s. 199 ff.

Det totale antal personer i registeret er 474 700, hvoraf 98 711 har en debutdato før 1 januar 1996; dette er altså antallet af prævalente diabetikere pr 1 januar 1996.

Såfremt kun DVDD kriteriet anvendes vil der ud af de 474 700 registrerede være 30 337 (6,4%) registreret som T1. Hvis yderligere registreringerne fra LPR anvendes vil yderligere 15 293 (3,2%) blive klassificeret som T1, i alt 45 630 (9,6%) for hele perioden 1996-2016.

Hvis man slækker kriterierne og inkluderer personer med kun en recept, resp. en registrering i LPR, vil man få inkluderet i alt xxx xxx i registeret, altså xxxx yderligere personer.

## 1.3 Forskelle til RUKS

Steno algoritmen adskiller sig fra algoritmen brugt til RUKS ved:

- der inkluderes flere diagnosekoder fra LPR.
- type klassifikationen er baseret på DVDD og derfor mere pålidelig.
- eksklusion for PCOS er mindre restriktiv (flere ekskluderes) — ud over LPR-registrering som bruges både af RUKS og DMreg, kræver RUKS at personer som udelukkende er behandlet med meformin også har indløst clomifen eller antiandrogener + østrogen, mens DMreg alene baserer sig på metformin. DMreg tillader imidlertid kvinder med PCOS at blive inkluderet som diabetikere på andre kriterier, herunder indløsning af metformin efter 40 års alderen, idet PCOS også er en velkendt risikofaktor for diabetes.
- eksklusion for GDM er mere restriktiv (færre ekskluderes) idet DMreg opererer med et vindue på  $[-30, 365]$  dage, mens RUKS bruger et interval på  $[-280, 280]$  dage ( $=[-40, 40]$  uger, svarende til en normal graviditetslængde) på hver side af en GDM dato.
- Herudover opererer RUKS med en “forældelsesfrist” på 10 år; personer fjernes fra registeret hvis de i en periode på 10 år ikke er registreret som opfyldende et af inklusionkriterierne.

Det sidste er enten temmelig betydningsløst eller også giver det kunstigt lave tal i perioden før 2007 (10 år før den aktuelle opgørelse). Det er forståeligt at ville ekskludere eventuelle falsk positive registreringer, men det bør ikke gøres ved en eksklusion fra registeret som gør tid-trends upålidelige. I stedet burde man som supplement til variablene med den *tidligste* dato for et kriterium (*doIns*, *doOAD* osv.) definere den *senest* registrerede dato for hvert kriterium, således at man muliggør en mere nuanceret analyse af det eventuelle problem med falsk positive.

# Chapter 2

## Background and definitions

The maintenance of the National Diabetes Register (NDR) has been discontinued by the Health Data Authority (Sundhedsdatastyrelsen). It has been replaced by the Register of Selected Chronic Diseases (RUKS—Register for Udvalgte Kroniske Sygdomme) which however does not encompass precisely the same persons.

### 2.1 National Diabetes Register, NDR

The “old” NDR, established 2006, covering the period 1995–2012 (in terms of incidence) was based on the following criteria:

**lpr:** recording of diabetes as diagnosis in the NPR

**fodt:** use of the service “foot-therapy for diabetes patients” in the National Health Services Register (NHSR).

**bl5i1:** the date of the 5<sup>th</sup> blood glucose measurement within a period of one year in the NHSR.

**bl2i5:** two measurements of blood glucose per year in 5 consecutive years. The date is defined as the 2<sup>nd</sup> blood glucose measurement within the 5<sup>th</sup> period of one year.

**oad:** date of 2<sup>nd</sup> purchase of OAD as recorded in the Register of Medicines Products Statistics (RMPS) – the prescription register.

**ins:** date of 2<sup>nd</sup> purchase of insulin as recorded in the RMPS.

The inclusion date was the earliest of the dates where any of these 6 criteria were met, except:

- PCOS — if metformin were the only dispensation of antidiabetic drugs between ages 20 and 35, these were not counted as it was assumed that they were dispensations for treatment of PCOS.
- GDM — if a woman has a record of GDM in the NPR, any criterion met in a 1-year period after the GDM date was disregarded.

It has been pointed out that the two blood-glucose (purely *procedural*) criteria included many persons that were unlikely to be diabetic patients, notably women only being *tested* for gestational diabetes (GDM) [?].

Because of this, the comparison between NDR, RUKS and the reconstructed register is based on a modified version of the NDR, where the two blood glucose criteria are disregarded.

## 2.2 RUKS

The alleged replacement of the NDR is the Register of Selected Chronic Diseases (Register over Udvalgte Kroniske Sygdomme, RUKS). Among the 8 diseases selected for the register are T1 diabetes and T2 diabetes.

The only available data from RUKS are the tabular counts of incident cases for the years 2000 – 2015 and prevalent cases for 1 January each of the years 2000–2015 (why not 2016 — end of 2015?)

- Type 2 DM:
  - Persons recorded with ICD10 code E11 in NPR, as the latest diagnosis.  
Persons are not included on the basis of a single NPR contact with code E11, at least one more contact (E10 or E11?) or purchase of OAD or insulin is required.
  - Persons who have purchased OADs (A10B from the RMPS), and at least two purchases of either A10A (insulins) or A10B (other antidiabetic drugs).  
Persons are not included on the basis of a single OAD purchase, at least one more purchase of OAD or insulin is required or contact to NDR is required.
  - Women who have a diagnosis of PCOS or have only purchased metformin (and no other OADs or insulin) and have purchased either clomifen (G03GB02) or estrogen (G03HB) are *excluded*.
  - Persons who have had no diabetes recordings in NPR or RMPS during the last 10 years are *excluded*.
  - The term “latest” for the NPR criterion and the exclusion referring to “last 10 years” seems to indicate that the register is defined relative to a particular creation date for the register, although this is not explicitly stated.
- Type 1 diabetes:
  - Persons recorded with ICD10 code E10 in NPR, as the latest diagnosis.  
Persons are not included on the basis of NPR contacts with code E11, at least one purchase of insulins is required
  - Persons who have purchased insulins (A10A from the RMPS), and at least two purchases of A10 (either A10A (insulins) or A10B (OADs)).
  - Persons already classified as T2 above are *excluded*.
  - Women with a diagnosis of GDM (ICD10 024.4) and only have purchased anti diabetic medication in a window from 280 days before the first till 280 days after the last recording of GDM are excluded.

## 2.3 A new register

The following is an attempt to reconstruct / improve the NDR, using some of criteria as in the original NDR, with an additional effort to define persons as either T1 or T2.

The basic content of the register is one record per person with sex, type of diabetes and dates of birth, DM and death. Additionally, the register will have the dates for meeting each of the defining criteria (name of the date in the register):

**doNPR, doNPR2** Dates of the first and second recorded contact date with a diagnosis of diabetes in the NPR.

**doOAD, doOAD2** Date of first recorded purchase of OAD (A10B).

**doIns, doIns2** Date of first recorded purchase of insulin (A10A).

**doDVD** Earliest recorded date of diagnosis in the Danish adult diabetes register (DDD). If none recorded, the date of reporting is used.

**doPod** Earliest date of billing for podiatry in the NHR.

**doDiab** First recorded date of eye-screening in the Danish eye-screening database for diabetes patients.

As for RUKS we do not include persons on one drug purchase or one record in NPR—two of these dates are required for inclusion; and epidemiologically we make the date of the second of these the criterion date. Thus there are nine possible criteria, depending on the sequence of the two earliest dates among records from NPR and RMPS.

### 2.3.1 Type of diabetes

The classification of patients as T1 or T2 based on register date only is not accurate, and the approach chosen here is to identify persons with T1D with reasonably high specificity, and classify the rest as T2D. Thus T2D will be equivalent to “cannot be classified as T1D with reasonable certainty”, and hence the classification should be used cautiously; the persons recorded as T1D are likely to be T1D, but there is some under-reporting. Consequently, some T1D patients are erroneously classified as T2D, but the precise size of this problem is unknown.

The practical implementation of the type classification is:

- use the DVDD recordings of diabetes type (T1,T2,Other,Unkn) and classify persons as:
  - T1 if strictly<sup>1</sup> more than half of the recordings are T1.
  - T2 if strictly more than half of the recordings are T2.
  - NA if neither is met, or no DVDD record exist.
- if classified as NA from DVDD, then use the NPR to classify persons as:
  - T1 if strictly more than half of the NPR recordings are E10.

---

<sup>1</sup>4 out of 8 does not count

- T2 if strictly more than half of the NPR recordings are E11.
- NA if neither is met, or no NPR record exist.
- Persons that have purchased insulin before age 30 are always classified as T1, except if classified as T2 in DVDD.
- Persons without insulin purchase are always classified as T2.
- Any persons not classified above are classified as T2.

The flow of decisions is shown in figures 2.1. The reason that we cannot entirely dispose with the NDR in classification of diabetes is that the DVDD was not established till 2005, so the classification of patients dead before 2005 is very sparse in the DVDD.

### 2.3.2 Gestational Diabetes (GDM)

GDM diagnoses that are less than 200 days from the previous one are disregarded; so from the earliest GDM for a given person, no GDM diagnosis in the next 200 days is counted, from the next after this, another window of 200 days is used etc.

If a person is recorded with a diagnosis of GDM in the NPR, the person cannot enter the register on any criterion during the next 365 days. To account for registration delays the window starts 30 days prior to the recorded date of GDM.

### 2.3.3 Polycystic Ovarian Syndrome (PCOS)

If a person is recorded with PCOS in the NPR, this person cannot be included on the basis of metformin purchase in the period from the earliest PCOS diagnosis until the person's 40<sup>th</sup> birthday.

Moreover, if a person's only drug dispensations are metformin between age 20 and 40, the person is considered a possible PCOS case and these dispensations are not counted. Dispensation of metformin after age 40 for women with a PCOS diagnosis are considered

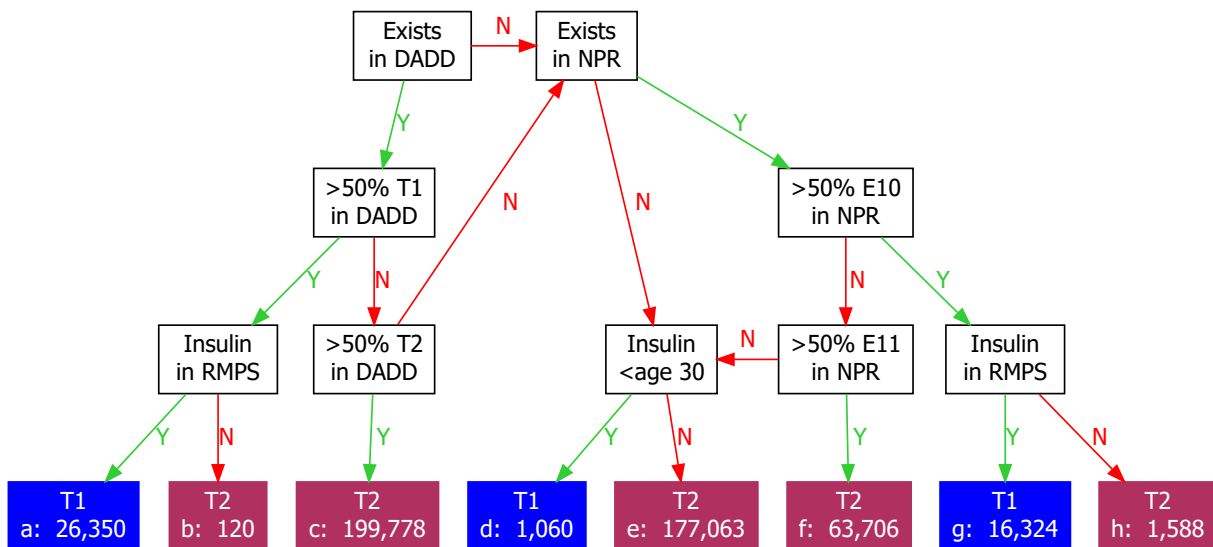


Figure 2.1: Decision flow to classify persons as T1/T2 in the DMreg.



diabetes medication and lead to inclusion in the register at the first date of purchase after the 40<sup>th</sup> birthday.

### 2.3.4 Summary

The register we attempt to build is a register where persons are captured by a set of criteria and then kept in the register with this inclusion date.

### 2.3.5 Differences to RUKS

The proposed approach differs from RUKS in the following points:

- Only NPR diagnosis of PCOS is used, and women deemed to suffer from PCOS can actually be included at a time after age 40 based on metformin purchase alone.

It is not entirely clear whether persons who meet the criteria for PCOS before age 40 and meet other criteria after age 40 are included in RUKS with a date of inclusion equal to the first purchase of metformin, or whether these women are not included at all. After all, PCOS is a known risk factor for diabetes, so these women may contract diabetes later.

- RUKS maintains a window of no inclusion of 280 days *before* date of GDM till 280 days after. Our approach only use a window of 30 days before (to account for registration delays) and of 365 days after the date of GDM. Moreover repeat GDM diagnoses closer than 200 days are regarded as being from the same pregnancy in our approach, and only the first one is used in defining the window.
- The RUKS approach to definition T1/T2 is based on recordings in the NPR and classify persons as T1/T2 according to the most recent occurrence of E10 and E11, whereas our approach only classify persons if more than half of the recordings are E10 resp E11, also taking other codes into account. It seems that RUKS do not include the codes E12–E14 as diabetes.
- In principle we might use the health registers to define an exit date as well (for example 10 years). However it would be more viable to define a dates of last meeting each criterion, enabling reserchers to explore the nature of “false” positives in the register according to different criteria. A date, `doLast`, with the last date of meeting a criterion is added to the database.

# Chapter 3

## SAS programs

### 3.1 Rationale and overview

The following documented programs sequentially construct data sets with dates of diagnosis of DM according to different criteria, then merge these to pick the earliest. All computing is done at the server of Statistics Denmark.

All created data will be in the data folder as SAS-datasets, and the SAS log and `lst` files will be printed here verbatim for documentation (the latter after removal of numbers less than 4).

We have the following programs (also described in more detail in connection with the listing of the output):

`00-fmts` creates a number of useful formats used for annotation and grouping of diagnoses etc. They are in the format file `DMfmt.DMreg` (see `optslibs.sas`)

`00-labka` Reads the (very large) file of LABKA-measurements and subdivides it to 26 smaller files with one type of lab-measuremenmt in each.

`00-base` creates:

1. `DMdat.pop` with demographic information about the entire population (sex, date of birth); key: `(pnr)`
2. `DMdat.xDK` with IM-migration and E-migration records for persons with at least one IM or Emigration (so not for from the entire population). In the file, `doEm < doIm`, so in principle each record represents a period OUT of the country (hence the `x`); key: `(pnr,doIm)`.

`00d-base` creates `DMdat.CoD` with cause of death for the population that died between 1996-1-1 and 2017-12-31. Not all deaths are in this file, only those with a cause; key: `(pnr)`

`00y-base` creates `DMdat.popreg` with information for all persons at 1 Jan each year: kommune and region of residence, highest attained educational level and family income. The classification variables may be missing for some persons. key: `(pnr,yr)`.

`01-npr` Uses the national patient register (NPR) to generate three data sets, all with `pnr` as key:

- a dataset **npr** with the two earliest dates of DM diagnosis in the NPR, **doNPR** and **doNPR2**, as well as a variable **nprtyp** with values T1 (ICD10: E10) or T2 (ICD10: E11) or NA (anything else), based on whether E10 or E11 or neither is recorded on more than half of the person's NPR entries. Note that codes E12, E13 and E14 also define diabetes in NPR, and such records are counted in this calculation, hence some patients will have an indeterminate type from NPR.

Thus formally some of the follow-up will be based on type-information from future recordings—*i.e.* records later than **doNPR**; key: (**pnr**)

- a dataset **pcos** with the earliest date of registered PCOS, **doPCOS**; key: (**pnr**)
- a dataset **gdm** with recorded dates of GDM that are at least 200 days apart, **doGDM1**, **doGDM2**, ...; key: (**pnr**)

**02-dvdd** Uses the DVDD to identify persons from outpatient clinics (and in due course from GPs) and to seek out persons deemed to be T1D patients. It creates a dataset, **DMdat.DVDD** with key **pnr** and a variable for type of diabetes **dvdtyp**, based on whether T1 resp. T2 is recorded on more than half of the available records in DVDD. Thus formally some of the follow-up will be based on type-information from future recording. The variable **dvdtyp** has missing values; key: (**pnr**)

**03-nhsr** Uses the NHSR to get the date of the first podiatry (foot-therapy) service for diabetes patients and excludes records with examination date in the GDM grace interval. Creates the dataset **DMdat.foot** with the date variable **doPod**; key: (**pnr**)

**04-rmps** Generates a dataset **DMdat.pRMPS** with one record per person, with dates of first and second purchase of OAD (**doOAD**, **doOAD2**) resp. insulin (**doIns**, **doIns2**); key: (**pnr**).

**05-diab** Extracts data from the DiaBase, excludes records with examination date in the GDM grace interval, and selects the earliest record for each person and defines the date in the variable **DMdat.doDiaB**.

**06-define** Collects data from the 5 previously created data sets and defines date of diagnosis and type of diabetes (T1/T2), and thus generates a DM-register with sex, date of birth, date of death, date of inclusion (“diagnosis”).

However, some 75% dates of diagnosis in the DVDD are either 1<sup>st</sup> January or 15<sup>th</sup> June; both of which we interpret as “sometime during the year”. The consequence of this that if a person meets another criterion, the date from DVDD will be ignored and the person will be included at the date of the other criterion. In short, the date from DVDD will only be used if no other criterion is met.

For persons with a record from DVDD with type of diabetes defined, this is used. If different types are given in different records, the most frequent type is used, but only if present in more than half of the records. If a person is not classified from DVDD, the classification as T1 based on NPR is used.

Further, a person is classified as T1 if insulin has been taken out before age 30 (unless classified as T2 in DVDD), otherwise as T2. Finally, a person cannot be classified as T1 if no insulin purchase is recorded.

10-labcomp1 Extracts measurements from LABKA and DVDD and defines dates of severe, moderate and end stage kidney disease, as well as dates of micro- and macro-ablunimuria. This is done for the *entire* population.

10-comp1 Defines complication dates based on NPR-records and appends the lab-defined complications This is done for the *entire* population.

## 3.2 Program execution

All data analyses are run on the servers at Statistics Denmark. In order to have a thorough documentation of the data processing all SAS-programs have been run in sequence as batch jobs from the command prompt (`cmd`), where the program in the file `xxx.sas`, say, is run and produces the files `xxx.log` and `xxx.lst`. Since the code from `xxx.sas` is contained in `xxx.log`, it suffices to show the files `xxx.log` and `xxx.lst` to provide full documentation of the data acquisition process.

The practical execution of the SAS-programs is done using the `cmd`-script `sj.bat` which reads:

```
start "sas job" /min sjx %~n1
```

The running of the program `xxx.sas` is started by issuing “`sj xxx`” at the command prompt.

The script `sj.bat` just starts a new process which in turn runs the script `sjx.bat`, which reads:

```
"C:\Program Files\SASHome\SASFoundation\9.4\sas.exe" ^
-CONFIG "C:\Program Files\SASHome\SASFoundation\9.4\nls\en\sasv9.cfg" ^
-$lognote1 "Program: %~n1.sas" -nonews -linesize 90 ^
-autoexec optslibs.sas -sysin %~n1.sas
copy %~n1.log + %~n1.lst %~n1.yt
rem del %~n1.log
rem del %~n1.lst
exit
```

The second last line in the script simply copies the two result-files from SAS into one for convenience of inspection. It is the two result files that are transferred from DST to a local computer for inclusion in a documentation report (after removal of too small table entries). Thus the `.lst` files on the served have been edited to meet the criteria for transfer out of DST. But the original contents of the `.lst` is part of

Note that all programs are preceded by execution of `optslibs.sas` via the `-autoexec` argument to SAS, as seen from the script `sjx.bat`. The file `optslibs` contains definitions of libraries and a couple of macro constants used throughout the programs.

This way there is a reasonable documentation that the results are actually produced by the listed code (in the `.log` file). Hopefully the code in the SAS-programs is reasonably human-readable.

## 3.3 Program documentation

The following is a listing of the SAS-programs and -results (that is the `.log` and `.lst` files) used to generate the base data sets. Each one is preceded by a brief description; the main technical points are included as comments in the program code, found in the `.log` files.

Note that according to rules of DST, all table entries of 3 or less in `.lst` file are masked as a “\*”. This is done in an automated process, so also occurrences of 1, 2 and 3 not strictly necessary to mask have been masked.

### 3.3.1 optslibs.sas

This is common set of declarative commands that defines a couple of options, the location of the raw and the derived data sets and some global macro variables used for handling GDM and PCOS and definition of T1D. It is included as autoexec file in all runs, note the options `nonotes` for brevity of output:

```
* options used throughout ;
options nocenter nonotes nomprint nosource2
      ps = 10000 /* 105 */
      ls = 90    /* 160 */
      obs = max
      formchar = ' - '
      nofmterr /* dont crash with missing formats ;
/* format libraries we use */
fmtsearch = ( dsfmt.times_personstatistik
              dsfmt.brancher
              dsfmt.uddannelser
              dsfmt.disced
              dsfmt.geokoder
              dsfmt.sundhed
              dsfmt.statistikbank
              DMfmt.DMreg ) ;

* data libraries ;
libname ekstn 'E:\rawdata\707655\Eksterne data\' ;
libname grund 'E:\rawdata\707655\Grunddata\' ;
libname popul 'E:\rawdata\707655\Population\' ;
libname DMdat 'E:\workdata\707655\DMreg\data\' ;
libname lbdat 'E:\workdata\707655\DMreg\data\labka' ;

* format libraries ;
libname DMfmt 'E:\workdata\707655\DMreg\fmts' ;
*libname dsfmt 'E:\Formater\SAS formater i Danmarks Statistik\FORMATKATALOG';
libname dsfmt '\\srvfsenas1\data\Formater\SAS formater i Danmarks Statistik\FORMATKATALOG';

* useful constants ;
%let yrf = 1996 ; * Range of years of population data ;
%let yrl = 2018 ;
%let ini = '01JAN1996'd ; * Range of folow-up period ;
%let end = '31DEC2018'd ;
%let tload = 15 ; * Age limit for OAD to define T1 - obsolete ;
%let t1ins = 30 ; * Age limit for Insulin to define T1 ;
%let pcoslo = 18 ; * Age interval for pcos (years) ;
%let pcoshi = 40 ;
%let fbwin = 30 ; * Window from metformin to first fertility drug defining co-treatment ;
%let gdmint = 200 ; * distance between GDM dates to constitute 2 GDM events (days) ;

* macro to exclude observations with dates in GDM grace period (days) ;
%macro xgdm( xdate,
            gdmpr = 30,
            gdmwin = 365 ) ;
/* this loop should produce a warning to be sure all instances of GDM are covered */
%do n = 1 %to 12 ;
    if ( doGDM&n. - &gdmpr. ) < &xdate. < ( doGDM&n. + &gdmwin. ) then delete ;
```

```
%end ;
%mend ;

* page ;
options notes ;
```

### 3.3.2 xgdm.sas

Note that the `optslibs.sas` also contains the definition of the `xgdm` macro: For each of the criteria it is necessary to exclude dates of meeting the criterion which fall within a grace period after a diagnosis of GDM. This is what the macro `xgdm` is for; it relies on the structure of the GDM dataset constructed in the `01-npr` program, which has the GDM dates in the wide form for person with at least one date of GDM. It iterates up to 12 in order to produce a note from the SAS system, that documents that only 11 GDM dates are needed.

## 3.4 00-base

Reads the files with all person ids (`pnr`), for each calendar year of data, and forms a total roster of all `pnr` with demographic information (sex, date of birth, date of death).

Also reads all migration records, and forms a dataset of time spent *outside* of Denmark, which is used by the program `08-mkFU` to count only events and person-years among persons actually present in Denmark.

```
1                                "Program: 00-base.sas"    11:04 Thursday, August 27, 2020
```

```
NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
      Licensed to FORSKNING 1, Site 50800722.
NOTE: This session is executing on the X64_SR12R2 platform.
```

```
NOTE: Updated analytical products:
```

```
      SAS/STAT 14.3
```

```
NOTE: Additional host information:
```

```
      X64_SR12R2 WIN 6.3.9600 Server
```

```
NOTE: SAS initialization used:
```

```
      real time          0.13 seconds
      cpu time           0.09 seconds
```

```
NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.
```

```
NOTE: AUTOEXEC processing completed.
```

```
1      * The base populations (entire Danish population 1995-2015) ;
2      %macro getpop ;
3      data pop ;
4          merge %do i = &yrf.-1 %to &yrl. ;
5                  grund.bef&i.12 ( keep = pnr koen foed_dag opr_land
6                      /* some of the files contain blanks in pnr */
7                      where = ( pnr ne ' ' ) )
8      %end ; ;
```

```

9          by pnr ;
10         run;
11         %mend ;
12         %getpop ;

NOTE: There were 5245127 observations read from the data set GRUND.BEF199512.
WHERE pnr not = ' ' ;
NOTE: There were 5268800 observations read from the data set GRUND.BEF199612.
WHERE pnr not = ' ' ;
NOTE: There were 5288526 observations read from the data set GRUND.BEF199712.
WHERE pnr not = ' ' ;
NOTE: There were 5308412 observations read from the data set GRUND.BEF199812.
WHERE pnr not = ' ' ;
NOTE: There were 5324505 observations read from the data set GRUND.BEF199912.
WHERE pnr not = ' ' ;
NOTE: There were 5344465 observations read from the data set GRUND.BEF200012.
WHERE pnr not = ' ' ;
NOTE: There were 5363002 observations read from the data set GRUND.BEF200112.
WHERE pnr not = ' ' ;
NOTE: There were 5378270 observations read from the data set GRUND.BEF200212.
WHERE pnr not = ' ' ;
NOTE: There were 5391853 observations read from the data set GRUND.BEF200312.
WHERE pnr not = ' ' ;
NOTE: There were 5406591 observations read from the data set GRUND.BEF200412.
WHERE pnr not = ' ' ;
NOTE: There were 5423306 observations read from the data set GRUND.BEF200512.
WHERE pnr not = ' ' ;
NOTE: There were 5447075 observations read from the data set GRUND.BEF200612.
WHERE pnr not = ' ' ;
NOTE: There were 5475682 observations read from the data set GRUND.BEF200712.
WHERE pnr not = ' ' ;
NOTE: There were 5511247 observations read from the data set GRUND.BEF200812.
WHERE pnr not = ' ' ;
NOTE: There were 5534637 observations read from the data set GRUND.BEF200912.
WHERE pnr not = ' ' ;
NOTE: There were 5560522 observations read from the data set GRUND.BEF201012.
WHERE pnr not = ' ' ;
NOTE: There were 5580429 observations read from the data set GRUND.BEF201112.
WHERE pnr not = ' ' ;
NOTE: There were 5602535 observations read from the data set GRUND.BEF201212.
WHERE pnr not = ' ' ;
NOTE: There were 5627159 observations read from the data set GRUND.BEF201312.
WHERE pnr not = ' ' ;
NOTE: There were 5659654 observations read from the data set GRUND.BEF201412.
WHERE pnr not = ' ' ;
NOTE: There were 5707176 observations read from the data set GRUND.BEF201512.
WHERE pnr not = ' ' ;
NOTE: There were 5748720 observations read from the data set GRUND.BEF201612.
WHERE pnr not = ' ' ;
NOTE: There were 5781131 observations read from the data set GRUND.BEF201712.
WHERE pnr not = ' ' ;
NOTE: There were 5806044 observations read from the data set GRUND.BEF201812.
WHERE pnr not = ' ' ;
NOTE: The data set WORK.POP has 7632150 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time          2:22.15
      cpu time           44.65 seconds

13
14         * merge population with death records and remove persons not observed
15         between ini and end ;
16         data DMdat.pop ( keep = pnr sex doBth whBth doDth dSrc
17                       label = 'Total population 1996-2018 incl.' ) ;
18             label pnr = 'person id'
19                 sex = 'sex'
20                 doBth = 'date of birth'
21                 doDth = 'date of death'
22                 whBth = 'place of birth DK/We/nW'
23                 dSrc = 'source of doDth' ;

```

```

24      format doBth doDth ddmmyy010. ;
25      merge pop ( in = pop )
26          grund.dodsaars2001 /* d_dodsdto */
27          grund.dodsaasg2017 /* d_dodsdato */
28          grund.dod2018      /* doddato */
29          grund.civ2019 ( where = (civst eq "D")
30                      keep = pnr civst civ_vfra ) /* civ_vfra */ ;
31      by pnr ;
32      * must be in base population ;
33      if pop ;
34
35      * new variable names ;
36      if koen eq 1 then sex = "M" ; else
37      if koen eq 2 then sex = "W" ; else put "This should never print:" koen= ;
38      doBth = foed_dag ;
39
40      * place of birth - Denmark (DK), Western (West), non-Western (non-W) ;
41      whB = input( substr( put( opr_land, OPR_LAND_VESTLIG_SB. ), 1, 2 ), 2. ) ;
42      if whB eq 3 then whBth = 'non-W' ;
43      if whB eq 2 then whBth = 'West' ;
44      if whB eq 1 then whBth = 'DK' ;
45
46      * date of death from cause of death register(s), CPR or civST (ordered!) ;
47      if( doDth le .z ) then do ; doDth = d_statdato ; dSrc = "cod17" ; end ;
48      if( doDth le .z ) then do ; doDth = d_dodsdto ; dSrc = "cod01" ; end ;
49      if( doDth le .z ) then do ; doDth = doddato ; dSrc = "cpr" ; end ;
50      if( doDth le .z ) then do ; doDth = civ_vfra ; dSrc = "civ" ; end ;
51      if( doDth le .z ) then
52          do ; doDth = . ; dSrc = "none" ; end ;
53
54      * born after end date: late Born ;
55      lBrn = ( doBth >= &end. ) ;
56      * dead before start date: early Death ;
57      eDth = ( .z < doDth < &ini. ) ;
58      * collect only persons contributing risk 1996-2018 ;
59      if ~lBrn and ~eDth then output DMdat.pop ;
60      run ;

```

WARNING: Multiple lengths were specified for the variable C\_DODSMAADE by input data set(s). This can cause truncation of data.

NOTE: There were 7632150 observations read from the data set WORK.POP.

NOTE: There were 1444199 observations read from the data set GRUND.DODSAARS2001.

NOTE: There were 860599 observations read from the data set GRUND.DODSAASG2017.

NOTE: There were 2367205 observations read from the data set GRUND.DOD2018.

NOTE: There were 2438024 observations read from the data set GRUND.CIV2019.

WHERE civst='D' ;

NOTE: The data set DMdat.POP has 7631979 observations and 6 variables.

NOTE: DATA statement used (Total process time):

real time 12.23 seconds

cpu time 6.79 seconds

```

60
61      * Dmdat.pop now has all persons contributing between (end) and (ini) ;
62      title1 "The total population contributing between &ini. and &end." ;
63      proc contents data = DMdat.pop varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

real time 0.04 seconds

cpu time 0.04 seconds

NOTE: The PROCEDURE CONTENTS printed page 1.

```

64      proc tabulate data = DMdat.pop noseps missing ;
65          class whBth doBth doDth dSrc ;
66          table all doBth doDth, dSrc * f=comma10. / rts = 15 ;
67          table all doBth doDth, whBth * f=comma10. / rts = 15 ;
68          format doBth doDth year4. ;
69          title1 ;
70
71      * Here comes the migrations ;

```



NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: The PROCEDURE TABULATE printed pages 2-3.

NOTE: PROCEDURE TABULATE used (Total process time):

real time	1.98 seconds
cpu time	5.57 seconds

```

72      proc sort  data = grund.vnds2018  out = migr ;
73          by pnr haend_dato ;
74      run ;

```

NOTE: There were 3687670 observations read from the data set GRUND.VNDS2018.

NOTE: The data set WORK.MIGR has 3687670 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.15 seconds
cpu time	1.04 seconds

```

75
76      * if multiple records with same type of movement, only take the first ;
77      data migr ups ;
78          set migr ;
79          by pnr ;
80          if first.pnr or
81             indud_kode ne lag1(indud_kode) then output migr ;
82          else output ups ;
83      run ;

```

NOTE: There were 3687670 observations read from the data set WORK.MIGR.

NOTE: The data set WORK.MIGR has 3673682 observations and 4 variables.

NOTE: The data set WORK.UPS has 13988 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	0.70 seconds
cpu time	0.70 seconds

```

84
85      * How many persons have fishy data ;
86      proc sort data = ups  nodupkey ; by pnr ; run ;

```

NOTE: There were 13988 observations read from the data set WORK.UPS.

NOTE: 1158 observations with duplicate key values were deleted.

NOTE: The data set WORK.UPS has 12830 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.00 seconds
cpu time	0.01 seconds

```

87
88      * We keep track of period OUTSIDE of DK in the period ;
89      * so in each records doEm < doIm ;
90      data DMdat.xDK ( keep = pnr doIm doEm
91          label = 'Periods spent outside DK: doEm < doIm' ) ;
92      merge migr ( in = mig )
93          DMdat.pop ( in = pop ) ;
94      by pnr ;
95      if mig and pop ;
96      retain doEm ;
97      if first.pnr then doEm = . ;
98      if ( indud_kode eq "U" ) then doEm = haend_dato ;
99      if ( indud_kode eq "I" ) then doIm = haend_dato ;
100     * Not relevant if entered back in before start ;
101     if ( .z < doIm < &ini. ) then delete ;
102     if ( .z < doIm < doEm ) then put "This should never print!" ;
103     if ( indud_kode eq "I" or last.pnr ) then output ;
104     format doEm doIm ddmmyy10. ;
105     run ;

```

NOTE: There were 3673682 observations read from the data set WORK.MIGR.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.  
 NOTE: The data set DMDAT.XDK has 1912979 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            2.22 seconds  
     cpu time             2.00 seconds

```
106
107         title1 'Person-time spent outside of DK: doEM < doIm' ;
108         proc contents data = DMdat.xDK ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):  
     real time            0.00 seconds  
     cpu time             0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 4.

```
109         proc tabulate data = DMdat.xDK noseps missing ;
110             class doEm doIm ;
111             table all doEm,
112                 all * f=comma9.
113                 doIm * f=comma7.
114                 / rts = 7 ;
115             format doEm doIm year4. ;
116             title1 ;
NOTE: There were 1912979 observations read from the data set DMDAT.XDK.
NOTE: The PROCEDURE TABULATE printed pages 5-7.
NOTE: PROCEDURE TABULATE used (Total process time):
      real time            0.37 seconds
      cpu time             0.87 seconds
```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
 NOTE: The SAS System used:  
     real time            2:42.17  
     cpu time             1:01.90

### 3.4.1 00-base.lst

The total population contributing between '01JAN1996'd and '31DEC2018'd 1  
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#### The CONTENTS Procedure

Data Set Name	DMDAT.POP	Observations	7631979
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	27/08/2020 11:06:43	Observation Length	40
Last Modified	27/08/2020 11:06:43	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Total population 1996-2018 incl.		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

#### Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	4677
First Data Page	*
Max Obs per Page	1632
Obs in First Data Page	1589
Number of Data Set Repairs	0

```

ExtendObsCounter      YES
Filename              E:\workdata\707655\DMreg\data\pop.sas7bdat
Release Created       9.0401M5
Host Created          X64_SR12R2
Owner Name            DSTFSE\FDIY7655
File Size             292MB
File Size (bytes)     306577408

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	person id
2	sex	Char	*			sex
3	doBth	Num	8	DDMMYY10.		date of birth
4	doDth	Num	8	DDMMYY10.		date of death
5	whBth	Char	5			place of birth DK/We/nW
6	dSrc	Char	5			source of doDth

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```

-----
                                source of doDth
-----
                                -----
                                civ      cod01      cod17      cpr      none
                                -----
                                N        N        N        N        N
-----
All                             59,906      350,593      860,412      62,498      6,298,570
date of birth
1884                             .            *            .            .            .
1888                             .            *            .            .            .
1889                             .            5            .            .            .
1890                             .           16            .            .            .
1891                             .           13            .            .            .
1892                             .           30            .            .            .
1893                             .           60            *            .            .
1894                             .           99            *            .            .
1895                             .          192            6            *            .
1896                             .          303           10            .            .
1897                             .          454           29            *            .
1898                             .          683           39            *            *
1899                             .        1,011           79            *            .
1900                             .        1,496          109            .            .
1901                             *        2,079          275            *            *
1902                             .        2,820          415            *            .
1903                             *        3,469          636            8            *
1904                             .        4,511         1,007           11            *
1905                             *        5,305         1,429           10            5
1906                             *        6,424         2,028           23            *
1907                             *        7,376         2,741           28            4
1908                             *        8,475         4,012           25           10
1909                             7         9,686         5,124           29            6
1910                             12        10,305         6,578           32           19
1911                             5         10,791         8,043           46           10
1912                             20        11,504         9,907           54           29
1913                             21        11,844        11,628           63           33
1914                             38        11,817        13,375           86           58
1915                             55        11,384        14,421          126           85
1916                             86        11,355        16,399          176          136
1917                             140       11,313        17,859          223          166
1918                             187       11,428        20,179          311          323
1919                             294       10,682        20,871          443          534
1920                             405       11,917        25,852          647          892
1921                             557       11,238        26,297          820         1,272
1922                             627       10,220        25,809          855         1,667
1923                             881       10,134        27,036         1,121         2,428
1924                             1,069      9,470         27,769         1,291         3,392
1925                             1,185      8,589         27,362         1,436         4,483

```

1926	1,335	8,296	26,822	1,634	5,770
1927	1,491	7,589	25,951	1,742	6,890
1928	1,656	7,219	26,093	1,905	8,607
1929	1,743	6,621	24,572	1,913	9,968
1930	1,784	6,383	24,511	1,928	11,899
1931	1,829	5,898	23,105	1,966	13,690
1932	1,902	5,497	22,201	1,923	15,945
1933	1,868	4,967	20,658	1,922	18,249
1934	1,876	4,772	20,585	1,908	21,040
1935	1,948	4,345	19,452	1,981	23,572
1936	1,895	4,090	18,666	1,881	27,013
1937	1,865	3,807	17,509	1,894	30,488
1938	1,760	3,512	16,935	1,772	33,511
1939	1,756	3,302	15,574	1,656	35,813
1940	1,722	3,025	15,043	1,707	39,361
1941	1,629	2,914	14,521	1,628	42,099
1942	1,670	3,057	15,019	1,686	49,129
1943	1,697	2,914	14,897	1,746	53,764
1944	1,807	2,936	15,176	1,691	59,898
1945	1,672	2,824	14,594	1,636	64,932
1946	1,611	2,437	13,754	1,463	69,054
1947	1,399	2,240	12,047	1,420	68,492
1948	1,249	1,979	10,527	1,232	65,608
1949	1,126	1,712	9,484	1,130	63,285
1950	1,100	1,583	8,834	1,036	64,688
1951	1,021	1,389	8,060	937	63,608
1952	944	1,382	7,609	902	65,526
1953	909	1,289	7,243	817	67,654
1954	810	1,180	6,593	755	67,402
1955	816	1,043	6,128	737	69,516
1956	708	899	5,602	667	71,455
1957	650	855	4,980	584	71,815
1958	582	787	4,453	583	73,166
1959	555	677	4,205	537	73,443
1960	540	620	3,836	486	77,439
1961	438	591	3,399	429	78,210
1962	455	525	3,066	410	81,265
1963	367	546	2,973	426	86,715
1964	379	478	2,682	327	89,331
1965	344	465	2,488	318	92,084
1966	371	433	2,319	304	95,845
1967	294	393	1,931	264	90,615
1968	239	302	1,612	242	86,062
1969	209	296	1,419	175	83,841
1970	206	277	1,237	208	84,926
1971	183	253	1,238	161	88,907
1972	156	274	1,032	133	91,136
1973	145	262	951	142	88,376
1974	141	252	846	120	89,344
1975	135	202	840	112	91,183
1976	94	204	673	100	85,628
1977	91	203	646	106	84,079
1978	78	211	625	94	85,428
1979	69	183	564	84	84,727
1980	90	176	482	63	84,455
1981	57	137	437	69	81,169
1982	53	131	434	58	82,331
1983	60	72	404	60	81,718
1984	49	79	421	65	83,592
1985	50	60	411	61	86,384
1986	54	71	368	54	88,725
1987	49	47	337	48	89,374
1988	36	45	350	47	92,406
1989	34	47	321	48	93,693
1990	37	42	329	44	95,086
1991	28	50	300	33	93,814
1992	37	66	242	41	94,851
1993	19	57	217	33	92,123
1994	31	83	210	23	93,000
1995	36	143	174	30	90,265

1996	23	119	150	19	84,955
1997	24	92	121	30	82,192
1998	22	68	117	28	77,911
1999	28	72	125	31	75,200
2000	23	45	129	19	74,425
2001	21	.	158	23	71,892
2002	6	.	127	18	70,442
2003	18	.	118	10	70,620
2004	10	.	85	7	70,620
2005	9	.	111	*	70,465
2006	7	.	90	4	71,442
2007	7	.	91	5	70,559
2008	6	.	76	6	71,551
2009	5	.	59	10	69,080
2010	*	.	78	8	69,312
2011	4	.	50	5	64,427
2012	4	.	48	5	63,056
2013	4	.	33	4	60,429
2014	7	.	40	*	60,820
2015	7	.	37	7	61,189
2016	7	.	25	13	63,777
2017	6	.	.	29	62,615
2018	19	.	.	.	61,554
date of death	.	.	.	.	6,298,570
1996	14	60,658	.	9	.
1997	39	59,531	.	10	.
1998	54	57,763	.	386	.
1999	71	58,442	.	445	.
2000	81	56,873	.	774	.
2001	120	57,326	.	692	.
2002	114	.	58,050	303	.
2003	171	.	57,055	297	.
2004	145	.	55,314	332	.
2005	187	.	54,388	329	.
2006	195	.	54,949	324	.
2007	236	.	55,018	335	.
2008	281	.	54,003	342	.
2009	291	.	54,324	349	.
2010	300	.	53,804	348	.
2011	329	.	51,997	313	.
2012	377	.	51,801	325	.
2013	411	.	51,981	291	.
2014	433	.	50,758	338	.
2015	422	.	51,993	319	.
2016	483	.	52,278	323	.
2017	518	.	52,699	310	.
2018	571	.	.	55,004	.
2019	54,063	.	.	.	.

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place of birth DK/We/nW			
	DK	West	non-W
	N	N	N
All	6,367,307	585,098	679,574
date of birth			
1884	*	.	.
1888	*	.	.
1889	4	*	.
1890	15	*	.
1891	13	.	.
1892	30	.	.
1893	60	*	.
1894	100	*	.

1895	189	10	.
1896	301	8	4
1897	462	21	*
1898	696	27	*
1899	1,062	28	*
1900	1,551	47	7
1901	2,294	56	9
1902	3,147	83	7
1903	3,993	111	11
1904	5,376	141	15
1905	6,513	215	22
1906	8,196	244	38
1907	9,809	304	38
1908	12,159	325	41
1909	14,403	395	54
1910	16,420	447	79
1911	18,308	525	62
1912	20,838	583	93
1913	22,857	643	89
1914	24,637	622	115
1915	25,344	598	129
1916	27,457	562	133
1917	28,988	596	117
1918	31,642	660	126
1919	31,920	735	169
1920	38,572	863	278
1921	39,039	890	255
1922	37,968	907	303
1923	40,287	980	333
1924	41,590	992	409
1925	41,601	971	483
1926	42,349	1,023	485
1927	42,042	1,026	595
1928	43,741	1,159	580
1929	43,015	1,129	673
1930	44,536	1,123	846
1931	44,598	1,129	761
1932	45,450	1,158	860
1933	45,609	1,204	851
1934	47,999	1,317	865
1935	48,934	1,400	964
1936	51,059	1,520	966
1937	52,833	1,661	1,069
1938	54,577	1,804	1,109
1939	54,983	1,863	1,255
1940	57,453	1,984	1,421
1941	59,199	2,252	1,340
1942	66,784	2,323	1,454
1943	70,968	2,506	1,544
1944	76,928	2,905	1,675
1945	81,162	2,625	1,871
1946	83,549	2,826	1,944
1947	80,446	2,938	2,214
1948	75,262	3,030	2,303
1949	71,321	3,057	2,359
1950	71,474	3,110	2,657
1951	69,309	3,202	2,504
1952	70,068	3,263	3,032
1953	71,431	3,309	3,172
1954	69,920	3,289	3,531
1955	70,792	3,453	3,995
1956	71,302	3,653	4,376
1957	70,651	3,865	4,368
1958	70,633	4,004	4,934
1959	70,005	4,192	5,220
1960	72,220	4,411	6,290
1961	72,455	4,591	6,021
1962	74,012	4,816	6,893
1963	78,533	5,311	7,183
1964	79,795	5,593	7,809

1965	81,915	5,886	7,898
1966	84,995	6,247	8,030
1967	78,790	6,672	8,035
1968	72,452	7,056	8,949
1969	69,705	7,330	8,905
1970	69,630	7,628	9,596
1971	74,029	8,161	8,552
1972	74,441	8,777	9,513
1973	70,714	9,251	9,911
1974	70,356	9,848	10,499
1975	71,412	10,346	10,714
1976	64,854	10,750	11,095
1977	61,566	11,834	11,725
1978	61,511	12,212	12,713
1979	58,954	13,311	13,362
1980	56,901	13,747	14,618
1981	52,761	14,090	15,018
1982	52,579	14,541	15,887
1983	50,759	15,217	16,338
1984	51,616	15,917	16,673
1985	53,623	16,455	16,888
1986	54,852	17,508	16,912
1987	55,257	17,455	17,143
1988	57,940	17,953	16,991
1989	60,224	17,790	16,129
1990	62,256	17,914	15,368
1991	62,679	17,065	14,481
1992	65,606	15,873	13,758
1993	65,087	14,737	12,625
1994	67,395	13,504	12,448
1995	67,131	12,030	11,487
1996	64,549	9,929	10,788
1997	63,901	8,197	10,361
1998	62,640	6,015	9,491
1999	62,218	4,179	9,059
2000	62,772	2,818	9,051
2001	60,974	2,571	8,549
2002	59,891	2,452	8,250
2003	60,411	2,373	7,982
2004	60,680	2,338	7,704
2005	60,711	2,357	7,519
2006	61,569	2,489	7,485
2007	60,628	2,506	7,528
2008	61,355	2,694	7,590
2009	59,009	2,732	7,413
2010	59,027	2,790	7,583
2011	54,411	2,765	7,310
2012	53,056	2,854	7,203
2013	50,601	2,801	7,068
2014	50,825	2,921	7,123
2015	51,514	2,920	6,806
2016	53,766	3,056	7,000
2017	53,005	2,866	6,779
2018	52,563	2,753	6,257
date of death			
.	5,086,281	551,745	660,544
1996	58,922	1,288	471
1997	57,764	1,351	465
1998	56,319	1,396	488
1999	56,988	1,385	585
2000	55,779	1,392	557
2001	56,124	1,356	658
2002	56,545	1,318	604
2003	55,518	1,309	696
2004	53,821	1,270	700
2005	52,910	1,291	703
2006	53,388	1,322	758
2007	53,514	1,332	743
2008	52,533	1,332	761
2009	52,741	1,396	827

2010	52,307	1,331	814
2011	50,455	1,333	851
2012	50,214	1,414	875
2013	50,380	1,381	922
2014	49,152	1,403	974
2015	50,294	1,456	984
2016	50,491	1,508	1,085
2017	50,884	1,555	1,088
2018	52,702	1,664	1,209
2019	51,281	1,570	1,212

Person-time spent outside of DK: doEm < doIm

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#### The CONTENTS Procedure

Data Set Name	DMDAT.XDK	Observations	1912979
Member Type	DATA	Variables	*
Engine	V9	Indexes	0
Created	27/08/2020 11:07:00	Observation Length	32
Last Modified	27/08/2020 11:07:00	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Periods spent outside DK: doEm < doIm		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

#### Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	939
First Data Page	*
Max Obs per Page	2039
Obs in First Data Page	1996
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\xdk.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	59MB
File Size (bytes)	61603840

#### Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.	\$10.	Personnummer
2	doEm	Num	8	DDMMYY10.		
3	doIm	Num	8	DDMMYY10.		

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----- doIm -----										
	All	.	1996	1997	1998	1999	2000	2001	2002	2003
	N	N	N	N	N	N	N	N	N	N
All	1,912,979	538,661	47,788	43,509	44,365	43,554	46,573	48,872	45,902	42,566
doEm	869,900	.	26,331	22,362	23,416	22,628	25,740	28,337	25,650	22,658
.	*	.	.	.	*	.	.	.	*	.
1969	*	*	.	.	.	.	.	.	.	.
1970	*	*	.	.	.	.	.	.	.	.
1971	*	*	*	.	.	.	.	.	.	.
1972	24	4	*	.	*	.	*	*	.	*
1973	703	262	40	33	28	29	27	20	21	24



1974	990	358	65	64	41	35	29	29	20	30
1975	1,074	435	71	52	45	34	22	32	27	23
1976	861	317	61	53	49	30	36	26	23	22
1977	781	236	57	51	47	33	34	26	18	25
1978	1,007	346	73	60	49	36	36	28	23	23
1979	996	266	87	54	60	45	42	25	31	23
1980	1,279	366	81	77	54	64	52	46	36	38
1981	1,464	478	79	87	76	66	46	62	39	45
1982	1,578	579	108	96	88	56	53	62	47	36
1983	1,938	868	97	111	84	54	66	34	58	40
1984	2,494	1,269	118	107	101	70	76	60	55	51
1985	3,189	1,710	127	124	114	100	81	81	73	55
1986	1,401	15	174	135	137	97	112	73	68	60
1987	1,816	31	285	202	154	146	94	102	71	89
1988	2,155	29	328	253	212	172	154	106	96	83
1989	2,573	32	427	288	267	211	167	134	91	126
1990	2,711	18	456	370	259	214	202	160	103	108
1991	3,101	38	607	424	325	226	208	146	125	125
1992	4,085	69	989	610	425	289	251	162	151	118
1993	5,752	111	1,782	976	577	367	272	223	185	160
1994	8,743	172	2,694	1,791	958	654	363	258	248	229
1995	17,115	182	8,378	2,658	1,725	979	603	411	273	234
1996	32,082	10,223	4,270	8,203	2,881	1,814	1,040	625	492	370
1997	32,422	11,063	.	4,268	7,884	2,788	1,764	997	586	497
1998	33,652	12,060	.	.	4,306	7,910	2,844	1,790	1,021	696
1999	35,015	13,107	.	.	.	4,407	7,886	2,775	1,782	1,121
2000	35,789	13,486	.	.	.	.	4,270	7,988	2,951	1,816
2001	36,432	14,478	.	.	.	.	.	4,053	7,831	2,931
2002	35,614	14,877	.	.	.	.	.	.	3,706	7,289
2003	35,637	15,696	.	.	.	.	.	.	.	3,419
2004	37,126	16,392	.	.	.	.	.	.	.	.
2005	40,498	17,854	.	.	.	.	.	.	.	.
2006	42,381	19,771	.	.	.	.	.	.	.	.
2007	43,396	21,032	.	.	.	.	.	.	.	.
2008	45,299	23,897	.	.	.	.	.	.	.	.
2009	46,587	26,755	.	.	.	.	.	.	.	.
2010	47,146	27,332	.	.	.	.	.	.	.	.
2011	48,707	28,239	.	.	.	.	.	.	.	.
2012	49,126	29,416	.	.	.	.	.	.	.	.
2013	49,404	30,290	.	.	.	.	.	.	.	.
2014	48,760	30,838	.	.	.	.	.	.	.	.
2015	49,693	32,804	.	.	.	.	.	.	.	.
2016	51,863	37,045	.	.	.	.	.	.	.	.
2017	51,778	40,350	.	.	.	.	.	.	.	.
2018	46,835	43,463	.	.	.	.	.	.	.	.

(Continued)

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-----										
doIm										
-----										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
-----										
	N	N	N	N	N	N	N	N	N	N
-----										
All	42,987	47,342	52,119	60,926	68,081	61,969	62,888	64,523	66,150	71,916
doEm	22,934	26,569	30,750	39,361	45,689	39,707	41,016	42,315	43,370	48,550
.	.	.	.	*	.	.	.	.	.	.
1969	.	.	*	.	.	.	.	.	.	.
1970	.	.	.	.	.	.	.	.	.	.
1971	.	.	.	.	.	.	.	.	.	.
1972	*	*	.	*	*	*	.	.	*	.
1973	26	23	10	14	20	18	22	9	13	12
1974	31	33	34	27	16	31	9	17	22	19
1975	31	31	37	25	23	28	20	17	16	16
1976	13	26	26	31	21	11	14	16	17	12
1977	18	20	32	22	21	17	22	12	15	14

1978	24	43	35	26	32	24	19	17	15	25
1979	33	42	41	43	26	20	20	13	20	21
1980	34	33	53	33	51	38	32	27	30	19
1981	32	40	62	47	38	30	32	26	29	28
1982	38	36	54	46	43	35	29	30	20	21
1983	30	44	48	57	51	41	36	35	32	23
1984	43	69	57	57	54	31	57	36	26	23
1985	60	89	81	74	52	60	46	38	34	30
1986	67	48	63	43	37	27	36	37	24	37
1987	78	78	57	54	57	51	35	35	36	30
1988	77	78	68	82	67	46	51	49	29	32
1989	115	90	94	92	71	59	40	37	27	46
1990	105	80	73	73	82	72	47	52	47	48
1991	103	109	104	61	68	76	55	60	35	44
1992	125	108	98	86	103	78	72	51	68	45
1993	130	116	127	99	88	77	85	64	67	45
1994	178	145	150	133	97	96	103	78	67	52
1995	234	195	165	160	149	127	109	82	94	69
1996	304	279	209	241	167	154	114	116	101	102
1997	410	329	276	234	203	178	159	125	114	99
1998	464	390	326	258	245	194	173	172	146	134
1999	692	585	484	358	309	236	211	173	158	118
2000	1,124	798	565	435	404	319	289	214	192	206
2001	1,815	1,145	832	594	450	374	315	261	258	248
2002	2,879	1,703	1,127	773	562	459	368	321	293	283
2003	7,084	2,775	1,637	1,068	756	597	444	423	372	287
2004	3,655	7,444	2,782	1,699	1,139	759	720	453	371	348
2005	.	3,748	7,975	3,251	1,981	1,304	928	679	600	513
2006	.	.	3,586	7,810	3,381	2,166	1,349	934	696	657
2007	.	.	.	3,457	7,757	3,490	2,182	1,246	988	832
2008	.	.	.	.	3,769	7,508	3,176	2,044	1,294	975
2009	.	.	.	.	.	3,430	7,052	3,060	1,791	1,329
2010	.	.	.	.	.	.	3,401	7,417	3,038	1,973
2011	.	.	.	.	.	.	.	3,732	7,894	3,210
2012	.	.	.	.	.	.	.	.	3,690	7,659
2013	.	.	.	.	.	.	.	.	.	3,682
2014	.	.	.	.	.	.	.	.	.	.
2015	.	.	.	.	.	.	.	.	.	.
2016	.	.	.	.	.	.	.	.	.	.
2017	.	.	.	.	.	.	.	.	.	.
2018	.	.	.	.	.	.	.	.	.	.

(Continued)

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doIm					
	2014	2015	2016	2017	2018
	N	N	N	N	N
All	79,399	91,028	85,472	80,450	75,939
doEm	55,690	66,807	61,369	56,265	52,386
.	.	.	.	.	.
1969	.	.	.	.	.
1970	.	.	.	.	.
1971	.	.	.	.	.
1972	.	*	.	*	*
1973	9	14	10	9	10
1974	19	15	15	16	15
1975	23	15	11	19	21
1976	10	10	11	10	16
1977	11	15	13	15	7
1978	14	19	20	11	9
1979	25	19	20	9	11
1980	25	35	22	19	14
1981	28	11	35	27	21

1982	28	15	14	19	25
1983	25	27	21	31	25
1984	34	23	26	18	33
1985	30	28	38	37	27
1986	16	18	29	30	18
1987	27	26	28	29	21
1988	38	30	21	30	24
1989	42	43	23	18	33
1990	35	31	27	18	31
1991	42	30	37	23	30
1992	40	42	29	34	42
1993	53	34	39	37	38
1994	71	58	53	51	44
1995	63	67	52	55	51
1996	81	109	78	56	53
1997	117	81	94	83	73
1998	117	113	111	100	82
1999	134	122	132	115	110
2000	171	168	132	129	132
2001	201	191	161	161	133
2002	239	217	197	158	163
2003	258	230	191	207	193
2004	333	326	248	255	202
2005	397	382	351	270	265
2006	511	491	419	337	273
2007	637	505	503	431	336
2008	757	648	459	437	335
2009	984	741	565	556	324
2010	1,281	954	738	537	475
2011	2,030	1,340	987	711	564
2012	3,405	1,988	1,344	924	700
2013	7,756	3,383	2,039	1,346	908
2014	3,592	7,950	3,126	1,953	1,301
2015	.	3,656	8,039	3,180	2,014
2016	.	.	3,595	8,021	3,202
2017	.	.	.	3,652	7,776
2018	.	.	.	.	3,372
-----	-----	-----	-----	-----	-----

## 3.5 00d-base

Reads the cause of death register files and classifies deaths by cause in four categories: CVD, Cancer, Respiratory and Other. Also defines a 10-level categorization of causes of death.

1 "Program: 00d-base.sas" 15:09 Wednesday, August 12, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.12 seconds

cpu time 0.15 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```
1      proc format ;
2          value $grX /* 10 levels */
3              "A00"-"B999" = "Infect"
4              "C00"-"D099" = "Cancer"
5              "I00"-"I999" = "CVD"
6              "E10"-"E149" = "Diab"
7              "J00"-"J999" = "Respir"
8              "K00"-"K939" = "Digest"
9              "N00"-"N169" = "Urinal"
10             "N20"-"N999" = "Urinal"
11             "N17"-"N199" = "Renal"
12             "V01"-"Y999" = "Extern"
13             other = "Other" ;
```

NOTE: Format \$GRX has been output.

```
14
15         value $grX2IV /* 4 levels */
16             "Cancer" = "Can"
17             "CVD" = "CVD"
18             "Respir" = "Res"
19             other = "Oth" ;
```

NOTE: Format \$GRX2IV has been output.

```
20      run ;
```

NOTE: PROCEDURE FORMAT used (Total process time):

```
real time      0.00 seconds
cpu time       0.01 seconds
```

```
21
22      data d01 ;
23          keep pnr daa1 daa2 daa3 daa4 doDth ;
24          length daa1 daa2 daa3 daa4 $8 ;
25          set grund.dodsaars2001 ( rename = ( C_DOD1 = daa1
26                                              C_DOD2 = daa2
27                                              C_DOD3 = daa3
28                                              C_DOD4 = daa4
29                                              D_DODSDTO = doDth ) ) ;
30      run ;
```

NOTE: There were 1444199 observations read from the data set GRUND.DODSAARS2001.

NOTE: The data set WORK.D01 has 1444199 observations and 6 variables.

NOTE: DATA statement used (Total process time):

```
real time      3.82 seconds
cpu time       0.25 seconds
```

```
31
32      data d17 ;
33          keep pnr daa1 daa2 daa3 daa4 doDth ;
34          length daa1 daa2 daa3 daa4 $8 ;
35          set grund.dodsaasg2017 ( rename = ( C_DODTILGRUNDL_ACME = daa1
36                                              C_DOD_1A = daa2
37                                              C_DOD_1B = daa3
38                                              C_DOD_1C = daa4 ) ) ;
39          if D_DODSDATO le .z then doDth = D_STATDATO ;
40                      else doDth = D_DODSDATO ;
41      run ;
```

NOTE: There were 860599 observations read from the data set GRUND.DODSAASG2017.

NOTE: The data set WORK.D17 has 860599 observations and 6 variables.

NOTE: DATA statement used (Total process time):

```
real time      1.32 seconds
cpu time       0.17 seconds
```

```

42
43      proc sort  data = d01 ; by pnr ; run ;

```

NOTE: There were 1444199 observations read from the data set WORK.D01.

NOTE: The data set WORK.D01 has 1444199 observations and 6 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

      real time      0.41 seconds
      cpu time       0.78 seconds

```

```

44      proc sort  data = d17 ; by pnr ; run ;

```

NOTE: There were 860599 observations read from the data set WORK.D17.

NOTE: The data set WORK.D17 has 860599 observations and 6 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

      real time      0.16 seconds
      cpu time       0.39 seconds

```

```

45
46      data DMdat.CoD  ( keep = pnr doDth cod4 codX codD daar
47                      daa1 daa2 daa3 daa4 ) ;
48      retain  pnr doDth cod4 codX codD daar
49              daa1 daa2 daa3 daa4 ;
50      merge d01 d17 ;
51      by pnr ;
52      if ( doDth ge &ini. and doDth le &end. ) ;
53      codX = put( daa1, $grX. ) ;
54      codD = codX ;
55      * Reclassify death from diabetes to secondary causes ;
56
57      if codX eq "Diab" then do ; codX = put( daa2, $grX. ) ; daar = daa1 ;
58      if codX eq "Diab" then do ; codX = put( daa3, $grX. ) ; daar = daa2 ; end ;
59      if codX eq "Diab" then do ; codX = put( daa4, $grX. ) ; daar = daa3 ; end ;
60      * well, except for hypoglycaemia and ketoacidosis ;
61      if ( daa1 in ("E159","E160","E161","E162","E101","E111") or
62          daa2 in ("E159","E160","E161","E162","E101","E111") or
63          daa3 in ("E159","E160","E161","E162","E101","E111") or
64          daa4 in ("E159","E160","E161","E162","E101","E111") )
65      then codX = "Diab" ;
66      cod4 = put( codX, $grX2IV. ) ;
67      * to comply with the convention of the format $ICD010_L1L1_KT. ;
68      daar = "D" || daar ;
69      daa1 = "D" || daa1 ;
70      daa2 = "D" || daa2 ;
71      daa3 = "D" || daa3 ;
72      daa4 = "D" || daa4 ;
73      label cod4 = "CoD 4 groups"
74             codD = "CoD 10 groups"
75             codX = "CoD 10 groups w/ DM recoded"
76             daar = "CoD revised"
77             daa1 = "Primary CoD"
78             daa2 = "Secondary CoD"
79             daa3 = "Tertiary CoD"
80             daa4 = "Quarternary CoD" ;
81      run ;

```

NOTE: There were 1444199 observations read from the data set WORK.D01.

NOTE: There were 860599 observations read from the data set WORK.D17.

NOTE: The data set DMDAT.COD has 1211314 observations and 10 variables.

NOTE: DATA statement used (Total process time):

```

      real time      1.45 seconds
      cpu time       0.98 seconds

```

```

82
83      title 'Cause of death for entire population' ;
84      proc tabulate data = DMdat.CoD missing nosepts ;
85          class daar cod4 codX doDth ;
86          table cod4 * codX * daar,

```

```

87          N * f=comma10.
88          / rts = 75  indent = 2 ;
89          table doDth, ( all cod4 * codX=" " ) * f=comma6.
90          / rts = 11 ;
91          format doDth year.
92          daar $ICD10_L1L1_KT. ;
93          run ;

```

NOTE: There were 1211314 observations read from the data set DMDAT.COD.

NOTE: The PROCEDURE TABULATE printed pages 1-2.

NOTE: PROCEDURE TABULATE used (Total process time):

```

      real time      2.22 seconds
      cpu time       0.78 seconds

```

```

94
95          proc contents data = DMdat.CoD  varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

      real time      0.00 seconds
      cpu time       0.01 seconds

```

NOTE: The PROCEDURE CONTENTS printed page 3.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

```

      real time      9.69 seconds
      cpu time       3.56 seconds

```

### 3.5.1 00d-base.lst

Cause of death for entire population

15:09 Wednesday, August 12, 2020 1

		N
-----		
CVD		
CVD		
DI009	Gigtfeber uden hjertesygdom	9
DI010	Akut reumatisk perikarditis	*
DI011	Akut reumatisk endokarditis	*
DI012	Akut reumatisk myokarditis	*
DI018	Anden form for akut reumatisk hjertesygdom	*
DI019	Akut reumatisk hjertesygdom UNS	23
DI020	Reumatisk chorea med affektion af hjertet	*
DI029	Reumatisk chorea uden affektion af hjertet	*
DI050	Reumatisk mitralstenose	31
DI051	Reumatisk mitralinsufficiens	26
DI052	Reumatisk mitralstenose med insufficiens	21
DI058	Anden form for reumatisk mitralklapaffektion	8
DI059	Reumatisk mitralklapaffektion UNS	57
DI060	Reumatisk aortaklapstenose	71
DI061	Reumatisk aortaklapinsufficiens	15
DI062	Reumatisk aortaklapstenose med insufficiens	530
DI068	Anden form for reumatisk aortaklapaffektion	*
DI069	Reumatisk aortaklapaffektion UNS	17
DI070	Reumatisk trikuspidalstenose	*
DI071	Reumatisk trikuspidalinsufficiens	*
DI080	Affektioner af både mitralklap og aortaklap	108
DI081	Affektioner af både mitralklap og trikuspidalklap	15
DI082	Affektion af både trikuspidalklap og aortaklap	14
DI083	Affektioner af både mitralklap, trikuspidalklap og aortaklap	7
DI088	Anden form for affektion inddragende flere hjerteklapper	24
DI089	Affektion af flere hjerteklapper UNS	45

DI090	Reumatisk myokarditis	*
DI091	Reumatisk endokarditis uden angivelse af afficeret klap	11
DI092	Kronisk reumatisk perikarditis	5
DI098	Anden reumatisk hjertesygdom	*
DI099	Reumatisk hjertesygdom UNS	25
DI10	Blodtryksforhøjelse af ukendt årsag	536
DI109	Essentiel hypertension	8,037
DI110	Hypertensiv hjertesygdom med inkompenaseret hjertesvigt	2,814
DI119	Hypertensiv hjertesygdom uden inkomensation	1,237
DI120	Hypertensiv nyresygdom med nyresvigt	1,145
DI129	Hypertensiv nyresygdom uden nyresvigt	111
DI130	Hypertensiv hjertesygdom og nyresygdom med hjertesvigt	881
DI131	Hypertensiv hjertesygdom og nyresygdom med nyresvigt	187
DI132	Hypertensiv hjertesygdom og nyresygdom m. hjerte- og nyresvigt	1,559
DI139	Hypertensiv hjertesygdom og nyresygdom UNS	220
DI152	Hypertension sekundært til endokrin sygdom	*
DI200	Ustabil angina pectoris	103
DI201	Prinzmetals angina pectoris	11
DI208	Anden form for angina pectoris	22
DI209	Angina pectoris UNS	947
DI210	Anterior akut myokardieinfarkt med Q-taksudvikling	854
DI211	Inferiort/posterior akut myokardieinfarkt med Q-taksudv.	372
DI212	Infarctus myocardi acutus transmuralis m anden lokalisatio	540
DI213	ST-elevations akut myokardieinfarkt uden Q-taksudvikling	1,033
DI214	Non-ST-elevations akut myokardieinfarkt uden Q-taksudvikling	1,199
DI219	Akut myokardieinfarkt UNS	61,345
DI220	Infarctus myocardi acutus recidivans anterioris	4
DI221	Infarctus myocardi acutus recidivans inferioris	*
DI228	Infarctus myocardi acutus recidivans m anden lokalisatio	5
DI229	Infarctus myocardi acutus recidivans uden specifikation	3,312
DI230	Hæmoperikardium efter akut myokardieinfarkt	*
DI233	Ruptur i hjertevæg u hæmoperikardium eft AMI	*
DI240	Koronar trombose uden infarkt	26
DI241	Postmyokardieinfarktsyndrom	12
DI248	Anden form for akut iskæmisk hjertesygdom	606
DI249	Akut iskæmisk hjertesygdom UNS	6,837
DI250	Arteriosclerosis cardiovascularis	3,381
DI251	Arteriosklerotisk hjertesygdom	45,835
DI252	Gammelt myokardieinfarkt	5,563
DI253	Hjerteaneurisme	34
DI254	Koronararterieaneurisme	11
DI255	Iskæmisk kardiomyopati	984
DI256	Stum myokardieiskæmi	22
DI258	Anden form for kronisk iskæmisk hjertesygdom	3,285
DI259	Kronisk iskæmisk hjertesygdom UNS	14,610
DI260	Lungeemboli med akut cor pulmonale	550
DI269	Lungeemboli uden akut cor pulmonale	4,426
DI270	Essentiel pulmonal arteriel hypertension	375
DI271	Kyfoskoliotisk hjertesygdom	25
DI272	Kronisk tromboembolisk pulmonal hypertension	34
DI278	Anden pulmonal hjertesygdom	26
DI279	Pulmonal hjertesygdom UNS	500
DI281	Aneurysme i lungearterie	*
DI288	Anden sygdom i lungekredsløbet	4
DI289	Sygdom i lungekredsløb UNS	13
DI300	Akut idiopatisk perikarditis	37
DI301	Akut infektiøs perikarditis	21
DI308	Anden form for akut perikarditis	12
DI309	Akut perikarditis UNS	14
DI310	Kronisk adhesiv perikarditis	10
DI311	Kronisk konstriktiv perikarditis	50
DI312	Hæmoperikardium ikke klassificeret andetsteds	38
DI313	Non-inflammatorisk eksudativ perikarditis	22
DI318	Anden sygdom i perikardiet	11
DI319	Sygdom i perikardiet UNS	50
DI320	Perikarditis ved bakteriel sygdom klassificeret andetsteds	*
DI330	Akut eller subakut infektiøs endokarditis	367
DI339	Akut endokarditis UNS	324
DI340	Mitralinsufficiens	1,277
DI341	Mitralklapsprolaps	83

DI342	Ikke-reumatisk mitralstenose	174
DI348	Anden sygdom i mitralklap	21
DI349	Ikke-reumatisk mitralklaplidelse UNS	106
DI350	Aortastenose	5,858
DI351	Aortainsufficiens	536
DI352	Aortastenose med insufficiens	452
DI358	Anden form for aortaklapsygdom	72
DI359	Aortaklapsygdom UNS	374
DI360	Ikke-reumatisk trikuspidalstenose	4
DI361	Ikke-reumatisk trikuspidalinsufficiens	56
DI362	Ikke-reumatisk trikuspidalklapstenose med insufficiens	*
DI368	Anden form for ikke-reumatisk trikuspidalklapsygdom	*
DI369	Ikke-reumatisk trikuspidalklapsygdom UNS	*
DI370	Pulmonalklapstenose	*
DI371	Pulmonalklapinsufficiens	4
DI378	Anden form for pulmonalklapsygdom	*
DI379	Pulmonalklapsygdom UNS	*
DI38	Endokarditis uden angivelse klapaffektion	32
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DI398	Endokarditis UNS ved sygdom klassificeret andetsteds	*
DI400	Infektiøs myokarditis	31
DI408	Anden form for akut myokarditis	8
DI409	Akut myokarditis UNS	197
DI420	Dilateret kardiomyopati	968
DI421	Obstruktiv hypertrofisk kardiomyopati	113
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DI424	Fibroelastosis endocardii	17
DI425	Anden form for restriktiv kardiomyopati	41
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DI429	Kardiomyopati UNS	1,225
DI431	Kardiomyopati ved metabolisk sygdom klassificeret andetsteds	*
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DI446	Andet eller ikke specificeret venstresidigt grenblok	12
DI447	Venstresidigt grenblok UNS	22
DI450	Højresidigt fascikelblok	*
DI451	Anden eller ikke specificeret form for højresidigt grenblok	*
DI452	Bifascikulært blok	20
DI453	Trifascikulært blok	20
DI454	Intraventrikulært blok UNS	17
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DI456	Præexcitationssyndrom	13
DI458	Anden ledningsforstyrrelse i hjertet	31
DI459	Ledningsforstyrrelse i hjertet UNS	121
DI460	Hjertestop med vellykket genoplivning	1,036
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DI470	Ventrikulær takykardi (reentry)	13
DI471	Supraventrikulær takykardi med smalle QRS-komplekser	99
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DI48	Atrieflagren og atrieflimren	319
DI489	Atrieflagren eller atrieflimren UNS	13,960
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DI491	Supraventrikulære ekstrasystoler	*
DI492	AV junktionale ekstrasystoler	*
DI493	Ventrikulære ekstrasystoler	6
DI494	Anden form for ekstrasystoli	17
DI495	Syg sinusnude-syndrom	454
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DI499	Hjerterytmeforstyrrelse UNS	903
DI500	Kronisk hjereteinsufficiens	1,217
DI501	Venstresidig hjereteinsufficiens	5,372



DI509	Hjertesvigt UNS	23,623
DI510	Erhvervet defekt i hjerteskillevæg	4
DI511	Ruptur af chordae tendineae IKA	5
DI512	Papillærmuskelruptur i hjertet IKA	*
DI513	Intrakardiel trombose IKA	6
DI514	Myokarditis UNS	149
DI515	Myokardiedegeneration	51
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DI517	Kardiomegali	1,055
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DI601	Subaraknoidalblødning fra arteria cerebri media	204
DI602	Subaraknoidalblødning fra arteria communicans anterior	227
DI603	Subaraknoidalblødning fra arteria communicans posterior	42
DI604	Subaraknoidalblødning fra arteria basilaris	138
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DI609	Subaraknoidalblødning UNS	2,727
DI610	Subkortikal blødning i hjernehemisfære	314
DI611	Kortikal blødning i hjernehemisfære	144
DI612	Intracerebral blødning i hjernehemisfære UNS	1,257
DI613	Blødning i hjernestammen	565
DI614	Blødning i lillehjernen	418
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DI619	Hjerneblødning UNS	12,987
DI620	Akut ikke-traumatisk subdural blødning	1,021
DI621	Ikke-traumatisk epidural blødning	17
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DI632	Hjerneinfarkt f.a. tilluk./stenose i præcerebral arterie UNS	95
DI633	Hjerneinfarkt forårsaget af trombose i cerebral arterie	1,345
DI634	Hjerneinfarkt forårsaget af emboli i cerebral arterie	390
DI635	Hjerneinfarkt f.a. tillukning/stenose i cerebral arterie UNS	114
DI636	Hjerneinfarkt f.a. ikke-pyogen cerebral venøs trombose	20
DI638	Anden form for hjerneinfarkt	619
DI639	Hjerneinfarkt UNS	9,201
DI64	Slagtilfælde uden oplysning om blødning eller infarkt	1,689
DI640		*
DI649	Apoplexia cerebri UNS	48,853
DI650	Okklusion/stenose af arteria vertebralis uden hjerneinfarkt	*
DI651	Okklusion el. stenose af arteria basilaris u. hjerneinfarkt	*
DI652	Okklusion el. stenose af arteria carotis uden hjerneinfarkt	*
DI659	Okklusion/stenose af præcerebral arterie u. hjerneinfarkt UNS	*
DI663	Okklusion el. stenose af cerebellar arterie u. hjerneinfarkt	*
DI664	Okklusion/stenose af fl/bilaterale cerebrale aa. u/infarkt	*
DI669	Okklusion/stenose af cerebrale arterie UNS u. hjerneinfarkt	*
DI670	Dissektion af cerebral arterie uden ruptur	*
DI671	Cerebralt aneurisme uden ruptur	106
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DI678	Anden cerebrovaskulær sygdom	143
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DI694	Senfølge efter tidligere apoplexia cerebri	8,549
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DI701	Aterosklerose i nyrearterie	44
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DI711	Rumperet torakalt aorta-aneurisme	699
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DI713	Rumperet abdominalt aorta-aneurisme	4,034
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DI715	Rumperet torakoabdominalt aorta-aneurisme	997
DI716	Torakoabdominalt aorta-aneurisme uden ruptur	230
DI718	Rumperet aorta-aneurisme UNS	1,662
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DI720	Aneurisme på arteria carotis	31
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DI728	Aneurisme med anden lokalisering	116
DI729	Aneurisme UNS	101
DI730	Raynauds syndrom	4
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DI738	Anden sygdom i perifere kar	13
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DI743	Emboli eller trombose i arterie i underekstremitet	447
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DI745	Emboli eller trombose i arteria iliaca	84
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DI848	Hæmorrhoider UNS m anden komplikation	4
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DI872	Venøs insufficiens	33
DI878	Anden sygdom i vener	*
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DI880	Lymfadenitis i mesenteriet UNS	*
DI888	Anden lymfadenitis UNS	*
DI889	Lymfadenitis UNS	*
DI890	Lymfødem IKA	8
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DI950	Idiopatisk hypotension	64
DI951	Ortostatisk hypotension	12
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DI99	Andre og ikke specificerede kardiovaskulære sygdomme	4
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DC001	Kræft i underlæbens yderside	11
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DC004	Kræft i underlæbens slimhinde	8
DC005	Kræft i læbens slimhinde UNS	5
DC008	Kræft i læbe overgribende flere lokalisationer	19
DC009	Læbekræft UNS	57
DC01	Kræft i basis af tunge	*
DC019	Kræft i tungebasis	187
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DC021	Kræft i tungeranden	*
DC023	Kræft i tungens forreste to tredjedele UNS	8
DC024	Kræft i tonsilla lingualis	10
DC028	Kræft i tungen overgribende flere lokalisationer	133
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DC030	Kræft i tandkødet i overmund	36
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DC039	Kræft i tandkødet UNS	61
DC040	Kræft i mundgulvets forreste del	4
DC041	Kræft i mundgulvets laterale del	6
DC048	Kræft i mundgulvet overgribende flere lokalisationer	56
DC049	Kræft i mundgulvet UNS	229
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DC051	Kræft i den bløde gane	21
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DC068	Kræft i mundhulen overgribende flere lokalisationer	144
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DC088	Kræft i stor spytkirtel overgribende flere lokalisationer	9
DC089	Kræft i stor spytkirtel UNS	24
DC090	Kræft i tonsilleje	17
DC092	Kræft i tonsilla palatina	*
DC098	Kræft i tonsil overgribende flere lokalisationer	202
DC099	Kræft i tonsil UNS	760
DC100	Kræft i vallecula epiglottica	6
DC101	Kræft i strubelågets forflade	5
DC102	Kræft i oropharynx later Alvæg	8
DC103	Kræft i oropharynx bagvæg	*
DC104	Kræft i brankialcyste eller brankialfure	5
DC108	Kræft i mundsvælget overgribende flere lokalisationer	116
DC109	Kræft i mundsvælget UNS	544

DC110	Kræft i næsesvælgets loft	4
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DC118	Kræft i næsesvælget overgribende flere lokalisationer	33
DC119	Kræft i næsesvælget UNS	182
DC129	Kræft i recessus piriformis	17
DC130	Kræft i regio postcricoideae	4
DC131	Kræft i plica aryepiglottica	*
DC132	Kræft i hypopharynx bagvæg	34
DC138	Kræft i hypopharynx overgribende flere lokalisationer	132
DC139	Kræft i hypopharynx UNS	778
DC140	Kræft i svælget UNS	329
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DC142	Kræft i Waldeyers ring	*
DC148	Kræft i læbe, mundhule og svælg overgrib.fl.lokal.	50
DC150	Neopl mal oesophagi pars cervicalis	7
DC151	Neopl mal oesophagi pars thoracalis	14
DC152	Neopl mal oesophagi pars abdominalis	12
DC153	Kræft i spiserørets øverste tredjedel	7
DC154	Kræft i spiserørets midterste tredjedel	*
DC155	Kræft i spiserørets nederste tredjedel	45
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DC158	Kræft i spiserøret overgribende flere lokalisationer	1,449
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DC160	Kræft i cardia	2,434
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DC162	Kræft i corpus ventriculi	106
DC163	Kræft i antrum pyloricum	55
DC164	Kræft i pylorus	60
DC165	Kræft i curvatura gastrica minor	14
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DC168	Kræft i mavesækken overgribende flere lokalisationer	918
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DC172	Kræft i ileum	99
DC173	Kræft i Meckels divertikel	*
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DC223	Angiosarkom i leveren	68
DC224	Anden form for sarkom i leveren	45
DC227	Anden kræft i leveren	95
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DC23	Kræft i galdeblæren	14
DC239	Kræft i galdeblæren	701
DC240	Kræft i ekstrahepatiske galdeveje	539
DC241	Kræft i papilla Vateri	306
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DC250	Kræft i caput pancreatis	1,678

DC251	Kræft i corpus pancreatis	373
DC252	Kræft i cauda pancreatis	224
DC253	Kræft i ductus pancreaticus	35
DC254	Kræft i Langerhanske øer	16
DC257	Kræft i andre dele af pancreas	175
DC258	Kræft i pancreas overgribende flere lokalisationer	2,671
DC259	Kræft i pancreas UNS	13,617
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DC268	Kræft i fordøj-org. overgrib.fl.lokal.	64
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DC311	Kræft i sinus ethmoidalis	6
DC312	Kræft i pandehulen	*
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DC320	Kræft i glottis	138
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DC342	Kræft i lungens mellemste lap	399
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DC348	Kræft i bronkier og lunge overgribende flere lokalisationer	8,355
DC349	Kræft i lunge UNS	66,196
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DC379	Kræft i thymus	82
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DC381	Kræft i mediastinum anterius	17
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DC400	Kræft i skulderblad, lange knogler eller ledbrusk i arm	28
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DC402	Kræft i lang knogle eller ledbrusk i underekstremitet	80
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DC409	Kræft i knogle eller ledbrusk i ekstremitet UNS	78
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DC411	Kræft i underkæben	55
DC412	Kræft i rygsøjlen	62
DC413	Kræft i ribben, brystben eller kraveben	16
DC414	Kræft i bækken, korsben eller haleben	62
DC418	Kræft i knogle/ledbrusk overgribende flere lokalisationer	23
DC419	Kræft i knogle eller ledbrusk UNS	173
DC430	Malignt melanom i hud på læbe	7
DC431	Malignt melanom i hud på øjenlåg	17
DC432	Malignt melanom i hud på øre eller i ydre øregang	11
DC433	Malignt melanom med anden/ikke spec. lokalisation i ansigtet	157
DC434	Malignt melanom i hud på skalpen eller halsen	60
DC435	Malignt melanom i hud på kroppen	482
DC436	Malignt melanom i hud på overekstremitet	88
DC437	Malignt melanom i hud på underekstremitet	242
DC438	Malignt melanom overgribende flere lokalisationer	994
DC439	Malignt melanom i huden UNS	3,283
DC440	Anden hudkræft på læbe	15
DC441	Anden hudkræft på øjenlåg	14

DC442	Anden hudkræft på øre eller i ydre øregang	93
DC443	Anden hudkræft i ansigtet med anden/ikke spec. lokalisation	269
DC444	Anden hudkræft på skalpen eller halsen	108
DC445	Anden hudkræft på kroppen	60
DC446	Anden hudkræft på overekstremitet	49
DC447	Anden hudkræft på underekstremitet	55
DC448	Anden hudkræft overgribende flere lokalisationer	71
DC449	Anden hudkræft UNS	438
DC450	Malignt mesoteliom i lungehinde	1,219
DC451	Malignt mesoteliom i bughinden	113
DC452	Malignt mesoteliom i perikardiet	5
DC457	Malignt mesoteliom med anden lokalisation	80
DC459	Malignt mesoteliom UNS	454
DC460	Kaposi sarkom i huden	8
DC461	Kaposi sarkom i bindevæv	*
DC467	Kaposi sarkom med anden lokalisation	8
DC468	Kaposi sarkom i multiple lokalisationer	14
DC469	Kaposi sarkom UNS	24
DC470	Kræft i perifer nerve el. auton.NS i hoved, ansigt el. hals	*
DC471	Kræft i perifer nerve eller autonome nervesystem i arm	5
DC472	Kræft i perifer nerve eller autonome nervesystem i ben	4
DC473	Kræft i perifer nerve eller autonome nervesystem i thorax	5
DC474	Kræft i perifer nerve eller autonome nervesystem i abdomen	7
DC475	Kræft i perifer nerve eller autonome nervesystem i bækkenet	4
DC476	Kræft i perifer nerve el. autonome nervesystem i truncus UNS	*
DC478	Kræft i perifere nerver el. auton.NS overgribende fl. lokal.	4
DC479	Kræft i perifer nerve eller autonome nervesystem UNS	23
DC480	Kræft i retroperitoneum	223
DC481	Kræft i spec. del af peritoneum	40
DC482	Kræft i peritoneum UNS	91
DC488	Kræft i bughinden og bughulens bagvæg overgrib.fl.lokal.	26
DC490	Kræft i bindevæv og bløddelsvæv i hoved, ansigt eller hals	55
DC491	Kræft i bindevæv og bløddelsvæv i overekstremitet	44
DC492	Kræft i bindevæv og bløddelsvæv i underekstremitet	206
DC493	Kræft i bindevæv og bløddelsvæv i thorax	64
DC494	Kræft i bindevæv og bløddelsvæv i abdomen	123
DC495	Kræft i bindevæv og bløddelsvæv i bækkenet	48
DC496	Kræft i bindevæv og bløddelsvæv i truncus UNS	49
DC498	Kræft i bindevæv og bløddelsvæv overgrib.fl.lokal.	42
DC499	Kræft i bindevæv og bløddelsvæv UNS	535
DC500	Kræft i brystvorte eller areola mammae	12
DC501	Brystkræft i den centrale del af mamma	11
DC502	Brystkræft i den øvre mediale kvadrant af mamma	*
DC503	Brystkræft i den nedre mediale kvadrant af mamma	4
DC504	Brystkræft i den øvre laterale kvadrant af mamma	10
DC505	Brystkræft i den nedre laterale kvadrant af mamma	*
DC506	Brystkræft i processus axillaris mammae	*
DC508	Brystkræft overgribende flere lokalisationer	5,032
DC509	Brystkræft UNS	22,513
DC510	Kræft i stor kønslæbe	11
DC511	Kræft i lille kønslæbe	*
DC512	Kræft i klitoris	*
DC518	Kræft i ydre kvind. kønsorganer overgrib.fl.lokal.	144
DC519	Kræft i ydre kvindelige kønsorganer UNS	542
DC52	Kræft i vagina	8
DC529	Vaginakræft	203
DC530	Neopl mal endocervicis uteri	9
DC531	Neopl mal cervicis uteri, planocellulært carcinom st. I	11
DC532	Neopl mal cervicis uteri, planocellulært carcinom st. II	23
DC533	Neopl mal cervicis uteri, planocellulært carcinom st. III	66
DC534	Neopl mal cervicis uteri, planocellulært carcinom st. IV	47
DC538	Neopl mal cervicis uteri overgribende flere regioner	402
DC539	Livmoderhalskræft	2,243
DC541	Neopl mal fundi uteri, st. I	55
DC542	Neopl mal myometrii, alle stadier	5
DC543	Neopl mal endometrii, st. I	43
DC544	Neopl mal endometrii, st. II	7
DC545	Neopl mal endometrii, st. III	29
DC546	Neopl mal endometrii, st. IV	16
DC548	Neopl mal corporis uteri overgribende flere regioner	264

DC549	Livmoderkraft	2,005
DC55	Kraft i livmoderen uden nærmere spec. lokalisation	25
DC559	Kraft i livmoderen uden nærmere spec. lokalisation	1,383
DC56	Kraft i æggestok	229
DC560	Neopl mal ovarii, st. I	*
DC561	Neopl mal ovarii, st. II	15
DC562	Neopl mal ovarii, st. III	194
DC563	Neopl mal ovarii, st. IV	137
DC569	Æggestokkraft	8,272
DC570	Kraft i æggeleder	138
DC571	Kraft i ligamentum latum uteri	*
DC574	Kraft i adnexa uteri	32
DC577	Kraft i anden spec. struktur i kvindeligt kønsorgan	16
DC578	Kraft i kvind. kønsorganer overgrib.fl.lokal.	50
DC579	Kraft i kvindeligt kønsorgan UNS	317
DC589	Kraft i moderkagen UNS	*
DC600	Kraft i forhuden	*
DC601	Kraft i glans penis	10
DC602	Kraft i corpus penis	9
DC608	Kraft i penis overgribende flere lokalisationer	48
DC609	Kraft i penis UNS	195
DC61	Kraft i blærehalskirtlen	6,146
DC619	Prostatakraft	18,650
DC620	Kraft i ikke-nedstegen testikel	*
DC621	Kraft i testikel i scrotum	24
DC629	Testikelkraft UNS	258
DC631	Kraft i sædstreng	*
DC632	Kraft i scrotum	6
DC638	Kraft i mand. kønsorganer overgrib.fl.lokal.	*
DC639	Kraft i mandligt kønsorgan UNS	16
DC64	Nyrekraft	202
DC649	Nyrekraft	6,552
DC65	Kraft i nyrebækken	11
DC659	Kraft i nyrebækken	680
DC66	Kraft i urinleder	5
DC669	Kraft i urinleder	247
DC670	Neopl mal trigoni vesicae urinariae	8
DC671	Neopl mal vesicae urinariae loft	*
DC672	Neopl mal vesicae urinariae sidevæg	*
DC673	Neopl mal vesicae urinariae forvæg	*
DC674	Neopl mal vesicae urinariae bagvæg	*
DC675	Neopl mal cervicis vesicae urinariae	*
DC676	Kraft i ostium ureteris	*
DC677	Kraft i urachus	6
DC678	Neopl mal vesicae urinariae overgribende flere regioner	1,398
DC679	Kraft i urinblæren UNS	10,366
DC680	Kraft i urinrørret	58
DC681	Kraft i glandula paraurethralis s. bulbourethralis	*
DC688	Kraft i urinorganer overgribende flere lokalisationer	57
DC689	Kraft i urinorgan UNS	157
DC690	Kraft i conjunctiva	*
DC691	Kraft i cornea	*
DC692	Kraft i retina	9
DC693	Kraft i choroidea	45
DC694	Kraft i corpus ciliare	4
DC695	Kraft i tårekirtel eller tårekanal	9
DC696	Kraft i øjenhule	20
DC697	Malignt melanom i øjet	13
DC698	Kraft i øje overgribende flere lokalisationer	7
DC699	Kraft i øje UNS	207
DC700	Kraft i hjernehinde	94
DC701	Kraft i rygmarvshinde	5
DC709	Kraft i hjernehinde eller rygmarvshinde UNS	36
DC710	Kraft i storhjernen	374
DC711	Kraft i hjernens pandelap	497
DC712	Kraft i hjernens tindingelap	299
DC713	Kraft i hjernens isselap	228
DC714	Kraft i hjernens nakkelap	79
DC715	Intraventrikulær kraft i hjernen	31
DC716	Kraft i lillehjernen	125

DC717	Kræft i hjernestammen eller 4. ventrikel	182
DC718	Kræft i hjernen overgribende flere lokalisationer	506
DC719	Kræft i hjernen UNS	6,241
DC720	Kræft i rygmarven	46
DC721	Kræft i cauda equina	*
DC722	Kræft i lugtenerve	4
DC724	Kræft i hørenerve	4
DC728	Kræft i CNS overgrib.fl.lokal.	38
DC729	Kræft i centralnervesystemet UNS	80
DC73	Kræft i skjoldbruskkirtlen	21
DC739	Kræft i skjoldbruskkirtlen	805
DC740	Kræft i binyrebark	51
DC741	Kræft i binyremarv	28
DC749	Kræft i binyre UNS	196
DC750	Kræft i biskjoldbruskkirtel	9
DC751	Kræft i hypofysen	17
DC753	Kræft i corpus pineale	8
DC754	Kræft i glomus caroticum	*
DC755	Kræft i corpus para-aorticus eller andet paraganglion	7
DC758	Pluriglandulær kræft UNS	*
DC759	Kræft i endokrin kirtel UNS	48
DC760	Kræft i hoved/ansigt/hals uden nærmere spec. lokalisation	225
DC761	Kræft i thorax uden spec. lokalisation	97
DC762	Kræft i abdomen uden spec. lokalisation	3,357
DC763	Kræft i bækkenet uden spec. lokalisation	122
DC764	Kræft i arm u spec. lokal.	13
DC765	Kræft i ben u spec. lokal.	58
DC767	Kræft med anden dårligt specificeret lokalisation	91
DC768	Kræft med anden/dårligt spec. lokal. overgribende fl. lokal.	209
DC770	Metastase eller kræft UNS i lymfeknude i hoved/ansigt/hals	62
DC771	Metastase eller kræft UNS i intratorakal lymfeknude	18
DC772	Metastase eller kræft UNS i intraabdominal lymfeknude	21
DC773	Metastase eller kræft UNS i lymfeknude i axil eller arm	9
DC774	Metastase eller kræft UNS i lymfeknude i lyske el. ben	5
DC775	Metastase eller kræft UNS i intrapelvin lymfeknude	*
DC778	Metastase el. kræft UNS i lymfeknuder i mult. lokalisationer	31
DC779	Metastase eller kræft UNS i lymfeknude UNS	49
DC780	Fjernmetastase i lunge	552
DC781	Fjernmetastase i mediastinum	*
DC782	Fjernmetastase i lungehinde	9
DC783	Fjernmetastase med anden/ikke spec. lokal. i åndedrætsorgan	4
DC784	Fjernmetastase i tyndtarmen	*
DC785	Fjernmetastase i tyktarmen eller endetarmen	115
DC786	Metastase i retroperitoneale rum eller i peritoneum	20
DC787	Fjernmetastase i leveren	103
DC788	Fjernmetastase m. anden/ikke spec. lokal. i fordøjelsesorgan	4
DC790	Fjernmetastase i nyre eller nyrebækken	80
DC791	Fjernmetastase i andet urinorgan eller mandligt kønsorgan	29
DC792	Fjernmetastase i huden	11
DC793	Fjernmetastase i hjernen eller hjernebinder	33
DC794	Fjernmetastase med anden/ikke spec. lokal. i nervesystemet	*
DC795	Fjernmetastase i knogle eller knoglemarven	10
DC796	Fjernmetastase i æggestok	136
DC798	Metastase UNS	17
DC80	Ikke nærmere spec. kræft (ukendt primærtumor)	534
DC800	Primær kræftsygdom uden kendt lokalisation	140
DC809	Kræftsygdom UNS	15,731
DC810	Nodulært lymfocytdomineret Hodgkin lymfom	6
DC811	Klassisk Hodgkin lymfom med nodulær sklerose	36
DC812	Klassisk Hodgkin lymfom med blandet cellularitet	27
DC813	Klassisk lymfocytfattigt Hodgkin lymfom	5
DC814	Klassisk lymfocytrigt Hodgkin lymfom	5
DC817	Andet klassisk Hodgkin lymfom	7
DC819	Hodgkin lymfom UNS	538
DC820	Follikulært lymfom, grad I	25
DC821	Follikulært lymfom, grad II	48
DC822	Follikulært lymfom, grad III	94
DC827	Andet follikulært lymfom	33
DC829	Follikulært lymfom UNS	141
DC830	Småcellet B-celle lymfom	97



DC831	Mantle celle lymfom (MCL)	102
DC832	Lymph mal non-Hodg af diff type mixed small and large cell	17
DC833	Diffust storcellet B-celle lymfom	940
DC834	Lymphoma mal non-Hodgkin af diffus immunoblastær type	11
DC835	Lymfoblastært lymfom	99
DC836	Lymphoma mal non-Hodgkin af diffus udifferentieret type	11
DC837	Burkitt lymfom	78
DC838	Andet ikke-follikulært lymfom	119
DC839	Ikke-follikulært (diffust) lymfom UNS	51
DC840	Mycosis fungoides	64
DC841	Sézarys sygdom	8
DC842	Lymphoma mal T-zone	*
DC843	Lymphoma mal lymfoepiteloidt	25
DC844	Perifert T-celle lymfom UNS	103
DC845	Andet modent NK/T-celle lymfom	445
DC850	Lymphosarcoma	13
DC851	B-celle lymfom UNS	1,706
DC857	Andet non-Hodgkin lymfom	111
DC859	Lymfom (neoplasi) UNS	3,102
DC860	Ekstranodalt NK/T-celle lymfom, nasal type	*
DC861	Hepatosplenisk T-celle lymfom	16
DC864	Blastisk NK-celle lymfom	4
DC865	Angioimmunoblastært T-celle lymfom	8
DC880	Waldenströms makroglobulinæmi	490
DC882	Anden heavy chain disease	*
DC883	Immunoproliferativ tyndtarmssygdom	5
DC884	Ekstranodalt marginalzone B-celle lymfom	19
DC887	Anden malign immunoproliferativ sygdom	7
DC889	Malign immunoproliferativ sygdom UNS	12
DC900	Myelomatose	4,692
DC901	Plasmacelle leukæmi	48
DC902	Solitært ikke-ossøst plasmacytom	16
DC903	Solitært ossøst plasmacytom	*
DC910	Akut lymfoblastær leukæmi (ALL)	455
DC911	Kronisk lymfatisk leukæmi af B-celle type (B-CLL)	3,047
DC912	Leukaemia lymphatica subacuta	13
DC913	Prolymfocyt leukæmi af B-celle type	34
DC914	Hårcelle leukæmi	54
DC915	Adult T-celle lymfom/leukæmi (HTLV-1-associeret)	29
DC916	Prolymfocyt leukæmi af T-celle type	11
DC917	Anden lymfatisk leukæmi	21
DC918	Moden B-celle leukæmi af Burkitt-type	*
DC919	Lymfatisk leukæmi UNS	89
DC920	Akut myeloblastær leukæmi (AML)	3,676
DC921	Kronisk myeloid leukæmi (CML), BCR/ABL-positiv	707
DC922	Atypisk kronisk myeloid leukæmi, BCR/ABL-negativ	85
DC923	Myeloidt sarkom	57
DC924	Akut myeloblastær leukæmi, AML M3	15
DC925	Akut myeloblastær leukæmi, AML M4	66
DC926	Akut myeloblastær leukæmi med 11q23-abnormalitet	*
DC927	Anden myeloid leukæmi	97
DC928	Akut myeloid leukæmi med multilinje dysplasi	124
DC929	Myeloid leukæmi UNS	199
DC930	Akut monoblastær leukæmi, AML M5	26
DC931	Kronisk myelomonocytær leukæmi, CMML	94
DC937	Anden monocytær leukæmi	6
DC939	Monocytær leukæmi UNS	8
DC940	Akut erytroid leukæmi, M6 (a)(b)	22
DC942	Akut megakaryoblastær leukæmi, M7	4
DC943	Mastcelle leukæmi	*
DC944	Akut myelofibrose	*
DC945	Myelofibrosis acuta	83
DC946	Uklassificerbar myelodysplasi/myeloproliferativ sygdom	13
DC947	Anden leukæmi	20
DC950	Akut leukæmi af ikke spec. celletype	394
DC951	Kronisk leukæmi af ikke spec. celletype	178
DC952	Leukaemia subacuta uden specifikation	*
DC957	Anden leukæmi af ikke spec. celletype	11
DC959	Leukæmi UNS	422
DC960	Multifokal og multisyst. Langerhans-celle histiocytosis	*

DC961	Histiocytosis maligna	15
DC962	Malign mastcelle tumor	7
DC963	Lymphoma mal histiocyticum verum	*
DC964	Dendritcelle sarkom (accessoriske celler)	4
DC967	Anden malign neoplasi fra lymfoidt eller hæmatopoietisk væv	9
DC969	Malign neoplasi fra lymfoidt eller hæmatopoietisk væv UNS	88
DC97	Kræft opstået uafhængigt i flere lokalisationer	1,226
DC979	Neopl mal primarium flere lokalisationer	52
DD010	Carcinoma in situ i tyktarmen	*
DD012	Carcinoma in situ i endetarmen	4
DD015	Carcinoma in situ i leveren, galdeblæren eller galdeveje	13
DD019	Carcinoma in situ i fordøjelseskanalen UNS	4
DD020	Carcinoma in situ i strubehovedet	*
DD022	Carcinoma in situ i bronkie eller lunge	20
DD023	Carcinoma in situ med anden lokalisation i åndedrætsorganer	*
DD037	Melanoma in situ på underekstremitet	*
DD039	Melanoma in situ UNS	*
DD043	Carcinoma in situ i hud i ansigtet med an./ikke spec. lokal.	*
DD044	Carcinoma in situ i hud på skalpen eller halsen	*
DD046	Carcinoma in situ i hud på overekstremitet	*
DD048	Carcinoma in situ i huden med anden lokalisation	*
DD049	Carcinoma in situ i huden UNS	*
DD051	Intraduktalt carcinoma in situ i mamma	*
DD059	Carcinoma in situ i mamma UNS	4
DD067	Carc in situ cervicis uteri m anden lokalisation	*
DD070	Endometriehyperplasi med atypi	*
DD071	Carcinoma in situ i vulva	*
DD074	Carcinoma in situ på penis	*
DD075	Carcinoma in situ i prostata	4
DD090	Carcinoma in situ (Tis) i urinblæren	19
DD091	Carcinoma in situ (Tis) med anden/ikke spec. lok. i urinveje	*
DD092	Carcinoma in situ i øje	*
DD097	Carcinoma in situ med anden lokalisation	*
DD099	Carcinoma in situ UNS	*
Oth		
Diab		
D		182
D0000		*
DA410	Sepsis forårsaget af Staphylococcus aureus	*
DA419	Sepsis UNS	37
DA469	Rosen UNS	*
DA498	Anden bakteriel infektion uden angivelse af lokalisation	*
DA499	Bakteriel infektion UNS	*
DB999	Anden eller ikke specificeret infektionssygdom	*
DC138	Kræft i hypopharynx overgribende flere lokalisationer	*
DC159	Kræft i spiserøret UNS	*
DC189	Kræft i tyktarmen UNS	*
DC220	Hepatocellulært karcinom	*
DC221	Kræft i intrahepatiske galdegange	*
DC252	Kræft i cauda pancreatis	*
DC258	Kræft i pancreas overgribende flere lokalisationer	*
DC259	Kræft i pancreas UNS	4
DC383	Kræft i mediastinum UNS	*
DC509	Brystkræft UNS	*
DC619	Prostatakræft	4
DC649	Nyrekræft	*
DC659	Kræft i nyrebækken	*
DC809	Kræftsygdom UNS	*
DC851	B-celle lymfom UNS	*
DC97	Kræft opstået uafhængigt i flere lokalisationer	*
DD809	Immundefekt med overvejende antistofmangel UNS	*
DE107	Type 1-diabetes med multiple komplikationer	*
DE110	Type 2-diabetes med koma	*
DE139	Anden diabetes uden komplikationer	*
DE159	Hypoglykæmisk koma UNS	40
DE160	Hypoglykæmi uden koma forårsaget af lægemiddel	*
DE161	Anden form for hypoglykæmi	13
DE162	Hypoglykæmi UNS	111
DE271	Primær binyrebarkinsufficiens	*
DE419	Svækkelse forårsaget af underernæring UNS	*

DE512	Wernickes encefalopati	*
DE725	Forstyrrelser i glycinomsætningen	*
DE729	Forstyrrelse i aminosyreomsætningen UNS	*
DE869	Volumennedsættelse af plasma eller ekstracellulær væske	4
DE871	Hypoosmolalitet eller hyponatriæmi	*
DE872	Acidose	31
DE875	Hyperkaliæmi	*
DF009	Demens ved Alzheimers sygdom UNS	*
DF011	Multi-infarkt demens	*
DF039	Demens UNS	*
DF101	Skadelig brug af alkohol	*
DF102	Alkoholafhængighedssyndrom	11
DF107	Sen psykotisk eller residual tilstand f.a. alkoholbrug	*
DF192	Afhængighedssyndrom v. brug af fl./andre psykoaktive stoffer	*
DF500	Nervøs spisevægning	*
DF708	Lettere mental retardering med anden påvirkning af adfærd	*
DG009	Bakteriel meningitis UNS	*
DG359	Dissemineret sklerose UNS	*
DG419	Status epilepticus UNS	*
DG710	Muskeldystrofi	*
DG838	Andet paralytisk syndrom	*
DG931	Anoksisk hjerneskade IKA	*
DG934	Encefalopati UNS	*
DG935	Compressio cerebri	*
DG936	Hjerneødem	*
DG939	Hjernesygdom UNS	*
DI129	Hypertensiv nyresygdom uden nyresvigt	*
DI209	Angina pectoris UNS	*
DI210	Anteriort akut myokardieinfarkt med Q-taksudvikling	*
DI219	Akut myokardieinfarkt UNS	14
DI229	Infarctus myocardii acutus recidivans uden specifikation	*
DI249	Akut iskæmisk hjertesygdom UNS	*
DI251	Arteriosklerotisk hjertesygdom	6
DI252	Gammelt myokardieinfarkt	*
DI420	Dilateret kardiomyopati	*
DI426	Alkoholisk kardiomyopati	*
DI429	Kardiomyopati UNS	*
DI442	3° Ophævet AV-overledning (AV-blok)	*
DI443	Atrioventrikulært hjerteblok UNS	*
DI460	Hjertestop med vellykket genoplivning	*
DI461	Pludselig hjertedød	5
DI469	Hjertestop UNS	6
DI489	Atrieflagren eller atrieflimren UNS	*
DI495	Syg sinusknode-syndrom	*
DI498	Anden hjerterytmeforstyrrelse	*
DI499	Hjerterytmeforstyrrelse UNS	*
DI500	Kronisk hjereteinsufficiens	*
DI509	Hjertesvigt UNS	6
DI517	Kardiomegali	*
DI619	Hjerneblødning UNS	*
DI620	Akut ikke-traumatisk subdural blødning	*
DI639	Hjerneinfarkt UNS	*
DI649	Apoplexia cerebri UNS	13
DI678	Anden cerebrovaskulær sygdom	*
DI694	Senfølge efter tidligere apoplexia cerebri	*
DI702	Aterosklerose i arterie i underekstremitet	*
DI709	Aterosklerose UNS	*
DI713	Rumperet abdominalt aorta-aneurisme	*
DI719	Aorta-aneurisme UNS uden ruptur	*
DI742	Emboli eller trombose i arterie i overekstremitet	*
DI958	Anden form for hypotension	*
DJ139	Pneumoni forårsaget af Streptococcus pneumoniae	*
DJ151	Pneumoni forårsaget af Pseudomonas	*
DJ152	Pneumoni forårsaget af stafylokokker	*
DJ158	Anden bakteriel pneumoni	*
DJ159	Bakteriel pneumoni UNS	4
DJ180	Bronkopneumoni UNS	*
DJ189	Pneumoni UNS	20
DJ441	Kronisk obstruktiv lungesygdom med akut eksacerbation UNS	*
DJ449	Kronisk obstruktiv lungesygdom UNS	*

DJ690	Aspirationspneumoni forårsaget af fødeemner el. maveindhold	6
DJ819	Lungeødem UNS	*
DJ960	Akut respirationsinsufficiens	21
DJ969	Respirationsinsufficiens UNS	10
DK264	Kronisk eller ikke specificeret duodenalulcus med blødning	*
DK290	Akut blødende gastritis	*
DK297	Mavekatar UNS	*
DK550	Akut karsygdom i tarm	*
DK631	Ikke-traumatisk perforation af tarmen	*
DK700	Alkoholisk fedtlever	*
DK702	Alkoholisk leverfibrose	*
DK703	Alkoholisk levercirrose	6
DK709	Alkoholisk leversygdom UNS	*
DK720	Akut eller subakut leverinsufficiens	*
DK729	Leversvigt UNS	*
DK732	Kronisk aktiv hepatitis IKA	*
DK746	Anden eller ikke specificeret levercirrose	*
DK859	Akut pankreatitis UNS	*
DK860	Kronisk alkoholisk pankreatitis	9
DK861	Anden form for kronisk pankreatitis	*
DK922	Gastrointestinal blødning UNS	*
DL899	Decubitus UNS	*
DM179	Knæledsartrose UNS	*
DM353	Reumatisk polymyalgi	*
DN059	Glomerulonefrit UNS	*
DN109	Akut tubulointerstitiel nefritis UNS	*
DN159	Tubulointerstitiel nyresygdom UNS	*
DN179	Akut nyreinsufficiens UNS	*
DN180	Terminal nyreinsufficiens	*
DN189	Kronisk nyreinsufficiens UNS	4
DN199	Nyreinsufficiens UNS	*
DN300	Akut blærebetændelse	*
DR092	Respirationsstop	24
DR549	Senilitet	*
DR570	Kardiogent shock	*
DR571	Hypovolæmisk shock	*
DR572	Septisk shock	*
DR578	Anden form for shock	*
DR579	Shock UNS	*
DR649	Kakeksi UNS	*
DR989	Mors causa ignota (fundet død)	4
DR999	Mors uden specifikation	4
DT719	Asfyksi	*
DT814	Infektion efter indgreb IKA	*
DW190		*
DX59		*
DX590		*
DX64	Forsætlig selvskade m. uspec. lægemidler og biologiske stof.	*
Digest		
DK028	Anden form for karies	*
DK040	Pulpitis	*
DK045	Kronisk apikal parodontitis	*
DK047	Periapikal tandabsces uden fistel	15
DK050	Akut gingivitis	*
DK052	Akut parodontitis	4
DK053	Kronisk parodontitis	*
DK068	An. sygd. i gingiva/processus alveolaris eft tab af tænder	*
DK071	Abnormt forhold mellem kæber og basis cranii	*
DK089	Sygdom i tænder eller støttevæv UNS	8
DK102	Betændelsestilstand i kæbe	5
DK103	Ostitis alveolaris	*
DK108	Anden sygdom i kæbe	*
DK110	Atrofi af spytkirtel	*
DK112	Betændelse i spytkirtel	45
DK113	Absces i spytkirtel	7
DK117	Sekretionsforstyrrelse i spytkirtel	*
DK118	Anden sygdom i spytkirtel	*
DK119	Sygdom i spytkirtel UNS	*
DK121	Anden form for stomatitis	6
DK122	Flegmone eller absces i munden	8

DK132	Leukoplakia eller anden forstyrrelse i mundslimhinden	*
DK137	Anden eller ikke nærmere specificeret sygdom i mundslimhinde	*
DK140	Glossitis	*
DK149	Sygdom i tunge UNS	*
DK20	Betændelse i spiserøret	7
DK209	Øsofagitis UNS	106
DK210	Gastro-øsofageal reflux med øsofagitis	40
DK219	Gastro-øsofageal reflux uden øsofagitis	8
DK220	Kardia-akalasi	26
DK221	Ulcus i spiserøret	168
DK222	Obstruktion af spiserøret	245
DK223	Perforation af spiserøret	125
DK224	Spiserørskinesesi	10
DK225	Erhvervet øsofagusdivertikel	42
DK226	Mallory-Weiss' syndrom	20
DK227	Barretts øsofagus	6
DK228	Anden sygdom i spiserøret	33
DK229	Sygdom i øsofagus UNS	36
DK250	Akut mavesår med blødning	951
DK251	Akut mavesår med perforation	593
DK252	Akut mavesår med blødning og perforation	112
DK253	Akut mavesår uden blødning eller perforation	51
DK254	Kronisk eller ikke specificeret mavesår med blødning	1,206
DK255	Kronisk eller ikke specificeret mavesår med perforation	801
DK256	Kronisk eller ikke spec. mavesår med blødning og perforation	75
DK257	Kronisk mavesår uden blødning eller perforation	61
DK259	Mavesår UNS uden blødning eller perforation	713
DK260	Akut duodenalulcus med blødning	813
DK261	Akut duodenalulcus med perforation	446
DK262	Akut duodenalulcus med blødning og perforation	99
DK263	Akut duodenalulcus uden blødning eller perforation	47
DK264	Kronisk eller ikke specificeret duodenalulcus med blødning	800
DK265	Kronisk el. ikke specificeret duodenalulcus med perforation	596
DK266	Kronisk/uspec. duodenalulcus med blødning og perforation	86
DK267	Kronisk duodenalulcus uden blødning eller perforation	17
DK269	Duodenalulcus UNS uden blødning eller perforation	358
DK270	Akut gastroduodenalt ulcus med blødning	306
DK271	Akut gastroduodenalt ulcus med perforation	111
DK272	Akut gastroduodenalt ulcus med blødning og perforation	36
DK273	Akut gastroduodenalt ulcus uden blødning eller perforation	15
DK274	Kronisk eller ikke spec. gastroduodenalt ulcus med blødning	499
DK275	Kronisk el. ikke spec. gastroduodenalt ulcus med perforation	291
DK276	Kronisk/uspec. gastroduodenalt ulcus med blødning og perfor.	25
DK277	Kronisk gastroduodenalt ulcus uden blødning el. perforation	15
DK279	Gastroduodenalt ulcus UNS uden blødning eller perforation	178
DK280	Akut gastrointestinalt sår med blødning	45
DK281	Akut gastrointestinalt sår med perforation	26
DK282	Akut gastrointestinalt sår med blødning og perforation	7
DK283	Akut gastrointestinalt sår uden blødning og perforation	*
DK284	Kronisk eller ikke spec. gastrointestinalt sår med blødning	46
DK285	Kronisk el. ikke spec. gastrointestinalt sår med perforation	31
DK286	Kronisk/uspec. gastrointestinalt sår med blødning og perfor.	*
DK287	Kronisk gastrointestinalt sår uden blødning og perforation	*
DK289	Gastrointestinalt sår UNS uden blødning eller perforation	16
DK290	Akut blødende gastritis	151
DK291	Anden form for akut mavekatar	10
DK292	Alkoholisk gastritis	57
DK293	Kronisk superficiel gastritis	7
DK294	Kronisk atrofisk gastritis	12
DK295	Kronisk gastritis UNS	57
DK296	Anden form for mavekatar	15
DK297	Mavekatar UNS	71
DK298	Duodenitis	*
DK299	Gastroduodenitis UNS	36
DK30	Funktionelt fordøjelsesbesvær	*
DK309	Funktionel dyspepsi UNS	35
DK310	Akut dilatation af mavesækken	*
DK311	Hyperτροφisk pylorostenose	28
DK312	Timeglasformet striktur eller stenose i mavesækken	6
DK315	Obstruktion af duodenum	39

DK316	Fistel fra mavesækken eller duodenum	7
DK317	Polyp i mavesækken eller duodenum	*
DK318	Anden sygdom i ventrikel eller duodenum	36
DK319	Sygdom i mavesækken eller duodenum UNS	29
DK350	Appendicitis acuta m diffus peritonitis	230
DK351	Appendicitis acuta m peritoneal absces	45
DK352	Akut appendicitis med generaliseret peritonitis	24
DK353	Akut appendicitis med lokaliseret peritonitis	23
DK358	Anden og ikke spec. akut appendicitis	14
DK359	Akut blindtarmsbetændelse uden specifikation	152
DK369	Kronisk eller recidiverende appendicitis	*
DK37	Blindtarmsbetændelse UNS	*
DK379	Appendicitis UNS	39
DK389	Sygdom i blindtarmen UNS	13
DK400	Bilateralt ingvinalhernie med ileus uden gangræn	21
DK401	Bilateralt ingvinalhernie med gangræn	9
DK402	Bilateralt ingvinalhernie uden ileus eller gangræn	10
DK403	Unilateralt ingvinalhernie med ileus uden gangræn	219
DK404	Unilateralt ingvinalhernie med gangræn	67
DK409	Ingvinalhernie UNS uden ileus eller gangræn	108
DK410	Bilateralt femoralhernie med ileus uden gangræn	8
DK411	Bilateralt femoralhernie med gangræn	5
DK413	Unilateralt femoralhernie med ileus uden gangræn	91
DK414	Unilateralt femoralhernie med gangræn	49
DK419	Femoralhernie UNS uden ileus eller gangræn	21
DK420	Umbilikalhernie med ileus uden gangræn	52
DK421	Umbilikalhernie med gangræn	23
DK429	Umbilikalhernie uden ileus eller gangræn	18
DK430	Incisionalhernie med ileus uden gangræn	112
DK431	Incisionalhernie med gangræn	36
DK432	Incisionalhernie uden ileus eller gangræn	*
DK433	Parastomalt hernie med ileus uden gangræn	10
DK434	Parastomalt hernie med gangræn	*
DK435	Parastomalt hernie uden ileus eller gangræn	*
DK436	Andet ventralhernie med ileus uden gangræn	8
DK437	Andet ventralhernie med gangræn	5
DK439	Ventralhernie UNS uden ileus eller gangræn	69
DK440	Diafragmahernie med ileus uden gangræn	37
DK441	Diafragmahernie med gangræn	14
DK449	Diafragmahernie uden ileus eller gangræn	178
DK450	Andet abdominalhernie med ileus uden gangræn	66
DK451	Andet abdominalhernie med gangræn	36
DK458	Andet abdominalhernie uden ileus eller gangræn	15
DK460	Abdominalhernie UNS med ileus uden gangræn	107
DK461	Abdominalhernie UNS med gangræn	42
DK469	Abdominalhernie UNS uden ileus eller gangræn	41
DK500	Crohns sygdom i tyndtarmen	31
DK501	Crohns sygdom i tyktarmen	34
DK508	Anden form for Crohns sygdom	9
DK509	Crohns sygdom UNS	354
DK510	Ulcerøs pancolitis	135
DK511	Ileocolitis (chronica) ulcerosa	18
DK512	Ulcerøs proktitis	10
DK513	Ulcerøs proktosigmoiditis	5
DK514	Inflammatoriske polypper	*
DK515	Venstresidig ulcerøs colitis	5
DK518	Anden form for ulcerøs colitis	32
DK519	Ulcerøs colitis UNS	289
DK520	Gastroenteritis eller colitis forårsaget af stråling	*
DK521	Toksisk gastroenteritis eller colitis	18
DK522	Gastroenteritis eller colitis f.a. allergi eller fødemiddel	*
DK523	Ikke spec. colitis	31
DK528	Anden form for ikke-infektiøs gastroenteritis eller colitis	46
DK529	Anden ikke-infektiøs gastroenteritis eller colitis UNS	179
DK550	Akut karsygdom i tarm	2,577
DK551	Kronisk karsygdom i tarm	152
DK552	Angiodysplasi i tyktarmen	30
DK558	Anden karsygdom i tarmen	40
DK559	Karsygdom i tarm UNS	531
DK560	Paralytisk ileus	182

DK561	Invagination	10
DK562	Volvulus	508
DK563	Galdestensileus	92
DK564	Anden form for tarmobstruktion	90
DK565	Tarmadhæreencer med tarmobstruktion	718
DK566	Anden eller ikke specificeret tarmobstruktion	638
DK567	Ileus UNS	2,410
DK570	Divertikulose el divertikulitis i tyndtarm. m perf el absces	128
DK571	Divertikulose el divertikulit i tyndtarmen u perf. el absces	49
DK572	Divertikulose/divertikulitis i tyktarmen m. perfor./absces	1,040
DK573	Divertikulose eller divertikulit i tyktarm u perf. el absces	607
DK574	Divertikler i både tynd- og tyktarm m perforation el absces	127
DK575	Divertikler i både tynd- og tyktarm u perforation el absces	15
DK578	Divertikler u. ang. af lokal. m. perforation el. absces	99
DK579	Divertikler uden lokalisering uden perforation eller absces	247
DK580	Irritabel tyktarm med diaré	15
DK589	Irritabel tyktarm uden diaré	6
DK590	Forstoppelse	300
DK591	Funktionel diaré	127
DK592	Neurogen tarmfunktionsforstyrrelse IKA	*
DK593	Megacolon IKA	48
DK598	Anden forstyrrelse i tarmfunktionen	7
DK599	Forstyrrelse i tarmfunktionen UNS	22
DK602	Analfissur UNS	*
DK603	Analfistel	*
DK604	Rektalfistel	7
DK605	Anorektal fistel	*
DK610	Analabsces	62
DK611	Rektalabsces	14
DK612	Anorektal absces	7
DK613	Iskiorektal absces	13
DK621	Rektal polyp	18
DK622	Analprolaps	6
DK623	Rektalprolaps	44
DK624	Stenose i anus eller rectum	9
DK625	Blødning fra anus eller rectum	324
DK626	Ulcus i anus eller rectum	*
DK627	Proktitis forårsaget af stråling	4
DK628	Anden sygdom i anus eller rectum	16
DK629	Sygdom i anus eller rectum UNS	5
DK630	Tarmabsces	56
DK631	Ikke-traumatisk perforation af tarmen	857
DK632	Tarmfistel	32
DK633	Tarmsår	26
DK635	Colonpolyp UNS	4
DK638	Anden tarmsygdom	75
DK639	Tarmsygdom UNS	139
DK649	Hæmorider UNS	5
DK650	Akut peritonitis	450
DK658	Anden form for peritonitis	83
DK659	Peritonitis UNS	219
DK660	Sammenvoksninger i bughinden	37
DK661	Blødning i peritoneum	21
DK668	Anden sygdom i bughinden	29
DK669	Sygdom i bughinde UNS	8
DK700	Alkoholisk fedtlever	611
DK701	Alkoholisk leverbetændelse	655
DK702	Alkoholisk leverfibrose	63
DK703	Alkoholisk levercirrose	11,745
DK704	Alkoholisk leverinsufficiens	1,511
DK709	Alkoholisk leversygdom UNS	870
DK710	Toksisk leversygdom med kolestase	7
DK711	Toksisk leversygdom med nekrose	48
DK712	Toksisk leversygdom med akut hepatitis	14
DK713	Toksisk leversygdom med kronisk persisterende hepatitis	*
DK715	Toksisk leversygdom med kronisk aktiv hepatitis	5
DK716	Toksisk leversygdom med hepatitis IKA	14
DK717	Toksisk leversygdom med fibrose eller cirrose	36
DK718	Toksisk leversygdom med anden manifestation i leveren	5
DK719	Toksisk leversygdom UNS	20

DK720	Akut eller subakut leverinsufficiens	235
DK721	Kronisk leverinsufficiens	158
DK729	Leversvigt UNS	564
DK730	Kronisk persisterende hepatitis IKA	23
DK732	Kronisk aktiv hepatitis IKA	46
DK738	Anden form for kronisk hepatitis IKA	14
DK739	Kronisk hepatitis UNS	40
DK740	Leverfibrose	20
DK741	Leverisklerose	6
DK742	Leverfibrose med sklerose	*
DK743	Primær biliær levercirrose	220
DK744	Sekundær biliær levercirrose	11
DK745	Biliær levercirrose UNS	112
DK746	Anden eller ikke specificeret levercirrose	1,551
DK750	Leverabsces	88
DK751	Pyleflebitis	*
DK752	Reaktiv hepatitis UNS	10
DK753	Granulomatøs hepatitis IKA	*
DK754	Autoimmun hepatitis	20
DK758	Anden inflammatorisk leversygdom	62
DK759	Inflammatorisk leversygdom UNS	13
DK760	Fedtdegeneration i leveren IKA	46
DK761	Leverstase	15
DK762	Central hæmoragisk levernekrose	*
DK763	Leverinfarkt	10
DK765	Tillukning af levervener	*
DK766	Portal hypertension	23
DK767	Hepatorenalt syndrom	75
DK768	Anden leversygdom	73
DK769	Lever sygdom UNS	177
DK800	Sten i galdeblæren med akut kolecystitis	247
DK801	Sten i galdeblæren med kronisk kolecystitis	86
DK802	Sten i galdeblæren uden kolecystitis	378
DK803	Sten i galdegang med kolangitis	204
DK804	Sten i galdegang med kolecystitis	91
DK805	Galdesten uden kolangitis eller kolecystitis	151
DK808	Anden form for galdesten	155
DK810	Akut kolecystitis	554
DK811	Kronisk kolecystitis	38
DK818	Anden form for kolecystitis	21
DK819	Kolecystitis UNS	345
DK820	Aflukning af ductus cysticus	19
DK821	Hydrops vesicae felleae	*
DK822	Perforation af galdeblæren	44
DK823	Fistel fra galdeblæren	4
DK828	Anden sygdom i galdeblæren	6
DK829	Sygdom i galdeblæren UNS	39
DK830	Kolangitis	416
DK831	Galdegangsobstruktion	142
DK832	Perforation af galdegang	13
DK833	Fistel fra galdegang	*
DK835	Galdegangscyste	*
DK838	Anden sygdom i galdevejene	24
DK839	Galdevejssygdom UNS	126
DK85	Akut betændelse i bugspytkirtel	28
DK850	Idiopatisk akut pankreatitis	12
DK851	Akut pankreatitis forårsaget af galdevejslidelse	94
DK852	Akut alkoholisk pankreatitis	86
DK853	Akut pankreatitis forårsaget af lægemiddel	*
DK858	Anden form for akut pankreatitis	27
DK859	Akut pankreatitis UNS	1,112
DK860	Kronisk alkoholisk pankreatitis	1,007
DK861	Anden form for kronisk pankreatitis	460
DK862	Pancreascyste	30
DK863	Pseudocyste i pancreas	5
DK868	Anden sygdom i pancreas	94
DK869	Pancreassygdom UNS	67
DK900	Cøliaki	30
DK901	Tropisk sprue	*
DK903	Pankreatisk steatoré	*



DK904	Malabsorption ved intolerans IKS	8
DK908	Anden form for malabsorption	9
DK909	Malabsorption UNS	11
DK911	Postgastrektomisyndrom	*
DK912	Malabsorption efter gastrointestinal kirurgi IKA	8
DK913	Postoperativ tarmobstruktion	*
DK914	Dårligt fungerende colostomi eller enterostomi	*
DK918	An. forstyrrelse i fordøjelsessyst. efter kir/med-beh IKA	*
DK920	Hæmatemese	1,163
DK921	Melæna	476
DK922	Gastrointestinal blødning UNS	2,502
DK928	Anden sygdom i fordøjelsessystemet	*
DK929	Sygdom i fordøjelsessystemet UNS	86
Extern		
DV01		5
DV010		*
DV011		20
DV019		*
DV02		11
DV020		*
DV021		25
DV029		*
DV03		169
DV030		28
DV031		544
DV039		65
DV04		46
DV040		15
DV041		125
DV049		16
DV05		48
DV050		51
DV051		17
DV059		22
DV06		5
DV060		*
DV09		19
DV090		20
DV091		6
DV092		17
DV093		11
DV099		7
DV10		*
DV100		*
DV104		4
DV11		7
DV110		*
DV114		7
DV119		*
DV12		*
DV120		*
DV124		10
DV129		*
DV13		112
DV130		25
DV131		*
DV132		*
DV134		276
DV135		5
DV139		51
DV14		64
DV140		7
DV142		*
DV143		*
DV144		143
DV145		*
DV149		27
DV15		6
DV154		*
DV159		*

DV16	*
DV164	*
DV17	11
DV170	6
DV171	*
DV174	13
DV179	4
DV18	35
DV180	13
DV182	*
DV183	*
DV184	65
DV185	*
DV189	14
DV19	12
DV190	*
DV193	5
DV194	17
DV195	*
DV196	*
DV198	8
DV199	11
DV20	*
DV200	*
DV202	*
DV204	*
DV214	5
DV219	*
DV22	6
DV220	*
DV222	*
DV223	*
DV224	9
DV225	*
DV229	5
DV23	130
DV230	23
DV233	*
DV234	270
DV235	20
DV239	60
DV24	20
DV240	6
DV244	64
DV245	4
DV249	8
DV25	*
DV254	6
DV26	*
DV264	5
DV265	*
DV27	56
DV270	13
DV271	*
DV272	*
DV274	105
DV275	6
DV279	17
DV28	34
DV280	12
DV281	*
DV283	*
DV284	72
DV289	10
DV29	24
DV290	4
DV293	*
DV294	9
DV298	12
DV299	22

DV32	*
DV325	*
DV329	*
DV33	*
DV330	*
DV335	13
DV339	*
DV34	*
DV340	*
DV345	*
DV349	*
DV37	*
DV370	*
DV375	*
DV38	5
DV380	*
DV389	*
DV39	4
DV393	*
DV394	*
DV395	*
DV398	*
DV399	*
DV40	*
DV400	*
DV405	7
DV406	*
DV409	*
DV421	*
DV424	*
DV425	*
DV426	5
DV43	259
DV430	26
DV431	4
DV434	9
DV435	719
DV436	298
DV439	119
DV44	149
DV440	22
DV441	*
DV445	342
DV446	114
DV449	38
DV45	8
DV455	17
DV457	*
DV459	*
DV46	4
DV460	*
DV461	*
DV465	6
DV466	*
DV47	178
DV470	45
DV471	7
DV475	404
DV476	161
DV479	89
DV48	68
DV480	20
DV481	5
DV484	*
DV485	182
DV486	74
DV489	33
DV49	48
DV490	*
DV491	*

DV493	6
DV494	29
DV495	24
DV496	*
DV498	13
DV499	112
DV506	*
DV53	6
DV530	*
DV531	*
DV535	24
DV536	8
DV539	4
DV54	7
DV540	*
DV545	25
DV546	*
DV549	6
DV555	*
DV559	*
DV565	*
DV57	10
DV570	*
DV571	*
DV575	22
DV576	4
DV577	*
DV579	5
DV58	*
DV580	*
DV585	14
DV586	5
DV589	*
DV59	*
DV594	*
DV595	*
DV598	5
DV599	*
DV63	*
DV635	6
DV636	*
DV639	*
DV64	7
DV640	*
DV642	*
DV645	8
DV646	*
DV649	*
DV659	*
DV67	4
DV671	*
DV675	4
DV68	*
DV682	*
DV685	4
DV686	*
DV689	4
DV69	*
DV693	*
DV694	*
DV695	*
DV698	*
DV699	*
DV73	*
DV733	*
DV736	*
DV740	*
DV744	*
DV745	*
DV746	6

DV77	*
DV776	*
DV78	*
DV780	*
DV781	*
DV784	*
DV786	*
DV79	*
DV795	*
DV798	*
DV799	*
DV800	28
DV804	*
DV808	*
DV809	5
DV810	*
DV812	*
DV813	*
DV814	4
DV817	*
DV818	*
DV819	5
DV83	*
DV830	4
DV835	7
DV836	*
DV837	*
DV839	*
DV84	12
DV840	13
DV841	*
DV842	*
DV843	*
DV844	*
DV845	25
DV846	*
DV847	5
DV849	10
DV85	4
DV850	*
DV851	4
DV854	*
DV855	5
DV856	*
DV857	*
DV859	*
DV86	*
DV860	*
DV861	*
DV865	5
DV866	*
DV867	*
DV869	*
DV870	*
DV873	*
DV875	*
DV876	*
DV877	*
DV878	*
DV880	*
DV886	*
DV887	*
DV888	*
DV889	*
DV89	18
DV890	*
DV892	13
DV899	43
DV900	7
DV901	*

DV902	32
DV903	11
DV904	11
DV905	4
DV908	4
DV909	29
DV910	*
DV911	*
DV912	6
DV913	4
DV914	*
DV917	*
DV919	*
DV920	4
DV921	*
DV922	9
DV923	13
DV924	15
DV925	9
DV928	6
DV929	23
DV930	*
DV931	*
DV932	6
DV933	*
DV935	*
DV938	*
DV939	*
DV94	*
DV942	*
DV943	*
DV948	*
DV949	4
DV950	9
DV951	9
DV952	21
DV953	4
DV958	*
DV959	*
DV961	*
DV962	4
DV968	*
DV972	12
DV973	*
DV98	8
DV99	36
DV990	6
DW00	48
DW000	*
DW01	1,026
DW010	32
DW02	*
DW020	*
DW03	9
DW030	*
DW04	11
DW040	*
DW05	74
DW050	20
DW06	196
DW060	46
DW07	67
DW070	13
DW08	107
DW080	*
DW09	*
DW10	551
DW100	293
DW11	69
DW110	40

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DW12	19
DW120	13
DW13	194
DW130	84
DW14	11
DW140	7
DW15	7
DW150	*
DW16	5
DW17	211
DW170	24
DW18	1,445
DW180	56
DW19	2,592
DW190	5,862
DW20	97
DW200	53
DW22	14
DW220	6
DW23	101
DW230	57
DW24	20
DW240	13
DW25	4
DW250	*
DW26	18
DW260	4
DW268	*
DW27	*
DW270	6
DW28	*
DW29	6
DW290	5
DW30	11
DW300	11
DW31	8
DW310	5
DW32	*
DW320	*
DW33	13
DW330	6
DW34	*
DW35	*
DW36	*
DW360	4
DW37	*
DW38	*
DW380	*
DW39	8
DW390	*
DW40	11
DW400	15
DW41	*
DW44	8
DW440	17
DW45	*
DW49	*
DW490	*
DW50	8
DW500	*
DW51	*
DW52	*
DW520	*
DW54	5
DW540	*
DW55	18
DW550	9
DW570	4
DW59	*
DW64	*

DW65	14
DW650	10
DW66	5
DW67	12
DW670	10
DW68	4
DW680	5
DW69	281
DW690	147
DW70	91
DW700	26
DW73	51
DW730	19
DW74	117
DW740	39
DW75	16
DW750	11
DW76	44
DW760	26
DW77	22
DW770	10
DW78	121
DW780	92
DW79	365
DW790	252
DW80	43
DW800	17
DW81	*
DW83	61
DW830	14
DW84	77
DW840	5
DW85	12
DW850	11
DW86	8
DW860	*
DW87	*
DW870	*
DW890	*
DW900	*
DW92	*
DW93	*
DW94	*
DW940	*
DX00	282
DX000	96
DX01	21
DX010	*
DX02	30
DX020	23
DX03	5
DX030	*
DX04	44
DX040	13
DX05	18
DX050	17
DX06	30
DX060	38
DX08	389
DX080	165
DX09	174
DX090	57
DX10	*
DX11	*
DX110	*
DX120	*
DX16	*
DX160	*
DX19	4
DX200	*



DX23	21
DX230	7
DX29	*
DX30	*
DX300	*
DX31	190
DX310	72
DX33	*
DX330	*
DX37	*
DX39	*
DX390	5
DX40	82
DX400	48
DX41	229
DX410	68
DX42	1,368
DX420	635
DX43	6
DX430	*
DX44	869
DX440	137
DX45	197
DX450	131
DX46	19
DX460	7
DX47	61
DX470	34
DX49	11
DX490	*
DX50	*
DX57	*
DX58	45
DX580	9
DX59	5,754
DX590	2,587
DX599	40
DX60 Forsætlig selvbeskadigelse med ikke-opioide analgetika o.l.	239
DX600	104
DX61 Forsætlig selvskade m psykofarmaka/antiepilep/antiparkin-mid	461
DX610	230
DX62 Forsætlig selvbeskadigelse med narkotika og psykodyseptika	435
DX620	183
DX63 Forsætlig selvskade m. midler m. virkning på det autonome NS	26
DX630	14
DX64 Forsætlig selvskade m. uspec. lægemidler og biologiske stof.	854
DX640	401
DX65 Forsætlig selvbeskadigelse med alkohol	45
DX650	11
DX66 Forsætlig selvskade m organisk opløs-mid/halogen-kulbrinter	32
DX660	5
DX67 Forsætlig selvbesk. med kulilte og andre gasarter og dampe	604
DX670	436
DX68 Forsætlig selvbeskadigelse med bekæmpelsesmidler	8
DX680	10
DX69 Forsætlig selvskade med andre kemiske og toksiske stoffer	27
DX690	18
DX70 Forsætlig selvskade ved hængning, strangulation og kvælning	3,954
DX700	1,850
DX71 Forsætlig selvbeskadigelse ved drukning og nedsænken i vand	550
DX710	346
DX72 Forsætlig selvbeskadigelse ved skud fra håndvåben	229
DX720	98
DX73 Forsætlig selvskade v skud f. gevær og an. større skydevåben	686
DX730	363
DX74 Forsætlig selvskade v. skud fra an. og uspec. skydevåben	71
DX740	39
DX75 Forsætlig selvbeskadigelse ved eksplosive materialer	6
DX750	18
DX76 Forsætlig selvbeskadigelse ved røg, ild og flammer	96

DX760	23
DX78 Forsætlig selvbeskadigelse med skarpe genstande	406
DX780	152
DX79 Forsætlig selvbeskadigelse med stumpe genstande	5
DX790	*
DX80 Forsætlig selvbeskadigelse ved spring fra højde	508
DX800	285
DX809	*
DX81 Forsætlig selvskade un køretøjer og genstande i bevægelse	386
DX810	156
DX82 Forsætlig selvbeskadigelse ved kollision med motorkøretøj	57
DX820	38
DX83 Forsætlig selvbeskadigelse med andre specificerede metoder	54
DX830	23
DX84 Forsætlig selvbeskadigelse med ikke specificerede metoder	11
DX840	4
DX85 Overgreb ved brug af lægemidler og biologiske stoffer	6
DX850	*
DX880	*
DX91 Overgreb ved hængning, strangulation og kvælning	101
DX910	59
DX92 Overgreb ved drukning	4
DX920	5
DX93 Overgreb ved skud fra håndskydevåben	55
DX930	15
DX94 Overgreb ved skud fra geværer og andre større skydevåben	43
DX940	38
DX95 Overgreb ved skud fra andre og ikke specificerede skydevåben	35
DX950	37
DX96 Overgreb ved brug af eksplosive materialer	6
DX960	*
DX97 Overgreb ved brug af røg, ild og flammer	8
DX970	*
DX99 Overgreb ved brug af skarpe genstande	218
DX990	119
DY00 Overgreb ved brug af stumpe genstande	63
DY000	27
DY01 Overgreb ved skub fra højde	*
DY010	*
DY02 Overgreb ved skub foran genstand i bevægelse	*
DY03 Overgreb ved påkørsel med motorkøretøj	7
DY04 Overgreb ved korporlig vold	60
DY040	39
DY071 Mishandling fra forælder (forældre)	*
DY08 Overgreb ved andre specificerede metoder	*
DY080	*
DY09 Overgreb ved ikke specificerede metoder	18
DY090	*
DY10	56
DY100	56
DY11	114
DY110	115
DY12	351
DY120	477
DY13	8
DY130	7
DY14	272
DY140	167
DY15	87
DY150	89
DY16	4
DY160	*
DY17	8
DY170	7
DY18	*
DY19	*
DY190	*
DY20	25
DY200	13
DY21	112

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DY210	88
DY22	6
DY220	7
DY23	7
DY230	4
DY24	5
DY240	*
DY250	*
DY26	74
DY260	49
DY270	*
DY28	10
DY280	15
DY29	4
DY290	*
DY30	39
DY300	23
DY31	19
DY310	8
DY32	14
DY320	8
DY33	24
DY330	14
DY34	124
DY340	48
DY350	6
DY351	*
DY356	*
DY362	6
DY364	*
DY400	*
DY420	*
DY43	*
DY442	*
DY478	*
DY482	*
DY495	*
DY497	*
DY50	*
DY525	*
DY57	*
DY578	*
DY60	184
DY600	28
DY601	*
DY602	*
DY604	21
DY605	4
DY606	15
DY607	*
DY608	15
DY609	33
DY61	*
DY63	7
DY638	5
DY639	*
DY650	*
DY652	5
DY653	*
DY654	21
DY658	59
DY69	10
DY700	*
DY832	*
DY839	*
DY848	*
DY850	36
DY859	17
DY86	56
DY860	129

DY870		12
DY871		6
DY872		56
DY881		*
DY899		*
Infect		
DA000	Kolera forårsaget af <i>Vibrio cholerae</i>	11
DA009	Kolera UNS	4
DA010	Tyfus	6
DA011	Paratyfus A	5
DA012	Paratyfus B	6
DA013	Paratyfus C	5
DA014	Paratyfus UNS	*
DA020	Salmonellaenterit	28
DA021	Salmonellasepsis	45
DA022	Lokaliseret salmonellainfektion	*
DA028	Anden salmonellainfektion	*
DA029	Salmonellainfektion UNS	13
DA038	Anden bacillær dysenteri	*
DA040	Enteritis f.a. enteropatogen <i>Escherichia coli</i> -infektion	*
DA041	Enteritis f.a. enterotoksisk <i>Escherichia coli</i> -infektion	4
DA042	Enteritis f.a. enteroinvasiv <i>Escherichia coli</i> -infektion	*
DA043	Enteritis f.a. enterohæmoragisk <i>Escherichia coli</i> -infektion	*
DA044	Anden tarminfektion med <i>Escherichia coli</i>	5
DA045	Enteritis forårsaget af <i>Campylobacter</i>	7
DA046	Enteritis forårsaget af <i>Yersinia enterocolitica</i>	*
DA047	Enterokolitis forårsaget af <i>Clostridium difficile</i>	1,123
DA048	Anden bakteriel enteritis	15
DA049	Enteritis forårsaget af bakterier UNS	53
DA050	Fødevareforgiftning forårsaget af stafylokokker	6
DA052	Fødevareforgiftning forårsaget af <i>Clostridium perfringens</i>	15
DA054	Fødevareforgiftning forårsaget af <i>Bacillus cereus</i>	*
DA058	Anden bakteriel fødevareforgiftning	6
DA059	Bakteriel fødevareforgiftning UNS	*
DA062	Colitis forårsaget af amøbeinfektion	*
DA064	Leverabsces forårsaget af amøbeinfektion	*
DA068	Amøbeinfektion med anden lokalisation	*
DA069	Amøbeinfektion UNS	*
DA078	Anden tarminfektion forårsaget af protozoer	*
DA079	Tarmsygdom forårsaget af protozoer UNS	*
DA080	Enteritis forårsaget af rotavirus	4
DA081	Akut gastroenteritis forårsaget af Norwalk-virus	49
DA082	Enteritis forårsaget af adenovirus	4
DA083	Enteritis forårsaget af anden virus	5
DA084	Tarminfektion forårsaget af virus UNS	140
DA085	Tarminfektion forårsaget af anden (mikro)organisme UNS	49
DA09	An. gastroenteritis og colitis af infekt./ikke spec. årsag	51
DA090	An. og uspec gastroenteritis og colitis af infektiøs oprind.	*
DA099	Gastroenteritis eller colitis af ikke specificeret årsag	1,476
DA150	Lunge-TB verif. v. mikroskopi af ekspektorat m./u. dyrkning	9
DA151	Lungetuberkulose verificeret alene ved dyrkning	*
DA152	Lungetuberkulose verificeret histologisk	*
DA153	Lungetuberkulose verificeret ved ikke angivet metode	8
DA158	An. TB i åndedrætsorganerne verif. bakt. og hist.	*
DA159	TB i åndedrætsorganerne UNS, verificeret bakt. eller hist.	*
DA162	Lunge-TB uden bakteriologisk eller histologisk verifikation	295
DA164	TB i strube, luftrør el. bronkier u. bakt. el. hist. verif.	4
DA165	Tuberkuløs lungehindebetæn. u. ang. af bakt. el. hist. veri.	*
DA167	Primær TB i åndedrætsorganerne uden bakt. el. hist. verif.	10
DA169	TB i åndedrætsorganerne UNS, uden bakt. el. hist. verif.	61
DA170	Tuberkuløs meningitis	9
DA171	Tuberkulom i hjernebinder	*
DA178	Anden form for tuberkulose i nervesystemet	*
DA179	Tuberkulose i nervesystemet UNS	*
DA180	Tuberkulose i knogler og led	6
DA181	Tuberkulose i urinveje og kønsorganer	5
DA182	Tuberkulose i perifere lymfeknuder	*
DA183	Tuberkulose i tarm, bughinde og mesenteriale lymfeknuder	5
DA188	Tuberkulose i andet organ	7
DA190	Akut miliær tuberkulose med enkelt specificeret lokalisation	4

DA191	Akut miliær tuberkulose med flere lokalisationer	8
DA192	Akut miliær tuberkulose UNS	11
DA198	Anden miliær tuberkulose	*
DA199	Miliær tuberkulose UNS	19
DA240	Glanders	*
DA244	Melioidose UNS	*
DA259	Rottebidfeber UNS	*
DA267	Sepsis forårsaget af Erysipelothrix rhusiopathiae	6
DA269	Erysipeloid UNS	14
DA270	Weils sygdom	*
DA279	Leptospirose UNS	*
DA288	Anden dyreoverført bakteriel infektion	*
DA289	Dyreoverført bakteriel infektion UNS	*
DA310	Mykobakteriel lungeaffektion	13
DA318	Anden mykobakteriel infektion	*
DA319	Mykobakteriel infektion UNS	21
DA321	Listeriose i centralnervesystemet	28
DA327	Listeriosepsis	24
DA328	Anden form for listeriose	*
DA329	Listeriose UNS	*
DA359	Stivkrampe IKA	4
DA368	Anden form for difteri	*
DA390	Meningitis forårsaget af meningokokker	57
DA391	Waterhouse-Friderichsens syndrom	6
DA392	Akut meningokokbakteriæmi	19
DA394	Meningokokbakteriæmi UNS	35
DA395	Hjertesygdom forårsaget af meningokokker	*
DA398	Anden meningokokinfektion	*
DA399	Meningokokinfektion UNS	7
DA400	Sepsis forårsaget af Streptococcus A	31
DA401	Sepsis forårsaget af Streptococcus B	57
DA402	Sepsis forårsaget af Streptococcus D og Enterococcus	5
DA403	Sepsis forårsaget af Streptococcus pneumoniae	232
DA408	Anden streptokoksepsis	27
DA409	Streptokoksepsis UNS	58
DA410	Sepsis forårsaget af Staphylococcus aureus	345
DA411	Sepsis forårsaget af anden stafylokok	27
DA412	Sepsis forårsaget af stafylokokker UNS	106
DA413	Sepsis forårsaget af Haemophilus influenzae	4
DA414	Sepsis forårsaget af anaerob bakterie	41
DA415	Sepsis forårsaget af anden gramnegativ organisme	277
DA418	Anden sepsis IKA	125
DA419	Sepsis UNS	6,707
DA420	Pulmonal aktinomykose	*
DA421	Abdominal aktinomykose	7
DA427	Sepsis forårsaget af aktinomykose	*
DA428	Anden form for aktinomykose	*
DA429	Aktinomykose UNS	*
DA430	Pulmonal nocardiose	*
DA449	Bartonellose UNS	*
DA46	Rosen	40
DA469	Rosen UNS	630
DA480	Gasgangræn	36
DA481	Legionærsygdom	188
DA482	Pontiacfeber	8
DA483	Toksisk shock-syndrom	10
DA488	Anden bakteriel sygdom	37
DA490	Stafylokokinfektion UNS	59
DA491	Streptokok- og/eller enterokokinfektion, uspec lokalisation	22
DA492	Infektion med Haemophilus influenzae UNS	8
DA493	Mycoplasmainfektion UNS	*
DA498	Anden bakteriel infektion uden angivelse af lokalisation	752
DA499	Bakteriel infektion UNS	366
DA509	Medfødt syfilis UNS	*
DA514	Anden sekundær syfilis	*
DA520	Kardiovaskulær syfilis	*
DA521	Sen symptomatisk neurosyfilis	5
DA523	Neurosyfilis UNS	*
DA527	Anden form for sen symptomatisk syfilis	*
DA529	Syfilis i sent stadium UNS	*

DA544	Gonokokinfektion i led og muskler	*
DA545	Gonokokinfektion i svælget	*
DA549	Gonokokinfektion UNS	*
DA562	Klamydiainfektion i urin- og kønsorganer UNS	*
DA600	Herpes simplex-infektion i urin- og kønsorganer	*
DA649	Seksuelt overført sygdom UNS	*
DA689	Tilbagefaldsfeber UNS	7
DA690	Nekrotiserende ulcerøs mundbetændelse	*
DA692	Lymes sygdom	*
DA709	Chlamydia psittaci-infektion	6
DA719	Trakom UNS	*
DA789	Q feber UNS	*
DA800	Akut polio med lammelser forårsaget af vaccine	*
DA802	Akut polio m. lammelser forårsaget af indenlandsk vild virus	15
DA803	Anden eller ikke specificeret akut polio med lammelser	13
DA809	Akut polio UNS	8
DA810	Creutzfeldt-Jakobs sygdom	165
DA811	Subakut skleroserende panencephalitis	*
DA812	Progressiv multifokal leukoencefalopati	17
DA818	Anden atypisk virusinfektion i centralnervesystemet	*
DA819	Atypisk virusinfektion i centralnervesystemet UNS	*
DA830	Japansk hjernebetændelse	*
DA839	Viral hjernebetændelse overført af myg UNS	*
DA850	Hjernebetændelse forårsaget af enterovirus	*
DA851	Hjernebetændelse forårsaget af adenovirus	*
DA858	Anden viral hjernebetændelse	*
DA86	Viral hjernebetændelse UNS	*
DA869	Viral encephalitis UNS	38
DA871	Meningitis forårsaget af adenovirus	*
DA872	Lymfocytær koriomeningitis	*
DA878	Anden viral hjernehindebetændelse	*
DA879	Viral hjernehindebetændelse UNS	23
DA899	Viral infektion i centralnervesystemet UNS	*
DA999	Viral febersygdom med blødninger UNS	*
DB004	Encephalitis forårsaget af Herpes simplex-virus	79
DB007	Herpes generalisata	*
DB008	Anden form for Herpes simplex-virus infektion	*
DB009	Infektion med Herpes simplex-virus UNS	5
DB011	Encephalitis forårsaget af Varicella zoster	7
DB012	Pneumoni forårsaget af Varicella zoster	*
DB018	Skoldkopper med anden komplikation	*
DB019	Skoldkopper UNS	*
DB020	Herpes zoster-encephalitis	22
DB021	Herpes zoster-meningitis	*
DB022	Herpes zoster med anden komplikation i nervesystemet	4
DB023	Herpes zoster i øje	8
DB027	Dissemineret herpes zoster	9
DB028	Herpes zoster-infektion med anden komplikation	5
DB029	Herpes zoster-infektion uden komplikation	53
DB051	Mæslinger kompliceret med meningitis	*
DB052	Mæslinger kompliceret med pneumoni	34
DB059	Mæslinger uden komplikationer	*
DB069	Røde hunde uden komplikationer	*
DB099	Virusinfektion karak.v hud- og slimhindeaffektion UNS	*
DB150	Hepatitis A med leverkoma	7
DB159	Hepatitis A uden leverkoma	*
DB160	Akut hepatitis B m. coinfektion m. Delta agens m. leverkoma	*
DB161	Akut hepatitis B m. coinfektion m. Delta agens u. leverkoma	*
DB162	Akut hepatitis B u. coinfektion m. Delta agens m. leverkoma	9
DB169	Akut hepatitis B u. coinfektion m. Delta agens og uden leverkoma	10
DB170	Akut Delta-superinfektion i kronisk hepatitis B	*
DB171	Akut hepatitis C	*
DB172	Akut hepatitis E	*
DB178	Anden akut viral hepatitis	6
DB179	Akut viral hepatitis UNS	*
DB180	Kronisk viral hepatitis B med Delta agens	*
DB181	Kronisk viral hepatitis B uden Delta agens	71
DB182	Kronisk viral hepatitis C	259
DB188	Anden kronisk viral hepatitis	19
DB189	Kronisk viral hepatitis UNS	15

DB190	Viral hepatitis UNS med leverkoma	17
DB199	Viral hepatitis UNS uden leverkoma	22
DB200	HIV-sygdom med mykobakteriel infektion	17
DB201	HIV-sygdom med andre bakterielle sygdomme	43
DB202	HIV-sygdom med cytomegalovirus sygdom	6
DB203	HIV-sygdom med andre virus infektioner	32
DB204	HIV-sygdom med candidiasis	6
DB205	HIV-sygdom med andre svampeinfektioner	*
DB206	HIV-sygdom med Pneumocystis jirovecii pneumoni	34
DB207	HIV-sygdom med multiple infektioner	60
DB208	HIV-sygdom med andre infektiøse og parasitære sygdomme	52
DB209	HIV-sygdom med infektiøs eller parasitær sygdom UNS	13
DB210	HIV-sygdom med Kaposi's sarkom	18
DB211	HIV-sygdom med Burkitt's lymfom	*
DB212	HIV-sygdom med andet non-Hodgkin's lymfom	36
DB213	HIV-sygdom med anden neoplas i lymfoidt og bloddannende væv	10
DB217	HIV-sygdom med multiple neoplasier	*
DB218	HIV-sygdom med anden neoplas	15
DB219	HIV sygdom med neoplas UNS	*
DB220	HIV-encefalopati	16
DB221	HIV-lymfoid interstitiel pneumonitis	*
DB222	HIV-wasting syndrome	13
DB227	HIV-sygdom med multiple sygdomme klassificeret andetsteds	35
DB230	Akut HIV-sygdom	10
DB231	HIV-sygdom med (persisterende) generaliseret lymfadenopati	*
DB232	HIV-sygdom med hæmatologiske og immunologiske forandr. IKA	9
DB238	Anden eller ikke specificeret symptomatisk HIV-sygdom	88
DB24	HIV-sygdom og AIDS uden specificering	7
DB249	AIDS UNS	286
DB250	Cytomegalovirus-pneumoni	12
DB251	Cytomegalovirus-hepatitis	4
DB258	Anden sygdom forårsaget af cytomegalovirus	*
DB259	Cytomegaloviral sygdom UNS	11
DB268	Fåresyge med anden komplikation	12
DB269	Fåresyge uden komplikationer	8
DB270	Mononukleose forårsaget af Epstein-Barr virus	*
DB271	Mononukleose forårsaget af cytomegalovirus	*
DB279	Mononukleose UNS	9
DB338	Anden virussygdom	5
DB340	Adenovirus-infektion uden angivelse af lokalisation	11
DB341	Enterovirus-infektion uden angivelse af lokalisation	4
DB342	Coronavirus-infektion uden angivelse af lokalisation	*
DB343	Parvovirus-infektion uden angivelse af lokalisation	6
DB348	Anden virusinfektion uden angivelse af lokalisation	20
DB349	Virusinfektion UNS	108
DB369	Overfladisk svampeinfektion UNS	*
DB370	Candidiasis i mundhule	17
DB371	Candidiasis i lunge	18
DB374	Urogenital candidiasis med anden lokalisation	*
DB375	Candidiasis-meningitis	*
DB376	Candidiasis-endokarditis	*
DB377	Candidiasis-sepsis	24
DB378	Candidiasis med anden lokalisation	11
DB379	Candidiasis UNS	9
DB389	Coccidioidomykose UNS	*
DB440	Invasiv pulmonal aspergillose	34
DB441	Anden pulmonal aspergillose	28
DB447	Dissemineret aspergillose	*
DB448	Anden form for aspergillose	*
DB449	Aspergillosis UNS	22
DB451	Cerebral kryptokokkose	*
DB459	Kryptokokkose UNS	*
DB471	Aktinomyetom	*
DB487	Opportunistisk mykose	*
DB488	Anden mykose	*
DB499	Mykose UNS	10
DB509	Plasmodium falciparum-malaria uden komplikationer	7
DB549	Klinisk malaria, ikke parasitologisk verificeret	*
DB582	Meningoencephalitis ved toksoplasmose	*
DB599	Pneumocystose UNS	78

DB669	Ikke-infektion UNS	8
DB670	Infektion med Echinococcus granulosus i leveren	*
DB677	Infektion med Echinococcus multilocularis UNS	*
DB679	Anden eller ikke specificeret ekinokokinfektion	*
DB761	Infestation med Necator americanus	*
DB789	Strongyloidiasis UNS	*
DB820	Intestinal ormesygdom UNS	*
DB869	Scabies UNS	*
DB880	Anden sygdom fremkaldt af mider	*
DB900	Følger efter tuberkulose i centralnervesystemet	*
DB901	Følger efter tuberkulose i urin- og kønsorganer	*
DB902	Følger efter tuberkulose i knogler og led	*
DB908	Følger efter tuberkulose i andet organ	*
DB909	Følger eft TB i ånde-org. og u lokal.	125
DB91	Følger efter polio	9
DB919	Følger efter poliomyelitis	72
DB941	Følger efter viral hjernebetændelse	*
DB942	Følger efter viral leverbetændelse	*
DB948	Følger efter anden infektiøs eller parasitær sygdom	12
DB949	Følger efter infektiøs eller parasitær sygdom UNS	*
DB978	Anden virus som årsag til sygdom	*
DB980	Helicobacter pylori som årsag til sygdom	*
DB99	Andre eller ikke nærmere specificerede infektiøse sygdomme	46
DB990		*
DB999	Anden eller ikke specificeret infektionssygdom	873
Other		
D		4,162
D0000		246
DD103	Godartet tumor i mundhulen m. anden/ikke spec. lokalisation	*
DD106	Godartet tumor i næsesvælget	*
DD110	Godartet tumor i ørespytkirtel	5
DD117	Godartet tumor i anden stor spytkirtel	*
DD120	Godartet tumor i caecum	10
DD121	Godartet tumor i blindtarmen	*
DD122	Godartet tumor i colon ascendens	13
DD123	Godartet tumor i colon transversum	4
DD124	Godartet tumor i colon descendens	*
DD125	Godartet tumor i colon sigmoideum	17
DD126	Godartet tumor i tyktarm u spec. lokal.	68
DD127	Neopl ben rectosigmoidei	5
DD128	Godartet tumor i endetarmen	20
DD129	Godartet tumor i endetarmsåbningen eller analkanalen	*
DD130	Godartet tumor i spiserøret	4
DD131	Godartet tumor i mavesækken	9
DD132	Godartet tumor i tolvfingertarmen	9
DD133	Godartet tumor i anden eller ikke spec. del af tyndtarmen	5
DD134	Godartet tumor i leveren	6
DD135	Godartet tumor i ekstrahepatiske galdeveje	5
DD136	Godartet tumor i pancreas	9
DD137	Godartet tumor i Langerhanske øer	8
DD139	Godartet tumor i fordøjelsessystemet UNS	7
DD141	Godartet tumor i strubehovedet	5
DD142	Godartet tumor i luftrøret	*
DD143	Godartet tumor i bronkie eller lunge	19
DD150	Godartet tumor i thymus	*
DD151	Godartet tumor i hjertet	19
DD152	Godartet tumor i mediastinum	*
DD159	Godartet tumor i brysthulen UNS	*
DD164	Godartet tumor i knogle eller ledbrusk i kranie eller ansigt	*
DD166	Godartet tumor i knogle eller ledbrusk i rygsøjlen	*
DD171	Lipom i hud eller underhud på kroppen	*
DD172	Lipom i hud eller underhud på ekstremitet	*
DD173	Lipom i hud el. underhud m. an. el. ikke spec. lokalisation	*
DD175	Lipom i intraabdominalt organ	*
DD177	Lipom med anden lokalisation	4
DD179	Lipom UNS	*
DD180	Hæmangiom	46
DD181	Lymfangiom	9
DD190	Godartet mesoteliom i lungehinde	39
DD191	Godartet mesoteliom i peritoneum	*



DD197	Godartet tumor i mesotelialt væv med anden lokalisation	*
DD199	Godartet tumor i mesotelialt væv UNS	5
DD200	Godartet tumor i bindevæv i retroperitoneum	*
DD201	Godartet tumor i bindevæv i peritoneum	*
DD212	Godartet tumor i bindevæv i underekstremitet	*
DD214	Godartet tumor i bindevæv i abdomen	*
DD219	Godartet tumor i bindevæv UNS	4
DD222	Nævus på øre eller i ydre øregang	*
DD238	Neopl ben cutis m anden lokalisation	*
DD249	Godartet tumor i mamma UNS	*
DD251	Intramuralt fibromyom i livmoderen	*
DD259	Fibromyom i livmoderen UNS	10
DD261	Godartet tumor i corpus uteri	*
DD270	Serøst cystadenom i æggestok	*
DD271	Mucinøst cystadenom i æggestok	*
DD272	Dermoidcyste i æggestok	*
DD279	Godartet tumor i æggestok UNS	20
DD289	Godartet tumor i kvindeligt kønsorgan UNS	*
DD291	Godartet tumor i prostata	8
DD297	Godartet tumor i mandlige kønsorganer med anden lokalisation	*
DD300	Godartet tumor i nyre	7
DD301	Godartet tumor i nyrebækken	12
DD302	Godartet tumor i urinleder	*
DD303	Godartet tumor i urinblæren	78
DD309	Godartet tumor i nyre eller urinveje UNS	4
DD319	Godartet tumor i øje UNS	*
DD320	Intrakranielt meningeom	179
DD321	Intraspinalt meningeom	*
DD329	Meningeom UNS	205
DD330	Supratentoriel godartet tumor i hjernen	52
DD331	Infratentoriel godartet tumor i hjernen	36
DD332	Godartet tumor i hjernen UNS	239
DD333	Godartet tumor i hjernenerve	25
DD334	Godartet tumor i rygmærven	6
DD337	Godartet tumor i anden del af centralnervesystemet	*
DD339	Godartet tumor i centralnervesystemet UNS	4
DD349	Godartet tumor i skjoldbruskkirtlen UNS	5
DD350	Godartet tumor i binyre	5
DD351	Godartet tumor i biskjoldbruskkirtel	6
DD352	Godartet tumor i hypofysen	87
DD353	Godartet tumor i ductus craniopharyngeus	5
DD355	Godartet tumor i glomus caroticum	*
DD367	Godartet tumor med anden lokalisation	6
DD369	Godartet tumor uden spec. lokalisation	*
DD370	Ikke specificeret tumor i læbe, mundhule eller svælg	14
DD371	Ikke spec. tumor i mavesækken	48
DD372	Ikke spec. tumor i tyndtarmen	25
DD373	Ikke spec. tumor i blindtarmen	*
DD374	Ikke spec. tumor i tyktarmen	248
DD375	Ikke spec. tumor i endetarmen	65
DD376	Ikke spec. tumor i leveren, galdeblæren eller galdeveje	175
DD377	Ikke spec. tumor i andet fordøjelsesorgan	153
DD379	Ikke spec. tumor i fordøjelsesorgan UNS	82
DD380	Ikke spec. tumor i strubehovedet	*
DD381	Ikke specificeret tumor i luftrør, bronkie eller lunge	911
DD382	Ikke spec. tumor i lungehinde	11
DD383	Ikke spec. tumor i mediastinum	74
DD384	Ikke spec. tumor i thymus	*
DD385	Ikke spec. tumor i andet åndedrætsorgan	9
DD386		6
DD389	Ikke specificeret tumor i åndedrætsorgan eller luftveje UNS	*
DD390	Ikke spec. tumor i livmoderen	5
DD391	Ikke spec. tumor i æggestok	51
DD397	Ikke spec. tumor med an. lokalisation i kvindeligt kønsorgan	*
DD399	Ikke spec. tumor i kvindeligt kønsorgan UNS	18
DD400	Ikke spec. tumor i prostata	23
DD401	Ikke spec. tumor i testikel	*
DD407	Ikke spec. tumor med anden lokalisation i mandligt kønsorgan	*
DD409	Ikke spec. tumor i mandligt kønsorgan UNS	*
DD410	Ikke spec. tumor i nyre	129

DD411	Ikke spec. tumor i nyrebækken	12
DD412	Ikke spec. tumor i urinleder	8
DD413	Ikke spec. tumor i urinrørret	*
DD414	Ikke spec. tumor i urinblæren	151
DD417	Ikke specificeret tumor med anden lokalisation i urinveje	4
DD419	Ikke spec. tumor med ikke spec. lokalisation i nyre/urinveje	11
DD420	Ikke spec. tumor i hjernehinde	25
DD421	Ikke spec. tumor i rygmargshinde	*
DD429	Ikke spec. tumor m ikke spec. lokal. i hjerne-/rygmargshinde	8
DD430	Supratentoriel ikke spec. tumor i hjernen	71
DD431	Infratentoriel ikke spec. tumor i hjernen	50
DD432	Ikke spec. tumor med an./ikke nærmere spec. lokal. i hjerne	756
DD433	Ikke spec. tumor i hjernenerve	*
DD434	Ikke spec. tumor i rygmargen	11
DD437	Ikke specificeret tumor med anden lokalisation i CNS	*
DD439	Ikke spec. tumor i ikke spec. lokal. i CNS	30
DD440	Ikke spec. tumor i skjoldbruskkirtlen	5
DD441	Ikke spec. tumor i binyre	12
DD442	Ikke spec. tumor i biskjoldbruskkirtel	*
DD443	Ikke spec. tumor i hypofysen	38
DD444	Ikke spec. tumor i ductus craniopharyngeus	14
DD445	Ikke spec. tumor i corpus pinealis	*
DD446	Ikke spec. tumor i glomus caroticum	*
DD447	Ikke spec. tumor i corpus para-aorticus el. an. paraganglion	*
DD448	Ikke spec. tumor i flere endokrine kirtler	*
DD449	Ikke spec. tumor i endokrin kirtel UNS	5
DD45	Polycythaemia vera	22
DD459	Polycythaemia vera	344
DD460	Refraktær cytopeni med unilineær dysplasi	18
DD461	Refraktær anæmi med ringsideroblaster	37
DD462	Refraktær anæmi med overskud af blastceller	101
DD463	Anaemia refractoria m blastceller i transformation	8
DD464	Refraktær anæmi UNS	87
DD465	Refraktær anæmi med multilinje dysplasi	9
DD466	Myelodysplastisk syndrom m isoleret del(5q) kromosomabnormit	*
DD467	Andet myelodysplastisk syndrom	25
DD469	Myelodysplastisk syndrom UNS	1,592
DD470	Histiocytær el mastcelle neoplasi af usikker/ukendt karakter	8
DD471	Kronisk myeloproliferativt syndrom	646
DD472	Monoklonal gammopati med ubestemt signifikans (MGUS)	47
DD473	Essentiel trombocytæmi	61
DD474	Primær og sekundær myelofibrose	82
DD475	Hypereosinofilt syndrom	*
DD477	An. ikke spec. neoplasi fra lymfoidt el. hæmatopoietisk væv	17
DD479	Anden neoplasi fra lymfoidt eller hæmatopoietisk væv	21
DD480	Ikke specificeret tumor i knogle eller ledbrusk	5
DD481	Ikke specificeret tumor i bindevæv eller andre bløddele	10
DD482	Ikke spec. tumor i perifer nerve eller autonome nervesystem	*
DD483	Ikke spec. tumor i retroperitoneum	28
DD484	Ikke spec. tumor i peritoneum	26
DD485	Ikke spec. tumor i huden	4
DD486	Ikke spec. tumor i mamma	32
DD487	Ikke specificeret tumor med anden lokalisation	271
DD489	Tumor af usikker el. ukendt karakter u. nærmere spec. lokal.	408
DD500	Kronisk blødningsanæmi	152
DD501	Jernmangelanæmi forårsaget af malabsorption af jern	4
DD508	Jernmangelanæmi af anden årsag	35
DD509	Jernmangelanæmi UNS	151
DD510	Anæmi sfa vitamin B12-mangel ved mangel på intrinsic factor	118
DD511	Anæmi f.a. malabsorption af vitamin B12 med proteinuri	4
DD513	Anden anæmi f.a. ernæringsbetinget mangel på vitamin B12	60
DD518	Anden anæmi forårsaget af vitamin B12-mangel	17
DD519	Anæmi forårsaget af vitamin B12-mangel UNS	18
DD521	Anæmi forårsaget af medikamentelt betinget folinsyremangel	*
DD528	Anden anæmi forårsaget af folinsyremangel	*
DD529	Anæmi forårsaget af folinsyremangel UNS	*
DD530	Proteinmangelanæmi	*
DD531	Anden megaloblastær anæmi IKA	17
DD538	Anden ernæringsbetinget anæmi	18
DD539	Ernæringsbetinget anæmi UNS	14

DD550	Anæmi forårsaget af glukose-6-fosfat-dehydrogenasemangel	*
DD551	Anæmi forårsaget af an. forstyrrelse i glutationsomsætningen	4
DD552	Anæmi forårsaget af forstyrrelser i de glykolytiske enzymer	*
DD558	Anden anæmi forårsaget af enzymatisk forstyrrelse	9
DD559	Anæmi forårsaget af enzymatisk forstyrrelse UNS	*
DD561	Beta-talassæmi	*
DD563	Thalassaemia minor	*
DD569	Talassæmi UNS	*
DD570	Seglcelleanæmi med krise	*
DD578	Anden form for seglcellesygdom	*
DD580	Arvelig hæmolytisk anæmi forårsaget af sfærocytose	*
DD582	Anden hæmoglobinopati	*
DD589	Arvelig hæmolytisk anæmi UNS	18
DD590	Autoimmun hæmolytisk anæmi forårsaget af lægemiddel	4
DD591	Anden autoimmun hæmolytisk anæmi	87
DD592	Hæmolytisk ikke-autoimmun anæmi forårsaget af lægemiddel	*
DD593	Hæmolytisk-uræmisk syndrom	18
DD594	Anden hæmolytisk ikke-autoimmun anæmi	13
DD595	Paroxysmal nokturn hæmoglobinuri	6
DD598	Anden erhvervet hæmolytisk anæmi	30
DD599	Erhvervet hæmolytisk anæmi UNS	41
DD608	Anden erhvervet pure red cell aplasi	5
DD609	Erhvervet pure red cell aplasi UNS	7
DD610	Konstitutionel aplastisk anæmi	4
DD611	Aplastisk anæmi forårsaget af lægemiddel	10
DD612	Aplastisk anæmi forårsaget af anden ydre påvirkning	*
DD613	Idiopatisk aplastisk anæmi	45
DD618	Anden aplastisk anæmi	19
DD619	Aplastisk anæmi UNS	225
DD62	Akut anæmi efter blødning	6
DD629	Akut blødningsanæmi UNS	376
DD630	Anæmi ved neoplastisk sygdom	*
DD638	Anæmi ved anden kronisk sygdom klassificeret andetsteds	7
DD640	Arvelig sideroblastær anæmi	*
DD641	Sekundær sideroblastær anæmi forårsaget af anden sygdom	5
DD642	Sekundær sideroblastær anæmi f.a. lægemiddel eller toksin	*
DD643	Anden sideroblastær anæmi	30
DD644	Medfødt dyserythropoietisk anæmi	*
DD648	Anden anæmi	100
DD649	Anæmi UNS	1,966
DD65	Dissemineret intravaskulær koagulation	*
DD659	Dissemineret intravaskulær koagulation	64
DD66	Arvelig faktor VIII-mangel	*
DD669	Hæmofili A	15
DD679	Hæmofili B	*
DD680	Von Willebrands sygdom	4
DD681	Arvelig faktor XI-mangel	*
DD682	Arvelig mangel på andre koagulationsfaktorer	*
DD683	Blødningsforstyrrelse f.a. cirkulerende antikoagulantia	81
DD684	Erhvervet koagulationsfaktormangel	13
DD685	Primær trombofili	*
DD686	Anden trombofili	6
DD688	Anden koagulationsdefekt	23
DD689	Koagulationsdefekt UNS	58
DD690	Allergisk purpura	9
DD691	Blodpladedefekter	4
DD692	Anden purpura uden trombocytmangel eller defekt	4
DD693	Idiopatisk trombocytopenisk purpura	92
DD694	Anden primær trombocytopeni	9
DD695	Sekundær trombocytopeni	*
DD696	Trombocytopeni UNS	98
DD698	Anden tilstand med blødningstendens	17
DD699	Blødningstendens UNS	33
DD70	Neutropeni	*
DD709	Neutropeni UNS	39
DD719	Funktionelle forstyrr. i polymorfkærkede neutrofile cel UNS	17
DD720	Genetisk betinget leukocytanomali	*
DD721	Eosinofili	5
DD728	Anden forstyrrelse i hvide blodlegemer	18
DD729	Sygdom i hvide blodlegemer UNS	*

DD730	Nedsat miltfunktion	5
DD731	Øget miltfunktion	*
DD732	Kronisk stasemilt	*
DD733	Miltabsces	6
DD734	Miltcyste	*
DD735	Miltinfarkt	28
DD738	Anden sygdom i milten	8
DD739	Sygdom i milten UNS	7
DD749	Methæmoglobinæmi UNS	*
DD750	Familiær polycytæmi	6
DD751	Sekundær polycytæmi	8
DD752	Thrombocytosis essentialis	50
DD758	Anden sygdom i blod eller bloddannende væv	17
DD759	Sygdom i blod eller bloddannende væv UNS	40
DD760	Histiocytose i de Langerhanske celler	11
DD761	Hæmofagocytær lymfhistiocytose	34
DD762	Hæmofagocytært syndrom, infektionsassocieret	17
DD763	Andet histiocytært syndrom	*
DD779	Sygdom i blod og bloddannende organer ved sygdom KA	*
DD800	Arvelig hypogammaglobulinæmi	5
DD801	Ikke-familiær hypogammaglobulinæmi	16
DD802	Selektiv IgA-mangel	*
DD806	Antistofmangel med hyperimmunglobulinæmi	*
DD808	Anden immundefekt med overvejende antistofmangel	4
DD809	Immundefekt med overvejende antistofmangel UNS	*
DD811	Svær kombineret immundefekt (SCID), lavt antal T-/B-celler	*
DD814	Nezelofs syndrom	*
DD818	Anden kombineret immundefekt	*
DD819	Kombineret immundefekt UNS	8
DD821	DiGeorges syndrom	*
DD823	Immundefekt ved abnorm reaktion på Epstein-Barr virus	*
DD824	Hyperimmunglobulin E (IgE) syndrom	*
DD828	Immundefekt ved andre større specificerede defekter	*
DD829	Immundefekt associeret med større defekt UNS	4
DD830	Immundefekt med overvejende abnormt B-celletal og -funktion	*
DD831	Immundefekt med overvejende forstyrrelse i T-celler	*
DD838	Anden almindelig variabel immundefekt	61
DD839	Almindelig variabel immundefekt UNS	26
DD841	Defekt i komplementsystemet	*
DD848	Anden immundefekt	6
DD849	Immundefekt UNS	20
DD860	Sarkoidose i lunger	197
DD861	Sarkoidose i lymfeknuder	*
DD862	Sarkoidose i både lunger og lymfeknuder	15
DD863	Sarkoidose i hud	*
DD868	Sarkoidose med anden lokalisering eller flere lokalisationer	33
DD869	Sarkoidose UNS	164
DD890	Polyklonal hypergammaglobulinæmi	7
DD891	Kryoglobulinæmi	*
DD892	Hypergammaglobulinæmi UNS	10
DD898	Anden forstyrrelse i immunsystemet IKA	8
DD899	Sygdom i immunsystemet UNS	14
DE010	Endemisk diffus struma forårsaget af jodmangel	*
DE012	Endemisk jodmangel struma UNS	*
DE031	Medfødt myksødem uden struma	*
DE032	Hypothyroidisme f.a. lægemiddel eller andet fremmed agens	*
DE034	Erhvervet atrofi af skjoldbruskkirtlen	*
DE035	Myksødematøs koma	5
DE038	Anden form for hypothyroidisme	15
DE039	Hypothyroidisme UNS	535
DE040	Atoksisk diffus struma	12
DE041	Atoksisk struma med solitært adenom	*
DE042	Atoksisk multinodøs struma	17
DE048	Anden form for atoksisk struma	8
DE049	Atoksisk struma UNS	26
DE050	Thyrotoksikose med diffus struma	42
DE051	Thyrotoksikose med toksisk solitært adenom	*
DE052	Thyrotoksikose med toksisk multinodøs struma	27
DE054	Thyrotoksikose ved overdosering af thyroideahormon	35
DE055	Thyrotoksisk krise	5

DE058	Anden form for thyrotoksikose	5
DE059	Thyrotoksikose UNS	410
DE063	Autoimmun thyroiditis	7
DE065	Anden kronisk betændelse i skjoldbruskkirtlen	*
DE069	Betændelse i skjoldbruskkirtlen UNS	4
DE078	Anden forstyrrelse i skjoldbruskkirtlen	*
DE079	Forstyrrelse i skjoldbruskkirtlen UNS	7
DE15	Ikke-diabetisk hypoglykæmisk koma	*
DE168	Andre forstyrrelser i pancreas interne sekretion	8
DE169	Forstyrrelse i pancreas interne sekretion UNS	*
DE200	Idiopatisk hypoparathyroidisme	*
DE201	Pseudohypoparathyroidisme	*
DE208	Anden hypoparathyroidisme	*
DE209	Hypoparathyroidisme UNS	7
DE210	Primær hyperparathyroidisme	31
DE211	Sekundær hyperparathyroidisme	7
DE212	Anden form for hyperparathyroidisme	*
DE213	Hyperparathyroidisme UNS	36
DE214	Anden sygdom i biskjoldbruskkirtel	*
DE215	Sygdom i biskjoldbruskkirtel UNS	*
DE220	Hypofysær kæmpevækst eller akromegali	18
DE221	Hyperprolaktinæmi	*
DE222	Øget sekretion af antidiuretisk hormon (ADH)	*
DE229	Øget hypofyseaktivitet UNS	*
DE230	Nedsat hormonsekretion fra hypofysen	31
DE232	Diabetes insipidus	10
DE233	Hypotalamisk dysfunktion IKA	*
DE236	Anden sygdom i hypofysen	7
DE237	Sygdom i hypofysen UNS	9
DE240	Hypofysært betinget Cushings sygdom	4
DE242	Cushings syndrom forårsaget af lægemiddel	*
DE244	Alkoholinduceret pseudo-Cushings syndrom	*
DE249	Cushings syndrom UNS	4
DE259	Adrenogenitalt syndrom UNS	6
DE269	Hyperaldosteronisme UNS	*
DE271	Primær binyrebarkinsufficiens	99
DE272	Addisonkrise	4
DE273	Binyrebarkinsufficiens forårsaget af lægemiddel	*
DE274	Anden og ikke spec. binyrebarkinsufficiens	19
DE278	Anden binyresygdom	*
DE279	Binyresygdom UNS	*
DE282	Polycystisk ovariesyndrom (PCOS)	*
DE310	Autoimmun polyglandulær insufficiens	*
DE328	Anden sygdom i thymus	*
DE340	Karcinoidt syndrom	18
DE342	Ektopisk hormonsekretion IKA	*
DE343	Lille højde IKA	*
DE348	Anden sygdom i endokrine kirtler	*
DE349	Endokrin sygdom UNS	4
DE409	Proteinmangelsygdom hos børn UNS	*
DE41	Svækkelse forårsaget af underernæring	17
DE419	Svækkelse forårsaget af underernæring UNS	426
DE42	Svær afmagring som følge af protein- og energimangel	*
DE429	Svær afmagring som følge af proteinmangel UNS	58
DE439	Svær protein- og energimangelsygdom UNS	5
DE46	Ikke spec. protein- og energiunderernæring	5
DE469	Protein- og energiunderernæring UNS	64
DE509	A-vitaminmangel UNS	*
DE512	Wernickes encefalopati	21
DE538	Anden B-vitaminmangel	9
DE539	B-vitaminmangel UNS	*
DE549	C-vitaminmangel UNS	*
DE550	Aktiv rakitis	*
DE559	D-vitaminmangel UNS	5
DE561	K-vitaminmangel	*
DE568	Anden vitaminmangel	*
DE569	Vitaminmangel UNS	*
DE611	Jernmangel	*
DE630	Mangel på essentielle fedtsyrer (EFA)	*
DE631	Fejlnæring som følge af misforhold i fødens sammensætning	24

DE638	Anden kostmangel	*
DE639	Kostmangel UNS	32
DE640	Følger efter protein-energimangel	*
DE643	Følger efter rakitis	*
DE648	Følger efter anden ernæringsbetinget mangeltilstand	4
DE649	Følger efter ernæringsbetinget mangeltilstand UNS	274
DE659	Lokaliseret fedme UNS	*
DE660	Fedme som følge af for stort kalorieindtag	67
DE662	Ekstrem fedme med hypoventilation	99
DE668	Anden overvægt eller fedme	59
DE669	Overvægt UNS	1,536
DE670	A-hypervitaminose	*
DE700	Klassisk fenyلكetonuri	10
DE701	Hyperfenylalaninæmi	*
DE702	Forstyrrelser i tyrosinomsætningen	4
DE709	Forstyrrelser i omsætningen af aromatiske aminosyrer UNS	*
DE711	Anden forstyrrelse i omsætningen af forgrenede aminosyrer	*
DE713	Forstyrrelse i fedtomsætningen	12
DE720	Forstyrrelse i aminosyretransporten	*
DE722	Forstyrrelse i urinstofcyklus	*
DE723	Forstyrrelse i lysin og hydroxylysinomsætningen	*
DE724	Forstyrrelse i ornitinomsætningen	*
DE725	Forstyrrelser i glycinomsætningen	6
DE728	Anden forstyrrelse i aminosyreomsætningen	*
DE729	Forstyrrelse i aminosyreomsætningen UNS	*
DE731	Erhvervet laktasemangel	*
DE739	Laktoseintolerans UNS	*
DE740	Forstyrrelse i glykogenaflejringen	7
DE741	Forstyrrelse i fruktoseomsætningen	*
DE744	Forstyrrelse i pyruvatomsætningen og glukoneogenesen	*
DE748	Anden forstyrrelse i kulhydratomsætningen	7
DE749	Forstyrrelse i kulhydratomsætningen UNS	*
DE750	GM2-gangliosidose	14
DE751	Anden gangliosidose	5
DE752	Anden sfingolipidose	28
DE753	Sfingolipidose UNS	*
DE754	Neuronal ceroid lipofuskinose	24
DE755	Anden lipidaflejringssygdom	4
DE756	Lipidaflejringssygdom UNS	5
DE760	Mukopolysakkaridose type I	*
DE761	Mukopolysakkaridose type II	8
DE762	Anden mukopolysakkaridose	5
DE763	Mukopolysakkaridose UNS	4
DE769	Forstyrrelse i glukosaminoglykanomsætningen UNS	*
DE770	Posttranslational defekt i lysosomale enzymer	4
DE771	Defekt i glykoproteinnedbrydningen	*
DE778	Anden forstyrrelse i glykoproteinomsætningen	4
DE780	Hyperkolesterolæmi	890
DE781	Hyperglyceridæmi	14
DE782	Blandet hyperlipidæmi	12
DE783	Hyperkylomikronæmi	*
DE784	Anden hyperlipidæmi	22
DE785	Hyperlipidæmi UNS	110
DE788	Anden forstyrrelse i lipoproteinomsætningen	6
DE789	Forstyrrelse i lipoproteinomsætningen UNS	9
DE790	Asymptomatisk hyperurikæmi	*
DE791	Lesch-Nyhans syndrom	*
DE798	Anden forstyrrelse i purin- eller pyrimidinomsætningen	*
DE801	Porphyria cutanea tarda	*
DE802	Anden form for porfyri	6
DE805	Crigler-Najjars sygdom	*
DE807	Forstyrrelse i bilirubinomsætningen UNS	*
DE830	Forstyrrelser i kobberomsætningen	12
DE831	Forstyrrelser i jernomsætningen	50
DE833	Forstyrrelser i fosforomsætningen og fosfataser	*
DE834	Forstyrrelse i magnesiumomsætningen	*
DE835	Forstyrrelser i kalciumomsætningen	48
DE840	Cystisk fibrose med lungemanifestationer	76
DE841	Cystisk fibrose med tarmanifestationer	4
DE848	Cystisk fibrose med anden manifestation	16

DE849	Cystisk fibrose UNS	39
DE850	Arvelig amyloidose uden neurologiske symptomer	*
DE851	Arvelig nerveamyloidose	*
DE852	Arvelig amyloidose UNS	6
DE853	Sekundær systemisk amyloidose	5
DE854	Lokaliseret amyloidose	125
DE858	Anden amyloidose	6
DE859	Amyloidose UNS	199
DE86	Udtørring og nedsat ekstracellulærvolumen	159
DE869	Volumennedsættelse af plasma eller ekstracellulær væske	3,332
DE870	Hyperosmolalitet eller hypernatriæmi	35
DE871	Hypoosmolalitet eller hyponatriæmi	46
DE872	Acidose	262
DE873	Alkalose	*
DE874	Blandet forstyrrelse i syre-basebalancen	4
DE875	Hyperkaliæmi	119
DE876	Hypokaliæmi	31
DE877	Væskeoverskud	*
DE878	Forstyrrelse i vand- eller elektrolytbalancen IKA	100
DE880	Forstyrrelse i plasmaproteinomsætningen IKA	224
DE881	Lipodystrofi IKA	*
DE883	Tumor lysis-syndrom	*
DE888	Anden metabolisk forstyrrelse	22
DE889	Omsætningsforstyrrelse UNS	69
DE893	Hypopituitarisme efter behandling	*
DE898	Anden endokrin forstyrrelse/omsætningsforstyrrelse eft. beh.	*
DF000	Demens ved Alzheimers sygdom med tidlig debut	15
DF001	Demens ved Alzheimers sygdom med sen debut	111
DF002	Demens ved Alzheimers sygdom af atypisk eller blandet type	*
DF009	Demens ved Alzheimers sygdom UNS	205
DF010	Vaskulær demens med akut indsætten	57
DF011	Multi-infarkt demens	943
DF012	Subkortikal vaskulær demens	105
DF013	Blandet kortikal og subkortikal vaskulær demens	226
DF018	Anden vaskulær demens	668
DF019	Vaskulær demens UNS	3,695
DF020	Demens ved Picks sygdom	5
DF023	Demens ved Parkinsons sygdom	*
DF028	Demens ved anden sygdom klassificeret andetsteds	4
DF03	Ikke specificeret demens	1,549
DF039	Demens UNS	31,005
DF049	Organisk amnestisk syndrom, ikke prov. af psykoak.stof	6
DF050	Delir uden demens	15
DF051	Delir ved demens	65
DF058	Andet delir	10
DF059	Delir UNS	50
DF060	Organisk hallucinose	4
DF062	Organisk paranoid eller skizofreniform sindslidelse	8
DF063	Organisk affektiv sindslidelse	8
DF067	Organisk kognitiv forstyrrelse af lettere grad	*
DF068	Anden organisk psykisk lidelse	13
DF069	Organisk psykisk lidelse UNS	31
DF070	Organisk personlighedsforstyrrelse	8
DF071	Postencefalitisk syndrom	*
DF072	Posttraumatisk hjernesyndrom	18
DF078	Anden organisk personligheds- eller adfærdsforstyrrelse	*
DF079	Organisk personligheds- eller adfærdsforstyrrelse UNS	10
DF099	Organisk/sympt. mental lidelse/personlighedsforstyrrelse UNS	33
DF100	Akut alkoholintoksikation	13
DF101	Skadelig brug af alkohol	5,095
DF102	Alkoholafhængighedssyndrom	7,982
DF103	Abstinensstilstand sfa alkoholbrug	62
DF104	Delirøs abstinensstilstand sfa alkoholbrug	30
DF105	Alkoholpsykose	12
DF106	Amnestisk syndrom sfa alkoholbrug	112
DF107	Sen psykotisk eller residual tilstand f.a. alkoholbrug	288
DF108	Anden psykisk lidelse/adfærdsforstyrrelse f.a. alkoholbrug	23
DF109	Psykisk lidelse el. adfærdsforstyrrelse f.a. alkoholbrug UNS	15
DF110	Akut opioidintoksikation	*
DF111	Skadelig brug af opioider	84

DF112	Opioidafhængighedssyndrom	67
DF113	Abstinensstilstand sfa opioidbrug	*
DF117	Sen psykotisk el. residual tilstand forårsaget af opioidbrug	*
DF118	Anden psykisk lidelse/adfærdsforstyrrelse f.a. opioidbrug	*
DF119	Psykisk lidelse el. adfærdsforstyrrelse f.a. opioidbrug UNS	7
DF120	Akut cannabisintoksikation	*
DF121	Skadelig brug af cannabis	5
DF122	Cannabisafhængighedssyndrom	7
DF125	Cannabispsykose	*
DF128	An. psykisk lidelse/adfærdsforstyrrelse f.a. cannabisbrug	*
DF129	Psykisk lidelse/adfærdsforstyrrelse f.a. cannabisbrug UNS	*
DF130	Akut intoksikation med sedativa eller hypnotika	*
DF131	Skadelig brug af sedativa/hypnotika	8
DF132	Afhængighedssyndrom ved brug af sedativa eller hypnotika	5
DF134	Delirøs abstinensstilstand sfa sedativa/hypnotika	*
DF139	Psykisk lidelse/adfærdsforstyr. sfa sedativa/hypnotika UNS	4
DF140	Akut kokainintoksikation	*
DF141	Skadelig brug af kokain	*
DF142	Afhængighedssyndrom ved brug af kokain	*
DF145	Kokainpsykose	*
DF149	Psykisk lidelse el. adfærdsforstyrrelse f.a. kokainbrug UNS	*
DF150	Akut intoksikation med andet centralstimulerende stof	*
DF151	Skadelig brug af andet centralstimulerende stof	10
DF152	Afhængighedssyndrom ved brug af andet centralstim. stof	4
DF157	Sen psykotisk/residual tilstand f.a. an. centralstim. stof	*
DF158	An. psykisk lidelse/adfærdsforst. f.a. an. centralstim. stof	*
DF160	Akut hallucinogenintoksikation	*
DF161	Skadelig brug af hallucinogen	*
DF162	Afhængighedssyndrom ved brug af hallucinogen	6
DF165	Hallucinogenpsykose	*
DF168	Anden psykisk lidelse/adfærdsforstyr. f.a. hallucinogenbrug	*
DF171	Skadelig brug af tobak	33
DF172	Afhængighedssyndrom ved brug af tobak	*
DF180	Akut intoksikation med flygtigt opløsningsmiddel	*
DF181	Skadelig brug af flygtigt opløsningsmiddel	*
DF182	Afhængighedssyndrom ved brug af flygtigt opløsningsmiddel	6
DF190	Akut intoksikation m. multiple el. andre psykoaktive stoffer	15
DF191	Skadelig brug af flere eller andre psykoaktive stoffer	380
DF192	Afhængighedssyndrom v. brug af fl./andre psykoaktive stoffer	155
DF193	Abstinensstilstand sfa multiple/an. psykoaktivt stof	*
DF194	Delirøs abstinensstilstand sfa multiple/an. psykoaktivt stof	*
DF199	Psykisk lid/adfærdsforst. sfa mult/an. psykoaktivt stofUNS	9
DF200	Paranoid skizofreni	268
DF201	Hebefren skizofreni	7
DF202	Katatton skizofreni	8
DF203	Udifferenteret skizofreni	32
DF204	Post-skizofren depression	*
DF205	Skizofren residual-tilstand	4
DF206	Simpel skizofreni	36
DF208	Skizofreni af anden type	12
DF209	Skizofreni UNS	497
DF219	Skizotypisk sindslidelse UNS	4
DF220	Enkel paranoia	66
DF228	Anden paranoid psykose	17
DF229	Paranoid psykose UNS	129
DF231	Akut polymorf skizofreniform psykose	*
DF232	Akut skizofreniform psykose	4
DF233	Akut paranoid psykose	6
DF239	Akut eller forbigående psykose UNS	8
DF250	Skizoaftaktiv psykose af manisk type	*
DF251	Skizoaftaktiv psykose af depressiv type	4
DF252	Skizoaftaktiv blandet manisk-depressiv psykose	*
DF258	Skizoaftaktiv psykose af anden type	*
DF259	Skizoaftaktiv psykose UNS	11
DF289	Anden ikke-organisk psykose UNS	7
DF29	Ikke spec. ikke-organisk psykose	*
DF299	Ikke-organisk psykose UNS	34
DF301	Manisk enkeltepisode uden psykotiske symptomer	4
DF302	Manisk enkeltepisode med psykotiske symptomer	*
DF309	Manisk enkeltepisode UNS	10



DF310	Bipolar affektiv sindslidelse i hypoman episode	*
DF311	Bip. aff. sindslid i manisk episode u psykot. sympt.	6
DF313	Bipolar affektiv sindslid. i lettere/moderat depressiv epi.	11
DF314	Bip. aff. sindslid i svær depress. episode u psykot. sympt.	11
DF315	Bip. aff. sindslid i svær depress. episode m. psykot. sympt.	9
DF316	Bipolar affektiv sindslidelse i episode m. blandingstilstand	10
DF317	Bipolar affektiv sindslidelse i remission	*
DF318	Anden form for bipolar affektiv sindslidelse	*
DF319	Bipolar affektiv sindslidelse UNS	257
DF320	Depressiv enkeltepisode af lettere grad	14
DF321	Depressiv enkeltepisode af moderat grad	20
DF322	Depress. enkeltepisode af svær grad u psykot. sympt.	14
DF323	Depressiv enkeltepisode af svær grad m. psykotiske symptomer	14
DF328	Depressiv enkeltepisode af anden type	4
DF329	Depressiv enkeltepisode UNS	874
DF330	Periodisk depression i episode af lettere grad	*
DF331	Periodisk depression i episode af moderat grad	7
DF332	Periodisk depression i episode af svær grad u psykot. sympt.	23
DF333	Periodisk depression i episode af svær grad m psykot. sympt.	16
DF338	Periodisk depression af anden type	*
DF339	Periodisk depression UNS	34
DF341	Dystymi	7
DF349	Kronisk forstemningstilstand UNS	10
DF381	Anden periodisk affektiv sindslidelse	*
DF388	Anden affektiv sindslidelse eller tilstand	*
DF399	Affektiv sindslidelse UNS	10
DF401	Socialfobi	*
DF410	Panikangst	*
DF411	Generaliseret angst	10
DF412	Lettere angst-depressionstilstand	4
DF419	Angsttilstand UNS	15
DF422	Blandet obsessiv-kompulsiv tilstand	*
DF430	Akut belastningsreaktion	5
DF431	Posttraumatisk belastningsreaktion	4
DF432	Tilpasningsreaktion	*
DF439	Belastningsreaktion UNS	*
DF448	Anden dissociativ tilstand eller forstyrrelse	*
DF449	Dissociativ tilstand eller forstyrrelse UNS	5
DF451	Udifferenteret somatoform tilstand	*
DF480	Neurasteni	6
DF489	Nervøs tilstand UNS	5
DF500	Nervøs spisevægring	65
DF501	Atypisk nervøs spisevægring	*
DF502	Nervøs spiseanfaldstilbøjelighed	*
DF505	Opkastning forbundet med anden psykisk forstyrrelse	*
DF508	Anden spiseforstyrrelse	4
DF509	Spiseforstyrrelse UNS	9
DF54	Psykiske faktorer forbundet med sygdomme klas. andetsteds	*
DF549	Psykiske faktorer forbundet med sygdom klas. andetsteds	9
DF55	Misbrug af ikke-afhængighedsskabende stoffer	*
DF559	Misbrug af ikke-afhængighedsskabende stoffer UNS	25
DF599	Adfærdsændring UNS forbundet m fysiologisk el fysisk faktor	*
DF600	Paranoid personlighedsstruktur	6
DF601	Skizoid personlighedsstruktur	*
DF603	Emotionelt ustabil personlighedsstruktur	*
DF606	Ængstelig personlighedsstruktur	*
DF608	Anden forstyrrelse af personlighedsstrukturen	*
DF609	Forstyrrelse i personlighedsstrukturen UNS	7
DF619	Forstyrret personlighedsstruktur af blandet og anden type	*
DF621	Personlighedsændring efter psykisk sygdom	*
DF628	Anden personlighedsændring	*
DF649	Kønsidentitetsforstyrrelse UNS	*
DF699	Forstyrrelse i personlighedsstruktur og adfærd UNS	7
DF70	Mental retardering af lettere grad	*
DF709	Lettere mental retardering med påvirkning af adfærd UNS	12
DF71	Mental retardering af middelsvær grad	*
DF719	Middelsvær mental retardering med påvirkning af adfærd UNS	17
DF72	Mental retardering af sværere grad	*
DF720	Svære mental retardering med ringe påvirkning af adfærd	*
DF729	Svære mental retardering med påvirkning af adfærd UNS	42

DF73	Mental retardering i sværeste grad	*
DF739	Mental retardering i sværeste grad med adfærdspåvirkning UNS	53
DF78	Anden mental retardering	*
DF789	Anden mental retardering med påvirkning af adfærd UNS	23
DF79	Mental retardering uden specificering	8
DF798	Mental retardering UNS med anden påvirkning af adfærd	*
DF799	Mental retardering UNS	194
DF829	Specifik udviklingsforstyrrelse af motoriske færdigheder	*
DF839	Blandet udviklingsforstyrrelse af specifikke færdigheder	*
DF840	Infantil autisme	7
DF842	Retts syndrom	21
DF845	Aspergers syndrom	*
DF848	Anden gennemgribende mental udviklingsforstyrrelse	4
DF849	Gennemgribende mental udviklingsforstyrrelse UNS	5
DF89	Psyriske udviklingsforstyrrelser uden specificering	*
DF899	Psyriske udviklingsforstyrrelse UNS	5
DF909	Hyperkinetisk forstyrrelse UNS	*
DF919	Adfærdforstyrrelse UNS	*
DF920	Depressiv adfærdforstyrrelse	8
DF948	Anden social funktionsforstyrrelse	*
DF949	Social funktionsforstyrrelse UNS	*
DF989	Adfærdsmæssig/emotionel forstyrrelse i barndom/adolescens UNS	*
DF99	Psyriske lidelser eller forstyrrelser ikke nærmere spec.	5
DF999	Psyriske lidelse eller forstyrrelse UNS	85
DG000	Meningitis forårsaget af Haemophilus influenzae	*
DG001	Meningitis forårsaget af pneumokokker	252
DG002	Meningitis forårsaget af andre streptokokker	22
DG003	Meningitis forårsaget af stafylokokker	14
DG008	Anden bakteriel meningitis	22
DG009	Bakteriel meningitis UNS	192
DG019	Meningitis ved bakteriesygdom klassificeret andetsteds	*
DG030	Ikke-infektios meningitis	5
DG031	Kronisk meningitis	*
DG038	Meningitis af anden årsag	9
DG039	Meningitis UNS	129
DG040	Akut dissemineret encephalitis	4
DG042	Bakteriel meningoencephalitis eller meningomyelitis IKA	6
DG048	Anden encephalitis, myelitis eller encephalomyelitis	14
DG049	Encephalitis, myelitis eller encephalomyelitis UNS	94
DG060	Intrakranielt absces eller granulom	61
DG061	Intraspinal absces eller granulom	13
DG062	Epidural eller subdural absces UNS	47
DG089	Intrakranielt eller intraspinal flebitis eller tromboflebitis	7
DG09	Følger efter betændelsessygdomme i centralnervesystemet	*
DG099	Følge efter inflammatorisk sygdom i centralnervesystemet	40
DG10	Huntingtons sygdom	9
DG109	Huntingtons sygdom	376
DG110	Ataxia nonprogressiva congenita	*
DG111	Ataxia cerebellaris med tidlig debut	34
DG112	Ataxia cerebellaris med sen debut	46
DG113	Ataxia cerebellaris med defekt DNA-reparation	*
DG114	Arvelig spastisk paraplegi	9
DG118	Anden arvelig ataksi	32
DG119	Arvelig ataksi UNS	30
DG120	Atrophia musculorum spinalis, type I	27
DG121	Anden arvelig spinal muskelatrofi	11
DG122	Sygdom i motorneuroner	2,845
DG128	Anden spinal muskelatrofi eller beslægtet syndrom	10
DG129	Spinal muskelatrofi UNS	19
DG138	Generel atrofi, som primært afficerer CNS, ved anden sygdom	*
DG20	Parkinsons sygdom	248
DG209	Parkinsons sygdom	6,823
DG210	Malignt neuroleptikasyndrom	10
DG211	Anden medikamentel parkinsonisme	24
DG212	Sekundær parkinsonisme forårsaget af andet eksternt agens	*
DG213	Postencephalitisk parkinsonisme	*
DG214	Vaskulær parkinsonisme	*
DG218	Anden sekundær parkinsonisme	94
DG219	Sekundær parkinsonisme UNS	20
DG230	Hallervorden-Spatz sygdom	5

DG231	Progressiv supranukleær oftalmoplegi	50
DG232	Multipel system atrofi, parkinson type (MSA-P)	18
DG233	Multipel system atrofi, cerebellar type (MSA-C)	6
DG238	Anden degenerativ sygdom i basalganglier	24
DG239	Degenerativ sygdom i basalganglier UNS	31
DG240	Dystoni forårsaget af lægemiddel	*
DG241	Idiopatisk familiær dystoni	*
DG244	Idiopatisk orofacial dystoni	*
DG248	Anden dystoni	5
DG249	Dystoni UNS	17
DG250	Essentiel tremor	7
DG251	Tremor forårsaget af lægemiddel	*
DG252	Anden form for tremor	*
DG253	Myoclonus	*
DG255	Anden form for chorea	*
DG258	Anden ekstrapyramidal sygdom eller bevægeforstyrrelse	*
DG259	Ekstrapyramidal sygdom eller bevægeforstyrrelse UNS	7
DG300	Alzheimers sygdom med tidlig debut	675
DG301	Alzheimers sygdom med sen debut	5,812
DG308	Anden form for Alzheimers sygdom	151
DG309	Alzheimers sygdom UNS	7,436
DG310	Lokaliseret hjerneatrofi	167
DG311	Senil degeneration af hjernen IKA	42
DG312	Degenerative forandringer i nervesystemet f.a. alkohol	156
DG318	Anden degenerativ sygdom i nervesystemet	62
DG319	Degenerativ sygdom i nervesystemet UNS	283
DG320	Subakut degeneration af rygmarven v. sygdom klas. andetsteds	*
DG328	Anden degenerativ tilstand i nervesystemet ved sygdom KA	*
DG35	Dissemineret sklerose	97
DG359	Dissemineret sklerose UNS	2,552
DG360	Neuromyelitis optica	*
DG361	Akut eller subakut hæmoragisk leukoencephalitis	*
DG368	Anden akut dissemineret demyelinisering	4
DG369	Akut dissemineret demyelinisering UNS	18
DG370	Diffus cerebral sklerose	11
DG371	Demyelinisatio centralis corporis callosi	*
DG372	Myelinolysis pontis centralis	22
DG373	Akut transversel myelitis ved demyeliniserende sygdom i CNS	13
DG375	Encephalitis periaxialis concentrica	*
DG378	Anden demyeliniserende sygdom i centralnervesystemet	10
DG379	Demyeliniserende sygdom i centralnervesystemet UNS	38
DG400	Fokal idiopatisk epilepsi	6
DG401	Fokal epilepsi kun med simple anfald	*
DG402	Fokal epilepsi m komplekse/gen. tonisk-klonisk anfald (GTCS)	20
DG403	Generaliseret idiopatisk epilepsi	24
DG404	Epileptisk encefalopati	40
DG405	Specielt epileptisk syndrom	119
DG406	Generaliseret tonisk-klonisk anfald UNS	86
DG407	Abscenser uden grand mal anfald	*
DG408	Anden epilepsi	53
DG409	Epilepsi UNS	1,413
DG410	Generaliseret tonisk-klonisk status epilepticus	29
DG411	Non-konvulsivt status epilepticus af absencetype	*
DG412	Non-konvulsivt komplekst partielt status epilepticus	7
DG418	Anden form for status epilepticus	9
DG419	Status epilepticus UNS	209
DG430	Migræne uden aura	*
DG431	Migræne med aura	*
DG432	Status migrainosus	*
DG433	Migræne med komplikation	*
DG439	Migræne UNS	*
DG450	Vertebrobasilært syndrom	11
DG451	Arteria carotis-syndrom	4
DG453	Amaurosis fugax	*
DG454	Global forbigående amnesi	*
DG458	Anden transitorisk cerebral iskæmi eller beslægtet syndrom	6
DG459	Transitorisk anfald af cerebral iskæmi UNS	293
DG460	Arteria cerebri media-syndrom	*
DG468	Andet vaskulært syndrom ved cerebrovaskulær sygdom	*
DG470	Insomni	*

DG471	Hypersomni	*
DG473	Søvnapnø	36
DG474	Narkolepsi og katapleksi	6
DG479	Søvnforstyrrelse UNS	*
DG500	Trigeminusneuralgi	6
DG522	Sygdom i nervus vagus (X)	*
DG523	Sygdom i nervus hypoglossus (XII)	*
DG527	Sygdom samtidigt i flere kranienerver	*
DG529	Sygdom i kranienerve UNS	*
DG545	Amyotrophia neuralgica	13
DG546	Fantomsyndrom med smerter	*
DG553	Kompression af nerverod el. nerveplexus ved anden ryglidelse	*
DG564	Kausalgi i arm	88
DG587	Neuropati samtidigt i flere enkelte nerver	*
DG588	Anden mononeuropati	*
DG589	Mononeuropati UNS	*
DG600	Arvelig motorisk-sensorisk neuropati	23
DG601	Refsums sygdom	*
DG603	Idiopatisk progressiv neuropati	5
DG608	Anden form for arvelig motorisk-sensorisk neuropati	11
DG609	Arvelig eller idiopatisk neuropati UNS	7
DG610	Guillain-Barrés syndrom	51
DG618	Anden inflammatorisk polyneuropati	*
DG619	Inflammatorisk polyneuropati UNS	11
DG621	Alkoholisk polyneuropati	106
DG628	Anden polyneuropati	20
DG629	Polyneuropati UNS	143
DG632	Diabetisk polyneuropati	*
DG649	Anden sygdom i perifere nervesystem	8
DG700	Myasthenia gravis	140
DG702	Medfødt og udviklingsrelateret myasteni	*
DG708	Anden neuromuskulær sygdom	*
DG709	Neuromuskulær sygdom UNS	23
DG710	Muskeldystrofi	247
DG711	Myoton sygdom	90
DG712	Medfødt myopati	23
DG713	Mitokondriel myopati IKA	31
DG718	Anden primær muskelsygdom	8
DG719	Primær muskelsygdom UNS	11
DG720	Myopati forårsaget af lægemiddel	*
DG721	Alkoholisk myopati	15
DG723	Paralysis periodica	*
DG724	Inflammatorisk myopati IKA	*
DG728	Anden myopati	15
DG729	Myopati UNS	25
DG800	Spastisk tetraplegisk cerebral parese	120
DG801	Spastisk diplegisk cerebral parese	5
DG802	Spastisk hemiplegisk cerebral parese	*
DG803	Dyskinetisk cerebral parese	9
DG804	Ataktisk cerebral parese	*
DG808	Anden form for cerebral parese	9
DG809	Cerebral parese UNS	144
DG810	Slap hemiplegi	*
DG811	Spastisk hemiplegi	13
DG819	Hemiplegi UNS	92
DG820	Slap paraplegi	*
DG821	Spastisk paraplegi	36
DG822	Paraplegi UNS	114
DG823	Slap tetraplegi	*
DG824	Spastisk tetraplegi	101
DG825	Tetraplegi UNS	167
DG832	Monoplegi af overekstremitet	*
DG833	Monoplegi UNS	*
DG834	Cauda equina-syndrom	4
DG838	Andet paralytisk syndrom	87
DG839	Paralytisk syndrom UNS	51
DG900	Idiopatisk perifer autonom neuropati	4
DG901	Familiær dysautonomi	*
DG902	Horners syndrom	*
DG903	Multipel systemdegeneration i autonome nervesystem	15

DG909	Sygdom i autonome nervesystem UNS	*
DG910	Kommunikerende hydrocefalus	7
DG911	Obstruktiv hydrocefalus	14
DG912	Normaltrykshydrocefalus	55
DG913	Posttraumatisk hydrocefalus UNS	7
DG918	Anden form for hydrocefalus	36
DG919	Hydrocefalus UNS	111
DG929	Toksisk encefalopati	77
DG930	Hjernecyste	23
DG931	Anoksisk hjerneskode IKA	252
DG932	Benign intrakraniel trykforøgelse	6
DG933	Postviralt træthedssyndrom	*
DG934	Encefalopati UNS	137
DG935	Compressio cerebri	61
DG936	Hjerneødem	57
DG937	Reyes syndrom	*
DG938	Anden hjernesygdom	31
DG939	Hjernesygdom UNS	90
DG948	Anden hjernesygdom ved sygdom klassificeret andetsteds	*
DG950	Syringomyeli eller syringobulbi	32
DG951	Vaskulær myelopati	19
DG952	Rygmarvskompression UNS	19
DG958	Anden sygdom i rygmarv	8
DG959	Sygdom i rygmarven UNS	21
DG960	Liquorrhoea cerebrospinalis	*
DG961	Sygdom i meninges IKA	29
DG968	Anden sygdom i centralnervesystemet	5
DG969	Sygdom i centralnervesystemet UNS	36
DG989	Anden sygdom i nervesystemet IKA	27
DH043	Akut eller ikke specificeret betændelse i tåreveje	*
DH160	Sår i hornhinde	*
DH188	Anden sygdom i hornhinde	*
DH259	Senil katarakt UNS	4
DH309	Posterior uveitis UNS	*
DH348	Anden vaskulær okklusion i retina	*
DH349	Okklusion af retinalt blodkar UNS	*
DH353	Degeneratio maculae luteae et polus posterior retinae	*
DH355	Familiær retinadystrofi	*
DH440	Purulent endoftalmitis	*
DH441	Anden form for endoftalmitis	4
DH469	Inflammation i synsnerve UNS	*
DH476	Forandring i synsbarken	*
DH494	Progressiv ekstern oftalmoplegi	*
DH540	Dobbeltsidig blindhed	*
DH579	Abnorm tilstand i øje eller øjenomgivelser UNS	*
DH609	Ekstern otitis UNS	*
DH651	Anden form for akut mellemørebetændelse uden pusdannelse	*
DH654	Anden form for kronisk mellemørebetændelse uden pusdannelse	*
DH660	Akut purulent mellemørebetændelse	12
DH663	Anden form for kronisk purulent mellemørebetændelse	*
DH664	Purulent mellemørebetændelse UNS	*
DH669	Mellemørebetændelse UNS	13
DH700	Akut mastoiditis	*
DH709	Mastoiditis UNS	*
DH719	Kolesteatom i mellemøre UNS	*
DH748	Anden sygdom i mellemøre eller processus mastoideus	*
DH810	Ménières sygdom	*
DH839	Sygdom i indre øre UNS	*
DH931	Tinnitus	*
DL00	Eksfoliativ dermatitis forårsaget af stafylokokker	*
DL009	Dermatitis exfoliativa staphylococcica	5
DL010	Impetigo UNS	*
DL020	Absces, furunkel eller karbunkel i huden i ansigtet	*
DL021	Absces, furunkel eller karbunkel i huden på halsen	13
DL022	Absces, furunkel eller karbunkel i huden på kroppen	27
DL023	Absces, furunkel eller karbunkel i huden i saderegionen	17
DL024	Absces, furunkel eller karbunkel i huden på ekstremitet	75
DL028	Absces, furunkel eller karbunkel i huden m. an. lokalisation	4
DL029	Absces, furunkel eller karbunkel i huden UNS	31
DL031	Flegmone med anden lokalisation på ekstremitet	10

DL032	Flegmone i ansigtet	*
DL038	Flegmone med anden lokalisering	*
DL039	Flegmone UNS	10
DL040	Akut lymfadenitis i ansigtet, på hovedet og halsen	*
DL050	Pilonidalcyste med absces	*
DL059	Pilonidalcyste uden absces	*
DL088	Anden lokal infektion i hud eller underhud	16
DL089	Lokal infektion i hud eller underhud UNS	82
DL100	Pemphigus vulgaris	*
DL104	Pemphigus erythematosus	*
DL108	Anden form for pemfigus	*
DL109	Pemfigus UNS	6
DL120	Bulløs pemfigoid	44
DL121	Pemphigoides cicatricialis	*
DL128	Anden form for pemfigoid	*
DL129	Pemfigoid UNS	7
DL139	Blæreudslæt UNS	14
DL200	Prurigo Besnier	*
DL208	Anden form for atopisk dermatitis	*
DL235	Allergisk kontaktdermatitis forårsaget af andet kemikalie	*
DL239	Allergisk kontaktdermatitis UNS	*
DL269	Dermatitis exfoliativa	6
DL301	Dyshidrose	*
DL303	Infektiøs dermatitis	*
DL308	Anden form for dermatitis	*
DL309	Dermatitis UNS	5
DL400	Psoriasis vulgaris	*
DL401	Psoriasis pustulosa generalisata	5
DL405	Psoriasis artropati	10
DL409	Psoriasis UNS	30
DL411	Pityriasis lichenoides chronica	*
DL419	Parapsoriasis UNS	*
DL429	Pityriasis rosea UNS	*
DL440	Pityriasis rubra pilaris	*
DL449	Papuløsquamøs sygdom UNS	*
DL509	Nældefeber UNS	*
DL511	Erythema multiforme bullosum	8
DL512	Necrolysis epidermalis toxica	10
DL518	Anden form for erythema multiforme	*
DL538	Anden erytematøs tilstand	*
DL539	Erytem eller erythrodermi UNS	*
DL558	Anden form for solskoldning	*
DL568	Anden akut hudforandring forårsaget af ultraviolet lys	*
DL570	Aktinisk keratose	*
DL578	Anden hudforandring ved langvarig ikke-joniserende stråling	*
DL580	Akut stråledermatitis	*
DL581	Kronisk stråledermatitis	*
DL598	Anden strålebetinget sygdom i hud og underhud	7
DL599	Strålebetinget sygdom i hud og underhud UNS	*
DL600	Nedgroet negl	*
DL649	Androgen alopeci UNS	*
DL659	Alopeci uden ardannelse UNS	*
DL679	Abnorm hårfarve eller hårform UNS	*
DL702	Acne varioliformis	*
DL758	Anden forstyrrelse i apokrine svedkirtler	*
DL839	Acanthosis nigricans UNS	*
DL858	Anden form for epidermal fortykkelse	*
DL88	Pusdannelse i huden	*
DL889	Pyoderma gangraenosum	53
DL89	Tryksår	24
DL892	Decubitus grad III	*
DL893	Decubitus grad IV	*
DL899	Decubitus UNS	492
DL900	Sklerotisk eller atrofisk lichen	*
DL908	Anden atrofisk forstyrrelse i hud	*
DL909	Atrofisk forstyrrelse i hud UNS	*
DL930	Diskoid lupus erythematosus	6
DL931	Lupus erythematosus cutaneus subacutus	*
DL932	Anden form for lokaliseret lupus erythematosus	*
DL940	Lokaliseret sklerodermi	*

DL948	Anden form for lokaliseret bindevævssygdom	*
DL949	Lokaliseret bindevævssygdom UNS	*
DL950	Vasculitis livedoides	*
DL958	Anden vaskulitis begrænset til huden	*
DL959	Vaskulitis begrænset til huden UNS	4
DL97	Sår på ben IKA	21
DL977		*
DL979	Ulcus på ben IKA	321
DL984	Kronisk ulcus i huden IKA	109
DL985	Mucinosi cutis	*
DL988	Anden sygdom i hud og underhud	*
DL989	Sygdom i hud eller underhud UNS	4
DM000	Arthritis eller polyarthritis forårsaget af stafylokokker	22
DM001	Arthritis eller polyarthritis forårsaget af pneumokokker	4
DM002	Arthritis eller polyarthritis forårsaget af streptokokker	*
DM008	Purulent arthritis eller polyarthritis f.a. anden bakterie	8
DM009	Purulent arthritis UNS	88
DM023	Reiters sygdom	*
DM028	Anden reaktiv arthritis	*
DM029	Reaktiv arthritis UNS	4
DM050	Feltys syndrom	12
DM051	Reumatoid arthritis med lungemanifestationer	15
DM052	Reumatoid vaskulitis	24
DM053	Reumatoid arthritis med involvering af andre organsystemer	176
DM058	Anden form for seropositiv reumatoid arthritis	27
DM059	Seropositiv reumatoid arthritis UNS	127
DM060	Seronegativ reumatoid arthritis	66
DM061	Stills sygdom med debut efter det fyldte 16. år	*
DM064	Polyarthriti inflammatorica	4
DM068	Anden form for reumatoid arthritis	16
DM069	Reumatoid arthritis UNS	1,310
DM073	Anden form for psoriatisk artropati	*
DM080	Juvenil reumatoid arthritis	*
DM082	Juvenil arthritis med ekstra-artikulære manifestationer	*
DM089	Juvenil arthritis UNS	6
DM100	Idiopatisk urinsur gigt	25
DM103	Urinsur gigt ved nefropati	6
DM109	Urinsur gigt UNS	72
DM111	Familiær kondrokalcinose	*
DM123	Palindromisk reumatisme	*
DM130	Polyarthritis UNS	35
DM131	Monoarthritis IKA	7
DM138	Anden arthritis	10
DM139	Arthritis UNS	42
DM144	Artropati ved amyloidose	*
DM150	Primær generaliseret artrose	19
DM153	Sekundær multipel artrose	*
DM154	Erosiv artrose	*
DM158	Anden polyartrose	5
DM159	Polyartrose UNS	46
DM160	Primær dobbeltsidig hofteledsartrose	26
DM161	Primær enkeltsidig hofteledsartrose	38
DM162	Dysplastisk dobbeltsidig hofteledsartrose	*
DM163	Dysplastisk enkeltsidig hofteledsartrose	*
DM165	Posttraumatisk enkeltsidig hofteledsartrose	*
DM166	Anden form for sekundær dobbeltsidig hofteledsartrose	*
DM167	Anden form for sekundær enkeltsidig hofteledsartrose	7
DM169	Hofteledsartrose UNS	250
DM170	Primær dobbeltsidig knæledsartrose	29
DM171	Primær enkeltsidig knæledsartrose	14
DM173	Posttraumatisk enkeltsidig knæledsartrose	*
DM174	Anden form for sekundær bilateral knæledsartrose	*
DM179	Knæledsartrose UNS	89
DM190	Primær artrose i andet (andre) led	*
DM191	Posttraumatisk artrose i andet (andre) led	*
DM198	Anden artrose	5
DM199	Artrose UNS	88
DM201	Erhvervet hallux valgus	*
DM206	Erhvervet tådeformitet UNS	*
DM229	Sygdom i patella UNS	*

DM233	Anden menisklidelse	*
DM238	Anden lidelse i knæled	*
DM239	Knæledslidelse UNS	31
DM243	Luksation eller subluksation i led IKA	*
DM244	Habituelle luksationer eller subluksationer	8
DM245	Ledkontraktur	*
DM246	Ankylose	*
DM247	Protrusio acetabuli	*
DM248	Anden ledlidelse IKA	*
DM249	Ledsygdom UNS	4
DM255	Ledsmerter	*
DM259	Ledlidelse UNS	*
DM300	Polyarteritis nodosa	48
DM301	Polyarteritis med asthma bronchiale	24
DM302	Polyarteritis juvenilis	*
DM303	Mukokutant lymfeknudesyndrom	*
DM308	Anden sygdom beslægtet med polyarteritis nodosa	5
DM310	Angiitis hypersensitiva	10
DM311	Microangiopathia thrombotica	31
DM312	Letalt midtlinjegrnulom	*
DM313	Wegeners granulomatose	361
DM314	Arcus aortae-syndrom	4
DM315	Kæmpecellearteritis med reumatisk polymyalgi	31
DM316	Anden kæmpecellearteritis	73
DM317	Mikroskopisk polyangiitis	*
DM318	Anden nekrotiserende vaskulitis	24
DM319	Nekrotiserende vaskulitis UNS	35
DM321	Systemisk lupus erythematosus med organinvolvering	108
DM328	Anden form for systemisk lupus erythematosus	8
DM329	Systemisk lupus erythematosus UNS	115
DM330	Dermatomyositis juvenilis	*
DM331	Anden dermatomyositis	25
DM332	Polymyositis	43
DM339	Dermatopolymyositis UNS	12
DM340	Progressiv systemisk sklerodermi	62
DM341	CREST-syndrom	5
DM348	Anden form for systemisk sklerodermi	89
DM349	Systemisk sklerodermi UNS	126
DM350	Sjögrens syndrom	38
DM351	Andet blandingssyndrom ved generaliseret bindevævssygdom	18
DM352	Behçets sygdom	4
DM353	Reumatisk polymyalgi	352
DM354	Eosinofil fasciitis	*
DM355	Fibrosclerosis multifocalis	*
DM357	Hypermobilitetssyndrom	*
DM358	Anden generaliseret bindevævssygdom	22
DM359	Generaliseret bindevævssygdom UNS	73
DM400	Postural kyfose	*
DM401	Anden form for sekundær kyfose	*
DM402	Anden eller ikke specificeret kyfose	16
DM404	Anden form for lordose	*
DM410	Idiopatisk skoliose hos barn	*
DM411	Idiopatisk skoliose hos ung	*
DM412	Anden form for idiopatisk skoliose	6
DM413	Torakogen skoliose	7
DM414	Neuromuskulær skoliose	9
DM415	Anden form for sekundær skoliose	*
DM418	Anden form for skoliose	*
DM419	Skoliose UNS	52
DM420	Juvenil osteokondrose i rygsøjlen	*
DM429	Osteokondrose i rygsøjlen UNS	*
DM430	Spondylolyse	*
DM431	Spondylolistese	5
DM432	Blokhvirveldannelse i rygsøjlen	*
DM434	Anden habituel atlantoaksial subluksation	*
DM435	Anden form for habituel subluksation i rygsøjlen	*
DM436	Torticollis	*
DM438	Anden deformerende ryglidelse	*
DM439	Deformerende ryglidelse UNS	*
DM45	Spondylitis ankylopoietica	4



DM459	Ankyloserende spondylitis	50
DM461	Sakroiliitis IKA	*
DM462	Osteomyelitis i ryghvirvel	18
DM463	Infektiøs diskitis i rygsøjlen	24
DM464	Diskitis UNS	16
DM465	Anden form for infektiøs spondylopati	44
DM468	Anden form for inflammatorisk spondylopati	*
DM469	Inflammatorisk spondylopati UNS	55
DM470	Kompressionssyndrom v forsnæv, a.spinalis ant./a.vertebralis	*
DM471	Anden spondylose med myelopati	5
DM472	Anden spondylose med radikulopati	*
DM478	Anden spondylose	16
DM479	Spondylose UNS	13
DM480	Spinalstenose	111
DM481	Hyperostosis ankylotica	*
DM482	Arthrosis processus spinosi vertebrarum lumbalium	*
DM485	Sammenfald af ryghvirvel IKA	52
DM488	Anden form for spondylopati	*
DM489	Spondylopati UNS	4
DM500	Cervikal diskusprolaps med myelopati	*
DM501	Cervikal diskusprolaps med radikulopati	*
DM502	Anden form for cervikal diskusprolaps	5
DM503	Anden form for cervikal diskusdegeneration	5
DM509	Sygdom i cervikal båndskive UNS	7
DM510	Lumbal eller torakal diskusprolaps med myelopati	*
DM511	Lumbal eller torakal diskusprolaps med radikulopati	8
DM512	Anden form for torakolumbal diskusprolaps	15
DM513	Anden torakal eller lumbal diskusdegeneration	*
DM519	Sygdom i lumbal eller torakal båndskive UNS	5
DM530	Cervikokranialt syndrom	*
DM538	Anden ryglidelse	*
DM539	Ryglidelse UNS	19
DM541	Radikulopati UNS	*
DM543	Ischias	*
DM544	Lændesmerter med ischias	*
DM545	Lændesmerter UNS	4
DM546	Torakale rygsmerter	7
DM548	Andre rygsmerter	6
DM549	Rygsmerter UNS	38
DM600	Infektiøs myositis	18
DM608	Anden form for myositis	8
DM609	Myositis UNS	17
DM614	Anden form for forkalkning af muskelvæv	*
DM619	Forkalkning eller forbening af muskel UNS	*
DM621	Anden ikke-traumatisk muskelruptur	*
DM622	Iskæmisk muskelinfarkt	17
DM623	Immobilitetssyndrom	49
DM625	Muskelatrofi IKA	*
DM626	Muskelspændinger	*
DM628	Anden muskelsygdom	31
DM629	Muskelsygdom UNS	36
DM659	Synovitis eller tenosynovitis UNS	*
DM679	Sygdom i ledkapselhinde eller sene UNS	*
DM702	Bursitis olecrani	19
DM703	Anden bursitis i albue	4
DM704	Bursitis i slimsækken over knæskallen	*
DM705	Anden bursitis i knæ	*
DM707	Anden bursitis i hofte	*
DM710	Purulent bursitis	4
DM711	Anden infektiøs bursitis	*
DM718	Anden sygdom i slimsæk	*
DM719	Sygdom i slimsæk UNS	*
DM720	Dupuytren's kontraktur	4
DM724	Pseudosarkomatøs fibromatose	*
DM725	Fasciitis ikke klassificeret andetsteds	58
DM726	Nekrotiserende fasciitis	57
DM728	Anden fibroblastsygdom	43
DM729	Fibroblastsygdom UNS	8
DM754	Afklemningssyndrom i skulder	*
DM755	Bursitis i skulder	*

DM758	Anden skulderlidelse	*
DM759	Skulderlidelse UNS	*
DM779	Entesopati UNS	*
DM790	Reumatisme UNS	19
DM792	Neuralgi eller neuritis UNS	*
DM796	Ekstremitetssmerter	4
DM797	Fibromyalgi	*
DM798	Anden bløddelsreumatisme	*
DM799	Bløddelsreumatisme UNS	*
DM800	Postmenopausal osteoporose med patologisk fraktur	30
DM802	Immobilisationsosteoporose med patologisk fraktur	45
DM804	Osteoporose med patologisk fraktur forårsaget af lægemiddel	7
DM805	Idiopatisk osteoporose med patologisk fraktur	84
DM808	Anden form for osteoporose med patologisk fraktur	49
DM809	Osteoporose UNS med patologisk fraktur	488
DM810	Postmenopausal osteoporose	9
DM812	Immobilisationsosteoporose	22
DM813	Osteoporose forårsaget af malabsorption efter operation	*
DM814	Osteoporose forårsaget af lægemiddel	*
DM815	Idiopatisk osteoporose	44
DM816	Lokaliseret osteoporose	13
DM818	Anden osteoporose	44
DM819	Osteoporose UNS	1,035
DM831	Senil osteomalaci	*
DM832	Osteomalaci hos voksen forårsaget af malabsorption	*
DM833	Osteomalaci hos voksen forårsaget af fejlnæring	6
DM834	Aluminium-knoglesygdom	*
DM838	Anden form for osteomalaci hos voksen	*
DM839	Osteomalaci hos voksen UNS	*
DM840	Fraktur med ufuldstændig heling	10
DM841	Pseudartrose	*
DM842	Fraktur med forsinket heling	4
DM844	Patologisk fraktur IKA	26
DM853	Osteitis condensans	*
DM858	Anden forstyrrelse i knogletæthed eller knoglestruktur	*
DM859	Forstyrrelse i knogletæthed eller knoglestruktur UNS	*
DM860	Akut hæmatogen osteomyelitis	4
DM861	Anden akut osteomyelitis	9
DM862	Subakut osteomyelitis	4
DM863	Kronisk multifokal osteomyelitis	*
DM864	Kronisk osteomyelitis med fistel	7
DM865	Anden kronisk hæmatogen osteomyelitis	5
DM866	Anden kronisk osteomyelitis	33
DM868	Anden osteomyelitis	6
DM869	Osteomyelitis UNS	95
DM872	Posttraumatisk knoglenekrose	*
DM873	Anden form for sekundær knoglenekrose	*
DM878	Anden form for knoglenekrose	10
DM879	Knoglenekrose UNS	23
DM888	Pagets sygdom i anden knogle	*
DM889	Pagets knoglesygdom UNS	7
DM896	Osteopati efter poliomyelitis	7
DM898	Anden knoglesygdom	*
DM899	Knoglesygdom UNS	5
DM918	Anden form for juvenil bruskklidelse i hofte eller bækken	*
DM919	Juvenil bruskklidelse i hofte eller bækken UNS	*
DM938	Anden osteokondropati	*
DM940	Tietzes syndrom	*
DM941	Recidiverende polykondritis	*
DM948	Anden brusksygdom	*
DM949	Brusksygdom UNS	*
DM954	Erhvervet deformitet af thorax eller ribben	*
DM959	Erhvervet deformitet af muskler eller knogler UNS	*
DM992	Subluksationsstenose af rygmarskanalen	*
DM993	Ossø's stenose af rygmarskanalen	*
DM995	Diskusstenose af rygmarskanalen	*
DM996	Stenose af foramen intervertebralis f.a. knoglevæv/subluksat	*
DM999	Biomekanisk dysfunktion UNS	6
D0001	Ektopisk graviditet i æggeleder	*
D0009	Ektopisk graviditet UNS	*

D0039	Komplet/ikke spec. spontan abort u komplikation	*
D0068	Provokeret abort på legal indikation uden specifikation	*
D0069	Fremkaldt abort før 12 graviditetsuger med samrådstilladelse	*
D0102	Gravid., fødsel el. barsel med kompl. hypertensiv nyresygdom	*
D0141	Svær præeklampsi	*
D0142	HELLP-syndrom	*
D0149	Præeklampsi UNS	7
D0150	Eklampsi	*
D0223	Dyb tromboflebitis i graviditeten	*
D0240	Graviditet, fødsel el. barsel m. forud best. type 1-diabetes	*
D0411	Infektion i amnionhule og fosterhinder	*
D0419	Sygdom i amnionvæske eller fosterhinder UNS	*
D0449	Forliggende moderkage UNS	*
D0600	Veer før termin uden fødsel	*
D0623	Styrtfødsel	*
D0670	Fødsel kompliceret af blødning med koagulationsdefekt	*
D0679	Fødsel kompliceret af blødning UNS	*
D0689	Fødsel kompliceret af mistanke om asfyksi UNS	*
D0711	Uterusruptur under eller efter fødslen	*
D0721	Haemorrhagia post partum efter partus placentae	*
D0730	Fastsiddende placenta	*
D0751	Shock under eller efter fødslen	*
D0754	Anden komplikation til obstetrisk indgreb	*
D0758	Anden fødselskomplikation	*
D0859	Sepsis i barselsperioden	*
D0860	Sårinfektion efter obstetrisk indgreb	*
D0882	Obstetrisk emboli forårsaget af blodprop	*
D0888	Anden obstetrisk emboli	*
D0903	Kardiomyopati i barselsperioden	*
D0959	Mors obstetrica (mater) causa ignota	*
D0994	Kredsløbssygdom som kompl. gravid., fødsel eller barselsp.	*
D0998	Anden sygdom som kompl. graviditet/fødsel/barselsperiode	*
DP011	For tidlig vandafgang med følger for nyfødt	*
DP021	Anden blødning med følger for nyfødt	*
DP022	Anden/ikke spec. abnormitet v. placenta m. følger for nyfødt	*
DP025	Anden afklemning af navlestreng med følger for nyfødt	*
DP033	Forløsning med vakuumeustraktor med følger for nyfødt	*
DP035	Styrtfødsel med følger for nyfødt	*
DP038	Anden fødselskomplikation med følger for nyfødt	*
DP039	Fødselskomplikation UNS med følger for nyfødt	*
DP052	Dysmaturitet	*
DP059	Langsom fostervækst UNS	*
DP072	Immaturitet	46
DP073	Præmaturitet	23
DP109	Intrakraniel læsion eller blødning UNS f.a. fødselstraume	*
DP140	Erb-Duchennes paralyse	*
DP210	Svær neonatal asfyksi	8
DP219	Neonatal asfyksi UNS	34
DP220	Idiopatisk respiratory distress-syndrom hos nyfødt	*
DP228	Anden respiratorisk distress hos nyfødt	*
DP229	Respiratory distress hos nyfødt UNS	*
DP236	Anden bakteriel medfødt pneumoni	4
DP240	Aspiration af mekonium hos nyfødt	*
DP271	Bronkopulmonal dysplasi opstået i perinatalperioden	*
DP278	Anden kronisk luftvejssygdom opstået i perinatalperioden	*
DP291	Hjertearytmi hos nyfødt	*
DP350	Medfødt rubellasyndrom	*
DP351	Medfødt cytomegalovirusinfektion	*
DP362	Sepsis hos nyfødt forårsaget af Staphylococcus aureus	*
DP364	Sepsis hos nyfødt forårsaget af Escherichia coli	*
DP371	Medfødt toksoplasmose	*
DP379	Medfødt infektiøs eller parasitær sygdom UNS	*
DP524	Ikke-traumatisk intracerebral hjerneblødning hos nyfødt	*
DP525	Ikke-traumatisk subaraknoidal blødning hos nyfødt	*
DP526	Ikke-traum. blødning i lillehjernen/fossa post hos nyfødt	*
DP528	An. ikke-traum. intrakraniel blødning hos nyfødt	*
DP529	Ikke-traumatisk intrakraniel blødning hos nyfødt UNS	*
DP543	Anden blødning i mavetarmkanalen hos nyfødt	*
DP579	Kernikterus UNS	*
DP592	Ikterus hos nyfødt ved anden el. ikke spec. levercelleskade	*

DP613	Medfødt anæmi ved blodtab i fostertilstanden	*
DP779	Nekrotiserende enterocolitis hos nyfødt	*
DP800	Cold injury-syndrom	*
DP832	Hydrops foetalis hos foster UNS	*
DP918	Anden neonatal cerebral forstyrrelse	*
DP919	Cerebral forstyrrelse hos nyfødt UNS	*
DP929	Problem med fødeindtagelsen hos nyfødt UNS	*
DP939	Reaktioner og forgiftninger hos nyfødt f.a. lægemiddel	*
DP942	Medfødt muskulær hypotoni	*
DP948	Anden forstyrrelse i muskeltonus hos nyfødt	*
DP959	Foetus mortuus ante partum	*
DQ012	Encephalocele occipitalis	*
DQ02	Mikrocefali	*
DQ029	Mikrocefali UNS	58
DQ030	Misdannelse af aquaeductus cerebri	4
DQ031	Atresia aperturæ medianae et lateralis ventriculi quarti	*
DQ038	Anden form for medfødt hydrocefalus	9
DQ039	Medfødt hydrocefalus UNS	34
DQ040	Medfødt misdannelse af corpus callosum	5
DQ042	Holoprosencefali	6
DQ043	Anden cerebral hypoplasi	16
DQ045	Megalencephalus	*
DQ046	Medfødte cerebrale cyster	*
DQ048	Anden medfødt misdannelse i hjernen	10
DQ049	Medfødt misdannelse i hjernen UNS	22
DQ051	Torakal spina bifida med hydrocefalus	*
DQ052	Lumbal spina bifida med hydrocefalus	4
DQ054	Spina bifida UNS med hydrocefalus	6
DQ055	Cervical spina bifida uden hydrocefalus	*
DQ057	Lumbal spina bifida uden hydrocefalus	*
DQ059	Spina bifida UNS	14
DQ061	Hypoplasi eller dysplasi af rygmarven	*
DQ068	Anden medfødt misdannelse i rygmarv	*
DQ069	Medfødt misdannelse i rygmarven UNS	4
DQ070	Arnold-Chiari syndrom	4
DQ078	Anden medfødt misdannelse i nervesystemet	9
DQ079	Medfødt misdannelse i nervesystemet UNS	*
DQ122	Kolobom i linse	*
DQ149	Medfødt misdannelse i bageste del af øje UNS	*
DQ200	Truncus arteriosus communis	7
DQ201	Transpositio vasorum incompleta i højre ventrikel	5
DQ202	Transpositio vasorum incompleta i venstre ventrikel	*
DQ203	Transpositio vasorum completa	17
DQ204	Ventriculus cordis communis	13
DQ205	Inversio ventriculorum cordis	5
DQ208	Anden medfødt misdannelse af hjertekamre	14
DQ209	Medfødt misdannelse af hjertekamre UNS	7
DQ210	Ventrikelseptumdefekt	49
DQ211	Atrieseptumdefekt	50
DQ212	Atrioventrikulær septumdefekt	30
DQ213	Steno-Fallots tetralogi	80
DQ214	Aortopulmonal septumdefekt	*
DQ218	Anden medfødt misdannelse af hjerteskillevæg	39
DQ219	Medfødt misdannelse af hjerteskillevæg UNS	6
DQ220	Pulmonalklapsatresi	*
DQ221	Medfødt pulmonalklapstenose	*
DQ223	Anden medfødt misdannelse af pulmonalklap	*
DQ224	Medfødt trikuspidalklapstenose	*
DQ225	Ebsteins anomali	13
DQ226	Hypoplastisk højre hjerte-syndrom	*
DQ230	Medfødt aortaklapstenose	19
DQ231	Medfødt aortaklapinsufficiens	11
DQ232	Medfødt mitralklapstenose	5
DQ233	Medfødt mitralklapinsufficiens	5
DQ234	Hypoplastisk venstre hjerte-syndrom	12
DQ238	Anden medfødt misdannelse af aorta- eller mitralklap	*
DQ239	Medfødt misdannelse af aorta- eller mitralklap UNS	5
DQ240	Dekstrokardi	7
DQ242	Cor triatriatum	*
DQ244	Medfødt subaortastenose	*

DQ245	Medfødt misdannelse af koronararterie	10
DQ246	Medfødt hjerteblok	*
DQ248	Anden medfødt hjertemisdannelse	38
DQ249	Medfødt hjertemisdannelse UNS	77
DQ250	Persisterende ductus arteriosus	9
DQ251	Coarctatio aortae	33
DQ252	Aortaatresi	*
DQ253	Medfødt aortastenose	46
DQ254	Anden medfødt misdannelse i aorta	*
DQ255	Pulmonalarterieatresi	*
DQ256	Medfødt pulmonalarteriestenose	*
DQ259	Medfødt misdannelse i de store arterier UNS	*
DQ261	Vena cava superior sinistra persistens	*
DQ262	Total anomali af lungevenerne	*
DQ263	Partiel anomali af lungevenerne	*
DQ265	Anomalia venae portae	*
DQ268	Anden medfødt misdannelse i de store vener	*
DQ271	Medfødt stenose af nyrearterie	*
DQ273	Medfødt perifer arteriovenøs malformation	8
DQ278	Anden medfødt misdannelse i det perifere kredsløb	*
DQ280	Arteriovenøs misdannelse i præcerebralt kar	*
DQ282	Arteriovenøs misdannelse i cerebralt kar	41
DQ283	Anden misdannelse i cerebralt kar	20
DQ288	Anden medfødt misdannelse i kredsløbsorganerne	4
DQ289	Medfødt misdannelse i kredsløbsorganerne UNS	*
DQ314	Stridor laryngis congenitus	*
DQ320	Tracheomalacia congenita	*
DQ321	Anden medfødt misdannelse i trakea	*
DQ324	Anden medfødt bronkiemisdannelse	*
DQ332	Sequestrum pulmonum	*
DQ334	Medfødt bronkiektasi	*
DQ335	Ektopisk væv i lunge	*
DQ338	Anden medfødt lungemisdannelse	4
DQ340	Medfødt misdannelse af lungehinde	4
DQ341	Medfødt mediastinal cyste	*
DQ375	Enkeltsidig læbe-gumme-ganespalte	*
DQ390	Øsofagusatresi uden fistel	4
DQ391	Øsofagusatresi med medfødt trakeoøsofageal fistel	*
DQ392	Medfødt trakeoøsofageal fistel uden øsofagusatresi	*
DQ393	Medfødt stenose eller striktur i øsofagus	*
DQ396	Øsofagusdivertikel	*
DQ401	Medfødt hiatushernie	*
DQ408	Anden medfødt misdannelse i øvre fordøjelsesorganer	*
DQ410	Agenesi, atresi eller medfødt stenose af duodenum	*
DQ412	Agenesi, atresi eller medfødt stenose af ileum	*
DQ418	Agenesi, atresi el. medfødt stenose af anden del af tyndtarm	*
DQ419	Agenesi, atresi eller medfødt stenose af tyndtarm UNS	*
DQ429	Agenesi, atresi eller medfødt stenose af tyktarm UNS	*
DQ430	Meckels divertikel	12
DQ431	Medfødt megacolon	5
DQ432	Anden medfødt forstyrrelse i tyktarmens funktion	*
DQ433	Medfødt misdannelse i mesenterie, oment eller peritoneum	*
DQ438	Anden medfødt misdannelse i tarmkanalen	*
DQ442	Atresi af galdegang	25
DQ445	Anden medfødt misdannelse i galdegang	*
DQ446	Medfødt cystelever	9
DQ447	Anden medfødt misdannelse i lever	*
DQ450	Agenesi, aplasi og hypoplasi af pancreas	*
DQ452	Medfødt pancreascyste	*
DQ453	Anden medfødt misdannelse af pancreas el. ductus pancreatis	*
DQ459	Medfødt misdannelse i fordøjelsessystem UNS	*
DQ600	Enkeltsidig nyreagenesi	7
DQ601	Dobbeltsidig nyreagenesi	*
DQ602	Nyreagenesi UNS	*
DQ604	Dobbeltsidig nyrehypoplasi	*
DQ610	Medfødt nyrecyste	8
DQ611	Polycystisk nyresygdom med autosomal recessiv arvegang	*
DQ612	Polycystisk nyresygdom med autosomal dominant arvegang	86
DQ613	Polycystisk nyresygdom UNS	208
DQ614	Cystisk renal dysplasi	*

DQ615	Medullær svampenyre	11
DQ618	Anden form for cystenyre	*
DQ619	Cystenyre UNS	23
DQ620	Medfødt hydronefroze	*
DQ621	Medfødt atresi eller stenose af urinleder	*
DQ622	Medfødt dilatation af urinleder	*
DQ628	Anden medfødt misdannelse i urinleder	*
DQ631	Lobuleret nyre, kagenyre eller hesteskonyre	*
DQ638	Anden medfødt nyremisdannelse	5
DQ639	Medfødt misdannelse i nyre UNS	*
DQ647	Anden medfødt misdannelse af urinblære og urinrør	*
DQ648	Anden medfødt misdannelse i urinveje	*
DQ649	Medfødt misdannelse i urinveje UNS	4
DQ652	Medfødt hofteleksation UNS	*
DQ675	Medfødt deformitet af rygsøjle	8
DQ688	Anden medfødt misdannelse i muskel eller knogle	*
DQ743	Arthrogryposis multiplex congenita	*
DQ751	Kraniofacial dysostose	*
DQ752	Hypertelorisme	*
DQ753	Makrocefali	*
DQ754	Mandibulofacial dysostose	*
DQ763	Medfødt skoliose forårsaget af knoglemisdannelse	7
DQ764	Anden medfødt misdannelse af rygsøjle uden samtidig skoliose	*
DQ769	Medfødt misdannelse i brystkassens knogler UNS	*
DQ774	Akondroplasi	*
DQ780	Osteogenesis imperfecta	8
DQ782	Osteopetrose	4
DQ788	Anden form for osteokondrodysplasi	*
DQ789	Osteokondrodysplasi UNS	4
DQ790	Medfødt diafragmahernie	*
DQ791	Anden medfødt misdannelse af diafragma	*
DQ792	Omfalocoele	*
DQ793	Gastroskise	*
DQ795	Anden medfødt misdannelse af bugvæg	*
DQ796	Ehlers-Danlos' syndrom	11
DQ809	Medfødt iktyosis UNS	*
DQ819	Epidermolysis bullosa UNS	*
DQ820	Arveligt lymfødeme	*
DQ822	Mastocytose	*
DQ828	Anden medfødt misdannelse af huden	*
DQ850	Ikke-malign neurofibromatose	47
DQ851	Tuberøs sklerose	10
DQ858	Anden fakomatose IKA	16
DQ860	Føtal alkoholisk syndrom	*
DQ870	Syndromer med medfødte misdannelser overvejende i ansigtet	6
DQ871	Medfødt misdannelsessyndrom med dværgvækst	19
DQ872	Syndrom m. medfødt misdannelser overvejende i ekstremiteter	*
DQ873	Syndromer med medfødte misdannelser med tidlig højdevækst	*
DQ874	Marfans syndrom	51
DQ875	Andet medfødt misdannelsessyndrom med an. skeletforandringer	*
DQ878	Andet medfødt misdannelsessyndrom IKA	37
DQ890	Medfødt misdannelse i milten	*
DQ893	Situs inversus	4
DQ897	Multiple medfødte misdannelser IKA	6
DQ898	Anden medfødt misdannelse	8
DQ899	Medfødt misdannelse UNS	42
DQ900	Trisomi 21, meiotisk nondisjunktion	12
DQ902	Trisomi 21, translokation	4
DQ909	Downs syndrom UNS	599
DQ910	Trisomi 18, meiotisk nondisjunktion	*
DQ912	Trisomi 18, translokation	*
DQ913	Edwards' syndrom UNS	12
DQ914	Trisomi 13, meiotisk nondisjunktion	*
DQ917	Patau syndrom UNS	*
DQ920	Autosomal trisomi, meiotisk nondisjunktion	*
DQ921	Autosomal trisomi, mosaik mitotisk nondisjunktion	*
DQ928	Anden hel eller partiel autosomal trisomi	4
DQ929	Hel eller partiel autosomal trisomi UNS	*
DQ930	Autosomal monosomi, meiotisk nondisjunktion	*
DQ933	Deletion af kromosom 4, kort arm	*

DQ934	Deletion af kromosom 5, kort arm	*
DQ935	Anden partiel deletion af et kromosom	*
DQ958	Anden balanceret ombytning i kromosom eller kromosommarkør	*
DQ960	Turners syndrom karyotype 45,X	*
DQ969	Turners syndrom UNS	11
DQ984	Klinefelters syndrom UNS	6
DQ988	Anden kønskromosomanomali med mandlig fænotype	*
DQ992	Fragilt X-kromosom	*
DQ998	Anden kromosomanomali	19
DQ999	Kromosomanomali UNS	17
DR000	Takykardi UNS	15
DR001	Bradykardi UNS	79
DR008	Anden eller ikke specificeret abnorm hjerterytme	25
DR02	Koldbrand IKA	5
DR029	Gangræn IKA	384
DR031	Lavt blodtryk UNS	*
DR040	Næseblod	8
DR041	Blødning fra svælg	*
DR042	Hæmoptyse	23
DR048	Blødning fra anden lokalisering i luftveje	4
DR049	Blødning fra luftvejene UNS	7
DR059	Hoste UNS	*
DR060	Dyspnø	40
DR062	Piben på lungerne	*
DR063	Cheyne-Stokes respiration	*
DR068	Anden eller ikke specificeret abnorm vejrtrækning	17
DR073	Andre bryst smerter	12
DR079	Bryst smerter uden specifikation	6
DR090	Asfyksi	114
DR091	Lungehindebetændelse IKA	8
DR092	Respirationsstop	570
DR098	An. spec. symptom el fund i kredsløbs- og åndedrætsorganerne	8
DR100	Akutte mavesmerter	310
DR101	Mavesmerter lokaliseret til øvre abdomen	17
DR102	Mavesmerter lokaliseret til bækken og bækkenbund	*
DR103	Mavesmerter lokaliseret til anden del af nedre abdomen	28
DR108	Abdominalia, anden og ikke specificeret	67
DR11	Kvalme og opkastning	*
DR119	Kvalme og opkastning	21
DR139	Synkebesvær UNS	94
DR159	Afføringsinkontinens	9
DR160	Forstørret lever IKA	5
DR161	Forstørret milt IKA	*
DR162	Hepatomegali med splenomegali IKA	*
DR179	Ikterus UNS	57
DR189	Ascites UNS	19
DR190	Udfyldning i abdomen eller bækken UNS	*
DR194	Ændret afføringsmønster	*
DR198	Andet symptom eller abnormt fund i fordøjelsessystem/abdomen	*
DR230	Cyanose	*
DR252	Kramper eller spasmer	6
DR268	Andet eller ikke spec. Gangbesvær/mobilitetsforstyrrelse	*
DR298	An./uspec. symptom/abnormt fund i nerve- og bevægelsessyst.	*
DR319	Hæmaturi UNS	25
DR329	Urininkontinens UNS	4
DR339	Urinretention UNS	20
DR349	Anuri eller oliguri	38
DR391	Vandladningsbesvær UNS	*
DR392	Ekstrarenal uræmi	14
DR400	Somnolens	6
DR401	Stupor	*
DR402	Koma UNS	20
DR410	Konfusion UNS	6
DR413	Anden amnesi	*
DR418	An. el ikke spec. symptom/abnormt fund vedr. erkendelsesevne	*
DR429	Vertigo UNS	5
DR482	Apraksi	*
DR509	Feber UNS	193
DR519	Hovedpine UNS	*
DR520	Akutte smerter	*

DR522	Andre kroniske smerter	*	
DR529	Smerter UNS	*	
DR53	Utilpashed og træthed	6	
DR539	Utilpashed eller udmattelse UNS	1,163	
DR54	Alderdomssvækkelse	448	
DR549	Senilitet	16,089	
DR559	Besvimelse eller kollaps	22	
DR560	Feberkramper	*	
DR568	Andre eller ikke specificerede kramper	21	
DR570	Kardiogent shock	227	
DR571	Hypovolæmisk shock	43	
DR572	Septisk shock	47	
DR578	Anden form for shock	14	
DR579	Shock UNS	72	
DR589	Blødning UNS	117	
DR591	Universel lymfeknudeforstørrelse	*	
DR600	Lokaliseret ødem	4	
DR601	Universelt ødem	5	
DR609	Ødem UNS	6	
DR620	Retarderet psykomotorisk udvikling	17	
DR630	Appetitløshed	118	
DR633	Anden form for spisevanskelighed	5	
DR634	Abnormt vægttab	32	
DR636		*	
DR638	Symptomer/abnorme fund vedr. føde- og væskeindtagelse UNS	4	
DR64	Kakeksi	23	
DR649	Kakeksi UNS	971	
DR659		*	
DR680	Hypotermi, som ikke skyldes kolde omgivelser	22	
DR700	Forhøjet sænkning	4	
DR739	Hyperglykæmi UNS	*	
DR770	Abnormt plasma-albumin	*	
DR781	Morfika i blodet	*	
DR788	Påvisning af andet fremm stof i blodet	4	
DR789	Påvisning af ikke spec. stof, normalt ikke i blodet	*	
DR798	Anden abnorm blodprøve	5	
DR799	Abnormt kemisk fund i blodprøve UNS	4	
DR809	Proteinuri UNS	*	
DR821	Myoglobinuri	20	
DR900	Intrakraniel rumopfyldende proces	*	
DR919	Abnorm billeddiagnostisk unds. af lunger	*	
DR930	Abnorm billeddiagnostisk undersøgelse af kranie IKA	*	
DR945	Abnorm leverfunktionsundersøgelse	*	
DR95	Pludselig uventet spædbarnsdød	4	
DR950		*	
DR959	Mors subita infantum	65	
DR960	Mors subita causa ignota	4,373	
DR961	Mors <24 timer efter sympt u kendt årsag og u tegn til vold	27	
DR969		*	
DR98	Fundet død uden årsagen kan konstateres	162	
DR989	Mors causa ignota (fundet død)	15,467	
DR99	Særlige forhold vedrørende død	1,319	
DR990		19,374	
DR991	Hjernedød i henhold til sundhedsloven section 176		*
DR999	Mors uden specifikation	14,583	
DS328	Fraktur af an/ikke spec. del af lumbale rygsøjle/bækken	*	
DS720	Fraktur af lårbenshals	7	
DS721	Pertrokantær femurfraktur	*	
DT055	Traumatisk amputation af begge ben	*	
DT179	Fremmedlegeme i luftvejene UNS	*	
DT809	Komplikation efter infusion, transfusion eller injektion UNS	*	
DT813	Postoperativ sårruptur IKA	*	
DT814	Infektion efter indgreb IKA	7	
DT819	Komplikation til indgreb UNS	*	
DT821	Mekanisk komplikation til pacemaker	*	
DT827	Infektion/inflam. v. an. implant/transplantat i hjerte/kar	*	
DT857	Infektion/inflamm. v. an. intern protese/implant/transplantat	*	
DT858	Anden kompl. til intern protese, implantat el. transplantat	*	
DT861	Svigt eller afstødning af transplanteret nyre	4	
DT874	Infektion i amputationsstump	8	



DT875	Nekrose i amputationsstump	*
DT905	Følgetilstand efter intrakraniel læsion	*
DT931	Følgetilstand efter fraktur af lårben	*
DT936	Følgetilst. eft. Knusningslæs./traumatisk amputation på ben	*
DZ491	Ekstracorporal dialyse	*
DZ492	Dialyse, anden	46
DZ895	Erhvervet mangel af ben i højde med eller under knæet	*
DZ896	Erhvervet mangel af underekstremitet oven for knæet	*
DZ897	Erhvervet mangel af begge underekstremiteter	*
DZ905	Erhvervet mangel af nyre	*
DZ933	Tilstand med kolostomi	*
DZ940	Nyretransplanteret	12
DZ951	Tilstand med aortokoronar-bypass transplantat	*
DZ992	Afhængig af renal dialyse	16
Renal		
DN170	Akut nyreinsufficiens med tubulær nekrose	27
DN171	Akut nyreinsufficiens med akut kortikal nekrose	7
DN172	Akut nyreinsufficiens med medullær nekrose	*
DN178	Anden form for akut nyreinsufficiens	94
DN179	Akut nyreinsufficiens UNS	508
DN180	Terminal nyreinsufficiens	834
DN181	Kronisk nyreinsufficiens uden funktionsnedsættelse, stadie *	16
DN182	Kronisk nyreinsufficiens, stadie *	4
DN183	Kronisk nyreinsufficiens, stadie *	21
DN184	Kronisk nyreinsufficiens, stadie 4	66
DN185	Kronisk nyreinsufficiens, terminal stadie 5	597
DN188	Kronisk nyreinsufficiens, andre former	126
DN189	Kronisk nyreinsufficiens UNS	3,343
DN19	Nyreinsufficiens UNS	150
DN199	Nyreinsufficiens UNS	2,991
Urinal		
DN000	Akut glomerulonefritis med minimale glomerulære forandringer	*
DN001	Akut glom.nefrit m fokale el segmentære glomerulære forandr.	*
DN002	Akut glomerulonefritis med diffus membranøs morfologi	5
DN003	Akut glomerulonefritis med diffus mesangial proliferation	*
DN006	Akut glomerulonefritis med membr-prolif. morfologi type *	*
DN007	Akut glomerulonefritis med ekstrakapillær morfologi	*
DN008	Akut glomerulonefritis med anden morfologi	*
DN009	Akut glomerulonefrit UNS	43
DN010	Akut progred. glomerulonefritis m. min. glomerulære forandr.	*
DN013	Akut progred. glom.nefrit m. diffus mesangial proliferation	*
DN015	Akut progred. glom.nefrit m. membr.-prolif.morfo. * og 3/UNS	*
DN017	Akut progredierende glom-nefritis m. ekstrakapil. morfologi	*
DN018	Akut progredierende glomerulonefritis med anden morfologi	4
DN019	Akut progredierende glomerulonefrit UNS	6
DN020	Recidiv. el. vedv. hæmaturi m. minimale glomerulære forandr.	*
DN027	Recidiverende/vedvar. hæmaturi med ekstrakapillær morfologi	*
DN028	Recidiverende eller vedvarende hæmaturi med anden morfologi	7
DN029	Recidiverende eller vedvarende hæmaturi UNS	*
DN030	Kronisk glomerulonefritis m. minimale glomerulære forandr.	5
DN031	Kron. glom.nefrit m. fokal/segment. glomerulære forandringer	*
DN032	Kronisk glomerulonefritis med diffus membranøs morfologi	4
DN033	Kronisk glomerulonefritis med diffus mesangial proliferation	5
DN034	Kronisk glomerulonefritis m diffus endokapil. proliferation	*
DN035	Kron. glom.nefrit m membranoprolif. morfologi tp. * og 3/UNS	*
DN037	Kronisk glomerulonefritis med ekstrakapillær morfologi	*
DN038	Kronisk glomerulonefritis med anden morfologi	8
DN039	Kronisk glomerulonefrit UNS	432
DN040	Nefrose med minimale glomerulære forandringer	*
DN041	Nefrose med fokale eller segmentære glomerulære forandringer	*
DN042	Nefrose med diffus membranøs morfologi	5
DN043	Nefrose med diffus mesangial proliferation	*
DN045	Nefrose m membranoproliferativ morfologi type * og * el. UNS	*
DN048	Nefrose med anden morfologi	11
DN049	Nefrose UNS	109
DN050	Glomerulonefritis UNS med minimale glomerulære forandringer	4
DN051	Glom.nefrit UNS m fokale el segmentære glomerulære forandr.	*
DN052	Glomerulonefritis UNS med diffus membranøs morfologi	7
DN053	Glomerulonefritis UNS med diffus mesangial proliferation	5
DN054	Glomerulonefritis UNS med diffus endokapillær proliferation	*

DN055	Glom.nefrit UNS m membr-prolif. morfologi type * og * el UNS	*
DN056	Glomerulonefritis UNS m. membranoproliferativ morfol. type *	*
DN057	Glomerulonefritis UNS med ekstrakapillær morfologi	10
DN058	Glomerulonefritis UNS med anden morfologi	7
DN059	Glomerulonefrit UNS	409
DN061	Monosymptomat. proteinuri m fokal/segmentær glomerul-forandr	*
DN070	Arvelig nefropati med minimale glomerulære forandringer	*
DN071	Arvelig nefropati m fokale el segmentære glomerulære forandr	*
DN072	Arvelig nefropati med diffus membranøs morfologi	*
DN075	Arvelig nefropati m membr-prolif. morfologi type * og 3/UNS	*
DN078	Arvelig nefropati med anden morfologi	6
DN079	Arvelig nefropati UNS	5
DN083	Glomerulonefropati ved diabetes mellitus	*
DN10	Akut tubulointerstitiel nefritis	6
DN109	Akut tubulointerstitiel nefritis UNS	268
DN110	Ikke-obstruktiv kron. pyelonefritis v vesikoureteral reflux	5
DN111	Kronisk obstruktiv pyelonefritis	11
DN118	Anden form for kronisk tubulointerstitiel nyresygdom	17
DN119	Kronisk pyelonefritis UNS	221
DN12	Tubulo-interstitiel nefritis UNS	16
DN129	Pyelonefritis UNS	405
DN130	Hydronefroze ved ureteropelvin obstruktion	29
DN131	Hydronefroze ved ureterstriktur IKA	31
DN132	Hydronefroze m. obstrukt. f.a. sten i nyrebækken el. ureter	26
DN133	Anden eller ikke nærmere specificeret hydronefroze	251
DN134	Hydroureter	*
DN135	Striktur eller stenose i ureter uden hydronefroze	25
DN136	Pyonefroze	45
DN137	Uropati ved vesikoureteral reflux	*
DN138	Anden uropati ved obstruktion eller reflux	6
DN139	Nyrelidelse UNS ved obstruktion eller reflux	9
DN140	Nefropati forårsaget af analgetika	15
DN141	Nefropati forårsaget af anden biologisk substans/lægemiddel	33
DN142	Nefropati f.a. ikke spec. biologisk substans el. lægemiddel	112
DN143	Nefropati forårsaget af tungmetal	*
DN144	Toksisk nefropati IKA	13
DN150	Balkan-nefropati	*
DN151	Renal eller perirenal absces	51
DN158	Anden tubulointerstitiel nyresygdom	17
DN159	Tubulointerstitiel nyresygdom UNS	64
DN200	Nyresten UNS	121
DN201	Uretersten UNS	43
DN202	Nyresten med uretersten UNS	15
DN209	Urinvejssten UNS	169
DN210	Urinblæresten	15
DN211	Uretrasten	*
DN218	Anden form for sten i nedre urinveje	*
DN219	Sten i nedre urinveje UNS	4
DN239	Colica renalis UNS	*
DN250	Nefrogen osteodystrofi	6
DN251	Nefrogen diabetes insipidus	*
DN258	Anden sygdom ved nedsat tubulær nyrefunktion	23
DN259	Nedsat tubulær nyrefunktion UNS	25
DN26	Skrumpenyrer UNS	7
DN269	Skrumpenyre UNS	159
DN270	Enkeltsidig nyreatrofi	*
DN271	Dobbeltsidig nyreatrofi	6
DN279	Nyreatrofi UNS	7
DN280	Iskæmi eller infarkt i nyre	19
DN281	Erhvervet nyrecyste	33
DN288	Anden sygdom i nyre eller urinleder	50
DN289	Sygdom i nyre eller urinleder UNS	84
DN300	Akut blærebetændelse	571
DN301	Kronisk interstitiel cystitis	58
DN302	Anden kronisk cystitis	55
DN304	Cystitis forårsaget af bestråling	*
DN308	Anden cystitis	101
DN309	Cystitis UNS	563
DN312	Atonisk neurogen urinblære IKA	*
DN318	Anden neuromuskulær funktionsforstyrrelse i urinblæren	4

DN319	Neuromuskulær funktionsforstyrrelse i urinblæren	UNS	*
DN320	Urinblærehalsstenose		*
DN321	Vesikointestinal fistel		55
DN322	Urinblærefistel IKA		6
DN323	Urinblæredivertikel		9
DN324	Ikke-traumatisk urinblæreruptur		11
DN328	Anden sygdom i urinblæren		23
DN329	Sygdom i urinblæren	UNS	23
DN340	Uretralabsces		*
DN342	Anden form for uretritis		*
DN351	Postinfektiøs uretrastriktur	IKA	*
DN359	Uretrastriktur	UNS	27
DN360	Uretrafistel		*
DN361	Uretradivertikel		*
DN368	Anden sygdom i uretra		*
DN369	Sygdom i uretra	UNS	*
DN390	Urinvejsinfektion uden angivelse af lokalisation		4,087
DN391	Vedvarende proteinuri	UNS	*
DN393	Stressinkontinens		*
DN394	Anden form for urininkontinens		*
DN398	Anden sygdom i urinvejene		19
DN399	Sygdom i urinvejene	UNS	38
DN40	Forstørret blærehalskirtel		135
DN409	Prostatahypertrofi		773
DN410	Akut prostatitis		*
DN411	Kronisk prostatitis		*
DN412	Prostataabsces		5
DN419	Prostatitis	UNS	*
DN420	Prostatasten		*
DN421	Prostatablødning		*
DN422	Prostata-atrofi		*
DN423	Dysplasi i prostata		*
DN428	Anden sygdom i prostata		17
DN429	Sygdom i prostata	UNS	21
DN433	Hydrocele	UNS	6
DN450	Orkitis, epididymitis eller epididymoorkitis med absces		13
DN459	Orkitis, epididymitis eller epididymoorkitis uden absces		14
DN47	Sygdomme i forhuden		*
DN479	Sygdomme i forhuden	UNS	*
DN482	Anden betændelsestilstand i penis		*
DN484	Organisk impotens		*
DN488	Anden sygdom i penis		*
DN492	Betændelsestilstand i scrotum		32
DN498	Betændelsestilstand i anden del af de mandlige kønsorganer		14
DN499	Betændelsestilstand i de mandlige kønsorganer	UNS	9
DN501	Vaskulær sygdom i de mandlige kønsorganer		*
DN509	Sygdom i de mandlige kønsorganer	UNS	*
DN619	Ikke-puerperal betændelse i mamma	UNS	*
DN629	Mammahypertrofi		*
DN639	Mammatumorer	UNS	20
DN645	Andet symptom eller fund i mamma		*
DN649	Sygdom i mamma	UNS	*
DN700	Akut salpingitis eller ooforitis		*
DN701	Kronisk salpingitis eller ooforitis		*
DN709	Salpingitis eller ooforitis	UNS	6
DN710	Akut endometritis		7
DN711	Kronisk endometritis		*
DN719	Endometritis	UNS	19
DN732	Parametritis eller flegmone i det kvindelige bækken	UNS	*
DN735	Kvindelig pelveoperitonitis	UNS	8
DN736	Adhærencer i det kvindelige bækken		*
DN738	Anden infektion i det kvindelige bækken		*
DN739	Infektion i det kvindelige bækken	UNS	12
DN751	Absces i Bartholins kirtel		*
DN758	Anden sygdom i Bartholins kirtler		*
DN760	Akut vaginitis		4
DN764	Absces i vulva		8
DN768	Anden betændelsessygdom i vagina eller vulva		*
DN804	Endometriose i septum rectovaginalis eller vagina		*
DN809	Endometriose	UNS	*

DN811	Cystocele hos kvinde	5
DN812	Livmoderprolaps uden vaginalprolaps	*
DN813	Inkomplet uterovaginal prolaps	*
DN814	Komplet uterovaginal prolaps	5
DN815	Uterovaginal prolaps UNS	5
DN816	Vaginalt enterocele	*
DN817	Rektocele	*
DN818	Anden form for kvindelig genitalprolaps	*
DN819	Kvindelig genitalprolaps UNS	4
DN820	Vesikovaginal fistel	*
DN822	Intestinovaginal fistel	5
DN823	Kolovaginal fistel	25
DN824	Anden fistel mellem kvindelige kønsorganer og tarm	5
DN831	Corpus luteum-cyste	*
DN832	Anden eller ikke specificeret ovariecyste	37
DN835	Torsion af ovarie, æggeleder eller uterine adnekser	*
DN839	Ikke-inflammatorisk sygd i ovarie, æggeleder, parametrie UNS	*
DN841	Polyp i livmoderhalsen	*
DN849	Polyp i kvindelige kønsorganer UNS	*
DN850	Endometriehyperplasi uden atypi	*
DN851	Adenomatøs endometriehyperplasi	*
DN852	Uterushypertrofi	*
DN858	Anden ikke-inflammatorisk sygdom i livmoderen	*
DN859	Ikke-inflammatorisk sygdom i livmoderen UNS	7
DN872	Svær dysplasi på livmoderhalsen	*
DN879	Dysplasi på livmoderhalsen UNS	*
DN898	Anden ikke-inflammatorisk sygdom i vagina	*
DN899	Ikke-inflammatorisk sygdom i vagina UNS	*
DN912	Amenoré UNS	*
DN921	Metroragi	*
DN939	Abnorm blødning fra livmoderen eller vagina UNS	23
DN950	Postmenopausal metroragi	*
Res		
Respir		
DJ009	Akut nasofaryngitis UNS	6
DJ010	Akut kæbehulebetændelse	*
DJ011	Akut pandehulebetændelse	*
DJ014	Akut pansinuitis	*
DJ019	Akut bihulebetændelse UNS	5
DJ020	Akut streptokok faryngitis	*
DJ028	Akut faryngitis forårsaget af anden organisme	*
DJ029	Akut faryngitis UNS	*
DJ030	Akut streptokok tonsillitis	5
DJ038	Akut tonsillitis forårsaget af anden organisme	*
DJ039	Akut tonsillitis UNS	22
DJ040	Akut laryngitis	7
DJ041	Akut trakeitis	*
DJ042	Akut laryngotrakeitis	5
DJ050	Akut obstruktiv laryngitis	*
DJ051	Epiglottitis acuta	15
DJ068	Anden akut øvre luftvejsinfektion med flere lokalisationer	7
DJ069	Akut øvre luftvejsinfektion UNS	68
DJ09	Influenza fa. identif zoonotisk el pandemisk type infl.virus	56
DJ10	Influenza f.a. identif. sæsonbestemte typer influenzavirus	17
DJ100	Influenza med lungebetændelse f.a. anden type influenzavirus	22
DJ101	Influenza m an luftvejsmanifest. f.a. an type influenzavirus	4
DJ108	Influenza m. an. manifestation f.a. an. type influenzavirus	*
DJ11	Influenza uden påvist influenzavirus	205
DJ110	Influenza med lungebetændelse uden påvist influenzavirus	309
DJ111	Influenza med an. luftvejsmanifest. u. påvist influenzavirus	158
DJ118	Influenza med anden manifestation uden påvist influenzavirus	264
DJ120	Pneumonia forårsaget af adenovirus	21
DJ121	Pneumoni forårsaget af respiratorisk syncytial virus	20
DJ122	Pneumoni forårsaget af parainfluenzavirus	24
DJ128	Anden viruspneumoni	104
DJ129	Viruspneumoni UNS	153
DJ13	Pneumokok-lungebetændelse	24
DJ139	Pneumoni forårsaget af Streptococcus pneumoniae	507
DJ14	Hæmofilus-lungebetændelse	*
DJ149	Pneumoni forårsaget af Haemophilus influenzae	55

DJ150	Pneumoni forårsaget af Klebsiella pneumoniae	68
DJ151	Pneumoni forårsaget af Pseudomonas	61
DJ152	Pneumoni forårsaget af stafylokokker	104
DJ153	Pneumoni forårsaget af streptokokker, gruppe B	11
DJ154	Pneumoni forårsaget af anden streptokok	39
DJ155	Pneumoni forårsaget af Escherichia coli	18
DJ156	Pneumoni forårsaget af anden gram-negativ bakterie	36
DJ157	Pneumoni forårsaget af Mycoplasma pneumoniae	39
DJ158	Anden bakteriel pneumoni	3,581
DJ159	Bakteriel pneumoni UNS	5,712
DJ160	Klamydiapneumoni	6
DJ168	Pneumoni forårsaget af andet infektiøst agens	20
DJ170	Pneumoni ved bakteriel infektion klassificeret andetsteds	*
DJ172	Pneumoni ved mykose klassificeret andetsteds	4
DJ180	Bronkopneumoni UNS	4,408
DJ181	Lobær pneumoni UNS	523
DJ182	Hypostatisk pneumoni UNS	39
DJ188	Anden pneumoni forårsaget af ikke spec. mikroorganisme UNS	714
DJ189	Pneumoni UNS	23,858
DJ200	Akut bronkitis forårsaget af Mycoplasma pneumoniae	7
DJ202	Akut bronkitis forårsaget af streptokokker	*
DJ205	Akut bronkitis forårsaget af respiratorisk syncytial virus	*
DJ206	Akut bronkitis forårsaget af rhinovirus	*
DJ208	Akut bronkitis forårsaget af anden mikroorganisme	*
DJ209	Akut bronkitis UNS	163
DJ210	Akut bronkiolitis f.a. respiratorisk syncytial virus	*
DJ218	Akut bronkiolitis forårsaget af anden mikroorganisme	6
DJ219	Akut bronkiolitis UNS	22
DJ22	Ikke spec. akutte inf. i nedre luftveje	5
DJ229	Akut nedre luftvejsinfektion UNS	141
DJ320	Kronisk kæbehulebetændelse	4
DJ321	Kronisk pandehulebetændelse	*
DJ329	Kronisk bihulebetændelse UNS	4
DJ339	Næsepolyp UNS	*
DJ340	Absces, furunkel eller karbunkel i næsen	*
DJ348	Anden sygdom i næsehule eller bihule	*
DJ353	Hypertrofi af tonsiller med adenoide vegetationer	*
DJ358	Anden kronisk sygdom i tonsiller og adenoide vegetationer	*
DJ359	Kronisk sygdom i tonsiller eller adenoide vegetationer UNS	*
DJ36	Halsbyld	*
DJ369	Peritonsillær absces	20
DJ370	Kronisk laryngitis	*
DJ380	Paralyse af stemmebånd eller struben	10
DJ381	Polyp på stemmebånd eller i struben	*
DJ383	Anden sygdom i stemmebånd	*
DJ384	Larynxødem	5
DJ385	Laryngospasme	*
DJ387	Anden sygdom i larynx	9
DJ390	Retrofaryngeal eller parafaryngeal absces	7
DJ391	Anden absces i pharynx	5
DJ392	Anden sygdom i pharynx	*
DJ398	Anden sygdom i øvre luftveje	10
DJ399	Sygdom i øvre luftveje UNS	7
DJ40	Bronkitis ikke specificeret som akut eller kronisk	*
DJ409	Bronkitis UNS	97
DJ410	Simpel kronisk bronkitis	99
DJ411	Mukopurulent kronisk bronkitis	67
DJ418	Blandet simpel og mukopurulent kronisk bronkitis	19
DJ42	Kronisk bronkitis ikke nærmere specificeret	135
DJ429	Kronisk bronkitis UNS	5,187
DJ430	Enkeltsidigt lungeemfysem	*
DJ431	Panlobulært lungeemfysem	36
DJ432	Centrilobulært emfysem	11
DJ438	Anden form for lungeemfysem	23
DJ439	Lungeemfysem UNS	1,500
DJ440	Kronisk obstr. lungesygdom m. akut nedre luftvejs infektion	6,978
DJ441	Kronisk obstruktiv lungesygdom med akut eksacerbation UNS	8,954
DJ442		*
DJ448	Anden form for kronisk obstruktiv lungesygdom	6,301
DJ449	Kronisk obstruktiv lungesygdom UNS	43,184

DJ450	Allergisk astma	40
DJ451	Ikke-allergisk astma	73
DJ458	Astma af blandet type	80
DJ459	Astma UNS	2,245
DJ46	Status asthmaticus	*
DJ469	Status asthmaticus UNS	194
DJ47	Udvidelse af bronkier	*
DJ479	Bronkiektasi	98
DJ609	Pneumokoniose forårsaget af kulstøv	*
DJ61	Støvlunge forårsaget af asbest og andre mineralfibre	9
DJ619	Pneumokoniose forårsaget af asbest og andre mineralfibre	185
DJ620	Pneumokoniose forårsaget af talkum	*
DJ628	Anden form for silikose	34
DJ631	Lungefibrose forårsaget af bauxit	7
DJ633	Lungefibrose forårsaget af grafit	7
DJ634	Lungesiderose	*
DJ638	Pneumokoniose forårsaget af andet uorganisk støv	7
DJ649	Pneumokoniose UNS	45
DJ659	Pneumokoniose med tuberkulose UNS	4
DJ660	Byssinose	*
DJ668	Luftvejssygdom forårsaget af andet organisk støv	6
DJ670	Tærskerlunger	6
DJ672	Fugleholderlunger	*
DJ678	Allergisk alveolitis forårsaget af andet organisk støv	4
DJ679	Allergisk alveolitis forårsaget af organisk støv UNS	17
DJ680	Bronkitis el. pneumonitis f.a. indåndet kemik./gas/røg/damp	6
DJ681	Lungeødem f.a. indåndede kemikalier, gasser, røg eller dampe	14
DJ682	Inflam. i øvre luftveje f.a. indåndede kemik./gas/røg/dampe	*
DJ683	An. tilst. i luftveje f.a. indåndet kemikalie/gas/røg/damp	*
DJ684	Kronisk sygdom i luftveje f.a. indåndet kemik./gas/røg/damp	11
DJ689	Sygdom i luftveje UNS f.a. indåndet kemik./gas/røg/dampe	*
DJ690	Aspirationspneumoni forårsaget af fødeemner el. maveindhold	675
DJ691	Aspirationspneumoni forårsaget af olie eller fedtstoffer	*
DJ698	Aspirationspneumoni f.a. andet fast eller flydende stof	155
DJ700	Strålepneumonitis	32
DJ701	Lungefibrose efter bestråling	52
DJ702	Akut interstitiel lungesygdom forårsaget af lægemiddel	7
DJ703	Kronisk interstitiel lungesygdom forårsaget af lægemiddel	4
DJ704	Interstitiel lungesygdom forårsaget af lægemiddel UNS	6
DJ708	Anden tilstand i luftvejene efter anden ydre påvirkning	5
DJ709	Tilstand i luftvejene efter ydre påvirkning UNS	10
DJ80	Respirationssvigt som følge af alveolebeskadigelse	*
DJ809	Alveolebeskadigelse med respirationssvigt (ARDS)	55
DJ81	Lungeødem	37
DJ819	Lungeødem UNS	1,297
DJ829	Eosinofile lungeinfiltrater	19
DJ840	Alveolær eller parietoalveolær sygdom	10
DJ841	Anden interstitiel lungesygdom med fibrose	1,886
DJ848	Anden interstitiel lungesygdom	178
DJ849	Interstitiel lungesygdom UNS	729
DJ850	Gangræn og nekrose i lunge	5
DJ851	Lungeabsces med pneumoni	183
DJ852	Lungeabsces UNS	92
DJ853	Absces i mediastinum	16
DJ860	Pleuraempyem med fistel	20
DJ869	Pleuraempyem UNS	317
DJ90	Væskeansamling i lungehinde IKA	11
DJ909	Pleuraeffusion IKA	313
DJ920	Pleurale plaques og belægninger eft kendt asbesteksponering	42
DJ929	Pleurale plaques og belægninger uden kendt asbesteksponering	4
DJ930	Spontan trykpneumothorax	6
DJ931	Anden spontan pneumothorax	19
DJ938	Anden form for pneumothorax	19
DJ939	Pneumothorax UNS	125
DJ940	Kylothorax	17
DJ941	Fibrothorax	10
DJ942	Hæmothorax	41
DJ948	Anden sygdom i lungehinder	82
DJ949	Sygdom i lungehinder UNS	9
DJ952	Akut respirationsinsufficiens efter ekstratorakal kirurgi	*

DJ959	Tilstand i respirationsveje UNS efter indgreb	*
DJ960	Akut respirationsinsufficiens	1,677
DJ961	Kronisk respirationsinsufficiens	571
DJ969	Respirationsinsufficiens UNS	1,053
DJ980	Sygdom i luftrør eller bronkier IKA	9
DJ981	Atelektase i lunge	133
DJ982	Interstitielt lungeemfysem	27
DJ983	Kompensatorisk emfysem	11
DJ984	Anden langesygdom	757
DJ985	Sygdom i mediastinum IKA	21
DJ986	Sygdom i diafragma	6
DJ988	Anden tilstand i åndedrætsorganer	23
DJ989	Tilstand i åndedrætsorgan UNS	88
DJ991	Lungeforandringer ved anden bindevævssygdom	*

Cause of death for entire population

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CoD 4 groups											
	CVD	Can	Oth						Res		
	All	CVD	Cancer	Diab	Digest	Extern	Infect	Other	Renal	Urinal	Respir
	N	N	N	N	N	N	N	N	N	N	N
Dødsdato											
1996	60,690	22,893	15,215	19	2,441	3,365	549	9,849	210	414	5,735
1997	59,559	22,685	15,260	22	2,867	3,534	384	8,655	201	459	5,492
1998	57,800	21,991	15,189	24	2,831	3,408	374	7,935	233	474	5,341
1999	58,458	22,272	15,448	26	2,909	3,439	490	7,420	253	488	5,713
2000	56,917	21,402	15,495	13	2,826	3,350	406	7,393	245	467	5,320
2001	57,536	21,742	15,515	15	2,836	3,075	423	7,777	254	462	5,437
2002	58,072	21,039	14,963	28	2,844	2,581	771	8,965	427	494	5,960
2003	57,082	20,344	14,923	30	2,752	2,537	886	8,559	515	524	6,012
2004	55,355	19,064	15,212	29	2,761	2,427	865	8,429	474	551	5,543
2005	54,435	18,022	15,290	28	2,877	2,573	771	8,584	423	553	5,314
2006	54,992	17,490	15,637	17	2,933	2,672	858	8,898	463	649	5,375
2007	55,076	16,338	15,134	37	2,681	2,515	927	10,696	459	517	5,772
2008	54,015	15,389	15,225	55	2,769	2,464	830	10,645	394	478	5,766
2009	54,271	15,175	15,094	53	2,772	2,266	933	10,719	409	511	6,339
2010	53,908	14,767	15,380	57	2,724	2,062	982	11,001	467	417	6,051
2011	51,881	13,791	15,522	51	2,486	2,199	913	10,020	414	470	6,015
2012	51,962	13,719	15,776	49	2,310	2,144	992	10,064	468	396	6,044
2013	51,798	13,172	15,409	65	2,214	2,098	1,112	10,461	477	471	6,319
2014	50,724	12,801	15,610	36	2,236	2,101	999	10,127	466	472	5,876
2015	51,950	13,155	15,677	35	2,129	1,959	1,055	10,785	454	491	6,210
2016	52,205	12,899	15,869	52	2,110	2,024	1,007	11,062	517	438	6,227
2017	52,626	12,501	15,515	36	2,054	1,942	1,106	11,951	563	444	6,514
2018	*	*	.	.	.	.	*	.	.	.	.

Cause of death for entire population

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## The CONTENTS Procedure

Data Set Name	DMDAT.COD	Observations	1211314
Member Type	DATA	Variables	10
Engine	V9	Indexes	0
Created	12/08/2020 15:09:31	Observation Length	80
Last Modified	12/08/2020 15:09:31	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

```

Data Set Page Size      65536
Number of Data Set Pages 1483
First Data Page        *
Max Obs per Page       817
Obs in First Data Page 791
Number of Data Set Repairs 0
ExtendObsCounter       YES
Filename               E:\workdata\707655\DMreg\data\cod.sas7bdat
Release Created        9.0401M5
Host Created           X64_SR12R2
Owner Name             DSTFSE\FDIY7655
File Size              93MB
File Size (bytes)      97255424

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
*	pnr	Char	12	\$12.	\$10.	Personnummer
*	doDth	Num	8	DDMMYY10.		Dødsdato
*	cod4	Char	*			CoD 4 groups
4	codX	Char	6			CoD 10 groups w/ DM recoded
5	codD	Char	6			CoD 10 groups
6	daar	Char	8			CoD revised
7	daa1	Char	8	\$4.	\$4.	Primary CoD
8	daa2	Char	8	\$4.	\$4.	Secondary CoD
9	daa3	Char	8	\$4.	\$4.	Tertiary CoD
10	daa4	Char	8	\$4.	\$4.	Quarternary CoD

## 3.6 00y-base

Reads the files with person information and creates a dataset classified by **pnr** and year (**yr**) 1996–2019, additionally holding variables for municipality (**kom**) and region (**reg**) of residence, level of education (**udd**, **udddk** and **eduen**) and family income (**find**), as of 1 January.

```
1                                "Program: 00y-base.sas"      14:51 Tuesday, August 11, 2020
```

```
NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
```

```
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
```

```
      Licensed to FORSKNING 1, Site 50800722.
```

```
NOTE: This session is executing on the X64_SR12R2 platform.
```

```
NOTE: Updated analytical products:
```

```
      SAS/STAT 14.3
```

```
NOTE: Additional host information:
```

```
      X64_SR12R2 WIN 6.3.9600 Server
```

```
NOTE: SAS initialization used:
```

```
      real time          0.18 seconds
```

```
      cpu time           0.10 seconds
```

```
NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.
```

```
NOTE: AUTOEXEC processing completed.
```

```
1                                *-----;
```



```

2      * the base populations (entire Danish population 1995-2017) classified
3      by kom/reg of residence, family income and education at 1 Jan each year ;
4
5      *-----;
6      * the available addresses in DK: compute the reg too ;
7      data adr ;
8          set grund.befadr201912 ;
9      * restrict records to those who group to a region (post-2007 codes)
10     that is with a blank as 3rd char after formatting by komreg_x4_kt ;
11     if substr( put( kom, $komreg_v4_KT. ), 3, 1 ) eq " " ;
12     reg = put( kom, $komreg_v4_K. ) ;
13     run ;

```

NOTE: There were 4115954 observations read from the data set GRUND.BEFADR201912.

NOTE: The data set WORK.ADR has 2935676 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```

real time      4.51 seconds
cpu time       2.95 seconds

```

```

14
15     * still there are a few duplicates to remove but by definition these
16     are also identical on kom and reg ;
17     proc sort  data = adr  out = adr  nodupkey ; by adresse_id ; run ;

```

NOTE: There were 2935676 observations read from the data set WORK.ADR.

NOTE: 179 observations with duplicate key values were deleted.

NOTE: The data set WORK.ADR has 2935497 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      0.33 seconds
cpu time       1.04 seconds

```

```

18     * adr is now a dataset with one record per adresse_id and only
19     post-2007 municipality codes for each address-id
20     sorted by adresse_id which is what we need ;
21
22     *-----;
23     * the available educational achievements ;
24
25     * the first step is to restrict put to only the needed lookups,
26     namely the different values of hfaudd ;
27     proc sort  data = grund.uddf2019 ( where = ( pnr ne ' ' ) )
28         out = uddf
29         nodupkey ;
30         by hfaudd ;
31     run ;

```

NOTE: There were 17231989 observations read from the data set GRUND.UDDF2019.

WHERE pnr not = ' ' ;

NOTE: 17228991 observations with duplicate key values were deleted.

NOTE: The data set WORK.UDDF has 2998 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      9.86 seconds
cpu time       7.78 seconds

```

```

32
33     data uddtab ( keep = hfaudd hfaudk hfauen ) ;
34     set uddf ;
35     hfaudk = put( hfaudd, AUDD2019_HOVED_L1L5_K. ) ;
36     hfauen = put( hfaudd, AUDD_LEVEL_L1L4_K. ) ;
37     run ;

```

NOTE: There were 2998 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDDTAB has 2998 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.38 seconds
cpu time       0.09 seconds

```

```

38
39      * then merge the approx. 3000 lookups to the original 17 mio. ;
40      proc sort  data = grund.uddf2019 ( where = ( pnr ne ' ' ) )
41              out = uddf ;
42      by hfaudd ;
43      run ;

```

NOTE: There were 17231989 observations read from the data set GRUND.UDDF2019.  
WHERE pnr not = ' ';

NOTE: The data set WORK.UDDF has 17231989 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      3.75 seconds
cpu time       9.54 seconds

```

```

44
45      data uddf ;
46      merge uddf uddtab ;
47      by hfaudd ;
48      run ;

```

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: There were 2998 observations read from the data set WORK.UDDTAB.

NOTE: The data set WORK.UDDF has 17231989 observations and 5 variables.

NOTE: DATA statement used (Total process time):

```

real time      3.37 seconds
cpu time       2.42 seconds

```

```

49
50      * the dataset must be sorted by pnr and date for subsequent use ;
51      proc sort  data = uddf ; by pnr hf_vfra ; run ;

```

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDDF has 17231989 observations and 5 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      3.99 seconds
cpu time       7.51 seconds

```

```

52
53      *-----;
54      * macro to get place of residence, family income and education at
55      1 January of the year yr. Note that &e. is yr-1. ;
56
57      %macro getpop ;
58
59      *****
60      * place of residence is at the end of year &e., but we want to
61      classify persons by residence at the *start* of year yr.
62      Also bef refers to the end of year &e. ;
63      %do e = &yrf.-1 %to &yrl. ;
64
65      proc sort  data = grund.bef&e.12 ( where = (pnr ne " ") )
66              out = beftmp ( keep = pnr adresse_id ) ;
67      by adresse_id ;
68      run ;
69
70      data geo ( keep = pnr yr kom reg ) ;
71      merge beftmp ( in = bef )
72      adr ;
73      by adresse_id ;
74      if bef ;
75      yr = &e. + 1 ;
76      run ;
77      proc sort  data = geo ; by pnr ;
78
79      *****
80      * family income is for the calendar year &e., but we want the

```

```

81      family income in year yr-1 coded at the start of year yr. ;
82      proc sort  data = grund.bef&e.12 ( where = (pnr ne " ") )
83          out = beftmp ( keep = pnr familie_id ) ;
84      by familie_id ;
85      run ;
86
87      data ind ( keep = pnr yr find ) ;
88      merge beftmp ( in = bef )
89          grund.faik&e. ( rename = ( FAMA EK VIVADISP_13 = find ) ) ;
90      by familie_id ;
91      if bef ;
92      yr = &e. + 1 ;
93      run ;
94      proc sort  data = ind ; by pnr ; run ;
95
96      *****
97      * highest achieved education before start of year yr. ;
98      data udd ( keep = pnr yr udd udddk eduen ) ;
99      merge grund.bef&e.12 ( keep = pnr
100                          where = (pnr ne " ")
101                          in = bef )
102          uddf ;
103      by pnr ;
104      if bef ;
105      yr = &e. + 1 ;
106      retain udd udddk eduen ;
107      if first.pnr then do ;
108          udd = . ;
109          udddk = . ;
110          eduen = . ;
111      end ;
112      if hf_vfra le mdy(1, 1, yr) then do ;
113          udd = hfaudd ;
114          udddk = hfauddk ;
115          eduen = hfauen ;
116      end ;
117      if last.pnr then output ;
118      run ;
119
120      data pop&e. ;
121      merge geo ind udd ;
122      by pnr ;
123      run ;
124
125      %end ; * end of loop over years ;
126
127      %mend ; * end of macro getpop ;
128      *-----;
129
130      %getpop ; * run the macro ;

```

NOTE: There were 5245127 observations read from the data set GRUND.BEF199512.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5245127 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	11.79 seconds
cpu time	5.20 seconds

NOTE: There were 5245127 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5245127 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	1.50 seconds
cpu time	1.06 seconds

NOTE: There were 5245127 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5245127 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        2.00 seconds  
    cpu time         3.67 seconds

NOTE: There were 5245127 observations read from the data set GRUND.BEF199512.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5245127 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        3.04 seconds  
    cpu time         5.20 seconds

NOTE: There were 5245127 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2372637 observations read from the data set GRUND.FAIK1995.  
NOTE: The data set WORK.IND has 5245127 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
    real time        1.67 seconds  
    cpu time         1.12 seconds

NOTE: There were 5245127 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5245127 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        1.98 seconds  
    cpu time         3.54 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).  
130:28    130:50

NOTE: There were 5245127 observations read from the data set GRUND.BEF199512.  
WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5245127 observations and 5 variables.  
NOTE: DATA statement used (Total process time):  
    real time        5.89 seconds  
    cpu time         5.07 seconds

NOTE: There were 5245127 observations read from the data set WORK.GEO.  
NOTE: There were 5245127 observations read from the data set WORK.IND.  
NOTE: There were 5245127 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP1995 has 5245127 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
    real time        2.62 seconds  
    cpu time         1.79 seconds

NOTE: There were 5268800 observations read from the data set GRUND.BEF199612.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5268800 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        10.96 seconds  
    cpu time         5.18 seconds

NOTE: There were 5268800 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5268800 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
    real time        1.53 seconds

cpu time 1.12 seconds

NOTE: There were 5268800 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5268800 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 1.98 seconds

cpu time 3.57 seconds

NOTE: There were 5268800 observations read from the data set GRUND.BEF199612.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5268800 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 3.07 seconds

cpu time 5.20 seconds

NOTE: There were 5268800 observations read from the data set WORK.BEFTMP.

NOTE: There were 2385495 observations read from the data set GRUND.FAIK1996.

NOTE: The data set WORK.IND has 5268800 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time 1.60 seconds

cpu time 1.09 seconds

NOTE: There were 5268800 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5268800 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 1.98 seconds

cpu time 3.53 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5268800 observations read from the data set GRUND.BEF199612.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5268800 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 5.91 seconds

cpu time 5.21 seconds

NOTE: There were 5268800 observations read from the data set WORK.GEO.

NOTE: There were 5268800 observations read from the data set WORK.IND.

NOTE: There were 5268800 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP1996 has 5268800 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 2.65 seconds

cpu time 1.98 seconds

NOTE: There were 5288526 observations read from the data set GRUND.BEF199712.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5288526 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 11.45 seconds

cpu time 5.26 seconds

NOTE: There were 5288526 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2935497 observations read from the data set WORK.ADR.  
 NOTE: The data set WORK.GEO has 5288526 observations and 4 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           1.53 seconds  
     cpu time            1.18 seconds

NOTE: There were 5288526 observations read from the data set WORK.GEO.  
 NOTE: The data set WORK.GEO has 5288526 observations and 4 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time           1.98 seconds  
     cpu time            3.75 seconds

NOTE: There were 5288526 observations read from the data set GRUND.BEF199712.  
     WHERE pnr not = ' ';  
 NOTE: The data set WORK.BEFTMP has 5288526 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time           3.10 seconds  
     cpu time            5.34 seconds

NOTE: There were 5288526 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2394099 observations read from the data set GRUND.FAIK1997.  
 NOTE: The data set WORK.IND has 5288526 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           2.03 seconds  
     cpu time            1.06 seconds

NOTE: There were 5288526 observations read from the data set WORK.IND.  
 NOTE: The data set WORK.IND has 5288526 observations and 3 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time           2.02 seconds  
     cpu time            3.57 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
     (Line):(Column).  
     130:28    130:50

NOTE: There were 5288526 observations read from the data set GRUND.BEF199712.  
     WHERE pnr not = ' ';  
 NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
 NOTE: The data set WORK.UDD has 5288526 observations and 5 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           5.93 seconds  
     cpu time            5.29 seconds

NOTE: There were 5288526 observations read from the data set WORK.GEO.  
 NOTE: There were 5288526 observations read from the data set WORK.IND.  
 NOTE: There were 5288526 observations read from the data set WORK.UDD.  
 NOTE: The data set WORK.POP1997 has 5288526 observations and 8 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           2.64 seconds  
     cpu time            1.90 seconds

NOTE: There were 5308412 observations read from the data set GRUND.BEF199812.  
     WHERE pnr not = ' ';  
 NOTE: The data set WORK.BEFTMP has 5308412 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):

```
real time      11.15 seconds
cpu time       5.04 seconds
```

```
NOTE: There were 5308412 observations read from the data set WORK.BEFTMP.
NOTE: There were 2935497 observations read from the data set WORK.ADR.
NOTE: The data set WORK.GEO has 5308412 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time      1.50 seconds
      cpu time       1.15 seconds
```

```
NOTE: There were 5308412 observations read from the data set WORK.GEO.
NOTE: The data set WORK.GEO has 5308412 observations and 4 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time      2.01 seconds
      cpu time       3.71 seconds
```

```
NOTE: There were 5308412 observations read from the data set GRUND.BEF199812.
      WHERE pnr not = ' ';
NOTE: The data set WORK.BEFTMP has 5308412 observations and 2 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time      3.15 seconds
      cpu time       5.29 seconds
```

```
NOTE: There were 5308412 observations read from the data set WORK.BEFTMP.
NOTE: There were 2401001 observations read from the data set GRUND.FAIK1998.
NOTE: The data set WORK.IND has 5308412 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time      1.74 seconds
      cpu time       1.06 seconds
```

```
NOTE: There were 5308412 observations read from the data set WORK.IND.
NOTE: The data set WORK.IND has 5308412 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time      2.00 seconds
      cpu time       3.62 seconds
```

```
NOTE: Character values have been converted to numeric values at the places given by:
      (Line):(Column).
      130:28    130:50
NOTE: There were 5308412 observations read from the data set GRUND.BEF199812.
      WHERE pnr not = ' ';
NOTE: There were 17231989 observations read from the data set WORK.UDDF.
NOTE: The data set WORK.UDD has 5308412 observations and 5 variables.
NOTE: DATA statement used (Total process time):
      real time      5.96 seconds
      cpu time       5.42 seconds
```

```
NOTE: There were 5308412 observations read from the data set WORK.GEO.
NOTE: There were 5308412 observations read from the data set WORK.IND.
NOTE: There were 5308412 observations read from the data set WORK.UDD.
NOTE: The data set WORK.POP1998 has 5308412 observations and 8 variables.
NOTE: DATA statement used (Total process time):
      real time      2.60 seconds
      cpu time       2.03 seconds
```

NOTE: There were 5324505 observations read from the data set GRUND.BEF199912.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5324505 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 9.52 seconds

cpu time 5.34 seconds

NOTE: There were 5324505 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5324505 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time 1.59 seconds

cpu time 1.10 seconds

NOTE: There were 5324505 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5324505 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.42 seconds

cpu time 3.96 seconds

NOTE: There were 5324505 observations read from the data set GRUND.BEF199912.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5324505 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 3.32 seconds

cpu time 5.56 seconds

NOTE: There were 5324505 observations read from the data set WORK.BEFTMP.

NOTE: There were 2405074 observations read from the data set GRUND.FAIK1999.

NOTE: The data set WORK.IND has 5324505 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time 1.98 seconds

cpu time 1.17 seconds

NOTE: There were 5324505 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5324505 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.24 seconds

cpu time 3.96 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5324505 observations read from the data set GRUND.BEF199912.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5324505 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 6.70 seconds

cpu time 5.81 seconds

NOTE: There were 5324505 observations read from the data set WORK.GEO.

NOTE: There were 5324505 observations read from the data set WORK.IND.

NOTE: There were 5324505 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP1999 has 5324505 observations and 8 variables.



NOTE: DATA statement used (Total process time):  
real time 3.14 seconds  
cpu time 2.11 seconds

NOTE: There were 5344465 observations read from the data set GRUND.BEF200012.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5344465 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 10.75 seconds  
cpu time 5.57 seconds

NOTE: There were 5344465 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5344465 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
real time 1.80 seconds  
cpu time 1.36 seconds

NOTE: There were 5344465 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5344465 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.22 seconds  
cpu time 3.84 seconds

NOTE: There were 5344465 observations read from the data set GRUND.BEF200012.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5344465 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 3.56 seconds  
cpu time 5.85 seconds

NOTE: There were 5344465 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2414649 observations read from the data set GRUND.FAIK2000.  
NOTE: The data set WORK.IND has 5344465 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
real time 2.16 seconds  
cpu time 1.31 seconds

NOTE: There were 5344465 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5344465 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.23 seconds  
cpu time 4.04 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).  
130:28 130:50  
NOTE: There were 5344465 observations read from the data set GRUND.BEF200012.  
WHERE pnr not = ' ';  
NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5344465 observations and 5 variables.  
NOTE: DATA statement used (Total process time):  
real time 6.56 seconds  
cpu time 5.60 seconds

NOTE: There were 5344465 observations read from the data set WORK.GEO.  
 NOTE: There were 5344465 observations read from the data set WORK.IND.  
 NOTE: There were 5344465 observations read from the data set WORK.UDD.  
 NOTE: The data set WORK.POP2000 has 5344465 observations and 8 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            3.06 seconds  
     cpu time             1.93 seconds

NOTE: There were 5363002 observations read from the data set GRUND.BEF200112.  
 WHERE pnr not = ' ' ;  
 NOTE: The data set WORK.BEFTMP has 5363002 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time            10.97 seconds  
     cpu time             5.65 seconds

NOTE: There were 5363002 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2935497 observations read from the data set WORK.ADR.  
 NOTE: The data set WORK.GEO has 5363002 observations and 4 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            1.77 seconds  
     cpu time             1.25 seconds

NOTE: There were 5363002 observations read from the data set WORK.GEO.  
 NOTE: The data set WORK.GEO has 5363002 observations and 4 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time            2.19 seconds  
     cpu time             3.84 seconds

NOTE: There were 5363002 observations read from the data set GRUND.BEF200112.  
 WHERE pnr not = ' ' ;  
 NOTE: The data set WORK.BEFTMP has 5363002 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time            3.44 seconds  
     cpu time             5.79 seconds

NOTE: There were 5363002 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2424801 observations read from the data set GRUND.FAIK2001.  
 NOTE: The data set WORK.IND has 5363002 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            1.71 seconds  
     cpu time             1.17 seconds

NOTE: There were 5363002 observations read from the data set WORK.IND.  
 NOTE: The data set WORK.IND has 5363002 observations and 3 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time            2.14 seconds  
     cpu time             3.76 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
 (Line):(Column).  
 130:28 130:50  
 NOTE: There were 5363002 observations read from the data set GRUND.BEF200112.  
 WHERE pnr not = ' ' ;  
 NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
 NOTE: The data set WORK.UDD has 5363002 observations and 5 variables.

NOTE: DATA statement used (Total process time):  
real time 6.46 seconds  
cpu time 5.62 seconds

NOTE: There were 5363002 observations read from the data set WORK.GEO.  
NOTE: There were 5363002 observations read from the data set WORK.IND.  
NOTE: There were 5363002 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP2001 has 5363002 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
real time 2.94 seconds  
cpu time 2.15 seconds

NOTE: There were 5378270 observations read from the data set GRUND.BEF200212.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5378270 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 10.87 seconds  
cpu time 5.62 seconds

NOTE: There were 5378270 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5378270 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
real time 1.78 seconds  
cpu time 1.32 seconds

NOTE: There were 5378270 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5378270 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.23 seconds  
cpu time 3.89 seconds

NOTE: There were 5378270 observations read from the data set GRUND.BEF200212.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5378270 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 3.42 seconds  
cpu time 5.59 seconds

NOTE: There were 5378270 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2432796 observations read from the data set GRUND.FAIK2002.  
NOTE: The data set WORK.IND has 5378270 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
real time 1.86 seconds  
cpu time 1.20 seconds

NOTE: There were 5378270 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5378270 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.05 seconds  
cpu time 3.68 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

```
130:28 130:50
NOTE: There were 5378270 observations read from the data set GRUND.BEF200212.
WHERE pnr not = ' ';
NOTE: There were 17231989 observations read from the data set WORK.UDDF.
NOTE: The data set WORK.UDD has 5378270 observations and 5 variables.
NOTE: DATA statement used (Total process time):
      real time          6.08 seconds
      cpu time           5.26 seconds

NOTE: There were 5378270 observations read from the data set WORK.GEO.
NOTE: There were 5378270 observations read from the data set WORK.IND.
NOTE: There were 5378270 observations read from the data set WORK.UDD.
NOTE: The data set WORK.POP2002 has 5378270 observations and 8 variables.
NOTE: DATA statement used (Total process time):
      real time          2.63 seconds
      cpu time           1.89 seconds

NOTE: There were 5391853 observations read from the data set GRUND.BEF200312.
WHERE pnr not = ' ';
NOTE: The data set WORK.BEFTMP has 5391853 observations and 2 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time         11.51 seconds
      cpu time           4.99 seconds

NOTE: There were 5391853 observations read from the data set WORK.BEFTMP.
NOTE: There were 2935497 observations read from the data set WORK.ADR.
NOTE: The data set WORK.GEO has 5391853 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time          1.51 seconds
      cpu time           1.26 seconds

NOTE: There were 5391853 observations read from the data set WORK.GEO.
NOTE: The data set WORK.GEO has 5391853 observations and 4 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          2.05 seconds
      cpu time           3.62 seconds

NOTE: There were 5391853 observations read from the data set GRUND.BEF200312.
WHERE pnr not = ' ';
NOTE: The data set WORK.BEFTMP has 5391853 observations and 2 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          3.16 seconds
      cpu time           5.35 seconds

NOTE: There were 5391853 observations read from the data set WORK.BEFTMP.
NOTE: There were 2441436 observations read from the data set GRUND.FAIK2003.
NOTE: The data set WORK.IND has 5391853 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          1.76 seconds
      cpu time           1.06 seconds

NOTE: There were 5391853 observations read from the data set WORK.IND.
NOTE: The data set WORK.IND has 5391853 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          2.06 seconds
      cpu time           3.79 seconds
```

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5391853 observations read from the data set GRUND.BEF200312.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5391853 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 6.09 seconds

cpu time 5.48 seconds

NOTE: There were 5391853 observations read from the data set WORK.GEO.

NOTE: There were 5391853 observations read from the data set WORK.IND.

NOTE: There were 5391853 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2003 has 5391853 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 2.70 seconds

cpu time 1.75 seconds

NOTE: There were 5406591 observations read from the data set GRUND.BEF200412.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5406591 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 11.36 seconds

cpu time 5.23 seconds

NOTE: There were 5406591 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5406591 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time 1.52 seconds

cpu time 1.15 seconds

NOTE: There were 5406591 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5406591 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.05 seconds

cpu time 3.75 seconds

NOTE: There were 5406591 observations read from the data set GRUND.BEF200412.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5406591 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 3.14 seconds

cpu time 5.23 seconds

NOTE: There were 5406591 observations read from the data set WORK.BEFTMP.

NOTE: There were 2455961 observations read from the data set GRUND.FAIK2004.

NOTE: The data set WORK.IND has 5406591 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time 1.65 seconds

cpu time 1.06 seconds

NOTE: There were 5406591 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5406591 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.04 seconds

cpu time 3.75 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5406591 observations read from the data set GRUND.BEF200412.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5406591 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 6.11 seconds

cpu time 5.39 seconds

NOTE: There were 5406591 observations read from the data set WORK.GEO.

NOTE: There were 5406591 observations read from the data set WORK.IND.

NOTE: There were 5406591 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2004 has 5406591 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 2.68 seconds

cpu time 1.75 seconds

NOTE: There were 5423306 observations read from the data set GRUND.BEF200512.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5423306 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 11.64 seconds

cpu time 5.20 seconds

NOTE: There were 5423306 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5423306 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time 1.55 seconds

cpu time 1.14 seconds

NOTE: There were 5423306 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5423306 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.07 seconds

cpu time 3.68 seconds

NOTE: There were 5423306 observations read from the data set GRUND.BEF200512.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5423306 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 3.15 seconds

cpu time 5.09 seconds

NOTE: There were 5423306 observations read from the data set WORK.BEFTMP.

NOTE: There were 2471730 observations read from the data set GRUND.FAIK2005.

NOTE: The data set WORK.IND has 5423306 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```
real time      1.97 seconds
cpu time       1.14 seconds
```

NOTE: There were 5423306 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5423306 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      2.08 seconds
cpu time       3.89 seconds
```

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).  
130:28 130:50

NOTE: There were 5423306 observations read from the data set GRUND.BEF200512.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5423306 observations and 5 variables.

NOTE: DATA statement used (Total process time):

```
real time      6.13 seconds
cpu time       5.40 seconds
```

NOTE: There were 5423306 observations read from the data set WORK.GEO.

NOTE: There were 5423306 observations read from the data set WORK.IND.

NOTE: There were 5423306 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2005 has 5423306 observations and 8 variables.

NOTE: DATA statement used (Total process time):

```
real time      2.68 seconds
cpu time       1.70 seconds
```

NOTE: There were 5447075 observations read from the data set GRUND.BEF200612.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5447075 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      10.98 seconds
cpu time       5.29 seconds
```

NOTE: There were 5447075 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5447075 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```
real time      1.53 seconds
cpu time       1.14 seconds
```

NOTE: There were 5447075 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5447075 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      2.09 seconds
cpu time       3.85 seconds
```

NOTE: There were 5447075 observations read from the data set GRUND.BEF200612.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5447075 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      3.19 seconds
cpu time       5.26 seconds
```

NOTE: There were 5447075 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2480716 observations read from the data set GRUND.FAIK2006.  
NOTE: The data set WORK.IND has 5447075 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
    real time        1.85 seconds  
    cpu time          1.14 seconds

NOTE: There were 5447075 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5447075 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        2.08 seconds  
    cpu time          3.70 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
    (Line):(Column).  
    130:28    130:50  
NOTE: There were 5447075 observations read from the data set GRUND.BEF200612.  
WHERE pnr not = ' ' ;  
NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5447075 observations and 5 variables.  
NOTE: DATA statement used (Total process time):  
    real time        6.22 seconds  
    cpu time          5.57 seconds

NOTE: There were 5447075 observations read from the data set WORK.GEO.  
NOTE: There were 5447075 observations read from the data set WORK.IND.  
NOTE: There were 5447075 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP2006 has 5447075 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
    real time        2.73 seconds  
    cpu time          2.04 seconds

NOTE: There were 5475682 observations read from the data set GRUND.BEF200712.  
WHERE pnr not = ' ' ;  
NOTE: The data set WORK.BEFTMP has 5475682 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        13.65 seconds  
    cpu time          5.21 seconds

NOTE: There were 5475682 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5475682 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
    real time        1.53 seconds  
    cpu time          1.12 seconds

NOTE: There were 5475682 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5475682 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        2.09 seconds  
    cpu time          3.78 seconds

NOTE: There were 5475682 observations read from the data set GRUND.BEF200712.  
WHERE pnr not = ' ' ;  
NOTE: The data set WORK.BEFTMP has 5475682 observations and 2 variables.



NOTE: PROCEDURE SORT used (Total process time):  
real time 3.18 seconds  
cpu time 5.37 seconds

NOTE: There were 5475682 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2499815 observations read from the data set GRUND.FAIK2007.  
NOTE: The data set WORK.IND has 5475682 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
real time 1.68 seconds  
cpu time 1.11 seconds

NOTE: There were 5475682 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5475682 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.11 seconds  
cpu time 3.75 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).  
130:28 130:50  
NOTE: There were 5475682 observations read from the data set GRUND.BEF200712.  
WHERE pnr not = ' ' ;  
NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5475682 observations and 5 variables.  
NOTE: DATA statement used (Total process time):  
real time 6.19 seconds  
cpu time 5.57 seconds

NOTE: There were 5475682 observations read from the data set WORK.GEO.  
NOTE: There were 5475682 observations read from the data set WORK.IND.  
NOTE: There were 5475682 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP2007 has 5475682 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
real time 2.74 seconds  
cpu time 1.84 seconds

NOTE: There were 5511247 observations read from the data set GRUND.BEF200812.  
WHERE pnr not = ' ' ;  
NOTE: The data set WORK.BEFTMP has 5511247 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 9.89 seconds  
cpu time 4.98 seconds

NOTE: There were 5511247 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5511247 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
real time 1.53 seconds  
cpu time 1.07 seconds

NOTE: There were 5511247 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5511247 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 2.11 seconds  
cpu time 3.96 seconds

NOTE: There were 5511247 observations read from the data set GRUND.BEF200812.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5511247 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	3.22 seconds
cpu time	5.50 seconds

NOTE: There were 5511247 observations read from the data set WORK.BEFTMP.

NOTE: There were 2515985 observations read from the data set GRUND.FAIK2008.

NOTE: The data set WORK.IND has 5511247 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	2.04 seconds
cpu time	1.17 seconds

NOTE: There were 5511247 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5511247 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.07 seconds
cpu time	3.82 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5511247 observations read from the data set GRUND.BEF200812.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5511247 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time	6.25 seconds
cpu time	5.34 seconds

NOTE: There were 5511247 observations read from the data set WORK.GEO.

NOTE: There were 5511247 observations read from the data set WORK.IND.

NOTE: There were 5511247 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2008 has 5511247 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time	2.75 seconds
cpu time	2.00 seconds

NOTE: There were 5534637 observations read from the data set GRUND.BEF200912.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5534637 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	10.10 seconds
cpu time	5.39 seconds

NOTE: There were 5534637 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5534637 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	1.55 seconds
cpu time	1.26 seconds

NOTE: There were 5534637 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5534637 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.08 seconds
cpu time	3.79 seconds

NOTE: There were 5534637 observations read from the data set GRUND.BEF200912.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5534637 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	3.27 seconds
cpu time	5.56 seconds

NOTE: There were 5534637 observations read from the data set WORK.BEFTMP.

NOTE: There were 2534513 observations read from the data set GRUND.FAIK2009.

NOTE: The data set WORK.IND has 5534637 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	2.03 seconds
cpu time	1.14 seconds

NOTE: There were 5534637 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5534637 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.11 seconds
cpu time	3.93 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5534637 observations read from the data set GRUND.BEF200912.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5534637 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time	6.27 seconds
cpu time	5.56 seconds

NOTE: There were 5534637 observations read from the data set WORK.GEO.

NOTE: There were 5534637 observations read from the data set WORK.IND.

NOTE: There were 5534637 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2009 has 5534637 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time	2.84 seconds
cpu time	2.01 seconds

NOTE: There were 5560522 observations read from the data set GRUND.BEF201012.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5560522 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	13.54 seconds
cpu time	4.97 seconds

NOTE: There were 5560522 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5560522 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	1.57 seconds
-----------	--------------

cpu time 1.28 seconds

NOTE: There were 5560522 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5560522 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.12 seconds

cpu time 3.76 seconds

NOTE: There were 5560522 observations read from the data set GRUND.BEF201012.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5560522 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 3.35 seconds

cpu time 5.57 seconds

NOTE: There were 5560522 observations read from the data set WORK.BEFTMP.

NOTE: There were 2552442 observations read from the data set GRUND.FAIK2010.

NOTE: The data set WORK.IND has 5560522 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time 1.70 seconds

cpu time 1.25 seconds

NOTE: There were 5560522 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5560522 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.10 seconds

cpu time 3.92 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5560522 observations read from the data set GRUND.BEF201012.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5560522 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 6.36 seconds

cpu time 5.67 seconds

NOTE: There were 5560522 observations read from the data set WORK.GEO.

NOTE: There were 5560522 observations read from the data set WORK.IND.

NOTE: There were 5560522 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2010 has 5560522 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 2.79 seconds

cpu time 1.92 seconds

NOTE: There were 5580429 observations read from the data set GRUND.BEF201112.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5580429 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 10.38 seconds

cpu time 5.45 seconds

NOTE: There were 5580429 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5580429 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
    real time        1.58 seconds  
    cpu time         1.34 seconds

NOTE: There were 5580429 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5580429 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        2.18 seconds  
    cpu time         3.89 seconds

NOTE: There were 5580429 observations read from the data set GRUND.BEF201112.  
    WHERE pnr not = ' ' ;  
NOTE: The data set WORK.BEFTMP has 5580429 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        3.24 seconds  
    cpu time         5.32 seconds

NOTE: There were 5580429 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2571094 observations read from the data set GRUND.FAIK2011.  
NOTE: The data set WORK.IND has 5580429 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
    real time        2.13 seconds  
    cpu time         1.14 seconds

NOTE: There were 5580429 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5580429 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time        2.14 seconds  
    cpu time         4.03 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
    (Line):(Column).  
    130:28    130:50  
NOTE: There were 5580429 observations read from the data set GRUND.BEF201112.  
    WHERE pnr not = ' ' ;  
NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5580429 observations and 5 variables.  
NOTE: DATA statement used (Total process time):  
    real time        6.31 seconds  
    cpu time         5.78 seconds

NOTE: There were 5580429 observations read from the data set WORK.GEO.  
NOTE: There were 5580429 observations read from the data set WORK.IND.  
NOTE: There were 5580429 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP2011 has 5580429 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
    real time        2.78 seconds  
    cpu time         1.87 seconds

NOTE: There were 5602535 observations read from the data set GRUND.BEF201212.  
    WHERE pnr not = ' ' ;  
NOTE: The data set WORK.BEFTMP has 5602535 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):

```

real time      12.06 seconds
cpu time       5.10 seconds

```

NOTE: There were 5602535 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5602535 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```

real time      1.55 seconds
cpu time       1.18 seconds

```

NOTE: There were 5602535 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5602535 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      2.16 seconds
cpu time       3.81 seconds

```

NOTE: There were 5602535 observations read from the data set GRUND.BEF201212.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5602535 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      3.27 seconds
cpu time       5.42 seconds

```

NOTE: There were 5602535 observations read from the data set WORK.BEFTMP.

NOTE: There were 2591739 observations read from the data set GRUND.FAIK2012.

NOTE: The data set WORK.IND has 5602535 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      1.69 seconds
cpu time       1.14 seconds

```

NOTE: There were 5602535 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5602535 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      2.12 seconds
cpu time       3.92 seconds

```

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5602535 observations read from the data set GRUND.BEF201212.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5602535 observations and 5 variables.

NOTE: DATA statement used (Total process time):

```

real time      6.37 seconds
cpu time       5.51 seconds

```

NOTE: There were 5602535 observations read from the data set WORK.GEO.

NOTE: There were 5602535 observations read from the data set WORK.IND.

NOTE: There were 5602535 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2012 has 5602535 observations and 8 variables.

NOTE: DATA statement used (Total process time):

```

real time      2.80 seconds
cpu time       1.96 seconds

```

NOTE: There were 5627159 observations read from the data set GRUND.BEF201312.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5627159 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	10.47 seconds
cpu time	5.29 seconds

NOTE: There were 5627159 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5627159 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	1.57 seconds
cpu time	1.23 seconds

NOTE: There were 5627159 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5627159 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.15 seconds
cpu time	3.89 seconds

NOTE: There were 5627159 observations read from the data set GRUND.BEF201312.

WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5627159 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	3.27 seconds
cpu time	5.48 seconds

NOTE: There were 5627159 observations read from the data set WORK.BEFTMP.

NOTE: There were 2617075 observations read from the data set GRUND.FAIK2013.

NOTE: The data set WORK.IND has 5627159 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	1.57 seconds
cpu time	1.21 seconds

NOTE: There were 5627159 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5627159 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.14 seconds
cpu time	3.86 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5627159 observations read from the data set GRUND.BEF201312.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5627159 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time	6.41 seconds
cpu time	5.78 seconds

NOTE: There were 5627159 observations read from the data set WORK.GEO.

NOTE: There were 5627159 observations read from the data set WORK.IND.

NOTE: There were 5627159 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2013 has 5627159 observations and 8 variables.

NOTE: DATA statement used (Total process time):  
 real time 2.75 seconds  
 cpu time 1.84 seconds

NOTE: There were 5659654 observations read from the data set GRUND.BEF201412.  
 WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5659654 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 11.15 seconds  
 cpu time 5.51 seconds

NOTE: There were 5659654 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5659654 observations and 4 variables.

NOTE: DATA statement used (Total process time):  
 real time 1.55 seconds  
 cpu time 1.09 seconds

NOTE: There were 5659654 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5659654 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 2.13 seconds  
 cpu time 3.84 seconds

NOTE: There were 5659654 observations read from the data set GRUND.BEF201412.  
 WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5659654 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 3.32 seconds  
 cpu time 5.48 seconds

NOTE: There were 5659654 observations read from the data set WORK.BEFTMP.

NOTE: There were 2644252 observations read from the data set GRUND.FAIK2014.

NOTE: The data set WORK.IND has 5659654 observations and 3 variables.

NOTE: DATA statement used (Total process time):  
 real time 1.65 seconds  
 cpu time 1.01 seconds

NOTE: There were 5659654 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5659654 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 2.13 seconds  
 cpu time 3.87 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
 (Line):(Column).  
 130:28 130:50

NOTE: There were 5659654 observations read from the data set GRUND.BEF201412.  
 WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5659654 observations and 5 variables.

NOTE: DATA statement used (Total process time):  
 real time 6.39 seconds  
 cpu time 5.54 seconds



NOTE: There were 5659654 observations read from the data set WORK.GEO.  
NOTE: There were 5659654 observations read from the data set WORK.IND.  
NOTE: There were 5659654 observations read from the data set WORK.UDD.  
NOTE: The data set WORK.POP2014 has 5659654 observations and 8 variables.  
NOTE: DATA statement used (Total process time):  
    real time                2.78 seconds  
    cpu time                1.86 seconds

NOTE: There were 5707176 observations read from the data set GRUND.BEF201512.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5707176 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time                10.81 seconds  
    cpu time                5.42 seconds

NOTE: There were 5707176 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2935497 observations read from the data set WORK.ADR.  
NOTE: The data set WORK.GEO has 5707176 observations and 4 variables.  
NOTE: DATA statement used (Total process time):  
    real time                1.65 seconds  
    cpu time                1.15 seconds

NOTE: There were 5707176 observations read from the data set WORK.GEO.  
NOTE: The data set WORK.GEO has 5707176 observations and 4 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time                2.24 seconds  
    cpu time                3.90 seconds

NOTE: There were 5707176 observations read from the data set GRUND.BEF201512.  
WHERE pnr not = ' ';  
NOTE: The data set WORK.BEFTMP has 5707176 observations and 2 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time                3.30 seconds  
    cpu time                5.68 seconds

NOTE: There were 5707176 observations read from the data set WORK.BEFTMP.  
NOTE: There were 2677212 observations read from the data set GRUND.FAIK2015.  
NOTE: The data set WORK.IND has 5707176 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
    real time                1.69 seconds  
    cpu time                1.07 seconds

NOTE: There were 5707176 observations read from the data set WORK.IND.  
NOTE: The data set WORK.IND has 5707176 observations and 3 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
    real time                2.15 seconds  
    cpu time                3.90 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
    (Line):(Column).  
    130:28    130:50  
NOTE: There were 5707176 observations read from the data set GRUND.BEF201512.  
WHERE pnr not = ' ';  
NOTE: There were 17231989 observations read from the data set WORK.UDDF.  
NOTE: The data set WORK.UDD has 5707176 observations and 5 variables.

NOTE: DATA statement used (Total process time):  
 real time 6.51 seconds  
 cpu time 5.81 seconds

NOTE: There were 5707176 observations read from the data set WORK.GEO.  
 NOTE: There were 5707176 observations read from the data set WORK.IND.  
 NOTE: There were 5707176 observations read from the data set WORK.UDD.  
 NOTE: The data set WORK.POP2015 has 5707176 observations and 8 variables.  
 NOTE: DATA statement used (Total process time):  
 real time 2.81 seconds  
 cpu time 1.87 seconds

NOTE: There were 5748720 observations read from the data set GRUND.BEF201612.  
 WHERE pnr not = ' ' ;  
 NOTE: The data set WORK.BEFTMP has 5748720 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 12.27 seconds  
 cpu time 5.86 seconds

NOTE: There were 5748720 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2935497 observations read from the data set WORK.ADR.  
 NOTE: The data set WORK.GEO has 5748720 observations and 4 variables.  
 NOTE: DATA statement used (Total process time):  
 real time 1.57 seconds  
 cpu time 1.28 seconds

NOTE: There were 5748720 observations read from the data set WORK.GEO.  
 NOTE: The data set WORK.GEO has 5748720 observations and 4 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 2.18 seconds  
 cpu time 3.90 seconds

NOTE: There were 5748720 observations read from the data set GRUND.BEF201612.  
 WHERE pnr not = ' ' ;  
 NOTE: The data set WORK.BEFTMP has 5748720 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 3.34 seconds  
 cpu time 5.53 seconds

NOTE: There were 5748720 observations read from the data set WORK.BEFTMP.  
 NOTE: There were 2701720 observations read from the data set GRUND.FAIK2016.  
 NOTE: The data set WORK.IND has 5748720 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
 real time 1.68 seconds  
 cpu time 1.12 seconds

NOTE: There were 5748720 observations read from the data set WORK.IND.  
 NOTE: The data set WORK.IND has 5748720 observations and 3 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 2.21 seconds  
 cpu time 3.89 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
 (Line):(Column).

```
130:28 130:50
NOTE: There were 5748720 observations read from the data set GRUND.BEF201612.
WHERE pnr not = ' ';
NOTE: There were 17231989 observations read from the data set WORK.UDDF.
NOTE: The data set WORK.UDD has 5748720 observations and 5 variables.
NOTE: DATA statement used (Total process time):
      real time          6.59 seconds
      cpu time           5.93 seconds

NOTE: There were 5748720 observations read from the data set WORK.GEO.
NOTE: There were 5748720 observations read from the data set WORK.IND.
NOTE: There were 5748720 observations read from the data set WORK.UDD.
NOTE: The data set WORK.POP2016 has 5748720 observations and 8 variables.
NOTE: DATA statement used (Total process time):
      real time          2.84 seconds
      cpu time           1.93 seconds

NOTE: There were 5781131 observations read from the data set GRUND.BEF201712.
WHERE pnr not = ' ';
NOTE: The data set WORK.BEFTMP has 5781131 observations and 2 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time         11.38 seconds
      cpu time           5.81 seconds

NOTE: There were 5781131 observations read from the data set WORK.BEFTMP.
NOTE: There were 2935497 observations read from the data set WORK.ADR.
NOTE: The data set WORK.GEO has 5781131 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time          1.59 seconds
      cpu time           1.15 seconds

NOTE: There were 5781131 observations read from the data set WORK.GEO.
NOTE: The data set WORK.GEO has 5781131 observations and 4 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          2.20 seconds
      cpu time           4.01 seconds

NOTE: There were 5781131 observations read from the data set GRUND.BEF201712.
WHERE pnr not = ' ';
NOTE: The data set WORK.BEFTMP has 5781131 observations and 2 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          3.35 seconds
      cpu time           5.56 seconds

NOTE: There were 5781131 observations read from the data set WORK.BEFTMP.
NOTE: There were 2728643 observations read from the data set GRUND.FAIK2017.
NOTE: The data set WORK.IND has 5781131 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          1.90 seconds
      cpu time           1.23 seconds

NOTE: There were 5781131 observations read from the data set WORK.IND.
NOTE: The data set WORK.IND has 5781131 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          2.24 seconds
      cpu time           4.01 seconds
```

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).  
130:28 130:50

NOTE: There were 5781131 observations read from the data set GRUND.BEF201712.  
WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5781131 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time	6.59 seconds
cpu time	5.96 seconds

NOTE: There were 5781131 observations read from the data set WORK.GEO.

NOTE: There were 5781131 observations read from the data set WORK.IND.

NOTE: There were 5781131 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2017 has 5781131 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time	2.83 seconds
cpu time	1.89 seconds

NOTE: There were 5806044 observations read from the data set GRUND.BEF201812.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5806044 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	11.87 seconds
cpu time	5.82 seconds

NOTE: There were 5806044 observations read from the data set WORK.BEFTMP.

NOTE: There were 2935497 observations read from the data set WORK.ADR.

NOTE: The data set WORK.GEO has 5806044 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	1.56 seconds
cpu time	1.28 seconds

NOTE: There were 5806044 observations read from the data set WORK.GEO.

NOTE: The data set WORK.GEO has 5806044 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	2.20 seconds
cpu time	4.03 seconds

NOTE: There were 5806044 observations read from the data set GRUND.BEF201812.  
WHERE pnr not = ' ';

NOTE: The data set WORK.BEFTMP has 5806044 observations and 2 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	3.39 seconds
cpu time	5.76 seconds

NOTE: There were 5806044 observations read from the data set WORK.BEFTMP.

NOTE: There were 2728643 observations read from the data set GRUND.FAIK2018.

NOTE: The data set WORK.IND has 5806044 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	1.59 seconds
cpu time	1.14 seconds

NOTE: There were 5806044 observations read from the data set WORK.IND.

NOTE: The data set WORK.IND has 5806044 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 2.25 seconds

cpu time 4.04 seconds

NOTE: Character values have been converted to numeric values at the places given by:  
(Line):(Column).

130:28 130:50

NOTE: There were 5806044 observations read from the data set GRUND.BEF201812.

WHERE pnr not = ' ';

NOTE: There were 17231989 observations read from the data set WORK.UDDF.

NOTE: The data set WORK.UDD has 5806044 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time 6.50 seconds

cpu time 5.93 seconds

NOTE: There were 5806044 observations read from the data set WORK.GEO.

NOTE: There were 5806044 observations read from the data set WORK.IND.

NOTE: There were 5806044 observations read from the data set WORK.UDD.

NOTE: The data set WORK.POP2018 has 5806044 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 2.84 seconds

cpu time 1.96 seconds

```

131
132 *-----;
133 * then stack the datafiles from each year ;
134
135 %macro combyrs ;
136 data DMdat.popstat ( keep = pnr yr
137                      kom reg
138                      find
139                      udd udddk eduen
140                      label = 'The population status at start of each year' ) ;
141   set %do e = &yrf.-1 %to &yrl. ; pop&e. %end ; ;
142   label pnr = "personnummer"
143         yr = "dato (år)"
144         kom = "kommune"
145         reg = "region"
146         find = "disponibel fam. indkomst"
147         udd = "uddannelseskode"
148         udddk = "grupperet uddannelse"
149         eduen = "grouped education" ;
150   format kom kom_v4_KT.
151         reg reg_v4_KT.
152         udddk AUDD_HOVED_L5L5_KT.
153         eduen AUDD_LEVEL_L4L4_KT. ;
154   run ;
155   %mend ;
156   %combyrs ;

```

NOTE: There were 5245127 observations read from the data set WORK.POP1995.

NOTE: There were 5268800 observations read from the data set WORK.POP1996.

NOTE: There were 5288526 observations read from the data set WORK.POP1997.

NOTE: There were 5308412 observations read from the data set WORK.POP1998.

NOTE: There were 5324505 observations read from the data set WORK.POP1999.

NOTE: There were 5344465 observations read from the data set WORK.POP2000.

NOTE: There were 5363002 observations read from the data set WORK.POP2001.

NOTE: There were 5378270 observations read from the data set WORK.POP2002.

NOTE: There were 5391853 observations read from the data set WORK.POP2003.

NOTE: There were 5406591 observations read from the data set WORK.POP2004.

NOTE: There were 5423306 observations read from the data set WORK.POP2005.

NOTE: There were 5447075 observations read from the data set WORK.POP2006.

NOTE: There were 5475682 observations read from the data set WORK.POP2007.

```

NOTE: There were 5511247 observations read from the data set WORK.POP2008.
NOTE: There were 5534637 observations read from the data set WORK.POP2009.
NOTE: There were 5560522 observations read from the data set WORK.POP2010.
NOTE: There were 5580429 observations read from the data set WORK.POP2011.
NOTE: There were 5602535 observations read from the data set WORK.POP2012.
NOTE: There were 5627159 observations read from the data set WORK.POP2013.
NOTE: There were 5659654 observations read from the data set WORK.POP2014.
NOTE: There were 5707176 observations read from the data set WORK.POP2015.
NOTE: There were 5748720 observations read from the data set WORK.POP2016.
NOTE: There were 5781131 observations read from the data set WORK.POP2017.
NOTE: There were 5806044 observations read from the data set WORK.POP2018.
NOTE: The data set DMDAT.POPSTAT has 131784868 observations and 8 variables.
NOTE: DATA statement used (Total process time):
      real time          42.10 seconds
      cpu time           17.34 seconds

```

```

157
158      *-----;
159      * overview of data ;
160
161      title1 'The population status at start of each year' ;
162      proc tabulate data = DMdat.popstat noseps missing ;
163          class yr reg kom udddk eduen ;
164          var find ;
165          table yr,
166              ( reg all ) * f=comma9.
167              / rts=6 ;
168          table yr,
169              find * ( (n nmiss) * f=comma9.
170                  ( p10 median mean p90 ) * f=comma10. )
171              / rts=8 ;
172          table udddk eduen,
173              find * ( p10 median p90 ) * f=comma9.
174              / rts=50 indent=2 ;
175          table udddk udddk * eduen
176              eduen eduen * udddk,
177              n * f=comma12.
178              / rts=55 indent=3 ;
179      run ;

```

```

NOTE: There were 131784868 observations read from the data set DMDAT.POPSTAT.
NOTE: The PROCEDURE TABULATE printed pages 1-4.
NOTE: PROCEDURE TABULATE used (Total process time):
      real time          5:23.77
      cpu time           7:11.28

```

```

180
181      proc contents data = DMdat.popstat varnum ; run ;

```

```

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time          0.01 seconds
      cpu time           0.01 seconds

```

```

NOTE: The PROCEDURE CONTENTS printed page 5.

```

```

182
183      *-----;
184      * labels to be transporeted to R ;
185
186      proc format library = dsfmt.discsd
187          cntlout = udd ( keep = fmtname start label type ) ;
188          select AUDD_HOVED_L5L5_T
189              AUDD_LEVEL_L4L4_T ;
190      run ;

```

```

NOTE: PROCEDURE FORMAT used (Total process time):
      real time          1.10 seconds
      cpu time           0.03 seconds

```

NOTE: The data set WORK.UDD has 24 observations and 4 variables.

```

191
192     proc format  library = dsfmt.geokoder
193           cntlout = geo ( keep = fmtname start label type ) ;
194     select kom_v4_T
195           reg_v4_T ;
196     run ;

```

NOTE: PROCEDURE FORMAT used (Total process time):

```

real time      0.05 seconds
cpu time       0.03 seconds

```

NOTE: The data set WORK.GEO has 105 observations and 4 variables.

```

197
198     data DMdat.statlabels ; set udd geo ; run ;

```

NOTE: There were 24 observations read from the data set WORK.UDD.

NOTE: There were 105 observations read from the data set WORK.GEO.

NOTE: The data set DMDAT.STATLABELS has 129 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.03 seconds
cpu time       0.00 seconds

```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

```

real time      19:03.91
cpu time       19:19.43

```

### 3.6.1 00y-base.lst

The population status at start of each year

14:51 Tuesday, August 11, 2020 1

	region						
		81 Nordjyll- and	82 Midtjyll- and	83 Syddanma- rk	84 Hovedsta- den	85 Sjælland	All
	N	N	N	N	N	N	N
dato (år)							
1996	227,097	545,626	1,115,391	1,109,786	1,506,850	740,377	5,245,127
1997	212,752	548,909	1,123,995	1,117,687	1,520,542	744,915	5,268,800
1998	201,368	551,596	1,131,226	1,123,490	1,531,258	749,588	5,288,526
1999	188,891	553,700	1,138,783	1,127,923	1,544,369	754,746	5,308,412
2000	174,634	555,692	1,146,500	1,132,044	1,555,200	760,435	5,324,505
2001	161,831	557,712	1,154,512	1,136,365	1,567,909	766,136	5,344,465
2002	148,157	559,655	1,163,183	1,141,747	1,577,726	772,534	5,363,002
2003	132,012	561,713	1,172,569	1,147,169	1,586,399	778,408	5,378,270
2004	115,158	563,801	1,180,984	1,153,949	1,593,932	784,029	5,391,853
2005	97,530	565,067	1,190,235	1,161,423	1,601,478	790,858	5,406,591
2006	79,664	566,658	1,200,685	1,167,049	1,610,427	798,823	5,423,306
2007	65,806	568,696	1,211,636	1,174,832	1,620,389	805,716	5,447,075
2008	46,356	572,887	1,225,015	1,184,187	1,635,139	812,098	5,475,682
2009	25,576	576,940	1,240,392	1,193,662	1,657,217	817,460	5,511,247
2010	.	579,622	1,253,978	1,200,254	1,680,231	820,552	5,534,637
2011	.	579,823	1,260,971	1,200,633	1,699,343	819,752	5,560,522
2012	.	579,984	1,266,663	1,201,323	1,714,561	817,898	5,580,429

2013	.	580,268	1,272,481	1,201,398	1,732,039	816,349	5,602,535
2014	.	581,043	1,277,517	1,202,498	1,749,387	816,714	5,627,159
2015	.	582,630	1,282,732	1,205,717	1,768,103	820,472	5,659,654
2016	.	585,496	1,293,290	1,211,762	1,789,144	827,484	5,707,176
2017	.	587,335	1,304,240	1,217,215	1,807,386	832,544	5,748,720
2018	.	589,145	1,313,574	1,220,754	1,822,639	835,019	5,781,131
2019	.	589,754	1,320,667	1,223,344	1,835,547	836,732	5,806,044

The population status at start of each year

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disponibel fam. indkomst						
	N	NMiss	P10	Median	Mean	P90
-----						
dato						
(år)						
1996	4,791,583	453,544	76,453	125,422	132,709	194,043
1997	4,816,338	452,462	78,449	129,544	137,940	202,517
1998	4,834,666	453,860	80,944	133,536	143,502	210,770
1999	4,850,470	457,942	83,727	139,061	149,587	220,853
2000	4,859,734	464,771	85,979	143,248	153,642	226,514
2001	4,879,565	464,900	88,469	148,010	159,961	235,348
2002	4,901,556	461,446	90,954	153,028	165,386	245,269
2003	4,916,359	461,911	95,955	159,417	171,749	254,645
2004	4,929,108	462,745	98,836	164,161	176,598	262,420
2005	4,952,442	454,149	102,358	173,677	187,203	279,215
2006	4,977,159	446,147	104,739	178,822	195,106	291,018
2007	4,993,340	453,735	108,598	184,219	203,052	300,764
2008	5,018,126	457,556	111,284	188,938	208,314	307,787
2009	5,046,158	465,089	111,783	193,852	206,607	313,377
2010	5,070,854	463,783	113,980	199,066	210,777	320,721
2011	5,096,360	464,162	120,531	212,352	230,649	353,328
2012	5,112,758	467,671	121,842	215,989	235,664	361,964
2013	5,134,411	468,124	125,137	219,975	242,101	370,700
2014	5,162,586	464,573	126,130	224,112	249,163	383,022
2015	5,197,606	462,048	126,865	229,315	254,131	393,700
2016	5,240,396	466,780	127,338	232,752	261,245	402,629
2017	5,276,149	472,571	127,153	237,153	265,888	411,701
2018	5,311,511	469,620	128,517	243,464	273,697	424,199
2019	5,305,336	500,708	128,402	243,405	273,497	424,023

The population status at start of each year

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disponibel fam. indkomst			
	P10	Median	P90
-----			
.	88,044	161,505	291,175
10 Grundskole	92,381	158,908	279,170
20 Gymnasiale uddannelser	64,352	157,684	327,085
30 Erhvervsfaglige uddannelser	115,295	191,388	322,983
35 Adgangsgivende uddannelsesforløb	69,646	154,398	302,001
40 Korte videregående uddannelser, KVU	117,315	215,586	366,986
50 Mellemlange videregående uddannelser, MVU	132,445	228,476	386,068
60 Bacheloruddannelser, BACH	68,075	163,060	347,553
70 Lange videregående uddannelser, LVU	136,678	275,176	508,933
80 Ph.d. og forskeruddannelser	167,689	306,202	533,849
.	88,044	161,505	291,175
1 Primary	93,271	190,538	339,908
2 Lower secondary	92,591	158,516	277,055
3 Upper secondary	102,935	186,794	323,593
5 Short cycle tertiary	117,832	216,141	368,304
6 Bachelor or equivalent	122,399	223,838	383,163
7 Master or equivalent	136,678	275,176	508,933
8 Doctoral or equivalent	167,689	306,202	533,849
9 Not elsewhere classified	64,124	115,331	193,387



-----

The population status at start of each year

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	N
-----	
.	27,244,106
10 Grundskole	37,019,504
20 Gymnasiale uddannelser	8,219,893
30 Erhvervsfaglige uddannelser	34,118,721
35 Adgangsgivende uddannelsesforløb	90,611
40 Korte videregående uddannelser, KVU	4,007,011
50 Mellemlange videregående uddannelser, MVU	12,834,261
60 Bacheloruddannelser, BACH	1,492,894
70 Lange videregående uddannelser, LVU	6,348,646
80 Ph.d. og forskeruddannelser	409,221
.	
.	27,244,106
10 Grundskole	
1 Primary	1,096,185
2 Lower secondary	35,739,744
9 Not elsewhere classified	183,575
20 Gymnasiale uddannelser	
3 Upper secondary	8,219,893
30 Erhvervsfaglige uddannelser	
2 Lower secondary	30,778
3 Upper secondary	34,087,943
35 Adgangsgivende uddannelsesforløb	
3 Upper secondary	90,611
40 Korte videregående uddannelser, KVU	
5 Short cycle tertiary	4,007,011
50 Mellemlange videregående uddannelser, MVU	
5 Short cycle tertiary	130,428
6 Bachelor or equivalent	12,703,833
60 Bacheloruddannelser, BACH	
6 Bachelor or equivalent	1,492,894
70 Lange videregående uddannelser, LVU	
7 Master or equivalent	6,348,646
80 Ph.d. og forskeruddannelser	
8 Doctoral or equivalent	409,221
.	27,244,106
1 Primary	1,096,185
2 Lower secondary	35,770,522
3 Upper secondary	42,398,447
5 Short cycle tertiary	4,137,439
6 Bachelor or equivalent	14,196,727
7 Master or equivalent	6,348,646
8 Doctoral or equivalent	409,221
9 Not elsewhere classified	183,575
.	
.	27,244,106
1 Primary	
10 Grundskole	1,096,185
2 Lower secondary	
10 Grundskole	35,739,744
30 Erhvervsfaglige uddannelser	30,778
3 Upper secondary	
20 Gymnasiale uddannelser	8,219,893
30 Erhvervsfaglige uddannelser	34,087,943
35 Adgangsgivende uddannelsesforløb	90,611
5 Short cycle tertiary	
40 Korte videregående uddannelser, KVU	4,007,011
50 Mellemlange videregående uddannelser, MVU	130,428
6 Bachelor or equivalent	
50 Mellemlange videregående uddannelser, MVU	12,703,833
60 Bacheloruddannelser, BACH	1,492,894
7 Master or equivalent	
70 Lange videregående uddannelser, LVU	6,348,646
8 Doctoral or equivalent	

80 Ph.d. og forskeruddannelser	409,221
9 Not elsewhere classified	
10 Grundskole	183,575

-----

The population status at start of each year 14:51 Tuesday, August 11, 2020 5

#### The CONTENTS Procedure

Data Set Name	DMDAT.POPSTAT	Observations	131784868
Member Type	DATA	Variables	8
Engine	V9	Indexes	0
Created	11/08/2020 15:04:49	Observation Length	64
Last Modified	11/08/2020 15:04:49	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	The population status at start of each year		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

#### Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	129075
First Data Page	1
Max Obs per Page	1021
Obs in First Data Page	990
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\popstat.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	8GB
File Size (bytes)	8459124736

#### Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.	\$10.	personnummer
2	KOM	Char	3	\$KOM_V4_KT.		kommune
3	reg	Char	2	\$REG_V4_KT.		region
4	yr	Num	8			dato (år)
5	find	Num	8			disponibel fam. indkomst
6	udd	Num	8			uddannelseskode
7	udddk	Num	8	AUDD_HOVED_L5L5_KT.		grupperet uddannelse
8	eduen	Num	8	AUDD_LEVEL_L4L4_KT.		grouped education

## 3.7 01-npr

Processes the records from the NPR, and produces records with GDM diagnoses and PCOS diagnoses.

Persons cannot enter on any criterion in a 365 days grace period after each GDM diagnosis. GDM diagnoses occurring within 200 days of another one is not counted, though. Thus all GDM diagnoses in the same person are at least 200 days apart.

Outputs the earliest NPR diagnosis clear of GDM and PCOS, and derives a tentative T1 / T2 classification in the variable **nprtyp** based on the ICD10 codes for action diagnoses.

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)  
Licensed to FORSKNING 2, Site 50800723.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.08 seconds  
cpu time 0.10 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      * read the NPR datasets in the two different formats and combine them ;
2      %macro mold ;
3      data all_npr1977_93 ;
4          set %do i = 1977 %to 1993 ;
5              grund.lpr_adm&i. (keep = pnr recnum c_adiag d_inddto )
6          %end ; ;
7      * the ICD-8 codes incl. GDM / PCOS ;
8      if c_adiag in('24900','24901','24902','24903','24904',
9                  '24905','24906','24907','24908','24909',
10                 '25000','25001','25002','25003','25004',
11                 '25005','25006','25007','25008','25009',
12                 '63474','Y6449','61520','61521') ;
13      if substr(c_adiag,1,3) eq '249' then nprtyp = 'T1' ;
14      if substr(c_adiag,1,3) eq '250' then nprtyp = 'T2' ;
15      run ;
16      %mend ;
17      %mold ;

```

NOTE: There were 805332 observations read from the data set GRUND.LPR\_ADM1977.  
 NOTE: There were 867531 observations read from the data set GRUND.LPR\_ADM1978.  
 NOTE: There were 882896 observations read from the data set GRUND.LPR\_ADM1979.  
 NOTE: There were 889120 observations read from the data set GRUND.LPR\_ADM1980.  
 NOTE: There were 883805 observations read from the data set GRUND.LPR\_ADM1981.  
 NOTE: There were 910878 observations read from the data set GRUND.LPR\_ADM1982.  
 NOTE: There were 938875 observations read from the data set GRUND.LPR\_ADM1983.  
 NOTE: There were 953048 observations read from the data set GRUND.LPR\_ADM1984.  
 NOTE: There were 971292 observations read from the data set GRUND.LPR\_ADM1985.  
 NOTE: There were 992916 observations read from the data set GRUND.LPR\_ADM1986.  
 NOTE: There were 1007181 observations read from the data set GRUND.LPR\_ADM1987.  
 NOTE: There were 1032422 observations read from the data set GRUND.LPR\_ADM1988.  
 NOTE: There were 1042588 observations read from the data set GRUND.LPR\_ADM1989.  
 NOTE: There were 1049307 observations read from the data set GRUND.LPR\_ADM1990.  
 NOTE: There were 1044150 observations read from the data set GRUND.LPR\_ADM1991.  
 NOTE: There were 1064970 observations read from the data set GRUND.LPR\_ADM1992.  
 NOTE: There were 1078440 observations read from the data set GRUND.LPR\_ADM1993.  
 NOTE: The data set WORK.ALL\_NPR1977\_93 has 238421 observations and 5 variables.  
 NOTE: DATA statement used (Total process time):  
 real time 11.13 seconds  
 cpu time 1.56 seconds

```

18
19      %macro mnew ;
20      data all_npr1994_18 ;

```

```

21      set %do i = 1994 %to 2018 ;
22          grund.lpr_adm&i. (keep = pnr recnum c_adiag d_inddto )
23          %end ;
24      grund.uaf_adm2018 ;
25      * the ICD-10 codes incl GDM / PCOS ;
26      if substr(c_adiag,2,3) in ('E10','E11','E12','E13','E14','024') or
27          substr(c_adiag,2,4) in ('H360','E282') ;
28      if substr(c_adiag,2,3) eq 'E10' then nprtyp = 'T1' ;
29      if substr(c_adiag,2,3) eq 'E11' then nprtyp = 'T2' ;
30      run ;
31      %mend ;
32      %mnew ;

```

```

NOTE: There were 2259996 observations read from the data set GRUND.LPR_ADM1994.
NOTE: There were 3099974 observations read from the data set GRUND.LPR_ADM1995.
NOTE: There were 3292287 observations read from the data set GRUND.LPR_ADM1996.
NOTE: There were 3381783 observations read from the data set GRUND.LPR_ADM1997.
NOTE: There were 3465660 observations read from the data set GRUND.LPR_ADM1998.
NOTE: There were 3573247 observations read from the data set GRUND.LPR_ADM1999.
NOTE: There were 3617984 observations read from the data set GRUND.LPR_ADM2000.
NOTE: There were 3908224 observations read from the data set GRUND.LPR_ADM2001.
NOTE: There were 4593785 observations read from the data set GRUND.LPR_ADM2002.
NOTE: There were 4630303 observations read from the data set GRUND.LPR_ADM2003.
NOTE: There were 4770380 observations read from the data set GRUND.LPR_ADM2004.
NOTE: There were 4970849 observations read from the data set GRUND.LPR_ADM2005.
NOTE: There were 5148038 observations read from the data set GRUND.LPR_ADM2006.
NOTE: There were 5176587 observations read from the data set GRUND.LPR_ADM2007.
NOTE: There were 5467668 observations read from the data set GRUND.LPR_ADM2008.
NOTE: There were 5892674 observations read from the data set GRUND.LPR_ADM2009.
NOTE: There were 5906779 observations read from the data set GRUND.LPR_ADM2010.
NOTE: There were 6204786 observations read from the data set GRUND.LPR_ADM2011.
NOTE: There were 6127472 observations read from the data set GRUND.LPR_ADM2012.
NOTE: There were 6329051 observations read from the data set GRUND.LPR_ADM2013.
NOTE: There were 6495594 observations read from the data set GRUND.LPR_ADM2014.
NOTE: There were 6927895 observations read from the data set GRUND.LPR_ADM2015.
NOTE: There were 6852448 observations read from the data set GRUND.LPR_ADM2016.
NOTE: There were 6857872 observations read from the data set GRUND.LPR_ADM2017.
NOTE: There were 6707411 observations read from the data set GRUND.LPR_ADM2018.
NOTE: There were 1977489 observations read from the data set GRUND.UAF_ADM2018.
NOTE: The data set WORK.ALL_NPR1994_18 has 1145705 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           1:49.89
      cpu time            15.21 seconds

```

```

33
34      * c_adiag has length 6 in the old data (1977-93) but length 10
35      in the new data (1994-18), so the data set with the longer
36      variable length must be mentioned first in order to avoid
37      truncation ;
38      data all_npr ;
39      set all_npr1994_18
40          all_npr1977_93 ;
41      run ;

```

```

NOTE: There were 1145705 observations read from the data set WORK.ALL_NPR1994_18.
NOTE: There were 238421 observations read from the data set WORK.ALL_NPR1977_93.
NOTE: The data set WORK.ALL_NPR has 1384126 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           0.25 seconds
      cpu time            0.26 seconds

```

```

42      proc sort data = all_npr ; by pnr d_inddto ; run ;

```

```

NOTE: There were 1384126 observations read from the data set WORK.ALL_NPR.
NOTE: The data set WORK.ALL_NPR has 1384126 observations and 13 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.38 seconds
      cpu time            0.79 seconds

```

```

43
44 *-----;
45 * only records from persons in the base population -
46   GDM & PCOS diagnoses are put in separate files ;
47 data DM
48     gdm
49     pcos ;
50     merge all_npr    ( in = npr )
51           DMdat.pop ( in = pop ) ;
52     by pnr ;
53     length diaggr $ 4 ;
54     if npr and pop ;
55     * GDM / PCOS (excluding men) ;
56     if substr(c_adiag,2,4) in('0244','0249') or
57        c_adiag           in('63474','Y6449')
58        then do ;
59         if sex eq "W" then diaggr = 'GDM' ; else delete ;
60     end ;
61     else
62     if substr(c_adiag,2,4) in('E282'           ) or
63        c_adiag           in('61520','61521')
64        then do ;
65         if sex eq "W" then diaggr = 'PCOS' ; else delete ;
66     end ;
67     else
68         diaggr = 'DM' ;
69     if diaggr eq 'DM' then output  DM ;
70     if diaggr eq 'GDM' then output  gdm ;
71     if diaggr eq 'PCOS' then output pcos ;
72 run ;

```

NOTE: There were 1384126 observations read from the data set WORK.ALL\_NPR.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: The data set WORK.DM has 1184249 observations and 19 variables.

NOTE: The data set WORK.GDM has 42219 observations and 19 variables.

NOTE: The data set WORK.PCOS has 31162 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time	4.53 seconds
cpu time	1.76 seconds

```

73
74 *-----;
75 title1 'PCOS: id and first date of PCOS' ;
76 proc sort data = pcos ; by pnr d_inddto ; run ;

```

NOTE: There were 31162 observations read from the data set WORK.PCOS.

NOTE: The data set WORK.PCOS has 31162 observations and 19 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.02 seconds
cpu time	0.01 seconds

```

77 data DMdat.pcos ( keep = pnr doPCOS c_adiag ) ;
78     set pcos ;
79     by pnr d_inddto ;
80     if first.pnr ;
81     doPCOS = d_inddto ;
82 run ;

```

NOTE: There were 31162 observations read from the data set WORK.PCOS.

NOTE: The data set DMDAT.PCOS has 22842 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	0.04 seconds
cpu time	0.01 seconds

```
84      proc contents  data = DMdat.pcos ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):  
 real time           0.03 seconds  
 cpu time            0.03 seconds

NOTE: The PROCEDURE CONTENTS printed page 1.

```
85      proc tabulate  data = DMdat.pcos  missing  noseps ;
86          class doPCOS c_adiag ;
87          table c_adiag, n * f=comma9.
88              / rts = 80 ;
89          table doPCOS, n * f=comma9.
90              / rts = 8 ;
91          format doPCOS year4.
92              c_adiag $icdAll_L1L1_KT. ;
93      run ;
```

NOTE: There were 22842 observations read from the data set DMDAT.PCOS.

NOTE: The PROCEDURE TABULATE printed pages 2-3.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time           1.22 seconds  
 cpu time            0.10 seconds

```
94
95      title1 'First date of PCOS > 2015' ;
96      proc tabulate  data = DMdat.pcos  missing  noseps ;
97          where doPCOS ge '01JAN2015'd ;
98          class doPCOS ;
99          table doPCOS, n * f=comma10.
100              / rts = 10 ;
101          format doPCOS yymms8. ;
102      run ;
```

NOTE: There were 2779 observations read from the data set DMDAT.PCOS.

WHERE doPCOS>='01JAN2015'D;

NOTE: The PROCEDURE TABULATE printed page 4.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time           0.01 seconds  
 cpu time            0.01 seconds

```
103
104      *-----;
105      title1 'GDM records - id and any date of GDM' ;
106      proc tabulate  data = gdm (rename = (d_inddto=doGDM))  missing  noseps ;
107          class doGDM c_adiag ;
108          table c_adiag, n * f=comma9.
109              / rts = 80 ;
110          table doGDM, n * f=comma9.
111              / rts = 8 ;
112          format doGDM year4.
113              c_adiag $icdAll_L1L1_KT. ;
114      run ;
```

NOTE: There were 42219 observations read from the data set WORK.GDM.

NOTE: The PROCEDURE TABULATE printed pages 5-6.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time           0.06 seconds  
 cpu time            0.07 seconds

```
115
116      title1 'GDM records - id and any date of GDM except if too close' ;
117      proc sort data = gdm ; by pnr d_inddto ; run ;
```

NOTE: There were 42219 observations read from the data set WORK.GDM.

NOTE: The data set WORK.GDM has 42219 observations and 19 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      0.03 seconds
cpu time       0.01 seconds

```

```

118      data gdm ( keep = pnr doGDM dno c_adiaag ) ;
119          set gdm ( rename = ( d_inddto = doGDM ) ) ;
120          by pnr doGDM ;
121          retain prevGDM ;
122          if first.pnr then do ;
123              dno = 1 ;
124              prevGDM = doGDM ;
125              output ;
126          end ;
127          if ^first.pnr and ( doGDM - prevGDM ) gt &gdmint. then do ;
128              dno + 1 ;
129              output ;
130              prevGDM = doGDM ;
131          end ;
132      run ;

```

NOTE: There were 42219 observations read from the data set WORK.GDM.

NOTE: The data set WORK.GDM has 27128 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.01 seconds
cpu time       0.03 seconds

```

```

133
134      proc transpose data = gdm
135                      out = DMdat.gdm ( drop = _NAME_ _LABEL_ )
136                      prefix = doGDM ;
137          by pnr ;
138          var doGDM ;
139          id dno ;
140      run ;

```

NOTE: There were 27128 observations read from the data set WORK.GDM.

NOTE: The data set DMDAT.GDM has 22391 observations and 12 variables.

NOTE: PROCEDURE TRANSPOSE used (Total process time):

```

real time      0.07 seconds
cpu time       0.06 seconds

```

```

141
142      %let doGDMn = doGDM2 doGDM3 doGDM4 doGDM5 doGDM6 doGDM7 doGDM8 doGDM9 doGDM10
142      ! doGDM11 ;
143      title 'The recorded dates of Gestational diabetes' ;
144      proc contents data = DMdat.gdm ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.00 seconds
cpu time       0.00 seconds

```

NOTE: The PROCEDURE CONTENTS printed page 7.

```

145      proc tabulate data = DMdat.gdm missing noseps ;
146          class doGDM1 ;
147          var &doGDMn. ;
148          table doGDM1 all &doGDMn.,
149              n * f=comma10. / rts=9 ;
150          format doGDM1 year4. ;
151      run ;

```

NOTE: There were 22391 observations read from the data set DMDAT.GDM.

NOTE: The PROCEDURE TABULATE printed page 8.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      0.02 seconds
cpu time       0.01 seconds

```

```

152
153     title1 'First date of GDM > 2015' ;
154     proc tabulate data = DMdat.gdm missing noseps ;
155         where doGDM1 ge '01JAN2015'd ;
156         class doGDM1 ;
157         var &doGDMn. ;
158         table doGDM1 all &doGDMn.,
159             n * f=comma10. / rts=9 ;
160         format doGDM1 yymms7. ;
161     run ;

```

NOTE: There were 5387 observations read from the data set DMDAT.GDM.  
 WHERE doGDM1>='01JAN2015'D;

NOTE: The PROCEDURE TABULATE printed page 9.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time 0.01 seconds  
 cpu time 0.01 seconds

```

162     title1 ;
163
164     *-----;
165     title1 'DM diagnoses from NPR (no. of records)' ;
166     proc tabulate data = DM missing noseps ;
167         class c_adiag nprtyp d_inddto ;
168         table all c_adiag, nprtyp * f=comma7.
169             / rts = 65 ;
170         table all d_inddto, nprtyp * ( n * f=comma9.
171             pctn<nprtyp> * f=5.1 )
172             / rts = 10 ;
173         format c_adiag $icdAll_L1L1_KT.
174             d_inddto year4. ;
175     run ;

```

NOTE: There were 1184249 observations read from the data set WORK.DM.

NOTE: The PROCEDURE TABULATE printed pages 10-11.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time 0.35 seconds  
 cpu time 0.60 seconds

```

176
177     proc tabulate data = DM missing noseps ;
178         where c_adiag in ('24907','24908','24909','DE109',
179             '25000','25001','25009','DE119') ;
180         class c_adiag nprtyp d_inddto ;
181         table all d_inddto,
182             nprtyp * c_adiag * f=comma7.
183             / rts = 6 ;
184         format d_inddto year4. ;
185     run ;

```

NOTE: There were 560468 observations read from the data set WORK.DM.

WHERE c\_adiag in ('24907', '24908', '24909', '25000', '25001', '25009', 'DE109',  
 'DE119');

NOTE: The PROCEDURE TABULATE printed page 12.

NOTE: PROCEDURE TABULATE used (Total process time):  
 real time 0.31 seconds  
 cpu time 0.34 seconds

```

186     title1 ;
187
188     *-----;
189     * Excluding NPR-records in the GDM windows ;
190     options mprint ;
191     data npr ( keep = pnr sex d_inddto nprtyp c_adiag ) ;
192         merge DM ( in = DM )
193             DMdat.gdm ;
194     by pnr ;

```



```

195         if DM ;
196         * Do not count NPR diagnoses in window around GDM ;
197         %xgdm( d_inddto ) ;
MPRINT(XGDM):  if ( doGDM1 - 30 ) < d_inddto < ( doGDM1 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM2 - 30 ) < d_inddto < ( doGDM2 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM3 - 30 ) < d_inddto < ( doGDM3 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM4 - 30 ) < d_inddto < ( doGDM4 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM5 - 30 ) < d_inddto < ( doGDM5 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM6 - 30 ) < d_inddto < ( doGDM6 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM7 - 30 ) < d_inddto < ( doGDM7 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM8 - 30 ) < d_inddto < ( doGDM8 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM9 - 30 ) < d_inddto < ( doGDM9 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM10 - 30 ) < d_inddto < ( doGDM10 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM11 - 30 ) < d_inddto < ( doGDM11 + 365 ) then delete ;
MPRINT(XGDM):  if ( doGDM12 - 30 ) < d_inddto < ( doGDM12 + 365 ) then delete ;
198         run ;

```

NOTE: Variable doGDM12 is uninitialized.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

1156358 at 197:18	1156358 at 197:54	1175527 at 197:20	1175527 at 197:56
1179482 at 197:20	1179482 at 197:56	1180219 at 197:20	1180219 at 197:56
1180327 at 197:20	1180327 at 197:56	1180381 at 197:20	1180381 at 197:56
1180400 at 197:20	1180400 at 197:56	1180400 at 197:20	1180400 at 197:56
1180405 at 197:20	1180405 at 197:56	1180405 at 197:20	1180405 at 197:56
1180405 at 197:20	1180405 at 197:56	1180407 at 197:20	1180407 at 197:56

NOTE: There were 1184249 observations read from the data set WORK.DM.

NOTE: There were 22391 observations read from the data set DMDAT.GDM.

NOTE: The data set WORK.NPR has 1180407 observations and 5 variables.

NOTE: DATA statement used (Total process time):

real time	3.37 seconds
cpu time	3.17 seconds

```

199         options nomprint ;
200
201         * NPR dates of first and second contact ;
202         data npr1 ( keep = pnr doNPR c_adiag nprtyp )
203             npr2 ( keep = pnr doNPR
204                 rename = ( doNPR = doNPR2 ) )
205             nprl ( keep = pnr doNPR
206                 rename = ( doNPR = lastNPR ) ) ;
207         set npr ( keep = pnr d_inddto c_adiag nprtyp
208             rename = ( d_inddto = doNPR ) ) ;
209         by pnr ;
210         if first.pnr then nprN = 0 ;
211         nprN + 1 ;
212         if first.pnr then output npr1 ;
213         if nprN eq 2 then output npr2 ;
214         if last.pnr then output nprl ;
215         run ;

```

NOTE: There were 1180407 observations read from the data set WORK.NPR.

NOTE: The data set WORK.NPR1 has 243939 observations and 4 variables.

NOTE: The data set WORK.NPR2 has 173127 observations and 2 variables.

NOTE: The data set WORK.NPRL has 243939 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time	0.19 seconds
cpu time	0.07 seconds

```

216
217         title1 'First NPR recording for each person - select diagnoses' ;
218         proc tabulate data = npr1 missing noseps ;
219             where nprtyp in ('T1','T2') ;
220             class c_adiag nprtyp doNPR ;
221             table all doNPR,
222                 nprtyp * ( all c_adiag ) * f=comma7.
223             / rts = 6 ;

```

```

224         format doNPR year4. ;
225         run ;

```

NOTE: There were 218937 observations read from the data set WORK.NPR1.

```
WHERE nprtyp in ('T1', 'T2');
```

NOTE: The PROCEDURE TABULATE printed pages 13-19.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      0.07 seconds
cpu time       0.14 seconds

```

```

226         title1 ;
227
228         * Classifiy persons according to the most frequently occurring type ;
229         data DMdat.npr ;
230         merge npr npr1 npr2 nprl ;
231         by pnr ;
232         drop c_adiag d_inddto ;
233         retain nT1 nT2 nRc ;
234         if first.pnr then do ;
235             nT1 = 0 ;
236             nT2 = 0 ;
237             nRc = 0 ;
238         end ;
239         nT1 + ( nprtyp eq 'T1' ) ;
240         nT2 + ( nprtyp eq 'T2' ) ;
241         nRc + 1 ;
242         * If more than half of records agree on one type ;
243         if last.pnr then do ;
244             if nRc < (nT1+nT2) then put "This should never print" ;
245             nprtyp = 'NA' ;
246             if nT1 > nRc/2 then nprtyp = 'T1' ;
247             if nT2 > nRc/2 then nprtyp = 'T2' ;
248             output ;
249         end ;
250         label doNPR = '1st NPR date'
251             doNPR2 = '2nd NPR date'
252             lastNPR = 'last NPR date' ;
253         run ;

```

NOTE: There were 1180407 observations read from the data set WORK.NPR.

NOTE: There were 243939 observations read from the data set WORK.NPR1.

NOTE: There were 173127 observations read from the data set WORK.NPR2.

NOTE: There were 243939 observations read from the data set WORK.NPRL.

NOTE: The data set DMDAT.NPR has 243939 observations and 9 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.45 seconds
cpu time       0.23 seconds

```

```

254
255         title1 'Diagnoses of DM accepted from NPR - persons' ;
256         proc contents data = DMdat.npr varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.00 seconds
cpu time       0.01 seconds

```

NOTE: The PROCEDURE CONTENTS printed page 20.

```

257
258         * Censor at 12 records from npr ;
259         data xnpr ;
260         set DMdat.npr ;
261         nT1 = min( nT1, 12 ) ;
262         nT2 = min( nT2, 12 ) ;
263         run ;

```

NOTE: There were 243939 observations read from the data set DMDAT.NPR.

NOTE: The data set WORK.XNPR has 243939 observations and 9 variables.

NOTE: DATA statement used (Total process time):  
 real time 0.08 seconds  
 cpu time 0.01 seconds

```

264      proc tabulate data = xnpr missing noseps ;
265          class doNPR doNPR2 nprtyp sex nT1 nT2 ;
266          var nRc ;
267          table nT1 * nT2,
268              nRc * ( min p25 p50 p75 max ) * f=4.
269              ( all nprtyp ) * f=comma7.
270              / rts = 7 ;
271          table all doNPR doNPR2,
272              ( all sex nprtyp ) * f=comma10.
273              / rts = 8 ;
274          format doNPR doNPR2 year4. ;
275          run ;

```

NOTE: There were 243939 observations read from the data set WORK.XNPR.  
 NOTE: The PROCEDURE TABULATE printed pages 21-22.  
 NOTE: PROCEDURE TABULATE used (Total process time):  
 real time 0.12 seconds  
 cpu time 0.40 seconds

```

276
277      title2 '- only from 1 January 2015 - checking seasonality' ;
278      proc tabulate data = DMdat.npr missing noseps ;
279          where doNPR ge '01JAN2015'd ;
280          class doNPR nprtyp sex ;
281          table all doNPR,
282              ( all sex nprtyp ) * f=comma10.
283              / rts = 10 ;
284          format doNPR yymms8. ;
285          run ;

```

NOTE: There were 32418 observations read from the data set DMDAT.NPR.  
 WHERE doNPR>='01JAN2015'D;  
 NOTE: The PROCEDURE TABULATE printed page 23.  
 NOTE: PROCEDURE TABULATE used (Total process time):  
 real time 0.03 seconds  
 cpu time 0.03 seconds

```

286      title1 ;

```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
 NOTE: The SAS System used:  
 real time 2:13.02  
 cpu time 25.18 seconds

### 3.7.1 01-npr.lst

PCOS: id and first date of PCOS 12:10 Wednesday, August 5, 2020 1

The CONTENTS Procedure

Data Set Name	DMDAT.PCOS	Observations	22842
Member Type	DATA	Variables	*
Engine	V9	Indexes	0
Created	05/08/2020 12:12:28	Observation Length	32
Last Modified	05/08/2020 12:12:28	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO

Label  
 Data Representation WINDOWS\_64  
 Encoding wlatin1 Western (Windows)

## Engine/Host Dependent Information

Data Set Page Size 65536  
 Number of Data Set Pages 12  
 First Data Page \*  
 Max Obs per Page 2039  
 Obs in First Data Page 1997  
 Number of Data Set Repairs 0  
 ExtendObsCounter YES  
 Filename E:\workdata\707655\DMreg\data\pcos.sas7bdat  
 Release Created 9.0401M5  
 Host Created X64\_SR12R2  
 Owner Name DSTFSE\FDIY7655  
 File Size 832KB  
 File Size (bytes) 851968

## Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
2	C_ADIAG	Char	10	\$10.	\$10.	C_ADIAG
1	PNR	Char	12	\$12.	\$10.	Personnummer
3	doPCOS	Num	8			

PCOS: id and first date of PCOS 12:10 Wednesday, August 5, 2020 2

```
-----
                                     N
-----
C_ADIAG
61520 CYSTIS FOLLICULARIS OVARIII 4,831
61521 CYSTIS CORPORIS LUTEI OVARIII 5,939
DE282 Polycystisk ovariesyndrom (PCOS) 11,953
DE282A Sklerocystisk ovariesyndrom *
DE282B Stein-Leventhal's syndrom 13
DE282C Polycystiske ovarier uden anovulation 104
-----
```

PCOS: id and first date of PCOS 12:10 Wednesday, August 5, 2020 3

```
-----
                                     N
-----
doPCOS
1976 *
1977 578
1978 603
1979 585
1980 646
1981 736
1982 679
1983 753
1984 714
1985 756
1986 740
1987 607
1988 636
1989 629
1990 584
1991 569
1992 532
1993 458
1994 110
1995 109
```

1996	156
1997	154
1998	189
1999	228
2000	197
2001	211
2002	276
2003	372
2004	464
2005	531
2006	539
2007	630
2008	565
2009	684
2010	727
2011	693
2012	739
2013	837
2014	844
2015	744
2016	650
2017	706
2018	679

-----

First date of PCOS > 2015

12:10 Wednesday, August 5, 2020 4

	N
doPCOS	
2015/01	70
2015/02	49
2015/03	79
2015/04	62
2015/05	71
2015/06	80
2015/07	38
2015/08	59
2015/09	73
2015/10	62
2015/11	59
2015/12	42
2016/01	56
2016/02	46
2016/03	49
2016/04	56
2016/05	65
2016/06	50
2016/07	42
2016/08	68
2016/09	61
2016/10	49
2016/11	61
2016/12	47
2017/01	76
2017/02	63
2017/03	63
2017/04	53
2017/05	71
2017/06	52
2017/07	24
2017/08	52
2017/09	62
2017/10	53
2017/11	89
2017/12	48
2018/01	84
2018/02	45
2018/03	66

2018/04	54
2018/05	49
2018/06	64
2018/07	30
2018/08	55
2018/09	60
2018/10	69
2018/11	59
2018/12	44

-----

GDM records - id and any date of GDM

12:10 Wednesday, August 5, 2020 5

		N
C_ADIAG		
63474	DIABETES MELLITUS GESTATIONIS	862
D0244	Graviditet, fødsel eller barsel med gestationel diabetes	15,864
D0244A	Graviditas med nyopstået diabetes mellitus	5
D0244B	Fødsel med gestationel diabetes	32
D0244C	Barsel med gestationel diabetes	78
D0244D	Graviditet med gestationel diabetes	18,805
D0244E	Graviditet med insulinbehandlet gestationel diabetes	2,943
D0249	Graviditet, fødsel eller barsel med diabetes UNS	3,538
D0249A	Graviditet med diabetes UNS	51
D0249B	Fødsel med diabetes UNS	*
D0249C	Barsel med diabetes UNS	9
Y6449	DIABETES MELLITUS(GESTATIONS-)ANTEA	31

GDM records - id and any date of GDM

12:10 Wednesday, August 5, 2020 6

-----

N

D\_IND-

DT0

1987	60
1988	117
1989	130
1990	157
1991	128
1992	127
1993	207
1994	713
1995	686
1996	1,010
1997	839
1998	970
1999	780
2000	865
2001	1,097
2002	1,038
2003	1,265
2004	1,492
2005	1,602
2006	1,663
2007	1,894
2008	2,192
2009	2,400
2010	2,160
2011	2,132
2012	1,931
2013	2,467
2014	2,579
2015	3,006
2016	2,624
2017	1,845
2018	2,043

-----

The recorded dates of Gestational diabetes

12:10 Wednesday, August 5, 2020 7

The CONTENTS Procedure

Data Set Name	DMDAT.GDM	Observations	22391
Member Type	DATA	Variables	12
Engine	V9	Indexes	0
Created	05/08/2020 12:12:30	Observation Length	104
Last Modified	05/08/2020 12:12:30	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	36
First Data Page	*
Max Obs per Page	629
Obs in First Data Page	607
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\gdm.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	2MB
File Size (bytes)	2424832

## Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
*	PNR	Char	12	\$12.	\$10.	Personnummer
*	doGDM1	Num	8	DATE9.		
*	doGDM2	Num	8	DATE9.		
4	doGDM3	Num	8	DATE9.		
5	doGDM4	Num	8	DATE9.		
6	doGDM5	Num	8	DATE9.		
7	doGDM6	Num	8	DATE9.		
8	doGDM7	Num	8	DATE9.		
9	doGDM8	Num	8	DATE9.		
10	doGDM9	Num	8	DATE9.		
11	doGDM10	Num	8	DATE9.		
12	doGDM11	Num	8	DATE9.		

The recorded dates of Gestational diabetes

12:10 Wednesday, August 5, 2020 8

-----

N

-----

doGDM1	
1987	50
1988	81
1989	108
1990	94
1991	84
1992	87
1993	147
1994	377
1995	365
1996	550
1997	504
1998	532

1999	435
2000	464
2001	482
2002	490
2003	667
2004	821
2005	895
2006	921
2007	973
2008	1,093
2009	1,182
2010	1,058
2011	1,089
2012	968
2013	1,197
2014	1,290
2015	1,520
2016	1,340
2017	1,238
2018	1,289
All	22,391
doGDM2	3,932
doGDM3	622
doGDM4	122
doGDM5	34
doGDM6	15
doGDM7	6
doGDM8	*
doGDM9	*
doGDM10	*
doGDM11	*

-----

First date of GDM &gt; 2015

12:10 Wednesday, August 5, 2020 9

	N
doGDM1	
2015/01	142
2015/02	116
2015/03	117
2015/04	96
2015/05	109
2015/06	134
2015/07	127
2015/08	132
2015/09	112
2015/10	119
2015/11	188
2015/12	128
2016/01	155
2016/02	122
2016/03	117
2016/04	137
2016/05	157
2016/06	137
2016/07	99
2016/08	93
2016/09	83
2016/10	68
2016/11	86
2016/12	86
2017/01	94
2017/02	83
2017/03	124
2017/04	81
2017/05	97
2017/06	145
2017/07	106



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2017/08      134
2017/09      104
2017/10       97
2017/11      104
2017/12       69
2018/01      102
2018/02       82
2018/03       95
2018/04       99
2018/05      118
2018/06      130
2018/07      120
2018/08      140
2018/09      108
2018/10      106
2018/11       96
2018/12       93
All          5,387
doGDM2       308
doGDM3        14
doGDM4         0
doGDM5         0
doGDM6         0
doGDM7         0
doGDM8         0
doGDM9         0
doGDM10        0
doGDM11        0
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DM diagnoses from NPR (no. of records)

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	nprtyp		
	T1	T2	
	N	N	N
All	193,372	409,057	581,820
C_ADIAG			
24900 DIABETES MELLITUS,INSULINO DEPENDENTE,SINE COMPLICATIONE	.	5,666	.
24901 CATARACTA,RETINOPATHIA DIABETICA INSULINO DEPENDENTE	.	2,064	.
24902 NEPHROPATHIA DIABETICA,SYNDR. KIMMELSTIEL-			
WILSON,INSUL.DEPEN.	.	308	.
24903 NEUROPATHIA,POLYNEURITIS DIABETICA,INSULINO DEPENDENTE	.	194	.
24904 ANGIOPATHIA DIABETICA EXTREMITATUM,INSULINO DEPENDENTE	.	78	.
24905 GANGRAENA DIABETICA, INSULINO DEPENDENTE	.	593	.
24906 COMA DIABETICUM SINE KETONURIA,INSULINO DEPENDENTE	.	65	.
24907 COMA(INCL.PRAECOMA)DIABETICUM,INSULINO DEPENDENTE	.	1,250	.
24908 DIABETES MELLITUS,INSULINO DEPENDENTE,CUM COMPL.ALIA			
DEFIN.	.	2,301	.
24909 DIABETES MELLITUS,INSULINO DEPENDENTE	.	19,728	.
25000 DIABETES MELLITUS,INSULINO INDEPENDENTE,SINE			
COMPLICATIONE	.	.	18,620
25001 CATARACTA,RETINOPATHIA DIABETICA,INSULINO INDEPENDENTE	.	.	3,674
25002 NEPHROPATHIA DIAB.,SYNDR.KIMMELSTIEL-WILSON,INSULINO			
INDEP	.	.	270
25003 NEUROPATHIA,POLYNEURITIS DIABETICA,INSULINO INDEPENDENTE	.	.	577
25004 ANGIOPATHIA DIABETICA EXTREMITATUM,INSULINO INDEPENDENTE	.	.	72
25005 GANGRAENA DIABETICA,INSULINO INDEPENDENTE	.	.	690
25006 COMA DIABETICUM SINE KETONURIA,INSULINO INDEPENDENTE	.	.	102
25007 COMA(INCL.PRAECOMA)DIABETICUM, INSULINO INDEPENDENTE	.	.	1,777
25008 DIABETES MELLITUS,INSULINO INDEPENDENTE,CUM COMPL.ALIA			
DEFI	.	.	4,364
25009 DIABETES MELLITUS, INSULINO INDEPENDENTE	.	.	43,306
DE10 Type 1-diabetes	.	1,313	.
DE100 Type 1-diabetes med koma	.	3,689	.
DE100A Coma diabeticum, hyperosmolær ved IDDM	.	23	.
DE100B Coma diabeticum ved IDDM med ketoacidose	.	391	.

DE100C	Coma diabeticum ved IDDM uden ketoacidose	.	34	.
DE100D	Coma diabeticum, hyperglykæmisk ved IDDM	.	85	.
DE100E	Coma diabeticum, hypoglykæmisk ved IDDM	.	497	.
DE100F	Diabetes mellitus insulino dependente med coma diabeticum	.	211	.
DE101	Type 1-diabetes med ketoacidose	.	23,435	.
DE102	Type 1-diabetes med nyrekompikation	.	13,616	.
DE103	Type 1-diabetes med øjenkompikation	.	21,980	.
DE104	Type 1-diabetes med neurologisk kompikation	.	7,788	.
DE105	Type 1-diabetes med kompikationer i perifere karsystem	.	14,181	.
DE105A	Type 1-diabetes med perifer angiopati	.	275	.
DE105B	Type 1-diabetes med fodsår	.	4,769	.
DE105C	Type 1-diabetes med gangræn	.	1,355	.
DE105D	Type 1-diabetes med mikroangiopati	.	61	.
DE106	Type 1-diabetes med anden kompikation	.	3,418	.
DE107	Type 1-diabetes med multiple kompikationer	.	33,078	.
DE108	Type 1-diabetes med kompikation UNS	.	35,863	.
DE109		.	*	.
DE109	Type 1-diabetes uden kompikationer	.	198,290	.
DE109A	Type 1-diabetes UNS	.	12,457	.
DE11	Type 2-diabetes	.	.	825
DE110	Type 2-diabetes med koma	.	.	2,761
DE110A	Coma diabeticum ved NIDDM uden ketoacidose	.	.	21
DE110B	Coma diabeticum, hypoglykæmisk ved NIDDM	.	.	166
DE110C	Coma diabeticum, hyperosmolær ved NIDDM	.	.	54
DE110D	Coma diabeticum, hyperglykæmisk ved NIDDM	.	.	40
DE110E	Coma diabeticum ved NIDDM med ketoacidose	.	.	44
DE111	Type 2-diabetes med ketoacidose	.	.	2,191
DE112	Type 2-diabetes med nyrekompikation	.	.	30,661
DE113	Type 2-diabetes med øjenkompikation	.	.	12,407
DE114	Type 2-diabetes med neurologisk kompikation	.	.	18,842
DE115	Type 2-diabetes med kompikationer i perifere karsystem	.	.	19,347
DE115A	Type 2-diabetes med perifer angiopati	.	.	535
DE115B	Type 2-diabetes med fodsår	.	.	16,151
DE115C	Type 2-diabetes med gangræn	.	.	1,976
DE115D	Type 2-diabetes med mikroangiopati	.	.	132
DE116	Type 2-diabetes med anden kompikation	.	.	6,291
DE117	Type 2-diabetes med multiple kompikationer	.	.	39,372
DE118	Type 2-diabetes med kompikation UNS	.	.	57,685
DE119		.	.	*
DE119	Type 2-diabetes uden kompikationer	.	.	273,299
DE119A	Type 2-diabetes UNS	.	.	25,567
DE12	Diabetes forårsaget af underernæring	8	.	.
DE120	Diabetes forårsaget af underernæring med koma	220	.	.
DE120A	Coma diabeticum, hyperglykæmisk ved diab mell malnutritioni	10	.	.
DE120B	Coma diabeticum, hypoglykæmisk ved diab mell malnutritionis	10	.	.
DE120C	Coma diabeticum ved diab mell malnutrit med ketoacidose	*	.	.
DE121	Diabetes forårsaget af underernæring med ketoacidose	153	.	.
DE122	Diabetes forårsaget af underernæring med nyrekompikation	102	.	.
DE123	Diabetes forårsaget af underernæring med øjenkompikation	72	.	.
DE124	Diabetes f.a. underernæring med neurologisk kompikation	74	.	.
DE125	Diabetes f.a. underernæring med kompl. i perifere karsystem	385	.	.
DE125A	Diabetes forårsaget af underernæring med perifer angiopati	*	.	.
DE125B	Diabetes forårsaget af underernæring med fodsår	40	.	.
DE125C	Diabetes forårsaget af underernæring med gangræn	42	.	.
DE126	Diabetes forårsaget af underernæring med anden kompikation	37	.	.
DE127	Diabetes f.a. underernæring med multiple kompikationer	85	.	.
DE128	Diabetes forårsaget af underernæring med kompikation UNS	131	.	.
DE129	Diabetes forårsaget af underernæring uden kompikationer	263	.	.
DE13	Andre former for diabetes	46	.	.

DE130	Anden diabetes med koma	76	.	.
DE131	Anden diabetes med ketoacidose	669	.	.
DE132	Anden diabetes med nyrekompikation	333	.	.
DE133	Anden diabetes med øjenkomplikationer	1,684	.	.
DE134	Anden diabetes med neurologisk komplikation	314	.	.
DE135	Anden diabetes med komplikationer i perifere karsystem	209	.	.
DE135A	Anden diabetes med perifer angiopati	7	.	.
DE135B	Anden diabetes med fodsår	307	.	.
DE135C	Anden diabetes med gangræn	70	.	.
DE135D	Anden diabetes med mikroangiopati	9	.	.
DE136	Anden diabetes med anden komplikation	227	.	.
DE137	Anden diabetes med multiple komplikationer	479	.	.
DE138	Anden diabetes med komplikation UNS	833	.	.
DE139	Anden diabetes uden komplikationer	5,986	.	.
DE14	Ikke spec. diabetes	377	.	.
DE140	Diabetes UNS med koma	724	.	.
DE140A	Coma diabeticum ved diabetes mellitus uden specifikation	55	.	.
DE140B	Coma diabeticum, hyperglykæmisk ved diab mell uden specifik	11	.	.
DE140C	Coma diabeticum, hyperosmolær ved diab mell uden specifik	19	.	.
DE140D	Coma diabeticum, hypoglykæmisk ved diab mell uden specifik	20	.	.
DE141	Diabetes UNS med ketoacidose	3,197	.	.
DE142	Diabetes UNS med nyrekompikation	915	.	.
DE143	Diabetes UNS med øjenkomplikation	1,954	.	.
DE144	Diabetes UNS med neurologisk komplikation	3,916	.	.
DE145	Diabetes UNS med komplikationer i perifere karsystem	6,022	.	.
DE145A	Diabetes UNS med perifer angiopati	35	.	.
DE145B	Diabetes UNS med fodsår	4,321	.	.
DE145C	Diabetes UNS med gangræn	776	.	.
DE145D	Diabetes UNS med mikroangiopati	31	.	.
DE146	Diabetes UNS med anden komplikation	642	.	.
DE147	Diabetes UNS med multiple komplikationer	1,561	.	.
DE148	Diabetes UNS med komplikation UNS	6,324	.	.
DE149	Diabetes UNS uden komplikationer	36,378	.	.
DH360				
		*	.	.
DH360	Diabetisk retinopati UNS	78,642	.	.
DH360A	Retinopathia simplex IDDM	975	.	.
DH360B	Retinopathia proliferativa IDDM	2,242	.	.
DH360C	Retinopathia simplex NIDDM	1,193	.	.
DH360D	Retinopathia proliferativa NIDDM	1,160	.	.
DH360E	Maculopathia diabetica IDDM	965	.	.
DH360F	Maculopathia diabetica NIDDM	1,978	.	.
DH360H	Simpel diabetisk retinopati	3,079	.	.
DH360J	Proliferativ diabetisk retinopati	4,081	.	.
DH360K	Diabetisk makulopati	6,027	.	.
D024	Diabetes under graviditet, fødsel og barsel	*	.	.
D0240	Graviditet, fødsel el. barsel m. forud best. type 1- diabetes	4,961	.	.
D0240A	Graviditet med forud bestående type 1-diabetes	3,790	.	.
D0240B	Fødsel med forud bestående type 1-diabetes	30	.	.
D0240C	Barsel med forud bestående type 1-diabetes	18	.	.
D0241	Graviditet, fødsel el. barsel m. forud best. type 2- diabetes	759	.	.
D0241A	Graviditet med forud bestående type 2-diabetes	1,677	.	.
D0241B	Fødsel med forud bestående type 2-diabetes	*	.	.
D0241C	Barsel med forud bestående type 2-diabetes	*	.	.
D0242	Gravid., fødsel eller barsel med diabetes f.a. underernæring	32	.	.
D0242A	Graviditet med forud bestående diabetes f.a. underernæring	*	.	.
D0243	Gravid., fødsel el. barsel med forud bestående diabetes UNS	1,534	.	.
D0243A	Graviditet med forud bestående diabetes UNS	31	.	.
D0243C	Barsel med forud bestående diabetes UNS	4	.	.
D0245	Nyopdaget manifest diabetes i graviditeten	20	.	.

DM diagnoses from NPR (no. of records)

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	nprtyp					
			T1		T2	
	N	PctN	N	PctN	N	PctN
All	193,372	16.3	409,057	34.5	581,820	49.1
D_INDDTO						
1941	.	.	* 100.0	.	.	.
1968	.	.	* 100.0	.	.	.
1970	.	.	* 100.0	.	.	.
1971	.	.	* 100.0	.	.	.
1972	.	.	8 100.0	.	.	.
1973	.	.	17 89.5	*	10.5	.
1974	.	.	17 94.4	*	5.6	.
1975	.	.	15 93.8	*	6.3	.
1976	.	.	19 29.7	45	70.3	.
1977	.	.	10 0.3	3,073	99.7	.
1978	.	.	20 0.5	3,840	99.5	.
1979	.	.	25 0.6	4,172	99.4	.
1980	*	0.0	28 0.6	4,440	99.3	.
1981	.	.	28 0.6	4,775	99.4	.
1982	.	.	24 0.5	5,284	99.5	.
1983	*	0.0	54 1.0	5,223	99.0	.
1984	4	0.1	45 0.7	5,968	99.2	.
1985	5	0.1	65 0.9	7,011	99.0	.
1986	6	0.1	215 2.9	7,307	97.1	.
1987	4	0.1	4,082 55.2	3,303	44.7	.
1988	60	0.7	4,805 59.6	3,195	39.6	.
1989	67	0.8	5,261 61.9	3,167	37.3	.
1990	57	0.7	5,263 62.6	3,085	36.7	.
1991	61	0.6	6,017 62.7	3,519	36.7	.
1992	107	1.0	6,363 61.8	3,823	37.1	.
1993	618	3.0	13,058 63.4	6,906	33.6	.
1994	2,587	10.9	12,248 51.6	8,915	37.5	.
1995	3,778	13.6	13,413 48.4	10,540	38.0	.
1996	4,369	13.9	14,010 44.6	13,045	41.5	.
1997	5,014	14.7	15,149 44.5	13,913	40.8	.
1998	6,466	17.3	15,019 40.2	15,842	42.4	.
1999	6,633	15.8	17,110 40.8	18,180	43.4	.
2000	5,533	14.3	14,896 38.6	18,194	47.1	.
2001	5,951	14.9	15,222 38.2	18,687	46.9	.
2002	6,297	16.1	14,523 37.2	18,267	46.7	.
2003	7,856	17.9	15,026 34.3	20,914	47.8	.
2004	8,159	19.5	14,646 34.9	19,102	45.6	.
2005	8,907	19.4	16,568 36.0	20,542	44.6	.
2006	8,540	18.8	14,731 32.4	22,242	48.9	.
2007	9,788	24.6	11,781 29.6	18,224	45.8	.
2008	10,484	20.4	16,837 32.7	24,183	47.0	.
2009	9,461	19.7	15,101 31.5	23,369	48.8	.
2010	8,395	21.6	11,840 30.5	18,589	47.9	.
2011	9,235	20.5	14,520 32.2	21,378	47.4	.
2012	9,631	22.4	12,470 28.9	20,982	48.7	.
2013	9,546	16.9	16,326 29.0	30,459	54.1	.
2014	8,375	22.5	10,109 27.1	18,817	50.4	.
2015	9,207	15.7	17,954 30.5	31,613	53.8	.
2016	11,370	24.6	11,328 24.5	23,520	50.9	.
2017	9,960	16.6	19,151 32.0	30,819	51.4	.
2018	6,838	15.6	13,632 31.1	23,344	53.3	.

DM diagnoses from NPR (no. of records)

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nprtyp					
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	T1				T2			
	C_ADIAG				C_ADIAG			
	24907	24908	24909	DE109	25000	25001	25009	DE119
	N	N	N	N	N	N	N	N
All	1,250	2,301	19,728	198,290	18,620	3,674	43,306	273,299
D_I-								
NDD-								
TO								
1970	.	.	.	*	.	.	.	.
1971	.	.	.	*	.	.	.	.
1972	.	.	.	4	.	.	.	.
1973	.	.	.	7	.	.	.	*
1974	.	.	.	5	.	.	.	.
1975	.	.	.	6	.	.	.	.
1976	.	.	.	7	11	.	29	*
1977	.	.	.	4	953	68	1,896	.
1978	.	.	.	11	1,264	103	2,152	.
1979	.	.	.	13	1,179	127	2,518	*
1980	.	.	.	15	1,214	141	2,685	.
1981	.	.	.	18	1,242	235	2,729	*
1982	.	.	.	12	1,346	352	3,072	*
1983	.	.	.	37	1,285	470	2,806	*
1984	.	.	.	31	1,597	360	3,170	*
1985	.	.	.	41	1,912	313	3,716	5
1986	*	6	9	147	1,709	536	3,982	9
1987	128	484	1,726	82	847	192	2,000	9
1988	187	483	2,239	273	864	217	1,768	22
1989	197	440	2,556	506	848	173	1,782	67
1990	200	240	3,029	486	573	96	1,988	114
1991	203	175	3,250	834	637	66	2,312	158
1992	156	193	3,487	956	605	93	2,203	383
1993	176	280	3,432	4,245	534	132	2,498	1,728
1994	.	.	.	7,070	.	.	.	5,743
1995	.	.	.	7,699	.	.	.	6,585
1996	.	.	.	7,935	.	.	.	8,163
1997	.	.	.	8,753	.	.	.	8,693
1998	.	.	.	8,568	.	.	.	9,936
1999	.	.	.	9,868	.	.	.	11,171
2000	.	.	.	8,075	.	.	.	10,991
2001	.	.	.	8,310	.	.	.	11,588
2002	.	.	.	7,380	.	.	.	11,268
2003	.	.	.	7,470	.	.	.	12,629
2004	.	.	.	7,245	.	.	.	11,144
2005	.	.	.	7,694	.	.	.	11,468
2006	.	.	.	8,152	.	.	.	13,981
2007	.	.	.	6,154	.	.	.	11,755
2008	.	.	.	8,902	.	.	.	14,623
2009	.	.	.	8,508	.	.	.	14,175
2010	.	.	.	6,334	.	.	.	11,129
2011	.	.	.	7,904	.	.	.	13,034
2012	.	.	.	6,197	.	.	.	11,179
2013	.	.	.	8,587	.	.	.	14,744
2014	.	.	.	4,795	.	.	.	8,552
2015	.	.	.	9,372	.	.	.	14,616
2016	.	.	.	5,288	.	.	.	8,832
2017	.	.	.	8,570	.	.	.	9,305
2018	.	.	.	5,717	.	.	.	5,487

First NPR recording for each person - select diagnoses

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nprtyp

T1

	C_ADIAG									
	All	24900	24901	24902	24903	24904	24905	24906	24907	24908
	N	N	N	N	N	N	N	N	N	N
All	40,765	1,385	134	17	23	8	70	24	187	199
D_I-										
NDD-										
TO										
1941	*	.	.	.	.	.	.	.	.	.
1968	*	.	.	.	.	.	.	.	.	.
1970	*	.	.	.	.	.	.	.	.	.
1971	*	.	.	.	.	.	.	.	.	.
1972	8	.	.	.	.	.	.	.	.	.
1973	17	.	.	.	.	.	.	.	.	.
1974	17	.	.	.	.	.	.	.	.	.
1975	15	.	.	.	.	.	.	.	.	.
1976	19	.	.	.	.	.	.	.	.	.
1977	6	.	.	.	.	.	.	.	.	.
1978	17	.	.	.	.	.	.	.	.	.
1979	12	.	.	.	.	.	.	.	.	.
1980	12	.	.	.	.	.	.	.	.	.
1981	14	.	.	.	.	.	.	.	.	.
1982	13	.	.	.	.	.	.	.	.	.
1983	16	.	.	.	.	.	.	.	.	.
1984	17	.	.	.	.	.	.	.	.	.
1985	19	.	.	.	.	.	.	.	.	.
1986	57	*	.	.	.	.	*	.	.	*
1987	810	276	29	*	*	.	9	.	19	47
1988	922	249	17	*	*	*	5	*	38	30
1989	998	218	21	.	5	.	5	.	26	38
1990	988	167	10	*	6	.	13	*	32	26
1991	1,098	149	21	*	*	*	8	5	24	17
1992	1,117	143	18	4	6	4	18	5	20	14
1993	1,800	181	18	4	*	*	11	8	28	24
1994	1,508	.	.	.	.	.	.	.	.	.
1995	1,507	.	.	.	.	.	.	.	.	.
1996	1,526	.	.	.	.	.	.	.	.	.
1997	1,496	.	.	.	.	.	.	.	.	.
1998	1,617	.	.	.	.	.	.	.	.	.
1999	1,478	.	.	.	.	.	.	.	.	.
2000	1,477	.	.	.	.	.	.	.	.	.
2001	1,462	.	.	.	.	.	.	.	.	.
2002	1,412	.	.	.	.	.	.	.	.	.
2003	1,468	.	.	.	.	.	.	.	.	.
2004	1,515	.	.	.	.	.	.	.	.	.
2005	1,426	.	.	.	.	.	.	.	.	.
2006	1,430	.	.	.	.	.	.	.	.	.
2007	1,377	.	.	.	.	.	.	.	.	.
2008	1,374	.	.	.	.	.	.	.	.	.
2009	1,322	.	.	.	.	.	.	.	.	.
2010	1,327	.	.	.	.	.	.	.	.	.
2011	1,318	.	.	.	.	.	.	.	.	.
2012	1,009	.	.	.	.	.	.	.	.	.
2013	1,013	.	.	.	.	.	.	.	.	.
2014	961	.	.	.	.	.	.	.	.	.
2015	982	.	.	.	.	.	.	.	.	.
2016	1,001	.	.	.	.	.	.	.	.	.
2017	915	.	.	.	.	.	.	.	.	.
2018	844	.	.	.	.	.	.	.	.	.

(Continued)

First NPR recording for each person - select diagnoses

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12:10 Wednesday, August 5, 2020

nprtyp										
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T1										
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C_ADIAG										
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	24909	DE10	DE100	DE100A	DE100B	DE100C	DE100D	DE100E	DE100F	DE101
	N	N	N	N	N	N	N	N	N	N
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
All	4,382	51	435	9	45	*	6	11	18	2,408
D_I-										
NDD-										
TD										
1941	.	.	.	.	.	.	.	.	.	.
1968	.	.	.	.	.	.	.	.	.	.
1970	.	.	.	.	.	.	.	.	.	.
1971	.	.	.	.	.	.	.	.	.	.
1972	.	.	.	.	.	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.
1976	.	.	.	.	.	.	.	.	.	.
1977	.	.	.	.	.	.	.	.	.	.
1978	.	.	.	.	.	.	.	.	.	.
1979	.	.	.	.	.	.	.	.	.	.
1980	.	.	.	.	.	.	.	.	.	.
1981	.	.	.	.	.	.	.	.	.	.
1982	.	.	.	.	.	.	.	.	.	.
1983	.	.	.	.	.	.	.	.	.	.
1984	.	.	.	.	.	.	.	.	.	.
1985	.	.	.	.	.	.	.	.	.	.
1986	6	.	.	.	.	.	.	.	.	.
1987	402	.	.	.	.	.	.	.	.	*
1988	524	.	.	.	.	.	.	.	.	.
1989	617	.	.	.	.	.	.	.	.	.
1990	643	.	.	.	.	.	.	.	.	.
1991	734	.	*	.	.	.	.	.	.	.
1992	711	.	.	.	.	.	.	.	.	.
1993	745	.	4	.	.	.	.	.	.	5
1994	.	*	28	.	.	.	.	.	.	70
1995	.	4	15	.	.	.	.	.	.	50
1996	.	5	21	.	.	.	.	.	.	72
1997	.	*	22	.	.	.	*	.	.	71
1998	.	*	27	.	.	.	.	.	.	73
1999	.	7	19	*	.	.	.	*	*	63
2000	.	*	28	.	*	.	.	.	*	61
2001	.	5	23	*	*	.	*	.	*	70
2002	.	*	22	*	*	.	.	.	.	86
2003	.	*	24	.	.	.	.	*	*	96
2004	.	4	22	*	*	.	.	.	*	99
2005	.	*	23	.	*	.	.	*	*	69
2006	.	*	17	.	.	.	.	.	*	108
2007	.	*	20	*	4	.	*	*	*	121
2008	.	*	34	.	9	*	*	*	*	119
2009	.	*	8	*	7	.	.	.	.	129
2010	.	*	13	.	13	*	*	*	*	136
2011	.	*	19	*	4	*	.	*	*	103
2012	.	*	5	.	.	.	.	.	.	120
2013	.	.	11	.	.	.	.	.	.	113
2014	.	.	12	.	.	.	.	.	.	113
2015	.	.	10	.	.	.	.	.	.	109
2016	.	.	5	.	.	.	.	.	.	127
2017	.	.	*	.	.	.	.	.	.	114
2018	.	.	*	.	.	.	.	.	.	110
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(Continued)

First NPR recording for each person - select diagnoses

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	nprtyp									
	T1									
	C_ADIAG									
	DE102	DE103	DE104	DE105	DE105A	DE105B	DE105C	DE105D	DE106	DE107
	N	N	N	N	N	N	N	N	N	N
All	470	491	411	904	20	213	71	*	216	611
D_I-										
NDD-										
TO										
1941	.	.	.	*	.	.	.	.	.	.
1968	.	.	.	.	.	.	.	.	.	.
1970	.	*	.	.	.	.	.	.	.	.
1971	.	.	*	.	.	.	.	.	.	.
1972	*	*	.	.	.	.	.	.	.	.
1973	*	.	.	*	.	.	.	.	.	*
1974	.	*	*	.	.	.	.	.	.	*
1975	*	.	*	.	.	.	.	.	.	.
1976	*	*	.	.	.	.	.	.	.	*
1977	.	*	.	.	.	.	.	.	.	.
1978	*	4	.	.	.	.	.	.	.	*
1979	*	*	*	.	.	.	.	.	.	.
1980	.	5	.	.	.	.	.	.	*	*
1981	*	*	.	.	.	.	.	.	.	.
1982	*	.	.	.	.	.	.	.	*	*
1983	*	*	.	.	.	.	.	.	.	*
1984	.	*	*	.	.	.	.	.	.	.
1985	.	.	.	.	.	.	.	.	*	*
1986	.	*	*	*	.	.	.	.	.	*
1987	*	*	.	.	.	.	.	.	.	.
1988	*	7	*	.	.	.	.	.	.	.
1989	*	*	.	*	.	.	.	.	.	*
1990	*	5	.	*	.	.	.	.	.	5
1991	7	10	5	*	.	.	.	.	*	7
1992	*	16	.	4	.	.	.	.	*	17
1993	18	94	32	8	.	.	.	.	*	87
1994	19	56	22	30	.	.	.	.	*	23
1995	27	25	27	31	.	.	.	.	5	12
1996	22	26	19	38	.	.	*	.	4	21
1997	21	16	24	41	.	*	.	.	5	27
1998	22	19	17	41	.	.	*	.	*	19
1999	22	17	22	41	.	.	.	.	6	14
2000	21	17	21	50	.	*	*	.	5	21
2001	26	10	17	47	.	4	*	.	9	40
2002	23	12	14	52	.	*	*	.	11	37
2003	16	12	12	60	*	8	*	.	19	22
2004	19	14	16	65	*	9	*	.	18	26
2005	23	15	19	57	.	6	5	.	14	32
2006	16	14	16	47	*	9	*	.	13	27
2007	23	9	11	43	*	7	*	.	16	20
2008	12	6	12	37	*	13	5	.	11	22
2009	14	6	7	43	.	11	10	.	14	22
2010	16	8	13	39	*	17	4	*	14	19
2011	21	13	10	31	.	26	5	.	11	14
2012	12	5	19	19	*	17	*	.	*	16
2013	13	9	10	21	4	14	7	.	5	8
2014	11	5	15	18	*	21	*	.	*	11
2015	10	4	8	12	*	14	*	.	9	8
2016	7	5	5	12	*	15	5	.	*	4
2017	4	7	4	7	.	10	*	*	5	*
2018	4	*	7	*	.	8	*	*	4	7



(Continued)

First NPR recording for each person - select diagnoses

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	nprtyp									
	T1				T2					
	C_ADIAG				C_ADIAG					
	DE108	DE109	DE109A	All	25000	25001	25002	25003	25004	25005
	N	N	N	N	N	N	N	N	N	N
All	2,130	24,226	1,584	178,172	7,894	624	48	258	26	192
D_I-										
NDD-										
TO										
1941	.	.	.	.	.	.	.	.	.	.
1968	*	.	.	.	.	.	.	.	.	.
1970	*	*	.	.	.	.	.	.	.	.
1971	.	*	.	.	.	.	.	.	.	.
1972	*	4	.	.	.	.	.	.	.	.
1973	5	7	.	*	.	.	.	.	.	.
1974	5	5	.	*	.	.	.	.	.	.
1975	7	6	.	*	.	.	.	.	.	.
1976	7	7	.	45	11	.	.	.	.	.
1977	*	*	.	2,290	721	41	*	8	.	6
1978	*	9	.	2,125	681	46	4	9	*	5
1979	.	9	.	1,944	554	42	*	9	*	*
1980	*	*	.	1,849	543	39	.	6	.	5
1981	*	11	.	1,723	457	57	*	14	.	13
1982	*	7	.	1,883	509	61	.	11	*	10
1983	*	11	.	1,745	472	62	*	14	*	7
1984	.	15	.	1,911	515	52	*	10	4	7
1985	4	12	.	2,010	604	42	*	5	*	6
1986	8	31	.	2,047	512	38	5	13	*	12
1987	*	19	.	1,329	370	24	4	13	.	10
1988	4	37	.	1,309	356	24	*	20	*	5
1989	*	57	.	1,408	374	25	.	18	*	14
1990	9	63	.	1,527	295	14	*	26	5	12
1991	9	92	.	1,732	317	17	7	20	*	23
1992	20	114	.	1,860	318	14	5	33	*	31
1993	57	471	.	2,904	285	26	6	29	*	23
1994	106	1,151	.	3,561	.	.	.	.	.	.
1995	109	1,202	.	3,957	.	.	.	.	.	.
1996	103	1,193	.	4,602	.	.	.	.	.	.
1997	112	1,151	.	4,865	.	.	.	.	.	.
1998	132	1,260	.	5,468	.	.	.	.	.	.
1999	105	1,159	.	5,730	.	.	.	.	.	.
2000	104	1,139	*	5,881	.	.	.	.	.	.
2001	103	1,100	.	5,886	.	.	.	.	.	.
2002	90	1,056	.	6,077	.	.	.	.	.	.
2003	108	1,083	.	6,917	.	.	.	.	.	.
2004	117	1,096	*	6,628	.	.	.	.	.	.
2005	97	1,056	*	6,524	.	.	.	.	.	.
2006	86	1,064	6	6,684	.	.	.	.	.	.
2007	89	995	8	6,739	.	.	.	.	.	.
2008	75	999	13	6,331	.	.	.	.	.	.
2009	61	950	38	6,195	.	.	.	.	.	.
2010	82	873	69	6,320	.	.	.	.	.	.
2011	85	857	108	6,351	.	.	.	.	.	.
2012	51	651	85	6,286	.	.	.	.	.	.
2013	48	629	121	6,201	.	.	.	.	.	.
2014	26	568	156	5,896	.	.	.	.	.	.
2015	25	593	177	6,159	.	.	.	.	.	.
2016	24	556	233	6,318	.	.	.	.	.	.
2017	25	480	254	6,067	.	.	.	.	.	.

2018	15	369	311	4,884	.	.	.	.	.	.
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(Continued)

First NPR recording for each person - select diagnoses

17  
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nprtyp										
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T2										
-----										
C_ADIAG										
-----										
	25006	25007	25008	25009	DE11	DE110	DE110A	DE110B	DE110C	DE110D
	N	N	N	N	N	N	N	N	N	N
-----										
All	62	527	981	19,312	238	1,078	8	49	25	11
D_I-										
NDD-										
TO										
1941	.	.	.	.	.	.	.	.	.	.
1968	.	.	.	.	.	.	.	.	.	.
1970	.	.	.	.	.	.	.	.	.	.
1971	.	.	.	.	.	.	.	.	.	.
1972	.	.	.	.	.	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.
1976	.	4	.	29	.	.	.	.	.	.
1977	*	74	20	1,417	.	.	.	.	.	.
1978	*	62	113	1,200	.	.	.	.	.	.
1979	4	47	69	1,213	.	.	.	.	.	.
1980	*	51	66	1,136	.	.	.	.	.	.
1981	*	36	79	1,060	.	.	.	.	.	.
1982	4	42	59	1,183	.	.	.	.	.	.
1983	*	45	75	1,062	.	.	.	.	.	.
1984	*	32	103	1,184	.	.	.	.	.	.
1985	4	31	135	1,176	.	.	.	.	.	.
1986	*	33	78	1,347	.	.	.	.	.	.
1987	.	8	31	861	.	.	.	.	.	.
1988	6	10	40	832	.	.	.	.	.	.
1989	4	9	27	902	.	.	.	.	.	.
1990	7	10	20	1,065	.	*	.	.	.	.
1991	8	9	15	1,215	.	*	.	.	.	.
1992	5	11	18	1,158	.	*	.	.	.	.
1993	4	13	33	1,272	.	11	.	.	.	.
1994	.	.	.	.	6	57	.	.	.	.
1995	.	.	.	.	18	71	.	.	.	.
1996	.	.	.	.	19	92	.	.	.	.
1997	.	.	.	.	31	58	.	*	.	.
1998	.	.	.	.	27	51	.	.	.	*
1999	.	.	.	.	23	52	.	*	*	.
2000	.	.	.	.	18	49	*	*	.	.
2001	.	.	.	.	18	50	.	*	*	.
2002	.	.	.	.	14	62	*	*	.	.
2003	.	.	.	.	20	71	.	*	*	.
2004	.	.	.	.	6	45	.	*	*	.
2005	.	.	.	.	11	53	.	4	*	.
2006	.	.	.	.	4	56	.	*	*	.
2007	.	.	.	.	6	32	.	.	*	.
2008	.	.	.	.	4	49	*	8	*	*
2009	.	.	.	.	5	40	.	8	*	*
2010	.	.	.	.	.	40	*	7	5	*
2011	.	.	.	.	5	19	*	4	9	*
2012	.	.	.	.	*	13	.	.	.	.
2013	.	.	.	.	*	18	.	.	.	.
2014	.	.	.	.	.	20	.	.	.	.

2015	.	.	.	.	.	27	.	.	.	.
2016	.	.	.	.	.	13	.	.	.	.
2017	.	.	.	.	.	11	.	.	.	.
2018	.	.	.	.	.	11	.	.	.	.

(Continued)

First NPR recording for each person - select diagnoses

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nprtyp										
-----										
T2										
-----										
C_ADIAG										
-----										
DE110E	DE111	DE112	DE113	DE114	DE115	DE115A	DE115B	DE115C	DE115D	
N	N	N	N	N	N	N	N	N	N	
-----										
All	8	451	5,512	1,677	4,385	4,107	102	1,880	254	18
D_I-										
NDD-										
TO										
1941	.	.	.	.	.	.	.	.	.	.
1968	.	.	.	.	.	.	.	.	.	.
1970	.	.	.	.	.	.	.	.	.	.
1971	.	.	.	.	.	.	.	.	.	.
1972	.	.	.	.	.	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.
1975	.	.	*	.	.	.	.	.	.	.
1976	.	.	.	.	.	.	.	.	.	.
1977	.	.	.	.	.	.	.	.	.	.
1978	.	.	.	.	.	.	.	.	.	.
1979	.	.	.	.	.	.	.	.	.	.
1980	.	.	.	.	.	.	.	.	.	.
1981	.	.	.	.	.	.	.	.	.	.
1982	.	.	.	.	.	*	.	.	.	.
1983	.	.	.	.	.	.	.	.	.	.
1984	.	.	.	.	.	.	.	.	.	.
1985	.	.	.	*	.	.	.	.	.	.
1986	.	.	.	*	.	*	.	.	.	.
1987	.	.	*	.	.	*	.	.	.	.
1988	.	.	.	*	.	.	.	.	.	.
1989	.	.	*	.	*	.	.	.	.	.
1990	.	.	*	4	*	*	.	.	.	.
1991	.	.	6	5	.	*	.	.	.	.
1992	.	.	11	17	11	*	.	.	.	.
1993	.	*	48	66	65	23	.	*	.	.
1994	.	15	78	94	161	97	.	.	.	.
1995	.	13	77	80	182	108	.	*	.	.
1996	.	17	93	88	175	164	.	*	*	.
1997	.	18	126	70	189	128	*	4	*	.
1998	*	13	138	64	235	173	.	4	*	.
1999	.	9	162	99	277	224	*	*	*	.
2000	.	19	142	86	251	226	5	6	6	.
2001	*	10	161	67	233	217	*	7	13	.
2002	.	17	145	77	229	231	*	8	8	.
2003	*	16	161	149	229	241	6	13	6	.
2004	.	19	192	121	205	259	8	29	*	.
2005	.	13	200	86	190	252	7	23	4	.
2006	.	19	241	62	166	259	*	30	*	.
2007	.	17	226	38	129	200	15	34	9	*
2008	*	25	179	57	133	155	*	42	9	.
2009	*	23	232	41	143	156	*	73	11	*
2010	*	13	270	46	119	141	6	73	16	*
2011	*	11	303	34	109	178	*	100	12	*

2012	.	17	283	33	115	148	*	112	19	.
2013	.	28	343	30	144	110	4	168	14	*
2014	.	18	325	29	140	100	*	181	20	.
2015	.	18	399	39	133	76	4	197	20	*
2016	.	30	360	29	114	83	9	230	28	*
2017	.	23	343	36	147	87	9	250	19	4
2018	.	28	262	27	159	64	14	290	26	5

(Continued)

First NPR recording for each person - select diagnoses

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nprtyp					
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T2					
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C_ADIAG					
-----					
	DE116	DE117	DE118	DE119	DE119A
-----					
	N	N	N	N	N
-----					
All	1,528	4,231	14,178	99,092	9,416
D_I-					
NDD-					
TO					
1941	.	.	.	.	.
1968	.	.	.	.	.
1970	.	.	.	.	.
1971	.	.	.	.	.
1972	.	.	.	.	.
1973	.	.	.	*	.
1974	.	.	*	.	.
1975	.	.	.	.	.
1976	.	.	.	*	.
1977	.	.	.	.	.
1978	.	.	*	.	.
1979	.	.	.	*	.
1980	.	.	.	.	.
1981	.	.	.	*	.
1982	.	.	.	*	.
1983	.	.	.	.	.
1984	.	.	.	.	.
1985	.	.	.	*	.
1986	.	*	*	.	.
1987	.	.	.	5	.
1988	.	*	.	10	.
1989	.	*	*	26	.
1990	.	*	20	42	.
1991	.	6	13	65	.
1992	*	9	35	175	.
1993	*	133	117	743	.
1994	15	83	348	2,607	.
1995	18	59	466	2,864	.
1996	26	81	429	3,415	.
1997	47	96	504	3,587	.
1998	31	124	575	4,029	.
1999	54	120	601	4,099	.
2000	50	127	621	4,272	.
2001	58	168	580	4,299	.
2002	51	188	607	4,435	.
2003	73	207	680	5,040	.
2004	83	211	648	4,793	4
2005	78	193	650	4,755	4
2006	70	221	580	4,962	5
2007	63	201	601	5,161	5
2008	61	184	481	4,907	27



0	0	*	*	*	*	25	13,537	13,537	.	.
	*	*	*	*	*	16	63,760	7,999	.	55,761
	*	*	*	*	*	30	34,087	2,556	.	31,531
	*	*	*	*	*	27	19,801	986	.	18,815
	4	4	4	4	5	22	12,046	441	.	11,605
	5	5	5	5	6	24	7,816	221	.	7,595
	6	6	6	6	7	30	4,836	111	.	4,725
	7	7	7	7	8	21	2,987	50	.	2,937
	8	8	8	8	10	24	1,948	40	.	1,908
	9	9	9	9	11	26	1,255	15	.	1,240
	10	10	10	11	12	22	775	7	.	768
	11	11	11	12	13	22	501	*	.	500
	12	12	13	15	17	60	1,033	7	.	1,026
*	0	*	*	*	*	18	7,269	1,256	6,013	.
	*	*	*	*	*	18	3,792	3,792	.	.
	*	*	*	*	4	23	2,973	934	.	2,039
	*	4	4	4	5	19	2,312	426	.	1,886
	4	5	5	5	6	20	1,695	223	.	1,472
	5	6	6	6	7	28	1,297	105	.	1,192
	6	7	7	7	9	20	962	65	.	897
	7	8	8	8	10	20	711	37	.	674
	8	9	9	10	11	24	496	23	.	473
	9	10	10	11	12	25	351	9	.	342
	10	11	11	12	14	25	260	6	.	254
	11	12	12	13	14	31	178	*	.	175
	12	13	15	17	20	41	496	6	.	490
*	0	*	*	*	*	19	3,895	469	3,426	.
	*	*	*	*	4	16	1,864	600	1,264	.
	*	4	4	4	5	22	1,522	1,522	.	.
	*	5	5	5	6	22	1,099	455	.	644
	4	6	6	6	8	22	878	241	.	637
	5	7	7	7	9	18	650	118	.	532
	6	8	8	9	10	18	471	56	.	415
	7	9	9	10	11	22	351	33	.	318
	8	10	10	11	12	24	294	24	.	270
	9	11	11	12	14	22	202	10	.	192
	10	12	12	13	16	23	133	4	.	129
	11	13	13	14	17	32	95	4	.	91
	12	14	17	19	23	46	309	4	.	305
*	0	*	*	*	4	20	3,089	250	2,839	.
	*	4	4	4	5	26	1,241	295	946	.
	*	5	5	5	7	27	952	439	513	.
	*	6	6	6	8	19	703	703	.	.
	4	7	7	7	9	22	527	258	.	269
	5	8	8	9	10	31	399	120	.	279
	6	9	9	9	11	23	267	50	.	217
	7	10	10	11	12	23	203	26	.	177
	8	11	11	12	14	23	169	17	.	152
	9	12	12	13	15	24	126	13	.	113
	10	13	13	14	15	27	93	6	.	87
	11	14	15	16	18	30	62	*	.	59
	12	15	17	20	23	42	209	6	.	203
4	0	4	4	4	5	32	2,728	196	2,532	.
	*	5	5	5	7	35	999	174	825	.
	*	6	6	6	8	37	736	204	532	.
	*	7	7	8	9	24	476	243	233	.
	4	8	8	9	10	24	392	392	.	.
	5	9	9	10	11	31	286	154	.	132
	6	10	10	11	12	24	180	68	.	112
	7	11	11	12	14	41	158	45	.	113
	8	12	12	13	15	30	121	22	.	99
	9	13	13	15	16	21	83	9	.	74
	10	14	14	16	18	25	58	10	.	48
	11	15	15	16	18	23	56	*	.	55
	12	16	18	21	25	55	170	6	.	164
5	0	5	5	5	7	30	2,391	126	2,265	.
	*	6	6	6	8	23	826	111	715	.
	*	7	7	8	10	21	592	155	437	.
	*	8	8	9	10	26	393	136	257	.
	4	9	9	10	12	23	294	173	121	.

	5	10	10	11	13	25	225	225	.	.
	6	11	11	12	14	25	164	105	.	59
	7	12	12	13	15	32	129	58	.	71
	8	13	13	14	16	27	82	28	.	54
	9	14	14	15	17	28	61	14	.	47
	10	15	15	17	19	42	65	9	.	56
	11	16	16	18	19	35	46	6	.	40
	12	17	19	22	25	45	124	4	.	120
6	0	6	6	6	8	34	2,092	103	1,989	.
	*	7	7	8	9	22	643	71	572	.
	*	8	8	9	11	23	482	97	385	.
	*	9	9	10	12	27	350	96	254	.
	4	10	10	11	12	28	252	94	158	.
	5	11	11	12	14	25	160	99	61	.
	6	12	12	13	15	21	126	126	.	.
	7	13	13	14	16	25	84	51	.	33
	8	14	14	15	18	29	70	34	.	36
	9	15	15	17	18	22	32	11	.	21
	10	16	17	18	20	26	37	10	.	27
	11	17	17	18	20	31	32	*	.	29
	12	18	21	24	27	42	100	13	.	87
7	0	7	7	7	9	38	1,814	63	1,751	.
	*	8	8	9	11	19	548	43	505	.
	*	9	9	10	12	24	388	49	339	.
	*	10	10	11	13	24	296	61	235	.
	4	11	11	12	14	26	189	54	135	.
	5	12	12	13	15	31	144	69	75	.
	6	13	13	15	16	26	97	70	27	.
	7	14	14	16	17	24	78	78	.	.
	8	15	15	17	19	35	67	47	.	20
	9	16	16	17	19	43	33	13	.	20
	10	17	18	20	22	26	36	20	.	16
	11	18	18	19	20	27	24	*	.	21
	12	19	22	25	29	46	100	12	.	88
8	0	8	8	9	10	36	1,468	45	1,423	.
	*	9	9	10	12	37	436	23	413	.
	*	10	10	11	13	26	316	25	291	.
	*	11	11	12	14	24	227	27	200	.
	4	12	12	14	16	30	150	40	110	.
	5	13	13	15	17	37	98	30	68	.
	6	14	14	16	17	31	72	37	35	.
	7	15	16	17	19	27	54	43	11	.
	8	16	17	18	22	27	38	38	.	.
	9	17	18	19	20	29	37	28	.	9
	10	18	19	21	23	30	16	10	.	6
	11	19	20	22	23	28	17	10	.	7
	12	20	24	27	31	40	59	6	.	53
9	0	9	9	10	11	33	1,146	40	1,106	.
	*	10	10	11	13	26	409	11	398	.
	*	11	11	12	14	26	271	24	247	.
	*	12	12	13	15	28	199	23	176	.
	4	13	13	15	16	26	141	23	118	.
	5	14	14	15	17	22	87	19	68	.
	6	15	16	17	19	35	59	27	32	.
	7	16	16	17	19	28	38	16	22	.
	8	17	18	19	22	26	34	26	8	.
	9	18	18	19	21	26	17	17	.	.
	10	19	19	20	22	26	20	14	.	6
	11	20	21	21	24	35	14	5	.	9
	12	21	24	27	33	55	64	19	.	45
10	0	10	10	11	12	36	883	22	861	.
	*	11	11	13	14	30	266	10	256	.
	*	12	12	13	15	29	253	16	237	.
	*	13	13	15	17	26	150	17	133	.
	4	14	14	15	17	29	116	11	105	.
	5	15	15	17	19	29	82	15	67	.
	6	16	16	18	20	28	65	19	46	.
	7	17	18	19	21	28	50	21	29	.
	8	18	19	20	21	31	37	24	13	.
	9	19	20	21	22	26	21	17	4	.

10	20	20	22	23	39	18	18	.	.
11	21	22	23	26	30	8	6	.	*
12	23	25	29	33	49	48	14	.	34
11 0	11	11	12	14	43	765	23	742	.
*	12	12	13	15	25	235	4	231	.
*	13	13	14	17	27	176	9	167	.
*	14	14	16	18	29	128	12	116	.
4	15	15	16	18	33	97	10	87	.
5	16	16	17	19	31	56	6	50	.
6	17	18	19	21	34	52	12	40	.
7	18	18	19	21	32	34	8	26	.
8	19	19	20	23	44	38	12	26	.
9	20	20	23	25	38	22	14	8	.
10	21	22	24	25	37	18	16	*	.
11	22	22	22	27	29	9	9	.	.
12	23	26	29	33	108	38	8	.	30
12 0	12	15	17	22	158	2,738	32	2,706	.
*	13	16	19	25	149	1,060	9	1,051	.
*	14	17	21	26	190	850	26	824	.
*	15	18	22	28	103	606	18	588	.
4	16	19	23	29	334	505	16	489	.
5	17	21	25	32	81	401	26	375	.
6	18	22	26	32	172	330	25	305	.
7	19	24	29	35	106	251	33	218	.
8	20	24	28	36	131	193	23	170	.
9	21	25	29	37	85	142	26	116	.
10	22	27	32	40	81	119	18	101	.
11	23	28	32	41	208	90	31	59	.
12	24	34	42	56	277	416	140	198	78

Diagnoses of DM accepted from NPR - persons

12:10 Wednesday, August 5, 2020 22

	sex			nprtyp		
	All	M	W	NA	T1	T2
	N	N	N	N	N	N
All	243,939	139,580	104,359	44,048	44,576	155,315
1st						
NPR						
date						
1941	*	.	*	.	*	.
1968	*	*	.	.	*	.
1970	*	*	*	*	*	.
1971	*	.	*	*	*	.
1972	8	*	6	5	*	.
1973	19	12	7	6	10	*
1974	18	9	9	6	10	*
1975	16	10	6	10	5	*
1976	64	31	33	17	36	11
1977	2,296	1,115	1,181	574	1,042	680
1978	2,142	1,077	1,065	548	964	630
1979	1,956	995	961	446	887	623
1980	1,862	982	880	436	793	633
1981	1,737	934	803	386	709	642
1982	1,896	1,018	878	376	751	769
1983	1,761	901	860	360	672	729
1984	1,929	924	1,005	365	760	804
1985	2,029	1,066	963	389	753	887
1986	2,104	1,143	961	381	857	866
1987	2,139	1,128	1,011	300	907	932
1988	2,239	1,238	1,001	328	957	954
1989	2,414	1,275	1,139	330	1,009	1,075
1990	2,526	1,390	1,136	358	970	1,198
1991	2,836	1,530	1,306	386	1,074	1,376
1992	3,003	1,604	1,399	434	1,038	1,531
1993	4,826	2,772	2,054	792	1,620	2,414



1994	5,526	3,035	2,491	943	1,401	3,182
1995	6,072	3,400	2,672	1,072	1,373	3,627
1996	6,758	3,816	2,942	1,117	1,376	4,265
1997	7,035	3,912	3,123	1,172	1,355	4,508
1998	7,919	4,401	3,518	1,345	1,418	5,156
1999	8,030	4,443	3,587	1,396	1,302	5,332
2000	8,097	4,511	3,586	1,293	1,288	5,516
2001	8,203	4,646	3,557	1,418	1,262	5,523
2002	8,463	4,811	3,652	1,592	1,213	5,658
2003	9,414	5,385	4,029	1,750	1,194	6,470
2004	9,182	5,277	3,905	1,777	1,237	6,168
2005	8,953	5,045	3,908	1,654	1,176	6,123
2006	9,294	5,369	3,925	1,848	1,200	6,246
2007	9,158	5,281	3,877	1,729	1,168	6,261
2008	8,725	5,134	3,591	1,595	1,139	5,991
2009	8,553	5,113	3,440	1,591	1,111	5,851
2010	8,599	5,166	3,433	1,468	1,112	6,019
2011	8,744	5,209	3,535	1,497	1,091	6,156
2012	8,406	4,904	3,502	1,488	909	6,009
2013	8,413	5,006	3,407	1,542	922	5,949
2014	8,149	4,849	3,300	1,575	904	5,670
2015	8,369	5,001	3,368	1,505	906	5,958
2016	8,763	5,237	3,526	1,664	956	6,143
2017	8,337	5,079	3,258	1,490	892	5,955
2018	6,949	4,391	2,558	1,292	838	4,819
2nd NPR date						
.	70,812	38,641	32,171	9,038	6,013	55,761
1977	556	263	293	153	207	196
1978	885	413	472	259	382	244
1979	928	423	505	268	418	242
1980	1,024	493	531	286	497	241
1981	1,070	520	550	274	500	296
1982	1,033	556	477	257	491	285
1983	996	543	453	241	482	273
1984	1,159	582	577	262	589	308
1985	1,342	692	650	327	673	342
1986	1,381	745	636	350	672	359
1987	1,261	689	572	193	718	350
1988	1,433	811	622	203	834	396
1989	1,527	836	691	225	876	426
1990	1,608	872	736	243	864	501
1991	1,806	1,014	792	271	981	554
1992	1,917	1,009	908	295	957	665
1993	4,542	2,678	1,864	775	2,284	1,483
1994	4,644	2,559	2,085	838	1,656	2,150
1995	4,885	2,778	2,107	861	1,462	2,562
1996	5,327	3,062	2,265	946	1,370	3,011
1997	5,472	3,108	2,364	936	1,405	3,131
1998	6,032	3,404	2,628	1,124	1,348	3,560
1999	6,307	3,568	2,739	1,157	1,343	3,807
2000	5,734	3,265	2,469	954	1,152	3,628
2001	5,930	3,448	2,482	1,058	1,156	3,716
2002	5,785	3,347	2,438	1,133	1,036	3,616
2003	6,635	3,839	2,796	1,460	1,039	4,136
2004	6,119	3,549	2,570	1,430	1,020	3,669
2005	6,311	3,642	2,669	1,375	1,120	3,816
2006	6,608	3,910	2,698	1,404	986	4,218
2007	5,644	3,350	2,294	1,356	916	3,372
2008	7,056	4,230	2,826	1,462	969	4,625
2009	6,801	4,151	2,650	1,449	971	4,381
2010	5,275	3,224	2,051	1,182	891	3,202
2011	5,873	3,493	2,380	1,238	886	3,749
2012	5,449	3,271	2,178	1,132	735	3,582
2013	7,355	4,500	2,855	1,324	904	5,127
2014	4,880	2,978	1,902	1,162	698	3,020
2015	6,645	4,039	2,606	1,299	812	4,534
2016	6,183	3,795	2,388	1,477	782	3,924
2017	6,759	4,168	2,591	1,255	807	4,697

2018 4,950 3,122 1,828 1,116 674 3,160

Diagnoses of DM accepted from NPR - persons 12:10 Wednesday, August 5, 2020 23  
 - only from \* January 2015 - checking seasonality

	sex			nprtyp		
	All	M	W	NA	T1	T2
	N	N	N	N	N	N
All	32,418	19,708	12,710	5,951	3,592	22,875
1st NPR						
date						
2015/01	745	479	266	97	81	567
2015/02	697	431	266	128	84	485
2015/03	785	468	317	146	78	561
2015/04	630	390	240	110	69	451
2015/05	705	411	294	116	85	504
2015/06	733	424	309	130	70	533
2015/07	531	304	227	97	61	373
2015/08	624	344	280	129	59	436
2015/09	811	493	318	138	79	594
2015/10	740	444	296	161	87	492
2015/11	770	453	317	155	76	539
2015/12	598	360	238	98	77	423
2016/01	780	486	294	148	96	536
2016/02	708	425	283	122	75	511
2016/03	708	428	280	127	103	478
2016/04	715	434	281	137	77	501
2016/05	780	460	320	136	68	576
2016/06	798	457	341	149	83	566
2016/07	509	292	217	105	67	337
2016/08	689	405	284	136	97	456
2016/09	791	470	321	168	72	551
2016/10	746	429	317	142	69	535
2016/11	864	522	342	172	76	616
2016/12	675	429	246	122	73	480
2017/01	814	482	332	160	82	572
2017/02	643	381	262	117	70	456
2017/03	920	600	320	163	88	669
2017/04	544	337	207	82	61	401
2017/05	842	504	338	155	91	596
2017/06	724	449	275	130	65	529
2017/07	504	299	205	97	66	341
2017/08	664	390	274	112	81	471
2017/09	673	412	261	109	72	492
2017/10	693	403	290	112	67	514
2017/11	790	489	301	165	91	534
2017/12	526	333	193	88	58	380
2018/01	682	419	263	122	61	499
2018/02	621	394	227	96	69	456
2018/03	647	394	253	115	77	455
2018/04	594	378	216	109	69	416
2018/05	611	400	211	102	63	446
2018/06	606	410	196	111	68	427
2018/07	465	280	185	91	53	321
2018/08	549	357	192	100	76	373
2018/09	568	356	212	105	66	397
2018/10	554	341	213	110	71	373
2018/11	574	356	218	122	87	365
2018/12	478	306	172	109	78	291

### 3.8 02-dvdd

The DVDD contains annual records for diabetes patients, mostly from out-patient clinics, but (eventually, but not yet) also from GPs. There records contain type and date of diagnosis. The program chooses the earliest reported date of diagnosis and the classification as T1 or T2 if reported more than half of the times (`dvdtyp`). This may be missing if neither occur in more than half of the records for a given person.

Uses the GDM dates to exclude possible inclusion dates in GDM grace periods.

```
1                                "Program: 02-dvdd.sas"  12:22 Wednesday, August 12, 2020
```

```
NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
```

```
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
```

```
      Licensed to FORSKNING 1, Site 50800722.
```

```
NOTE: This session is executing on the X64_SR12R2  platform.
```

```
NOTE: Updated analytical products:
```

```
      SAS/STAT 14.3
```

```
NOTE: Additional host information:
```

```
      X64_SR12R2 WIN 6.3.9600  Server
```

```
NOTE: SAS initialization used:
```

```
      real time          0.09 seconds
```

```
      cpu time           0.10 seconds
```

```
NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.
```

```
NOTE: AUTOEXEC processing completed.
```

```
1      proc sort  data = ekstn.ny_dvdd_7_feb20
2              out = dvdd  ( keep = pnr status_dato diag_dato diag_type ) ;
3          by pnr status_dato diag_dato diag_type ;
4      run ;
```

```
NOTE: There were 868972 observations read from the data set EKSTN.NY_DVDD_7_FEB20.
```

```
NOTE: The data set WORK.DVDD has 868972 observations and 4 variables.
```

```
NOTE: PROCEDURE SORT used (Total process time):
```

```
      real time          8.65 seconds
```

```
      cpu time           3.18 seconds
```

```
5
6      * check number of *persons* in the data set ;
7      proc sort data = dvdd  out = pers  nodupkey ;
8          by pnr ;
9      run ;
```

```
NOTE: There were 868972 observations read from the data set WORK.DVDD.
```

```
NOTE: 620174 observations with duplicate key values were deleted.
```

```
NOTE: The data set WORK.PERS has 248798 observations and 4 variables.
```

```
NOTE: PROCEDURE SORT used (Total process time):
```

```
      real time          0.12 seconds
```

```
      cpu time           0.31 seconds
```

```
10
11      * only persons in base and included before 1.1.2016 ;
12      data dvdd      ;
13      merge dvdd      ( in = dvdd )
```

```

14          DMdat.pop ( in = pop )
15          DMdat.GDM ;
16      by pnr ;
17      if pop and dvdd ;
18          * remove status records after the cut date ;
19          if status_dato > &end. then delete ;
20          * do not count diagnosis in the GDM grace period ;
21          %xgdm( diag_dato ) ;
22      run ;

```

NOTE: Variable doGDM12 is uninitialized.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

```

793128 at 21:18  793128 at 21:54  804446 at 21:20  804446 at 21:56
806742 at 21:20  806742 at 21:56  807180 at 21:20  807180 at 21:56
807252 at 21:20  807252 at 21:56  807285 at 21:20  807285 at 21:56
807289 at 21:20  807289 at 21:56  807289 at 21:20  807289 at 21:56
807295 at 21:20  807295 at 21:56  807295 at 21:20  807295 at 21:56
807295 at 21:20  807295 at 21:56  807295 at 21:20  807295 at 21:56

```

NOTE: There were 868972 observations read from the data set WORK.DVDD.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: There were 22391 observations read from the data set DMDAT.GDM.

NOTE: The data set WORK.DVDD has 807295 observations and 21 variables.

NOTE: DATA statement used (Total process time):

```

real time      4.75 seconds
cpu time       3.09 seconds

```

```

23
24      * clean out multiple status dates and return a date of diagnosis ;
25      data dvdd /* All records */
26          dvdd_fix ( keep = pnr doDVDD ) ; /* one per pnr with revised date of DM
27      ! diagnosis */
28      set dvdd ( keep = pnr status_dato diag_dato diag_type doBth doDth ) ;
29      by pnr status_dato diag_dato diag_type ;
30      retain doDVDD ;
31      * use only the first among identical status dates within each person ;
32      if first.status_dato ;
33      * set the revised DM date to the earlier of diag_dato and status dates ;
34      if first.pnr then doDVDD = min( diag_dato, status_dato ) ;
35      else doDVDD = min( doDVDD, diag_dato, status_dato ) ;
36      output dvdd ;
37      if last.pnr then output dvdd_fix ;
38      run ;

```

NOTE: There were 807295 observations read from the data set WORK.DVDD.

NOTE: The data set WORK.DVDD has 801372 observations and 7 variables.

NOTE: The data set WORK.DVDD\_FIX has 231508 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.28 seconds
cpu time       0.29 seconds

```

```

38
39      * add the computed earliest doDVDD to the status records ;
40      data dvdd ;
41      merge dvdd
42          dvdd_fix ;
43      by pnr ;
44      run ;

```

NOTE: There were 801372 observations read from the data set WORK.DVDD.

NOTE: There were 231508 observations read from the data set WORK.DVDD\_FIX.

NOTE: The data set WORK.DVDD has 801372 observations and 7 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.20 seconds
cpu time       0.20 seconds

```

```

45
46      * DVDD will provide classification of follow-up as T1 / *not* T1 (=T2) ;
47      * tabulation of the sequences of type classifications occurring ;
48      proc sort  data = dvdd  out = dvdd_type ;
49          by pnr status_dato ;
50      run ;

```

NOTE: There were 801372 observations read from the data set WORK.DVDD.  
 NOTE: The data set WORK.DVDD\_TYPE has 801372 observations and 7 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time            0.14 seconds  
     cpu time             0.31 seconds

```

51
52      data dvdd_type ( keep = pnr doDVDD status_dato typ )
53          dvdd_hist ( keep = pnr hist ) ;
54      set dvdd_type ;
55      by pnr ;
56      length typ $ 4  hist $ 80 ;
57      retain hist ;
58      typ = substr( diag_type, 1, 2 ) ;
59      if typ eq "Ty" then typ = "T" || substr( diag_type, 6, 1 ) ;
60      if first.pnr then hist = typ ;
61      if ^first.pnr and ( diag_type ne lag(diag_type) )
62          then hist = trim(hist) || " " || typ ;
63      output dvdd_type ;
64      if last.pnr then output dvdd_hist ;
65      run ;

```

NOTE: There were 801372 observations read from the data set WORK.DVDD\_TYPE.  
 NOTE: The data set WORK.DVDD\_TYPE has 801372 observations and 4 variables.  
 NOTE: The data set WORK.DVDD\_HIST has 233082 observations and 2 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            0.24 seconds  
     cpu time             0.25 seconds

```

66
67      * classification rule: if more than half of registrations T1 then T1 ;
68      *                          if more than half of registrations T2 then T2 ;
69      data dvdd ( keep = pnr doDVDD lastDVDD dvdtyp nT1 nT2 nRc ) ;
70      set dvdd_type ;
71      by pnr status_dato ;
72      retain nT1 nT2 ;
73      if first.pnr then do ;
74          nT1 = 0 ;
75          nT2 = 0 ;
76          nRc = 0 ;
77      end ;
78      nT1 + ( typ eq "T1" ) ;
79      nT2 + ( typ eq "T2" ) ;
80      nRc + 1 ;
81      * If more than half of records agree on one type ;
82      if last.pnr then do ;
83          if nRc < (nT1+nT2) then put "This should never print" ;
84          dvdtyp = 'NA' ;
85          if nT1 > nRc/2 then dvdtyp = 'T1' ;
86          if nT2 > nRc/2 then dvdtyp = 'T2' ;
87          lastDVDD = status_dato ;
88          output ;
89      end ;
90      run ;

```

NOTE: There were 801372 observations read from the data set WORK.DVDD\_TYPE.  
 NOTE: The data set WORK.DVDD has 233082 observations and 7 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            0.16 seconds  
     cpu time             0.17 seconds

```

91
92     data DMdat.dvdd ( label = 'Persons from the DVDD, first recorded date' );
93     merge dvdd
94         dvdd_hist ( keep = pnr hist ) ;
95     by pnr ;
96     run ;

```

NOTE: There were 233082 observations read from the data set WORK.DVDD.

NOTE: There were 233082 observations read from the data set WORK.DVDD\_HIST.

NOTE: The data set DMDAT.DVDD has 233082 observations and 8 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.17 seconds
cpu time       0.07 seconds

```

```

97
98     title1 'Dates and types from DVDD' ;
99     proc contents data = DMdat.dvdd varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.03 seconds
cpu time       0.03 seconds

```

NOTE: The PROCEDURE CONTENTS printed page 1.

```

100
101     title2 'Classification based on most frequent type recorded in DVDD - persons'
102     ! ;
103     proc tabulate data = DMdat.dvdd missing noseps ;
104         class dvdtyp doDVDD nT1 nT2 NRc ;
105         table all doDVDD,
106             ( all dvdtyp ) * f=comma9.
107             / rts = 8 ;
108         table nRc * nT1,
109             nT2 * f=5.
110             / rts = 5 indent = 1 ;
111         format doDVDD year4. ;
112     run ;

```

NOTE: There were 233082 observations read from the data set DMDAT.DVDD.

NOTE: The PROCEDURE TABULATE printed pages 2-4.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      0.16 seconds
cpu time       0.12 seconds

```

```

112
113     proc tabulate data = DMdat.dvdd missing noseps order = freq ;
114         class dvdtyp hist ;
115         table all hist="sequence of different types",
116             ( all dvdtyp ) * f=comma7.
117             / rts = 30 ;
118     run ;

```

NOTE: There were 233082 observations read from the data set DMDAT.DVDD.

NOTE: The PROCEDURE TABULATE printed page 5.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      0.04 seconds
cpu time       0.11 seconds

```

```

119     title1 ;
120
121     title1 'Seasonality of DVDD dates' ;
122     data dvdd ;
123     set DMdat.dvdd ;
124     moDVDD = put( doDVDD, month. ) ;
125     yo = max( 1991, input( put( doDVDD, year4. ), 4. ) ) ;
126     run ;

```

NOTE: There were 233082 observations read from the data set DMDAT.DVDD.

NOTE: The data set WORK.DVDD has 233082 observations and 10 variables.

NOTE: DATA statement used (Total process time):

real time	0.10 seconds
cpu time	0.10 seconds

```

127
128      proc tabulate data = dvdd missing noseps order=fmt ;
129          class moDVDD doDVDD ;
130          table all doDVDD="Date",
131              all * f=comma7.
132              moDVDD * f=5.
133              / rts=6 ;
134          table all doDVDD="Date",
135              all * pctn<all doDVDD>* f=5.1
136              moDVDD * pctn<all doDVDD*moDVDD>* f=5.2
137              / rts=6 ;
138          format doDVDD day. ;
139      run ;

```

NOTE: There were 233082 observations read from the data set WORK.DVDD.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: The PROCEDURE TABULATE printed pages 6-7.

NOTE: PROCEDURE TABULATE used (Total process time):

real time	0.03 seconds
cpu time	0.09 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time	15.36 seconds
cpu time	8.51 seconds

### 3.8.1 02-dvdd.lst

Dates and types from DVDD

12:22 Wednesday, August 12, 2020 1

The CONTENTS Procedure

Data Set Name	DMDAT.DVDD	Observations	233082
Member Type	DATA	Variables	8
Engine	V9	Indexes	0
Created	12/08/2020 12:22:53	Observation Length	136
Last Modified	12/08/2020 12:22:53	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Persons from the DVDD, first recorded date		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

#### Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	485
First Data Page	*
Max Obs per Page	481
Obs in First Data Page	467
Number of Data Set Repairs	0
ExtendObsCounter	YES

```

Filename          E:\workdata\707655\DMreg\data\dvdd.sas7bdat
Release Created   9.0401M5
Host Created      X64_SR12R2
Owner Name        DSTFSE\FDIY7655
File Size         30MB
File Size (bytes) 31850496

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	Personnummer
2	doDVDD	Num	8			
3	nT1	Num	8			
4	nT2	Num	8			
5	nRc	Num	8			
6	dvdtyp	Char	*			
7	lastDVDD	Num	8			
8	hist	Char	80			

Dates and types from DVDD 12:22 Wednesday, August 12, 2020 2  
 Classification based on most frequent type recorded in DVDD - persons

	dvdtyp			
	All	NA	T1	T2
	N	N	N	N
All	233,082	5,012	26,487	201,583
doDVDD				
1890	*	.	.	*
1899	*	.	.	*
1900	62	.	11	51
1901	*	*	.	*
1903	*	.	.	*
1905	*	.	.	*
1907	*	.	.	*
1909	*	*	.	.
1910	*	.	.	*
1920	10	.	4	6
1922	*	.	.	*
1923	*	.	.	*
1927	*	.	*	*
1931	*	.	.	*
1933	*	.	*	.
1934	*	.	*	*
1936	*	*	*	.
1937	*	.	*	*
1938	*	.	*	.
1939	6	.	5	*
1940	9	.	6	*
1941	6	.	4	*
1942	8	.	7	*
1943	4	.	*	*
1944	11	.	10	*
1945	20	.	16	4
1946	15	.	13	*
1947	25	*	22	*
1948	30	*	27	*
1949	28	.	26	*
1950	46	.	35	11
1951	39	.	36	*
1952	42	.	33	9
1953	45	*	40	4
1954	58	*	49	6
1955	89	*	72	15
1956	129	*	123	5



1957	95	*	87	6
1958	124	4	106	14
1959	110	*	99	8
1960	207	*	171	33
1961	175	6	163	6
1962	201	6	174	21
1963	201	*	184	16
1964	202	4	169	29
1965	226	4	179	43
1966	226	4	183	39
1967	236	4	198	34
1968	224	*	191	31
1969	268	*	215	51
1970	445	10	298	137
1971	325	*	268	54
1972	438	8	318	112
1973	384	8	288	88
1974	422	10	324	88
1975	528	9	322	197
1976	484	7	347	130
1977	514	18	345	151
1978	654	11	420	223
1979	591	10	403	178
1980	1,162	33	481	648
1981	671	13	414	244
1982	859	23	413	423
1983	845	18	424	403
1984	907	14	432	461
1985	1,429	35	431	963
1986	1,168	23	489	656
1987	1,275	27	482	766
1988	1,411	36	475	900
1989	1,388	36	494	858
1990	3,105	54	624	2,427
1991	1,769	41	548	1,180
1992	2,505	38	549	1,918
1993	2,358	44	514	1,800
1994	2,705	49	614	2,042
1995	4,511	72	603	3,836
1996	3,573	58	605	2,910
1997	3,784	60	657	3,067
1998	5,079	60	650	4,369
1999	4,816	75	577	4,164
2000	9,101	121	688	8,292
2001	6,336	88	717	5,531
2002	7,018	103	611	6,304
2003	7,851	110	599	7,142
2004	8,872	145	623	8,104
2005	9,983	140	614	9,229
2006	10,157	202	668	9,287
2007	10,915	200	635	10,080
2008	12,812	225	679	11,908
2009	12,777	251	592	11,934
2010	14,553	262	581	13,710
2011	14,857	270	489	14,098
2012	12,050	287	484	11,279
2013	9,559	314	432	8,813
2014	6,127	311	414	5,402
2015	3,666	292	414	2,960
2016	3,860	326	347	3,187
2017	3,054	291	222	2,541
2018	16,225	114	200	15,911

-----

Dates and types from DVDD

12:22 Wednesday, August 12, 2020 3

Classification based on most frequent type recorded in DVDD - persons

-----

nT2

-----

	0	*	*	*	4	5	6	7	8	9	10	11	12	13
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
*														
0	1291	76830	.	.	.	.	.	.	.	.	.	.	.	.
*	1982	.	.	.	.	.	.	.	.	.	.	.	.	.
*														
0	443	524	44461	.	.	.	.	.	.	.	.	.	.	.
*	68	461	.	.	.	.	.	.	.	.	.	.	.	.
*	1457	.	.	.	.	.	.	.	.	.	.	.	.	.
*														
0	184	178	339	27531	.	.	.	.	.	.	.	.	.	.
*	38	25	279	.	.	.	.	.	.	.	.	.	.	.
*	40	299	.	.	.	.	.	.	.	.	.	.	.	.
*	1306	.	.	.	.	.	.	.	.	.	.	.	.	.
4														
0	137	81	102	250	15485	.	.	.	.	.	.	.	.	.
*	14	7	14	198	.	.	.	.	.	.	.	.	.	.
*	11	16	154	.	.	.	.	.	.	.	.	.	.	.
*	29	354	.	.	.	.	.	.	.	.	.	.	.	.
4	1121	.	.	.	.	.	.	.	.	.	.	.	.	.
5														
0	74	74	50	69	162	9429	.	.	.	.	.	.	.	.
*	14	11	4	6	150	.	.	.	.	.	.	.	.	.
*	15	6	4	105	.	.	.	.	.	.	.	.	.	.
*	13	15	145	.	.	.	.	.	.	.	.	.	.	.
4	38	437	.	.	.	.	.	.	.	.	.	.	.	.
5	1066	.	.	.	.	.	.	.	.	.	.	.	.	.
6														
0	46	42	25	34	49	147	6453	.	.	.	.	.	.	.
*	4	5	*	*	6	141	.	.	.	.	.	.	.	.
*	5	8	5	6	64	.	.	.	.	.	.	.	.	.
*	*	8	6	72	.	.	.	.	.	.	.	.	.	.
4	8	10	157	.	.	.	.	.	.	.	.	.	.	.
5	21	390	.	.	.	.	.	.	.	.	.	.	.	.
6	1034	.	.	.	.	.	.	.	.	.	.	.	.	.
7														
0	33	28	17	19	20	38	92	4788	.	.	.	.	.	.
*	4	*	*	*	*	6	112	.	.	.	.	.	.	.
*	*	*	.	*	*	61	.	.	.	.	.	.	.	.
*	*	8	*	7	63	.	.	.	.	.	.	.	.	.
4	*	5	5	63	.	.	.	.	.	.	.	.	.	.
5	5	11	143	.	.	.	.	.	.	.	.	.	.	.
6	13	439	.	.	.	.	.	.	.	.	.	.	.	.
7	1035	.	.	.	.	.	.	.	.	.	.	.	.	.
8														
0	24	16	12	9	9	14	19	52	3613	.	.	.	.	.
*	5	*	4	*	*	*	4	99	.	.	.	.	.	.
*	4	*	.	*	.	*	72	.	.	.	.	.	.	.
*	5	*	*	.	5	48	.	.	.	.	.	.	.	.
4	4	5	*	.	42	.	.	.	.	.	.	.	.	.
5	6	8	6	63	.	.	.	.	.	.	.	.	.	.
6	9	8	163	.	.	.	.	.	.	.	.	.	.	.
7	25	442	.	.	.	.	.	.	.	.	.	.	.	.
8	1199	.	.	.	.	.	.	.	.	.	.	.	.	.
9														
0	22	13	8	15	8	4	13	21	54	2579	.	.	.	.
*	*	*	*	*	.	*	*	*	106	.	.	.	.	.
*	*	*	.	4	.	*	4	53	.	.	.	.	.	.
*	*	*	*	.	.	4	38	.	.	.	.	.	.	.
4	*	*	.	*	4	39	.	.	.	.	.	.	.	.
5	*	*	*	*	31	.	.	.	.	.	.	.	.	.
6	*	*	*	58	.	.	.	.	.	.	.	.	.	.
7	5	17	159	.	.	.	.	.	.	.	.	.	.	.
8	21	513	.	.	.	.	.	.	.	.	.	.	.	.
9	1484	.	.	.	.	.	.	.	.	.	.	.	.	.
10														
0	28	14	9	*	*	6	5	11	13	44	2380	.	.	.
*	4	*	.	*	.	*	.	*	*	75	.	.	.	.

```

*      *      *      *      *      *      *      4      .      65      .      .      .      .      .
*      *      .      .      *      .      *      *      53      .      .      .      .      .      .
4      *      *      .      *      *      *      51      .      .      .      .      .      .      .
5      *      *      6      *      *      57      .      .      .      .      .      .      .      .
6      4      .      *      *      60      .      .      .      .      .      .      .      .
7      5      *      *      67      .      .      .      .      .      .      .      .      .      .
8      6      13      198      .      .      .      .      .      .      .      .      .      .
9      15      563      .      .      .      .      .      .      .      .      .      .      .
10     2118      .      .      .      .      .      .      .      .      .      .      .      .
11
0      39      7      11      4      *      *      *      *      8      8      24      1980      .      .
*      *      *      .      *      .      .      .      *      *      60      .      .      .
*      *      *      *      .      *      .      .      *      *      48      .      .      .
*      *      *      *      *      *      .      .      *      50      .      .      .
4      .      .      .      .      .      *      *      45      .      .      .      .      .
5      *      *      .      *      .      *      33      .      .      .      .      .
6      *      *      *      *      *      51      .      .      .      .      .
7      4      .      *      54      .      .      .      .      .      .      .
8      *      5      4      64      .      .      .      .      .      .      .
9      7      7      187      .      .      .      .      .      .      .
10     17      767      .      .      .      .      .      .      .
11     2239      .      .      .      .      .      .      .      .      .
12
0      13      11      *      .      *      *      *      5      *      6      8      12      1215      .
*      .      .      .      .      *      .      .      .      *      *      39      .
*      .      .      .      .      *      .      .      .      *      17      .
*      *      *      .      .      .      .      .      .      22      .
4      .      *      *      *      .      .      *      15      .      .
5      .      *      *      *      .      .      *      29      .      .
6      *      *      .      .      .      .      25      .      .
7      *      *      *      *      .      20      .      .      .
8      *      *      *      .      22      .      .      .      .
9      .      *      4      35      .      .      .      .      .
10     5      7      204      .      .      .      .      .
11     13      750      .      .      .      .      .
12     1270      .      .      .      .      .      .      .
13
0      *      4      *      .      .      .      .      .      *      *      *      4      9      608
*      .      .      *      .      *      .      .      *      .      .      .      25      .
*      .      .      .      .      .      .      .      *      .      *      8      .
*      .      .      .      .      .      *      .      .      *      12      .
4      .      .      .      .      .      .      .      .      9      .
5      .      .      .      .      .      .      .      .      .      .
6      *      .      .      .      *      .      .      11      .      .
7      .      *      .      .      .      .      15      .      .
8      .      .      .      .      *      6      .      .      .
9      *      .      *      13      .      .      .      .      .
10     *      *      *      13      .      .      .      .      .
11     *      *      195      .      .      .      .      .
12     13      455      .      .      .      .      .
13     544      .      .      .      .      .      .      .
14
0      *      *      .      .      .      .      .      .      *      .      .      .      *      6
*      .      .      .      .      .      .      .      .      *      .      .      .      8
*      .      .      .      .      .      .      .      .      *      .      .      .      5
*      .      .      .      .      .      .      .      .      .      .      *      .
4      .      .      *      .      .      *      .      .      *      *      .      .
5      .      .      *      .      .      .      .      .      *      *      .
6      .      .      *      .      .      .      .      *      4      .
7      .      .      .      .      .      .      .      6      .
8      .      .      .      .      .      *      *      .      .
9      .      .      .      .      .      *      .      .      .
10     .      .      .      *      *      .      .      .      .
11     .      .      .      6      .      .      .      .      .
12     *      *      122      .      .      .      .      .
13     7      171      .      .      .      .      .
14     89      .      .      .      .      .      .      .
15
0      .      *      .      .      .      .      .      .      *      .      .      .      *
*      .      .      *      .      .      .      .      .      .      .      .      .

```

4	.	.	.	.	.	.	.	.	.	.	.	*	.	.
7	.	.	.	.	.	.	.	.	*	.	.	.	.	.
8	.	.	.	.	.	.	.	*	.	.	.	.	.	.
9	.	.	.	.	.	.	*	.	.	.	.	.	.	.
10	.	.	.	.	*	*	.	.	.	.	.	.	.	.
11	.	.	.	.	*	.	.	.	.	.	.	.	.	.
12	.	.	.	7	.	.	.	.	.	.	.	.	.	.
13	.	4	41	.	.	.	.	.	.	.	.	.	.	.
14	.	30	.	.	.	.	.	.	.	.	.	.	.	.
15	*	.	.	.	.	.	.	.	.	.	.	.	.	.
16														
0	.	.	.	.	.	*	.	.	.	.	.	.	.	.
*	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	*	.	.	.
12	.	.	.	.	*	.	.	.	.	.	.	.	.	.
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18														
16	.	.	*	.	.	.	.	.	.	.	.	.	.	.

(Continued)

Dates and types from DVDD

12:22 Wednesday, August 12, 2020 4

Classification based on most frequent type recorded in DVDD - persons

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nT2				
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	14	15	16	17
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	N	N	N	N
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12	.	.	.	.

	dvdtyp		
All	T2	T1	NA
N	N	N	N

All	233,082	201,583	26,487	5,012
sequence of different types				
T2	197,641	197,641	.	.
T1	17,947	.	17,947	.
T1 T2 T1	4,777	51	4,695	31
T2 T1	2,628	858	1,346	424
An	2,301	.	.	2,301
T1 T2	1,575	733	562	280
An T2	1,137	642	.	495
T1 T2 T1 T2 T1	938	*	931	5
T2 An	877	330	.	547
T2 T1 T2	566	535	20	11
T2 An T2	480	448	.	32
T2 T1 T2 T1	376	58	280	38
An T1	249	.	139	110
An T2 An	174	8	.	166
T1 An	172	.	94	78
T1 T2 T1 T2	136	39	79	18
T1 An T1	83	.	73	10
T2 T1 T2 T1 T2 T1	56	7	43	6
T2 An T1	56	8	13	35
T2 T1 T2 T1 T2	52	44	5	*
T2 An T2 An	47	10	.	37
An T2 An T2	46	25	.	21
T2 T1 An	46	8	10	28
An T1 T2 T1	40	.	35	5
-I T2	39	33	.	6
T1 T2 An	37	5	7	25
An T2 T1	33	7	5	21
T1 T2 T1 An	26	*	19	5
An T1 An	25	.	*	23
T1 T2 T1 T2 T1 T2 T1	25	.	25	.
An T2 An T2 An	24	.	.	24
An T1 T2	20	7	*	11
-I T1	18	.	17	*
-I An	18	.	.	18
T1 An T2	17	5	*	11
T1 T2 T1 T2 T1 T2	17	*	14	*
T1 T2 An T1	16	.	12	4
-I	16	.	.	16
T2 -I T2	13	13	.	.
T2 An T2 An T2	13	10	.	*
T1 T2 T1 An T1	12	.	9	*
An T2 An T1	12	.	*	11
T1 An T2 An	12	.	*	9
T2 T1 T2 An	11	6	*	4
T2 An T2 T1	11	6	*	*
-I An T2	10	*	.	8
T1 T2 An T2	10	4	.	6
An T2 T1 An	9	*	*	6
T1 -I T1	9	.	9	.
T2 T1 An T1	9	.	7	*
T1 An T1 An	9	.	7	*
An T2 T1 T2 T1	8	*	4	*
T1 An T1 T2 T1	7	.	7	.
An T1 T2 T1 T2 T1	7	.	6	*
T1 An T2 T1	7	*	5	*
T2 T1 T2 An T2	7	7	.	.
-I T2 T1	7	*	*	*
T2 An T1 An	6	.	.	6
An T2 An T2 An T2	6	.	.	6
T2 T1 T2 T1 An	5	*	*	*
T1 An T2 An T2 An	5	.	.	5
An T2 T1 T2	4	*	.	*
T1 An T1 An T1	4	.	4	.
T2 T1 T2 T1 T2 T1 T2 T1	4	*	*	.
An T2 An T1 An	*	.	.	*
An T1 T2 An	*	*	.	*
-I An T2 An	*	.	.	*
T2 -I	*	*	.	*

T2 An T2 An T2 An	*	.	.	*
-I T2 T1 T2 T1	*	.	*	*
T1 T2 T1 T2 An	*	*	*	*
An T1 T2 T1 An	*	.	*	*
T2 T1 An T2	*	*	.	*
An T1 An T2	*	.	.	*
T2 An T1 T2	*	*	.	*
-I T1 T2 T1	*	.	*	.
An T1 An T1	*	.	*	*
An T1 T2 T1 T2	*	*	*	.
T1 An T2 T1 T2	*	.	.	*
T1 T2 An T2 An	*	.	.	*
T2 An T2 An T1	*	.	.	*
T1 An T2 T1 T2 T1	*	.	*	.
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T2 An T1 T2 T1	*	.	*	*
T1 T2 An T1 An	*	*	.	*
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T1 An T2 An T1	*	.	.	*
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-I T1 T2	*	*	*	.
T1 An T2 T1 An	*	.	.	*
T2 -I T1 T2 T1	*	.	.	*
-I T1 T2 T1 T2	*	.	*	.
T2 T1 T2 T1 T2 An	*	.	.	*
T2 T1 T2 An T2 An T2 T1 An	*	.	.	*
An T1 An T2 T1 T2 T1 An	*	.	.	*
T1 An T1 An T2 An T1 An T1	*	.	.	*
An	*	.	.	*
T2 T1 T2 T1 T2 An T2	*	*	.	.
T1 T2 T1 T2 T1 T2 T1 T2	*	*	.	.
An T2 T1 T2 An	*	.	.	*
T1 T2 T1 T2 T1 T2 An	*	.	.	*
T2 T1 T2 An T1 T2	*	*	.	.
T1 -I An T1 T2 T1	*	.	.	*
T2 T1 T2 An T1	*	.	.	*
T1 T2 T1 An T2	*	.	*	.
T2 T1 T2 T1 T2 T1 T2	*	.	*	.
T2 An T1 T2 T1 An T1	*	.	*	.
-I T1 T2 T1 T2 T1	*	.	*	.
T1 An T1 An T1 T2 T1 An	*	.	.	*
T1 An T1 T2	*	.	.	*
T1 T2 An T1 T2	*	.	*	.
T2 An T2 T1 T2	*	*	.	.
An T2 An T2 An T2 An T1	*	.	.	*
An -I An T2 An T2 An	*	.	.	*
T1 -I An	*	.	.	*
T1 -I T2 T1	*	.	*	.
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An T2 An T1 T2 T1	*	.	*	.
T2 T1 T2 T1 An T1	*	.	*	.
T1 -I An T2	*	.	.	*
T2 T1 An T2 An	*	*	.	.
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T1 An T1 T2 An T2 An	*	.	.	*
T2 -I An T2 An T2 T1 An	*	.	.	*
An -I An T2 An T1	*	.	.	*
An T2 An T2 An T2 An	*	.	.	*
T2 An T2 An T2 T1	*	.	.	*
T2 T1 T2 An T2 T1	*	.	.	*
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T1 An T2 An T2 An T1	*	.	.	*
An -I An	*	.	.	*



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12:22 Wednesday, August 12, 2020 7

[illegible]

Date													
*	100.0	24.43	0.36	0.40	0.31	0.42	2.44	0.31	0.22	0.22	0.31	0.26	0.27
*	100.0	0.04	0.07	0.07	0.04	0.09	0.07	0.04	0.02	0.02	0.07	0.04	0.04
*	100.0	0.03	0.04	0.05	0.07	0.09	0.07	0.05	0.02	0.07	0.05	0.03	0.03
4	100.0	0.03	0.04	0.05	0.10	0.05	0.12	0.04	0.02	0.06	0.06	0.02	0.03
5	100.0	0.04	0.06	0.10	0.06	0.04	0.03	0.04	0.02	0.07	0.05	0.03	0.03
6	100.0	0.05	0.08	0.10	0.05	0.05	0.14	0.04	0.02	0.06	0.03	0.03	0.03
7	100.0	0.04	0.07	0.09	0.04	0.09	0.11	0.02	0.02	0.05	0.03	0.03	0.04
8	100.0	0.04	0.07	0.08	0.06	0.08	0.11	0.02	0.04	0.03	0.06	0.04	0.03
9	100.0	0.05	0.07	0.06	0.08	0.09	0.07	0.03	0.03	0.04	0.07	0.03	0.03
10	100.0	0.05	0.05	0.06	0.08	0.05	0.09	0.03	0.03	0.08	0.09	0.03	0.04
11	100.0	0.04	0.04	0.06	0.10	0.05	0.12	0.03	0.02	0.07	0.06	0.03	0.03
12	100.0	0.04	0.06	0.09	0.08	0.05	0.12	0.03	0.02	0.07	0.05	0.03	0.03
13	100.0	0.05	0.06	0.10	0.07	0.05	0.13	0.03	0.04	0.07	0.02	0.03	0.04
14	100.0	0.04	0.06	0.10	0.05	0.09	0.12	0.02	0.05	0.05	0.02	0.03	0.03
15	100.0	0.23	0.25	0.27	0.19	0.23	49.84	0.46	0.12	0.11	0.12	0.10	0.12
16	100.0	0.06	0.05	0.07	0.09	0.08	0.05	0.02	0.06	0.02	0.04	0.03	0.03
17	100.0	0.05	0.04	0.05	0.08	0.08	0.05	0.02	0.05	0.08	0.04	0.03	0.03
18	100.0	0.05	0.05	0.06	0.08	0.07	0.09	0.03	0.03	0.07	0.03	0.03	0.03
19	100.0	0.06	0.07	0.10	0.10	0.05	0.09	0.02	0.02	0.07	0.03	0.03	0.03
20	100.0	0.04	0.07	0.10	0.07	0.04	0.10	0.02	0.07	0.07	0.03	0.04	0.03
21	100.0	0.05	0.07	0.10	0.03	0.05	0.09	0.01	0.07	0.06	0.02	0.04	0.03
22	100.0	0.05	0.08	0.08	0.03	0.11	0.09	0.01	0.08	0.03	0.06	0.04	0.03
23	100.0	0.05	0.05	0.06	0.08	0.10	0.05	0.02	0.06	0.03	0.06	0.04	0.02
24	100.0	0.06	0.05	0.03	0.08	0.07	0.05	0.02	0.06	0.07	0.06	0.03	0.00
25	100.0	0.06	0.06	0.04	0.08	0.07	0.09	0.02	0.02	0.08	0.06	0.02	0.00
26	100.0	0.06	0.10	0.07	0.08	0.04	0.10	0.02	0.03	0.07	0.05	0.04	0.00
27	100.0	0.05	0.09	0.06	0.04	0.05	0.08	0.02	0.07	0.08	0.02	0.03	0.01
28	100.0	0.06	0.12	0.05	0.04	0.08	0.09	0.01	0.07	0.04	0.02	0.04	0.01
29	100.0	0.06	0.04	0.03	0.05	0.09	0.07	0.01	0.06	0.03	0.05	0.03	0.01
30	100.0	0.07	.	0.04	0.10	0.10	0.05	0.02	0.08	0.02	0.05	0.03	0.01
31	100.0	0.08	.	0.05	.	0.09	.	0.03	0.05	.	0.05	.	0.00

### 3.9 03-nhsr

Extracts dates of foot therapy from the National Health Services Register.

Uses the GDM dates to exclude possible inclusion dates in GDM grace periods.

1 "Program: 03-nhsr.sas" 14:43 Wednesday, August 12, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.09 seconds

cpu time 0.10 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      /*
2      proc contents data = grund.sysi2005 ; run ;
3      proc contents data = grund.sssy2005 ; run ;
4      proc print data = grund.sysi2005 (obs=10) ; run ;
5      proc print data = grund.sssy2005 (obs=10) ; run ;
6      */
7
8      %macro getssy ;
9      data foot ( keep = pnr doP speciale ) ;
10         set %do i = 1990 %to 2005 ;
11             grund.sysi&i. ( keep = pnr speciale honuge )
12         %end ;
13         %do i = 2005 %to 2018 ;
14             grund.sssy&i. ( keep = pnr speciale honuge )
15         %end ;
16         if substr( speciale, 1, 2 ) eq '54' ;
17         yr = input( substr( honuge, 1, 2 ), 2. ) ;
18         wk = input( substr( honuge, 3, 2 ), 2. ) ;
19         doP = ( 1900 + yr + 100 * (yr<50) - 1960 ) * 365.25 + wk * 7 ;
20     run ;
21 %mend ;
22
23 %getssy ;

```

```

NOTE: There were 133344 observations read from the data set GRUND.SYSI1990.
NOTE: There were 145830 observations read from the data set GRUND.SYSI1991.
NOTE: There were 162331 observations read from the data set GRUND.SYSI1992.
NOTE: There were 175648 observations read from the data set GRUND.SYSI1993.
NOTE: There were 193396 observations read from the data set GRUND.SYSI1994.
NOTE: There were 219430 observations read from the data set GRUND.SYSI1995.
NOTE: There were 239616 observations read from the data set GRUND.SYSI1996.
NOTE: There were 263392 observations read from the data set GRUND.SYSI1997.
NOTE: There were 289082 observations read from the data set GRUND.SYSI1998.
NOTE: There were 318830 observations read from the data set GRUND.SYSI1999.
NOTE: There were 278443 observations read from the data set GRUND.SYSI2000.
NOTE: There were 157321 observations read from the data set GRUND.SYSI2001.
NOTE: There were 361516 observations read from the data set GRUND.SYSI2002.
NOTE: There were 486671 observations read from the data set GRUND.SYSI2003.
NOTE: There were 537483 observations read from the data set GRUND.SYSI2004.
NOTE: There were 279213 observations read from the data set GRUND.SYSI2005.
NOTE: There were 279214 observations read from the data set GRUND.SSSY2005.
NOTE: There were 69820 observations read from the data set GRUND.SSSY2006.
NOTE: There were 74814 observations read from the data set GRUND.SSSY2007.
NOTE: There were 85976 observations read from the data set GRUND.SSSY2008.
NOTE: There were 97168 observations read from the data set GRUND.SSSY2009.
NOTE: There were 114076 observations read from the data set GRUND.SSSY2010.
NOTE: There were 405604 observations read from the data set GRUND.SSSY2011.
NOTE: There were 616974 observations read from the data set GRUND.SSSY2012.
NOTE: There were 709354 observations read from the data set GRUND.SSSY2013.
NOTE: There were 719588 observations read from the data set GRUND.SSSY2014.
NOTE: There were 727427 observations read from the data set GRUND.SSSY2015.
NOTE: There were 854129 observations read from the data set GRUND.SSSY2016.
NOTE: There were 887268 observations read from the data set GRUND.SSSY2017.
NOTE: There were 907382 observations read from the data set GRUND.SSSY2018.
NOTE: The data set WORK.FOOT has 9437442 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          6.43 seconds
      cpu time           2.12 seconds

```

```

24
25      proc sort data = foot nodupkey ; by pnr doP ; run ;

```

```

NOTE: There were 9437442 observations read from the data set WORK.FOOT.
NOTE: 2758808 observations with duplicate key values were deleted.
NOTE: The data set WORK.FOOT has 6678634 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          1.94 seconds
      cpu time           4.57 seconds

```

```

26      data foot ;
27      merge foot ( in = f )
28            DMdat.GDM ;
29      by pnr ;
30      if f ;
31      %xgdm( dop ) ;
32      run ;

```

NOTE: Variable doGDM12 is uninitialized.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

```

6640189 at 31:18  6640189 at 31:54  6670343 at 31:20  6670343 at 31:56
6676316 at 31:20  6676316 at 31:56  6677227 at 31:20  6677227 at 31:56
6677458 at 31:20  6677458 at 31:56  6677528 at 31:20  6677528 at 31:56
6677528 at 31:20  6677528 at 31:56  6677536 at 31:20  6677536 at 31:56
6677536 at 31:20  6677536 at 31:56  6677536 at 31:20  6677536 at 31:56
6677536 at 31:20  6677536 at 31:56  6677536 at 31:20  6677536 at 31:56

```

NOTE: There were 6678634 observations read from the data set WORK.FOOT.

NOTE: There were 22391 observations read from the data set DMDAT.GDM.

NOTE: The data set WORK.FOOT has 6677536 observations and 15 variables.

NOTE: DATA statement used (Total process time):

```

real time      8.89 seconds
cpu time       7.67 seconds

```

```

33
34      title1 'Date of >>any<< podiatry' ;
35      proc tabulate data = foot noseps missing ;
36      class doP ;
37      table all doP = 'doPod', n * f=comma10. / rts = 10 ;
38      format doP year4. ;
39      run ;

```

NOTE: There were 6677536 observations read from the data set WORK.FOOT.

NOTE: The PROCEDURE TABULATE printed page 1.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      1.46 seconds
cpu time       1.98 seconds

```

```

40
41      data DMdat.foot ;
42      set foot ( keep = pnr doP speciale ) ;
43      by pnr doP ;
44      drop doP ;
45      retain doPod ;
46      if first.pnr then doPod = doP ;
47      if last.pnr then do ;
48          lastPod = doP ;
49          output ;
50      end ;
51      label doPod = 'Date of first poidatry'
52            lastPod = 'Date of last poidatry' ;
53      run ;

```

NOTE: There were 6677536 observations read from the data set WORK.FOOT.

NOTE: The data set DMDAT.FOOT has 289157 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```

real time      1.96 seconds
cpu time       1.20 seconds

```

```

54
55      title1 'Date of >>first<< podiatry' ;
56      proc tabulate data = DMdat.foot noseps missing ;
57      class doPod ;
58      table all doPod, n * f=comma10. / rts = 10 ;
59      format doPod year4. ;

```

```
60          run ;
```

NOTE: There were 289157 observations read from the data set DMDAT.FOOT.

NOTE: The PROCEDURE TABULATE printed page 2.

NOTE: PROCEDURE TABULATE used (Total process time):

real time 0.10 seconds

cpu time 0.10 seconds

```
61
```

```
62          proc contents data = DMdat.foot varnum ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):

real time 0.01 seconds

cpu time 0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 3.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time 21.07 seconds

cpu time 17.84 seconds

### 3.9.1 03-nhsr.lst

```
!!Date of >>any<< podiatry
```

14:43 Wednesday, August 12, 2020 1

```
-----
N
-----
All 6,677,536
doPod
1990 103,234
1991 113,125
1992 125,435
1993 134,861
1994 148,991
1995 168,016
1996 183,931
1997 204,360
1998 224,282
1999 249,172
2000 213,722
2001 106,526
2002 264,859
2003 356,852
2004 398,063
2005 205,680
2006 48,490
2007 50,679
2008 53,338
2009 53,593
2010 53,408
2011 218,700
2012 343,050
2013 387,125
2014 417,320
2015 435,659
2016 457,659
2017 475,284
2018 482,122
-----
```

```
Date of >>first<< podiatry
```

14:43 Wednesday, August 12, 2020 2

```

-----
N
-----
All          289,157
Date of
first
poidatry
1990         19,124
1991         5,505
1992         5,704
1993         6,085
1994         6,755
1995         7,720
1996         7,907
1997         8,337
1998         8,993
1999         9,788
2000         8,008
2001         5,009
2002        16,090
2003        14,245
2004        14,353
2005         6,960
2006         1,459
2007         1,586
2008         1,598
2009         1,404
2010         1,882
2011        35,266
2012        18,512
2013        14,057
2014        12,456
2015        12,084
2016        12,560
2017        12,718
2018        12,992
-----

```

Date of &gt;&gt;first&lt;&lt; podiatry

14:43 Wednesday, August 12, 2020 3

## The CONTENTS Procedure

Data Set Name	DMDAT.FOOT	Observations	289157
Member Type	DATA	Variables	4
Engine	V9	Indexes	0
Created	12/08/2020 14:43:43	Observation Length	40
Last Modified	12/08/2020 14:43:43	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	178
First Data Page	*
Max Obs per Page	1632
Obs in First Data Page	1595
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\foot.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	11MB
File Size (bytes)	11730944

Variables in Creation Order						
#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.	\$10.	Personnummer
2	SPECIALE	Char	6	\$6.	\$6.	6-cifret speciale
3	doPod	Num	8			Date of first poidatry
4	lastPod	Num	8			Date of last poidatry

## 3.10 04-rmps

Processes the records from the RMPS with other target medications and creates a file (pRMPS) with one record per person with at least one prescription of either OAD or insulin. Computes the first and second date of OAD, respectively insulin purchase.

Uses the GDM dates to exclude possible inclusion dates in GDM grace periods.

```
1                                "Program: 04-rmps.sas"          17:54 Monday, August 10, 2020
```

```
NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
```

```
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
```

```
      Licensed to FORSKNING 1, Site 50800722.
```

```
NOTE: This session is executing on the X64_SR12R2 platform.
```

```
NOTE: Updated analytical products:
```

```
      SAS/STAT 14.3
```

```
NOTE: Additional host information:
```

```
      X64_SR12R2 WIN 6.3.9600 Server
```

```
NOTE: SAS initialization used:
```

```
      real time          0.09 seconds
```

```
      cpu time           0.07 seconds
```

```
NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.
```

```
NOTE: AUTOEXEC processing completed.
```

```
1      %macro getmed ;
2      data rmps
3          fert ( rename = ( eksd = doFb ) ) ;
4          set %do i = 1995 %to 2019 ;
5              grund.lmdb&i.          ( keep = pnr atc eksd
6                                      where = ( substr(atc,1,3) in ("A10","G03") ) )
7              grund.lmdb&i._brutto ( keep = pnr atc eksd
8                                      where = ( substr(atc,1,3) in ("A10","G03") ) )
9          %end ; ;
10         if substr( atc, 1, 4 ) in ("G03G","G03H") then output fert ;
11         if substr( atc, 1, 4 ) in ("A10A","A10B") then output rmps ;
12     run ;
13     %mend ;
14     %getmed ;
```

```
NOTE: There were 583837 observations read from the data set GRUND.LMDB1995.
```

```
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
```

```
NOTE: There were 564309 observations read from the data set GRUND.LMDB1995_BRUTTO.
```

```
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
```

```

NOTE: There were 646713 observations read from the data set GRUND.LMDB1996.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 628673 observations read from the data set GRUND.LMDB1996_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 690515 observations read from the data set GRUND.LMDB1997.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 673272 observations read from the data set GRUND.LMDB1997_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 751178 observations read from the data set GRUND.LMDB1998.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 734724 observations read from the data set GRUND.LMDB1998_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 812675 observations read from the data set GRUND.LMDB1999.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 797198 observations read from the data set GRUND.LMDB1999_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 843479 observations read from the data set GRUND.LMDB2000.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 829201 observations read from the data set GRUND.LMDB2000_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 922459 observations read from the data set GRUND.LMDB2001.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 908987 observations read from the data set GRUND.LMDB2001_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1000624 observations read from the data set GRUND.LMDB2002.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 987387 observations read from the data set GRUND.LMDB2002_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1082273 observations read from the data set GRUND.LMDB2003.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1069550 observations read from the data set GRUND.LMDB2003_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1195096 observations read from the data set GRUND.LMDB2004.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1182980 observations read from the data set GRUND.LMDB2004_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1306429 observations read from the data set GRUND.LMDB2005.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1294466 observations read from the data set GRUND.LMDB2005_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1423247 observations read from the data set GRUND.LMDB2006.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1411671 observations read from the data set GRUND.LMDB2006_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1535243 observations read from the data set GRUND.LMDB2007.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1523697 observations read from the data set GRUND.LMDB2007_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1673701 observations read from the data set GRUND.LMDB2008.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1662816 observations read from the data set GRUND.LMDB2008_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1765353 observations read from the data set GRUND.LMDB2009.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1754160 observations read from the data set GRUND.LMDB2009_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1885400 observations read from the data set GRUND.LMDB2010.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 1877610 observations read from the data set GRUND.LMDB2010_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2012463 observations read from the data set GRUND.LMDB2011.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2005300 observations read from the data set GRUND.LMDB2011_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2113065 observations read from the data set GRUND.LMDB2012.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2104229 observations read from the data set GRUND.LMDB2012_BRUTTO.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2142429 observations read from the data set GRUND.LMDB2013.
WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');

```



```

NOTE: There were 2133412 observations read from the data set GRUND.LMDB2013_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2163345 observations read from the data set GRUND.LMDB2014.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2154513 observations read from the data set GRUND.LMDB2014_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2176058 observations read from the data set GRUND.LMDB2015.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2166529 observations read from the data set GRUND.LMDB2015_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2263674 observations read from the data set GRUND.LMDB2016.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2254229 observations read from the data set GRUND.LMDB2016_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2318789 observations read from the data set GRUND.LMDB2017.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2313898 observations read from the data set GRUND.LMDB2017_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2369981 observations read from the data set GRUND.LMDB2018.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2370542 observations read from the data set GRUND.LMDB2018_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2480185 observations read from the data set GRUND.LMDB2019.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: There were 2460080 observations read from the data set GRUND.LMDB2019_BRUTTO.
      WHERE SUBSTR(atc, 1, 3) in ('A10', 'G03');
NOTE: The data set WORK.RMPS has 75619542 observations and 3 variables.
NOTE: The data set WORK.FERT has 402102 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          39:49.34
      cpu time           3:38.90

```

```

15
16      *-----;
17      * delete duplicates ;
18      proc sort  data = rmps  nodupkey ; by pnr eksd atc ; run ;

```

```

NOTE: There were 75619542 observations read from the data set WORK.RMPS.
NOTE: 38606984 observations with duplicate key values were deleted.
NOTE: The data set WORK.RMPS has 37012558 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          13.49 seconds
      cpu time           30.78 seconds

```

```

19      proc sort  data = fert  nodupkey ; by pnr doFb atc ; run ;

```

```

NOTE: There were 402102 observations read from the data set WORK.FERT.
NOTE: 68542 observations with duplicate key values were deleted.
NOTE: The data set WORK.FERT has 333560 observations and 3 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          0.08 seconds
      cpu time           0.15 seconds

```

```

20
21      *-----;
22      * we need sex as variable in alloAD and excluding ;
23      data alloAD
24          allIns ;
25          merge rmps      ( in = r )
26                  DMdat.pcos ( in = p )
27                  DMdat.gdm
28                  DMdat.pop ( in = b  keep = pnr doBth sex ) ;
29          by pnr ;
30          if r and b ;
31          * exclude drug dispensation in the GDM-windows ;
32          %xgdm( eksd ) ;
33          * drop metformin in PCOSrange ;

```

```

34      inPCOSrg = ( doBth + 365.25*&pcoslo. )
35      < eksd <
36      ( doBth + 365.25*&pcoshi. ) ;
37      if inPCOSrg and
38          sex eq "W" and
39          atc eq "A10BA02" then delete ;
40      if substr( atc, 1, 4 ) eq "A10A" then output allIns ;
41      if substr( atc, 1, 4 ) eq "A10B" then output allOAD ;
42      run ;

```

NOTE: Variable doGDM12 is uninitialized.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

```

36455400 at 32:18 36455400 at 32:54 36857953 at 32:20 36857953 at 32:56
36943512 at 32:20 36943512 at 32:56 36958057 at 32:20 36958057 at 32:56
36961870 at 32:20 36961870 at 32:56 36962809 at 32:20 36962809 at 32:56
36963060 at 32:20 36963060 at 32:56 36963060 at 32:20 36963060 at 32:56
36963235 at 32:20 36963235 at 32:56 36963235 at 32:20 36963235 at 32:56
36963235 at 32:20 36963235 at 32:56 36963235 at 32:20 36963235 at 32:56

```

NOTE: There were 37012558 observations read from the data set WORK.RMPs.

NOTE: There were 22842 observations read from the data set DMDAT.PCOS.

NOTE: There were 22391 observations read from the data set DMDAT.GDM.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: The data set WORK.ALLOAD has 24343735 observations and 20 variables.

NOTE: The data set WORK.ALLINS has 12278010 observations and 20 variables.

NOTE: DATA statement used (Total process time):

```

real time      1:00.37
cpu time       52.03 seconds

```

```

43
44      *-----;
45      * generate data sets with second date of OAD / Ins ;
46      %macro second( tp ) ;
47      data &tp.1 ( keep = pnr last&tp. ) ;
48          set all&tp. ( rename = ( eksd = last&tp. ) ) ;
49          by pnr ;
50          if last.pnr then output ;
51      run ;
52
53      data &tp.2 ( keep = pnr do&tp.2 ) ;
54          set all&tp. ( rename = ( eksd = do&tp.2 ) ) ;
55          by pnr ;
56          if first.pnr then dno = 0 ;
57          dno + 1 ;
58          if dno eq 2 then output ;
59      run ;
60
61      data &tp. ( keep = pnr do&tp. ) ;
62          set all&tp. ( rename = ( eksd = do&tp. ) ) ;
63          by pnr ;
64          if first.pnr ;
65      run ;
66      %mend ;
67
68      options mprint ;
69      %second( OAD ) ;
MPRINT(SECOND): data OAD1 ( keep = pnr lastOAD ) ;
MPRINT(SECOND): set allOAD ( rename = ( eksd = lastOAD ) ) ;
MPRINT(SECOND): by pnr ;
MPRINT(SECOND): if last.pnr then output ;
MPRINT(SECOND): run ;

```

NOTE: There were 24343735 observations read from the data set WORK.ALLOAD.

NOTE: The data set WORK.OADL has 427331 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      6.26 seconds
cpu time       2.82 seconds

```

```

MPRINT(SECOND):  data OAD2 ( keep = pnr doOAD2 ) ;
MPRINT(SECOND):  set allOAD ( rename = ( eksd = doOAD2 ) ) ;
MPRINT(SECOND):  by pnr ;
MPRINT(SECOND):  if first.pnr then dno = 0 ;
MPRINT(SECOND):  dno + 1 ;
MPRINT(SECOND):  if dno eq 2 then output ;
MPRINT(SECOND):  run ;

```

NOTE: There were 24343735 observations read from the data set WORK.ALLOAD.

NOTE: The data set WORK.OAD2 has 403376 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      5.98 seconds
cpu time       3.09 seconds

```

```

MPRINT(SECOND):  data OAD ( keep = pnr doOAD ) ;
MPRINT(SECOND):  set allOAD ( rename = ( eksd = doOAD ) ) ;
MPRINT(SECOND):  by pnr ;
MPRINT(SECOND):  if first.pnr ;
MPRINT(SECOND):  run ;

```

NOTE: There were 24343735 observations read from the data set WORK.ALLOAD.

NOTE: The data set WORK.OAD has 427331 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      6.71 seconds
cpu time       3.34 seconds

```

```

70      %second( Ins ) ;
MPRINT(SECOND):  data Ins1 ( keep = pnr lastIns ) ;
MPRINT(SECOND):  set allIns ( rename = ( eksd = lastIns ) ) ;
MPRINT(SECOND):  by pnr ;
MPRINT(SECOND):  if last.pnr then output ;
MPRINT(SECOND):  run ;

```

NOTE: There were 12278010 observations read from the data set WORK.ALLINS.

NOTE: The data set WORK.INS1 has 176217 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      3.89 seconds
cpu time       1.61 seconds

```

```

MPRINT(SECOND):  data Ins2 ( keep = pnr doIns2 ) ;
MPRINT(SECOND):  set allIns ( rename = ( eksd = doIns2 ) ) ;
MPRINT(SECOND):  by pnr ;
MPRINT(SECOND):  if first.pnr then dno = 0 ;
MPRINT(SECOND):  dno + 1 ;
MPRINT(SECOND):  if dno eq 2 then output ;
MPRINT(SECOND):  run ;

```

NOTE: There were 12278010 observations read from the data set WORK.ALLINS.

NOTE: The data set WORK.INS2 has 162690 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      3.37 seconds
cpu time       1.51 seconds

```

```

MPRINT(SECOND):  data Ins ( keep = pnr doIns ) ;
MPRINT(SECOND):  set allIns ( rename = ( eksd = doIns ) ) ;
MPRINT(SECOND):  by pnr ;
MPRINT(SECOND):  if first.pnr ;
MPRINT(SECOND):  run ;

```

NOTE: There were 12278010 observations read from the data set WORK.ALLINS.

NOTE: The data set WORK.INS has 176217 observations and 2 variables.

NOTE: DATA statement used (Total process time):

```

real time      2.90 seconds
cpu time       1.48 seconds

```

```

71      options nomprint ;
72
73      data DMdat.rmps ( label = "Antidiabetic drug purchase DK 1995-2019") ;
74          merge OAD OAD2 OAD1
75              Ins Ins2 Insl ;
76      by pnr ;
77      label doOAD = 'Date of 1st OAD'
78            doOAD2 = 'Date of 2nd OAD'
79            lastOAD = 'Date of last OAD'
80            doIns = 'Date of 1st Ins'
81            doIns2 = 'Date of 2nd Ins'
82            lastIns = 'Date of last Ins' ;
83      format doOAD doOAD2 lastOAD doIns doIns2 lastIns  ddmmyyss10. ;
84      run ;

```

NOTE: There were 427331 observations read from the data set WORK.OAD.  
 NOTE: There were 403376 observations read from the data set WORK.OAD2.  
 NOTE: There were 427331 observations read from the data set WORK.OADL.  
 NOTE: There were 176217 observations read from the data set WORK.INS.  
 NOTE: There were 162690 observations read from the data set WORK.INS2.  
 NOTE: There were 176217 observations read from the data set WORK.INSL.  
 NOTE: The data set DMDAT.RMPS has 484172 observations and 7 variables.  
 NOTE: DATA statement used (Total process time):  
     real time                  0.41 seconds  
     cpu time                    0.23 seconds

```

85
86      proc tabulate data = DMdat.rmps noseps missing ;
87          class doINS doOAD ;
88          var doINS2 doOAD2 ;
89          table all doOAD="doOAD",
90              all * f=comma7.
91              doOAD2='N:OAD2' * n * f=comma7.
92              doIns2='N:Ins2' * n * f=comma7.
93              doIns="doIns" * f=comma7.
94          / rts = 7 ;
95          format doINS doOAD
96              doINS2 doOAD2 year4. ;
97          keylabel n = ' ' ;
98      run ;

```

NOTE: There were 484172 observations read from the data set DMDAT.RMPS.  
 NOTE: The PROCEDURE TABULATE printed pages 1-3.  
 NOTE: PROCEDURE TABULATE used (Total process time):  
     real time                  0.16 seconds  
     cpu time                    0.32 seconds

```

99
100     proc contents data = DMdat.rmps ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):  
     real time                  0.01 seconds  
     cpu time                    0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 4.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
 NOTE: The SAS System used:  
     real time                  41:33.26  
     cpu time                    5:16.46

## 3.10.1 04-rmps.lst

The SAS System

17:54 Monday, August 10, 2020 1

----- doIns -----										
	All	N:OAD2	N:Ins2	.	1995	1996	1997	1998	1999	2000
All	484,172	403,376	162,690	307,955	31,996	4,828	4,022	4,365	4,807	4,976
doOAD										
.	56,841	0	52,565	.	25,760	2,005	1,204	1,131	1,112	1,138
1995	46,057	45,239	21,772	23,172	2,504	2,163	1,968	1,996	2,068	1,852
1996	10,877	10,171	4,879	5,744	372	289	259	280	317	363
1997	10,134	9,465	4,500	5,387	267	48	275	249	276	270
1998	11,152	10,507	5,076	5,798	278	29	63	328	303	302
1999	11,407	10,735	5,108	6,012	292	33	30	75	378	281
2000	11,527	10,930	5,001	6,237	271	28	25	36	64	402
2001	12,222	11,668	5,215	6,678	232	15	20	24	30	71
2002	12,093	11,517	4,927	6,832	213	24	19	18	37	39
2003	14,271	13,669	5,421	8,485	177	16	22	19	31	24
2004	14,667	13,951	4,991	9,293	124	18	9	18	22	25
2005	14,480	13,867	4,792	9,327	119	7	8	12	18	24
2006	15,009	14,338	4,514	10,158	99	11	13	18	18	16
2007	16,468	15,772	4,459	11,608	123	15	14	24	15	14
2008	18,221	17,444	4,256	13,536	112	14	9	11	14	23
2009	19,123	18,292	3,997	14,715	133	13	8	19	13	19
2010	21,338	20,392	3,789	17,117	120	7	11	15	14	11
2011	25,090	24,011	3,426	21,221	128	13	9	19	7	16
2012	21,998	20,872	2,813	18,773	132	15	6	15	10	16
2013	16,062	15,223	2,203	13,535	94	4	9	12	7	10
2014	14,946	14,193	1,941	12,707	64	18	8	7	5	6
2015	16,867	15,968	1,838	14,696	63	14	8	4	10	8
2016	18,278	17,272	1,551	16,432	77	5	6	7	11	8
2017	17,652	16,633	1,370	15,991	70	5	7	10	6	12
2018	18,005	16,710	1,195	16,535	62	12	6	8	8	11
2019	19,387	14,537	1,091	17,966	110	7	6	10	13	15

(Continued)

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----- doIns -----										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	4,904	5,207	5,971	6,416	6,243	6,313	6,562	6,221	6,288	5,991
doOAD										
.	1,132	1,153	1,122	1,188	1,177	1,263	1,264	1,286	1,276	1,266
1995	1,414	1,418	1,406	1,204	931	773	627	439	365	313
1996	328	336	356	363	281	277	244	177	151	121
1997	337	308	376	347	321	266	233	190	141	140
1998	335	331	431	410	361	311	325	239	200	180
1999	284	321	406	418	349	339	339	279	233	186
2000	291	271	381	379	385	344	354	282	266	211
2001	454	301	372	392	399	361	410	330	303	260
2002	59	458	324	381	354	348	339	301	315	259
2003	35	62	478	405	404	413	436	372	371	299
2004	32	33	60	556	376	345	342	376	348	293
2005	25	34	21	64	599	357	369	321	344	310
2006	24	19	33	33	64	565	354	324	365	308
2007	18	22	17	38	47	66	611	327	329	288
2008	17	18	30	32	25	39	75	681	320	288
2009	13	17	21	33	21	35	39	70	716	305
2010	21	18	22	31	26	41	51	47	83	717

2011	17	19	26	26	26	34	31	36	35	79
2012	12	5	17	21	21	31	20	25	34	69
2013	9	13	12	14	12	23	12	21	21	21
2014	12	7	12	13	8	24	23	25	11	22
2015	5	10	6	21	13	13	20	17	9	11
2016	5	5	5	12	8	7	8	9	13	13
2017	9	7	12	16	9	10	10	18	9	9
2018	7	9	9	10	12	15	14	14	12	12
2019	9	12	16	9	14	13	12	15	18	11

(Continued)

The SAS System

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doIns									
	2011	2012	2013	2014	2015	2016	2017	2018	2019
All	6,292	6,337	6,638	6,686	7,026	7,238	7,444	7,004	6,442
doOAD									
.	1,212	1,162	1,362	1,334	1,311	1,376	1,511	1,489	1,607
1995	291	238	202	175	143	133	109	68	85
1996	114	92	82	77	69	44	56	53	32
1997	138	116	82	81	81	65	46	47	47
1998	170	149	145	93	91	90	84	67	39
1999	186	172	165	140	134	120	93	82	60
2000	220	197	161	171	165	119	114	79	74
2001	245	240	234	176	161	158	131	120	105
2002	257	229	228	225	204	178	195	142	115
2003	336	288	284	279	257	241	207	185	145
2004	343	301	319	273	278	285	239	194	165
2005	320	348	314	285	311	280	279	217	167
2006	329	325	302	303	299	309	303	214	203
2007	332	329	357	374	357	336	330	279	198
2008	275	339	354	357	376	362	377	282	255
2009	301	305	339	350	366	360	346	307	259
2010	319	279	279	311	385	402	386	342	283
2011	713	316	287	305	321	374	375	361	296
2012	60	722	288	267	264	296	314	315	250
2013	27	71	700	234	252	249	270	254	176
2014	21	23	61	711	255	244	232	233	194
2015	20	30	29	66	794	284	256	249	211
2016	16	20	17	42	66	785	250	229	222
2017	19	15	19	23	32	69	816	261	188
2018	15	17	9	20	29	40	76	823	220
2019	13	14	19	14	25	39	49	112	846

The SAS System

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The CONTENTS Procedure

Data Set Name	DMDAT.RMPS	Observations	484172
Member Type	DATA	Variables	7
Engine	V9	Indexes	0
Created	10/08/2020 18:35:54	Observation Length	36
Last Modified	10/08/2020 18:35:54	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Antidiabetic drug purchase DK 1995-2019		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	268

```

First Data Page          *
Max Obs per Page        1813
Obs in First Data Page   1761
Number of Data Set Repairs 0
ExtendObsCounter         YES
Filename                 E:\workdata\707655\DMreg\data\rmps.sas7bdat
Release Created          9.0401M5
Host Created             X64_SR12R2
Owner Name              DSTFSE\FDIY7655
File Size                17MB
File Size (bytes)       17629184

```

#### Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.	\$10.	Personnummer
5	doIns	Num	4	DDMMYY10.		Date of 1st Ins
6	doIns2	Num	4	DDMMYY10.		Date of 2nd Ins
2	doOAD	Num	4	DDMMYY10.		Date of 1st OAD
3	doOAD2	Num	4	DDMMYY10.		Date of 2nd OAD
7	lastIns	Num	4	DDMMYY10.		Date of last Ins
4	lastOAD	Num	4	DDMMYY10.		Date of last OAD

## 3.11 05-diab

Uses eye-screening dates from the national eye-screening database to supplement persons with diabetes and update dates of diabetes diagnosis.

Uses the dataset with GDM dates to exclude examination dates in GDM grace periods.

```
1                                "Program: 05-diab.sas"  14:52 Wednesday, August 12, 2020
```

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.09 seconds

cpu time 0.10 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      options nofmterr ;
2
3      proc sort  data = ekstn.diabase_forskning
4                (  rename = (Report_EyeScreeningDate = doDia) )
5                out = diab ( keep = pnr doDia ) ;
6      by pnr doDia ;
7      run ;

```

NOTE: There were 723554 observations read from the data set EKSTN.DIABASE\_FORSKNING.  
 NOTE: The data set WORK.DIAB has 723554 observations and 2 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time           1.65 seconds  
     cpu time            0.95 seconds

```

8
9      data diab ;
10     merge diab ( in = d )
11             DMdat.GDM ;
12     by pnr ;
13     if d ;
14     %xgdm( doDia ) ;
15     run ;

```

NOTE: Variable doGDM12 is uninitialized.  
 NOTE: Missing values were generated as a result of performing an operation on missing values.  
 Each place is given by: (Number of times) at (Line):(Column).  
 710536 at 14:18   710536 at 14:54   720316 at 14:20   720316 at 14:56  
 722465 at 14:20   722465 at 14:56   722877 at 14:20   722877 at 14:56  
 722982 at 14:20   722982 at 14:56   723027 at 14:20   723027 at 14:56  
 723045 at 14:20   723045 at 14:56   723047 at 14:20   723047 at 14:56  
 723056 at 14:20   723056 at 14:56   723056 at 14:20   723056 at 14:56  
 723056 at 14:20   723056 at 14:56   723056 at 14:20   723056 at 14:56

NOTE: There were 723554 observations read from the data set WORK.DIAB.  
 NOTE: There were 22391 observations read from the data set DMDAT.GDM.  
 NOTE: The data set WORK.DIAB has 723056 observations and 14 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           0.89 seconds  
     cpu time            0.84 seconds

```

16
17     data DiaF
18         DiaB
19         Dial ;
20     set diab ( keep = pnr doDia ) ;
21     by pnr ;
22     visit = 'Repeat' ;
23     if first.pnr then do ;
24         output DiaF ;
25         visit = 'First' ;
26     end ;
27     output DiaB ;
28     if last.pnr then do ;
29         output Dial ;
30     end ;
31     format doDia ddmmyy10. ;
32     run ;

```

NOTE: There were 723056 observations read from the data set WORK.DIAB.  
 NOTE: The data set WORK.DIAF has 221669 observations and 3 variables.  
 NOTE: The data set WORK.DIAB has 723056 observations and 3 variables.  
 NOTE: The data set WORK.DIAL has 221669 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           0.19 seconds  
     cpu time            0.15 seconds

```

33
34     proc tabulate data = DiaB missing noseps ;
35         class doDia visit ;
36         table all doDia,
37             ( visit all ) * f =comma9.
38             / rts = 10 ;
39         format doDia yyqs8. ;
40     run ;

```



NOTE: There were 723056 observations read from the data set WORK.DIAB.  
 NOTE: The PROCEDURE TABULATE printed page 1.  
 NOTE: PROCEDURE TABULATE used (Total process time):  
     real time            0.31 seconds  
     cpu time             0.31 seconds

```

41
42      data DMdat.DiaB ;
43          merge DiaF
44              Dial ( rename = ( doDia = lastDia ) ) ;
45          by pnr ;
46          drop visit ;
47          label doDia = 'First EyeScreen date'
48              lastDia = 'Last EyeScreen date' ;
49      run ;

```

NOTE: There were 221669 observations read from the data set WORK.DIAF.  
 NOTE: There were 221669 observations read from the data set WORK.DIAL.  
 NOTE: The data set DMDAT.DIAB has 221669 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time            0.09 seconds  
     cpu time             0.06 seconds

```

50
51      proc contents data = DMdat.DiaB varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):  
     real time            0.01 seconds  
     cpu time             0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 2.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
 NOTE: The SAS System used:  
     real time            3.38 seconds  
     cpu time             2.49 seconds

### 3.11.1 05-diab.lst

The SAS System

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----- visit -----			
	First	Repeat	All
	-----		
	N	N	N
-----			
All	221,669	501,387	723,056
Øjenscr-			
eenings-			
dato			
2009/1	1,72*	*	1,731
2009/2	1,467	81	1,548
2009/3	1,340	243	1,583
2009/4	1,519	271	1,790
2010/1	2,001	744	2,745
2010/2	1,941	1,080	3,021
2010/3	3,121	1,388	4,509
2010/4	3,632	1,689	5,321
2011/1	4,267	2,407	6,674

2011/2	2,851	2,427	5,278
2011/3	2,207	2,725	4,932
2011/4	2,362	3,651	6,013
2012/1	2,208	4,088	6,296
2012/2	1,969	3,699	5,668
2012/3	1,199	3,119	4,318
2012/4	1,051	3,458	4,509
2013/1	3,300	3,922	7,222
2013/2	5,827	4,464	10,291
2013/3	4,663	4,031	8,694
2013/4	6,627	5,126	11,753
2014/1	9,927	7,281	17,208
2014/2	12,067	9,213	21,280
2014/3	12,033	8,080	20,113
2014/4	11,220	9,685	20,905
2015/1	12,720	13,394	26,114
2015/2	11,875	17,238	29,113
2015/3	7,625	16,135	23,760
2015/4	10,421	20,309	30,730
2016/1	7,193	22,150	29,343
2016/2	6,874	26,237	33,111
2016/3	4,789	18,845	23,634
2016/4	4,951	24,360	29,311
2017/1	5,342	23,608	28,950
2017/2	6,432	26,362	32,794
2017/3	5,248	19,897	25,145
2017/4	7,056	27,012	34,068
2018/1	6,865	25,957	32,822
2018/2	6,698	32,278	38,976
2018/3	4,542	23,276	27,818
2018/4	4,769	28,780	33,549
2019/1	4,415	25,972	30,387
2019/2	3,327	26,702	30,029

-----

The SAS System

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The CONTENTS Procedure

Data Set Name	DMDAT.DIAB	Observations	221669
Member Type	DATA	Variables	3
Engine	V9	Indexes	0
Created	12/08/2020 14:52:22	Observation Length	32
Last Modified	12/08/2020 14:52:22	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	109
First Data Page	1
Max Obs per Page	2039
Obs in First Data Page	1995
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\diab.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	7MB
File Size (bytes)	7208960

Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	Personnummer
2	doDia	Num	8	DDMMYY10.	IS8601DA10.	First EyeScreen date
3	lastDia	Num	8	DDMMYY10.	IS8601DA10.	Last EyeScreen date

## 3.12 06-define

Collects records from the processed registers and defines a diabetes register and the relevant dates in it.

The inclusion date will be the smaller of the earliest dates from the data sets NPR, RMPS, DVDD, NHR and DIAB, and the inclusion criterion will be the one that triggered the inclusion.

Persons are only included in the register at the second of the dates from NPR and RMPS, and the corresponding inclusion criterion is therefore one of 9 possible

Diabetes type is derived as described above.

Also derives a diabetes register exclusively based on drug information only.

```
1                                "Program: 06-define.sas" 12:36 Saturday, August 29, 2020
```

```
NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
```

```
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
```

```
      Licensed to FORSKNING 1, Site 50800722.
```

```
NOTE: This session is executing on the X64_SR12R2 platform.
```

```
NOTE: Updated analytical products:
```

```
      SAS/STAT 14.3
```

```
NOTE: Additional host information:
```

```
      X64_SR12R2 WIN 6.3.9600 Server
```

```
NOTE: SAS initialization used:
```

```
      real time          0.09 seconds
```

```
      cpu time           0.10 seconds
```

```
NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.
```

```
NOTE: AUTOEXEC processing completed.
```

```
1      * Constants used ;
2      %put ini = &ini. end = &end. t1ins = &t1ins. ;
3      ini = '01JAN1996'd end = '31DEC2018'd t1ins = 30
4
5      * A data set of all persons mentioned in any of the source registers ;
6      data DMreg ;
7          label pnr      = 'Person-id'
8                sex      = 'Sex'
9                doBth    = 'Date of birth'
10               doDM     = 'Date of inclusion'
11               doLast    = 'Date of latest criterion'
12               doDth     = 'Date of death'
13               DMtp      = 'Type of DM'
14               dvdtyp    = 'Type from DVDD'
15               nprtyp    = 'Type from NPR'
16               only1     = 'Only one criterion'
17               hasdvd    = 'has DVDD record'
```

```

17         inCr   = 'Incl. criterion'
18         do2nd  = 'Date of 2nd of Ins/OAD/NPR'
19         doNPR  = 'Date of 1st NPR'
20         doNPR2 = 'Date of 2nd NPR'
21         doOAD  = 'Date of 1st OAD'
22         doOAD2 = 'Date of 2nd OAD'
23         doIns  = 'Date of 1st Ins'
24         doIns2 = 'Date of 2nd Ins'
25         doPod  = 'Date of Podiatry'
26         doDia  = 'Date of diaBase'
27         doDVD  = 'Date of DVDD' ;
28     merge DMdat.npr ( in = npr   keep = pnr doNPR doNPR2 nprtyp lastNPR )
29           DMdat.DVDD ( in = dvdd  keep = pnr doDVDD          dvdtyp lastDVDD )
30           DMdat.RMPS ( in = rmps  keep = pnr doOAD doOAD2    lastOAD
31                               doIns doIns2                    lastIns )
32           DMdat.FOOT ( in = foot  keep = pnr doPod          lastPod )
33           DMdat.DiaB ( in = diab  keep = pnr doDia          lastDia )
34           DMdat.pop  ( in = pop ) ;
35     by pnr ;
36     format doBth doDM doLast doDth
37           doNPR doDVDD doDia doPod doOAD doIns
38           doNPR2 doDVD          doOAD2 doIns2 do2nd
39           ddmmyy10. ;
40     * must be in the population and meet at least one criterion ;
41     if pop and ( npr or dvdd or rmps or foot or diab ) ;
42
43     * date in DVDD only used if the person meets no other criterion
44     so we define doDVD as the doDVDD to be used. This will have the
45     effect of putting the date of inclusion later than if we used the
46     DVDD date proper. But the DVDD date is too uncertain to be used
47     except when no other criterion met ;
48     if nmiss( doNPR, doOAD, doIns, doPod, doDia ) eq 5 then doDVD = doDVDD ;
49
50     *-----;
51     * Date of diagnosis as 2nd date of EITHER dispense OR NPR diagnosis:
52     1) find the date of the 1st and 2nd criterion met
53     2) record the criterion met at the earliest date ;
54     if doOAD eq min(doOAD ,doIns ,doNPR ) then do ;
55         do2nd = min(doOAD2,doIns ,doNPR ) ; fC = 'O' ; end ;
56     if doIns eq min(doOAD ,doIns ,doNPR ) then do ;
57         do2nd = min(doOAD ,doIns2,doNPR ) ; fC = 'I' ; end ;
58     if doNPR eq min(doOAD ,doIns ,doNPR ) then do ;
59         do2nd = min(doOAD ,doIns ,doNPR2) ; fC = 'N' ; end ;
60     * compute the type of 2nd criterion between OAD, Ins and NPR ;
61     if do2nd eq doOAD or do2nd eq doOAD2 then inCr = fC||"-O" ;
62     if do2nd eq doIns or do2nd eq doIns2 then inCr = fC||"-I" ;
63     if do2nd eq doNPR or do2nd eq doNPR2 then inCr = fC||"-N" ;
64     * Date of inclusion using 2nd record of dispense OR NPR ;
65     doDM = min( do2nd, doPod, doDia, doDVD ) ;
66     * Inclusion criterion based on 2nd purchase / 2nd NPR ;
67     if doDM le .z      then inCr = "---" ;
68     else do ;
69         if doDM eq doDia then inCr = "Dia" ;
70         if doDM eq doPod then inCr = "Pod" ;
71         if doDM eq doDVD then inCr = "DVD" ;
72     end ;
73
74     *-----;
75     * indicator of a single criterion met
76     and whether the person has a DVDD record ;
77     only1 = nmiss( do2nd, doPod, doDia, doDVD ) eq 3 ;
78     hasdvd = ~missing( doDVDD ) ;
79     * date of last criterion ;
80     doLast = max( lastNPR, lastDVDD, lastPod, lastOAD, lastIns, lastDia ) ;
81
82     *-----;
83     * Type definition using also the T1 definitions from NPR ;
84     if          dvdtyp eq 'T1'          or
85       ( nprtyp eq 'T1' and dvdtyp ne 'T2' ) or
86       .z < (doIns - doBth) < ( 365.25 * &t1ins. ) then DMtp = 'T1' ;

```

```

87         else DMtp = 'T2' ;
88         *-----;
89         * impossible to be T1 without insulin ;
90         if missing( doIns ) then DMtp = 'T2' ;
91         * finally, never override a DVDD/NPR verdict of T2 ;
92         if dvdtyp eq 'T2' or
93         ( nprtyp eq 'T2' and ~(dvdtyp eq 'T1') ) then DMtp = 'T2' ;
94     run ;

```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

32186 at 54:15      50556 at 55:15      32186 at 56:15      35651 at 57:15  
 32186 at 58:15      43799 at 59:15      28621 at 65:13      352418 at 86:18

NOTE: There were 243939 observations read from the data set DMDAT.NPR.

NOTE: There were 233082 observations read from the data set DMDAT.DVDD.

NOTE: There were 484172 observations read from the data set DMDAT.RMPS.

NOTE: There were 289157 observations read from the data set DMDAT.FOOT.

NOTE: There were 221669 observations read from the data set DMDAT.DIAB.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: The data set WORK.DMREG has 532201 observations and 32 variables.

NOTE: DATA statement used (Total process time):

real time            5.50 seconds  
 cpu time            3.64 seconds

```

95
96     title1 'The reconstructed diabetes register' ;
97     data DMdat.DMreg ( label = 'Reconstructed DM register for Denmark'
98                     keep = pnr sex DMtp dvdtyp nprtyp
99                     inCr only1 hasdvd
100                    doBth doDth doLast
101                    doDM doNPR doOAD doIns doPod doDia doDVD
102                    doNPR2 doOAD2 doIns2
103                    do2nd ) ;
104     set DMreg ;
105     * only sane results accepted ;
106     if doDM gt doBth and
107     doDM le &end. ;
108     run ;

```

NOTE: There were 532201 observations read from the data set WORK.DMREG.

NOTE: The data set DMDAT.DMREG has 485989 observations and 22 variables.

NOTE: DATA statement used (Total process time):

real time            0.28 seconds  
 cpu time            0.17 seconds

```

109
110     * temporary variables for the tabulation ;
111     data a ;
112     set DMdat.DMreg ;
113     * age at diagnosis ;
114     ageDM = ( doDM - doBth ) / 365.25 ;
115     a1 = floor( ageDM ) ;
116     * date of diagnosis moved to end 1995 ;
117     doDM = max( doDM , &ini.-1 ) + doDM - doDM ;
118     o1 = only1 * 100 ;
119     run ;

```

NOTE: There were 485989 observations read from the data set DMDAT.DMREG.

NOTE: The data set WORK.A has 485989 observations and 25 variables.

NOTE: DATA statement used (Total process time):

real time            0.29 seconds  
 cpu time            0.12 seconds

```

120
121     proc format ;
122     value onlyone 0='>1 crit' 1=' only 1' ;

```

NOTE: Format ONLYONE has been output.  
 123       value hasdvd 0='no DVDD' 1='in DVDD' ;  
 NOTE: Format HASDVD has been output.  
 124       run ;

NOTE: PROCEDURE FORMAT used (Total process time):  
       real time           0.00 seconds  
       cpu time           0.00 seconds

```

125
126       title2 'Inclusion using 2nd OAD/Ins/NPR (the official version)' ;
127       proc tabulate data = a ( where = (doDM > .z) )
128       missing noseps formchar = ' - - - ' ;
129       class sex doDth doDM inCr a1 ageDM
130       only1 hasdvd dvdtyp nprtyp DMtp ;
131       var o1 doIns ;
132       keylabel n = ' '
133       mean = ' ' ;
134       table all DMtp * doDM,
135       dvdtyp * ( all nprtyp ) * f=comma7.
136       / rts = 6 indent = 0 ;
137       table ( all DMtp ) *
138       ( all only1 ) *
139       ( all hasdvd ),
140       ( all inCr ) * f=comma7.
141       / rts = 20 indent = 2 ;
142       table DMtp * ( all doDM ),
143       all * ( n='        N' * f=comma7. mean * o1='%w1' * f=4.1 )
144       inCr * ( n='        N' * f=comma7. mean * o1='%w1' * f=3.0 )
145       / rts = 6 indent = 0 ;
146       table all doDM,
147       all * f = comma7.
148       inCr * f = comma7.
149       / rts = 6 condense ;
150       table all doDM,
151       all * f = comma7.
152       inCr * pctn< inCr all > * f = 4.1
153       / rts = 6 condense ;
154       table sex all="M+W"
155       ( sex all="M+W" ) * a1="dAge",
156       all * f = comma7.
157       inCr * f = 5.
158       / rts = 6 indent=0 condense ;
159       format doDM year4.
160       ageDM agr.
161       only1 onlyone.
162       hasdvd hasdvd. ;
163       run ;
```

NOTE: There were 485989 observations read from the data set WORK.A.

WHERE doDM>.Z;

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: The PROCEDURE TABULATE printed pages 1-9.

NOTE: PROCEDURE TABULATE used (Total process time):

      real time           0.64 seconds  
       cpu time           0.62 seconds

```

164
165       proc contents data = DMdat.DMreg varnum ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):

      real time           0.00 seconds  
       cpu time           0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 10.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:  
 real time 6.97 seconds  
 cpu time 4.74 seconds

### 3.12.1 06-define.lst

The following is a tabular documentation of the most important features of the constructed register.

The reconstructed diabetes register 12:36 Saturday, August 29, 2020 1  
 Inclusion using 2nd OAD/Ins/NPR (the official version)

----- Type from DVDD -----										
----- NA -----										
----- Type from NPR -----										
----- All NA T1 T2 All NA T1 T2 -----										
All	254,774	158,273	17,910	16,892	61,699	4,967	186	1,754	1,020	2,007
All	254,774	158,273	17,910	16,892	61,699	4,967	186	1,754	1,020	2,007
T1										
1995	8,114	76	95	7,943	.	293	.	35	258	.
1996	478	23	9	446	.	26	.	5	21	.
1997	431	12	10	409	.	34	.	4	30	.
1998	404	8	4	392	.	26	.	7	19	.
1999	324	13	6	305	.	30	.	7	23	.
2000	307	6	*	300	.	26	.	4	22	.
2001	282	4	8	270	.	23	.	4	19	.
2002	275	6	11	258	.	39	.	4	35	.
2003	249	5	7	237	.	40	.	8	32	.
2004	245	*	7	235	.	32	.	7	25	.
2005	238	7	15	216	.	35	.	6	29	.
2006	214	13	19	182	.	54	.	6	48	.
2007	240	8	14	218	.	36	.	6	30	.
2008	249	*	10	236	.	43	.	6	37	.
2009	282	8	23	251	.	46	.	9	37	.
2010	277	8	21	248	.	46	.	6	40	.
2011	303	6	27	270	.	51	.	7	44	.
2012	280	8	25	247	.	62	.	15	47	.
2013	350	6	41	303	.	54	.	8	46	.
2014	379	9	40	330	.	51	.	5	46	.
2015	402	6	31	365	.	45	.	*	43	.
2016	517	9	33	475	.	36	.	5	31	.
2017	655	13	55	587	.	33	*	4	28	.
2018	717	19	97	601	.	11	.	*	10	.
T2										
1995	46,398	18,122	6,397	465	21,414	332	*	185	.	145
1996	7,868	4,142	687	81	2,958	44	.	13	.	31
1997	6,984	3,767	614	51	2,552	65	.	28	.	37
1998	7,231	3,953	611	65	2,602	64	.	23	.	41
1999	7,467	4,229	632	64	2,542	72	*	35	.	35
2000	6,905	4,051	509	54	2,291	75	*	31	.	42
2001	6,649	3,957	498	55	2,139	85	*	37	*	46
2002	8,254	5,301	578	74	2,301	90	*	36	*	50
2003	8,578	5,656	599	85	2,238	113	4	49	*	58
2004	8,386	5,785	536	60	2,005	110	*	43	.	66
2005	6,575	4,582	454	56	1,483	124	*	61	*	60
2006	5,783	4,002	426	50	1,305	155	*	60	*	90
2007	6,226	4,452	395	48	1,331	145	5	53	*	85
2008	6,654	4,976	341	42	1,295	185	11	63	*	110
2009	6,673	5,111	355	33	1,174	187	9	69	.	109
2010	7,045	5,452	311	40	1,242	208	15	72	*	120
2011	9,686	7,974	325	56	1,331	240	12	96	*	130

2012	8,009	6,474	356	21	1,158	251	13	102	.	136
2013	6,894	5,545	319	17	1,013	269	17	116	*	135
2014	8,334	6,734	366	27	1,207	242	15	113	*	113
2015	11,412	9,486	440	30	1,456	239	15	97	4	123
2016	12,834	10,710	500	23	1,601	229	16	102	.	111
2017	13,438	11,294	495	36	1,613	194	22	74	*	97
2018	14,279	12,239	557	35	1,448	77	15	25	.	37

(Continued)

The reconstructed diabetes register 12:36 Saturday, August 29, 2020 2  
 Inclusion using 2nd OAD/Ins/NPR (the official version)

Type from DVDD										
T1					T2					
Type from NPR					Type from NPR					
All	NA	T1	T2	All	NA	T1	T2	All	NA	T1
All	26,470	71	4,376	20,760	1,263	199,778	92,640	17,736	4,016	85,386
T1										
1995	13,590	*	2,721	10,297	571	.	.	.	.	.
1996	696	.	70	587	39	.	.	.	.	.
1997	713	*	74	595	43	.	.	.	.	.
1998	694	*	82	579	30	.	.	.	.	.
1999	640	*	62	549	28	.	.	.	.	.
2000	655	*	62	561	31	.	.	.	.	.
2001	698	*	73	585	39	.	.	.	.	.
2002	686	.	82	559	45	.	.	.	.	.
2003	646	*	79	542	24	.	.	.	.	.
2004	628	*	66	521	39	.	.	.	.	.
2005	623	*	73	522	25	.	.	.	.	.
2006	671	.	75	563	33	.	.	.	.	.
2007	672	.	88	549	35	.	.	.	.	.
2008	640	.	91	523	26	.	.	.	.	.
2009	610	*	89	485	34	.	.	.	.	.
2010	574	*	77	468	27	.	.	.	.	.
2011	513	*	57	418	37	.	.	.	.	.
2012	477	*	68	384	24	.	.	.	.	.
2013	447	4	76	346	21	.	.	.	.	.
2014	415	.	73	321	21	.	.	.	.	.
2015	438	*	88	320	28	.	.	.	.	.
2016	347	*	61	264	21	.	.	.	.	.
2017	184	.	49	125	10	.	.	.	.	.
2018	93	6	17	67	*	.	.	.	.	.
T2										
1995	5	4	*	.	.	14,568	877	2,925	1,280	9,486
1996	.	.	.	.	.	3,541	424	507	134	2,476
1997	*	.	*	.	.	3,703	453	503	128	2,619
1998	.	.	.	.	.	4,494	639	593	189	3,073
1999	*	.	.	*	.	4,856	795	655	181	3,225
2000	6	.	*	*	*	5,138	958	629	156	3,395
2001	*	.	*	.	.	5,476	1,107	697	149	3,523
2002	*	*	.	.	*	6,962	1,816	765	152	4,229
2003	4	*	.	.	*	8,071	2,330	919	166	4,656
2004	6	.	*	*	*	8,523	2,951	856	163	4,553
2005	*	.	*	*	.	7,898	2,789	800	159	4,150
2006	*	.	.	.	*	8,099	2,965	821	160	4,153
2007	*	.	*	.	*	9,008	3,810	837	141	4,220
2008	7	*	*	*	*	10,597	5,100	885	137	4,475
2009	*	.	.	*	.	11,554	6,054	946	146	4,408
2010	4	*	*	*	.	13,246	7,770	863	151	4,462
2011	4	.	*	*	.	18,614	12,548	942	130	4,994
2012	7	*	*	*	*	14,629	10,173	718	93	3,645
2013	4	*	.	*	.	11,075	7,616	561	60	2,838
2014	11	*	*	4	4	8,696	5,958	467	54	2,217



2015	10	*	*	*	*	6,148	3,977	348	32	1,791
2016	9	*	*	4	*	5,585	3,871	269	20	1,425
2017	11	8	.	*	*	4,892	3,752	163	13	964
2018	18	12	*	*	*	4,405	3,907	67	22	409

The reconstructed diabetes register 12:36 Saturday, August 29, 2020 3  
 Inclusion using 2nd OAD/Ins/NPR (the official version)

-----									
Incl. criterion									
-----									
	All	DVD	Dia	I-I	I-N	I-O	N-I	N-N	
-----									
All									
All									
All	485,989	5,369	16,739	8,992	1,191	525	10,992	65,099	
no DVDD	254,774	.	9,175	6,439	617	354	4,998	25,935	
in DVDD	231,215	5,369	7,564	2,553	574	171	5,994	39,164	
>1 crit									
All	328,747	.	10,603	3,966	702	267	7,718	51,271	
no DVDD	134,339	.	5,284	1,777	230	129	2,320	15,053	
in DVDD	194,408	.	5,319	2,189	472	138	5,398	36,218	
only *									
All	157,242	5,369	6,136	5,026	489	258	3,274	13,828	
no DVDD	120,435	.	3,891	4,662	387	225	2,678	10,882	
in DVDD	36,807	5,369	2,245	364	102	33	596	2,946	
T1									
All									
All	43,734	.	226	1,731	334	18	5,325	28,421	
no DVDD	16,212	.	56	885	186	11	2,085	8,802	
in DVDD	27,522	.	170	846	148	7	3,240	19,619	
>1 crit									
All	36,058	.	226	1,099	197	11	4,005	23,681	
no DVDD	9,712	.	56	334	65	5	949	4,832	
in DVDD	26,346	.	170	765	132	6	3,056	18,849	
only *									
All	7,676	.	.	632	137	7	1,320	4,740	
no DVDD	6,500	.	.	551	121	6	1,136	3,970	
in DVDD	1,176	.	.	81	16	*	184	770	
T2									
All									
All	442,255	5,369	16,513	7,261	857	507	5,667	36,678	
no DVDD	238,562	.	9,119	5,554	431	343	2,913	17,133	
in DVDD	203,693	5,369	7,394	1,707	426	164	2,754	19,545	
>1 crit									
All	292,689	.	10,377	2,867	505	256	3,713	27,590	
no DVDD	124,627	.	5,228	1,443	165	124	1,371	10,221	
in DVDD	168,062	.	5,149	1,424	340	132	2,342	17,369	
only *									
All	149,566	5,369	6,136	4,394	352	251	1,954	9,088	
no DVDD	113,935	.	3,891	4,111	266	219	1,542	6,912	
in DVDD	35,631	5,369	2,245	283	86	32	412	2,176	

(Continued)

The reconstructed diabetes register 12:36 Saturday, August 29, 2020 4  
 Inclusion using 2nd OAD/Ins/NPR (the official version)

-----					
Incl. criterion					
-----					
	N-O	O-I	O-N	O-O	Pod
-----					
All					
All					
All	24,763	1,462	13,168	256,744	80,945
no DVDD	11,549	903	4,647	138,611	51,546
in DVDD	13,214	559	8,521	118,133	29,399

>1 crit						
All	17,851	785	10,237	164,755	60,592	
no DVDD	6,343	330	2,748	66,897	33,228	
in DVDD	11,508	455	7,489	97,858	27,364	
only *						
All	6,912	677	2,931	91,989	20,353	
no DVDD	5,206	573	1,899	71,714	18,318	
in DVDD	1,706	104	1,032	20,275	2,035	
T1						
All						
All	608	107	749	2,766	3,449	
no DVDD	289	50	186	1,595	2,067	
in DVDD	319	57	563	1,171	1,382	
>1 crit						
All	475	82	641	2,192	3,449	
no DVDD	181	30	113	1,080	2,067	
in DVDD	294	52	528	1,112	1,382	
only *						
All	133	25	108	574	.	
no DVDD	108	20	73	515	.	
in DVDD	25	5	35	59	.	
T2						
All						
All	24,155	1,355	12,419	253,978	77,496	
no DVDD	11,260	853	4,461	137,016	49,479	
in DVDD	12,895	502	7,958	116,962	28,017	
>1 crit						
All	17,376	703	9,596	162,563	57,143	
no DVDD	6,162	300	2,635	65,817	31,161	
in DVDD	11,214	403	6,961	96,746	25,982	
only *						
All	6,779	652	2,823	91,415	20,353	
no DVDD	5,098	553	1,826	71,199	18,318	
in DVDD	1,681	99	997	20,216	2,035	

The reconstructed diabetes register

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Inclusion using 2nd OAD/Ins/NPR (the official version)

-----													
Incl. criterion													
-----													
All		DVD		Dia		I-I		I-N		I-O		N-I	
N %w1		N %w1		N %w1		N %w1		N %w1		N %w1		N	
-----													
T1													
All	43,734	17.6	.	.	226	0	1,731	37	334	41	18	39	5,325
1995	21,997	10.3	.	.	.	.	677	28	31	26	*	100	1,650
1996	1,200	17.7	.	.	.	.	98	41	10	40	*	0	265
1997	1,178	15.2	.	.	.	.	56	46	11	55	*	100	280
1998	1,124	15.8	.	.	.	.	56	50	12	25	.	.	247
1999	994	15.4	.	.	.	.	55	47	13	31	*	0	200
2000	988	17.3	.	.	.	.	47	34	12	58	*	100	199
2001	1,003	15.4	.	.	.	.	40	40	16	44	.	.	216
2002	1,000	13.9	.	.	.	.	44	45	19	53	.	.	195
2003	935	17.4	.	.	.	.	36	44	10	80	.	.	138
2004	905	15.1	.	.	.	.	37	32	15	27	*	0	180
2005	896	20.2	.	.	.	.	34	50	16	50	.	.	168
2006	939	21.8	.	.	.	.	41	59	9	44	.	.	153
2007	948	21.9	.	.	.	.	49	45	16	44	.	.	144
2008	932	24.8	.	.	.	.	46	35	17	47	*	50	162
2009	938	24.0	.	.	12	0	43	44	8	38	*	0	148
2010	897	21.6	.	.	14	0	40	35	14	43	*	0	127
2011	867	25.7	.	.	23	0	39	28	9	44	*	0	107
2012	819	24.1	.	.	24	0	44	45	9	0	.	.	88
2013	851	29.3	.	.	22	0	41	15	9	11	.	.	103
2014	845	33.8	.	.	24	0	41	29	14	21	.	.	100
2015	885	32.1	.	.	29	0	35	26	19	32	*	0	108
2016	900	42.8	.	.	22	0	49	37	14	57	*	0	85

2017	872	57.2	.	.	31	0	42	62	17	47	*	100	119
2018	821	68.8	.	.	25	0	41	76	14	71	*	100	143
T2													
All	442,255	33.8	5,369	100	16,513	37	7,261	61	857	41	507	50	5,667
1995	61,303	27.6	52	100	.	.	1,801	65	28	32	18	44	1,006
1996	11,453	34.3	11	100	.	.	253	64	14	43	5	40	151
1997	10,753	32.1	7	100	.	.	161	63	11	27	9	22	140
1998	11,789	30.3	15	100	.	.	139	52	19	37	12	50	131
1999	12,396	30.9	14	100	.	.	180	56	24	33	10	50	169
2000	12,124	31.4	58	100	.	.	170	59	22	32	11	55	187
2001	12,211	30.3	44	100	.	.	186	51	29	31	14	36	172
2002	15,309	31.1	52	100	.	.	174	45	26	15	13	38	207
2003	16,766	31.1	75	100	.	.	169	51	47	32	15	33	192
2004	17,025	32.0	95	100	.	.	187	52	40	45	17	53	239
2005	14,599	36.2	150	100	.	.	205	62	41	44	15	67	223
2006	14,039	36.2	198	100	.	.	248	67	47	40	19	37	209
2007	15,381	34.6	250	100	.	.	254	63	38	50	25	52	209
2008	17,443	33.9	441	100	.	.	292	63	39	46	37	38	235
2009	18,416	31.5	403	100	255	12	290	63	37	43	26	50	198
2010	20,503	30.2	575	100	334	9	256	59	43	37	29	38	204
2011	28,544	29.3	587	100	569	16	266	51	31	42	17	59	203
2012	22,896	29.8	489	100	286	11	255	58	35	26	36	39	200
2013	18,242	32.8	501	100	1,299	40	311	53	49	31	31	55	220
2014	17,283	35.3	264	100	3,069	43	281	60	34	41	27	63	266
2015	17,809	37.0	48	100	3,245	42	270	55	49	53	32	44	212
2016	18,657	40.0	90	100	2,406	33	278	54	45	51	27	67	220
2017	18,535	46.7	116	100	2,519	37	301	64	38	42	30	60	248
2018	18,779	60.9	834	100	2,531	41	334	76	71	62	32	69	226

(Continued)

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Inclusion using 2nd OAD/Ins/NPR (the official version)

Incl. criterion														
	N-I		N-N		N-O		O-I		O-N		O-O		Pod	
	%w1	N	%w1	N	%w1	N	%w1	N	%w1	N	%w1	N	%w1	
T1														
All	25	28,421	17	608	22	107	23	749	14	2,766	21	3,449	0	
1995	20	15,400	9	238	28	16	38	34	15	832	23	3,117	0	
1996	16	512	12	30	23	9	22	32	16	203	25	40	0	
1997	13	541	11	29	7	*	0	32	16	191	21	36	0	
1998	18	544	11	35	20	5	20	34	18	159	17	32	0	
1999	17	511	11	28	14	*	0	28	18	122	21	33	0	
2000	22	519	13	17	12	*	33	27	15	134	20	29	0	
2001	15	541	12	16	19	4	25	31	16	120	19	19	0	
2002	14	557	11	18	22	4	25	38	5	95	16	30	0	
2003	22	552	13	20	15	*	33	32	25	106	25	38	0	
2004	17	497	12	17	12	4	0	41	22	93	24	20	0	
2005	24	535	17	17	35	4	25	31	23	85	14	6	0	
2006	29	593	17	15	20	*	100	43	9	79	27	4	0	
2007	34	594	18	20	20	8	0	34	9	81	20	*	0	
2008	35	565	22	14	7	4	0	39	23	82	17	*	0	
2009	36	606	22	14	21	5	0	35	17	65	12	*	0	
2010	28	613	20	12	8	*	0	22	5	51	27	*	0	
2011	29	591	28	13	38	*	0	31	*	47	11	*	0	
2012	33	554	26	11	9	4	25	25	0	55	5	5	0	
2013	40	581	33	13	0	5	20	31	6	39	10	7	0	
2014	39	589	37	11	27	6	33	21	10	32	16	7	0	
2015	33	607	37	9	11	*	0	34	6	33	9	7	0	
2016	45	660	47	5	20	*	50	31	10	27	15	*	0	
2017	52	612	63	*	0	*	67	19	32	21	43	6	0	
2018	79	547	72	5	60	5	40	24	33	14	29	*	0	
T2														
All	34	36,678	25	24,155	28	1,355	48	12,419	23	253,978	36	77,496	26	

1995	31	11,945	23	4,861	33	43	51	406	25	19,486	38	21,657	17
1996	26	1,149	25	952	31	14	64	334	25	6,331	36	2,239	35
1997	24	1,132	23	830	26	27	67	318	27	5,688	33	2,430	34
1998	22	1,300	22	870	23	23	61	406	23	6,281	32	2,593	33
1999	21	1,329	22	880	24	20	45	372	23	6,465	33	2,933	32
2000	27	1,316	22	863	27	24	46	446	26	6,485	32	2,542	34
2001	30	1,342	23	938	24	36	47	487	23	7,281	30	1,682	38
2002	20	1,253	22	840	23	36	33	507	19	7,155	30	5,046	37
2003	27	1,430	22	984	24	43	42	574	17	8,143	30	5,094	37
2004	33	1,235	24	921	26	49	41	605	19	8,607	33	5,030	32
2005	39	1,205	32	911	33	47	51	580	25	8,689	37	2,533	33
2006	41	1,412	30	953	28	56	55	574	26	9,806	36	517	35
2007	48	1,266	28	1,098	26	68	53	592	28	10,959	34	622	42
2008	44	1,351	27	1,070	26	80	53	617	22	12,632	32	649	45
2009	38	1,188	27	1,106	22	73	45	617	24	13,732	30	491	42
2010	39	1,026	24	1,170	22	90	40	671	18	15,547	29	558	39
2011	28	915	23	1,058	19	80	41	654	17	17,655	29	6,509	28
2012	32	772	25	778	26	63	48	641	17	15,861	30	3,480	20
2013	36	722	28	597	25	80	41	557	21	11,664	32	2,211	18
2014	37	659	22	542	26	72	49	504	20	9,864	36	1,701	16
2015	35	699	27	499	27	82	44	550	17	10,360	40	1,763	17
2016	42	701	30	509	39	74	49	543	24	11,867	46	1,897	16
2017	42	671	34	489	41	87	52	482	29	11,746	54	1,808	21
2018	58	660	47	436	58	88	59	382	47	11,674	68	1,511	25

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	Incl. criterion									
	All	DVD	Dia	I-I	I-N	I-O	N-I	N-N	N-O	O-I
All	485,989	5,369	16,739	8,992	1,191	525	10,992	65,099	24,763	1,462
Date of inclusion										
1995	83,300	52	.	2,478	59	20	2,656	27,345	5,099	59
1996	12,653	11	.	351	24	6	416	1,661	982	23
1997	11,931	7	.	217	22	10	420	1,673	859	28
1998	12,913	15	.	195	31	12	378	1,844	905	28
1999	13,390	14	.	235	37	11	369	1,840	908	23
2000	13,112	58	.	217	34	12	386	1,835	880	27
2001	13,214	44	.	226	45	14	388	1,883	954	40
2002	16,309	52	.	218	45	13	402	1,810	858	40
2003	17,701	75	.	205	57	15	330	1,982	1,004	46
2004	17,930	95	.	224	55	18	419	1,732	938	53
2005	15,495	150	.	239	57	15	391	1,740	928	51
2006	14,978	198	.	289	56	19	362	2,005	968	58
2007	16,329	250	.	303	54	25	353	1,860	1,118	76
2008	18,375	441	.	338	56	39	397	1,916	1,084	84
2009	19,354	403	267	333	45	27	346	1,794	1,120	78
2010	21,400	575	348	296	57	30	331	1,639	1,182	92
2011	29,411	587	592	305	40	18	310	1,506	1,071	83
2012	23,715	489	310	299	44	36	288	1,326	789	67
2013	19,093	501	1,321	352	58	31	323	1,303	610	85
2014	18,128	264	3,093	322	48	27	366	1,248	553	78
2015	18,694	48	3,274	305	68	34	320	1,306	508	84
2016	19,557	90	2,428	327	59	29	305	1,361	514	76
2017	19,407	116	2,550	343	55	31	367	1,283	490	90
2018	19,600	834	2,556	375	85	33	369	1,207	441	93

(Continued)

	Incl. criterion		
	0-N	0-0	Pod
All	13,168	256,744	80,945
Date of inc- lus- ion			
1995	440	20,318	24,774
1996	366	6,534	2,279
1997	350	5,879	2,466
1998	440	6,440	2,625
1999	400	6,587	2,966
2000	473	6,619	2,571
2001	518	7,401	1,701
2002	545	7,250	5,076
2003	606	8,249	5,132
2004	646	8,700	5,050
2005	611	8,774	2,539
2006	617	9,885	521
2007	626	11,040	624
2008	656	12,714	650
2009	652	13,797	492
2010	693	15,598	559
2011	685	17,702	6,512
2012	666	15,916	3,485
2013	588	11,703	2,218
2014	525	9,896	1,708
2015	584	10,393	1,770
2016	574	11,894	1,900
2017	501	11,767	1,814
2018	406	11,688	1,513

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		Incl. criterion												
		DVD	Dia	I-I	I-N	I-O	N-I	N-N	N-O	O-I	O-N	O-O	Pod	
All		PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	
Date of inclusion	All	485,989	1.1	3.4	1.9	0.2	0.1	2.3	13.4	5.1	0.3	2.7	52.8	16.7
1995	83,300	0.1	.	3.0	0.1	0.0	3.2	32.8	6.1	0.1	0.5	24.4	29.7	
1996	12,653	0.1	.	2.8	0.2	0.0	3.3	13.1	7.8	0.2	2.9	51.6	18.0	
1997	11,931	0.1	.	1.8	0.2	0.1	3.5	14.0	7.2	0.2	2.9	49.3	20.7	
1998	12,913	0.1	.	1.5	0.2	0.1	2.9	14.3	7.0	0.2	3.4	49.9	20.3	
1999	13,390	0.1	.	1.8	0.3	0.1	2.8	13.7	6.8	0.2	3.0	49.2	22.2	
2000	13,112	0.4	.	1.7	0.3	0.1	2.9	14.0	6.7	0.2	3.6	50.5	19.6	
2001	13,214	0.3	.	1.7	0.3	0.1	2.9	14.3	7.2	0.3	3.9	56.0	12.9	
2002	16,309	0.3	.	1.3	0.3	0.1	2.5	11.1	5.3	0.2	3.3	44.5	31.1	
2003	17,701	0.4	.	1.2	0.3	0.1	1.9	11.2	5.7	0.3	3.4	46.6	29.0	
2004	17,930	0.5	.	1.2	0.3	0.1	2.3	9.7	5.2	0.3	3.6	48.5	28.2	
2005	15,495	1.0	.	1.5	0.4	0.1	2.5	11.2	6.0	0.3	3.9	56.6	16.4	
2006	14,978	1.3	.	1.9	0.4	0.1	2.4	13.4	6.5	0.4	4.1	66.0	3.5	
2007	16,329	1.5	.	1.9	0.3	0.2	2.2	11.4	6.8	0.5	3.8	67.6	3.8	
2008	18,375	2.4	.	1.8	0.3	0.2	2.2	10.4	5.9	0.5	3.6	69.2	3.5	
2009	19,354	2.1	1.4	1.7	0.2	0.1	1.8	9.3	5.8	0.4	3.4	71.3	2.5	
2010	21,400	2.7	1.6	1.4	0.3	0.1	1.5	7.7	5.5	0.4	3.2	72.9	2.6	
2011	29,411	2.0	2.0	1.0	0.1	0.1	1.1	5.1	3.6	0.3	2.3	60.2	22.1	
2012	23,715	2.1	1.3	1.3	0.2	0.2	1.2	5.6	3.3	0.3	2.8	67.1	14.7	

2013	19,093	2.6	6.9	1.8	0.3	0.2	1.7	6.8	3.2	0.4	3.1	61.3	11.6
2014	18,128	1.5	17.1	1.8	0.3	0.1	2.0	6.9	3.1	0.4	2.9	54.6	9.4
2015	18,694	0.3	17.5	1.6	0.4	0.2	1.7	7.0	2.7	0.4	3.1	55.6	9.5
2016	19,557	0.5	12.4	1.7	0.3	0.1	1.6	7.0	2.6	0.4	2.9	60.8	9.7
2017	19,407	0.6	13.1	1.8	0.3	0.2	1.9	6.6	2.5	0.5	2.6	60.6	9.3
2018	19,600	4.3	13.0	1.9	0.4	0.2	1.9	6.2	2.3	0.5	2.1	59.6	7.7

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Incl. criterion													
	All	DVD	Dia	I-I	I-N	I-O	N-I	N-N	N-O	O-I	O-N	O-O	Pod
M	268,279	2858	8702	4573	697	272	6517	38347	14574	851	8145	148E3	35180
W	217,710	2511	8037	4419	494	253	4475	26752	10189	611	5023	109E3	45765
M+W	485,989	5369	16739	8992	1191	525	10992	65099	24763	1462	13168	257E3	80945
M													
0	32	.	.	*	.	.	4	24	.	.	.	*	.
*	140	.	.	*	.	.	17	120	.	.	.	.	*
*	170	.	.	*	.	.	23	145	.	.	.	.	.
*	189	.	.	*	.	.	23	164	.	.	.	.	*
4	239	.	.	*	*	.	26	209	.	.	.	*	*
5	224	.	.	*	.	.	29	192	.	.	.	.	*
6	250	.	.	*	*	.	28	219	.	.	.	.	*
7	277	.	.	*	.	.	32	241	.	.	.	*	*
8	315	.	.	*	.	.	31	281	*	.	.	.	.
9	382	.	.	*	.	.	39	335	*	.	.	*	*
10	402	.	.	4	.	.	48	345	*	.	.	*	*
11	436	.	.	7	.	.	50	373	.	.	.	*	5
12	546	.	.	*	*	.	73	459	*	.	.	4	*
13	588	*	*	5	*	.	59	507	*	.	*	*	9
14	607	.	*	5	*	.	65	508	4	.	*	7	13
15	524	.	.	9	.	.	44	445	*	.	*	5	16
16	432	*	.	8	*	.	41	346	4	.	4	4	23
17	473	*	.	8	*	.	38	384	4	.	9	9	19
18	440	.	8	8	*	.	52	338	7	.	6	4	16
19	454	*	*	12	*	.	29	361	9	.	8	19	11
20	478	4	5	17	*	.	41	357	11	.	8	18	14
21	446	*	4	13	*	.	46	321	13	.	4	33	10
22	543	*	7	17	5	.	48	377	13	.	13	42	19
23	587	*	15	14	*	.	47	388	22	*	10	64	20
24	558	*	8	21	*	*	43	374	19	.	15	47	27
25	652	4	10	17	*	.	53	399	25	.	26	83	32
26	687	*	10	26	6	.	47	421	32	*	22	99	22
27	721	*	7	24	4	.	63	421	27	*	20	122	30
28	799	*	7	32	4	.	43	457	40	*	40	145	27
29	850	*	6	33	4	.	48	440	44	*	48	191	33
30	912	*	15	32	*	*	64	429	51	*	45	230	39
31	989	*	15	27	5	*	70	450	55	.	49	265	49
32	1,041	*	21	30	*	.	64	431	61	*	46	307	73
33	1,211	4	23	28	7	*	74	505	84	*	55	361	66
34	1,277	5	25	26	4	*	74	523	80	4	49	413	71
35	1,494	9	30	43	*	*	91	562	88	8	71	516	72
36	1,626	7	20	51	7	*	86	544	118	*	79	622	89
37	1,788	6	21	30	7	*	86	612	117	12	88	692	114
38	1,894	9	32	62	4	.	103	566	126	5	111	773	103
39	2,152	9	40	59	11	*	93	589	141	6	132	936	134
40	2,343	14	40	46	5	*	90	651	171	10	120	1053	142
41	2,627	16	49	65	16	*	87	680	168	10	128	1220	187
42	2,820	12	55	61	7	*	97	657	187	10	146	1369	216
43	3,103	17	56	68	8	*	104	652	209	9	162	1558	259
44	3,480	18	68	82	6	5	105	719	236	13	166	1780	282
45	3,567	21	81	62	12	5	108	666	236	10	190	1880	296
46	4,030	28	92	71	9	*	101	730	258	14	177	2172	375
47	4,347	34	125	81	13	4	131	695	283	10	177	2421	373
48	4,578	28	122	77	14	4	122	716	316	13	191	2558	417
49	5,035	25	126	106	15	*	112	755	361	25	213	2807	489

50	5,337	34	133	93	20	4	137	720	356	19	201	3116	504
51	5,697	44	155	83	13	*	122	752	358	18	220	3382	547
52	5,963	46	164	100	20	5	130	754	397	18	231	3451	647
53	6,078	52	156	93	16	6	108	719	387	22	246	3618	655
54	6,322	42	170	94	17	10	119	775	373	22	240	3777	683
55	6,504	59	173	90	12	7	122	768	421	19	221	3874	738
56	6,738	71	192	110	17	7	109	755	405	16	229	4035	792
57	6,914	82	180	92	16	5	117	697	388	19	229	4237	852
58	7,078	74	230	85	13	8	113	688	436	20	255	4310	846
59	7,091	66	206	96	19	7	121	661	407	19	236	4375	878
60	7,533	76	233	95	12	9	114	671	414	24	244	4633	1008
61	7,582	78	231	108	23	5	108	590	422	28	256	4771	962
62	7,562	85	241	100	20	7	123	611	396	23	210	4674	1072
63	7,545	91	275	108	19	9	127	577	364	27	203	4683	1062
64	7,568	72	296	101	17	11	123	593	404	30	209	4592	1120
65	7,493	99	292	114	16	8	116	509	377	22	213	4628	1099
66	7,188	121	277	103	13	7	100	506	354	26	172	4323	1186
67	7,262	98	312	91	15	5	119	502	340	23	179	4330	1248
68	6,858	100	306	105	19	7	106	433	367	14	167	4056	1178
69	6,596	78	357	102	13	6	97	413	290	22	159	3893	1166
70	6,412	101	323	107	10	10	89	375	304	16	132	3877	1068
71	6,026	73	304	98	15	6	95	330	274	18	130	3602	1081
72	5,680	79	255	92	20	6	89	356	281	18	119	3327	1038
73	5,503	79	266	103	17	*	75	362	262	22	106	3199	1009
74	5,157	82	244	72	13	5	83	266	236	18	107	3086	945
75	4,669	75	206	82	10	5	66	293	221	17	83	2717	894
76	4,508	78	173	72	11	5	81	243	221	14	69	2691	850
77	4,042	68	189	62	5	7	65	217	229	18	69	2339	774
78	3,759	67	160	53	13	*	65	176	180	9	60	2212	761
79	3,306	59	139	68	5	8	49	172	160	14	50	1947	635
80	3,140	44	152	61	5	5	47	154	160	14	55	1825	618
81	2,601	49	101	43	8	*	47	122	107	10	46	1551	516
82	2,352	45	95	54	6	6	44	94	109	6	31	1429	433
83	2,003	38	72	42	4	*	38	84	94	9	35	1213	373
84	1,741	34	68	26	6	*	24	72	93	5	24	1008	378
85	1,560	31	56	32	4	6	30	74	70	9	16	919	313
86	1,231	24	48	30	*	*	23	45	79	5	10	730	232
87	1,032	18	33	26	*	6	13	35	58	6	9	615	210
88	826	12	27	26	.	*	15	37	40	4	16	473	174
89	584	8	19	12	*	*	12	18	36	*	9	340	125
90	459	10	17	17	.	.	10	10	15	4	*	269	106
91	323	4	9	6	*	.	12	12	17	.	*	191	70
92	232	6	11	*	.	.	7	7	15	*	5	131	44
93	145	*	*	*	.	*	7	5	11	*	.	89	22
94	119	*	*	4	.	*	*	5	6	.	4	69	22
95	88	*	4	*	*	.	4	*	6	*	*	49	14
96	47	.	*	*	.	.	.	*	*	.	*	25	14
97	28	*	.	.	.	.	.	*	.	.	*	19	4
98	21	.	*	*	.	.	.	*	*	.	.	14	*
99	13	.	.	*	*	.	*	.	*	.	.	8	*
100	*	.	.	.	.	.	.	.	.	.	.	.	*
101	*	.	.	.	.	.	.	.	.	.	.	*	.
102	*	.	.	*	.	.	.	.	.	.	.	*	.
103	*	.	.	.	.	.	.	.	.	.	.	*	.
W													
0	33	.	.	*	*	.	*	26	.	.	.	.	*
*	131	.	.	*	.	.	16	111	.	.	.	*	.
*	134	.	.	.	.	.	17	117	.	.	.	.	.
*	165	*	.	*	.	.	13	148	.	.	.	.	*
4	200	*	.	*	.	.	27	171	.	.	.	.	.
5	252	.	.	*	.	.	27	222	.	.	.	.	*
6	244	.	.	*	.	.	30	212	.	.	.	.	.
7	314	.	.	.	*	.	44	266	*	.	.	*	.
8	308	.	.	*	*	.	40	260	*	.	.	*	*
9	411	*	.	*	*	.	69	335	.	.	.	*	*
10	401	*	.	5	.	.	52	335	.	.	.	5	*
11	490	.	.	6	*	.	64	408	*	.	.	5	4
12	519	.	.	4	*	.	49	444	*	.	.	11	6
13	438	*	.	7	*	.	41	364	*	.	.	10	11
14	424	*	.	*	.	.	51	319	9	.	*	33	7

15	458	.	.	9	*	.	27	322	8	.	*	80	8
16	442	.	*	7	.	.	33	278	7	.	5	100	11
17	474	.	4	5	*	.	34	265	10	.	5	131	17
18	321	*	10	9	.	.	26	245	*	.	*	7	17
19	351	*	7	7	*	.	37	262	5	.	*	11	13
20	375	4	9	22	.	.	29	263	11	.	*	15	20
21	410	7	19	17	*	*	27	275	12	.	4	24	21
22	460	*	12	27	*	.	41	303	9	.	5	32	26
23	456	*	20	18	6	.	48	286	11	*	6	24	34
24	513	*	29	28	9	.	36	319	10	.	*	45	33
25	501	8	20	27	4	.	42	274	16	.	*	53	54
26	603	10	16	52	*	.	47	342	21	*	9	57	45
27	591	9	33	37	8	.	38	327	10	*	7	61	60
28	575	5	35	48	6	.	35	280	17	.	8	79	62
29	674	9	36	52	*	.	41	321	26	4	10	89	83
30	695	8	34	55	6	*	50	318	26	.	13	90	94
31	768	10	44	75	7	*	50	325	30	*	19	103	103
32	812	9	47	84	10	.	54	347	23	*	23	120	94
33	827	7	63	72	5	*	57	310	31	*	10	133	135
34	966	18	65	92	7	*	52	340	40	.	20	174	157
35	997	12	61	89	5	.	48	339	38	*	25	207	172
36	1,036	16	61	80	7	*	54	342	59	5	22	211	178
37	1,133	12	91	88	5	*	49	388	57	*	23	220	197
38	1,212	12	101	86	12	*	52	326	78	8	31	265	239
39	1,377	4	113	90	4	*	61	398	82	8	35	311	270
40	3,666	17	61	101	*	10	38	322	315	*	69	2526	202
41	2,263	9	46	90	4	*	32	298	132	4	80	1332	234
42	2,220	19	46	66	7	*	27	326	139	5	84	1270	230
43	2,173	19	64	52	*	*	42	331	144	11	84	1129	295
44	2,310	18	62	63	5	*	44	369	141	4	87	1229	287
45	2,492	22	69	62	6	4	35	367	122	5	97	1391	312
46	2,533	22	64	58	10	*	51	357	129	9	105	1364	362
47	2,781	13	71	66	8	*	42	374	162	5	108	1530	400
48	2,932	20	90	70	*	*	60	345	182	11	101	1655	394
49	3,129	24	97	52	10	*	52	374	172	9	122	1740	474
50	3,411	23	111	59	7	6	51	363	203	13	121	1944	510
51	3,772	25	131	70	7	5	65	368	198	15	129	2159	600
52	3,864	18	123	57	12	5	67	408	243	12	138	2163	618
53	4,097	34	135	60	13	4	70	441	210	16	141	2294	679
54	4,133	40	140	48	6	*	52	437	260	11	140	2248	749
55	4,355	41	148	59	7	*	66	426	225	11	140	2428	801
56	4,440	34	165	50	7	8	51	413	240	10	134	2442	886
57	4,464	46	147	57	9	7	71	433	215	11	137	2470	861
58	4,679	43	149	55	4	4	62	423	258	16	127	2634	904
59	4,670	48	147	54	8	*	64	415	218	14	157	2577	967
60	4,984	65	201	57	9	*	74	403	268	13	120	2727	1044
61	5,056	60	185	64	8	5	67	429	244	12	140	2760	1082
62	5,218	65	204	56	8	6	74	422	246	13	142	2851	1131
63	5,236	59	193	66	12	6	61	438	252	13	128	2802	1206
64	5,427	78	185	75	9	4	67	379	242	17	133	3043	1195
65	5,529	54	202	74	13	*	75	380	266	12	127	3034	1289
66	5,518	77	211	87	9	5	79	375	226	12	135	2954	1348
67	5,499	67	248	79	12	*	80	385	227	18	119	2937	1324
68	5,484	77	241	60	13	5	65	383	217	10	128	2899	1386
69	5,426	86	269	77	10	4	70	338	233	12	115	2776	1436
70	5,356	86	258	73	9	11	83	342	196	17	90	2811	1380
71	5,245	76	260	56	11	7	61	308	218	16	98	2797	1337
72	5,332	73	246	85	9	7	72	317	201	19	102	2789	1412
73	5,149	71	226	80	5	6	67	296	222	16	88	2765	1307
74	4,930	77	224	81	5	5	68	280	207	9	96	2610	1268
75	4,766	71	189	72	9	7	73	246	201	9	76	2484	1329
76	4,540	61	192	61	14	*	52	272	191	14	80	2379	1222
77	4,183	52	161	49	5	7	63	223	174	19	67	2151	1212
78	4,066	66	156	64	9	7	59	206	158	21	76	2092	1152
79	3,893	57	125	61	7	6	72	159	159	9	55	2032	1151
80	3,600	54	143	68	5	11	56	164	144	12	43	1885	1015
81	3,473	55	140	71	*	6	53	152	154	8	42	1813	976
82	3,032	48	105	51	4	5	38	117	166	9	45	1583	861
83	2,844	59	83	71	5	6	43	115	130	8	30	1495	799
84	2,489	32	71	53	4	5	44	102	135	6	22	1274	741



85	2,227	22	74	41	*	5	41	92	113	8	25	1184	621
86	1,927	32	56	40	4	*	32	84	86	7	21	1027	536
87	1,644	26	48	33	*	5	23	60	78	5	24	909	431
88	1,345	20	37	33	*	*	27	41	65	6	17	713	380
89	1,094	23	31	24	.	*	19	39	60	7	9	567	313
90	859	12	24	19	*	*	17	16	42	4	16	473	234
91	717	9	15	23	*	.	13	17	27	*	6	376	227
92	499	5	6	9	*	*	4	18	18	5	4	286	140
93	397	6	7	14	*	*	12	9	19	*	4	215	106
94	318	7	14	5	*	*	7	7	15	*	*	169	87
95	179	*	5	8	*	*	*	4	5	*	.	103	43
96	135	5	4	5	*	*	*	5	5	*	*	66	38
97	84	.	.	*	.	.	4	*	5	.	.	51	21
98	56	*	*	*	*	.	*	*	4	*	.	25	17
99	36	*	.	*	.	.	*	*	*	.	.	17	9
100	24	.	.	.	.	.	.	*	*	*	.	11	10
101	11	.	.	.	.	.	.	.	*	*	.	5	*
102	4	.	.	.	.	.	.	.	.	.	.	*	*
103	*	.	.	.	.	.	.	.	.	.	.	*	.
104	*	.	.	.	.	.	.	.	.	.	.	*	*
105	*	.	.	.	.	.	.	.	.	.	.	*	.
M+W													
0	65	.	.	5	*	.	7	50	.	.	.	*	*
*	271	.	.	5	.	.	33	231	.	.	.	*	*
*	304	.	.	*	.	.	40	262	.	.	.	.	.
*	354	*	.	*	.	.	36	312	.	.	.	.	*
4	439	*	.	*	*	.	53	380	.	.	.	*	*
5	476	.	.	4	.	.	56	414	.	.	.	.	*
6	494	.	.	*	*	.	58	431	.	.	.	.	*
7	591	.	.	*	*	.	76	507	*	.	.	*	*
8	623	.	.	5	*	.	71	541	*	.	.	*	*
9	793	*	.	6	*	.	108	670	*	.	.	*	4
10	803	*	.	9	.	.	100	680	*	.	.	6	5
11	926	.	.	13	*	.	114	781	*	.	.	6	9
12	1,065	.	.	6	4	.	122	903	6	.	.	15	9
13	1,026	*	*	12	*	.	100	871	4	.	*	12	20
14	1,031	*	*	8	*	.	116	827	13	.	*	40	20
15	982	.	.	18	*	.	71	767	11	.	4	85	24
16	874	*	*	15	*	.	74	624	11	.	9	104	34
17	947	*	4	13	4	.	72	649	14	.	14	140	36
18	761	*	18	17	*	.	78	583	9	.	9	11	33
19	805	6	8	19	4	.	66	623	14	.	11	30	24
20	853	8	14	39	*	.	70	620	22	.	10	33	34
21	856	8	23	30	*	*	73	596	25	.	8	57	31
22	1,003	5	19	44	7	.	89	680	22	.	18	74	45
23	1,043	5	35	32	9	.	95	674	33	*	16	88	54
24	1,071	*	37	49	11	*	79	693	29	.	17	92	60
25	1,153	12	30	44	7	.	95	673	41	.	29	136	86
26	1,290	11	26	78	8	.	94	763	53	*	31	156	67
27	1,312	11	40	61	12	.	101	748	37	*	27	183	90
28	1,374	6	42	80	10	.	78	737	57	*	48	224	89
29	1,524	11	42	85	7	.	89	761	70	5	58	280	116
30	1,607	11	49	87	8	*	114	747	77	*	58	320	133
31	1,757	13	59	102	12	*	120	775	85	*	68	368	152
32	1,853	12	68	114	12	.	118	778	84	4	69	427	167
33	2,038	11	86	100	12	4	131	815	115	4	65	494	201
34	2,243	23	90	118	11	4	126	863	120	4	69	587	228
35	2,491	21	91	132	8	*	139	901	126	9	96	723	244
36	2,662	23	81	131	14	*	140	886	177	7	101	833	267
37	2,921	18	112	118	12	4	135	1000	174	14	111	912	311
38	3,106	21	133	148	16	*	155	892	204	13	142	1038	342
39	3,529	13	153	149	15	*	154	987	223	14	167	1247	404
40	6,009	31	101	147	8	11	128	973	486	12	189	3579	344
41	4,890	25	95	155	20	*	119	978	300	14	208	2552	421
42	5,040	31	101	127	14	4	124	983	326	15	230	2639	446
43	5,276	36	120	120	9	*	146	983	353	20	246	2687	554
44	5,790	36	130	145	11	6	149	1088	377	17	253	3009	569
45	6,059	43	150	124	18	9	143	1033	358	15	287	3271	608
46	6,563	50	156	129	19	5	152	1087	387	23	282	3536	737
47	7,128	47	196	147	21	6	173	1069	445	15	285	3951	773

48	7,510	48	212	147	16	6	182	1061	498	24	292	4213	811
49	8,164	49	223	158	25	4	164	1129	533	34	335	4547	963
50	8,748	57	244	152	27	10	188	1083	559	32	322	5060	1014
51	9,469	69	286	153	20	8	187	1120	556	33	349	5541	1147
52	9,827	64	287	157	32	10	197	1162	640	30	369	5614	1265
53	10,175	86	291	153	29	10	178	1160	597	38	387	5912	1334
54	10,455	82	310	142	23	12	171	1212	633	33	380	6025	1432
55	10,859	100	321	149	19	10	188	1194	646	30	361	6302	1539
56	11,178	105	357	160	24	15	160	1168	645	26	363	6477	1678
57	11,378	128	327	149	25	12	188	1130	603	30	366	6707	1713
58	11,757	117	379	140	17	12	175	1111	694	36	382	6944	1750
59	11,761	114	353	150	27	8	185	1076	625	33	393	6952	1845
60	12,517	141	434	152	21	12	188	1074	682	37	364	7360	2052
61	12,638	138	416	172	31	10	175	1019	666	40	396	7531	2044
62	12,780	150	445	156	28	13	197	1033	642	36	352	7525	2203
63	12,781	150	468	174	31	15	188	1015	616	40	331	7485	2268
64	12,995	150	481	176	26	15	190	972	646	47	342	7635	2315
65	13,022	153	494	188	29	11	191	889	643	34	340	7662	2388
66	12,706	198	488	190	22	12	179	881	580	38	307	7277	2534
67	12,761	165	560	170	27	8	199	887	567	41	298	7267	2572
68	12,342	177	547	165	32	12	171	816	584	24	295	6955	2564
69	12,022	164	626	179	23	10	167	751	523	34	274	6669	2602
70	11,768	187	581	180	19	21	172	717	500	33	222	6688	2448
71	11,271	149	564	154	26	13	156	638	492	34	228	6399	2418
72	11,012	152	501	177	29	13	161	673	482	37	221	6116	2450
73	10,652	150	492	183	22	9	142	658	484	38	194	5964	2316
74	10,087	159	468	153	18	10	151	546	443	27	203	5696	2213
75	9,435	146	395	154	19	12	139	539	422	26	159	5201	2223
76	9,048	139	365	133	25	7	133	515	412	28	149	5070	2072
77	8,225	120	350	111	10	14	128	440	403	37	136	4490	1986
78	7,825	133	316	117	22	10	124	382	338	30	136	4304	1913
79	7,199	116	264	129	12	14	121	331	319	23	105	3979	1786
80	6,740	98	295	129	10	16	103	318	304	26	98	3710	1633
81	6,074	104	241	114	11	7	100	274	261	18	88	3364	1492
82	5,384	93	200	105	10	11	82	211	275	15	76	3012	1294
83	4,847	97	155	113	9	7	81	199	224	17	65	2708	1172
84	4,230	66	139	79	10	8	68	174	228	11	46	2282	1119
85	3,787	53	130	73	5	11	71	166	183	17	41	2103	934
86	3,158	56	104	70	7	4	55	129	165	12	31	1757	768
87	2,676	44	81	59	5	11	36	95	136	11	33	1524	641
88	2,171	32	64	59	*	5	42	78	105	10	33	1186	554
89	1,678	31	50	36	*	*	31	57	96	10	18	907	438
90	1,318	22	41	36	*	*	27	26	57	8	17	742	340
91	1,040	13	24	29	*	.	25	29	44	*	7	567	297
92	731	11	17	12	*	*	11	25	33	8	9	417	184
93	542	9	9	17	*	*	19	14	30	4	4	304	128
94	437	9	16	9	*	*	10	12	21	*	6	238	109
95	267	5	9	11	*	*	7	5	11	*	*	152	57
96	182	5	5	8	*	*	*	6	6	*	*	91	52
97	112	*	.	*	.	.	4	5	5	.	*	70	25
98	77	*	*	4	*	.	*	*	5	*	.	39	20
99	49	*	.	4	*	.	*	*	4	.	.	25	10
100	27	.	.	.	.	.	.	*	*	*	.	11	13
101	12	.	.	.	.	.	.	.	*	*	.	6	*
102	7	.	.	*	.	.	.	.	.	.	.	5	*
103	*	.	.	.	.	.	.	.	.	.	.	*	.
104	*	.	.	.	.	.	.	.	.	.	.	*	*
105	*	.	.	.	.	.	.	.	.	.	.	*	.

The reconstructed diabetes register

12:36 Saturday, August 29, 2020 10

Inclusion using 2nd OAD/Ins/NPR (the official version)

## The CONTENTS Procedure

Data Set Name	DMDAT.DMREG	Observations	485989
Member Type	DATA	Variables	22
Engine	V9	Indexes	0
Created	29/08/2020 12:36:59	Observation Length	136
Last Modified	29/08/2020 12:36:59	Deleted Observations	0

Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Reconstructed DM register for Denmark		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	1011
First Data Page	*
Max Obs per Page	481
Obs in First Data Page	454
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\dmreg.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	63MB
File Size (bytes)	66322432

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
*	pnr	Char	12	\$12.	\$10.	Person-id
*	sex	Char	*			Sex
*	doBth	Num	8	DDMMYY10.		Date of birth
4	doDM	Num	8	DDMMYY10.		Date of inclusion
5	doLast	Num	8	DDMMYY10.		Date of latest criterion
6	doDth	Num	8	DDMMYY10.		Date of death
7	DMtp	Char	*			Type of DM
8	dvdtyp	Char	*			Type from DVDD
9	nprtyp	Char	*			Type from NPR
10	only1	Num	8			Only one criterion
11	hasdvd	Num	8			has DVDD record
12	inCr	Char	*			Incl. criterion
13	do2nd	Num	8	DDMMYY10.		Date of 2nd of Ins/OAD/NPR
14	doNPR	Num	8	DDMMYY10.	DATE9.	Date of 1st NPR
15	doNPR2	Num	8	DDMMYY10.	DATE9.	Date of 2nd NPR
16	doOAD	Num	4	DDMMYY10.		Date of 1st OAD
17	doOAD2	Num	4	DDMMYY10.		Date of 2nd OAD
18	doIns	Num	4	DDMMYY10.		Date of 1st Ins
19	doIns2	Num	4	DDMMYY10.		Date of 2nd Ins
20	doPod	Num	8	DDMMYY10.		Date of Podiatry
21	doDia	Num	8	DDMMYY10.	IS8601DA10.	Date of diaBase
22	doDVD	Num	8	DDMMYY10.		Date of DVDD
!						

### 3.13 06d-define

Defines the diabetes *drug-register*, i.e. the register exclusively based on drug purchases. Persons are included on the 2nd purchase of drugs, while type of diabetes is taken from DMreg.

1 "Program: 06d-define.sas" 12:49 Saturday, August 29, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

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NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.08 seconds  
cpu time 0.10 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      title1 'The reconstructed diabetes *drug* register' ;
2      data DMdreg ;
3          label pnr      = 'Person id'
4                  sex      = 'Sex'
5                  DMtp     = 'Type of DM'
6                  doBth    = 'Date of birth'
7                  doDM     = 'Date of inclusion'
8                  doDth    = 'Date of death'
9                  inCr     = 'Incl. criterion'
10                 doOAD     = 'Date of 1st OAD'
11                 doIns     = 'Date of 1st Ins'
12                 lastOAD   = 'Date of last OAD'
13                 lastIns   = 'Date of last Ins' ;
14      merge DMdat.RMPS  ( in = rmps  keep = pnr doOAD  doIns
15                          doOAD2  doIns2
16                          lastOAD lastIns )
17              DMdat.pop  ( in = pop )
18              DMdat.DMreg ( in = dmr  keep = pnr DMtp ) ;
19      by pnr ;
20      keep pnr sex DMtp inCr
21          doBth doDM doOAD doIns doDth lastOAD lastIns ;
22      format doBth doDM doDth doOAD doIns lastOAD lastIns  ddmmyy10. ;
23      if pop and rmps and dmr ;
24      * Date of diagnosis - GDM and PCOS are taken care of in RMPS/DVDD ;
25      if doOAD eq min(doOAD ,doIns ) then do ;
26          doDM = min(doOAD2,doIns ) ; fC = '0' ; end ;
27      if doIns eq min(doOAD ,doIns ) then do ;
28          doDM = min(doOAD ,doIns2) ; fC = 'I' ; end ;
29      * compute the type of 2nd criterion between OAD and Ins ;
30      if doDM eq doOAD or doDM eq doOAD2 then inCr = fC||"-0" ;
31      if doDM eq doIns or doDM eq doIns2 then inCr = fC||"-I" ;
32      if doDM gt .z and doDM lt '01JAN2019'd ;
33      run ;

```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3494 at 26:15 951 at 28:15

NOTE: There were 484172 observations read from the data set DMDAT.RMPS.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: There were 485989 observations read from the data set DMDAT.DMREG.

NOTE: The data set WORK.DMDREG has 440687 observations and 11 variables.

NOTE: DATA statement used (Total process time):

real time 3.65 seconds  
cpu time 1.84 seconds

```

34
35      data DMdat.DMdreg ( label = 'Reconstructed DM register, only persons on drugs'
36      ! ) ;

```

The reconstructed diabetes *drug* register							12:49 Saturday, August 29, 2020						1
-----													
Type of DM													
-----													
T1						T2							
-----													
Incl. criterion						Incl. criterion							
-----													
	All	All	I-I	I-O	O-I	O-O	All	I-I	I-O	O-I	O-O		
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
All	440,687	43,431	37,456	190	1,059	4,726	397,256	28,000	1,691	4,551	363014		
Date													
of													
inc-													
lus-													

ion											
1995	70,540	20,497	18,650	35	109	1,703	50,043	10,228	128	306	39,381
1996	13,195	2,290	1,927	12	38	313	10,905	848	48	68	9,941
1997	10,564	1,255	930	16	33	276	9,309	514	38	77	8,680
1998	11,461	1,151	852	8	44	247	10,310	545	57	84	9,624
1999	11,720	994	748	9	36	201	10,726	610	64	82	9,970
2000	11,800	1,019	777	9	33	200	10,781	683	59	97	9,942
2001	12,618	978	744	9	39	186	11,640	690	41	123	10,786
2002	12,533	991	773	7	42	169	11,542	680	48	134	10,680
2003	14,342	926	711	4	42	169	13,416	711	54	151	12,500
2004	15,274	951	742	4	54	151	14,323	830	64	184	13,245
2005	14,973	897	710	10	42	135	14,076	819	55	169	13,033
2006	15,500	931	769	4	40	118	14,569	845	52	199	13,473
2007	16,599	941	765	*	52	121	15,658	834	65	201	14,558
2008	18,295	925	750	10	47	118	17,370	872	73	216	16,209
2009	19,086	923	769	6	52	96	18,163	834	76	204	17,049
2010	21,123	913	800	7	34	72	20,210	810	88	248	19,064
2011	23,963	850	726	*	40	81	23,113	784	52	243	22,034
2012	22,500	845	721	*	39	83	21,655	757	84	211	20,603
2013	17,311	842	726	4	48	64	16,469	847	80	213	15,329
2014	15,390	843	743	*	41	56	14,547	813	76	234	13,424
2015	16,546	866	758	5	44	59	15,680	846	102	263	14,469
2016	18,647	910	816	8	43	43	17,737	827	81	268	16,561
2017	18,436	881	802	6	30	43	17,555	868	95	279	16,313
2018	18,271	812	747	6	37	22	17,459	905	111	297	16,146

The reconstructed diabetes \*drug\* register

12:49 Saturday, August 29, 2020

2

Date of inc- lus- ion	Type of DM									
	T1					T2				
	Incl. criterion					Incl. criterion				
	All	I-I	I-O	O-I	O-O	All	I-I	I-O	O-I	O-O
	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN	PctN
1995	100.0	91.0	0.2	0.5	8.3	100.0	20.4	0.3	0.6	78.7
1996	100.0	84.1	0.5	1.7	13.7	100.0	7.8	0.4	0.6	91.2
1997	100.0	74.1	1.3	2.6	22.0	100.0	5.5	0.4	0.8	93.2
1998	100.0	74.0	0.7	3.8	21.5	100.0	5.3	0.6	0.8	93.3
1999	100.0	75.3	0.9	3.6	20.2	100.0	5.7	0.6	0.8	93.0
2000	100.0	76.3	0.9	3.2	19.6	100.0	6.3	0.5	0.9	92.2
2001	100.0	76.1	0.9	4.0	19.0	100.0	5.9	0.4	1.1	92.7
2002	100.0	78.0	0.7	4.2	17.1	100.0	5.9	0.4	1.2	92.5
2003	100.0	76.8	0.4	4.5	18.3	100.0	5.3	0.4	1.1	93.2
2004	100.0	78.0	0.4	5.7	15.9	100.0	5.8	0.4	1.3	92.5
2005	100.0	79.2	1.1	4.7	15.1	100.0	5.8	0.4	1.2	92.6
2006	100.0	82.6	0.4	4.3	12.7	100.0	5.8	0.4	1.4	92.5
2007	100.0	81.3	0.3	5.5	12.9	100.0	5.3	0.4	1.3	93.0
2008	100.0	81.1	1.1	5.1	12.8	100.0	5.0	0.4	1.2	93.3
2009	100.0	83.3	0.7	5.6	10.4	100.0	4.6	0.4	1.1	93.9
2010	100.0	87.6	0.8	3.7	7.9	100.0	4.0	0.4	1.2	94.3
2011	100.0	85.4	0.4	4.7	9.5	100.0	3.4	0.2	1.1	95.3
2012	100.0	85.3	0.2	4.6	9.8	100.0	3.5	0.4	1.0	95.1
2013	100.0	86.2	0.5	5.7	7.6	100.0	5.1	0.5	1.3	93.1
2014	100.0	88.1	0.4	4.9	6.6	100.0	5.6	0.5	1.6	92.3
2015	100.0	87.5	0.6	5.1	6.8	100.0	5.4	0.7	1.7	92.3
2016	100.0	89.7	0.9	4.7	4.7	100.0	4.7	0.5	1.5	93.4
2017	100.0	91.0	0.7	3.4	4.9	100.0	4.9	0.5	1.6	92.9
2018	100.0	92.0	0.7	4.6	2.7	100.0	5.2	0.6	1.7	92.5

The reconstructed diabetes \*drug\* register

12:49 Saturday, August 29, 2020 3

The CONTENTS Procedure

Data Set Name	DMDAT.DMDREG	Observations	440687
Member Type	DATA	Variables	11
Engine	V9	Indexes	0
Created	29/08/2020 12:49:59	Observation Length	64
Last Modified	29/08/2020 12:49:59	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Reconstructed DM register, only persons on drugs		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	432
First Data Page	*
Max Obs per Page	1021
Obs in First Data Page	985
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\dmdreg.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	27MB
File Size (bytes)	28377088

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
*	pnr	Char	12	\$12.	\$10.	Person id
*	sex	Char	*			Sex
*	DMtp	Char	*			Type of DM
4	doBth	Num	8	DDMMYY10.		Date of birth
5	doDM	Num	8	DDMMYY10.		Date of inclusion
6	doDth	Num	8	DDMMYY10.		Date of death
7	inCr	Char	*			Incl. criterion
8	doOAD	Num	4	DDMMYY10.		Date of 1st OAD
9	doIns	Num	4	DDMMYY10.		Date of 1st Ins
10	lastOAD	Num	4	DDMMYY10.		Date of last OAD
11	lastIns	Num	4	DDMMYY10.		Date of last Ins
!						

## 3.14 00-labka

Reads the LABKA file lab\_forsker and splits it in different files according to the values of the `analysiscode` after formatting by `$npue`. The purpose is mainly to make it easier to access the LABKA measurements without necessarily reading the entire file.

1 "Program: 00-labka.sas" 11:54 Wednesday, April 29, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

SAS/STAT 14.3

X64 SR12R2 WIN 6.3.9600 Server

```
real time      0.11 seconds
cpu time       0.13 seconds
```

NOTE: AUTOEXEC processing completed.

```

real time      0.11 seconds
cpu time       0.04 seconds

```

```
real time      0.06 seconds
cpu time       0.00 seconds
```

```

4
5      data
6          lbdatt.HbA1c ( label = 'HbA1c' )
7          lbdatt.Gluc ( label = 'Glukose' )
8          lbdatt.Glu0 ( label = 'Glukose 0' )
9          lbdatt.Gl30 ( label = 'Glukose 30' )
10         lbdatt.Gl120 ( label = 'Glukose 120' )
11         lbdatt.TChl ( label = 'Total kolesterol' )
12         lbdatt.LDL ( label = 'LDL kolesterol' )
13         lbdatt.HDL ( label = 'HDL kolesterol' )
14         lbdatt.VLDL ( label = 'VLDL kolesterol' )
15         lbdatt.Trig ( label = 'Triglycerid' )
16         lbdatt.PlCr ( label = 'Plasma Kreatinin' )
17         lbdatt.Uacr ( label = 'Ualbkrea' )
18         lbdatt.Pota ( label = 'Kalium' )
19         lbdatt.Sodi ( label = 'Natrium' )
20         lbdatt.TSH ( label = 'TSH' )
21         lbdatt.Cpep ( label = 'C-peptid/Proinsulin' )
22         lbdatt.CRP ( label = 'CRP' )
23         lbdatt.GAD ( label = 'GAD65' )
24         lbdatt.eGFR ( label = 'eGFR' )
25         lbdatt.GFR ( label = 'GFR' )
26         lbdatt.ALAT ( label = 'ALAT' )
27         lbdatt.alcP ( label = 'Basisk fosfatase' )
28         lbdatt.Cobl ( label = 'Cobalamin' )
29         lbdatt.Trmb ( label = 'Trombocytt' )
30         lbdatt.Leuc ( label = 'Leucocytt' )
31         lbdatt.Hmgb ( label = 'Hæmoglobin' );
32     set ekstn.lab_forsker ( obs = max
33                           keep = patient_cpr
34                               SAMPLINGDATE
35                               SAMPLINGTIME
36                               ANALYSISCODE

```



```

37                                LABORATORIUM_IDCODE
38                                VALUE
39                                UNIT
40                                rename = ( patient_cpr = pnr ) ) ;
41      if put( analysiscode, $npue. ) eq "HbA1" then output lbdatt.HbA1 ;
42      if put( analysiscode, $npue. ) eq "Gluc" then output lbdatt.Gluc ;
43      if put( analysiscode, $npue. ) eq "Glu0" then output lbdatt.Glu0 ;
44      if put( analysiscode, $npue. ) eq "Gl30" then output lbdatt.Gl30 ;
45      if put( analysiscode, $npue. ) eq "G120" then output lbdatt.G120 ;
46      if put( analysiscode, $npue. ) eq "TCh1" then output lbdatt.TCh1 ;
47      if put( analysiscode, $npue. ) eq "LDL" then output lbdatt.LDL ;
48      if put( analysiscode, $npue. ) eq "HDL" then output lbdatt.HDL ;
49      if put( analysiscode, $npue. ) eq "VLDL" then output lbdatt.VLDL ;
50      if put( analysiscode, $npue. ) eq "Trig" then output lbdatt.Trig ;
51      if put( analysiscode, $npue. ) eq "PlCr" then output lbdatt.PlCr ;
52      if put( analysiscode, $npue. ) eq "Uacr" then output lbdatt.Uacr ;
53      if put( analysiscode, $npue. ) eq "Pota" then output lbdatt.Pota ;
54      if put( analysiscode, $npue. ) eq "Sodi" then output lbdatt.Sodi ;
55      if put( analysiscode, $npue. ) eq "TSH" then output lbdatt.TSH ;
56      if put( analysiscode, $npue. ) eq "Cpep" then output lbdatt.Cpep ;
57      if put( analysiscode, $npue. ) eq "CRP" then output lbdatt.CRP ;
58      if put( analysiscode, $npue. ) eq "GAD" then output lbdatt.GAD ;
59      if put( analysiscode, $npue. ) eq "eGFR" then output lbdatt.eGFR ;
60      if put( analysiscode, $npue. ) eq "GFR" then output lbdatt.GFR ;
61      if put( analysiscode, $npue. ) eq "ALAT" then output lbdatt.ALAT ;
62      if put( analysiscode, $npue. ) eq "alcP" then output lbdatt.alcP ;
63      if put( analysiscode, $npue. ) eq "Cobl" then output lbdatt.Cobl ;
64      if put( analysiscode, $npue. ) eq "Trmb" then output lbdatt.Trmb ;
65      if put( analysiscode, $npue. ) eq "Leuc" then output lbdatt.Leuc ;
66      if put( analysiscode, $npue. ) eq "Hmgb" then output lbdatt.Hmgb ;
67      run ;

```

NOTE: There were 346919442 observations read from the data set EKSTN.LAB\_FORSKER.

NOTE: The data set LBDAT.HBA1 has 21261038 observations and 7 variables.

NOTE: The data set LBDAT.GLUC has 8736053 observations and 7 variables.

NOTE: The data set LBDAT.GLU0 has 874845 observations and 7 variables.

NOTE: The data set LBDAT.GL30 has 11395 observations and 7 variables.

NOTE: The data set LBDAT.G120 has 61892 observations and 7 variables.

NOTE: The data set LBDAT.TCHL has 10463522 observations and 7 variables.

NOTE: The data set LBDAT.LDL has 9875421 observations and 7 variables.

NOTE: The data set LBDAT.HDL has 10083655 observations and 7 variables.

NOTE: The data set LBDAT.VLDL has 1492139 observations and 7 variables.

NOTE: The data set LBDAT.TRIG has 10356568 observations and 7 variables.

NOTE: The data set LBDAT.PLCR has 31617208 observations and 7 variables.

NOTE: The data set LBDAT.UACR has 2085164 observations and 7 variables.

NOTE: The data set LBDAT.POTA has 30207229 observations and 7 variables.

NOTE: The data set LBDAT.SODI has 30186282 observations and 7 variables.

NOTE: The data set LBDAT.TSH has 11495628 observations and 7 variables.

NOTE: The data set LBDAT.CPEP has 164936 observations and 7 variables.

NOTE: The data set LBDAT.CRP has 20723651 observations and 7 variables.

NOTE: The data set LBDAT.GAD has 28416 observations and 7 variables.

NOTE: The data set LBDAT.EGFR has 28742105 observations and 7 variables.

NOTE: The data set LBDAT.GFR has 2409 observations and 7 variables.

NOTE: The data set LBDAT.ALAT has 20540099 observations and 7 variables.

NOTE: The data set LBDAT.ALCP has 15495551 observations and 7 variables.

NOTE: The data set LBDAT.COBL has 5324860 observations and 7 variables.

NOTE: The data set LBDAT.TRMB has 21039994 observations and 7 variables.

NOTE: The data set LBDAT.LEUC has 25630130 observations and 7 variables.

NOTE: The data set LBDAT.HMGB has 30419252 observations and 7 variables.

NOTE: DATA statement used (Total process time):

real time 35:06.18

cpu time 17:22.09

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time 35:06.60

cpu time 17:22.31

## 3.14.1 00-labka.lst

The SAS System

11:54 Wednesday, April 29, 2020 1

The CONTENTS Procedure

Data Set Name	LBDAT.HBA1	Observations	21261038
Member Type	DATA	Variables	7
Engine	V9	Indexes	0
Created	24/04/2020 15:34:17	Observation Length	80
Last Modified	24/04/2020 15:34:17	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Hba1c		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	26024
First Data Page	1
Max Obs per Page	817
Obs in First Data Page	795
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\labka\hba1.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	2GB
File Size (bytes)	1705574400

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat
1	pnr	Char	12	\$12.	\$10.
2	SAMPLINGDATE	Num	8	DATE9.	DATE9.
3	SAMPLINGTIME	Num	8	TIME8.	TIME8.
4	ANALYSISCODE	Char	17	\$17.	\$17.
5	LABORATORIUM_IDCODE	Char	3	\$3.	\$3.
6	VALUE	Char	12	\$12.	\$12.
7	UNIT	Char	16	\$16.	\$16.

The SAS System

11:54 Wednesday, April 29, 2020 2

The CONTENTS Procedure

Data Set Name	EKSTN.LAB_FORSKER	Observations	346919442
Member Type	DATA	Variables	12
Engine	V9	Indexes	0
Created	19/12/2019 17:18:58	Observation Length	416
Last Modified	19/12/2019 17:18:58	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	32768
Number of Data Set Pages	4447686

```

First Data Page          1
Max Obs per Page        78
Obs in First Data Page   73
Number of Data Set Repairs 0
Filename                 E:\rawdata\707655\Eksterne data\lab_forsker.sas7bdat
Release Created          9.0401M5
Host Created             X64_SR12R2
Owner Name               DSTFSE\MMK
File Size                136GB
File Size (bytes)       145741807616

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat
1	rekvirent_id	Char	34	\$34.	\$17.
2	patient_cpr	Char	12	\$12.	\$10.
3	SAMPLINGDATE	Num	8	DATE9.	DATE9.
4	SAMPLINGTIME	Num	8	TIME8.	TIME8.
5	ANALYSISCODE	Char	17	\$17.	\$17.
6	LABORATORIUM_IDCODE	Char	3	\$3.	\$3.
7	VALUE	Char	12	\$12.	\$12.
8	UNIT	Char	16	\$16.	\$16.
9	RESULTTYPE	Char	80	\$80.	\$80.
10	REFERENCEINTERVAL_LOWERLIMIT	Char	70	\$70.	\$70.
11	REFERENCEINTERVAL_UPPERLIMIT	Char	70	\$70.	\$70.
12	REKVIRENT_IDTYPE	Char	80	\$80.	\$80.

## 3.15 00-rmps

Reads the files with prescription data (Register of Medicinal Products Statistics, LægemiddelstatistikDataBasen) LMDByyyy and LMDByyyy\_BRUTTO and saves (some of the) records in different files according to ATC-codes. The purpose is mainly to make it easier to access the RMPS measurements without necessarily reading the entire file.

```

1                                "Program: 00-rmps.sas"  10:06 Tuesday, November 17, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)
      Licensed to FORSKNING 1, Site 50800722.
NOTE: This session is executing on the X64_SR12R2 platform.

NOTE: Updated analytical products:
      SAS/STAT 14.3

NOTE: Additional host information:
      X64_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:
      real time          0.11 seconds
      cpu time           0.07 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

1                                /*

```

```

2
3      lipid-lowering      C10
4      renal               C09
5      bloodpressure       C01A, C01D, C02, C03, C07, C08
6      platelet            B01AC
7      OAD                 A10A
8      insulin             A10B
9      */
10
11      %let fr = 1995 ;
12      %let to = 2019 ;
13
14      %macro getmed ;
15      *-----;
16      data lipid renal blpr plate oad ins ;
17          set %do i = &fr. %to &to. ;
18              grund.lmdb&i.      ( keep = pnr atc eksd doso apk packsize )
19              grund.lmdb&i._brutto ( keep = pnr atc eksd doso apk packsize )
20          %end ; ;
21          if substr(atc, 1, 3) in ("C10") then output lipid ;
22          if substr(atc, 1, 3) in ("C09") then output renal ;
23          if substr(atc, 1, 4) in ("C01A","C01D") or
24              substr(atc, 1, 3) in ("C02","C03","C07","C08") then output blpr ;
25          if substr(atc, 1, 5) in ("B01AC") then output plate ;
26          if substr(atc, 1, 4) in ("A10A") then output oad ;
27          if substr(atc, 1, 4) in ("A10B") then output ins ;
28      run ;
29      %mend ;
30      %getmed ;

```

```

NOTE: There were 13552545 observations read from the data set GRUND.LMDB1995.
NOTE: There were 3568979 observations read from the data set GRUND.LMDB1995_BRUTTO.
NOTE: There were 13987953 observations read from the data set GRUND.LMDB1996.
NOTE: There were 3784012 observations read from the data set GRUND.LMDB1996_BRUTTO.
NOTE: There were 14470331 observations read from the data set GRUND.LMDB1997.
NOTE: There were 3973525 observations read from the data set GRUND.LMDB1997_BRUTTO.
NOTE: There were 15235400 observations read from the data set GRUND.LMDB1998.
NOTE: There were 4248450 observations read from the data set GRUND.LMDB1998_BRUTTO.
NOTE: There were 15540101 observations read from the data set GRUND.LMDB1999.
NOTE: There were 4483510 observations read from the data set GRUND.LMDB1999_BRUTTO.
NOTE: There were 15733948 observations read from the data set GRUND.LMDB2000.
NOTE: There were 4653099 observations read from the data set GRUND.LMDB2000_BRUTTO.
NOTE: There were 16595791 observations read from the data set GRUND.LMDB2001.
NOTE: There were 5022086 observations read from the data set GRUND.LMDB2001_BRUTTO.
NOTE: There were 17666883 observations read from the data set GRUND.LMDB2002.
NOTE: There were 5459492 observations read from the data set GRUND.LMDB2002_BRUTTO.
NOTE: There were 18878804 observations read from the data set GRUND.LMDB2003.
NOTE: There were 6000805 observations read from the data set GRUND.LMDB2003_BRUTTO.
NOTE: There were 20449486 observations read from the data set GRUND.LMDB2004.
NOTE: There were 6588662 observations read from the data set GRUND.LMDB2004_BRUTTO.
NOTE: There were 21663811 observations read from the data set GRUND.LMDB2005.
NOTE: There were 7075022 observations read from the data set GRUND.LMDB2005_BRUTTO.
NOTE: There were 23033327 observations read from the data set GRUND.LMDB2006.
NOTE: There were 7567168 observations read from the data set GRUND.LMDB2006_BRUTTO.
NOTE: There were 24324181 observations read from the data set GRUND.LMDB2007.
NOTE: There were 8030396 observations read from the data set GRUND.LMDB2007_BRUTTO.
NOTE: There were 25484004 observations read from the data set GRUND.LMDB2008.
NOTE: There were 8533368 observations read from the data set GRUND.LMDB2008_BRUTTO.
NOTE: There were 26040637 observations read from the data set GRUND.LMDB2009.
NOTE: There were 8758122 observations read from the data set GRUND.LMDB2009_BRUTTO.
NOTE: There were 26874842 observations read from the data set GRUND.LMDB2010.
NOTE: There were 9053925 observations read from the data set GRUND.LMDB2010_BRUTTO.
NOTE: There were 27476210 observations read from the data set GRUND.LMDB2011.
NOTE: There were 9309185 observations read from the data set GRUND.LMDB2011_BRUTTO.
NOTE: There were 27720576 observations read from the data set GRUND.LMDB2012.
NOTE: There were 9463003 observations read from the data set GRUND.LMDB2012_BRUTTO.
NOTE: There were 27670851 observations read from the data set GRUND.LMDB2013.
NOTE: There were 9401555 observations read from the data set GRUND.LMDB2013_BRUTTO.
NOTE: There were 27612777 observations read from the data set GRUND.LMDB2014.
NOTE: There were 9292871 observations read from the data set GRUND.LMDB2014_BRUTTO.

```

NOTE: There were 27468960 observations read from the data set GRUND.LMDB2015.  
 NOTE: There were 9137469 observations read from the data set GRUND.LMDB2015\_BRUTTO.  
 NOTE: There were 27365352 observations read from the data set GRUND.LMDB2016.  
 NOTE: There were 9011666 observations read from the data set GRUND.LMDB2016\_BRUTTO.  
 NOTE: There were 27161833 observations read from the data set GRUND.LMDB2017.  
 NOTE: There were 8836650 observations read from the data set GRUND.LMDB2017\_BRUTTO.  
 NOTE: There were 26976587 observations read from the data set GRUND.LMDB2018.  
 NOTE: There were 8643481 observations read from the data set GRUND.LMDB2018\_BRUTTO.  
 NOTE: There were 27259310 observations read from the data set GRUND.LMDB2019.  
 NOTE: There were 8553674 observations read from the data set GRUND.LMDB2019\_BRUTTO.  
 NOTE: The data set WORK.LIPID has 49609142 observations and 6 variables.  
 NOTE: The data set WORK.RENAL has 68956839 observations and 6 variables.  
 NOTE: The data set WORK.BLPR has 163107152 observations and 6 variables.  
 NOTE: The data set WORK.PLATE has 51752610 observations and 6 variables.  
 NOTE: The data set WORK.OAD has 25235372 observations and 6 variables.  
 NOTE: The data set WORK.INS has 50384170 observations and 6 variables.  
 NOTE: DATA statement used (Total process time):  
     real time                  29:33.22  
     cpu time                   4:44.71

```

31
32      %macro sortmed( dsn, lab ) ;
33      proc sort data = &dsn.
34          out = drdat.&dsn. ( label = "&lab." )
35          nodupkey ;
36          by pnr atc eksd doso apk packsize ;
37      run ;
38      proc contents data = drdat.&dsn. varnum ; run ;
39      %mend ;
40
41      %sortmed( lipid, %str(Lipid lowering drugs) ) ;

```

NOTE: There were 49609142 observations read from the data set WORK.LIPID.  
 NOTE: 13384998 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.LIPID has 36224144 observations and 6 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time                  24.18 seconds  
     cpu time                   42.01 seconds

NOTE: PROCEDURE CONTENTS used (Total process time):  
     real time                  0.05 seconds  
     cpu time                   0.04 seconds

NOTE: The PROCEDURE CONTENTS printed page 1.

```

42      %sortmed( renal, %str(Renal related drugs) ) ;

```

NOTE: There were 68956839 observations read from the data set WORK.RENAL.  
 NOTE: 17116848 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.RENAL has 51839991 observations and 6 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time                  25.43 seconds  
     cpu time                   39.03 seconds

NOTE: PROCEDURE CONTENTS used (Total process time):  
     real time                  0.01 seconds  
     cpu time                   0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 2.

```

43      %sortmed( blpr , %str(Blood pressure lowering) ) ;

```

NOTE: There were 163107152 observations read from the data set WORK.BLPR.  
 NOTE: 36633336 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.BLPR has 126473816 observations and 6 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 1:15.67  
 cpu time 1:45.26

NOTE: PROCEDURE CONTENTS used (Total process time):  
 real time 0.00 seconds  
 cpu time 0.00 seconds

NOTE: The PROCEDURE CONTENTS printed page 3.

```
44      %sortmed( plate, %str(Platelets) ) ;
```

NOTE: There were 51752610 observations read from the data set WORK.PLATE.  
 NOTE: 11714298 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.PLATE has 40038312 observations and 6 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 20.13 seconds  
 cpu time 29.48 seconds

NOTE: PROCEDURE CONTENTS used (Total process time):  
 real time 0.00 seconds  
 cpu time 0.00 seconds

NOTE: The PROCEDURE CONTENTS printed page 4.

```
45      %sortmed( oad , %str(Oral antidiabetic drugs) ) ;
```

NOTE: There were 25235372 observations read from the data set WORK.OAD.  
 NOTE: 12815356 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.OAD has 12420016 observations and 6 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 9.00 seconds  
 cpu time 13.32 seconds

NOTE: PROCEDURE CONTENTS used (Total process time):  
 real time 0.00 seconds  
 cpu time 0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 5.

```
46      %sortmed( ins , %str(Insulines) ) ;
```

NOTE: There were 50384170 observations read from the data set WORK.INS.  
 NOTE: 25548530 observations with duplicate key values were deleted.  
 NOTE: The data set DRDAT.INS has 24835640 observations and 6 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
 real time 16.65 seconds  
 cpu time 26.82 seconds

NOTE: PROCEDURE CONTENTS used (Total process time):  
 real time 0.01 seconds  
 cpu time 0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 6.

```
47
48      * A data frame with all ATC codes ;
49      proc format library = dsfmt.sundhed
50          cntlout = drdat.atcnam ( keep = fmtname start label type ) ;
51          select $ATC_L1L1_KT ;
52      run ;
```

NOTE: PROCEDURE FORMAT used (Total process time):  
       real time              0.06 seconds  
       cpu time               0.01 seconds

NOTE: The data set DRDAT.ATCNAM has 6605 observations and 4 variables.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:  
       real time              32:24.75  
       cpu time               9:00.90

### 3.15.1 00-rmps.lst

The SAS System 10:06 Tuesday, November 17, 2020 1

#### The CONTENTS Procedure

Data Set Name	DRDAT.LIPID	Observations	36224144
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:36:23	Observation Length	48
Last Modified	17/11/2020 10:36:23	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Lipid lowering drugs		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

#### Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	26616
First Data Page	1
Max Obs per Page	1361
Obs in First Data Page	1325
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\rmps\lipid.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	2GB
File Size (bytes)	1744371712

#### Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

#### Sort Information

Sortedby	PNR ATC eksd doso apk PACKSIZE
Validated	YES
Character Set	ANSI
Sort Option	NODUPKEY

The SAS System

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## The CONTENTS Procedure

Data Set Name	DRDAT.RENAL	Observations	51839991
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:36:47	Observation Length	48
Last Modified	17/11/2020 10:36:47	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Renal related drugs		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	38090
First Data Page	1
Max Obs per Page	1361
Obs in First Data Page	1325
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\rmps\renal.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	2GB
File Size (bytes)	2496331776

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

## Sort Information

Sortedby	PNR ATC eksd doso apk PACKSIZE
Validated	YES
Character Set	ANSI
Sort Option	NODUPKEY

The SAS System

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## The CONTENTS Procedure

Data Set Name	DRDAT.BLPR	Observations	126473816
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:37:12	Observation Length	48
Last Modified	17/11/2020 10:37:12	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Blood pressure lowering		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information



```

Data Set Page Size          65536
Number of Data Set Pages    92928
First Data Page             1
Max Obs per Page            1361
Obs in First Data Page      1325
Number of Data Set Repairs  0
ExtendObsCounter            YES
Filename                    E:\workdata\707655\DMreg\data\rmps\blpr.sas7bdat
Release Created              9.0401M5
Host Created                 X64_SR12R2
Owner Name                   DSTFSE\FDIY7655
File Size                    6GB
File Size (bytes)           6090194944

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

## Sort Information

```

Sortedby      PNR ATC eksd doso apk PACKSIZE
Validated     YES
Character Set  ANSI
Sort Option    NODUPKEY

```

The SAS System

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## The CONTENTS Procedure

Data Set Name	DRDAT.PLATE	Observations	40038312
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:38:28	Observation Length	48
Last Modified	17/11/2020 10:38:28	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Platelets		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

```

Data Set Page Size          65536
Number of Data Set Pages    29419
First Data Page             1
Max Obs per Page            1361
Obs in First Data Page      1326
Number of Data Set Repairs  0
ExtendObsCounter            YES
Filename                    E:\workdata\707655\DMreg\data\rmps\plate.sas7bdat
Release Created              9.0401M5
Host Created                 X64_SR12R2
Owner Name                   DSTFSE\FDIY7655
File Size                    2GB
File Size (bytes)           1928069120

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

## Sort Information

Sortedby PNR ATC eksd doso apk PACKSIZE  
 Validated YES  
 Character Set ANSI  
 Sort Option NODUPKEY

The SAS System

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## The CONTENTS Procedure

Data Set Name	DRDAT.OAD	Observations	12420016
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:38:49	Observation Length	48
Last Modified	17/11/2020 10:38:49	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Oral antidiabetic drugs		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	9126
First Data Page	1
Max Obs per Page	1361
Obs in First Data Page	1325
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\rmps\oad.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	570MB
File Size (bytes)	598147072

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

## Sort Information

Sortedby PNR ATC eksd doso apk PACKSIZE  
 Validated YES  
 Character Set ANSI  
 Sort Option NODUPKEY

The SAS System

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## The CONTENTS Procedure

Data Set Name	DRDAT.INS	Observations	24835640
Member Type	DATA	Variables	6
Engine	V9	Indexes	0
Created	17/11/2020 10:38:57	Observation Length	48
Last Modified	17/11/2020 10:38:57	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	YES
Label	Insulines		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	18249
First Data Page	1
Max Obs per Page	1361
Obs in First Data Page	1326
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\rmps\ins.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	1GB
File Size (bytes)	1196032000

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	PNR	Char	12	\$12.		
2	eksd	Num	4	YYMMDDN8.		Ekspeditionsdato
3	apk	Num	8	BEST12.		Antal pakninger
4	doso	Char	7	\$7.		Dosering for ordination
5	ATC	Char	8	\$8.	\$16.	ATC-kode 5. niveau
6	PACKSIZE	Num	8	13.3	13.3	Pakningsstørrelse

## Sort Information

Sortedby	PNR ATC eksd doso apk PACKSIZE
Validated	YES
Character Set	ANSI
Sort Option	NODUPKEY

## 3.16 10-labcomp

Reads the files of urine albumin/creatinine from LABKA and the albumin/cceatinine ratio from DVDD and the GFR from the LABKA data base and plasma creatinine measurements from the DVDD. Measurements and dates of measurement are then combined to dates of severe, moderate and end stage kidney disease and to dates of micro- and macroalbuminuria in the file DMdat.micompl.

1 "Program: 10-labcomp.sas"  
10:37 Wednesday, October 28, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.  
NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.13 seconds  
cpu time 0.09 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      options mprint ;
2      *-----;
3      * KIDNEY complications are derived from LABKA and DVDD, from each we
4        derive a date and a measurement value (eGFR or Alb) in the
5        appropriate values units.
6        Then complications are derived from these taking timing into account
7        using macros for eGFR and Albumin ;
8
9      *-----;
10     * LABORATORY data ;
11
12     title "Tabulation showing fishy range for NPU03918" ;
13     data Uacr ;
14       set lbdatt.Uacr ;
15       length numval 8 ;
16       if value eq '<10' then numval = . ; else
17         numval = input( translate( value, '.', '>/' ), best8. ) ;
18     run ;

```

NOTE: There were 2085164 observations read from the data set LBDAT.UACR.

NOTE: The data set WORK.UACR has 2085164 observations and 8 variables.

NOTE: DATA statement used (Total process time):

real time 3.38 seconds  
cpu time 0.57 seconds

```

19     proc tabulate data = Uacr missing noseps ;
20       class value analysiscode unit ;
21       var numval ;
22       table analysiscode * unit,
23         numval * ( ( n nmiss ) * f=comma7.
24                   (p5 p25 p50 p75 p95) * f=10.3 )
25       / rts=11 indent=2 condense ;
26     run ;

```

NOTE: There were 2085164 observations read from the data set WORK.UACR.

NOTE: The PROCEDURE TABULATE printed page 1.

NOTE: PROCEDURE TABULATE used (Total process time):

real time 0.28 seconds  
cpu time 0.95 seconds

```

27     title1 ;
28
29     *-----;
30     * Albumin ;
31     data labAlb ( keep = pnr doAlb Alb ) ;

```

```

32      set lbdatt.Uacr ;
33      * change "," to "." and remove "<>/" and convert to numeric ;
34      nval = input( translate( value, '.', '<>/' ), best8. ) ;
35      * values for NPU03918 are obviously wrong (see tabulation) ;
36      if analysiscode eq "NPU03918" then nval = nval * 1000 ;
37      * convert from g/mol to mg/g: molecular mass of creatine: 113.12 ;
38      if unit eq 'g/mol' then Alb = nval / 113.12 * 1000 ;
39      else Alb = nval ;
40      doAlb = samplingdate ;
41      run ;

```

NOTE: There were 2085164 observations read from the data set LBDAT.UACR.

NOTE: The data set WORK.LABALB has 2085164 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.59 seconds
cpu time       0.54 seconds

```

```

42
43      *-----;
44      * GFR ;
45      data labGFR ( keep = pnr doGFR eGFR ) ;
46      set lbdatt.eGFR
47      lbdatt.GFR ;
48      doC = samplingdate ;
49      * change "," to "." and remove "<>/" and convert to numeric ;
50      nval = input( translate( value, '.', '<>/' ), best8. ) ;
51      eGFR = nval ;
52      doGFR = samplingdate ;
53      run ;

```

NOTE: There were 28742105 observations read from the data set LBDAT.EGFR.

NOTE: There were 2409 observations read from the data set LBDAT.GFR.

NOTE: The data set WORK.LABGFR has 28744514 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      34.15 seconds
cpu time       6.57 seconds

```

```

54
55      *-----;
56      * DVDD data ;
57
58      * sort by pnr so we can merge with population data ;
59      proc sort data = ekstn.ny_dvdd_7_feb20 out = dvdd ; by pnr ; run ;

```

NOTE: There were 868972 observations read from the data set EKSTN.NY\_DVDD\_7\_FEB20.

NOTE: The data set WORK.DVDD has 868972 observations and 107 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      23.76 seconds
cpu time       3.00 seconds

```

```

60
61      * a macro to convert albumin measurements to mg/g ;
62      %macro fixalb ;
63      * code to fix the scalings of the albumin in DVDD ;
64      * molecular mass of albumin: 66437, of creatine: 113.12 ;
65      * so this is merely an exercise in quantitative chemistry ;
66      if unAlb eq 'A/K ratio mg/g' then Alb = Alb ; else
67      if unAlb eq 'A/K ratio mg/mmol' then Alb = Alb / 0.11312 ; else
68      if unAlb eq 'A/K ratio mikromol/millimol' then Alb = Alb / 0.11312 * 66.437 ;
69      else
70      if unAlb eq 'Albumin ud. g/døgn' then Alb = Alb * 1000 ; else
71      if unAlb eq 'Albumin ud. mg/døgn' then Alb = Alb ; else
72      if unAlb eq 'Albumin ud. mikrogram/min' then Alb = Alb * 24*60 / 1000 ;
73      else
74      if unAlb eq 'Albumin ud. mikromol/døgn' then Alb = Alb * 66.437 ; else
75      output fishy ;
76      %mend ;

```

```

77
78      * Computing eGFR requires sex and age hence merge with DMdat.pop ;
79      data dvddGFR ( keep = pnr doGFR eGFR )
80          dvddAlb ( keep = pnr doAlb Alb unAlb )
81          fishy ( keep = pnr doAlb Alb unAlb ) ;
82      merge dvdd ( keep = pnr
83          plasmakreatinin plasmakreatinin_dato
84          albuminuri albuminuri_dato albuminuri_enhed
85          albuminuri2 albuminuri_dato2 albuminuri_enhed2
86          albuminuri3 albuminuri_dato3 albuminuri_enhed3
87          in = dvdd )
88      DMdat.pop ( keep = pnr sex doBth ) ;
89      by pnr ;
90      if dvdd ;
91      * Kidney function computed from plasma creatinine ;
92      doGFR = plasmakreatinin_dato ;
93      scr = plasmakreatinin * 0.011312 ; * convert to mg/dl for the formula ;
94      age = ( doGFR - doBth ) / 365.25 ;
95      if scr gt 0 then do ; * remove missing and nonsense ;
96      if( sex eq "W" and scr le 0.7 ) then egfr = 144*(scr/0.7)**(-0.329)*0.993**age
96      ! ;
97      if( sex eq "W" and scr gt 0.7 ) then egfr = 144*(scr/0.7)**(-1.209)*0.993**age
97      ! ;
98      if( sex eq "M" and scr le 0.9 ) then egfr = 144*(scr/0.9)**(-0.411)*0.993**age
98      ! ;
99      if( sex eq "M" and scr gt 0.9 ) then egfr = 144*(scr/0.9)**(-1.209)*0.993**age
99      ! ;
100      end ;
101      if egfr > 0 then output dvddgfr ; * remove missing and nonsense ;
102      * Albumin levels ;
103      * first measurement ;
104      doAlb = albuminuri_dato ;
105      unAlb = albuminuri_enhed ;
106      Alb = albuminuri ;
107      %fixalb ;
MPRINT(FIXALB):      * code to fix the scalings of the albumin in DVDD ;
MPRINT(FIXALB):      * molecular mass of albumin: 66437, of creatine: 113.12 ;
MPRINT(FIXALB):      * so this is merely an exercise in quantitative chemistry ;
MPRINT(FIXALB):      if unAlb eq 'A/K ratio mg/g' then Alb = Alb ;
MPRINT(FIXALB):      else if unAlb eq 'A/K ratio mg/mmol' then Alb = Alb / 0.11312 ;
MPRINT(FIXALB):      else if unAlb eq 'A/K ratio mikromol/millimol' then Alb = Alb / 0.11312
* 66.437 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. g/døgn' then Alb = Alb * 1000 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mg/døgn' then Alb = Alb ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mikrogram/min' then Alb = Alb * 24*60 /
1000 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mikromol/døgn' then Alb = Alb * 66.437 ;
MPRINT(FIXALB):      else output fishy ;
108      if Alb > 0 then output dvddalb ; * remove missing and nonsense ;
109      * second measurement ;
110      doAlb = albuminuri_dato2 ;
111      unAlb = albuminuri_enhed2 ;
112      Alb = albuminuri2 ;
113      %fixalb ;
MPRINT(FIXALB):      * code to fix the scalings of the albumin in DVDD ;
MPRINT(FIXALB):      * molecular mass of albumin: 66437, of creatine: 113.12 ;
MPRINT(FIXALB):      * so this is merely an exercise in quantitative chemistry ;
MPRINT(FIXALB):      if unAlb eq 'A/K ratio mg/g' then Alb = Alb ;
MPRINT(FIXALB):      else if unAlb eq 'A/K ratio mg/mmol' then Alb = Alb / 0.11312 ;
MPRINT(FIXALB):      else if unAlb eq 'A/K ratio mikromol/millimol' then Alb = Alb / 0.11312
* 66.437 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. g/døgn' then Alb = Alb * 1000 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mg/døgn' then Alb = Alb ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mikrogram/min' then Alb = Alb * 24*60 /
1000 ;
MPRINT(FIXALB):      else if unAlb eq 'Albumin ud. mikromol/døgn' then Alb = Alb * 66.437 ;
MPRINT(FIXALB):      else output fishy ;
114      if Alb > 0 then output dvddalb ; * remove missing and nonsense ;
115      * third measurement ;
116      doAlb = albuminuri_dato3 ;

```

```

117      unAlb = albuminuri_enhed3 ;
118      Alb = albuminuri3 ;
119      %fixalb ;
MPRINT(FIXALB):  * code to fix the scalings of the albumin in DVDD ;
MPRINT(FIXALB):  * molecular mass of albumin: 66437, of creatine: 113.12 ;
MPRINT(FIXALB):  * so this is merely an exercise in quantitative chemistry ;
MPRINT(FIXALB):  if unAlb eq 'A/K ratio mg/g' then Alb = Alb ;
MPRINT(FIXALB):  else if unAlb eq 'A/K ratio mg/mmol' then Alb = Alb / 0.11312 ;
MPRINT(FIXALB):  else if unAlb eq 'A/K ratio mikromol/millimol' then Alb = Alb / 0.11312
* 66.437 ;
MPRINT(FIXALB):  else if unAlb eq 'Albumin ud. g/døgn' then Alb = Alb * 1000 ;
MPRINT(FIXALB):  else if unAlb eq 'Albumin ud. mg/døgn' then Alb = Alb ;
MPRINT(FIXALB):  else if unAlb eq 'Albumin ud. mikrogram/min' then Alb = Alb * 24*60 /
1000 ;
MPRINT(FIXALB):  else if unAlb eq 'Albumin ud. mikromol/døgn' then Alb = Alb * 66.437 ;
MPRINT(FIXALB):  else output fishy ;
120      if Alb > 0 then output dvddalb ; * remove missing and nonsense ;
121      run ;

```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

408299 at 93:27	358558 at 94:19	1 at 97:68	1 at 97:74
2 at 98:68	2 at 98:74	2 at 99:68	2 at 99:74
31 at 107:50	929 at 107:124	8 at 107:26	23 at 107:174
2 at 107:133	32 at 113:50	1812 at 113:124	215 at 113:26
1514 at 113:174	487 at 113:133	32 at 119:50	1812 at 119:124
215 at 119:26	1514 at 119:174	487 at 119:133	

NOTE: There were 868972 observations read from the data set WORK.DVDD.

NOTE: There were 7631979 observations read from the data set DMDAT.POP.

NOTE: The data set WORK.DVDDGFR has 460537 observations and 3 variables.

NOTE: The data set WORK.DVDDALB has 1185687 observations and 4 variables.

NOTE: The data set WORK.FISHY has 1377251 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	7.72 seconds
cpu time	2.57 seconds

```

122
123      title1 "DVDD records of albumin that were ignored" ;
124      proc tabulate data = fishy noseps missing ;
125          class unAlb doAlb ;
126          table all doAlb,
127              ( all unAlb ) * f=comma11. ;
128          format doAlb year4. ;
129      run ;

```

NOTE: There were 1377251 observations read from the data set WORK.FISHY.

NOTE: The PROCEDURE TABULATE printed page 2.

NOTE: PROCEDURE TABULATE used (Total process time):

real time	0.18 seconds
cpu time	0.35 seconds

```

130
131      title1 "DVDD records of albumin used" ;
132      proc tabulate data = dvddalb missing noseps ;
133          class unalb doAlb ;
134          var Alb ;
135          table doAlb,
136              ( all unalb ) * f=comma9.
137              / rts = 7 ;
138          table unalb,
139              Alb * ( ( n nmiss ) * f=comma7.
140                  ( min p10 p50 p90 max ) * f=6.1 )
141              / rts = 30 ;
142          format doAlb year4. ;
143      run ;

```

NOTE: There were 1185687 observations read from the data set WORK.DVDDALB.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: The PROCEDURE TABULATE printed pages 3-4.

NOTE: PROCEDURE TABULATE used (Total process time):

```
real time      0.33 seconds
cpu time       0.68 seconds
```

```
144      title1 ;
145
146      *-----;
147      * construct GFR stages (ModL, SevL, ESRL) ;
148      %macro kidney( typ, lim ) ;
149          retain ts&typ. has&typ. done&typ. ;
150          if first.pnr then do ;
151              ts&typ. = 0 ;
152              has&typ. = 0 ;
153              done&typ. = 0 ;
154          end ;
155          has&typ. + (eGFR < &lim.) ; * any value beyond threshold yet? ;
156          if ^first.pnr then do ;
157              ts&typ. = ( ts&typ. + difGFR ) * (has&typ. ge 1) ;
158              if ts&typ. > 60 and eGFR < &lim. and ^done&typ. then do ;
159                  doC = doGFR ;
160                  compl = "&typ." ;
161                  output ;
162                  done&typ. = 1 ;
163              end ;
164          end ;
165      %mend kidney ;
166
167      * combine the eGFR info from LABKA and DVDD restrict to one record
168      per date by taking the mean of the measurements on that day ;
169      data gfr ; set labGFR dvddGFR ; run ;
```

NOTE: There were 28744514 observations read from the data set WORK.LABGFR.

NOTE: There were 460537 observations read from the data set WORK.DVDDGFR.

NOTE: The data set WORK.GFR has 29205051 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```
real time      5.06 seconds
cpu time       2.84 seconds
```

```
170      proc summary data = gfr nway ;
171          class pnr doGFR ;
172          var eGFR ;
173          output out = gfr ( keep = pnr doGFR eGFR )
174              mean = ;
175      run ;
```

NOTE: There were 29205051 observations read from the data set WORK.GFR.

NOTE: The data set WORK.GFR has 28201373 observations and 3 variables.

NOTE: PROCEDURE SUMMARY used (Total process time):

```
real time      34.46 seconds
cpu time       50.00 seconds
```

```
176      /*
177      * Old code ;
178      proc sort data = gfr nodupkey ; by pnr doGFR ; run ;
179      data gfr ( keep = pnr doGFR eGFR ) ;
180          set gfr ;
181          by pnr doGFR ;
182          difGFR = dif( doGFR ) ;
183          if first.pnr or difGFR > 3 ; * only tests 4+ days apart ;
184      run ;
185      */
186      data gfr ( keep = pnr doC compl ) ;
187          set gfr ;
188          by pnr doGFR ;
```



```

189         difGFR = dif( doGFR ) ;
190         %kidney( CModL, 60 ) ;
MPRINT(KIDNEY):   retain tsCModL hasCModL doneCModL ;
MPRINT(KIDNEY):   if first.pnr then do ;
MPRINT(KIDNEY):   tsCModL = 0 ;
MPRINT(KIDNEY):   hasCModL = 0 ;
MPRINT(KIDNEY):   doneCModL = 0 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   hasCModL + (eGFR < 60) ;
MPRINT(KIDNEY):   * any value beyond threshold yet? ;
MPRINT(KIDNEY):   if ^first.pnr then do ;
MPRINT(KIDNEY):   tsCModL = ( tsCModL + difGFR ) * (hasCModL ge 1) ;
MPRINT(KIDNEY):   if tsCModL > 60 and eGFR < 60 and ^doneCModL then do ;
MPRINT(KIDNEY):   doC = doGFR ;
MPRINT(KIDNEY):   compl = "CModL" ;
MPRINT(KIDNEY):   output ;
MPRINT(KIDNEY):   doneCModL = 1 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   end ;
191         %kidney( BSevL, 30 ) ;
MPRINT(KIDNEY):   retain tsBSevL hasBSevL doneBSevL ;
MPRINT(KIDNEY):   if first.pnr then do ;
MPRINT(KIDNEY):   tsBSevL = 0 ;
MPRINT(KIDNEY):   hasBSevL = 0 ;
MPRINT(KIDNEY):   doneBSevL = 0 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   hasBSevL + (eGFR < 30) ;
MPRINT(KIDNEY):   * any value beyond threshold yet? ;
MPRINT(KIDNEY):   if ^first.pnr then do ;
MPRINT(KIDNEY):   tsBSevL = ( tsBSevL + difGFR ) * (hasBSevL ge 1) ;
MPRINT(KIDNEY):   if tsBSevL > 60 and eGFR < 30 and ^doneBSevL then do ;
MPRINT(KIDNEY):   doC = doGFR ;
MPRINT(KIDNEY):   compl = "BSevL" ;
MPRINT(KIDNEY):   output ;
MPRINT(KIDNEY):   doneBSevL = 1 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   end ;
192         %kidney( AESRL, 15 ) ;
MPRINT(KIDNEY):   retain tsAESRL hasAESRL doneAESRL ;
MPRINT(KIDNEY):   if first.pnr then do ;
MPRINT(KIDNEY):   tsAESRL = 0 ;
MPRINT(KIDNEY):   hasAESRL = 0 ;
MPRINT(KIDNEY):   doneAESRL = 0 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   hasAESRL + (eGFR < 15) ;
MPRINT(KIDNEY):   * any value beyond threshold yet? ;
MPRINT(KIDNEY):   if ^first.pnr then do ;
MPRINT(KIDNEY):   tsAESRL = ( tsAESRL + difGFR ) * (hasAESRL ge 1) ;
MPRINT(KIDNEY):   if tsAESRL > 60 and eGFR < 15 and ^doneAESRL then do ;
MPRINT(KIDNEY):   doC = doGFR ;
MPRINT(KIDNEY):   compl = "AESRL" ;
MPRINT(KIDNEY):   output ;
MPRINT(KIDNEY):   doneAESRL = 1 ;
MPRINT(KIDNEY):   end ;
MPRINT(KIDNEY):   end ;
193         run ;

```

NOTE: There were 28201373 observations read from the data set WORK.GFR.

NOTE: The data set WORK.GFR has 543459 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	7.99 seconds
cpu time	7.04 seconds

```

194
195         * if two complications appear on the same date we only take the most severe ;
196         proc sort data = gfr ; by pnr doC compl ; run ;

```

NOTE: There were 543459 observations read from the data set WORK.GFR.

NOTE: The data set WORK.GFR has 543459 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):  
 real time 0.11 seconds  
 cpu time 0.20 seconds

```
197      data gfr ( keep = pnr doC compl ) ;
198      set gfr ;
199      by pnr doC ;
200      if first.doC ;
201      compl = substr( compl, 2, 4 ) ;
202      run ;
```

NOTE: There were 543459 observations read from the data set WORK.GFR.

NOTE: The data set WORK.GFR has 507661 observations and 3 variables.

NOTE: DATA statement used (Total process time):  
 real time 0.15 seconds  
 cpu time 0.10 seconds

```
203
204      *-----;
205      * construct Albumin stages (MicA, MacA) ;
206      %macro albumin( typ, lim ) ;
207      retain ts&typ. has&typ. done&typ. ;
208      if first.pnr then do ;
209      ts&typ. = 0 ;
210      has&typ. = 0 ;
211      done&typ. = 0 ;
212      end ;
213      has&typ. + (Alb > &lim.) ; * any value beyond threshold yet? ;
214      if ^first.pnr then do ;
215      ts&typ. = ( ts&typ. + difAlb ) * (has&typ. ge 1);
216      if ts&typ. > 60 and Alb < &lim. and ^done&typ. then do ;
217      doC = doAlb ;
218      compl = "&typ." ;
219      output ;
220      done&typ. = 1 ;
221      end ;
222      end ;
223      %mend albumin ;
224
225      * combine the Albumin info from LABKA and DVDD and restrict to one record
226      per date by taking the mean of the measurements on that day ;
227      data alb ; set labalb dvddalb ; run ;
```

NOTE: There were 2085164 observations read from the data set WORK.LABALB.

NOTE: There were 1185687 observations read from the data set WORK.DVDDALB.

NOTE: The data set WORK.ALB has 3270851 observations and 4 variables.

NOTE: DATA statement used (Total process time):  
 real time 0.73 seconds  
 cpu time 0.36 seconds

```
228      proc summary data = alb (where = (Alb < 10000) ) nway ;
229      class pnr doAlb ;
230      var Alb ;
231      output out = alb ( keep = pnr doAlb Alb )
232      mean = ;
233      run ;
```

NOTE: There were 3270157 observations read from the data set WORK.ALB.  
 WHERE Alb<10000;

NOTE: The data set WORK.ALB has 2677658 observations and 3 variables.

NOTE: PROCEDURE SUMMARY used (Total process time):  
 real time 4.15 seconds  
 cpu time 6.28 seconds

```
234      /* old code ;
235      proc sort data = alb nodupkey ; by pnr doAlb ; run ;
```

```

236      data alb ( keep = pnr doAlb Alb ) ;
237          set alb ;
238          by pnr doAlb ;
239          difAlb = dif( doAlb ) ;
240          if first.pnr or difAlb > 3 ; * only tests 4+ days apart ;
241      run ;
242      /*
243      data alb ( keep = pnr doC compl ) ;
244          set alb ;
245          by pnr doAlb ;
246          difAlb = dif( doAlb ) ;
247          %albumin( BMicA, 30 ) ;
MPRINT(ALBUMIN):      retain tsBMicA hasBMicA doneBMicA ;
MPRINT(ALBUMIN):      if first.pnr then do ;
MPRINT(ALBUMIN):          tsBMicA = 0 ;
MPRINT(ALBUMIN):          hasBMicA = 0 ;
MPRINT(ALBUMIN):          doneBMicA = 0 ;
MPRINT(ALBUMIN):      end ;
MPRINT(ALBUMIN):          hasBMicA + (Alb > 30) ;
MPRINT(ALBUMIN):          * any value beyond threshold yet? ;
MPRINT(ALBUMIN):          if ~first.pnr then do ;
MPRINT(ALBUMIN):              tsBMicA = ( tsBMicA + difAlb ) * (hasBMicA ge 1);
MPRINT(ALBUMIN):              if tsBMicA > 60 and Alb < 30 and ~doneBMicA then do ;
MPRINT(ALBUMIN):                  doC = doAlb ;
MPRINT(ALBUMIN):                  compl = "BMicA" ;
MPRINT(ALBUMIN):                  output ;
MPRINT(ALBUMIN):                  doneBMicA = 1 ;
MPRINT(ALBUMIN):              end ;
MPRINT(ALBUMIN):          end ;
248          %albumin( AMacA, 300 ) ;
MPRINT(ALBUMIN):      retain tsAMacA hasAMacA doneAMacA ;
MPRINT(ALBUMIN):      if first.pnr then do ;
MPRINT(ALBUMIN):          tsAMacA = 0 ;
MPRINT(ALBUMIN):          hasAMacA = 0 ;
MPRINT(ALBUMIN):          doneAMacA = 0 ;
MPRINT(ALBUMIN):      end ;
MPRINT(ALBUMIN):          hasAMacA + (Alb > 300) ;
MPRINT(ALBUMIN):          * any value beyond threshold yet? ;
MPRINT(ALBUMIN):          if ~first.pnr then do ;
MPRINT(ALBUMIN):              tsAMacA = ( tsAMacA + difAlb ) * (hasAMacA ge 1);
MPRINT(ALBUMIN):              if tsAMacA > 60 and Alb < 300 and ~doneAMacA then do ;
MPRINT(ALBUMIN):                  doC = doAlb ;
MPRINT(ALBUMIN):                  compl = "AMacA" ;
MPRINT(ALBUMIN):                  output ;
MPRINT(ALBUMIN):                  doneAMacA = 1 ;
MPRINT(ALBUMIN):              end ;
MPRINT(ALBUMIN):          end ;
249      run ;

```

NOTE: There were 2677658 observations read from the data set WORK.ALB.

NOTE: The data set WORK.ALB has 142599 observations and 3 variables.

NOTE: DATA statement used (Total process time):

real time	0.70 seconds
cpu time	0.60 seconds

250

```

251      * if two complications appear on the same date we only take the most severe ;
252      proc sort data = alb ; by pnr doC compl ; run ;

```

NOTE: There were 142599 observations read from the data set WORK.ALB.

NOTE: The data set WORK.ALB has 142599 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.03 seconds
cpu time	0.09 seconds

```

253      data alb ( keep = pnr doC compl ) ;
254          set alb ;
255          by pnr doC ;

```

```

256         if first.doC ;
257         compl = substr( compl, 2, 4 ) ;
258         run ;

```

NOTE: There were 142599 observations read from the data set WORK.ALB.

NOTE: The data set WORK.ALB has 137783 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.04 seconds
cpu time       0.03 seconds

```

```

259
260         data DMdat.micompl ; set alb gfr ; run ;

```

NOTE: There were 137783 observations read from the data set WORK.ALB.

NOTE: There were 507661 observations read from the data set WORK.GFR.

NOTE: The data set DMDAT.MICOMPL has 645444 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```

real time      0.15 seconds
cpu time       0.04 seconds

```

```

261
262         title1 "Measurement-based complications from LABKA and DVDD" ;
263         proc contents data = DMdat.micompl varnum ; run ;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.01 seconds
cpu time       0.01 seconds

```

NOTE: The PROCEDURE CONTENTS printed page 5.

```

264         proc tabulate data = DMdat.micompl noseps missing ;
265         class doC compl ;
266         table doC,
267             ( all compl ) * f=comma9.
268             / rts = 6 ;
269         format doC year4. ;
270         run ;

```

NOTE: There were 645444 observations read from the data set DMDAT.MICOMPL.

NOTE: The PROCEDURE TABULATE printed page 6.

NOTE: PROCEDURE TABULATE used (Total process time):

```

real time      0.57 seconds
cpu time       0.26 seconds

```

```

271         * End of lab-based complication definitions ;
272         *-----;

```

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

```

real time      2:05.21
cpu time       1:23.32

```

### 3.16.1 10-labcomp.lst

Tabulation showing fishy range for NPU03918

10:37 Wednesday, October 28, 2020 1

```

-----
                                numval
-----
      N      NMiss      P5      P25      P50      P75      P95
-----

```

```

NPU03918
  10^-3      8,448      0      0.004      0.011      0.029      0.108      1.510
NPU19661
  10E-3    127,631 182,379      10.000      15.000      30.000      79.000      480.000
  10^-3    504,856      0      3.000      6.000      14.000      50.000      546.000
  mg/g     577,473      0      2.000      5.000      10.000      34.000      374.000
  x 10E-3  115,649      0      5.000      9.000      17.000      54.000      712.000
  x
  10<sup>
  3</sup>    292,709      0      4.200      8.000      17.500      60.100      794.000
  x 10^-3  256,376      0      5.000      9.000      18.000      59.000      790.000
NPU28842
  g/mol    19,643      0      0.300      0.700      1.700      5.600      54.300
-----

```

DVDD records of albumin that were ignored

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```

-----
                                unAlb
                                -----
                                -Ingen-
                                -----
                                N
-----
All      1,377,251      130,290      1,246,961
doAlb
.         1,211,570      75,603      1,135,967
1996      *              .          *
1997      *              *          .
1998      *              *          .
1999      7              5          *
2000      49             49         .
2001      85             85         .
2002      14             14         .
2003      155            155         .
2004      91             86         5
2005      871            849        22
2006      1,378          1,309       69
2007      1,915          1,692       223
2008      8,122          6,197       1,925
2009      13,627         7,693       5,934
2010      16,468         7,549       8,919
2011      22,398         8,961      13,437
2012      24,102         7,606      16,496
2013      21,911         4,890      17,021
2014      18,479         2,826      15,653
2015      14,695         2,064      12,631
2016      9,472          655        8,817
2017      5,589          1,001       4,588
2018      5,049          969        4,080
2019      1,201          30         1,171
-----

```

DVDD records of albumin used

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```

-----
                                unAlb
                                -----
                                Albumin  Albumin
                                ud.      ud.
                                mikrogra- mikromol-
                                m/min    /døgn
-----
All      A/K ratio A/K ratio A/K ratio Albumin  Albumin
          mg/g     mg/mmol  /millimol g/døgn   mg/døgn
-----
          N       N       N       N       N
-----
doAlb
.         6,450      12      6,432      *       *       *       .       *
1993      *         .       .       .       .       .       *       .
1995      6         *       .       .       .       5       .       .
1996      4         .       *       .       .       *       .       .
-----

```

1997	4	*	*	.	.	*	.	.
1998	18	9	*	.	.	7	.	.
1999	32	16	*	*	.	6	6	.
2000	111	53	13	.	.	10	33	*
2001	4,836	4,711	42	.	.	9	72	*
2002	416	108	120	*	*	7	171	6
2003	788	190	248	20	.	6	312	12
2004	1,763	254	1,227	23	4	43	186	26
2005	5,781	663	4,199	47	31	304	468	69
2006	18,129	2,879	11,480	209	40	2,207	1,103	211
2007	26,263	4,131	16,972	637	41	3,536	625	321
2008	26,131	4,341	17,673	589	56	2,837	506	129
2009	31,588	9,658	18,740	110	83	2,578	406	13
2010	45,137	30,430	12,265	314	126	1,680	317	5
2011	85,976	61,313	19,248	3,406	178	1,591	240	.
2012	169,692	130,869	35,959	389	60	2,282	132	*
2013	189,784	187,677	241	*	*	1,859	*	.
2014	139,950	138,237	.	.	.	1,713	.	.
2015	97,443	95,966	.	.	.	1,477	.	.
2016	96,088	94,813	.	.	.	1,275	.	.
2017	101,077	99,518	.	.	.	1,559	.	.
2018	102,689	100,343	.	.	.	2,346	.	.
2019	35,530	34,480	.	.	.	1,050	.	.

DVDD records of albumin used

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Alb							
	N	NMiss	Min	P10	P50	P90	Max
unAlb							
A/K ratio mg/g	1000673	0	0.2	3.0	11.0	145.0	35537
A/K ratio mg/mmol	144,869	0	0.9	4.4	26.5	300.6	15382
A/K ratio mikromol/millimol	5,751	0	0.6	4.1	72.2	1409.6	2.55E6
Albumin ud. g/døgn	624	0	2.0	80.0	325.0	2700.0	17770
Albumin ud. mg/døgn	28,390	0	1.0	5.0	21.0	719.5	10000
Albumin ud. mikrogram/min	4,581	0	1.4	10.1	46.1	1224.0	14400
Albumin ud. mikromol/døgn	799	0	0.7	8.6	69.8	914.2	6550.7

Measurement-based complications from LABKA and DVDD

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## The CONTENTS Procedure

Data Set Name	DMDAT.MICOMPL	Observations	645444
Member Type	DATA	Variables	*
Engine	V9	Indexes	0
Created	28/10/2020 10:39:50	Observation Length	32
Last Modified	28/10/2020 10:39:50	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	317
First Data Page	*
Max Obs per Page	2039
Obs in First Data Page	1998
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\micompl.sas7bdat
Release Created	9.0401M5

```

Host Created          X64_SR12R2
Owner Name            DSTFSE\FDIY7655
File Size             20MB
File Size (bytes)     20840448

```

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	Personnummer
2	doC	Num	8			
3	compl	Char	5			

Measurement-based complications from LABKA and DVDD

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-----						
compl						
All	ESRL	MacA	MicA	ModL	SevL	
N	N	N	N	N	N	
-----						
doC						
2001	*	.	.	*	.	.
2002	*	.	.	*	.	.
2003	4	.	*	*	.	.
2004	5	.	*	4	.	.
2005	16	.	*	14	.	.
2006	93	.	23	70	.	.
2007	736	.	192	544	.	.
2008	1,221	.	274	947	.	.
2009	2,479	22	633	1,729	74	21
2010	22,680	629	1,111	3,611	15,246	2,083
2011	36,970	1,401	1,606	5,244	25,209	3,510
2012	47,550	1,339	3,492	10,114	28,403	4,202
2013	46,615	1,002	3,207	13,699	24,916	3,791
2014	88,725	2,275	2,794	9,735	65,406	8,515
2015	86,530	2,451	2,886	9,709	62,849	8,635
2016	113,561	2,966	3,741	12,369	81,929	12,556
2017	86,904	2,760	4,213	15,132	54,332	10,467
2018	80,501	2,904	4,620	17,387	45,504	10,086
2019	30,852	1,088	1,829	6,845	17,149	3,941
-----						

## 3.17 10-compl

Reads ICD10-codes from NPR for the period 1994–2018 and classifies these as belonging in 18 mutually exclusive groups of complications. The complications defined in 10-labcomp are appended. Some of the complication groups are combined in super-groups, and a total 26 different groups are formed.

1 "Program: 10-compl.sas"

11:36 Wednesday, October 28, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.11 seconds  
cpu time 0.09 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      *-----;
2      * Creates a data frame for the entire DK pop with complications dates:
3      *   for each complication the first date of the complication ;
4
5      *-----;
6      * ADMINISTRATIVE RECORDS from NPR:
7      *   Read the link between recno and pnr and keep the date of
8      *   hospitalization to be used as the date of complication ;
9      %MACRO mrec;
10     data recpnr ( keep = pnr recnum doC ) ;
11         set %do i = 1994 %to 2018 ; /* only relevant from 1994 */
12             grund.lpr_adm&i.
13         %end ;
14         grund.uaf_adm2018 ;
15         doC = d_inddto ;
16     run;
17 %MEND ;
18 %mrec ;

```

NOTE: There were 2259996 observations read from the data set GRUND.LPR\_ADM1994.  
NOTE: There were 3099974 observations read from the data set GRUND.LPR\_ADM1995.  
NOTE: There were 3292287 observations read from the data set GRUND.LPR\_ADM1996.  
NOTE: There were 3381783 observations read from the data set GRUND.LPR\_ADM1997.  
NOTE: There were 3465660 observations read from the data set GRUND.LPR\_ADM1998.  
NOTE: There were 3573247 observations read from the data set GRUND.LPR\_ADM1999.  
NOTE: There were 3617984 observations read from the data set GRUND.LPR\_ADM2000.  
NOTE: There were 3908224 observations read from the data set GRUND.LPR\_ADM2001.  
NOTE: There were 4593785 observations read from the data set GRUND.LPR\_ADM2002.  
NOTE: There were 4630303 observations read from the data set GRUND.LPR\_ADM2003.  
NOTE: There were 4770380 observations read from the data set GRUND.LPR\_ADM2004.  
NOTE: There were 4970849 observations read from the data set GRUND.LPR\_ADM2005.  
NOTE: There were 5148038 observations read from the data set GRUND.LPR\_ADM2006.  
NOTE: There were 5176587 observations read from the data set GRUND.LPR\_ADM2007.  
NOTE: There were 5467668 observations read from the data set GRUND.LPR\_ADM2008.  
NOTE: There were 5892674 observations read from the data set GRUND.LPR\_ADM2009.  
NOTE: There were 5906779 observations read from the data set GRUND.LPR\_ADM2010.  
NOTE: There were 6204786 observations read from the data set GRUND.LPR\_ADM2011.  
NOTE: There were 6127472 observations read from the data set GRUND.LPR\_ADM2012.  
NOTE: There were 6329051 observations read from the data set GRUND.LPR\_ADM2013.  
NOTE: There were 6495594 observations read from the data set GRUND.LPR\_ADM2014.  
NOTE: There were 6927895 observations read from the data set GRUND.LPR\_ADM2015.  
NOTE: There were 6852448 observations read from the data set GRUND.LPR\_ADM2016.  
NOTE: There were 6857872 observations read from the data set GRUND.LPR\_ADM2017.  
NOTE: There were 6707411 observations read from the data set GRUND.LPR\_ADM2018.  
NOTE: There were 1977489 observations read from the data set GRUND.UAF\_ADM2018.  
NOTE: The data set WORK.RECPNR has 127636236 observations and 3 variables.  
NOTE: DATA statement used (Total process time):  
real time 1:03.76  
cpu time 21.48 seconds

```

19      * Sort so data can be merged on recnum with
20      *   diagnosis, surgery and procedures records ;

```



```
21      proc sort data = recpnr ; by recnum ; RUN ;
```

NOTE: There were 127636236 observations read from the data set WORK.RECPNR.

NOTE: The data set WORK.RECPNR has 127636236 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      1:12.42
cpu time       2:02.32
```

```
22
23      *-----;
24      * ICD10 diagnosis data (we should include pre 1994 using ICD8) ;
25      %MACRO mdiag ;
26      data diags ( keep = recnum diag compl ) ;
27      length c_diag $ 10 ; * has length 6 in the 1994 file ;
28      set %do i = 1994 %to 2018 ; /* only relevant from 1994 */
29      grund.lpr_diag&i.
30      %end ;
31      grund.uaf_diag2018 ;
32      * Retain only observations that are not referrals ;
33      if c_diagtype eq "H" then delete ;
34      * group the diagnoses, first by full code ;
35      compl = put(      c_diag      , $compsub.) ;
36      * ...then by the first 4 digits ;
37      if compl eq 'Other' then
38      compl = put(substr(c_diag, 1, 4), $cmp4sub.) ;
39      diag = c_diag ;
40      * only records with one of the specified complications ;
41      if compl ne 'Other' then output ;
42      run ;
43      %MEND ;
44      %mdiag ;
```

NOTE: There were 3061037 observations read from the data set GRUND.LPR\_DIAG1994.

NOTE: There were 4417984 observations read from the data set GRUND.LPR\_DIAG1995.

NOTE: There were 5114752 observations read from the data set GRUND.LPR\_DIAG1996.

NOTE: There were 5526027 observations read from the data set GRUND.LPR\_DIAG1997.

NOTE: There were 5979155 observations read from the data set GRUND.LPR\_DIAG1998.

NOTE: There were 7331856 observations read from the data set GRUND.LPR\_DIAG1999.

NOTE: There were 7904652 observations read from the data set GRUND.LPR\_DIAG2000.

NOTE: There were 8505005 observations read from the data set GRUND.LPR\_DIAG2001.

NOTE: There were 9702689 observations read from the data set GRUND.LPR\_DIAG2002.

NOTE: There were 10113403 observations read from the data set GRUND.LPR\_DIAG2003.

NOTE: There were 10928441 observations read from the data set GRUND.LPR\_DIAG2004.

NOTE: There were 11483126 observations read from the data set GRUND.LPR\_DIAG2005.

NOTE: There were 11957102 observations read from the data set GRUND.LPR\_DIAG2006.

NOTE: There were 12147472 observations read from the data set GRUND.LPR\_DIAG2007.

NOTE: There were 12766717 observations read from the data set GRUND.LPR\_DIAG2008.

NOTE: There were 13482499 observations read from the data set GRUND.LPR\_DIAG2009.

NOTE: There were 13660985 observations read from the data set GRUND.LPR\_DIAG2010.

NOTE: There were 14347430 observations read from the data set GRUND.LPR\_DIAG2011.

NOTE: There were 14357996 observations read from the data set GRUND.LPR\_DIAG2012.

NOTE: There were 14676150 observations read from the data set GRUND.LPR\_DIAG2013.

NOTE: There were 14832333 observations read from the data set GRUND.LPR\_DIAG2014.

NOTE: There were 15650577 observations read from the data set GRUND.LPR\_DIAG2015.

NOTE: There were 15131689 observations read from the data set GRUND.LPR\_DIAG2016.

NOTE: There were 15628953 observations read from the data set GRUND.LPR\_DIAG2017.

NOTE: There were 15356228 observations read from the data set GRUND.LPR\_DIAG2018.

NOTE: There were 4613813 observations read from the data set GRUND.UAF\_DIAG2018.

NOTE: The data set WORK.DIAGS has 11917013 observations and 3 variables.

NOTE: DATA statement used (Total process time):

```
real time      3:20.71
cpu time       1:05.95
```

```
45
46      *-----;
47      * Surgery data ;
48      %MACRO msurg ;
49      data surgs ( keep = recnum diag compl ) ;
```

```

50      set %do i = 1996 %to 2018 ; /* only exist from 1996 */
51      grund.lpr_sksopr&i.
52      %end ;
53      grund.uaf_sksopr2018
54      grund.uaf_opr1996 ; * must be last: C_diag has only length 6 ;
55      compl = put(      c_opr      , $compsub.) ;
56      if compl eq 'Other' then
57      compl = put(substr(c_opr, 1, 4), $cmp4sub.) ;
58      diag = c_opr ;
59      * only records with one of the complications ;
60      if compl ne 'Other' then output surgs ;
61  run ;
62  %MEND ;
63  %msurg ;

```

```

NOTE: There were 1005520 observations read from the data set GRUND.LPR_SKSOPR1996.
NOTE: There were 1068015 observations read from the data set GRUND.LPR_SKSOPR1997.
NOTE: There were 1172159 observations read from the data set GRUND.LPR_SKSOPR1998.
NOTE: There were 1202449 observations read from the data set GRUND.LPR_SKSOPR1999.
NOTE: There were 1355194 observations read from the data set GRUND.LPR_SKSOPR2000.
NOTE: There were 1566517 observations read from the data set GRUND.LPR_SKSOPR2001.
NOTE: There were 1601589 observations read from the data set GRUND.LPR_SKSOPR2002.
NOTE: There were 1726606 observations read from the data set GRUND.LPR_SKSOPR2003.
NOTE: There were 1865271 observations read from the data set GRUND.LPR_SKSOPR2004.
NOTE: There were 1968744 observations read from the data set GRUND.LPR_SKSOPR2005.
NOTE: There were 2029382 observations read from the data set GRUND.LPR_SKSOPR2006.
NOTE: There were 2037839 observations read from the data set GRUND.LPR_SKSOPR2007.
NOTE: There were 2112855 observations read from the data set GRUND.LPR_SKSOPR2008.
NOTE: There were 2202248 observations read from the data set GRUND.LPR_SKSOPR2009.
NOTE: There were 2248493 observations read from the data set GRUND.LPR_SKSOPR2010.
NOTE: There were 2467102 observations read from the data set GRUND.LPR_SKSOPR2011.
NOTE: There were 2451266 observations read from the data set GRUND.LPR_SKSOPR2012.
NOTE: There were 2608265 observations read from the data set GRUND.LPR_SKSOPR2013.
NOTE: There were 2647552 observations read from the data set GRUND.LPR_SKSOPR2014.
NOTE: There were 3159681 observations read from the data set GRUND.LPR_SKSOPR2015.
NOTE: There were 2881706 observations read from the data set GRUND.LPR_SKSOPR2016.
NOTE: There were 2942536 observations read from the data set GRUND.LPR_SKSOPR2017.
NOTE: There were 2741472 observations read from the data set GRUND.LPR_SKSOPR2018.
NOTE: There were 1721434 observations read from the data set GRUND.UAF_SKSOPR2018.
NOTE: There were 18753 observations read from the data set GRUND.UAF_OPR1996.
NOTE: The data set WORK.SURGS has 2689688 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          52.25 seconds
      cpu time           12.82 seconds

```

```

64
65      *-----;
66      * Examination and procedures data ;
67      %MACRO mexam ;
68      data exams ( keep = recnum diag compl ) ;
69      set %do i = 1999 %to 2018 ; /* only exist from 1999 */
70      grund.lpr_sksube&i.
71      %end ;
72      grund.uaf_sksube2018 ;
73      compl = put(      c_opr      , $compsub.) ;
74      if compl eq 'Other' then
75      compl = put(substr(c_opr, 1, 4), $cmp4sub.) ;
76      diag = c_opr ;
77      if compl ne 'Other' then output exams ;
78  run ;
79  %MEND ;
80  %mexam ;

```

```

NOTE: There were 790360 observations read from the data set GRUND.LPR_SKSUBE1999.
NOTE: There were 1331778 observations read from the data set GRUND.LPR_SKSUBE2000.
NOTE: There were 3549220 observations read from the data set GRUND.LPR_SKSUBE2001.
NOTE: There were 8650787 observations read from the data set GRUND.LPR_SKSUBE2002.
NOTE: There were 11008755 observations read from the data set GRUND.LPR_SKSUBE2003.
NOTE: There were 15801484 observations read from the data set GRUND.LPR_SKSUBE2004.

```

```

NOTE: There were 17662628 observations read from the data set GRUND.LPR_SKSUBE2005.
NOTE: There were 20015620 observations read from the data set GRUND.LPR_SKSUBE2006.
NOTE: There were 20400478 observations read from the data set GRUND.LPR_SKSUBE2007.
NOTE: There were 24272485 observations read from the data set GRUND.LPR_SKSUBE2008.
NOTE: There were 24827897 observations read from the data set GRUND.LPR_SKSUBE2009.
NOTE: There were 25466350 observations read from the data set GRUND.LPR_SKSUBE2010.
NOTE: There were 31485421 observations read from the data set GRUND.LPR_SKSUBE2011.
NOTE: There were 37251165 observations read from the data set GRUND.LPR_SKSUBE2012.
NOTE: There were 46899955 observations read from the data set GRUND.LPR_SKSUBE2013.
NOTE: There were 47031584 observations read from the data set GRUND.LPR_SKSUBE2014.
NOTE: There were 55087013 observations read from the data set GRUND.LPR_SKSUBE2015.
NOTE: There were 54408611 observations read from the data set GRUND.LPR_SKSUBE2016.
NOTE: There were 55661241 observations read from the data set GRUND.LPR_SKSUBE2017.
NOTE: There were 50416994 observations read from the data set GRUND.LPR_SKSUBE2018.
NOTE: There were 37387739 observations read from the data set GRUND.UAF_SKSUBE2018.
NOTE: The data set WORK.EXAMS has 5829634 observations and 3 variables.
NOTE: DATA statement used (Total process time):
      real time          9:45.50
      cpu time           2:31.95

```

```

81
82      *-----;
83      * Append diagnoses, surgery and procedures and groups complications ;
84      data compl ( keep = recnum diag compl compGr ) ;
85          set diags surgs exams ;
86          compGr = put( compl, $sub2grp. ) ;
87      run ;

```

```

NOTE: There were 11917013 observations read from the data set WORK.DIAGS.
NOTE: There were 2689688 observations read from the data set WORK.SURGS.
NOTE: There were 5829634 observations read from the data set WORK.EXAMS.
NOTE: The data set WORK.COMPL has 20436335 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time          4.92 seconds
      cpu time           4.46 seconds

```

```

88
89      *-----;
90      * Show the collected diagnoses, surgery and procedures and the
91      * classification of these - several records per person ;
92      proc tabulate data = compl noseps missing ;
93          class diag compl compGr ;
94          table all compGr * compl * diag, n*f=comma10.
95              / rts = 78 indent = 1 box = "No. of NPR records retrieved" ;
96          format diag $dob_l1l1_kt.
97              compGr compl $ab2abtx. ;
98      run ;

```

```

NOTE: There were 20436335 observations read from the data set WORK.COMPL.
NOTE: The PROCEDURE TABULATE printed page 1.
NOTE: PROCEDURE TABULATE used (Total process time):
      real time          3.83 seconds
      cpu time           6.57 seconds

```

```

99
100     *-----;
101     * Sort by recnum to merge with adm and obtain pnr ;
102     proc sort data = compl ; by recnum ; run ;

```

```

NOTE: There were 20436335 observations read from the data set WORK.COMPL.
NOTE: The data set WORK.COMPL has 20436335 observations and 4 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          4.56 seconds
      cpu time           8.35 seconds

```

```

103     * Append the pnr and the dates to NPR diagnoses via recnum ;

```

```

104      data compl ;
105      merge compl (in = dg)
106          recpnr ;
107      by recnum ;
108      if dg ;
109      * recnum not needed any more ;
110      drop recnum ;
111      run ;

```

NOTE: There were 20436335 observations read from the data set WORK.COMPL.

NOTE: There were 127636236 observations read from the data set WORK.RECPNR.

NOTE: The data set WORK.COMPL has 20436335 observations and 5 variables.

NOTE: DATA statement used (Total process time):

```

real time      33.25 seconds
cpu time       25.34 seconds

```

```

112      * compl is now a dataset with all diagnoses assigned to a group from:
113      - lprdiag (diagnoses)
114      - lprksop (surgery)
115      - lprksub (procedures)
116      The sort order is not used ;
117
118      * append the labdata-based complications created by program 10-labcompl ;
119      data compl ;
120      set compl DMdat.micmpl ;
121      run ;

```

NOTE: There were 20436335 observations read from the data set WORK.COMPL.

NOTE: There were 645444 observations read from the data set DMDAT.MICOMPL.

NOTE: The data set WORK.COMPL has 21081779 observations and 5 variables.

NOTE: DATA statement used (Total process time):

```

real time      5.23 seconds
cpu time       2.09 seconds

```

```

122
123      *-----;
124      * Construction of the datasets with complication dates
125      * sort by pnr, complication and date within complication ;
126      proc sort data = compl ; by pnr compl doC ; run ;

```

NOTE: There were 21081779 observations read from the data set WORK.COMPL.

NOTE: The data set WORK.COMPL has 21081779 observations and 5 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      8.20 seconds
cpu time       14.61 seconds

```

```

127
128      * Select the first complication of each type within each person ;
129      data DMdat.fcompl ( keep = pnr compl compGr doC
130                          label = 'Dates of first complication in long form for DKpop'
131      ! ) ;
132      label pnr = 'Person id'
133            diag = 'Diagnosis'
134            compl = 'Complication group'
135            complGr = 'Complication group'
136            doC = 'Date of complication' ;
137      set compl ;
138      by pnr compl ;
139      if first.compl ;
140      compGr = put( compl, $sub2grp. ) ;
141      format doC ddmmyy10. ;
142      run ;

```

NOTE: Variable complGr is uninitialized.

NOTE: There were 21081779 observations read from the data set WORK.COMPL.

NOTE: The data set DMDAT.FCOMPL has 4327573 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```
real time      4.57 seconds
cpu time       3.17 seconds
```

```
142
143      * Transpose to one record per person with compl-dates ;
144      proc transpose data = DMdat.fcompl ( drop = compGr )
145                out = wcompl ( drop = _name_ _label_ )
146                prefix = do ;
147          by pnr ;
148          id compl ;
149          var doC ;
150      run ;
```

NOTE: There were 4327573 observations read from the data set DMDAT.FCOMPL.

NOTE: The data set WORK.WCOMPL has 1874704 observations and 24 variables.

NOTE: PROCEDURE TRANSPOSE used (Total process time):

```
real time      5.69 seconds
cpu time       4.90 seconds
```

```
151
152      * The coarser grouping but same procedure ;
153      proc sort  data = DMdat.fcompl  out = cmpgr ;  by pnr compGr doC ; run ;
```

NOTE: There were 4327573 observations read from the data set DMDAT.FCOMPL.

NOTE: The data set WORK.CMPGR has 4327573 observations and 4 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      0.70 seconds
cpu time       1.79 seconds
```

```
154      data cmpgr ;
155          set cmpgr ;
156          by pnr compGr ;
157          if first.compGr ;
158      run ;
```

NOTE: There were 4327573 observations read from the data set WORK.CMPGR.

NOTE: The data set WORK.CMPGR has 3128176 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```
real time      1.14 seconds
cpu time       0.87 seconds
```

```
159
160      * Transpose to one record per person with compGr-dates ;
161      proc transpose data = cmpgr ( drop = compl )
162                out = wgrps ( drop = _name_ _label_ )
163                prefix = do ;
164          by pnr ;
165          id compGR ;
166          var doC ;
167      run ;
```

NOTE: There were 3128176 observations read from the data set WORK.CMPGR.

NOTE: The data set WORK.WGRPS has 1874704 observations and 11 variables.

NOTE: PROCEDURE TRANSPOSE used (Total process time):

```
real time      4.49 seconds
cpu time       3.87 seconds
```

```
168
169      * Merge side-by side ;
170      data DMdat.wcompl ( label = 'Dates of first complications for DKpop' ) ;
171          merge wcompl wgrps ;
172          by pnr ;
173      run ;
```

NOTE: There were 1874704 observations read from the data set WORK.WCOMPL.

NOTE: There were 1874704 observations read from the data set WORK.WGRPS.  
 NOTE: The data set DMDAT.WCOMPL has 1874704 observations and 29 variables.  
 NOTE: DATA statement used (Total process time):  
     real time          2.68 seconds  
     cpu time           1.23 seconds

```

174
175      *-----;
176      * For ketoacidosis and hypoglycaemia we also want all the recurring
176      ! complications ;
177      data DMdat.rcompl ( keep = pnr compl doC
178                        label = 'Dates of *all* recurrent complications in long form
178      ! for DKpop' ) ;
179          label pnr = 'Person id'
180          compl = 'Complication group'
181          doC = 'Date of complication' ;
182          set compl ;
183          if compl in ('Keto','HpoG','Str','MI') ;
184          format doC ddmmyy10. ;
185      run ;

```

NOTE: There were 21081779 observations read from the data set WORK.COMPL.  
 NOTE: The data set DMDAT.RCOMPL has 1847158 observations and 3 variables.  
 NOTE: DATA statement used (Total process time):  
     real time          2.69 seconds  
     cpu time           1.57 seconds

```

186
187      *-----;
188      * Show the classification of complications groups ;
189      proc tabulate data = DMdat.fcompl missing noseps ;
190          class      compGr compl ;
191          table all compGr*compl,
192                n * f=comma9.
193                / rts = 17  indent = 3  box = "no. first complications" ;
194      run ;

```

NOTE: Box contents truncated on page 2.  
 NOTE: There were 4327573 observations read from the data set DMDAT.FCOMPL.  
 NOTE: The PROCEDURE TABULATE printed page 2.  
 NOTE: PROCEDURE TABULATE used (Total process time):  
     real time          0.26 seconds  
     cpu time           1.01 seconds

```

195
196      *-----;
197      * Check how many persons ;
198      proc sort  data = DMdat.fcompl  nodupkey  out = x ; by pnr ; run ;

```

NOTE: There were 4327573 observations read from the data set DMDAT.FCOMPL.  
 NOTE: 2452869 observations with duplicate key values were deleted.  
 NOTE: The data set WORK.X has 1874704 observations and 4 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time          0.53 seconds  
     cpu time           1.37 seconds

```

199      proc sort  data = DMdat.wcompl  nodupkey  out = x ; by pnr ; run ;

```

NOTE: There were 1874704 observations read from the data set DMDAT.WCOMPL.  
 NOTE: 0 observations with duplicate key values were deleted.  
 NOTE: The data set WORK.X has 1874704 observations and 29 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time          4.47 seconds  
     cpu time           1.36 seconds

```
200      proc sort  data = DMdat.rcompl  nodupkey  out = x ; by pnr ; run ;
```

NOTE: There were 1847158 observations read from the data set DMDAT.RCOMPL.

NOTE: 1200269 observations with duplicate key values were deleted.

NOTE: The data set WORK.X has 646889 observations and 3 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time 0.46 seconds

cpu time 0.61 seconds

```
201
```

```
202      *-----;
```

```
203      * Show the contents of the datasets ;
```

```
204      proc contents data = DMdat.fcompl  varnum ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):

real time 0.01 seconds

cpu time 0.01 seconds

NOTE: The PROCEDURE CONTENTS printed page 3.

```
205      proc contents data = DMdat.wcompl  varnum ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):

real time 0.00 seconds

cpu time 0.00 seconds

NOTE: The PROCEDURE CONTENTS printed page 4.

```
206      proc contents data = DMdat.rcompl  varnum ; run ;
```

NOTE: PROCEDURE CONTENTS used (Total process time):

real time 0.00 seconds

cpu time 0.00 seconds

NOTE: The PROCEDURE CONTENTS printed page 5.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

NOTE: The SAS System used:

real time 17:42.67

cpu time 7:37.99

### 3.17.1 10-compl.lst

The SAS System

11:36 Wednesday, October 28, 2020 1

-----	
No. of NPR records retrieved	N
-----	
All	20,436,335
Amp: Amputation	
MajA: Major amputation	
KNFQ09 Eksartikulation i hofteled	1,038
KNFQ19 Amputation på lårben	41,449
KNFQ99 Anden amputationsoperation på hofte/lår	447
MedA: Medium amputation	
KNGQ09 Eksartikulation i knæled	6,006
KNGQ19 Amputation på underben	27,276
MinA: Minor amputation	
KNHQ00 Eksartikulation i talokruralled	55
KNHQ02 Intertarsal eksartikulation	447
KNHQ03 Tarsometatarsal eksartikulation	1,261
KNHQ05 Metatarsofalangeal eksartikulation	5,460
KNHQ07 Eksartikulation af tå i interfalangealled	2,360

KNHQ11	Amputation i ankelled a.m. Syme	156
KNHQ14	Transmetatarsal amputation	21,598
KNHQ17	Partiel amputation af tå	12,899
KNHQ99	An. amputations- el. eksartikulationssoperation på ankel/fod	817
CVD: Cardiovascular Disease		
AFib: Atrial fibrillation		
DI48	Atrieflagren og atrieflimren	678
DI480	Paroksysmatisk atrieflimren	102,967
DI481	Persisterende atrieflimren	28,840
DI482	Kronisk atrieflimren	42,462
DI483	Typisk atrieflagren	10,988
DI484	Atypisk atrieflagren	3,634
DI489	Atrieflagren eller atrieflimren UNS	1,363,420
DI489A	Atrieflagren	21,642
DI489AA	Almindelig typisk atrieflagren	303
DI489AB	Reverse typisk atrieflagren	72
DI489AC	Lower loop-atrieflagren	*
DI489AD	Venstre atrie makro-reentry atrieflagren	18
DI489AE	Postoperativ (ar) makro-reentry atrieflagren	13
DI489B	Atrieflimren	173,383
DI489BA	Atrieflimren, første anfald	2,718
DI489BB	Paroksysmatisk atrieflimren	32,728
DI489BC	Persisterende atrieflimren	4,183
DI489BD	Permanent atrieflimren	5,264
KFPD00	Labyrintoperation for atrieflimmer	867
KFPD96	Anden operation for atrieflimmer	2,092
AtMD: Atherosclerotic macrovascular dis		
DI70	Åreforkalkning	42
DI700	Aterosklerose i aorta	7,591
DI701	Aterosklerose i nyrearterie	2,591
DI702	Aterosklerose i arterie i underekstremitet	344,533
DI702A	Aterosklerotisk gangræn	63,383
DI702B	Mönckebergs mediasklerose	82
DI708	Aterosklerose i anden arterie	13,485
DI708A	Aterosklerotisk retinopati	18
DI709	Aterosklerose UNS	53,697
DI71	Aorta-aneurisme og aortadissektion	207
DI710	Aortadissektion UNS	8,662
DI710A	Aortadissektion, type A	3,748
DI710B	Aortadissektion, type B	3,574
DI711	Rumperet torakalt aorta-aneurisme	2,099
DI712	Torakalt aorta-aneurisme uden ruptur	14,039
DI713	Rumperet abdominalt aorta-aneurisme	17,946
DI714	Abdominalt aorta-aneurisme uden ruptur	96,369
DI715	Rumperet torakoabdominalt aorta-aneurisme	1,130
DI716	Torakoabdominalt aorta-aneurisme uden ruptur	6,250
DI718	Rumperet aorta-aneurisme UNS	1,471
DI719	Aorta-aneurisme UNS uden ruptur	18,940
DI719A	Dilateret aorta	6,626
DI719B	Hyalin nekrose i aorta	6
DI739A	Claudicatio intermittens	165,521
DI739C	Iskæmiske hvilesmerter i underekstremitet	60,497
CbVD: Cerebrovascular disease		
DI60	Subaraknoidalblødning	138
DI600	Subaraknoidalblødning fra karotissifonen eller bifurkaturen	3,433
DI601	Subaraknoidalblødning fra arteria cerebri media	5,305
DI602	Subaraknoidalblødning fra arteria communicans anterior	7,511
DI603	Subaraknoidalblødning fra arteria communicans posterior	1,828
DI604	Subaraknoidalblødning fra arteria basilaris	1,974
DI605	Subaraknoidalblødning fra arteria vertebralis	680
DI606	Subaraknoidalblødning fra anden intrakraniell arterie	1,407
DI606A	Subaraknoidalblødning fra arteria cerebri posterior	114
DI606B	Subaraknoidalblødning fra arteria cerebri anterior	257
DI606C	Subaraknoidalblødning fra flere intrakranielle arterier	48
DI606D	Haemorrhagia subarachnoidalis, anden arterie	133
DI607	Subaraknoidalblødning fra intrakraniell arterie UNS	5,032
DI607A	Bristet medfødt intrakranielt sakkulært aneurisme	19
DI608	Anden form for subaraknoidalblødning	2,753
DI609	Subaraknoidalblødning UNS	24,268
DI609A	Bristet (medfødt) intrakranielt aneurisme UNS	76



DI67	Andre cerebrovaskulære sygdomme	*
DI670	Dissektion af cerebral arterie uden ruptur	2,575
DI671	Cerebralt aneurisme uden ruptur	20,012
DI671A	Erhvervet cerebral arteriovenøs fistel	901
DI672	Cerebral aterosklerose	8,469
DI672A	Atheroma arteriae cerebri	25
DI673	Progressiv vaskulær leukoencefalopati	1,658
DI673A	Binswangers sygdom	134
DI674	Hypertensiv encefalopati	1,412
DI675	Moyamoya-sygdom	610
DI676	Ikke-pyogen intrakraniell venøs trombose	2,451
DI676A	Ikke-pyogen trombose i sinus venosi cerebri	739
DI677	Cerebral arteritis IKA	1,394
DI677A	Primær cerebral vaskulitis	411
DI678	Anden cerebrovaskulær sygdom	2,681
DI678A	Akut cerebrovaskulær insufficiens	172
DI678B	Cerebral (kronisk) iskæmi	768
DI679	Cerebrovaskulær sygdom UNS	3,867
DI68	Karforandringer i hjernen ved sygdomme klas. andetsteds	*
DI680	Cerebral amyloid angiopati	1,196
DI681	Cerebral arteritis ved infektiøs eller parasitær sygdom KA	43
DI681A	Arteritis cerebri ved infektiøs sygdom	4
DI682	Cerebral arteritis ved anden sygdom klassificeret andetsteds	119
DI688	Anden karforandring i hjernen ved sygdom klas. andetsteds	245
DI69	Senfølge efter karsygdomme i hjernen	16
DI690	Senfølge efter tidligere subaraknoidalblødning	7,983
DI691	Senfølge efter tidligere hjerneblødning	18,321
DI692	Senfølge eft. tidl. an. art ikke-traum. intrakran. blødning	1,829
DI693	Senfølge efter tidligere hjerneinfarkt	92,022
DI694	Senfølge efter tidligere apoplexia cerebri	344,214
DI698	Senfølge efter tidligere an/ikke spec. cerebrovaskulær sygd	8,875
HF: Heart failure		
DI110	Hypertensiv hjertesygdom med inkompenaseret hjertesvigt	23,844
DI130	Hypertensiv hjertesygdom og nyresygdom med hjertesvigt	1,589
DI132	Hypertensiv hjertesygdom og nyresygdom m. hjerte- og nyresvigt	1,282
DI50	Hjertesvigt	1,059
DI500	Kronisk hjerteinsufficiens	194,556
DI500A	Højresidig hjerteinsufficiens	4,815
DI501	Venstresidig hjerteinsufficiens	99,005
DI501A	Asthma cardiale	413
DI501B	Kardielt lungeødem	8,129
DI501C	Kardiel lungestase	9,474
DI501D	Biventrikulær hjerteinsufficiens	1,183
DI502	Højresidig inkompenaseret hjerteinsufficiens	247
DI503	Biventrikulær inkompenaseret hjerteinsufficiens	248
DI508	Hjerteinsufficiens, andre former	369
DI508A	Kompenaseret hjerteinsufficiens	431
DI509	Hjertesvigt UNS	659,476
DI509A	Incompensatio cordis biventricularis	734
DI509B	Biventrikulær hjerteinsufficiens	415
IHD: Ischeamic heart disease		
DI20	Angina pectoris	4,682
DI200	Ustabil angina pectoris	143,874
DI200A	Praeinfarkt syndrom	303
DI200B	Klinisk vurderet ustabil angina pectoris	4,306
DI200C	Ustabil angina pectoris med dokumenteret iskæmi	1,955
DI201	Prinzmetals angina pectoris	15,984
DI201A	Angina pectoris, variant	52
DI201B	Angina pectoris, Prinzmetal	23
DI208	Anden form for angina pectoris	51,666
DI208A	Angina pectoris, anstrengelsesudløst	4,335
DI208B	Stenocardia	83
DI208D	Mikrovaskulær angina	942
DI208E	Stabil angina pectoris	9,639
DI208E1	Klinisk vurderet angina pectoris	500
DI208E2	Angina pectoris med dokumenteret iskæmi	704
DI209	Angina pectoris UNS	805,705
DI210	Anteriort akut myokardieinfarkt med Q-taksudvikling	36,658
DI210A	Anteriort non-ST-elevations AMI med Q-taksudvikling	1,916
DI210B	Anteriort ST-elevations akut myokardieinfarkt med Q-taksudv.	9,466

DI211	Inferiort/posteriort akut myokardieinfarkt med Q-taksudv.	28,936
DI211A	Inferiort el posteriort non-ST-elevations AMI m Q-taksudvikl	1,663
DI211B	Inferiort el posteriort ST-elevations AMI m Q-taksudvikling	9,713
DI213	ST-elevations akut myokardieinfarkt uden Q-taksudvikling	57,262
DI214	Non-ST-elevations akut myokardieinfarkt uden Q-taksudvikling	191,400
DI219	Akut myokardieinfarkt UNS	229,536
DI230	Hæmoperikardium efter akut myokardieinfarkt	504
DI231	Atrieseptumruptur efter akut myokardieinfarkt	151
DI232	Ventrikelseptumruptur efter akut myokardieinfarkt	849
DI233	Ruptur i hjertevæg u hæmoperikardium eft AMI	128
DI234	Ruptur af chordae tendineae efter akut myokardieinfarkt	89
DI235	Papillærmuskelruptur efter akut myokardieinfarkt	161
DI236	Trombose i atrie eller ventrikel efter akut myokardieinfarkt	544
DI236A	Trombose i atrieaurikel efter akut myokardieinfarkt	17
DI236B	Trombose i ventrikel akut myokardieinfarkt	80
DI238	An. akut kompl. i efterforløbet af AMI	782
DI238A	Perikardieansamling efter akut myokardieinfarkt	174
DI240	Koronartrombose uden infarkt	1,242
DI240A	Arteriel eller venøs koronaremboli uden infarkt	31
DI241	Postmyokardieinfarktsyndrom	1,350
DI248	Anden form for akut iskæmisk hjertesygdom	3,385
DI248A	Insufficiencia coronaria	352
DI249	Akut iskæmisk hjertesygdom UNS	15,439
DI25	Kronisk iskæmisk hjertesygdom	317
DI250	Arteriosclerosis cardiovascularis	11,470
DI251	Arteriosklerotisk hjertesygdom	518,610
DI251A	Ateriosclerosis arteriae coronariae	166
DI251B	Klinisk vurderet angina pectoris	3,323
DI251C	Angina pectoris med dokumenteret iskæmi	1,723
DI252	Gammelt myokardieinfarkt	260,337
DI252A	Tidligere myokardieinfarkt (non-Q-tak)	2,981
DI252B	Tidligere myokardieinfarkt (Q-tak, anteriort)	1,510
DI252C	Tidligere myokardieinfarkt (Q-tak, inferiort/posteriort)	962
DI253	Hjerteaneurisme	1,839
DI254	Koronararterieaneurisme	486
DI254A	Fistula arteriovenosa coronaria acquisita	11
DI255	Iskæmisk kardiomyopati	12,365
DI256	Stum myokardieiskæmi	2,098
DI256A	Søvnrelateret iskæmisk hjertesygdom	*
DI258	Anden form for kronisk iskæmisk hjertesygdom	24,662
DI259	Kronisk iskæmisk hjertesygdom UNS	549,812
KFNG20	Fjernelse af fremmedlegeme i kor-a.	11
MI: Myocardial Infarction		
DI21	Akut myokardieinfarkt	8,434
DI212	Infarctus myocardii acutus transmuralis m anden lokalisatio	3,319
DI212A	Infarctus myocardii acutus transmuralis posterolateralis	20
DI212B	Infarctus myocardii acutus transmuralis septalis	23
DI212C	Infarctus myocardii acutus transmuralis posterobasalis	7
DI212E	Infarctus myocardii acutus transmuralis apicolateralis	4
DI212G	Infarctus myocardii acutus transmuralis lateralis	13
DI212H	Infarctus myocardii acutus transmuralis posterioris	26
DI23	Komplikationer i efterforløbet af akut myokardieinfarkt	9
DI24	Andre former for akut iskæmisk hjertesygdom	258
DI241A	Dressler's syndrom	19
KFNA00	Anastom. mellem a. mammaria interna og kor-a.	50,866
KFNA10	Sekventielle anastomoser mellem a. mamm. interna og kor-a.	3,029
KFNA20	Anastomoser mellem bilat. aa. mamm. internae og kor-a.	2,950
KFNA96	An. anastomoseoperation mellem a. mammaria interna og kor-a.	339
KFNB00	Anastom. mellem a. gastroepiploica og kor-a.	42
KFNB20	Sekventielle anastomoser mellem a. gastroepiploica og kor-a.	4
KFNB96	An. anastomoseoperation mellem a. gastroepiploica og kor.ea.	6
KFNC10	Aortokoronar byp. m. enkelt distal anastom.	17,585
KFNC20	Aortokoronar byp. m. to distale anastomoser	23,943
KFNC30	Aortokoronar byp. m. tre distale anastomoser	14,795
KFNC40	Aortokoronar byp. m. fire distale anastomoser	4,252
KFNC50	Aortokoronar byp. m. fem distale anastomoser	589
KFNC60	Aortokoronar byp. m. seks distale anastomoser	64
KFNC96	Anden aortokoronar bypass-operation	79
KFND10	Aortokoronar bypass med enkelt protese	53
KFND20	Aortokoronar bypass med to proteser	6

KFND96	Anden aortokoronar bypass-operation m. proteese	*
KFNE00	Kor. byp. m. anv. af frit a.transpl. fra a. mammaria interna	652
KFNE10	Kor. byp. m. anv. af frit a.transpl. fra a. gastroepiploica	35
KFNE20	Kor. byp. m. anv. af frit a.transpl. fra a. radialis	204
KFNE96	An. kor. byp. m. anv. af frit a.transpl.	4,599
KFNF00	Trombendarterektomi i hø. kor-a.	80
KFNF10	Trombendarterektomi i ramus desc. ant. fra hø. kor-a.	63
KFNF20	Trombendarterektomi i ramus circumflexus fra hø. kor-a.	19
KFNF30	Trombendarterektomi i ve. koronararteries hovedstamme	*
KFNF96	Anden koronar trombendarterektomi	41
KFNG00	Udvidelse af koronararterie	8,266
KFNG02	Perkut. translum. plastik på kor-a. (PTCA)	33,321
KFNG02A	Prim. perkut. translum. plastik på kor-a. (PTCA)	9,783
KFNG05	Perkut. translum. plastik på kor-a. (PTCA) m. stent	196,053
KFNG05A	Prim. perkut. translum. plastik på kor-a. (PTCA) m. stent	76,667
KFNG10	Embolektomi på koronararterie	84
KFNG12	Perkut. translum. embolektomi på kor-a.	217
KFNG30	Udvidelse af kor-a. m. anvendelse af patch	588
KFNG40	Laserbehandling af koronararterie	46
KFNG96	Anden udvidelse el. rekanalisering af kor-a.	3,737
Str: Stroke		
DG45	Transitorisk cerebral iskæmi og beslægtede syndromer	133
DG450	Vertebrobasilært syndrom	2,568
DG450A	Arteria vertebralis-syndrom	145
DG450B	Arteria basilaris-syndrom	202
DG451	Arteria carotis-syndrom	5,219
DG452	Insufficiens af fl. el. dobbeltsidige præcerebrale arterier	70
DG452A	Insufficiens af dobbeltsidige præcerebrale arterier	11
DG453	Amaurosis fugax	16,876
DG454	Global forbigående amnesi	11,073
DG458	Anden transitorisk cerebral iskæmi eller beslægtet syndrom	5,692
DG459	Transitorisk anfald af cerebral iskæmi UNS	215,595
DG459A	Spasme i cerebral arterie	221
DI61	Hjerneblødning	225
DI610	Subkortikal blødning i hjernehemisfære	8,224
DI610A	Dybtliggende blødning i hjernehemisfære	3,033
DI611	Kortikal blødning i hjernehemisfære	3,351
DI611A	Blødning i hjernens overflade	198
DI611B	Haemorrhagia lobi cerebri	669
DI612	Intracerebral blødning i hjernehemisfære UNS	19,821
DI613	Blødning i hjernestammen	2,993
DI614	Blødning i lillehjernen	4,883
DI615	Blødning i hjerneventrikel	3,118
DI616	Blødning flere steder i hjernen	1,564
DI618	Anden form for hjerneblødning	1,958
DI619	Hjerneblødning UNS	59,233
DI62	Andre ikke-traumatiske intrakranielle blødninger	42
DI620	Akut ikke-traumatisk subdural blødning	5,621
DI621	Ikke-traumatisk epidural blødning	378
DI629	Ikke-traumatisk intrakraniell blødning UNS	2,071
DI63	Hjerneinfarkt	171
DI630	Hjerneinfarkt forårsaget af trombose i præcerebral arterie	2,933
DI631	Hjerneinfarkt forårsaget af emboli i præcerebral arterie	1,417
DI632	Hjerneinfarkt f.a. tilluk./stenose i præcerebral arterie UNS	13,073
DI633	Hjerneinfarkt forårsaget af trombose i cerebral arterie	32,911
DI634	Hjerneinfarkt forårsaget af emboli i cerebral arterie	12,986
DI634A	Embolia cerebri	140
DI635	Hjerneinfarkt f.a. tillukning/stenose i cerebral arterie UNS	12,010
DI636	Hjerneinfarkt f.a. ikke-pyogen cerebral venøs trombose	565
DI638	Anden form for hjerneinfarkt	4,942
DI639	Hjerneinfarkt UNS	339,354
DI64	Slagtilfælde uden oplysning om blødning eller infarkt	2,061
DI649	Apoplexia cerebri UNS	379,228
DI65	Okklusioner og stenoser af præcerebrale arterier u/infarkt	5
DI650	Okklusion/stenose af arteria vertebralis uden hjerneinfarkt	713
DI650A	Okklusion af arteria vertebralis uden hjerneinfarkt	64
DI650B	Stenose af arteria vertebralis uden hjerneinfarkt	84
DI651	Okklusion el. stenose af arteria basilaris u. hjerneinfarkt	600
DI651A	Okklusion af arteria basilaris uden hjerneinfarkt	42
DI651B	Stenose af arteria basilaris uden hjerneinfarkt	35

DI652	Okklusion el. stenose af arteria carotis uden hjerneinfarkt	28,885
DI652A	Okklusion af arteria carotis uden hjerneinfarkt	794
DI652B	Stenose af arteria carotis uden hjerneinfarkt	5,252
DI653	Okklusion/stenose af fl/bilat præcerebrale aa. u/infarkt	499
DI653A	Okklusion af bilaterale præcerebrale aa. u/infarkt	46
DI653B	Okklusion af flere præcerebrale arterier u/infarkt	26
DI653C	Stenose flere præcerebrale arterier u/infarkt	51
DI653D	Stenose af bilaterale præcerebrale arterier u/infarkt	41
DI658	Okklusion/stenose af an. præcerebral arterie u. hjerneinfarkt	735
DI659	Okklusion/stenose af præcerebral arterie u. hjerneinfarkt. UNS	5,239
DI66	Okklusioner og stenoser af cerebrale arterier u/infarkt	4
DI660	Okklus. el. stenose af arteria cerebri media u. hjerneinfarkt	618
DI660A	Okklusion af arteria cerebri media u/infarkt	98
DI660B	Stenose af arteria cerebri media u/infarkt	184
DI661	Okklusion/stenose af arteria cerebri anterior u. hjerneinfarkt	56
DI661A	Okklusion af arteria cerebri anterior u/infarkt	11
DI661B	Stenose af arteria cerebri anterior u/infarkt	7
DI662	Okklusion/steno. af arteria cerebri posterior u. hjerneinfarkt	113
DI662A	Okklusion af arteria cerebri posterior u/infarkt	14
DI662B	Stenose af arteria cerebri posterior u/infarkt	14
DI663	Okklusion el. stenose af cerebellar arterie u. hjerneinfarkt	130
DI663A	Okklusion af cerebellar arterie uden hjerneinfarkt	5
DI663B	Stenose af cerebellar arterie uden hjerneinfarkt	*
DI664	Okklusion/stenose af fl/bilaterale cerebrale aa. u/infarkt	187
DI664A	Okklusion af bilaterale cerebrale arterier u/infarkt	4
DI664B	Okklusion af flere cerebrale arterier u/infarkt	13
DI664C	Stenose af bilaterale cerebrale arterier u/infarkt	6
DI664D	Stenose af flere cerebrale arterier u/infarkt	21
DI668	Okklusion/stenose af an. cerebrale arterier u. hjerneinfarkt	644
DI668A	Okklusion af en el fl. af aa. perforantes cerebri u/infarkt	7
DI669	Okklusion/stenose af cerebrale arterie UNS u. hjerneinfarkt	1,654
HpoG: Hypoglycæmia		
HpoG: Hypoglycæmia		
DE100	Type 1-diabetes med koma	6,572
DE110	Type 2-diabetes med koma	10,643
DE120	Diabetes forårsaget af underernæring med koma	518
DE130	Anden diabetes med koma	218
DE140	Diabetes UNS med koma	1,335
DE160	Hypoglykæmi uden koma forårsaget af lægemiddel	14,143
DE161	Anden form for hypoglykæmi	4,159
DE161B	Encefalopati efter hypoglykæmisk koma	97
DE162	Hypoglykæmi UNS	76,508
DT38	Forgift. m. hormoner og syntetiske substit. og antagon. IKA	37
DT380	Forgift. m. hormon/synt-substitut/antagon. af kendt art IKA	3,136
DT383	Forgiftning med insulin eller andet antidiabetika	874
DT383A	Insulin-shock	198
DT389	Forgift.med hormon, syntetisk substitut el. antagonist UNS	783
HypD: Hypertensive Disease		
HypD: Hypertensive Disease		
DI10	Blodtryksforhøjelse af ukendt årsag	1,310
DI109	Essentiel hypertension	2,452,408
DI11	Hypertensiv hjertesygdom	36
DI119	Hypertensiv hjertesygdom uden inkomensation	24,602
DI119A	Hypertensiv hjertesygdom UNS	2,307
DI12	Hypertensiv nyresygdom	7
DI120	Hypertensiv nyresygdom med nyresvigt	14,195
DI129	Hypertensiv nyresygdom uden nyresvigt	8,438
DI129A	Hypertensiv nyresygdom UNS	598
DI131	Hypertensiv hjertesygdom og nyresygdom med nyresvigt	1,073
DI139	Hypertensiv hjertesygdom og nyresygdom UNS	1,342
DI15	Blodtryksforhøjelse med kendt årsag	49
DI150	Renovaskulær hypertension	11,945
DI151	Hypertension sekundært til anden nyresygdom	21,046
DI152	Hypertension sekundært til endokrin sygdom	3,085
DI158	Anden form for sekundær hypertension	4,066
DI159	Sekundær hypertension UNS	28,281
Keto: Ketoacidosis		
Keto: Ketoacidosis		
DE101	Type 1-diabetes med ketoacidose	28,801
DE111	Type 2-diabetes med ketoacidose	4,653

DE121	Diabetes forårsaget af underernæring med ketoacidose	224
DE131	Anden diabetes med ketoacidose	913
DE141	Diabetes UNS med ketoacidose	4,272
Nefr: Nephropathy		
ESRD: End-stage CKD		
BJFD	Dialysebehandling	17,678
BJFD0	Akut dialyse	2,943
BJFD00	Akut hæmodialyse	243,702
BJFD01	Akut peritonealdialyse	11,804
BJFD02	Kontinuerlig vene-vene-diahæmofiltration (CVVDHF)	58,678
BJFD2	Dialyse ved kronisk nyresygdom	550
BJFD20	Hæmodialyse ved kronisk nyresygdom	5,147,898
BJFD21	Kontinuerlig ambulant peritonealdialyse, CAPD	111,225
BJFD22	Intermitterende peritonealdialyse, IPD	8,362
BJFD23	Natlig peritonealdialyse, NPD	565
BJFD24	Kontinuerlig cyklisk peritonealdialyse, CCPD	*
BJFD25	Daglig ambulant peritonealdialyse, DAPD	2,116
BJFD26	Hæmodiafiltration	150,777
BJFD27	Automatisk peritonealdialyse, APD	19,731
BJFZ	Delprocedurer ved dialysebehandling	142
BJFZ0	Tilslutning af dialyseapparat til patient	263
BJFZ00	Tilslutning af hæmodialyseapparat til patient	363
BJFZ01	Tilslutning af peritonealdialyseapparat til patient	572
BJFZ1	Fjernelse af dialyseapparat fra patient	267
BJFZ10	Fjernelse af hæmodialyseapparat fra patient	542
BJFZ11	Fjernelse af peritonealdialyseapparat fra patient	133
BJFZ4	Delprocedure vedrørende dialysekateter	1,632
BJFZ40	Anlæggelse af hæmodialysekateter	15,010
BJFZ40A	Anlæggelse af tunnelleret hæmodialysekateter	2,511
BJFZ41	Skift af hæmodialysekateter	894
BJFZ41A	Skiftning af tunnelleret hæmodialysekateter	29
BJFZ42	Skylning af hæmodialysekateter	3,258
BJFZ43	Fjernelse af hæmodialysekateter	1,716
BJFZ43A	Fjernelse af tunnelleret hæmodialysekateter	1,646
BJFZ44	Omlægning af hæmodialysekateter	58
BJFZ45	Anlæggelse af peritonealdialysekateter	2,916
BJFZ46	Skift af peritonealdialysekateter	154
BJFZ47	Skylning af peritonealdialysekateter	6,204
BJFZ48	Fjernelse af peritonealdialysekateter	2,835
BJFZ49	Omlægning af peritonealdialysekateter	290
BJFZ4A	Tætning af peritoneal dialysekateter uden omlægning	14
BJFZ6	Slangeskit ved dialysebehandling	163
BJFZ60	Slangeskit ved peritonealdialysekateter	5,816
BJFZ9	Tilpasning af dialyseapparat til patient	347
BJFZ90	Programmering af kort til individuel dialysebehandling	803
BJFZ91	Justering af individuel dialysebehandling	4,695
DN185	Kronisk nyreinsufficiens, terminal stadie 5	48,351
KJAK10	Laparotomi m. indl. af kateter til peritonealdialyse	3,195
KJAK11	Laparoskopisk indl. af kateter til peritonealdialyse	1,264
KJAK13	Laparotomi m. omlejrning af peritonealt dialysekateter	223
KJAK14	Laparoskopisk omlejrning af peritonealt dialysekateter	476
KKAS00	Autolog nyretransplantation	50
KKAS10	Allogen nyretransplantation m. nyre fra kadaverdonor	3,602
KKAS20	Allogen nyretransplantation m. nyre fra levende donor	2,042
KKAS40	Excision af transplanteret nyre	815
KKAS41	Perkut. endoskopisk excision af transplanteret nyre	*
KKAS50	Pyelocystotomi på transplanteret nyre	11
KKAS60	Operation for lymfocele v. transplanteret nyre	67
KKAS61	Perkut. endoskop. op. for lymfocele v. transplanteret nyre	23
KKAS70	Uretertransposition til transplanteret urinleder/nyrebækken	65
KKAS96	Anden operation i forbindelse m. nyretransplantation	154
KKAS97	An. perkut. endoskop. op. i forb. m. nyretransplant.	*
KPBL10	Anlæggelse af av-fistel fra a. axillaris	61
KPBL10A	Anlæggelse af av-fistel fra a. axillaris m. protese	13
KPBL20	Anlæggelse af av-fistel fra a. brachialis	7,901
KPBL20A	Anlæggelse af av-fistel fra a. brachialis m. protese	513
KPBL30	Anlæggelse af av-fistel fra a. radialis el. a. ulnaris	16,413
KPBL30A	Anlæggelse af av-fistel fra a. radialis/ulnaris m. protese	505
KPBL99	Anlæggelse af av-fistel fra an. a. i overekstremitet.	180
ModC: Moderate CKD		

DN183	Kronisk nyreinsufficiens, stadie *	15,228
DN189	Kronisk nyreinsufficiens UNS	304,583
SevC: Severe CKD		
DN184	Kronisk nyreinsufficiens, stadie 4	13,363
Neur: Neuropathy		
Neur: Neuropathy		
DE104	Type 1-diabetes med neurologisk komplikation	27,574
DE114	Type 2-diabetes med neurologisk komplikation	52,206
DE124	Diabetes f.a. underernæring med neurologisk komplikation	186
DE134	Anden diabetes med neurologisk komplikation	799
DG590	Diabetisk mononeuropati	432
DG632	Diabetisk polyneuropati	8,508
DG990	Autonom neuropati ved endokrin eller metabolisk sygdom KA	269
Reti: Retinopathy		
Reti: Retinopathy		
DH350I	Retinopati UNS	1,500
DH360	Diabetisk retinopati UNS	120,821
DH360A	Retinopathia simplex IDDM	2,898
DH360B	Retinopathia proliferativa IDDM	5,732
DH360C	Retinopathia simplex NIDDM	2,927
DH360D	Retinopathia proliferativa NIDDM	2,288
DH360E	Maculopathia diabetica IDDM	2,036
DH360F	Maculopathia diabetica NIDDM	3,588
DH360H	Simpel diabetisk retinopati	8,150
DH360J	Proliferativ diabetisk retinopati	12,194
DH360K	Diabetisk makulopati	14,347
KCKB00	Punktur og udtømning af suprakoroidal væske	195
KCKB10	Punkt/udtømm. af suprakoroid.væske/injekt. af væskesubstitut	106
KCKB99	Anden operation ved choroidealøsning	20
KCKC00	Fotoruptur i corpus vitreum	250
KCKC10	Lokal fotokoagulation af nethinde	144,449
KCKC10A	Photocoagulatio retinae (lokal), argonlaser	1,657
KCKC10B	Photocoagulatio retinae (lokal), diodelaser	159
KCKC15	Panretinal fotokoagulation af nethinde	184,019
KCKC15A	Photocoagulatio retinae (panretinal), argonlaser	1,914
KCKC15B	Photocoagulatio retinae (panretinal), diodelaser	22
KCKC20	Kryopeksi på tilliggende nethinde	3,533
KCKC30	Kryopeksi på afløst nethinde	13,652
KCKC40	Elektrokoagulation af nethinde	322
KCKC50	Transskleral laserterapi af nethinde	518
KCKC60	Skleraimpression med implantat	13,467
KCKC65	Fjernelse af impressionsimplantat fra sklera	1,947
KCKC70	Sklerainvagination med cerklage	24,404
KCKC75	Fjernelse af invaginationscerklage fra sklera	1,288
KCKC99	Anden ekstraokulær operation på corpus vitreum og nethinde	247
KCKD00	Dekompressionpunktur af corpus vitreum	260
KCKD05	Punktur af corpus vitreum m. injektion af lægemiddel	239,193
KCKD05A	Punktur af corpus vitreum m. injektion af ranibizumab	2,144
KCKD05B	Punktur af corpus vitreum m. inj. af angiostatisk lægemiddel	1,085,190
KCKD05C	Pkt. af corpus vitreum m inj af implantat indh. dexamethason	8,180
KCKD10	Injektion af luft i corpus vitreum	44,322
KCKD15	Injektion af væskesubstitut i corpus vitreum	24,879
KCKD20	Fjernelse af corpus vitreum-substitut	24,757
KCKD25	Ekstern drænage af subretinal væske	9,327
KCKD30	Intern drænage af subretinal væske	6,796
KCKD40	Intrabulbær fotokoagulation af nethinde	48,784
KCKD45	Intrabulbær kryobehandling af nethinde	117
KCKD50	Intrabulbær diatermi af nethinde	9,457
KCKD60	Forreste vitrektomi	12,124
KCKD65	Vitrektomi genn. pars plana el. pars plicata	125,603
KCKD70	Excision af præretinal el. epiretinal membran	31,434
KCKD75	Retinotomi	3,183
KCKD80	Retinektomi	3,546
KCKD85	Fjernelse af subretinal membran el. streng	772
KCKD90	Fjernelse af subretinal blødning	164
KCKD99	Anden intrabulbær operation på corpus vitreum el. nethinde	2,193
KCKD99A	Intrabulbær fakoemulsifikation	224

no. first	N
All	4,327,573
Amp	
MajA	15,738
MedA	13,400
MinA	15,055
CVD	
AFib	404,189
AtMD	228,213
CbVD	219,428
HF	318,439
IHD	585,120
MI	183,458
Str	456,035
DNef	
MacA	30,627
MicA	107,156
HpoG	
HpoG	50,616
HypD	
HypD	842,582
Keto	
Keto	14,632
NefL	
ESRL	18,837
ModL	421,017
SevL	67,807
Nefr	
ESRD	49,740
ModC	83,475
SevC	6,807
Neur	
Neur	37,547
Reti	
Reti	157,655

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The CONTENTS Procedure

Data Set Name	DMDAT.FCOMPL	Observations	4327573
Member Type	DATA	Variables	4
Engine	V9	Indexes	0
Created	28/10/2020 11:54:06	Observation Length	32
Last Modified	28/10/2020 11:54:06	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Dates of first complication in long form for DKpop		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	2123
First Data Page	*
Max Obs per Page	2039
Obs in First Data Page	1992
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\fcompl.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655

File Size 133MB  
 File Size (bytes) 139198464

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	Person id
2	compl	Char	5			Complication group
3	doC	Num	8	DDMMYY10.		Date of complication
4	compGr	Char	5			

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## The CONTENTS Procedure

Data Set Name	DMDAT.WCOMPL	Observations	1874704
Member Type	DATA	Variables	29
Engine	V9	Indexes	0
Created	28/10/2020 11:54:22	Observation Length	240
Last Modified	28/10/2020 11:54:22	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Dates of first complications for DKpop		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	6893
First Data Page	*
Max Obs per Page	272
Obs in First Data Page	256
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\wcompl.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	431MB
File Size (bytes)	451805184

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
*	pnr	Char	12	\$12.	\$10.	Person id
*	doCbVD	Num	8	DDMMYY10.		
*	doHypD	Num	8	DDMMYY10.		
4	doStr	Num	8	DDMMYY10.		
5	doAFib	Num	8	DDMMYY10.		
6	doIHD	Num	8	DDMMYY10.		
7	doMicA	Num	8	DDMMYY10.		
8	doAtMD	Num	8	DDMMYY10.		
9	doMI	Num	8	DDMMYY10.		
10	doModC	Num	8	DDMMYY10.		
11	doSevL	Num	8	DDMMYY10.		
12	doModL	Num	8	DDMMYY10.		
13	doESRD	Num	8	DDMMYY10.		
14	doHF	Num	8	DDMMYY10.		
15	doHpoG	Num	8	DDMMYY10.		
16	doMajA	Num	8	DDMMYY10.		
17	doMedA	Num	8	DDMMYY10.		
18	doMinA	Num	8	DDMMYY10.		
19	doReti	Num	8	DDMMYY10.		
20	doNeur	Num	8	DDMMYY10.		



21	doESRL	Num	8	DDMMYY10.
22	doKeto	Num	8	DDMMYY10.
23	doMacA	Num	8	DDMMYY10.
24	doSevC	Num	8	DDMMYY10.
25	doCVD	Num	8	DDMMYY10.
26	doDNef	Num	8	DDMMYY10.
27	doNefL	Num	8	DDMMYY10.
28	doNefr	Num	8	DDMMYY10.
29	doAmp	Num	8	DDMMYY10.

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The CONTENTS Procedure

Data Set Name	DMDAT.RCOMPL	Observations	1847158
Member Type	DATA	Variables	*
Engine	V9	Indexes	0
Created	28/10/2020 11:54:25	Observation Length	32
Last Modified	28/10/2020 11:54:25	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Dates of *all* recurrent complications in long form for DKpop		
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

## Engine/Host Dependent Information

Data Set Page Size	65536
Number of Data Set Pages	906
First Data Page	*
Max Obs per Page	2039
Obs in First Data Page	1994
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	E:\workdata\707655\DMreg\data\rcompl.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2
Owner Name	DSTFSE\FDIY7655
File Size	57MB
File Size (bytes)	59441152

## Variables in Creation Order

#	Variable	Type	Len	Format	Informat	Label
1	pnr	Char	12	\$12.	\$10.	Person id
2	compl	Char	5			Complication group
3	doC	Num	8	DDMMYY10.		Date of complication

## 3.18 00-fmts

This is the log for the format definitions used in the project. The corresponding .lst file is not listed as it is *very* long and contains very little additional information relative to the .log file here.

1 "Program: 00-fmts.sas" 16:29 Tuesday, October 27, 2020

NOTE: Copyright (c) 2016 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software 9.4 (TS1M5)

Licensed to FORSKNING 1, Site 50800722.

NOTE: This session is executing on the X64\_SR12R2 platform.

NOTE: Updated analytical products:

SAS/STAT 14.3

NOTE: Additional host information:

X64\_SR12R2 WIN 6.3.9600 Server

NOTE: SAS initialization used:

real time 0.09 seconds  
cpu time 0.09 seconds

NOTE: AUTOEXEC processing beginning; file is E:\workdata\707655\DMreg\sas\optslibs.sas.

NOTE: AUTOEXEC processing completed.

```

1      title1 'Complications groupings' ;
2      * Input of the classification of diagnosis / surgery / procedure codes
3      in form of a file used as input to proc format via cntlin=
4      The formats created are classifying diagnosis, surgery and procedure
5      codes:
6      compsub - codes translated to 16 complication groups (4 characters)
7      cmp4sub - same, uses only 4 first digits of codes - wildcarding
8      sub2grp - grouping of 16 groups to 8 (4 of which are the same)
9      abb2txt - translate group-codes (4 char) to human readable text ;
10     data compfmt ;
11         infile '..\fmts\compfmt.csv'
12             delimiter = ',' ;
13             missover dsd lrecl=32767 firstobs=2 ;
14         informat fmtname $10. ;
15         informat start $9. ;
16         informat label $39. ;
17         informat hlo $3. ;
18         input fmtname $
19             start $
20             label $
21             hlo $ ;
22     run;
```

NOTE: The infile '..\fmts\compfmt.csv' is:  
Filename=E:\workdata\707655\DMreg\fmts\compfmt.csv,  
RECFM=V,LRECL=32767,File Size (bytes)=12351,  
Last Modified=27. oktober 2020 16:27:25,  
Create Time=27. oktober 2020 16:27:25

NOTE: 386 records were read from the infile '..\fmts\compfmt.csv'.  
The minimum record length was 25.  
The maximum record length was 67.

NOTE: The data set WORK.COMPfmt has 386 observations and 4 variables.

NOTE: DATA statement used (Total process time):  
real time 0.01 seconds  
cpu time 0.01 seconds

```

23
24     proc print data = compfmt ; run ;
```

NOTE: There were 386 observations read from the data set WORK.COMPfmt.

NOTE: The PROCEDURE PRINT printed page 1.

NOTE: PROCEDURE PRINT used (Total process time):  
real time 0.02 seconds  
cpu time 0.01 seconds

```

25     * create the formats ;
26     proc format library = DMfmt.DMreg
```

```

27          cntlin = compfmt ;
NOTE: Format $COMPSUB is already on the library DMFMT.DMREG.
NOTE: Format $COMPSUB has been written to DMFMT.DMREG.
NOTE: Format $CMP4SUB is already on the library DMFMT.DMREG.
NOTE: Format $CMP4SUB has been written to DMFMT.DMREG.
NOTE: Format $SUB2GRP is already on the library DMFMT.DMREG.
NOTE: Format $SUB2GRP has been written to DMFMT.DMREG.
NOTE: Format $ABB2TXT is already on the library DMFMT.DMREG.
NOTE: Format $ABB2TXT has been written to DMFMT.DMREG.
NOTE: Format $AB2ABTX is already on the library DMFMT.DMREG.
NOTE: Format $AB2ABTX has been written to DMFMT.DMREG.
28          run ;

```

```

NOTE: PROCEDURE FORMAT used (Total process time):
      real time          0.06 seconds
      cpu time           0.01 seconds

```

NOTE: There were 386 observations read from the data set WORK.COMPfmt.

```

29
30          title1 'Format with names of diagnoses, operations and behandlinger' ;
31          *-----;
32          * FORMATS used for grouping and labeling ;
33          * A collected format with Diagnoses (ICD 8 & 10, Behandling and Operation) ;
34          proc format library = dsfmt.sundhed
35                  cntlout = dob ( keep = fmtname start label type ) ;
36                  select $ICD8_L1L1_KT
37                          $ICD10_L1L1_KT
38                          $OPR_L1L1_KT
39                          $BEH_L1L1_KT ;
40          run ;

```

```

NOTE: PROCEDURE FORMAT used (Total process time):
      real time          0.14 seconds
      cpu time           0.03 seconds

```

NOTE: The data set WORK.DOB has 50445 observations and 4 variables.

```

41
42          data dob ;
43          set dob ;
44          fmtname = 'dob_L1L1_KT' ;
45          run ;

```

```

NOTE: There were 50445 observations read from the data set WORK.DOB.
NOTE: The data set WORK.DOB has 50445 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time          0.01 seconds
      cpu time           0.03 seconds

```

```

46
47          options source2 ;
48          proc format library = DMfmt.DMreg
49                  cntlin = dob ;
NOTE: Format $DOB_L1L1_KT is already on the library DMFMT.DMREG.
NOTE: Format $DOB_L1L1_KT has been written to DMFMT.DMREG.
NOTE: A byte-order mark in the file "E:\workdata\707655\DMreg\fmts\NPufmt.sas" (for
      fileref "#LN00066") indicates that the data is encoded in "utf-8". This encoding
      will be used to process the file.
49          ! * Diagnosis/Operation/Behandling ;
50          * Formats (NPu / NPuE - Danish English) grouping lab-measurements ;
51          %inc '../fmts/NPufmt.sas' ;
NOTE: %INCLUDE (level 1) file ../fmts/NPufmt.sas is file
      E:\workdata\707655\DMreg\fmts\NPufmt.sas.
52          +* proc format ;
53          +
54          +* Defines two formats:
55          + one with Danish long texts ($NPu) and
56          + one with English short texts ($NPuE) - max 4 characters ;

```

```

57      +
58      +value $NPUD
59      +
60      +'NPU27412',
61      +'NPU27300',
62      +'DNK35249',
63      +'NPU29296',
64      +'NPU03835',
65      +'NPU02307'='Hba1c'
66      +
67      +'NPU02187',
68      +'NPU04173',
69      +'NPU04177',
70      +'NPU08572',
71      +'NPU08571',
72      +'NPU02192',
73      +'NPU21531',
74      +'NPU22089'='Glukose'
75      +
76      +'DNK35842',
77      +'NPU10047',
78      +'NPU08503',
79      +'NPU22127',
80      +'NPU21532',
81      +'NPU02193',
82      +'NPU02195',
83      +'NPU08972',
84      +'NPU02188',
85      +'NPU22069'='Glukose 0'
86      +
87      +'NPU10048',
88      +'NPU08504',
89      +'NPU22129',
90      +'NPU04174'='Glukose 30'
91      +
92      +'NPU10051',
93      +'NPU08507',
94      +'NPU22134',
95      +'NPU21530'='Glukose 120'
96      +
97      +'NPU18412',
98      +'NPU01566',
99      +'NPU01549',
100     +'NPU17029',
101     +'NPU10033',
102     +'NPU18411'='Total kolesterol'
103     +
104     +'NPU10171',
105     +'NPU01568',
106     +'DNK35308'='LDL kolesterol'
107     +
108     +'NPU10157',
109     +'NPU01567',
110     +'NPU18107'='HDL kolesterol'
111     +
112     +'NPU09256',
113     +'NPU01569'='VLDL kolesterol'
114     +
115     +'NPU03620',
116     +'NPU04094',
117     +'NPU18413',
118     +'NPU18106'='Triglycerid'
119     +
120     +'NPU01807',
121     +'NPU04998',
122     +'NPU09101',
123     +'NPU18016'='Plasma Kreatinin'
124     +
125     +'NPU19661',
126     +'NPU28842',

```

```
127      + 'DNK05289' ,
128      + 'NPU03918' = 'Ualbcrea'
129      +
130      + 'NPU03230' = 'Kalium'
131      +
132      + 'NPU03429' = 'Natrium'
133      +
134      + 'NPU03577' ,
135      + 'NPU27547' = 'TSH'
136      +
137      + 'NPU03246' ,
138      + 'NPU03247' ,
139      + 'NPU03248' ,
140      + 'NPU04149' ,
141      + 'NPU18004' ,
142      + 'NPU18005' ,
143      + 'NPU04154' ,
144      + 'NPU04020' ,
145      + 'NPU10390' ,
146      + 'NPU18007' ,
147      + 'NPU08978' = 'C-peptid/Proinsulin'
148      +
149      + 'NPU01422' ,
150      + 'DNK05027' ,
151      + 'NPU19748' ,
152      + 'NPU01423' = 'CRP'
153      +
154      + 'NPU26737' ,
155      + 'NPU14507' ,
156      + 'NPU29550' ,
157      + 'NPU12544' ,
158      + 'NPU12546' ,
159      + 'NPU28627' ,
160      + 'NPU28628' ,
161      + 'NPU54726' ,
162      + 'NPU54727' ,
163      + 'NPU28103' = 'GAD65'
164      +
165      + 'DNK35131' ,
166      + 'NPU28811' ,
167      + 'DNK35301' ,
168      + 'DNK35302' ,
169      + 'DNK35303' ,
170      + 'DNK35304' = 'eGFR'
171      +
172      + 'NPU19597' ,
173      + 'NPU28271' ,
174      + 'NPU10295' = 'GFR'
175      +
176      + 'NPU01121' ,
177      + 'NPU19981' ,
178      + 'NPU19651' ,
179      + 'DNK05051' = 'ALAT'
180      +
181      + 'DNK05098' ,
182      + 'NPU27783' ,
183      + 'DNK05431' ,
184      + 'NPU57047' ,
185      + 'DNK05050' = 'Basisk fosfatase'
186      +
187      + 'NPU01700' = 'Cobalamin'
188      +
189      + 'NPU03568' ,
190      + 'NPU26813' = 'Trombocytter'
191      +
192      + 'NPU02593' ,
193      + 'NPU04851' ,
194      + 'NPU02596' ,
195      + 'NPU17027' ,
196      + 'NPU18245' ,
```

```

197      +'NPU18156',
198      +'NPU17580',
199      +'NPU04100'='Leucocytter'
200      +
201      +'NPU02319'='Hæmoglobin' ;
NOTE: Format $NPUD is already on the library DMFMT.DMREG.
NOTE: Format $NPUD has been written to DMFMT.DMREG.
202      +
203      +value $NPUE
204      +
205      +'NPU27412',
206      +'NPU27300',
207      +'DNK35249',
208      +'NPU29296',
209      +'NPU03835',
210      +'NPU02307'='HbA1'
211      +
212      +'NPU02187',
213      +'NPU04173',
214      +'NPU04177',
215      +'NPU08572',
216      +'NPU08571',
217      +'NPU02192',
218      +'NPU21531',
219      +'NPU22089'='Gluc'
220      +
221      +'DNK35842',
222      +'NPU10047',
223      +'NPU08503',
224      +'NPU22127',
225      +'NPU21532',
226      +'NPU02193',
227      +'NPU02195',
228      +'NPU08972',
229      +'NPU02188',
230      +'NPU22069'='Glu0'
231      +
232      +'NPU10048',
233      +'NPU08504',
234      +'NPU22129',
235      +'NPU04174'='G130'
236      +
237      +'NPU10051',
238      +'NPU08507',
239      +'NPU22134',
240      +'NPU21530'='G120'
241      +
242      +'NPU18412',
243      +'NPU01566',
244      +'NPU01549',
245      +'NPU17029',
246      +'NPU10033',
247      +'NPU18411'='TCh1'
248      +
249      +'NPU10171',
250      +'NPU01568',
251      +'DNK35308'='LDL'
252      +
253      +'NPU10157',
254      +'NPU01567',
255      +'NPU18107'='HDL'
256      +
257      +'NPU09256',
258      +'NPU01569'='VLDL'
259      +
260      +'NPU03620',
261      +'NPU04094',
262      +'NPU18413',
263      +'NPU18106'='Trig'
264      +

```

```
265      + 'NPU01807' ,
266      + 'NPU04998' ,
267      + 'NPU09101' ,
268      + 'NPU18016' = 'PlCr'
269      +
270      + 'NPU19661' ,
271      + 'NPU28842' ,
272      + 'DNK05289' ,
273      + 'NPU03918' = 'Uacr'
274      +
275      + 'NPU03230' = 'Pota'
276      +
277      + 'NPU03429' = 'Sodi'
278      +
279      + 'NPU03577' ,
280      + 'NPU27547' = 'TSH'
281      +
282      + 'NPU03246' ,
283      + 'NPU03247' ,
284      + 'NPU03248' ,
285      + 'NPU04149' ,
286      + 'NPU18004' ,
287      + 'NPU18005' ,
288      + 'NPU04154' ,
289      + 'NPU04020' ,
290      + 'NPU10390' ,
291      + 'NPU18007' ,
292      + 'NPU08978' = 'Cpep'
293      +
294      + 'NPU01422' ,
295      + 'DNK05027' ,
296      + 'NPU19748' ,
297      + 'NPU01423' = 'CRP'
298      +
299      + 'NPU26737' ,
300      + 'NPU14507' ,
301      + 'NPU29550' ,
302      + 'NPU12544' ,
303      + 'NPU12546' ,
304      + 'NPU28627' ,
305      + 'NPU28628' ,
306      + 'NPU54726' ,
307      + 'NPU54727' ,
308      + 'NPU28103' = 'GAD'
309      +
310      + 'DNK35131' ,
311      + 'NPU28811' ,
312      + 'DNK35301' ,
313      + 'DNK35302' ,
314      + 'DNK35303' ,
315      + 'DNK35304' = 'eGFR'
316      +
317      + 'NPU19597' ,
318      + 'NPU28271' ,
319      + 'NPU10295' = 'GFR'
320      +
321      + 'NPU01121' ,
322      + 'NPU19981' ,
323      + 'NPU19651' ,
324      + 'DNK05051' = 'ALAT'
325      +
326      + 'DNK05098' ,
327      + 'NPU27783' ,
328      + 'DNK05431' ,
329      + 'NPU57047' ,
330      + 'DNK05050' = 'AlcP'
331      +
332      + 'NPU01700' = 'Cobl'
333      +
334      + 'NPU03568' ,
```

```

335      +'NPU26813'='Trmb'
336      +
337      +'NPU02593',
338      +'NPU04851',
339      +'NPU02596',
340      +'NPU17027',
341      +'NPU18245',
342      +'NPU18156',
343      +'NPU17580',
344      +'NPU04100'='Leuc'
345      +
346      +'NPU02319'='Hmgb' ;
NOTE: Format $NPUE is already on the library DMFMT.DMREG.
NOTE: Format $NPUE has been written to DMFMT.DMREG.
347      +
348      +* run ;
349      +
350      +
NOTE: %INCLUDE (level 1) ending.
351
352      /*
353      *-----;
354      * Formats for grouping of complications / comorbidities (Daffodil - history) ;
355      value $icd8gr
356      '41090'-'41099' = 'MI'
357      '41930'-'41939',
358      '41390'-'41399' = 'Angina'
359      '42599',
360      '42709'-'42719',
361      '42799',
362      '42899' = 'HF'
363      '42793',
364      '42794' = 'AtrFib'
365      '43000'-'43099',
366      '43100',
367      '43108'-'43190',
368      '43198'-'43199' = 'HmStr'
369      '43200'-'43299',
370      '43309'-'43399',
371      '43409'-'43499' = 'IscStr'
372      '43509'-'43599' = 'TIA'
373      '44020'-'44030' = 'PAD'
374      '78410'-'78419',
375      '78470'-'78479' = 'Bleed'
376      '58100'-'58209' = 'CKD'
377      '35500'-'35799' = 'Neuro'
378      '25001'-'25002',
379      '37400'-'37499',
380      '37700'-'37719',
381      '37790'-'37799',
382      '37890'-'37899',
383      '45690'-'45699' = 'DiaEye'
384      '25003'-'25099' = 'PeriAng'
385      '58300'-'58399' = 'DKD'
386      '25100'-'25199',
387      '96230'-'96239' = 'Hypo'
388      '14000'-'20449' = 'Cancer'
389      '49100'-'49200' = 'COPD'
390      other='Other' ;
391
392      value $icd10gr
393      'I210'-'I229' = 'MI'
394      'I200' = 'UnstAng'
395      'I201', 'I208', 'I209' = 'Angina'
396      'I500'-'I509' = 'HF'
397      'I480'-'I489' = 'AtrFib'
398      'I600'-'I629' = 'HmStr'
399      'I630'-'I649' = 'IscStr'
400      'G450'-'G459' = 'TIA'
401      'I700'-'I799' = 'PAD'

```



```

402      'D629', 'I850', 'K226', 'K250', 'K252', 'K254', 'K256', 'K260',
403      'K262', 'K264', 'K266', 'K270', 'K272', 'K274', 'K276', 'K280',
404      'K282', 'K284', 'K286', 'K290', 'K625', 'K920', 'K921', 'K922' = 'Bleed'
405      'N180'-'N189' = 'CKD'
406      'Z490'-'Z499' = 'Dial'
407      'G990', 'G590', 'G632', 'E104', 'E114', 'E124', 'E134', 'E144' = 'Neuro'
408      'H280', 'H358', 'H360', 'E103', 'E113', 'E123', 'E133', 'E143' = 'DiaEye'
409      'M142', 'M146', 'M908', 'L984' = 'DiaFoot'
410      'E105', 'E115', 'E125', 'E135', 'E145' = 'PeriAng'
411      'N083', 'E102', 'E112', 'E122', 'E132', 'E142' = 'DKD'
412      'E107', 'E117', 'E127', 'E137', 'E147', 'E108', 'E118', 'E128', 'E138', 'E148'
412      ! = 'DMcompl'
413      'E100', 'E110', 'E120', 'E130', 'E140', 'E116', 'E106', 'E136', 'E146',
413      ! 'E160'-'E162' = 'Hypo'
414      'E101', 'E111', 'E121', 'E131', 'E141', 'E872' = 'Keto'
415      'C000'-'C999' = 'Cancer'
416      'J440'-'J449' = 'COPD'
417      other='Other' ;
418
419      value $icd5opr
420      'FNA00'-'FNE99' = 'CABG'
421      'FNG00'-'FNG99' = 'PCIsten'
422      'JDF10', 'JDF11', 'JDF20', 'JDF21' = 'Bari'
423      'JAK10', 'TJA20', 'TJA33', 'DJ008', 'DR015'-'DR024', 'QF006' = 'Dial'
424      'CKC12', 'CKD65' = 'DiaEye'
425      'QDGX10' = 'DiaFoot'
426      'NGQ00'-'NGQ99', 'NHQ00'-'NHQ99' = 'Amp'
427      other='Other' ;
428
429      value $icd4opr
430      'BJFD' = 'Dial'
431      other='Other' ;
432
433      value $icd3opr
434      'FNA', 'FNB', 'FNC', 'FND', 'FNE' = 'CABG'
435      'FNG' = 'PCIsten'
436      'NGQ', 'NHQ' = 'Amp'
437      other='Other' ;
438
439      value $icdabbr
440      MI = 'Myocardial infarction'
441      CABG = 'CABG'
442      PCIsten = 'PCI with stent'
443      UnstAng = 'Unstable angina'
444      Angina = 'Angina pectoris'
445      HF = 'Heart failure'
446      AtrFib = 'Atrial fibrillation'
447      Stroke = 'Stroke'
448      HmStr = 'Hemorrhagic stroke'
449      IscStr = 'Ischemic stroke'
450      TIA = 'Transitory ischemic attack'
451      PAD = 'Peripheral artery disease'
452      Bleed = 'Major organ specific bleeding'
453      Bari = 'Bariatric surgery'
454      CKD = 'Chronic kidney disease'
455      Dial = 'Dialysis'
456      Neuro = 'Diabetic mono-/polyneuropathy'
457      DiaEye = 'Diabetic eye complications'
458      DiaFoot = 'Diabetic foot'
459      PeriAng = 'Peripheral angiopathy'
460      DKD = 'Diabetic kidney disease'
461      DMcompl = 'Diabetes with several-/unspecified complications'
462      Hypo = 'Severe hypoglycemia'
463      Keto = 'Keto-/lactate acidosis'
464      Cancer = 'Cancer'
465      COPD = 'COPD'
466      Amp = 'Lower limb amputations'
467      other = 'Other';
468      */
469

```

470 run ;

NOTE: PROCEDURE FORMAT used (Total process time):

real time 0.44 seconds  
cpu time 0.12 seconds

NOTE: There were 50445 observations read from the data set WORK.DOB.

```
471
472 *-----;
473 * Formats used for the diabase and for grouping drugs and
474   socio-economic variables ;
475 proc format lib = DMfmt.DMreg
476 /*
477     cntlin = ekstn.s125_format ; * Formats for the diabase ;
478 exclude dwh_afdeling
479     dwh_hospital
480     $dwh_shak ; * Very long formats we are not using ;
481 */ ;
482
483 * For convenience ;
484 value yesno
485 0 = 'No'
486 1 = 'Yes'
487 ;
```

NOTE: Format YESNO is already on the library DMFMT.DMREG.

NOTE: Format YESNO has been written to DMFMT.DMREG.

```
488
489 * regions ;
490 value region
491 81 = "Nord"
492 82 = "Midt"
493 83 = "Syd"
494 84 = "Hov"
495 85 = "Sjll"
496 ;
```

NOTE: Format REGION is already on the library DMFMT.DMREG.

NOTE: Format REGION has been written to DMFMT.DMREG.

```
497
498 * income groups ;
499 value $indk
500 "< = 0,00" = "000"
501 "0,01 - 50.000,00" = "001"
502 "50.000,01 - 100.000,00" = "050"
503 "100.000,01 - 150.000,00" = "100"
504 "150.000,01 - 200.000,00" = "150"
505 "200.000,01 - 250.000,00" = "200"
506 "250.000,01 - 300.000,00" = "250"
507 "300.000,01 - 350.000,00" = "300"
508 "350.000,01 - 400.000,00" = "350"
509 "400.000,01 - 450.000,00" = "400"
510 "450.000,01 - 500.000,00" = "450"
511 "500.000,01 - 550.000,00" = "500"
512 "550.000,01 - 600.000,00" = "550"
513 "600.000,01 - 650.000,00" = "600"
514 " >= 650.000,01" = "650"
515 other = "oth"
516 ;
```

NOTE: Format \$INDK is already on the library DMFMT.DMREG.

NOTE: Format \$INDK has been written to DMFMT.DMREG.

```
517
518 value $indgr
519 "< = 0,00",
520 "0,01 - 50.000,00",
521 "50.000,01 - 100.000,00" = "000"
522 "100.000,01 - 150.000,00",
523 "150.000,01 - 200.000,00" = "100"
524 "200.000,01 - 250.000,00",
525 "250.000,01 - 300.000,00" = "200"
526 "300.000,01 - 350.000,00",
```

```

527      "350.000,01 - 400.000,00" = "300"
528      "400.000,01 - 450.000,00",
529      "450.000,01 - 500.000,00" = "400"
530      "500.000,01 - 550.000,00",
531      "550.000,01 - 600.000,00",
532      "600.000,01 - 650.000,00",
533      " >= 650.000,01"          = "500"
534      other                      = "oth"
535      ;
NOTE: Format $INDGR is already on the library DMFMT.DMREG.
NOTE: Format $INDGR has been written to DMFMT.DMREG.
536
537      * texts for socio_13
538      value $soclong
539      "100" = "Self-employed"
540      "200" = "Top manager"
541      "300" = "Wage-earner"
542      "400" = "Trainee"
543      "500" = "Unemployed 6mth+"
544      "600" = "Sick leave, mat leave, activation"
545      "700" = "Social welfare"
546      "800" = "Early pension"
547      "900" = "Retired"
548      "950" = "Other, children"
549      "999" = "Unknown"
550      ;
551      value $socshort
552      "100" = "s-Emp"
553      "200" = "TopMn"
554      "300" = "WageE"
555      "400" = "Train"
556      "500" = "Unemp"
557      "600" = "Leave"
558      "700" = "SWelf"
559      "800" = "e-Pen"
560      "900" = "Retir"
561      "950" = "Other"
562      "999" = "Unkn"
563      ;
NOTE: Format $SOCSHORT is already on the library DMFMT.DMREG.
NOTE: Format $SOCSHORT has been written to DMFMT.DMREG.
564      value $socshortlong
565      "s-Emp" = "Self-employed"
566      "TopMn" = "Top manager"
567      "WageE" = "Wage-earner"
568      "Train" = "Trainee"
569      "Unemp" = "Unemployed 6mth+"
570      "Leave" = "Sick leave, maternal leave, activation"
571      "SWelf" = "Social welfare"
572      "e-Pen" = "Early pension"
573      "Retir" = "Retired"
574      "Other" = "Other, children"
575      "Unkn" = "Unknown"
576      ;
NOTE: Format $SOCSHORTLONG is already on the library DMFMT.DMREG.
NOTE: Format $SOCSHORTLONG has been written to DMFMT.DMREG.
577
578      * Classifies from the variable 'afdeling' in DVDD to the 5 SDC,
579      based on reporting clinic ;
580      value $sdc
581      "1507010",
582      "1507019",
583      "150701R" = "SDCC"
584      "3800DOE",
585      "3800HOE",
586      "3800LOE",
587      "3800NOE",
588      "3800ROE",
589      "3800VOE",
590      "3800VOQ" = "SDCS"

```

```

591      "4202080",
592      "4202089" = "SDC0"
593      "6620076",
594      "6620079",
595      "7003079",
596      "7003279",
597      "7004069" = "SDCA"
598      "8001099" = "SDCN"
599          other = "notSDC"
600      ;
NOTE: Format $SDC is already on the library DMFMT.DMREG.
NOTE: Format $SDC has been written to DMFMT.DMREG.
601
602      * Classifies from the variable 'afdeling' in DVDD to ambl/prak ;
603      value $amb
604      "8001099", "800109", "8001329", "665033C", "665033B", "5003037",
605      "1330559", "1330550", "133032E", "1351309", "1309539", "663030C",
606      "663004C", "550155E", "700505B", "8003207", "200027E", "200076A",
607      "8001609", "8005039", "7005059", "200027B", "8003209", "8003201",
608      "200054A", "3800H0E", "3800H0Q", "1401297", "800159H", "800503H",
609      "1351110", "3800L0E", "3800L0D", "3800D0E", "3800D0D", "1401069",
610      "1516435", "130185F", "6501044", "6502066", "7003279", "7004069",
611      "6006049", "665033T", "1309699", "7003079", "6620076", "6620079",
612      "4212031", "6504020", "6007200", "2501059", "5002035", "4212039",
613      "4001039", "5004039", "6504029", "5001059", "1502069", "1351119",
614      "6007209", "6007059", "7601047", "7601049", "7002056", "1516339",
615      "1301719", "1501099", "3800N0E", "3800N0D", "3800P9D", "3800V0E",
616      "3800V0Q", "4202739", "4202080", "4202089", "3800C2D", "200027G",
617      "5000649", "5000409", "5000407", "5000637", "3800R0E", "600705E",
618      "6008056", "6008059", "550105E", "550145E", "150701R", "1507019",
619      "1507010", "7603049", "7603041"
620          = "Ambu"
621          other = "Prak"
622      ;
NOTE: Format $AMB is already on the library DMFMT.DMREG.
NOTE: Format $AMB has been written to DMFMT.DMREG.
623
624      * English sex ;
625      value sex
626          1 = 'M'
627          2 = 'F' ;
NOTE: Format SEX is already on the library DMFMT.DMREG.
NOTE: Format SEX has been written to DMFMT.DMREG.
628
629      * 5-year age-groups for tabulation ;
630      value agr ( fuzz=0)
631      0-<5 = ' 0 '
632      5-<10 = ' 5 '
633      10-<15 = '10 '
634      15-<20 = '15 '
635      20-<25 = '20 '
636      25-<30 = '25 '
637      30-<35 = '30 '
638      35-<40 = '35 '
639      40-<45 = '40 '
640      45-<50 = '45 '
641      50-<55 = '50 '
642      55-<60 = '55 '
643      60-<65 = '60 '
644      65-<70 = '65 '
645      70-<75 = '70 '
646      75-<80 = '75 '
647      80-<85 = '80 '
648      85-<90 = '85 '
649      90-<95 = '90 '
650      95-high= '95+' ;
NOTE: Format AGR is already on the library DMFMT.DMREG.
NOTE: Format AGR has been written to DMFMT.DMREG.
651
652      * formats to group ATC codes for diabetes drugs at different levels ;

```

```

653     value $atc4grp
654     'A10AB' = 'fastIns'
655     'A10AC' = 'intIns'
656     'A10AD' = 'mixIns'
657     'A10AE' = 'longIns'
658     'A10BA' = 11
659     'A10BB' = 12
660     'A10BG' = 13
661     'A10BH' = 14
662     'A10BF' = 18
663     'A10BC' = 'Other'
664     other   = 'Other'
665     ;
NOTE: Format $ATC4GRP is already on the library DMFMT.DMREG.
NOTE: Format $ATC4GRP has been written to DMFMT.DMREG.
666     value $atc5grp
667     'A10BD02' = 212
668     'A10BD03', 'A10BD05' = 213
669     'A10BD07', 'A10BD08', 'A10BD10', 'A10BD11', 'A10BD13' = 214
670     'A10BD17' = 218
671     'A10BD04', 'A10BD06' = 223
672     'A10BD09', 'A10BD12' = 234
673     'A10BD19', 'A10BD21' = 246
674     'A10BD15', 'A10BD16', 'A10BD20' = 216
675     'A10BX02', 'A10BX03' = 12
676     'A10BJ01', 'A10BJ02', 'A10BJ03', 'A10BJ04', 'A10BJ05' = 15
677     'A10BK01', 'A10BK02', 'A10BK03' = 16
678     'A10AE56' = 257
679     other = 'Other'
680     ;
NOTE: Format $ATC5GRP is already on the library DMFMT.DMREG.
NOTE: Format $ATC5GRP has been written to DMFMT.DMREG.
681
682     * Names of the groupings incl. combinations
683     - note there are no other groups here ;
684     value $druggr ( notsorted )
685     '11' = 'Metformin'
686     '12' = 'SU'
687     '13' = 'TZD'
688     '14' = 'DPP4'
689     '15' = 'GLP1'
690     '16' = 'SGLT2'
691     '17' = 'Insulin'
692     '18' = 'Acarbose'
693     '19' = 'Meglitinid'
694     '212' = 'MetxSU'
695     '213' = 'MetxTZD'
696     '214' = 'MetxDPP4'
697     '216' = 'MetxSGLT2'
698     '218' = 'MetxAcar'
699     '223' = 'SUxTZD'
700     '234' = 'TZDxDPP4'
701     '246' = 'DPP4xSGLT2'
702     '257' = 'InsxGLP1'
703     ;
NOTE: Format $DRUGGR is already on the library DMFMT.DMREG.
NOTE: Format $DRUGGR has been written to DMFMT.DMREG.
704
705     * A format that identifies usable dose-codes ;
706     value $dosogrp
707     '0000003'-'0000005', '0000015'-'0000017', '0000024'-'0000028',
708     '0000034', '0000038'-'0000039', '0000044'-'0000046', '0000050',
709     '0000059'-'0000060', '0000079'-'0000083', '0000092'-'0000093',
710     '0000098'-'0000099', '0000101', '0000105'-'0000106', '0000114',
711     '0000130', '0000133', '0000158', '0000178', '0000244', '0000246',
712     '0000247', '0000259'-'0000262', '0000266', '0000289'-'0000292',
713     '0000313', '0000362', '0000369', '0000370', '0000387', '0000447',
714     '0000468'-'0000469', '0000482', '0000492', '0000511', '0000540',
715     '0000555', '0000589', '0000613', '0000631', '0000637',
716     '0000655'-'0000656', '0000675', '0000805', '0000838'-'0000840',

```

```

717      '0000864'-'0000865','0000967','0000995'-'0000996','0001000',
718      '0001019','0001036','0001048','0001050','0001059','0001061',
719      '0001112','0001116','0001145' = '01'
720      other = '00';
NOTE: Format $DOS0GRP is already on the library DMFMT.DMREG.
NOTE: Format $DOS0GRP has been written to DMFMT.DMREG.
721
722      value $dosotxt ( notsorted )
723      '01' = 'Dose kn'
724      '00' = 'Unkn'
725      '99' = 'Blank/Tom'
726      ;
NOTE: Format $DOSOTXT is already on the library DMFMT.DMREG.
NOTE: Format $DOSOTXT has been written to DMFMT.DMREG.
727
728      * Values from WHO website: DDDs for combined products 2009 ;
729      * no. tablets for combos ;
730      value $DDDcombprod
731      'A10BD02' = 2 /* er rettet op fra 1 til 2 pr. 13.7.2010 */
732      'A10BD03' = 2
733      'A10BD04' = 1
734      'A10BD05' = 2
735      'A10BD06' = 1
736      'A10BD07' = 2
737      'A10BD08' = 2
738      'A10BD09' = 1
739      'A10BD11' = 2
740      'A10BD13' = 2
741      'A10BD15' = 2
742      ;
NOTE: Format $DDDCOMBPROD is already on the library DMFMT.DMREG.
NOTE: Format $DDDCOMBPROD has been written to DMFMT.DMREG.
743
744      *-----;
745      * Grouping of other (non OAD) drugs (Daffodil) ;
746      value $med3oth
747      'C07' = 'BB1'
748      'H02' = 'Ccs'
749      other = 'Other'
750      ;
NOTE: Format $MED30TH is already on the library DMFMT.DMREG.
NOTE: Format $MED30TH has been written to DMFMT.DMREG.
751      value $med4oth
752      'A08A' = 'WtL'
753      'C09A', 'C09B' = 'ACE'
754      'C09C', 'C09D' = 'ARB' /* (exclude C09DX04) */
755      'C08C' = 'DHP'
756      'C03A' = 'THZ'
757      'C08D' = 'NHP'
758      'C03C' = 'HCD'
759      other = 'Other'
760      ;
NOTE: Format $MED40TH is already on the library DMFMT.DMREG.
NOTE: Format $MED40TH has been written to DMFMT.DMREG.
761      value $med5oth
762      'B01AF' = 'DXI'
763      'C10AA' = 'Sta'
764      'C03DA' = 'AlA'
765      other = 'Other'
766      ;
NOTE: Format $MED50TH is already on the library DMFMT.DMREG.
NOTE: Format $MED50TH has been written to DMFMT.DMREG.
767      value $med7oth
768      'B01AC06' = 'Asp'
769      'B01AE07' = 'DTI'
770      'C09DX04' = 'NpI'
771      'C01AA04' = 'Dgt'
772      'C01AA05' = 'Dgo'
773      'C01BC04' = 'Fla'
774      'C01BD01' = 'Ami'

```

```

775      'B01AA03' = 'Wrf'
776      'B01AC04', 'B01AC22', 'B01AC24' = 'RPA'
777      'B01AC07', 'B01AC09', 'B01AC11',
778      'B01AC13', 'B01AC16', 'B01AC17', 'B01AC21' = 'AP1'
779      other = 'Other'
780      ;

```

NOTE: Format \$MED70TH is already on the library DMFMT.DMREG.

NOTE: Format \$MED70TH has been written to DMFMT.DMREG.

```

781
782      value $medgr
783      'BB1' = 'Beta blockers'
784      'Ccs' = 'Corticosteroids'
785      'WtL' = 'Weight loss drugs'
786      'ACE' = 'ACE inhibitors'
787      'ARB' = 'ARB'
788      'DHP' = 'Dihydropyridines (calcium channel blockers)'
789      'THZ' = 'Low ceiling diuretics (thiazides)'
790      'NHP' = 'Non-hydropyridines (calcium channel blockers)'
791      'HCD' = 'High ceiling diuretics (loop-diuretics)'
792      'DXI' = 'Direct factor Xa inhibitors'
793      'Sta' = 'Statins'
794      'AlA' = 'Aldosterone antagonists'
795      'Asp' = 'Low dose aspirin'
796      'DTI' = 'Direct thrombin inhibitor'
797      'NpI' = 'Neprilysine inhibitor'
798      'Dgt' = 'Digitoxin'
799      'Dgo' = 'Digoxin'
800      'Fla' = 'Flekanide'
801      'Ami' = 'Amiodarone'
802      'Wrf' = 'Warfarin'
803      'RPA' = 'Receptor P2Y12 antagonists'
804      'AP1' = 'Other antiplatelets'
805      ;

```

NOTE: Format \$MEDGR is already on the library DMFMT.DMREG.

NOTE: Format \$MEDGR has been written to DMFMT.DMREG.

```

806
807      value $lmedgr
808      'BB1' = 'BB1: Beta blockers'
809      'Ccs' = 'Ccs: Corticosteroids'
810      'WtL' = 'WtL: Weight loss drugs'
811      'ACE' = 'ACE: ACE inhibitors'
812      'ARB' = 'ARB: ARB'
813      'DHP' = 'DHP: Dihydropyridines (calcium channel blockers)'
814      'THZ' = 'THZ: Low ceiling diuretics (thiazides)'
815      'NHP' = 'NHP: Non-hydropyridines (calcium channel blockers)'
816      'HCD' = 'HCD: High ceiling diuretics (loop-diuretics)'
817      'DXI' = 'DXI: Direct factor Xa inhibitors'
818      'Sta' = 'Sta: Statins'
819      'AlA' = 'AlA: Aldosterone antagonists'
820      'Asp' = 'Asp: Low dose aspirin'
821      'DTI' = 'DTI: Direct thrombin inhibitor'
822      'NpI' = 'NpI: Neprilysine inhibitor'
823      'Dgt' = 'Dgt: Digitoxin'
824      'Dgo' = 'Dgo: Digoxin'
825      'Fla' = 'Fla: Flekanide'
826      'Ami' = 'Ami: Amiodarone'
827      'Wrf' = 'Wrf: Warfarin'
828      'RPA' = 'RPA: Receptor P2Y12 antagonists'
829      'AP1' = 'AP1: Other antiplatelets'
830      ;

```

NOTE: Format \$LMEDGR is already on the library DMFMT.DMREG.

NOTE: Format \$LMEDGR has been written to DMFMT.DMREG.

```

831
832      run ;

```

NOTE: PROCEDURE FORMAT used (Total process time):

```

      real time      0.01 seconds
      cpu time       0.00 seconds

```

```
833      title1 ;
834
835      *-----:
836      * Now list all the formats in the catalogs ;
837      proc catalog  catalog = DMfmt.DMreg ;
838          contents catalog = DMfmt.DMreg ; run ;
```

839

NOTE: The PROCEDURE CATALOG printed page 2.  
NOTE: PROCEDURE CATALOG used (Total process time):  
real time 0.02 seconds  
cpu time 0.01 seconds

```
840      proc format  fmtlib  library=DMfmt.DMreg ;
841          select $npu: ;
842      run ;
```

NOTE: PROCEDURE FORMAT used (Total process time):  
real time 0.00 seconds  
cpu time 0.00 seconds

NOTE: The PROCEDURE FORMAT printed page 3.

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414  
NOTE: The SAS System used:  
real time 0.95 seconds  
cpu time 0.35 seconds



# Chapter 4

## R-version of the register

```
> library(Epi)
> library(tidyverse)
> library(haven)
> source( '../util/elapsed.R' )
```

### 4.1 SAS-version of DMreg converted to R

```
> start()
```

```
-----
Code: E:/workdata/707655/DMreg/r/mkDMreg.rnw
Time: 2020-08-29 at 14:39:15
-----
```

We have created the DMreg as a SAS-file; the entire process is available in the document <http://bendixcarstensen/DMreg/DMreg2018.pdf>. Also available as v:\sdc\469drive\DMreg\tex\DMreg2018.pdf; it should have a creation date earlier than that of this document, but not too much earlier.

In this section we document the conversion of the SAS-version of the register to an R-version with variables defined as factors where necessary, with date variables converted to `cal.yr` and a logical ordering of the variables.

We first read the SAS-version of the register and rename PNR to PNR remove unwanted attributes and convert dates to `cal.yr`:

```
> system.time(
+ DMreg <- as.data.frame(read_sas("e:/workdata/707655/DMreg/data/DMreg.sas7bdat")) )
      user  system elapsed
      3.64    0.07    9.52
```

We want the variable labels for convenience so we get the variable labels from the attributes extracted by `read_sas`:

```
> cbind( vlabs <- sapply(DMreg, FUN = function(x) attr(x, "label")) )
      [,1]
pnr      "Person-id"
sex      "Sex"
```

```

doBth  "Date of birth"
doDM    "Date of inclusion"
doLast  "Date of latest criterion"
doDth   "Date of death"
DMtp    "Type of DM"
dvdtyp  "Type from DVDD"
nprtyp  "Type from NPR"
only1   "Only one criterion"
hasdvd  "has DVDD record"
inCr    "Incl. criterion"
do2nd   "Date of 2nd of Ins/OAD/NPR"
doNPR   "Date of 1st NPR"
doNPR2  "Date of 2nd NPR"
doOAD   "Date of 1st OAD"
doOAD2  "Date of 2nd OAD"
doIns   "Date of 1st Ins"
doIns2  "Date of 2nd Ins"
doPod   "Date of Podiatry"
doDia   "Date of diaBase"
doDVD   "Date of DVDD"

```

Thus, `vlab`s is now a character vector with *values* that are the labels of the variables, and with a `names` attribute that is the variable names.

We do not want to carry variable attributes around with data frame, and we want the date variables in `cal.yr` format:

```

> for(vn in names(DMreg))
+ for(at in c("label","format.sas") ) attr(DMreg[,vn], at) <- NULL
> DMreg <- cal.yr(DMreg)

```

Further, we define factors as needed. Note that `dvdtyp` and `nprtyp` will have missing values — they are character variables and one value that occur is "" (a zero-length character string), which, when not mentioned in the `levels` argument, will become a missing value for the factor.

```

> DMreg <- transform(DMreg,
+                   sex = factor(sex),
+                   DMtp = factor(DMtp),
+                   inCr = factor(inCr),
+                   only1 = factor(only1, labels=c("N","Y")),
+                   hasdvd = factor(hasdvd, labels=c("N","Y")),
+                   dvdtyp = factor(dvdtyp, levels=c("NA", "T1", "T2"),
+                                     labels=c("undef", "T1", "T2")),
+                   nprtyp = factor(nprtyp, levels=c("NA", "T1", "T2"),
+                                     labels=c("undef", "T1", "T2")))
> str(DMreg, v = 0)
'data.frame':      485989 obs. of  22 variables:
 $ pnr   : chr    ...
 $ sex   : Factor w/ 2 levels "M","W": NULL ...
 $ doBth : 'cal.yr' num  NULL ...
 $ doDM  : 'cal.yr' num  NULL ...
 $ doLast: 'cal.yr' num  NULL ...
 $ doDth : 'cal.yr' num  NULL ...
 $ DMtp  : Factor w/ 2 levels "T1","T2": NULL ...
 $ dvdtyp: Factor w/ 3 levels "undef","T1","T2": NULL ...
 $ nprtyp: Factor w/ 3 levels "undef","T1","T2": NULL ...

```

```

$ only1 : Factor w/ 2 levels "N","Y": NULL ...
$ hasdvd: Factor w/ 2 levels "N","Y": NULL ...
$ inCr   : Factor w/ 12 levels "Dia","DVD","I-I",...: NULL ...
$ do2nd  : 'cal.yr' num NULL ...
$ doNPR  : 'cal.yr' num NULL ...
$ doNPR2 : 'cal.yr' num NULL ...
$ doOAD  : 'cal.yr' num NULL ...
$ doOAD2 : 'cal.yr' num NULL ...
$ doIns  : 'cal.yr' num NULL ...
$ doIns2 : 'cal.yr' num NULL ...
$ doPod  : 'cal.yr' num NULL ...
$ doDia  : 'cal.yr' num NULL ...
$ doDVD  : 'cal.yr' num NULL ...

```

Finally, we save the register *and* the vector `vlabs` with the variable labels in the same file; it is a handy feature of `save`, that you can save several R-objects in one file, in this case `DMreg.Rda`; the load command will then load all objects stored in the file (`v=T` causes load to print the objects it loads.)

```

> system.time(
+ save(DMreg, vlabs, file="e:/workdata/707655/DMreg/data/DMreg.Rda") )
  user system elapsed
 3.34   0.03   4.47
> system.time( load( file="e:/workdata/707655/DMreg/data/DMreg.Rda", v=T) )
Loading objects:
DMreg
vlabs
  user system elapsed
 0.58   0.01   0.59

```

### 4.1.1 The diabetes drug register

There is also a version of the diabetes register where persons are included only on the basis of diabetes drug purchase. They are included at the date of the **second** drug purchase, but where the type of diabetes is taken from the `DMreg`. It is a subset of the `DMreg`.

```

> system.time(
+ DMdreg <- as.data.frame(read_sas("e:/workdata/707655/DMreg/data/DMdreg.sas7bdat")) )
  user system elapsed
 1.49   0.02   3.61

```

We want the variable labels for convenience so we get the variable labels from the attributes extracted by `read_sas`:

```

> cbind( vlabs <- sapply(DMdreg, FUN = function(x) attr(x, "label")) )
      [,1]
pnr      "Person id"
sex      "Sex"
DMtp     "Type of DM"
doBth    "Date of birth"
doDM     "Date of inclusion"
doDth    "Date of death"
inCr     "Incl. criterion"
doOAD    "Date of 1st OAD"
doIns    "Date of 1st Ins"
lastOAD  "Date of last OAD"
lastIns  "Date of last Ins"

```

Thus, `vlab`s is now a character vector with *values* that are the labels of the variables, and with a `names` attribute that is the variable names.

We do not want to carry variable attributes around with data frame, and we want the date variables in `cal.yr` format:

```
> for(vn in names(DMreg))
+ for(at in c("label","format.sas") ) attr(DMreg[,vn], at) <- NULL
> DMreg <- cal.yr(DMreg)
```

Further, we define factors:

```
> DMreg <- transform(DMreg,
+                     sex = factor(sex),
+                     DMtp = factor(DMtp),
+                     inCr = factor(inCr))
> str(DMreg, v = 0)
'data.frame':      440687 obs. of  11 variables:
 $ pnr      : chr      ...
 $ sex      : Factor w/ 2 levels "M","W": NULL ...
 $ DMtp     : Factor w/ 2 levels "T1","T2": NULL ...
 $ doBth    : 'cal.yr' num  NULL ...
 $ doDM     : 'cal.yr' num  NULL ...
 $ doDth    : 'cal.yr' num  NULL ...
 $ inCr     : Factor w/ 4 levels "I-I","I-O","O-I",...: NULL ...
 $ doOAD    : 'cal.yr' num  NULL ...
 $ doIns    : 'cal.yr' num  NULL ...
 $ lastOAD  : 'cal.yr' num  NULL ...
 $ lastIns  : 'cal.yr' num  NULL ...

> system.time(
+ save(DMreg, vlab, file="e:/workdata/707655/DMreg/data/DMreg.Rda") )
   user  system elapsed
  1.63    0.01    2.11
> system.time( load( file="e:/workdata/707655/DMreg/data/DMreg.Rda", v=T) )
Loading objects:
  DMreg
  vlab
   user  system elapsed
  0.37    0.02    0.39
```

```
-----
Code: E:/workdata/707655/DMreg/r/mkDMreg.rnw
Ends: 2020-08-29 at 14:39:40
Time elapsed:      00:00:25
-----
```

## 4.2 Reading and using the R-version of the DMreg

```
-----
Code: E:/workdata/707655/DMreg/r/readDMreg.rnw
Time: 2020-08-29 at 14:40:37
-----
```

The details of *creating* the R-version of the DMreg is in section 4.1.

The R-code from this section is available as the file

E:\workdata\707655\DMreg\r\readDMreg.R—you will most likely want some of this at the top of your program.

We can load the register and the variable labels—note the `v=TRUE` argument to `load` that lists the objects you are loading, and the `v=0` argument to `str` that prints the structure of DMreg without listing individual data values, allowing you to export the resulting document from DST (`v=0` suppresses the listing of data points; it lists 0 values of each variable):

```
> system.time(
+ load(file = "e:/workdata/707655/DMreg/data/DMreg.Rda", v = TRUE) )
Loading objects:
  DMreg
  vlabs
    user  system elapsed
    1.05    0.03     1.33
> str(DMreg, v=0)
'data.frame':      485989 obs. of  22 variables:
 $ pnr   : chr      ...
 $ sex   : Factor w/ 2 levels "M","W": NULL ...
 $ doBth : 'cal.yr' num  NULL ...
 $ doDM   : 'cal.yr' num  NULL ...
 $ doLast : 'cal.yr' num  NULL ...
 $ doDth  : 'cal.yr' num  NULL ...
 $ DMtp   : Factor w/ 2 levels "T1","T2": NULL ...
 $ dvdtyp: Factor w/ 3 levels "undef","T1","T2": NULL ...
 $ nprtyp : Factor w/ 3 levels "undef","T1","T2": NULL ...
 $ only1  : Factor w/ 2 levels "N","Y": NULL ...
 $ hasdvd : Factor w/ 2 levels "N","Y": NULL ...
 $ inCr   : Factor w/ 12 levels "Dia","DVD","I-I",...: NULL ...
 $ do2nd  : 'cal.yr' num  NULL ...
 $ doNPR  : 'cal.yr' num  NULL ...
 $ doNPR2 : 'cal.yr' num  NULL ...
 $ doOAD  : 'cal.yr' num  NULL ...
 $ doOAD2 : 'cal.yr' num  NULL ...
 $ doIns  : 'cal.yr' num  NULL ...
 $ doIns2 : 'cal.yr' num  NULL ...
 $ doPod  : 'cal.yr' num  NULL ...
 $ doDia  : 'cal.yr' num  NULL ...
 $ doDVD  : 'cal.yr' num  NULL ...
> cbind(vlabs)
      vlabs
pnr    "Person-id"
sex    "Sex"
doBth  "Date of birth"
doDM    "Date of inclusion"
doLast  "Date of latest criterion"
doDth   "Date of death"
DMtp    "Type of DM"
dvdtyp  "Type from DVDD"
nprtyp  "Type from NPR"
only1   "Only one criterion"
hasdvd  "has DVDD record"
inCr    "Incl. criterion"
do2nd   "Date of 2nd of Ins/OAD/NPR"
```

```
doNPR "Date of 1st NPR"
doNPR2 "Date of 2nd NPR"
doOAD "Date of 1st OAD"
doOAD2 "Date of 2nd OAD"
doIns "Date of 1st Ins"
doIns2 "Date of 2nd Ins"
doPod "Date of Podiatry"
doDia "Date of diaBase"
doDVD "Date of DVDD"
```

The character vector `vlabs` holds the long labels of the variables; its `names` attribute is the a vector variable names in the `DMreg`. Note also that for practical use, you may not need more than the first 6 or 7 variables, so for parsimony of your code as well as decency in behaviour toward other using the DST servers you could do:

```
> DMreg <- DMreg[,1:6]
```

#### 4.2.1 Things to note when using the DMreg:

- Do not put anything in the folder `E:\workdata\707655\DMreg` or any of its sub-folders.
- `pnr` is of class `character`. It must remain so, numerical values are inaccurate on a computer.
- Keep the factors in the `DMreg` that are defined.
- There is a point of *not* having the `pnr` as a factor, it saves no space to have a factor with as many levels as records in the data frame, whereas it is a good idea to have the variables with few levels as factors. Moreover, if you make a subsets of a data frame where `pnr` is a factor, the subset will carry along the entire set of 400,000+ levels.
- Do not rename the variables from the `DMreg`, that would be a prescription of confusion.

### 4.3 Tabular overview of incidence and prevalence in the DMreg

We can get an overview of the number of cases in the register, by date of inclusion, sex and type of diabetes.

```
> with( DMreg, ftable(addmargins(table(floor(pmax(doDM,1995)),
+                                     sex,
+                                     DMtp,
+                                     exclude=NULL) ),
+       row.vars=1) )
```

	sex	M		W		Sum		Sum		Sum
	DMtp	T1	T2	Sum	T1	T2	Sum	T1	T2	Sum
1995		12384	30259	42643	9613	31046	40659	21997	61305	83302
1996		681	6166	6847	519	5285	5804	1200	11451	12651
1997		688	5861	6549	490	4892	5382	1178	10753	11931
1998		664	6535	7199	460	5256	5716	1124	11791	12915
1999		592	6727	7319	402	5669	6071	994	12396	13390

2000	598	6588	7186	390	5534	5924	988	12122	13110
2001	589	6804	7393	414	5407	5821	1003	12211	13214
2002	607	8056	8663	394	7265	7659	1001	15321	16322
2003	547	9147	9694	387	7607	7994	934	16754	17688
2004	508	9292	9800	397	7733	8130	905	17025	17930
2005	518	8161	8679	378	6438	6816	896	14599	15495
2006	555	8161	8716	384	5889	6273	939	14050	14989
2007	562	8680	9242	387	6695	7082	949	15375	16324
2008	558	9865	10423	373	7573	7946	931	17438	18369
2009	572	10730	11302	366	7686	8052	938	18416	19354
2010	526	11847	12373	371	8664	9035	897	20511	21408
2011	511	15479	15990	357	13068	13425	868	28547	29415
2012	496	12792	13288	322	10093	10415	818	22885	23703
2013	488	10189	10677	363	8053	8416	851	18242	19093
2014	485	9877	10362	361	7407	7768	846	17284	18130
2015	496	10054	10550	390	7760	8150	886	17814	18700
2016	517	10695	11212	381	7956	8337	898	18651	19549
2017	508	10430	10938	364	8105	8469	872	18535	19407
2018	495	10739	11234	326	8040	8366	821	18779	19600
Sum	25145	243134	268279	18589	199121	217710	43734	442255	485989

The prevalent cases as of 2019-1-1 by age, sex and type of diabetes can be also be derived on the fly:

```
> with( subset(DMreg, doDM < 2019 & (doDth > 2019 | is.na(doDth))),
+       ftable(addmargins(table(cut(2019 - doBth,
+                                   breaks = seq(0, 120, 5),
+                                   right = FALSE),
+                                   sex,
+                                   DMtp,
+                                   exclude = NULL))),
+       row.vars=1) )
```

This table is not printed because because it has small numbers in it. But there is a remedy for that.

### 4.3.1 Readable tables that can be sent from DST

Readable tables with large numbers require position commas for readability; we want to write 485,989 instead of 485989.

Moreover, thin tables will benefit from having 0s printed as “.”—or some other character requiring minimal ink.

Finally, if you want to send a table home from the DST server you must omit counts smaller than 4, for example by replacing them by “\*”.

The two first facilities are available in the functions `fCp`, and `fCtable`, whereas all three are available in the functions `rCtable` and `rCp`. The code for these functions is available in the file `elapsed.R`, which is read by:

```
> source( "e:/workdata/707655/util/elapsed.R" )
```

We can then print the table of the prevalent cases of DM as of 2019-1-1 by age, sex and diabetes type:

```
> with( subset( DMreg, doDM < 2019 & (doDth > 2019 | is.na(doDth)) ),
+       rCtable(addmargins(table(cut(2019-doBth,
+                                   breaks = seq(0,120,5),
+                                   right = FALSE),
+                                   sex,
+                                   DMtp,
+                                   exclude = NULL))),
+       row.vars = 1, w = 7) )
```

	sex DMtp	M T1	T2	Sum	W T1	T2	Sum	Sum T1	T2	Sum
[0,5)		48	*	49	34	5	39	82	6	88
[5,10)		261	*	264	260	*	263	521	6	527
[10,15)		614	9	623	557	20	577	1,171	29	1,200
[15,20)		901	40	941	766	123	889	1,667	163	1,830
[20,25)		1,057	180	1,237	901	342	1,243	1,958	522	2,480
[25,30)		1,195	461	1,656	920	598	1,518	2,115	1,059	3,174
[30,35)		1,137	980	2,117	788	914	1,702	1,925	1,894	3,819
[35,40)		1,139	1,939	3,078	798	1,489	2,287	1,937	3,428	5,365
[40,45)		1,408	3,726	5,134	1,011	3,600	4,611	2,419	7,326	9,745
[45,50)		1,593	6,870	8,463	1,120	5,717	6,837	2,713	12,587	15,300
[50,55)		1,758	12,124	13,882	1,243	9,113	10,356	3,001	21,237	24,238
[55,60)		1,513	16,000	17,513	1,000	11,471	12,471	2,513	27,471	29,984
[60,65)		1,308	19,539	20,847	954	13,503	14,457	2,262	33,042	35,304
[65,70)		1,035	22,179	23,214	790	15,559	16,349	1,825	37,738	39,563
[70,75)		906	27,138	28,044	729	19,244	19,973	1,635	46,382	48,017
[75,80)		525	19,197	19,722	395	15,973	16,368	920	35,170	36,090
[80,85)		262	11,738	12,000	253	11,712	11,965	515	23,450	23,965
[85,90)		76	5,228	5,304	120	7,031	7,151	196	12,259	12,455
[90,95)		18	1,631	1,649	23	3,063	3,086	41	4,694	4,735
[95,100)		*	226	227	9	718	727	10	944	954
[100,105)		.	11	11	.	72	72	.	83	83
[105,110)		.	*	*	.	9	9	.	10	10
[110,115)		.	*	*	.	.	.	.	*	*
[115,120)		.	.	.	.	.	.	.	.	.
Sum		16,755	149,223	165,978	12,671	120,279	132,950	29,426	269,502	298,928

The last argument to `rCtable`, `w=7` determines the width of the columns in the resulting table.

You will note that the 0s have been replaced by a “.” and numbers 1, 2 and 3 by a “\*”.

### The functions `rCtable` and `fCtable`

have their funny names because they use `fTable` to layout the table (so arguments `row.vars` and `col.vars` from `fTable` apply), and use `formatC` to print the numbers with position markers. That explains the names `fCtable` and `fCp`; the names `rCtable` and `rCp` are versions that restrict entries to be at least 4.

The argument `w` (default 11) gives the width of the table entries, `d` (default 0) gives the number of digits after the decimal point, `z` (default “.”) gives the character to print instead of 0, and the argument `klm` (only for `rCp` and `rCtable`, default 4) gives the smallest admissible number printed.

The function `rCtable` is of course only relevant for tables of counts.



### 4.3.2 Reading and using the diabetes drug register

For illustration we also load the register based on drugs purchases alone:

```
> system.time(
+ load(file = "e:/workdata/707655/DMreg/data/DMdreg.Rda", v = TRUE) )
Loading objects:
  DMdreg
  vlabs
  user   system elapsed
  0.39    0.00    0.43
> str(DMdreg, v=0)
'data.frame':   440687 obs. of  11 variables:
 $ pnr      : chr   ...
 $ sex      : Factor w/ 2 levels "M","W": NULL ...
 $ DMtp     : Factor w/ 2 levels "T1","T2": NULL ...
 $ doBth    : 'cal.yr' num  NULL ...
 $ doDM     : 'cal.yr' num  NULL ...
 $ doDth    : 'cal.yr' num  NULL ...
 $ inCr     : Factor w/ 4 levels "I-I","I-O","O-I",...: NULL ...
 $ doOAD    : 'cal.yr' num  NULL ...
 $ doIns    : 'cal.yr' num  NULL ...
 $ lastOAD  : 'cal.yr' num  NULL ...
 $ lastIns  : 'cal.yr' num  NULL ...
> cbind(vlabs)

      vlabs
pnr      "Person id"
sex      "Sex"
DMtp     "Type of DM"
doBth    "Date of birth"
doDM     "Date of inclusion"
doDth    "Date of death"
inCr     "Incl. criterion"
doOAD    "Date of 1st OAD"
doIns    "Date of 1st Ins"
lastOAD  "Date of last OAD"
lastIns  "Date of last Ins"
```

We can then print the table of the prevalent cases of drug-treated DM as of 2019-1-1 by age, sex and diabetes type:

```
> with( subset( DMdreg, doDM < 2019 & (doDth > 2019 | is.na(doDth)) ),
+       rCtable(addmargins(table(cut(2019-doBth,
+                                   breaks = seq(0,120,5),
+                                   right = FALSE),
+                                   sex,
+                                   DMtp,
+                                   exclude = NULL))),
+       row.vars = 1, w = 7) )
```

	sex	M		Sum	W		Sum	Sum		Sum
	DMtp	T1	T2		T1	T2		T1	T2	
[0,5)		46	.	46	31	.	31	77	.	77
[5,10)		253	.	253	255	.	255	508	.	508
[10,15)		604	4	608	554	9	563	1,158	13	1,171
[15,20)		898	26	924	761	105	866	1,659	131	1,790

[20,25)	1,048	142	1,190	888	265	1,153	1,936	407	2,343
[25,30)	1,180	375	1,555	913	424	1,337	2,093	799	2,892
[30,35)	1,128	880	2,008	778	640	1,418	1,906	1,520	3,426
[35,40)	1,133	1,816	2,949	795	1,014	1,809	1,928	2,830	4,758
[40,45)	1,401	3,534	4,935	1,004	3,251	4,255	2,405	6,785	9,190
[45,50)	1,588	6,519	8,107	1,114	5,322	6,436	2,702	11,841	14,543
[50,55)	1,754	11,544	13,298	1,242	8,494	9,736	2,996	20,038	23,034
[55,60)	1,513	15,213	16,726	1,000	10,651	11,651	2,513	25,864	28,377
[60,65)	1,303	18,446	19,749	953	12,323	13,276	2,256	30,769	33,025
[65,70)	1,034	20,689	21,723	790	13,982	14,772	1,824	34,671	36,495
[70,75)	904	24,987	25,891	728	16,946	17,674	1,632	41,933	43,565
[75,80)	523	17,469	17,992	395	13,943	14,338	918	31,412	32,330
[80,85)	262	10,462	10,724	253	10,084	10,337	515	20,546	21,061
[85,90)	76	4,559	4,635	120	5,840	5,960	196	10,399	10,595
[90,95)	18	1,404	1,422	23	2,482	2,505	41	3,886	3,927
[95,100)	*	186	187	9	549	558	10	735	745
[100,105)	.	8	8	.	56	56	.	64	64
[105,110)	.	*	*	.	8	8	.	9	9
[110,115)	.	.	.	.	.	.	.	.	.
[115,120)	.	.	.	.	.	.	.	.	.
Sum	16,667	138,264	154,931	12,606	106,388	118,994	29,273	244,652	273,925

Note that the resulting factor from the cut function has levels all the way to 120, even if no persons are over 110.

```
-----
Code: E:/workdata/707655/DMreg/r/readDMreg.rnw
Ends: 2020-08-29 at 14:40:41
Time elapsed:      00:00:04
-----
```

# Chapter 5

## Auxiliary data files in R-format

The following sections describe data files that were created using SAS-code which is available the relevant chapters in the main document, V:\SDC\469DRIVE\DMreg\tex\DMreg2018.pdf

00-base (population files), 00y-base (status file), 00-labka (LABKA files), 10-labcomp and 10-comp1 (complications files).

### 5.1 The population file

First the paraphernalia:

```
-----  
Code: E:/workdata/707655/DMreg/r/mkPop.rnw  
Time: 2020-09-02 at 14:57:24  
-----
```

The file we produce contains the **pnr**, sex, dates of birth and death from the population files and the reclassified causes of death and country of birth from the cause of death files. We retrieve data from the SAS-files POP (population) and COD (cause of death):

```
> system.time(pop <- as.data.frame(read_sas("../data/pop.sas7bdat")))
  user system elapsed
36.19   0.53   69.50

> attr( pop$pnr, "label" ) <- NULL
> attr( pop$pnr, "format.sas" ) <- NULL
> str(pop, v = 0)

'data.frame':
  7631979 obs. of  6 variables:
 $ pnr : chr ...
 $ sex : chr ...
 ..- attr(*, "label")= chr ...
 $ doBth: Date, format: ...
 $ doDth: Date, format: ...
 $ whBth: chr ...
 ..- attr(*, "label")= chr ...
 $ dSrc : chr ...
 ..- attr(*, "label")= chr ...
 - attr(*, "label")= chr ...

> system.time(cod <- as.data.frame(read_sas("../data/cod.sas7bdat")))
  user system elapsed
 7.09   0.03   15.43
```

```

> attr( cod$pnr, "label"      ) <- NULL
> attr( cod$pnr, "format.sas" ) <- NULL
> str(cod, v = 0)
'data.frame':      1211314 obs. of  10 variables:
 $ pnr   : chr    ...
 $ doDth: Date, format:  ...
 $ cod4  : chr    ...
 ..- attr(*, "label")= chr  ...
 $ codX  : chr    ...
 ..- attr(*, "label")= chr  ...
 $ codD  : chr    ...
 ..- attr(*, "label")= chr  ...
 $ daar  : chr    ...
 ..- attr(*, "label")= chr  ...
 $ daa1  : chr    ...
 ..- attr(*, "label")= chr  ...
 ..- attr(*, "format.sas")= chr  ...
 $ daa2  : chr    ...
 ..- attr(*, "label")= chr  ...
 ..- attr(*, "format.sas")= chr  ...
 $ daa3  : chr    ...
 ..- attr(*, "label")= chr  ...
 ..- attr(*, "format.sas")= chr  ...
 $ daa4  : chr    ...
 ..- attr(*, "label")= chr  ...
 ..- attr(*, "format.sas")= chr  ...
 - attr(*, "label")= chr  ...

```

There is not the same number of deaths in the two files; and even the two dates of death do not always match:

```

> table(!is.na(pop$doDth))
  FALSE    TRUE
6298570 1333409
> table(!is.na(cod$doDth))
  TRUE
1211314
> jj <- left_join( pop[,c("pnr","doDth","doBth","sex")],
+                cod[,c("pnr","doDth","cod4","codX")],
+                by = "pnr")
> jj <- cal.yr(jj)
> dim(jj) ; cbind(sapply(jj, function(x) class(x)[1]))
[1] 7631979      7
      [,1]
pnr      "character"
doDth.x  "cal.yr"
doBth    "cal.yr"
sex      "character"
doDth.y  "cal.yr"
cod4     "character"
codX     "character"
> tt <- table(cod = floor(jj$doDth.y),
+            pop = floor(jj$doDth.x),
+            exclude=NULL )
> tt <- tt / ifelse(tt>10^5, 1000, 1)
> rCtable( tt[, 1:10 ], w=6 )

```

	pop	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
cod											
1995		283	.	.	.	.	.	.	.	.	.
1996		.	60,375	.	.	.	.	.	.	.	.
1997		.	.	59,531	.	.	.	.	.	.	.
1998		.	.	.	57,965	.	.	.	.	.	.
1999		.	.	.	.	58,452	.	.	.	.	.
2000		.	.	.	.	.	56,661	.	.	.	.
2001		.	.	.	.	.	.	57,326	.	.	.
2002		.	.	.	.	.	.	.	58,250	.	.
2003		.	.	.	.	.	.	.	*	57,069	*
2004		.	.	.	.	.	.	.	.	.	55,098
2005		.	.	.	.	.	.	.	.	.	.
2006		.	.	.	.	.	.	.	.	.	.
2007		.	.	.	.	.	.	.	.	.	.
2008		.	.	.	.	.	.	.	.	.	.
2009		.	.	.	.	.	.	.	.	.	.
2010		.	.	.	.	.	.	.	.	.	.
2011		.	.	.	.	.	.	.	.	.	.
2012		.	.	.	.	.	.	.	.	.	.
2013		.	.	.	.	.	.	.	.	.	.
2014		.	.	.	.	.	.	.	.	.	.
2015		.	.	.	.	.	.	.	.	.	.
2016		.	.	.	.	.	.	.	.	.	.
2017		.	.	.	.	.	.	.	.	.	.
2018		.	.	.	.	.	.	.	.	.	.
NA		.	23	49	443	515	853	812	418	469	475

```
> rCtable( tt[, 11:20 ], w=6 )
```

	pop	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
cod											
1995		.	.	.	.	.	.	.	.	.	.
1996		.	.	.	.	.	.	.	.	.	.
1997		.	.	.	.	.	.	.	.	.	.
1998		.	.	.	.	.	.	.	.	.	.
1999		.	.	.	.	.	.	.	.	.	.
2000		.	*	7	8	6	.	4	.	*	*
2001		.	.	*	*	*	61	98	8	*	7
2002		.	.	*	*	*	*	.	*	.	.
2003		.	.	*	*	*	.	.	.	8	.
2004		.	.	5	*	*	*	*	.	.	12
2005	54,387		8	*	7	*	.	.	.	.	.
2006	.	55,083		11	5	11	*	.	.	.	.
2007	.	*	55,021		46	6	.	.	.	.	.
2008	.	.	*	53,742		62	*	.	*	*	.
2009	.	.	*	*	54,227		27	.	.	*	.
2010	.	.	.	*	*	53,860		100	52	8	8
2011	.	.	.	.	.	.	5	51,790	61	4	7
2012	.	.	.	.	.	.	.	11	51,502	231	21
2013	.	.	.	.	.	.	.	*	10	51,703	59
2014	.	.	.	.	.	.	.	*	.	13	50,790
2015	.	.	.	.	.	.	*	.	.	*	*
2016	.	.	.	.	.	.	.	.	.	.	*
2017	.	.	.	.	.	.	.	.	.	.	.
2018	.	.	.	.	.	.	.	.	.	.	.
NA		517	521	573	621	640	649	641	702	709	784

```
> rCtable( tt[, -(1:20)], w=9 )
```

	pop	2015	2016	2017	2018	2019	NA
cod							
1995		.	.	.	.	.	.
1996		.	.	.	.	.	.
1997		.	.	.	.	.	.
1998		.	.	.	.	.	.
1999		.	.	.	.	.	.
2000		.	.	.	.	.	.
2001		6	*	7	.	.	.
2002		.	.	.	.	.	.
2003		.	.	.	.	.	.
2004		.	.	.	.	.	.
2005		14	.	.	.	.	.
2006		.	14	.	.	.	.
2007		.	.	23	.	.	.
2008		*	.	.	.	.	.
2009		.	.	.	.	.	.
2010		6	12	6	.	.	.
2011		5	*	5	.	.	.
2012		10	10	*	.	.	.
2013		4	15	.	.	.	.
2014		60	4	13	.	.	.
2015		51,843	65	*	.	.	.
2016		20	52,009	32	.	.	.
2017		*	8	52,605	.	.	.
2018		.	.	*	.	.	.
NA		741	802	829	55,729	53,909	6,299

We see that the cause of death file (`doDth.y`) only have dates of death till 2017 incl. and that there is a tendency that discrepancies are concentrated around dates of death from `cod` being 10 years earlier the date of death in the `pop` file. So we conclude that the date of death obtained from the `pop` file is the correct one; essentially we ascribe discrepancies to misrecordings of dates of death on death certificates. Also this is more complete cover the years 2018 and 2019 too.

```
> pop <- data.frame(pnr = jj$pnr,
+                   sex = factor(jj$sex),
+                   doBth = jj$doBth,
+                   doDth = jj$doDth.x,
+                   cod4 = factor(jj$cod4),
+                   codX = factor(jj$codX),
+                   stringsAsFactors = FALSE)
> with( pop, rCtable( addmargins(table(has.cod = !is.na(codX),
+                                     has.doDth = !is.na(doDth) )), w=9 ) )
```

	has.doDth	FALSE	TRUE	Sum
has.cod				
FALSE		6,298,570	122,424	6,420,994
TRUE		.	1,210,985	1,210,985
Sum		6,298,570	1,333,409	7,631,979

```
> with( pop, rCtable( addmargins(table(codX, cod4)), w=9 ) )
```

	cod4	Can	CVD	Oth	Res	Sum
codX						
Cancer		338,209	.	.	.	338,209
CVD		.	382,590	.	.	382,590
Diab		.	.	777	.	777
Digest		.	.	57,347	.	57,347

Extern	.	.	56,702	.	56,702
Infect	.	.	17,628	.	17,628
Other	.	.	209,946	.	209,946
Renal	.	.	8,785	.	8,785
Respir	.	.	.	128,362	128,362
Urinal	.	.	10,639	.	10,639
Sum	338,209	382,590	361,824	128,362	1,210,985

Note that there are very few deaths from diabetes; this is because this cause of death has been taken as the secondary or tertiary cause if the first or two first recorded causes were diabetes. This is specific for this project because we are primarily interested in comparing mortality between diabetes patients and other persons, and so diabetes as a cause of death in itself is not relevant, we would want to see the underlying cause(s) instead.

```
> str(pop, v=0)
'data.frame':      7631979 obs. of  6 variables:
 $ pnr  : chr      ...
 $ sex  : Factor w/ 2 levels "M","W": NULL ...
 $ doBth: 'cal.yr' num  NULL ...
 $ doDth: 'cal.yr' num  NULL ...
 $ cod4 : Factor w/ 4 levels "Can","CVD","Oth",...: NULL ...
 $ codX : Factor w/ 10 levels "Cancer","CVD",...: NULL ...

> save(pop,          file = "../data/pop.Rda")
> system.time(load(file = "../data/pop.Rda"))

   user  system elapsed 
  5.73    0.10    5.84
```

```
-----
Code: E:/workdata/707655/DMreg/r/mkPop.rnw
Ends: 2020-09-02 at 14:59:46
Time elapsed:      00:02:21
-----
```

## 5.2 The status file

```
-----
Code: E:/workdata/707655/DMreg/r/mkStat.rnw
Time: 2020-08-29 at 16:27:48
-----
```

The status file is classified by `pnr` and `yr`, each record representing a person's status at 1 January of the year `yr`. There are records for *all* residents in Denmark. The status variables are place of residence, family income and highest achieved education.

### 5.2.1 Converting the SAS dataset to .Rda format

We now read the SAS dataset and convert it to an R-dataset for easier (and quicker) access:

```
> system.time(popstat <- read_sas("../data/popstat.sas7bdat"))
```

```

      user  system elapsed
791.34    4.84 1758.00
> names(popstat) <- tolower( names(popstat) )
> for(v in names(popstat))
+   {
+     attr(popstat[,v], "label") <- NULL
+     attr(popstat[,v], "format.sas") <- NULL
+   }
> str(popstat, v = 0)
Classes 'tbl_df', 'tbl' and 'data.frame':      131784868 obs. of  8 variables:
 $ pnr   : chr      ...
 ..- attr(*, "label")= chr      ...
 ..- attr(*, "format.sas")= chr      ...
 $ kom   : chr      ...
 ..- attr(*, "label")= chr      ...
 ..- attr(*, "format.sas")= chr      ...
 $ reg   : chr      ...
 ..- attr(*, "label")= chr      ...
 ..- attr(*, "format.sas")= chr      ...
 $ yr    : num  NULL ...
 ..- attr(*, "label")= chr      ...
 $ find  : num  NULL ...
 ..- attr(*, "label")= chr      ...
 $ udd   : num  NULL ...
 ..- attr(*, "label")= chr      ...
 $ udddk: num  NULL ...
 ..- attr(*, "label")= chr      ...
 ..- attr(*, "format.sas")= chr      ...
 $ eduen: num  NULL ...
 ..- attr(*, "label")= chr      ...
 ..- attr(*, "format.sas")= chr      ...
 - attr(*, "label")= chr      ...

```

We then read the file with the character formats for geography and education (generated in the SAS program 00y-base.sas) in order to get the correct factor levels for kom, reg, udddk and eduen:

```

> labs <- read_sas("../data/statlabels.sas7bdat")
> labs$START <- as.numeric(labs$START)
> table( labs$FMTNAME )
AUDD_HOVED_L5L5_T  AUDD_LEVEL_L4L4_T      KOM_V4_T      REG_V4_T
              15                9          99              6

> ( k1 <- labs[grep("KOM" ,labs$FMTNAME),c("LABEL", "START")] )
# A tibble: 99 x 2
  LABEL      START
  <chr>      <dbl>
1 København    101
2 Frederiksberg 147
3 Ballerup     151
4 Brøndby      153
5 Dragør       155
6 Gentofte     157
7 Gladsaxe     159
8 Glostrup    161
9 Herlev       163
10 Albertslund 165
# ... with 89 more rows

```



```

> ( r1 <- labs[grep("REG" ,labs$FMTNAME),c("LABEL","START")][,-1,] )
# A tibble: 5 x 2
  LABEL      START
  <chr>    <dbl>
1 Nordjylland      81
2 Midtjylland      82
3 Syddanmark       83
4 Hovedstaden      84
5 Sjælland         85

> ( u1 <- labs[grep("HOVED",labs$FMTNAME),c("LABEL","START")] )
# A tibble: 15 x 2
  LABEL                                START
  <chr>                                <dbl>
1 Førskoleuddannelser                   5
2 Grundskole                           10
3 Forberedende uddannelser              15
4 Gymnasiale uddannelser                20
5 Danskundervisning ved sprogcentre    25
6 Erhvervsfaglige grundforløb          29
7 Erhvervsfaglige uddannelser          30
8 Adgangsgivende uddannelsesforløb     35
9 Arbejdsmarkedsuddannelser, AMU       39
10 Korte videregående uddannelser, KVV  40
11 Mellemlange videregående uddannelser, MVU 50
12 Bacheloruddannelser, BACH            60
13 Lange videregående uddannelser, LVU    70
14 Ph.d. og forskeruddannelser          80
15 Uoplyst mv.                         90

> ( e1 <- labs[grep("LEVEL",labs$FMTNAME),c("LABEL","START")] )
# A tibble: 9 x 2
  LABEL                                START
  <chr>                                <dbl>
1 Early childhood education            0
2 Primary                             1
3 Lower secondary                      2
4 Upper secondary                     3
5 Short cycle tertiary                 5
6 Bachelor or equivalent               6
7 Master or equivalent                 7
8 Doctoral or equivalent               8
9 Not elsewhere classified             9

```

These are the in turn used to define the relevant variables as factors:

```

> system.time(
+ popstat <-
+ mutate( popstat,
+   kom = factor( kom, levels = k1$START, labels = k1$LABEL),
+   reg = factor( reg, levels = r1$START, labels = r1$LABEL),
+   udddk = factor(udddk, levels = u1$START, labels = u1$LABEL),
+   eduen = factor(eduen, levels = e1$START, labels = e1$LABEL) ) )
  user system elapsed
234.00   1.58  235.58

```

### 5.2.2 Creating income deciles

Income levels change over a period as long as the the one covered by these data (1996–2018, 22 years), so we construct a factor of deciles of income for each year, `findec`, family income decile. We finally `ungroup` the tibble before we save it:

```
> system.time(
+ popstat %>%
+   group_by(yr) %>%
+   mutate( findec = cut( find,
+                         quantile( find,
+                                   0:10/10,
+                                   na.rm=TRUE ),
+                         labels = paste(1:10) ) ) %>%
+   ungroup() -> popstat )
   user system elapsed
38.99    4.58    43.56
> attr( popstat$findec, "label" ) <- "fam.indk. decil pr. yr"
```

### 5.2.3 Saving the file for future use

Finally, we save the data as an R-file and load it again to demonstrate the time it likely takes to load it. First we rearrange the order of the variables to make it more logical.

```
> popstat <- popstat[,c(1,4,2,3,5,9,6:8)]
> str( popstat, v=0 )
Classes 'tbl_df', 'tbl' and 'data.frame':      131784868 obs. of  9 variables:
 $ pnr   : chr   ...
 ..- attr(*, "label")= chr   ...
 ..- attr(*, "format.sas")= chr   ...
 $ yr    : num  NULL ...
 ..- attr(*, "label")= chr   ...
 $ kom   : Factor w/ 99 levels "København","Frederiksberg",...: NULL ...
 $ reg   : Factor w/ 5 levels "Nordjylland",...: NULL ...
 $ find  : num  NULL ...
 ..- attr(*, "label")= chr   ...
 $ findec: Factor w/ 10 levels "1","2","3","4",...: NULL ...
 ..- attr(*, "label")= chr   ...
 $ udd   : num  NULL ...
 ..- attr(*, "label")= chr   ...
 $ udddk : Factor w/ 15 levels "Førskoleuddannelser",...: NULL ...
 $ eduen : Factor w/ 9 levels "Early childhood education",...: NULL ...
> system.time( save(popstat, file="../data/popstat.Rda") )
   user system elapsed
496.22    3.95   578.44
> rm( popstat )
> system.time( load(          file="../data/popstat.Rda") )
   user system elapsed
106.09    1.36   167.44
```

So the R-version of the `popstat` dataset loads about 10 times faster than the SAS-version, and it is properly equipped with factors for residence (`kom`, `reg`), income decile (`findec`) and educational level (`udddk`, `eduen`).

```
-----
Code: E:/workdata/707655/DMreg/r/mkStat.rnw
Ends: 2020-08-29 at 17:14:24
Time elapsed:      00:46:37
-----
```

## 5.3 The LABKA database

```
> library( Epi )
> library( tidyverse )
> library( haven )
> source("E:/workdata/707655/util/elapsed.r")
> setwd("E:/workdata/707655/DMreg/r")
> start()
```

```
-----
Home: E:/workdata/707655/DMreg/r
Time: 2020-06-22 15:26:00
-----
```

LABKA measurements are in a very large file, 346 mil. records, 146 Gb, so we have read the file and created 26 sas-files with separate measurements in the folder  
E:\workdata\707655\DMreg\data\labka.

### 5.3.1 SAS splitting of the LABKA data.

### 5.3.2 Converting to .Rda

The SAS program 00-labka contains the names and the labels of the files, so we read the SAS-code and extract the file names and the labels for use in the R-files:

```
> ll <- read.table( "../sas/00-labka.sas", sep="/" )[,1]
> ll <- read.table( "../sas/00-labka.log", sep="/" )[,1]
> ll <- grep( "label", ll, value=TRUE )
> dot <- sapply( strsplit(ll,""), function(x) which(x=="." ) )
> eql <- sapply( strsplit(ll,""), function(x) which(x=="=") )
> rbr <- sapply( strsplit(ll,""), function(x) which(x=="") )
> nam <- gsub(" ", "", substr( ll, dot+1, dot+4 ) )
> lab <- substr( ll, eql+2, rbr-2 )
> nam <- tolower( nam )
> names( lab ) <- nam
> cbind( lab )

      lab
hba1 "Hba1c"
gluc "Glukose"
glu0 "Glukose 0"
gl30 "Glukose 30"
gl120 "Glukose 120"
tchl "Total kolesterol"
ldl "LDL kolesterol"
hdl "HDL kolesterol"
vldl "VLDL kolesterol"
trig "Triglycerid"
```

```

plcr "Plasma Kreatinin"
uacr "Ualbcreea"
pota "Kalium"
sodi "Natrium"
tsh "TSH"
cpep "C-peptid/Proinsulin"
crp "CRP"
gad "GAD65"
egfr "eGFR"
gfr "GFR"
alat "ALAT"
alcp "Basisk fosfatase"
cobl "Cobalamin"
trmb "Trombocytter"
leuc "Leucocytter"
hmgb "Hæmoglobin"

```

We now have the filenames (without extension) — note all filenames are in lower case; they are in the `names` attribute of the `lab` vector of labels of the various types of measurements.

Then we read the SAS-files, coerce them to `data.frames`, strip the disturbing attributes of the variabls, assigns the proper label to the `label` attribute of the data frame. It is then assigned to a object with the proper name and subsequently saved in an R-file with the correct name.

```

> for( fn in names(lab) )
+ {
+   cat( fn, " start at", format( Sys.time(), "%T" ) )
+   xx <- read_sas( paste0("../data/labka/", fn, ".sas7bdat") )
+   xx <- as.data.frame( xx )
+   for( i in names(xx) ) attr( xx[,i], "format.sas" ) <- NULL
+   attr( xx$SAMPLINGTIME, "units" ) <- NULL
+   attr( xx, "label" ) <- lab[fn]
+   assign( fn, xx )
+   system.time(
+     save( list = fn,
+           file = paste0("e:/workdata/707655/DMreg/data/labka/", fn, ".Rda" ) ) )
+   cat( " end at", format( Sys.time(), "%T" ),
+       "dim=", paste( fCp(dim(xx)), collapse=" by" ), "\n" )
+   rm( list = fn )
+ }

```

hba1	start at 15:26:01 end at 15:37:31 dim= 21,261,038 by	7
gluc	start at 15:37:31 end at 15:42:18 dim= 8,736,053 by	7
glu0	start at 15:42:18 end at 15:42:51 dim= 874,845 by	7
gl30	start at 15:42:51 end at 15:42:52 dim= 11,395 by	7
g120	start at 15:42:52 end at 15:42:54 dim= 61,892 by	7
tchl	start at 15:42:54 end at 15:49:05 dim= 10,463,522 by	7
ldl	start at 15:49:05 end at 15:54:52 dim= 9,875,421 by	7
hdl	start at 15:54:52 end at 16:01:12 dim= 10,083,655 by	7
vldl	start at 16:01:12 end at 16:02:06 dim= 1,492,139 by	7
trig	start at 16:02:06 end at 16:08:08 dim= 10,356,568 by	7
plcr	start at 16:08:08 end at 16:25:24 dim= 31,617,208 by	7
uacr	start at 16:25:24 end at 16:26:37 dim= 2,085,164 by	7
pota	start at 16:26:37 end at 16:42:26 dim= 30,207,229 by	7
sodi	start at 16:42:26 end at 16:57:45 dim= 30,186,282 by	7
tsh	start at 16:57:45 end at 17:02:50 dim= 11,495,628 by	7
cpep	start at 17:02:50 end at 17:02:56 dim= 164,936 by	7

```

crp  start at 17:02:56 end at 17:11:33 dim= 20,723,651 by      7
gad  start at 17:11:33 end at 17:11:35 dim=   28,416 by      7
egfr start at 17:11:35 end at 17:23:50 dim= 28,742,105 by      7
gfr  start at 17:23:50 end at 17:23:52 dim=   2,409 by      7
alat start at 17:23:52 end at 17:32:22 dim= 20,540,099 by      7
alcp start at 17:32:22 end at 17:38:52 dim= 15,495,551 by      7
cobl start at 17:38:52 end at 17:41:04 dim=  5,324,860 by      7
trmb start at 17:41:04 end at 17:49:42 dim= 21,039,994 by      7
leuc start at 17:49:42 end at 18:00:17 dim= 25,630,130 by      7
hmgb start at 18:00:17 end at 18:12:44 dim= 30,419,252 by      7

```

Thus, for example if you need the cobalamin measurements you just do:

```

> system.time(
+ load( "e:/workdata/707655/DMreg/data/labka/cobl.Rda", v=T ) )
Loading objects:
  cobl
    user  system elapsed
    8.53    0.06    8.77
> str( cobl, v=0 )
'data.frame':      5324860 obs. of  7 variables:
 $ pnr          : chr   ...
 $ SAMPLINGDATE : Date, format: ...
 $ SAMPLINGTIME : 'hms' num   ...
 $ ANALYSISCODE : chr   ...
 $ LABORATORIUM_IDCODE: chr   ...
 $ VALUE        : chr   ...
 $ UNIT         : chr   ...
 - attr(*, "label")= Named chr   ...
 ..- attr(*, "names")= chr   ...
> attr( cobl, "label" )
      cobl
"Cobalamin"
> fCp( object.size( cobl ) )
[1] 416,553,960

```

The last use of `attr` is necessary because `v=0` also cuts the the first (and only) element of the `label` attribute, so if you want a human readable label this is what to do.

```

-----
2020-06-22 at 18:12:56
Time elapsed: 02:46:55
-----

```

!

## 5.4 The complications files

First the paraphernalia:

```

> library( Epi )
> library( tidyverse )
> library( haven )
> source("E:/workdata/707655/util/elapseded.r")
> setwd("E:/workdata/707655/DMreg/r")
> start()

```

```
-----
Code: E:/workdata/707655/DMreg/r/mkCompl.rnw
Time: 2020-10-28 at 13:58:23
-----
```

Complications occurring in the entire population (*i.e.* not only among diabetes patients) have been gathered in three SAS files (see section ??):

**fcompl:** One record per *first* occurrence of each complication in NPR, key is (**pnr**, **compl**); **compl** has 23 values, the only variables beyond the key are **complGr** (a grouping of **compl** in 10 groups, of which 5 only have one element) and **doC**, the date of first occurrence of the complication.

**wcompl:** One record per person with at least one complication, key is **pnr**, and with further 28 variables, namely the date of first occurrence of each of the complications.

**rcmpl:** One record per person and recurrent complication (**HpoG**, **Keto**, **MI**, **Str**), the key is (**pnr**, **compl**, **doC**), and there are no other variables in the dataset.

### 5.4.1 Converting SAS datasets to .Rda format

We now read the SAS datasets and convert them to R-datasets for easier access:

```
> system.time(fcompl <- read_sas("../data/fcompl.sas7bdat"))
  user system elapsed
11.58   0.23   28.03

> system.time(wcompl <- read_sas("../data/wcompl.sas7bdat"))
  user system elapsed
23.06   0.46  109.22

> system.time(rcmpl <- read_sas("../data/rcmpl.sas7bdat"))
  user system elapsed
 3.29   0.03   6.21

> names(fcompl) ; fCp(object.size(fcompl))
[1] "pnr"      "compl"    "doC"      "compGr"
[1] 258,468,120

> names(wcompl) ; fCp(object.size(wcompl))
[1] "pnr"      "doCbVD"   "doHypD"   "doStr"    "doAFib"   "doIHD"    "doMicA"   "doAtMD"
[9] "doMI"     "doModC"   "doSevL"   "doModL"   "doESRD"   "doHF"     "doHpoG"   "doMajA"
[17] "doMedA"   "doMinA"   "doReti"   "doNeur"   "doESRL"   "doKeto"   "doMacA"   "doSevC"
[25] "doCVD"    "doDNef"   "doNefL"   "doNefr"   "doAmp"
[1] 554,929,864

> names(rcmpl) ; fCp(object.size(rcmpl))
[1] "pnr"      "compl"    "doC"
[1] 85,735,688
```

## Complication grouping

Note that the physical size of `wcompl` is more than twice that of `fcmpl`, even if the information in `wcompl` is approximately the same in `fcmpl`: `wcompl` does not contain information on the grouping of complications, but `fcmpl` does not contain explicit information of the occurrence dates of the five grouped complications (`Amp`, `CVD`, `DNef`, `NefL` and `Nefr`).

Here is an illustration of which types of complications that are collected in which groups; this information is available only in `fcmpl`:

```
> tt <- with(fcmpl, addmargins(table(C = compl,
+                                   G = compGr),
+                                   margin = 1:2))[,c(11,1:10)]
> fCtable(tt[, 1:6 ], w = 9)
```

	G	Sum	Amp	CVD	DNef	HpoG	HypD
C							
AFib		404,189	.	404,189	.	.	.
AtMD		228,213	.	228,213	.	.	.
CbVD		219,428	.	219,428	.	.	.
ESRD		49,740	.	.	.	.	.
ESRL		18,837	.	.	.	.	.
HF		318,439	.	318,439	.	.	.
HpoG		50,616	.	.	.	50,616	.
HypD		842,582	.	.	.	.	842,582
IHD		585,120	.	585,120	.	.	.
Keto		14,632	.	.	.	.	.
MacA		30,627	.	.	30,627	.	.
MajA		15,738	15,738	.	.	.	.
MedA		13,400	13,400	.	.	.	.
MI		183,458	.	183,458	.	.	.
MicA		107,156	.	.	107,156	.	.
MinA		15,055	15,055	.	.	.	.
ModC		83,475	.	.	.	.	.
ModL		421,017	.	.	.	.	.
Neur		37,547	.	.	.	.	.
Reti		157,655	.	.	.	.	.
SevC		6,807	.	.	.	.	.
SevL		67,807	.	.	.	.	.
Str		456,035	.	456,035	.	.	.
Sum	4,327,573		44,193	2,394,882	137,783	50,616	842,582

```
> fCtable(tt[, -(1:6)], w = 9)
```

	G	Keto	NefL	Nefr	Neur	Reti
C						
AFib		.	.	.	.	.
AtMD		.	.	.	.	.
CbVD		.	.	.	.	.
ESRD		.	.	49,740	.	.
ESRL		.	18,837	.	.	.
HF		.	.	.	.	.
HpoG		.	.	.	.	.
HypD		.	.	.	.	.
IHD		.	.	.	.	.
Keto		14,632	.	.	.	.
MacA		.	.	.	.	.
MajA		.	.	.	.	.
MedA		.	.	.	.	.

MI	.	.	.	.	.
MicA	.	.	.	.	.
MinA	.	.	.	.	.
ModC	.	.	83,475	.	.
ModL	.	421,017	.	.	.
Neur	.	.	.	37,547	.
Reti	.	.	.	.	157,655
SevC	.	.	6,807	.	.
SevL	.	67,807	.	.	.
Str	.	.	.	.	.
Sum	14,632	507,661	140,022	37,547	157,655

### Complication names

In order to get the long informative names of the complications we read the `.csv` file which is the base for the generating the format used for grouping and labeling of complications. This has the long form of the complications labels:

```
> cnam <- read.csv( "../fmts/compfmt.csv", header=TRUE )
> cnam <- subset( cnam, FMTNAME=="$abb2txt" )
> compl.names <- as.character( cnam$LABEL )
> names( compl.names ) <- cnam$START
> cbind( compl.names )
      compl.names
AtMD "Atherosclerotic macrovascular disease"
AFib "Atrial fibrillation"
CbVD "Cerebrovascular disease"
HF   "Heart failure"
HypD "Hypertensive Disease"
HpoG "Hypoglyceamia"
MI   "Myocardial Infarction"
Str  "Stroke"
IHD  "Ischeamic heart disease"
Keto "Ketoacidosis"
MajA "Major amputation"
MedA "Medium amputation"
MinA "Minor amputation"
Neur "Neuropathy"
Reti "Retinopathy"
ModC "Moderate CKD"
SevC "Severe CKD"
ESRD "End-stage CKD"
ModL "Moderate CKD (lab)"
SevL "Severe CKD (lab)"
ESRL "End-stage CKD (lab)"
Amp  "Amputation"
CVD  "Cardiovascular Disease"
Nefr "Nephropathy"
NefL "Nephropathy (lab)"
DNef "Diabetic nephropathy"
MicA "Macro-abuminuria"
MacA "Macro-abuminuria"
```

Now `compl.names` is a character vector with the long names of the complications. The `names` attribute of the vector is the abbreviations of the complications used in `fcompl` and `wcompl`; we see that they are all there:



```
> (zz <- sort(match(paste0("do", names(compl.names)), names(wcompl))))
[1] * * 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
[26] 27 28 29
> table(diff(zz))
*
27
```

—if they were not, there would be NAs in the vector or the sequence would not be complete. The table also demonstrates that there are 28 entries in `zz`.

The point of using the abbreviations as *names* attributes of the `compl.names` is that you can get the official long text by indexing with the abbreviation:

```
> compl.names["CbVD"]
          CbVD
"Cerebrovascular disease"
```

which is useful when labeling tables and graphs.

### Number of recurrent events per person

Here is an account of how many persons have how many recurrences of each of the recurrent types of complications:

```
> nn <- data.frame(N=1)
> for( nm in unique(rcompl$compl) )
+ {
+   dd <- data.frame(with(subset(rcompl, compl == nm), table(table(pnr))))
+   names(dd) <- c("N", nm)
+   dd$N <- as.numeric(as.character(dd$N))
+   nn <- merge(dd, nn, all=TRUE)
+ }
> mm <- as.matrix(nn[, -1])
> row.names(mm) <- nn$N
> rCtable( mm[1:30,] )
```

	Keto	HpoG	MI	Str
1	7,018	26,103	55,267	167,635
2	3,352	12,146	62,754	116,381
3	1,619	4,893	31,352	65,537
4	881	2,609	14,628	39,709
5	532	1,425	7,596	23,854
6	296	917	4,455	14,777
7	192	603	2,672	9,337
8	161	376	1,646	6,061
9	96	299	983	3,938
10	75	241	674	2,655
11	70	181	438	1,775
12	39	122	272	1,256
13	38	88	184	855
14	35	94	149	603
15	27	67	99	429
16	27	60	74	293
17	13	32	54	242
18	18	48	39	182
19	13	36	25	131

20	12	28	22	97
21	11	26	19	67
22	10	18	11	51
23	9	17	8	32
24	6	20	7	33
25	10	13	7	22
26	6	14	*	15
27	6	9	*	11
28	4	19	*	11
29	4	9	*	15
30	5	9	*	5

### Grooming the data frames

We want to store the datasets as `data.frames`, we remove the `label` and the `format.sas` attributes of the `pnr` variable:

```
> fcompl <- as.data.frame(fcompl)
> wcompl <- as.data.frame(wcompl)
> rcompl <- as.data.frame(rcompl)
> attr(fcompl$pnr, "label") <- NULL
> attr(wcompl$pnr, "label") <- NULL
> attr(rcompl$pnr, "label") <- NULL
> attr(fcompl$pnr, "format.sas") <- NULL
> attr(wcompl$pnr, "format.sas") <- NULL
> attr(rcompl$pnr, "format.sas") <- NULL
```

Finally we convert the date variables in data frames to class `cal.yr`:

```
> fcompl <- cal.yr(fcompl)
> wcompl <- cal.yr(wcompl)
> rcompl <- cal.yr(rcompl)
```

We save these as R-datasets and document how long it takes to read them back in—note that we save the names vector with each of the files, too.

```
> save(fcompl, compl.names, file = "../data/fcompl.Rda")
> system.time( load(file = "../data/fcompl.Rda", v=T) )
```

Loading objects:

```
fcompl
compl.names
  user  system elapsed
4.47   0.02   4.52
```

```
> save(wcompl, compl.names, file = "../data/wcompl.Rda")
> system.time( load(file = "../data/wcompl.Rda", v=T) )
```

Loading objects:

```
wcompl
compl.names
  user  system elapsed
2.58   0.08   2.69
```

```
> save(rcompl, compl.names, file = "../data/rcompl.Rda")
> system.time( load(file = "../data/rcompl.Rda", v=T) )
```

Loading objects:

```
rcompl
compl.names
  user  system elapsed
1.42   0.01   1.45
```

Thus these data sets provide for a reading time which is a factor 5–10 smaller then reading from the SAS files.

```
-----  
Code: E:/workdata/707655/DMreg/r/mkCompl.rnw  
Ends: 2020-10-28 at 14:01:34  
Time elapsed:      00:03:11  
-----
```