List of changes to Database Dictionary

Version 2.0, 13th Dec 2018, compared to version 1.0, 1st May 2014.
INTRODUCTORY NOTES
This document's purpose is to list the major changes in the 2018 version of the ACD dataset, compared to the previous version dating back to 2014.

For the full list of variables, with level of importance, acceptable ranges, options and full definitions, please refer to the Data Dictionary document, version 2.0, 13th December 2018, available at EACTS website.

Legend:
New additions/amendments are written in red. Removals are marked with strikethrough.

Importance of data:
All the variables are now classified in the following three categories:

1. Mandatory
2. Essential
3. Optional

Please note: Centres must provide all mandatory and at least 75% of essential variables, to join and remain in the ACD.
Contents

1 Patient demographics and other identifiers
   - Import Link ID
   - Patient identifier
   - Age at operation
   - Gender
   - Race
   - Country code
   - Hospital code

2 Hospitalisation
   - Date of admission
   - Date of surgery
   - Date of discharge / death

3 Cardiac history
   - Angina
   - Dyspnoea
   - Symptomatic status at time of surgery
   - Symptomatic status at admission
   - Number of previous MIs
   - Time of most recent MI
   - Type of most recent MI
   - Congestive Heart failure within 2 weeks

4 Previous interventions
   - Previous PCI
   - Date of last PCI
   - Previous cardiac surgery
   - Number of previous heart operations
   - Date of last cardiac surgery

5 Pre-operative risk factors
   - Weight
   - Height
   - Smoking history
   - Diabetes treatment
   - Hypertension
   - Hypercholesterolaemia
   - Renal disease
   - Dialysis/CVVH
   - Last pre-operative creatinine
   - GFR
   - Chronic lung disease
   - Degree of COPD
   - Extra-cardiac arteriopathy
   - Peripheral vascular disease details
   - Type of Cerebrovascular events disease
   - CVA when
   - TIA when
   - Neurological dysfunction
   - Poor mobility due to any non-cardiac reason
   - Carotid bruits
   - History of Atrial Fibrillation
   - Critical pre-operative status

6 Pre-operative haemodynamics and catheterisation
   - Left main stem disease
   - Ejection fraction value
   - Coronary artery disease - LAD
   - PA systolic category
   - Coronary artery disease - Circumflex
   - PA systolic value
   - Coronary artery disease - Right
   - RV dysfunction
   - Endocarditis
   - AV gradient mean
   - Left- or right-heart catheterisation
   - AV gradient peak
   - Date of last catheterisation
   - LVEDP
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Database Dictionary

Ejection fraction category  
Mean PAWP / LA

7 Pre-operative status and support
IV nitrates  
IV inotropes  
Ventilated  
Cardiogenic shock  
Immunosuppressive therapy within 30 days of operation  
Resuscitation / cardiac massage within 1 hour of operation

8 Operation
Operation urgency  
Acute Aortic Syndrome (Type A)  
Main reason for urgency  
Segments of the aorta treated  
Aortic procedure  
Aortic root enlargement

Procedure group
Other cardiac procedures
Other Non-cardiac procedures

9 Coronary surgery
CABG targets procedure  
Conduits used as grafts  
Target of LIMA (in situ)  
Target of RIMA (in situ)

Distal Coronary Anastomosis - number of arterial conduits
Distal Coronary Anastomosis - number of venous conduits

10 Valve surgery
Valve treated  
Valve procedure  
Indication for valve surgery  
Valve repair  
Valve pathology  
Implant type  
Pathology grade  
Implant code  
Insufficiency  
Implant code other  
Explant type  
Valve / ring size  
Native valve pathology

Reason for repeat valve surgery

11 Perfusion and myocardial protection
Cardio-pulmonary bypass  
Extracorporeal Life Support (Veno-Arterial ECMO/ECLS)  
Predominant form of myocardial protection  
Ventricular Assist Device used  
Cardioplegia - solution  
Bypass time  
Cardioplegia - temperature  
Cumulative cross-clamp time  
Cardioplegia - infusion mode  
Total Circulatory arrest time  
Cardioplegia - timing  
Surgical access  
Non-cardioplegia myocardial protection
Arterial cannulation site
Intra-aortic balloon pump used
Venous cannulation site
Reason for IABP use
12 Post-operative course

- New permanent pacemaker implanted
- Post-operative Atrial Fibrillation
- Rhythm at discharge
- AMI postop
- New CerebroVascular Event stroke
- New post-operative dialysis
- Peak post-operative creatinine
- Prolonged ventilation >48hrs

- Tracheostomy
- Sternal wound dehiscence
- Pneumonia
- Urinary tract infection (UTI)
- Sepsis
- Re-operation
- Blood transfusion
- Multi-system failure

13 Discharge details

- Patient status at discharge
- Primary cause of death
- Discharge destination
- Date of latest follow-up
- Status at latest follow-up

- Operative mortality
- Short stay (<6 d)
- Long stay (>14 d)
Patient demographics and other identifiers

**Import Link ID**
New field

**Age at operation**
Upgraded to **Mandatory**

**Race**
Deleted field

Hospitalisation

**Date of admission**
Downgraded to **Optional**

**Date of discharge / death**
Upgraded to **Mandatory**

Cardiac History

**Angina**
Added option: 0 - unspecified

**Symptomatic status at admission** changed to **Symptomatic status at time of surgery**
Downgraded to **Optional**

**Type of most recent MI**
Downgraded to **Optional**

Deleted field

**Most recent MI** changed to **Time of most recent MI**

**Congestive heart failure** changed to **Heart failure within 2 weeks**
### Previous interventions

**Date of last PCI**
Deleted field

**Number of previous heart operations**
Downgraded to **Optional**
Moved up from section “operation”

### Pre-operative risk factors

**BMI**
- **Optional**
  - Auto calculated
  - New field

**Smoking history**
- Upgraded to **Essential**
  - SingleChoice: the code only.

**Diabetes treatment**
- Added option 4 - Subcutaneous (non-insulin)

**Renal disease**
- Changed to **Dialysis/CVVH**
  - **Essential**

**GFR**
- **Optional**
  - Auto calculated
  - New field

**Degree of COPD**
- Downgraded to **Optional**

**Extra-cardiac arteriopathy**
- Added option 3 - Yes (type unknown/not coded)

**Peripheral vascular disease details**
Deleted field
Type of cerebrovascular disease
Changed to
Cerebrovascular events
Optional

CVA when and
TIA when and
Carotid bruits
Deleted fields

Neurological dysfunction and
Poor mobility due to any non-cardiac reason
Deleted fields, merged into:

Poor mobility
   Essential
New field

Pre-operative heart rhythm
Deleted field

Heart rhythm at admission
Optional
New field

Pre-operative Pacemaker
Optional
New field

History of Atrial Fibrillation
Optional
New field

Critical pre-operative state
   Essential
New field

Pre-operative haemodynamics and catheterisation

Coronary artery disease – LAD and
Coronary artery disease – Circumflex and
Coronary artery disease – Right and
Carotid artery disease and
Left- or right-heart catheterisation and
Date of last catheterisation and
Deleted fields

Ejection fraction value
Downgraded to Optional

PA systolic category
Essential
New field

PA systolic value
Downgraded to Optional

RV dysfunction
Optional
New field

AV gradient mean and
AV gradient peak and
LVEDP and
Mean PAWP / LA
Deleted fields

Pre-operative status and support

Immunosuppressive therapy within 30 days of operation
Downgraded to Optional

Operation

Main reason for urgency
Deleted field
Number of previous heart operations
Moved up to section “previous interventions”

CABG procedure  changed name to  CABG targets
Moved down to section “coronary surgery”

Other non-cardiac procedures  changed name to  Non-cardiac procedures
Upgraded to Mandatory

Acute Aortic Syndrome (Type A)
   Essential
   New field

Segments of the aorta treated
Upgraded to Mandatory
Added option  0 - Not applicable

Aortic root enlargement
Downgraded to Optional

Coronary surgery

CABG targets
Moved down from section “operation”

Distal Coronary Anastomosis (DCAs) - number of arterial conduits  and
DCAs - number of venous conduits  and
Conduits used as grafts
Upgraded to Essential

Target of LIMA (in situ)  and
Target of RIMA (in situ)
Optional
   New fields
### Valve surgery

**Valve treated**
Upgraded to **Mandatory**

**Valve pathology** changed name to **Indication for valve surgery**
Added new options
- 5 - Active Endocarditis
- 6 - Prosthesis dysfunction
- 7 - Other

**Pathology grade** and **Insufficiency**
Deleted fields

**Valve procedure**
Upgraded to **Mandatory**

**Valve repair**
Downgraded to **Optional**

**Implant type**
Upgraded to **Essential**

### Perfusion and myocardial protection

**Cardio-pulmonary bypass**
Upgraded to **Essential**
Added option 3 - Yes (unspecified)

**Extracorporeal Life Support (Veno-Arterial ECMO/ECLS)**
**Essential**
New field

**Bypass time** and **Cumulative cross-clamp time** and  
**Circulatory arrest time**
Upgraded to **Essential**
Surgical access

**Essential**
New field

Arterial cannulation site

**Optional**
New field

Venous cannulation site

**Optional**
New field

### Post-operative course

**New permanent pacemaker implanted**

**Essential**
New field

**Post-operative AF**

**Essential**
New field

**Rhythm at discharge**

**Optional**
New field

**AMI postop**

**Optional**
New field

**New post-operative stroke** Changed name to **New CerebroVascular Event**
Upgraded to **Essential**

**New post-operative dialysis**
Upgraded to **Essential**

**Peak post-operative creatinine**

**Optional**
New field

**Prolonged ventilation >48hrs**
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**Database Dictionary**

- **Essential**
  - New field

  - **Tracheostomy**
    - **Optional**
    - New field

  - **Sternal wound dehiscence**
    - **Optional**
    - New field

  - **Pneumonia**
    - **Optional**
    - New field

  - **Urinary tract infection (UTI)**
    - **Optional**
    - New field

  - **Sepsis**
    - **Optional**
    - New field

  - **Re-operation**
    - Upgraded to **Essential**

  - **Blood transfusion**
    - **Optional**
    - New field

  - **Multi-system failure**
    - Deleted field
    - Changed option 5 - Re-operation for other reasons

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**Discharge details**

- **Primary cause of death**
  - Deleted field

- **Discharge destination**
  - Upgraded to **Essential**
### Date of latest follow-up

**Optional**

**Date:** ODBC date with format yyyy-mm-dd.

New field

### Status at latest follow-up

**Optional**

New field

### Operative mortality

**Optional**

Auto calculated

New field

### Short stay (<6 d)

**Optional**

Auto calculated

New field

### Long stay (>14 d)

**Optional**

Auto calculated

New field