CSR Naloxone Standing Order Project - Data Cleaning, Wrangling, and Exporation (eventually)

STAT 245, Fall 2020 (Group Members: Nana Ama Baidoo, Alex Visser, Joshua Ridder, Joseph Jinn)

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Note to self: Run "remotes::install_github('ProjectMOSAIC/ggformula')" to install development version of ggformula.

```
# sessionInfo()
```

```
vssr <- read_csv("datasets\\VSRR_Provisional_Drug_Overdose_Death_Counts.csv")
```

```
glimpse(vssr)
```

Another dataset to compare agains for our results with CDC Wonder aggregated data statistics.

```
## Rows: 34,398
## Columns: 12
## $ State                          <chr> "AK", "AK", "AK", "AK", "AK", "AK",...
## $ Year                           <dbl> 2015, 2015, 2015, 2015, 2015, 2015,...
```

```
## $ Month                           <chr> "April", "April", "April", "April",...
## $ Period                          <chr> "12 month-ending", "12 month-ending...
## $ Indicator                       <chr> "Percent with drugs specified", "Na...
## $ `Data Value`                    <dbl> 88.09524, NA, NA, NA, 126.00000, NA...
## $ `Percent Complete`              <dbl> 100, 100, 100, 100, 100, 100, 100, ...
## $ `Percent Pending Investigation` <dbl> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,...
## $ `State Name`                    <chr> "Alaska", "Alaska", "Alaska", "Alas...
## $ Footnote                        <chr> "Numbers may differ from published ...
## $ `Footnote Symbol`               <chr> "**", "**", "**", "**", "**", "**",...
## $ `Predicted Value`               <dbl> NA, NA, NA, NA, 126, NA, NA, NA, NA...
```

```r
summary(vssr)
```

```
##     State                Year         Month              Period
##  Length:34398       Min.   :2015   Length:34398       Length:34398
##  Class :character   1st Qu.:2016   Class :character   Class :character
##  Mode  :character   Median :2017   Mode  :character   Mode  :character
##                     Mean   :2017
##                     3rd Qu.:2018
##                     Max.   :2020
##
##   Indicator           Data Value        Percent Complete
##  Length:34398       Min.   :     10.0   Min.   : 98.9
##  Class :character   1st Qu.:     92.8   1st Qu.:100.0
##  Mode  :character   Median :    286.0   Median :100.0
##                     Mean   :  13497.1   Mean   :100.0
##                     3rd Qu.:   1024.0   3rd Qu.:100.0
##                     Max.   :2892170.0   Max.   :100.0
##                     NA's   :6510        NA's   :96
##  Percent Pending Investigation  State Name          Footnote
##  Min.   :0.00000               Length:34398       Length:34398
##  1st Qu.:0.01772               Class :character   Class :character
##  Median :0.04605               Mode  :character   Mode  :character
##  Mean   :0.12086
##  3rd Qu.:0.16124
##  Max.   :1.41157
##
##  Footnote Symbol    Predicted Value
##  Length:34398       Min.   : 10.0
```

```
##  Class :character   1st Qu.: 71.0
##  Mode  :character   Median :203.0
##                     Mean   :274.9
##                     3rd Qu.:394.0
##                     Max.   :999.0
##                     NA's   :16808
```

```
head(vssr, 5)
```

```
## # A tibble: 5 x 12
##   State  Year Month Period Indicator `Data Value` `Percent Comple~
##   <chr> <dbl> <chr> <chr>  <chr>            <dbl>            <dbl>
## 1 AK     2015 April 12 mo~ Percent ~         88.1              100
## 2 AK     2015 April 12 mo~ Natural,~         NA                100
## 3 AK     2015 April 12 mo~ Natural ~         NA                100
## 4 AK     2015 April 12 mo~ Psychost~         NA                100
## 5 AK     2015 April 12 mo~ Number o~        126                100
## # ... with 5 more variables: `Percent Pending Investigation` <dbl>, `State
## #   Name` <chr>, Footnote <chr>, `Footnote Symbol` <chr>, `Predicted
## #   Value` <dbl>
```

Test that we can import CDC Wonder query files that have been converted to CSV manually. TODO: Learn how to import flat text files into R, parse them into a dataframe, and export back out as a CSV. Note: I know enough to do this in Python, but not R yet. Will need to loook into the tutorials on the course website.

```
agg1 <- read_csv("datasets\\Underlying_Cause_of_Death_1999-2018.csv")
```

```
glimpse(agg1)
```

```
## Rows: 511
## Columns: 9
## $ `2013 Urbanization`      <chr> "Large Central Metro", "Large Central Metr...
```

```
## $ `2013 Urbanization Code` <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ...
## $ Race                     <chr> "American Indian or Alaska Native", "Ameri...
## $ `Race Code`              <chr> "1002-5", "1002-5", "1002-5", "1002-5", "1...
## $ Year                     <dbl> 1999, 2000, 2001, 2002, 2003, 2004, 2005, ...
## $ `Year Code`              <dbl> 1999, 2000, 2001, 2002, 2003, 2004, 2005, ...
## $ Deaths                   <dbl> 1566, 1660, 1728, 1739, 1904, 1869, 1963, ...
## $ Population               <dbl> 696733, 725867, 771337, 805848, 843939, 88...
## $ `Crude Rate`             <dbl> 224.8, 228.7, 224.0, 215.8, 225.6, 211.1, ...
```

```
head(agg1)
```

```
## # A tibble: 6 x 9
##   `2013 Urbanizat~ `2013 Urbanizat~ Race  `Race Code`  Year `Year Code` Deaths
##   <chr>                       <dbl> <chr> <chr>       <dbl>       <dbl>  <dbl>
## 1 Large Central M~                1 Amer~ 1002-5       1999        1999   1566
## 2 Large Central M~                1 Amer~ 1002-5       2000        2000   1660
## 3 Large Central M~                1 Amer~ 1002-5       2001        2001   1728
## 4 Large Central M~                1 Amer~ 1002-5       2002        2002   1739
## 5 Large Central M~                1 Amer~ 1002-5       2003        2003   1904
## 6 Large Central M~                1 Amer~ 1002-5       2004        2004   1869
## # ... with 2 more variables: Population <dbl>, `Crude Rate` <dbl>
```

```
agg2 <- read_csv("datasets\\Underlying_Cause_of_Death_1999-2018_2.csv")
```

```
glimpse(agg2)
```

```
## Rows: 1,673
## Columns: 11
## $ State                           <chr> "Michigan", "Michigan", "Michigan...
## $ `State Code`                    <dbl> 26, 26, 26, 26, 26, 26, 26, 26, 2...
## $ County                          <chr> "Alcona County, MI", "Alcona Coun...
## $ `County Code`                   <dbl> 26001, 26001, 26003, 26005, 26005...
## $ `Drug/Alcohol Induced Cause`    <chr> "All other non-drug and non-alcoh...
## $ `Drug/Alcohol Induced Cause Code` <chr> "O9", "O9", "O9", "A9", "O9", "O9...
## $ `Cause of death`                <chr> "Atherosclerotic heart disease", ...
```

```
## $ `Cause of death Code`             <chr> "I25.1", "J44.9", "F03", "K70.3",...
## $ Deaths                            <dbl> 10, 18, 10, 12, 15, 12, 64, 11, 1...
## $ Population                        <dbl> 10362, 10362, 9097, 117327, 11732...
## $ `Crude Rate`                      <chr> "Unreliable", "Unreliable", "Unre...
```

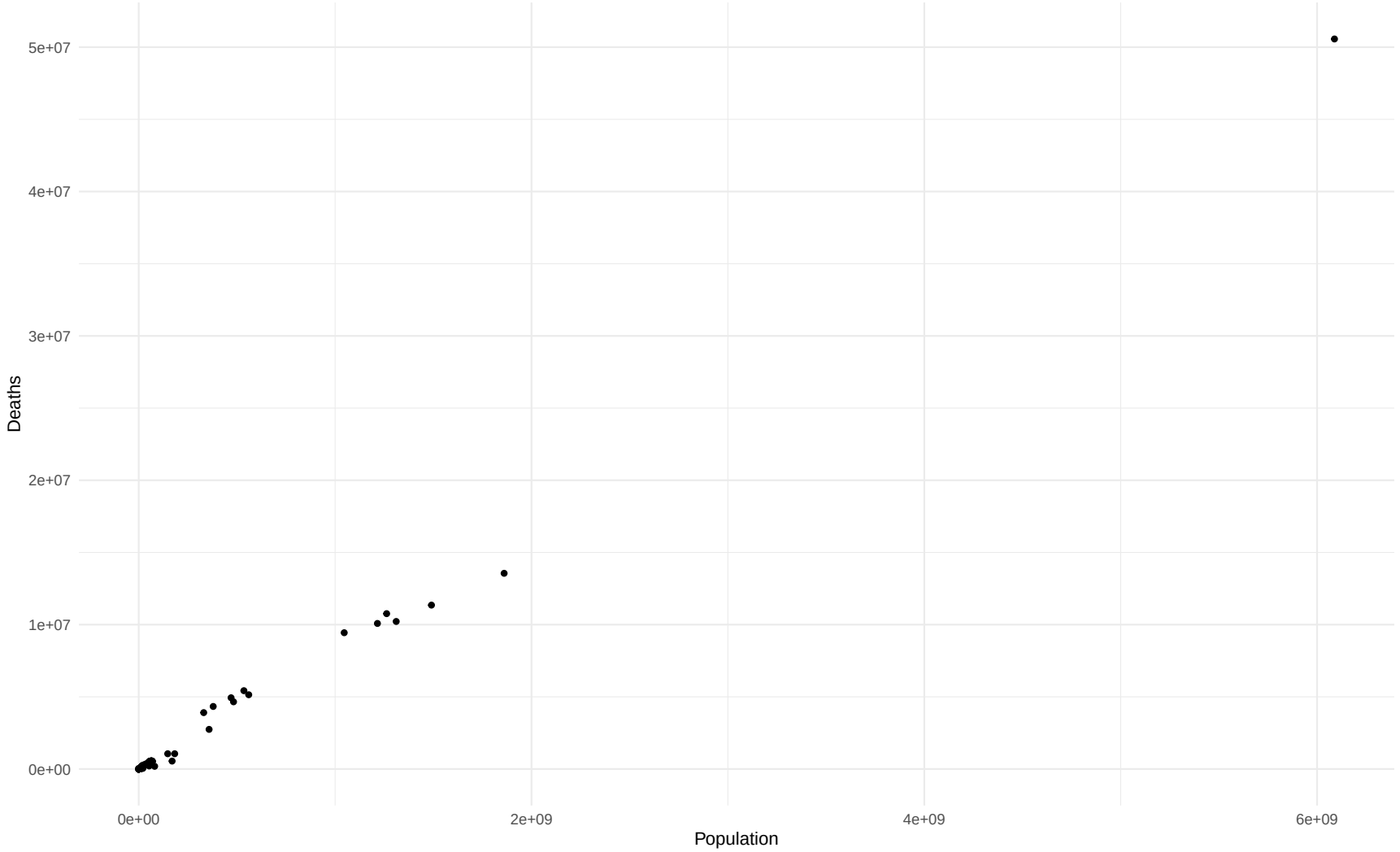
```
head(agg2)
```

```
## # A tibble: 6 x 11
##   State `State Code` County `County Code` `Drug/Alcohol I~ `Drug/Alcohol I~
##   <chr>        <dbl> <chr>          <dbl> <chr>            <chr>
## 1 Mich~           26 Alcon~         26001 All other non-d~ 09
## 2 Mich~           26 Alcon~         26001 All other non-d~ 09
## 3 Mich~           26 Alger~         26003 All other non-d~ 09
## 4 Mich~           26 Alleg~         26005 All other alcoh~ A9
## 5 Mich~           26 Alleg~         26005 All other non-d~ 09
## 6 Mich~           26 Alleg~         26005 All other non-d~ 09
## # ... with 5 more variables: `Cause of death` <chr>, `Cause of death
## #   Code` <chr>, Deaths <dbl>, Population <dbl>, `Crude Rate` <chr>
```

Looks like there's not initial issues with importing the CSV's we created from flat text file from the CDC Wonder data queries.

EDA Note: The goal of our service-learning project is to look through as many different combinations of aggregate statistics as possible to identify relevant trends and patterns. As such, there's no one "fixed" dataset we are working with, just experimentation with many different aggregate queries.

```
gf_point(Deaths ~ Population, data = agg1)
```



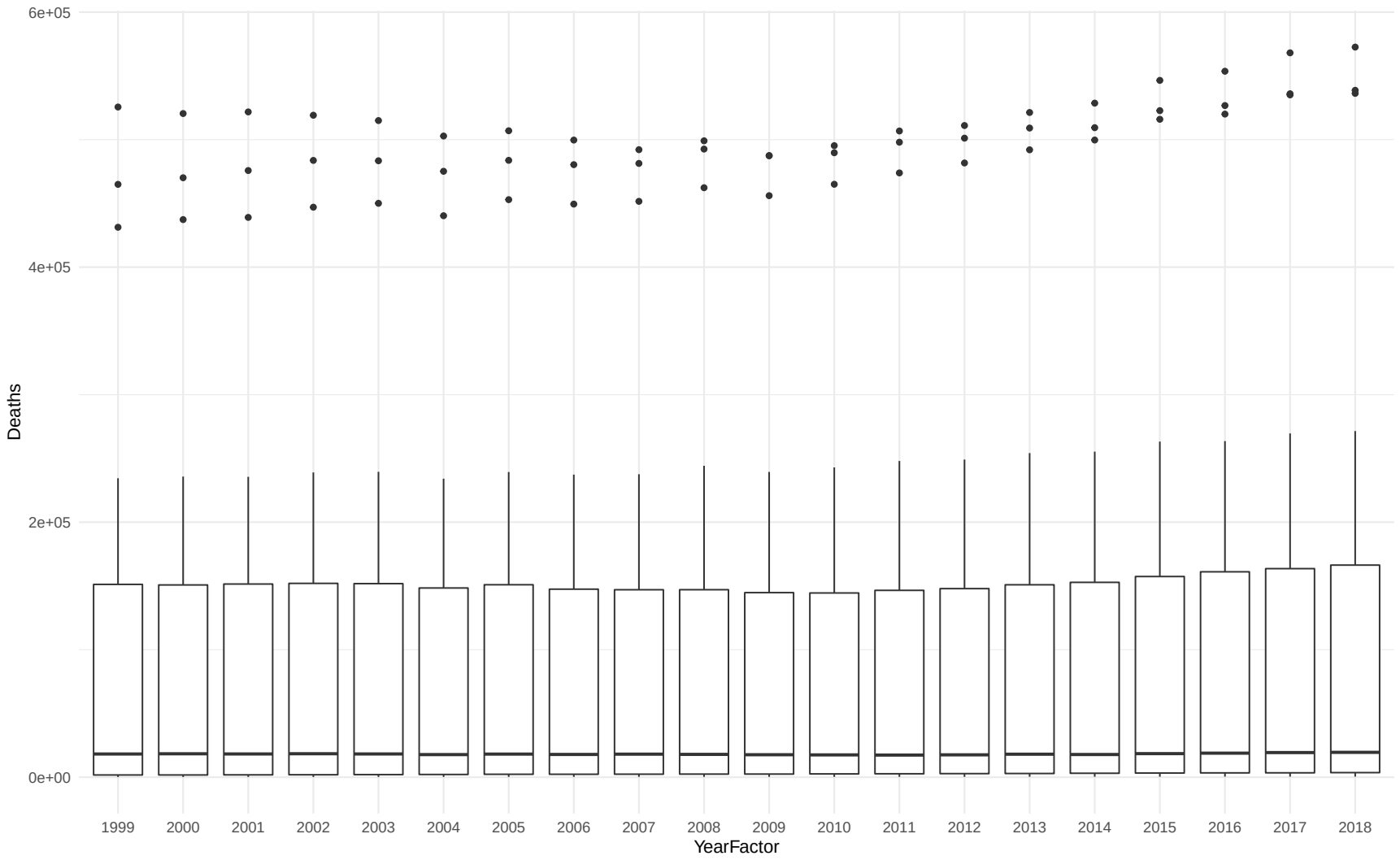

```
agg1_modified <- agg1 %>% mutate(YearFactor = factor(agg1$Year), Urbanization2013Factor = factor(agg1$`2013 Urbanization`))
```

```
glimpse(agg1_modified)
```

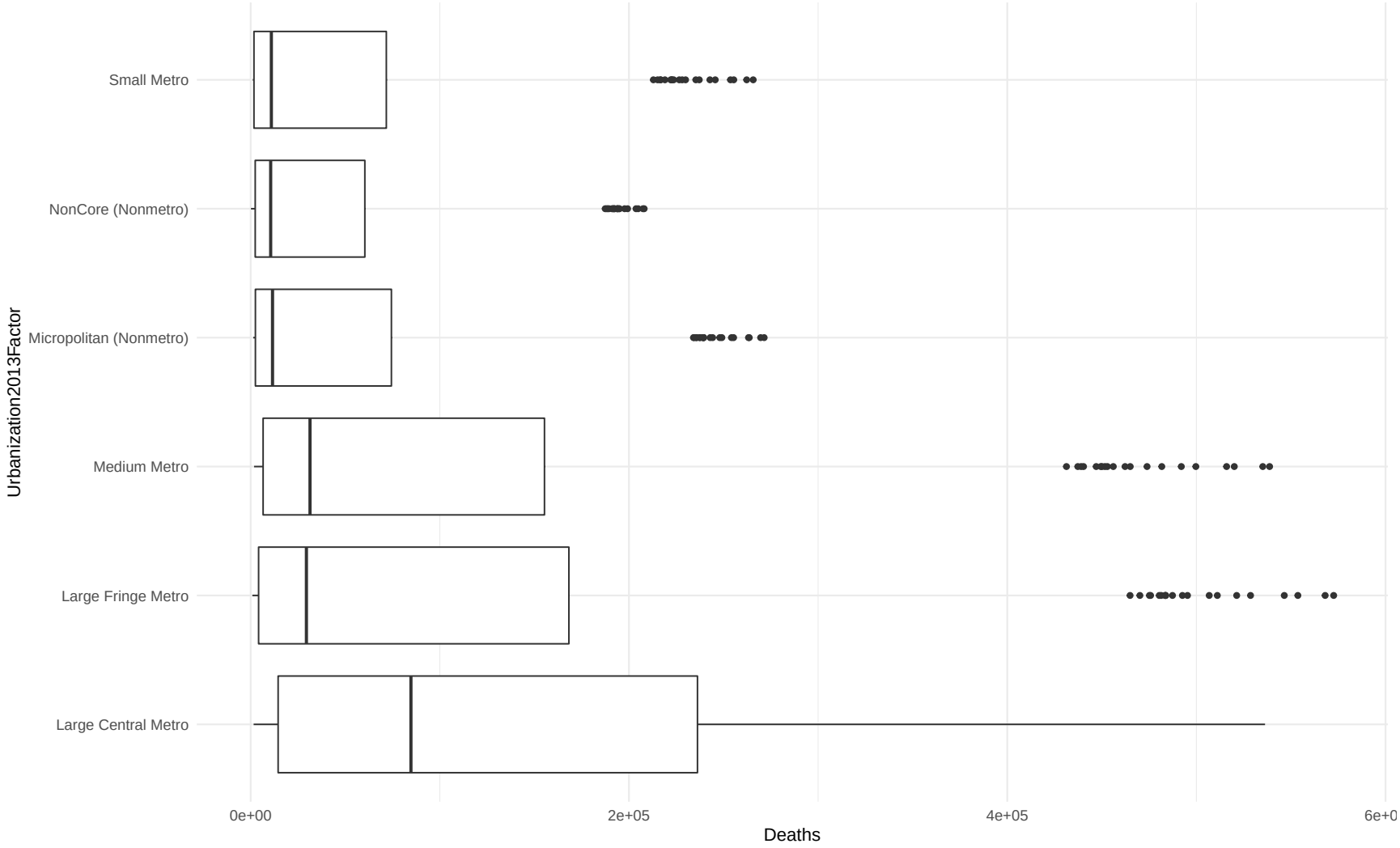
```
## Rows: 511
## Columns: 11
## $ `2013 Urbanization`      <chr> "Large Central Metro", "Large Central Metr...
## $ `2013 Urbanization Code` <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, ...
## $ Race                     <chr> "American Indian or Alaska Native", "Ameri...
## $ `Race Code`              <chr> "1002-5", "1002-5", "1002-5", "1002-5", "1...
## $ Year                     <dbl> 1999, 2000, 2001, 2002, 2003, 2004, 2005, ...
## $ `Year Code`              <dbl> 1999, 2000, 2001, 2002, 2003, 2004, 2005, ...
## $ Deaths                   <dbl> 1566, 1660, 1728, 1739, 1904, 1869, 1963, ...
## $ Population               <dbl> 696733, 725867, 771337, 805848, 843939, 88...
## $ `Crude Rate`             <dbl> 224.8, 228.7, 224.0, 215.8, 225.6, 211.1, ...
## $ YearFactor               <fct> 1999, 2000, 2001, 2002, 2003, 2004, 2005, ...
## $ Urbanization2013Factor   <fct> Large Central Metro, Large Central Metro, ...
```

```
agg1_modified_noNAs <- drop_na(agg1_modified)
```

```
gf_boxplot(Deaths ~ YearFactor, data = agg1_modified_noNAs) #+ coord_flip()
```



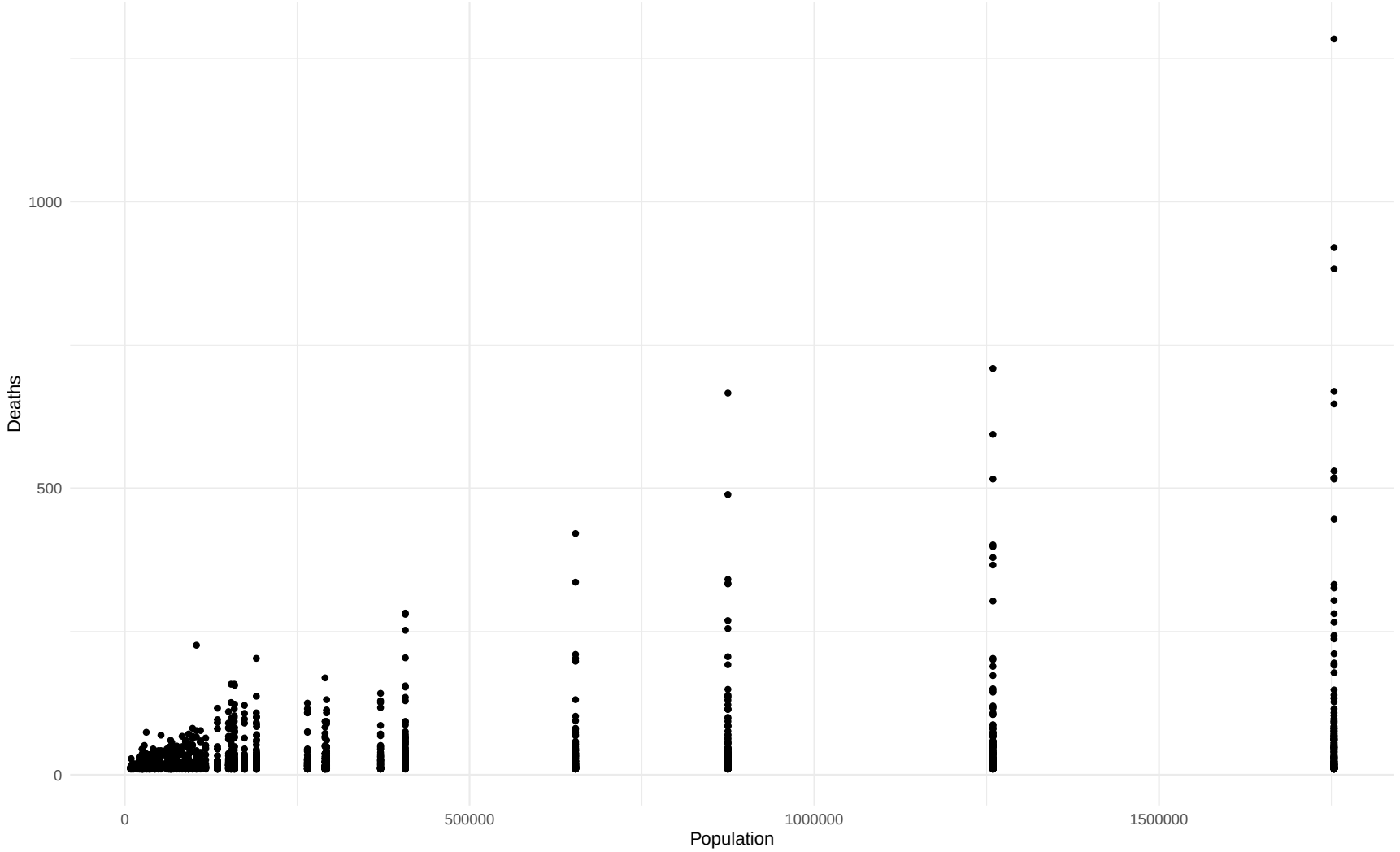

```
gf_boxplot(Deaths ~ Urbanization2013Factor, data = agg1_modified_noNAs) + coord_flip()
```




```
glimpse(agg2)
```

```
## Rows: 1,673
## Columns: 11
## $ State                              <chr> "Michigan", "Michigan", "Michigan...
## $ `State Code`                       <dbl> 26, 26, 26, 26, 26, 26, 26, 26, 2...
## $ County                             <chr> "Alcona County, MI", "Alcona Coun...
## $ `County Code`                      <dbl> 26001, 26001, 26003, 26005, 26005...
## $ `Drug/Alcohol Induced Cause`       <chr> "All other non-drug and non-alcoh...
## $ `Drug/Alcohol Induced Cause Code` <chr> "O9", "O9", "O9", "A9", "O9", "O9...
## $ `Cause of death`                   <chr> "Atherosclerotic heart disease", ...
## $ `Cause of death Code`              <chr> "I25.1", "J44.9", "F03", "K70.3",...
## $ Deaths                             <dbl> 10, 18, 10, 12, 15, 12, 64, 11, 1...
## $ Population                         <dbl> 10362, 10362, 9097, 117327, 11732...
## $ `Crude Rate`                       <chr> "Unreliable", "Unreliable", "Unre...
```

```
gf_point(Deaths ~ Population, data = agg2)
```



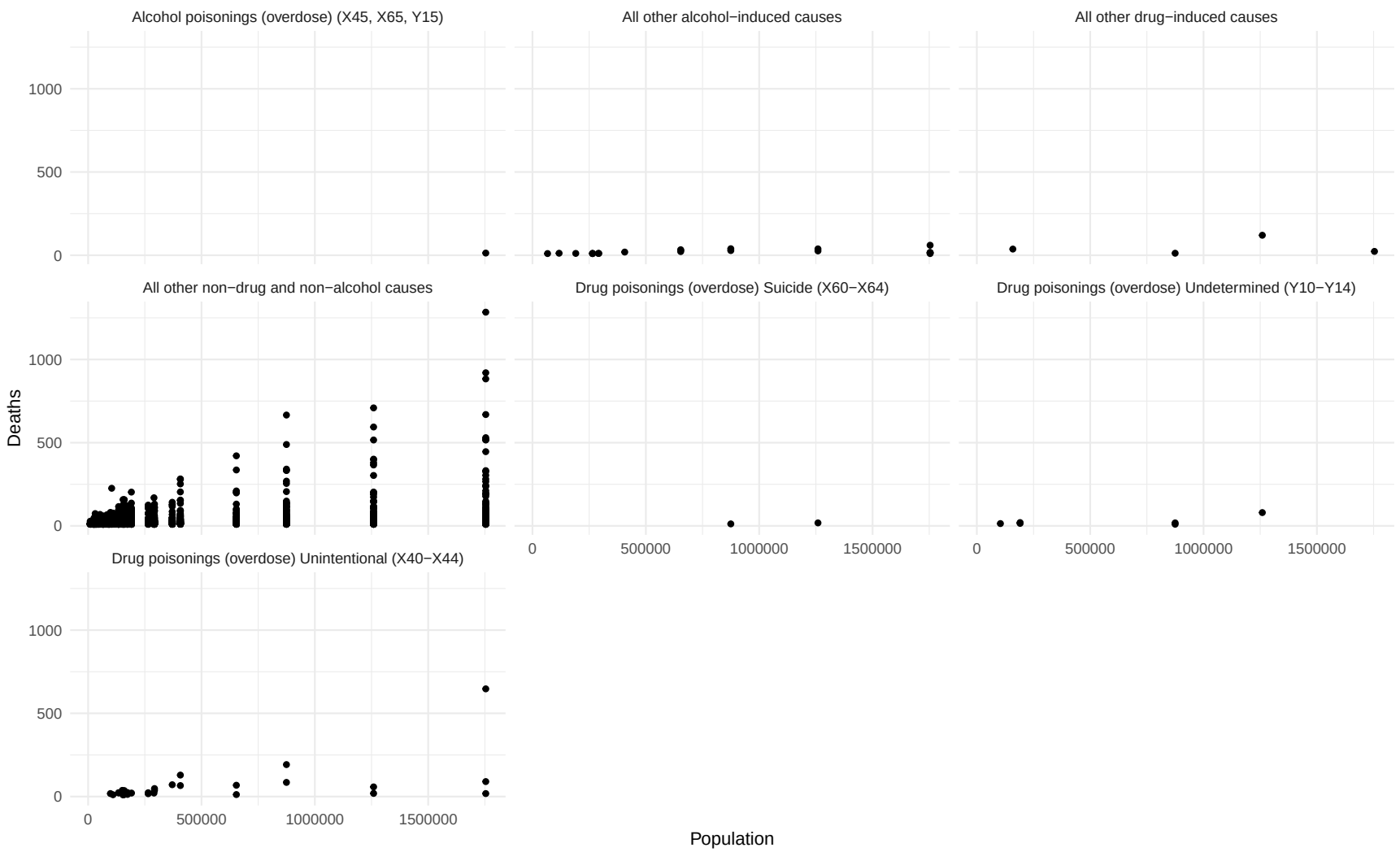

```
agg2_modified <- agg2 %>% mutate(CountyFactor = factor(agg2$County),
                                 CauseOfDeathFactor = factor(agg2$`Cause of death`),
                                 DrugAlcoholInducedCauseFactor = factor(agg2$`Drug/Alcohol Induced Cause`))
```

```r
glimpse(agg2_modified)
```

```
## Rows: 1,673
## Columns: 14
## $ State                            <chr> "Michigan", "Michigan", "Michigan...
## $ `State Code`                     <dbl> 26, 26, 26, 26, 26, 26, 26, 26, 2...
## $ County                           <chr> "Alcona County, MI", "Alcona Coun...
## $ `County Code`                    <dbl> 26001, 26001, 26003, 26005, 26005...
## $ `Drug/Alcohol Induced Cause`     <chr> "All other non-drug and non-alcoh...
## $ `Drug/Alcohol Induced Cause Code` <chr> "O9", "O9", "O9", "A9", "O9", "O9...
## $ `Cause of death`                 <chr> "Atherosclerotic heart disease", ...
## $ `Cause of death Code`            <chr> "I25.1", "J44.9", "F03", "K70.3",...
## $ Deaths                           <dbl> 10, 18, 10, 12, 15, 12, 64, 11, 1...
## $ Population                       <dbl> 10362, 10362, 9097, 117327, 11732...
## $ `Crude Rate`                     <chr> "Unreliable", "Unreliable", "Unre...
## $ CountyFactor                     <fct> "Alcona County, MI", "Alcona Coun...
## $ CauseOfDeathFactor               <fct> "Atherosclerotic heart disease", ...
## $ DrugAlcoholInducedCauseFactor    <fct> All other non-drug and non-alcoho...
```

```r
agg1_modified_noNAs <- drop_na(agg1_modified)
```

```r
gf_point(Deaths ~ Population | DrugAlcoholInducedCauseFactor, data = agg2_modified)
```




```
unique(agg2_modified$County)
```

```
##  [1] "Alcona County, MI"         "Alger County, MI"
##  [3] "Allegan County, MI"        "Alpena County, MI"
```

```
##  [5] "Antrim County, MI"         "Arenac County, MI"
##  [7] "Baraga County, MI"         "Barry County, MI"
##  [9] "Bay County, MI"            "Benzie County, MI"
## [11] "Berrien County, MI"        "Branch County, MI"
## [13] "Calhoun County, MI"        "Cass County, MI"
## [15] "Charlevoix County, MI"     "Cheboygan County, MI"
## [17] "Chippewa County, MI"       "Clare County, MI"
## [19] "Clinton County, MI"        "Crawford County, MI"
## [21] "Delta County, MI"          "Dickinson County, MI"
## [23] "Eaton County, MI"          "Emmet County, MI"
## [25] "Genesee County, MI"        "Gladwin County, MI"
## [27] "Gogebic County, MI"        "Grand Traverse County, MI"
## [29] "Gratiot County, MI"        "Hillsdale County, MI"
## [31] "Houghton County, MI"       "Huron County, MI"
## [33] "Ingham County, MI"         "Ionia County, MI"
## [35] "Iosco County, MI"          "Iron County, MI"
## [37] "Isabella County, MI"       "Jackson County, MI"
## [39] "Kalamazoo County, MI"      "Kalkaska County, MI"
## [41] "Kent County, MI"           "Lake County, MI"
## [43] "Lapeer County, MI"         "Leelanau County, MI"
## [45] "Lenawee County, MI"        "Livingston County, MI"
## [47] "Mackinac County, MI"       "Macomb County, MI"
## [49] "Manistee County, MI"       "Marquette County, MI"
## [51] "Mason County, MI"          "Mecosta County, MI"
## [53] "Menominee County, MI"      "Midland County, MI"
## [55] "Missaukee County, MI"      "Monroe County, MI"
## [57] "Montcalm County, MI"       "Montmorency County, MI"
## [59] "Muskegon County, MI"       "Newaygo County, MI"
## [61] "Oakland County, MI"        "Oceana County, MI"
## [63] "Ogemaw County, MI"         "Osceola County, MI"
## [65] "Oscoda County, MI"         "Otsego County, MI"
## [67] "Ottawa County, MI"         "Presque Isle County, MI"
## [69] "Roscommon County, MI"      "Saginaw County, MI"
## [71] "St. Clair County, MI"      "St. Joseph County, MI"
## [73] "Sanilac County, MI"        "Schoolcraft County, MI"
## [75] "Shiawassee County, MI"     "Tuscola County, MI"
## [77] "Van Buren County, MI"      "Washtenaw County, MI"
## [79] "Wayne County, MI"          "Wexford County, MI"
```

```r
unique(agg2_modified$CauseOfDeathFactor)
```

```
##  [1] Atherosclerotic heart disease
##  [2] Chronic obstructive pulmonary disease, unspecified
##  [3] Unspecified dementia
##  [4] Alcoholic cirrhosis of liver
##  [5] Colon, unspecified - Malignant neoplasms
##  [6] Pancreas, unspecified - Malignant neoplasms
##  [7] Bronchus or lung, unspecified - Malignant neoplasms
##  [8] Malignant neoplasm of prostate
##  [9] Non-insulin-dependent diabetes mellitus, without complications
## [10] Unspecified diabetes mellitus, without complications
## [11] Parkinson disease
## [12] Alzheimer disease, unspecified
## [13] Acute myocardial infarction, unspecified
## [14] Atherosclerotic cardiovascular disease, so described
## [15] Ischaemic cardiomyopathy
## [16] Congestive heart failure
## [17] Stroke, not specified as haemorrhage or infarction
## [18] Pneumonia, unspecified
## [19] Sequelae of other and unspecified cerebrovascular diseases
## [20] Malignant neoplasm without specification of site
## [21] Poisoning by and exposure to other and unspecified drugs, medicaments and biological substances, undetermined intent
## [22] Septicaemia, unspecified
## [23] Unspecified protein-energy malnutrition
## [24] Hypertensive heart disease with (congestive) heart failure
## [25] Cardiomyopathy, unspecified
## [26] Atrial fibrillation and flutter
## [27] Chronic kidney disease, stage 5
## [28] Unspecified fall
## [29] Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified
## [30] Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances
## [31] Intrahepatic bile duct carcinoma - Malignant neoplasms
## [32] Breast, unspecified - Malignant neoplasms
## [33] Bladder, unspecified - Malignant neoplasms
## [34] Multiple myeloma - Malignant neoplasms
## [35] Hyperlipidaemia, unspecified
## [36] Vascular dementia, unspecified
```

```
##  [37] Other secondary pulmonary hypertension
##  [38] Aortic (valve) stenosis
##  [39] Cardiovascular disease, unspecified
##  [40] Cerebral infarction, unspecified
##  [41] Other and unspecified cirrhosis of liver
##  [42] Chronic renal failure, unspecified
##  [43] Oesophagus, unspecified - Malignant neoplasms
##  [44] Senile degeneration of brain, not elsewhere classified
##  [45] Anoxic brain damage, not elsewhere classified
##  [46] Essential (primary) hypertension
##  [47] Hypertensive heart disease without (congestive) heart failure
##  [48] Acute subendocardial myocardial infarction
##  [49] Chronic ischaemic heart disease, unspecified
##  [50] Heart failure, unspecified
##  [51] Cerebral atherosclerosis
##  [52] Sequelae of stroke, not specified as haemorrhage or infarction
##  [53] Pneumonitis due to food and vomit
##  [54] Other fall on same level
##  [55] Intentional self-harm by hanging, strangulation and suffocation
##  [56] Intentional self-harm by other and unspecified firearm discharge
##  [57] Heart disease, unspecified
##  [58] Unspecified diabetes mellitus, with renal complications
##  [59] Other interstitial pulmonary diseases with fibrosis
##  [60] Stomach, unspecified - Malignant neoplasms
##  [61] Malignant neoplasm of rectum
##  [62] Liver cell carcinoma - Malignant neoplasms
##  [63] Liver, unspecified - Malignant neoplasms
##  [64] Malignant melanoma of skin, unspecified - Malignant neoplasms
##  [65] Malignant neoplasm of uterus, part unspecified
##  [66] Malignant neoplasm of ovary
##  [67] Malignant neoplasm of kidney, except renal pelvis
##  [68] Brain, unspecified - Malignant neoplasms
##  [69] Non-Hodgkin lymphoma, unspecified type
##  [70] Malignant neoplasms of independent (primary) multiple sites
##  [71] Myelodysplastic syndrome, unspecified - Uncertain neoplasms
##  [72] Non-insulin-dependent diabetes mellitus, with renal complications
##  [73] Motor neuron disease
##  [74] Degenerative disease of nervous system, unspecified
##  [75] Hypertensive renal disease with renal failure
```

```
##  [76] Hypertensive heart and renal disease with both (congestive) heart failure and renal failure
##  [77] Pulmonary embolism without mention of acute cor pulmonale
##  [78] Intracerebral haemorrhage, unspecified
##  [79] Intracranial haemorrhage (nontraumatic), unspecified
##  [80] Cerebrovascular disease, unspecified
##  [81] Peripheral vascular disease, unspecified
##  [82] Emphysema, unspecified
##  [83] Chronic obstructive pulmonary disease with acute lower respiratory infection
##  [84] Chronic obstructive pulmonary disease with acute exacerbation, unspecified
##  [85] Chronic respiratory failure
##  [86] Vascular disorder of intestine, unspecified
##  [87] Gastrointestinal haemorrhage, unspecified
##  [88] Acute renal failure, unspecified
##  [89] Unspecified renal failure
##  [90] Urinary tract infection, site not specified
##  [91] Other ill-defined and unspecified causes of mortality
##  [92] Pedestrian injured in traffic accident involving other and unspecified motor vehicles
##  [93] Person injured in unspecified motor-vehicle accident, traffic
##  [94] Intentional self-harm by rifle, shotgun and larger firearm discharge
##  [95] Assault by other and unspecified firearm discharge
##  [96] Generalized and unspecified atherosclerosis
##  [97] Acute myeloid leukaemia - Malignant neoplasms
##  [98] Endocarditis, valve unspecified
##  [99] Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances, harmful use
## [100] Mental and behavioural disorders due to use of alcohol, harmful use
## [101] Mental and behavioural disorders due to use of alcohol, dependence syndrome
## [102] Influenza with pneumonia, influenza virus identified
## [103] Chronic viral hepatitis C
## [104] Endometrium - Malignant neoplasms
## [105] B-cell lymphoma, unspecified - Malignant neoplasms
## [106] Chronic lymphocytic leukaemia - Malignant neoplasms
## [107] Other obesity
## [108] Disorder of lipoprotein metabolism, unspecified
## [109] Other specified degenerative diseases of nervous system
## [110] Multiple sclerosis
## [111] Hypertensive heart and renal disease with renal failure
## [112] Influenza with other respiratory manifestations, influenza virus identified
## [113] Person injured in collision between other specified motor vehicles (traffic)
## [114] Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances
```

```
## [115] Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent
## [116] Enterocolitis due to Clostridium difficile
## [117] Malignant neoplasm of rectosigmoid junction
## [118] Larynx, unspecified - Malignant neoplasms
## [119] Connective and soft tissue, unspecified - Malignant neoplasms
## [120] Cervix uteri, unspecified - Malignant neoplasms
## [121] Secondary malignant neoplasm of liver - Malignant neoplasms
## [122] Non-Hodgkin lymphoma large cell (diffuse)
## [123] Insulin-dependent diabetes mellitus, without complications
## [124] Unspecified diabetes mellitus, with peripheral circulatory complications
## [125] Unspecified severe protein-energy malnutrition
## [126] Metabolic disorder, unspecified
## [127] Alzheimer disease with late onset
## [128] Encephalopathy, unspecified
## [129] Cardiac arrest, unspecified
## [130] Cardiac arrhythmia, unspecified
## [131] Subarachnoid haemorrhage, unspecified
## [132] Cerebral infarction due to thrombosis of cerebral arteries
## [133] Dissection of aorta [any part]
## [134] Interstitial pulmonary disease, unspecified
## [135] Respiratory failure, unspecified
## [136] Other and unspecified intestinal obstruction
## [137] Liver disease, unspecified
## [138] Other specified disorders of kidney and ureter
## [139] Extreme immaturity
## [140] Exposure to unspecified factor causing other and unspecified injury
## [141] Intentional self-harm by handgun discharge
## [142] Alcoholic liver disease, unspecified
## [143] Secondary malignant neoplasm of other specified sites - Malignant neoplasms
## [144] Chronic myeloproliferative disease - Uncertain neoplasms
## [145] Progressive supranuclear ophthalmoplegia [Steele-Richardson-Olszewski]
## [146] Epilepsy, unspecified
## [147] Acute ischaemic heart disease, unspecified
## [148] Other forms of chronic ischaemic heart disease
## [149] Dilated cardiomyopathy
## [150] Abdominal aortic aneurysm, ruptured
## [151] Phlebitis and thrombophlebitis of other deep vessels of lower extremities
## [152] Other disorders of lung
## [153] Acute pancreatitis, unspecified
```

```
## [154] Inhalation and ingestion of food causing obstruction of respiratory tract
## [155] Exposure to uncontrolled fire in building or structure
## [156] Exposure to excessive natural cold
## [157] Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere
## [158] Accidental poisoning by and exposure to alcohol
## [159] Alcoholic hepatic failure
## [160] HIV disease resulting in other specified conditions
## [161] Tongue, unspecified - Malignant neoplasms
## [162] Mouth, unspecified - Malignant neoplasms
## [163] Oropharynx, unspecified - Malignant neoplasms
## [164] Duodenum - Malignant neoplasms
## [165] Malignant neoplasm of gallbladder
## [166] Extrahepatic bile duct - Malignant neoplasms
## [167] Ill-defined sites within the digestive system - Malignant neoplasms
## [168] Vulva, unspecified - Malignant neoplasms
## [169] Other and unspecified T-cell lymphomas - Malignant neoplasms
## [170] Leukaemia, unspecified - Malignant neoplasms
## [171] Anaemia, unspecified
## [172] Sarcoidosis, unspecified
## [173] Hypothyroidism, unspecified
## [174] Insulin-dependent diabetes mellitus, with renal complications
## [175] Unspecified diabetes mellitus, with ketoacidosis
## [176] Obesity, unspecified
## [177] Pure hypercholesterolaemia
## [178] Acidosis
## [179] Infantile cerebral palsy, unspecified
## [180] Acute and subacute infective endocarditis
## [181] Mitral (valve) insufficiency
## [182] Other specified conduction disorders
## [183] Subdural haemorrhage (acute)(nontraumatic)
## [184] Cerebral infarction due to embolism of cerebral arteries
## [185] Sequelae of cerebral infarction
## [186] Abdominal aortic aneurysm, without mention of rupture
## [187] Aortic aneurysm of unspecified site, ruptured
## [188] Influenza with other respiratory manifestations, virus not identified
## [189] Bacterial pneumonia, unspecified
## [190] Asthma, unspecified
## [191] Adult respiratory distress syndrome
## [192] Acute respiratory failure
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## [193] Acute vascular disorders of intestine
## [194] Diverticular disease of intestine, part unspecified, with perforation and abscess
## [195] Perforation of intestine (nontraumatic)
## [196] Hepatic failure, unspecified
## [197] Acute cholecystitis
## [198] Decubitus ulcer and pressure area, unspecified
## [199] Rheumatoid arthritis, unspecified
## [200] Osteomyelitis, unspecified
## [201] Other preterm infants
## [202] Down syndrome, unspecified
## [203] Senility
## [204] Other lack of expected normal physiological development
## [205] Sudden infant death syndrome - SIDS
## [206] Motorcycle rider [any] injured in unspecified traffic accident
## [207] Accidental suffocation and strangulation in bed
## [208] Inhalation and ingestion of other objects causing obstruction of respiratory tract
## [209] Assault by sharp object
## 209 Levels: Abdominal aortic aneurysm, ruptured ...
```