Australia and New Zealand Society of Cardiothoracic Surgeons (ANZSCTS) Database Program

Utilising the ANZSCTS Database as a Research Tool

This document gives an overview of the ANZSCTS variables and should be read before data analysis is undertaken.

Please note that all data that you receive from the ANZSCTS database is strictly confidential. It is intended for authorised personnel only and is not to be re-distributed.

Data is only to be used for the research purposes it was intended and approved (by the ANZSCTS Research Committee). If you wish to use the data for subsequent research projects, you will need to submit another request to the ANZSCTS Research Committee.

Please note the following when writing your scripts:

1. The codes used for the SPSS scripts are obtained from the data definitions manual (included in this package). Please ensure you refer to the data definitions manual when writing your scripts.

2. 'opno' is a filter that is used to omit double mortality (a patient with multiple procedures that has died) for 30 day / in hospital mortalities only. When writing your script include 'opno<9' to ensure that all double mortalities are omitted.

3. 'TP' is a variable that is not in the data definition manual, it is calculated from other variables. 'TP' codes for the type of procedure:

   TP = 1 is a code for isolated CABG procedures

   TP = 2 is for isolated valve procedures

   TP = 3 is a combination of CABG and valve procedures

   TP = 4 is for other procedures

   The use of TP will be at the discretion of the investigator.

4. Stat>0 is used to ensure that all patients that are included in the analysis have been assigned a surgical status (i.e. elective, urgent, emergency or salvage). ANZSCTS routinely excludes cases with no status entered from their analyses.

5. NewMort3 is an automated field that refers to whether a patient died within 30 days of the indexed procedure OR within hospital (both prior to and after 30 days). The fields used for this are Mort30 and Dischar.

    NewMort3=1 when (mort30=1 or dischar=5)

Variables

Your dataset has been customised to include the necessary variables for your analyses. In addition to the variables that are collected by the Database, these may include variables that are derived by the ANZSCTS Database Team after the datacut is taken and/or National Death Index (NDI) variables.

See below for a description of which variables are contained in each category. Please note that if you rearrange these variables the information below may no longer be applicable.

If you have any questions about these variables, including how they are calculated, please contact the ANZSCTS Database Team via anzscts@monash.edu.

Collected and automated ANZSCTS variables

Please refer to Data Definitions v4 for a description of these variables. These variables are located at the start of the dataset. TP, opno and newmort3 (automated ANZSCTS variables) are described in detail above.

Derived ANZSCTS variables

There are five variables that are derived using existing ANZSCTS variables, which are used for calculating our key performance indicators. These are located at the end of the dataset and are defined as follows:

- Complete identifies if a case is considered complete by our websystem
- PreviousSurgery is used in our risk adjustment model, as the standalone previous cardiac surgery (PCS) variable was only introduced in 2016. It is derived from PCS (where available), POP, PCAB, POPCAB, PVAL, and PCOP according to a set of coding rules. Where the data is heavily inconsistent, PreviousSurgery = null.
    o PreviousSurgery = 1, patient has had previous surgery
    o PreviousSurgery = 0, patient has *not* had previous surgery
- DoublePreCR doubles the preoperative creatinine for each patient. It is used to code derived new renal insufficiency (NRF_DD).

- NRF_DD is our derived variable for new renal insufficiency, characterised by an increase in serum creatinine to >200 µmol/L post-operatively AND a doubling or greater increase in creatinine over the baseline pre-operative value AND the patient did not require pre-operative dialysis/haemofiltration; OR a new post-operative requirement for dialysis/haemofiltration. Note, patients that receive pre-operative dialysis/haemofiltration are placed in the '0' category. Where any of the variables used to code NRF_DD are missing, NRF_DD = null.
    - NRF_DD = 1, patient has met the definition for new renal insufficiency
    - NRF_DD = 0, patient has *not* met the definition for new renal insufficiency
- dis_dsi indicates whether a patient had a deep sternal wound infection (DSWI) prior to, or at the time of, discharge. Where any of the variables used to code dis_dsi are missing, dis_dsi = null.
    - dis_dsi = 1, patient has DSWI recorded prior to discharge
    - dis_dsi = 0, patient has *no* DSWI recorded prior to discharge
- new_DSWI indicates whether a patient had a DSWI prior to, or at the time of, discharge and/or was readmitted to hospital within 30 days for DSWI. This is the variable the Database reports on for DSWI. Where any of the variables used to code dis_dsi are missing, dis_dsi = null.
    - new_DSWI = 1, patient has DSWI recorded within 30 days of procedure
    - new_DSWI = 0, patient has *no* DSWI recorded within 30 days of procedure

Other derived variables prepared on special request

Other variables that may have been included in your dataset upon special request are defined as follows:

- New_HID is an anonymised code used to distinguish hospitals. Note, this code does not correspond to any code used to identify hospitals in any reports published by the Database.
- newsurg is an anonymised code used to distinguish surgeons. Note, any surgeons with 10 or fewer cases in the Database are assigned a code of 0. This applies to approximately 7% of the surgeons in the Database.
- Private identifies if a patient was admitted to a private or public hospital.
    - Private = 1, patient was admitted to a private hospital
    - Private = 0, patient was admitted to a public hospital
- HospState identifies what state the patient had their procedure.
    - HospState = 1, Vic
    - HospState = 2, NSW (inc. ACT)
    - HospState = 3, QLD

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- o HospState = 4, SA
- o HospState = 5, WA

NDI variables

- o Accepted = 1, identifies that the record has been matched to the NDI and a death found
- o DEATH_CODE, ICD10* code for primary cause of death
- o DEATH_CODE_OTHER_1-10, ICD10* code for secondary causes of death
- o NDI_Deathdate, date of death recorded by the NDI
- o Final_Deathdate, this is a combination of the NDI_Deathdate and the ANZSCTS Database's Mort_D. Where a mortality is recorded in the ANZSCTS Database but not matched to an NDI record Final_Deathdate=Mort_D, otherwise Final_Deathdate=NDI_Deathdate

The censor date for the linkage was the 1st August 2019.

*The online version of the ICD10 can be found at: http://www.who.int/classifications/icd/en/.