Acute coronary syndrome (clinical) DSS

Exported from METEOR (AIHW's Metadata Online Registry)

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Identifying and definitional attributes

Metadata item type: Data Set Specification

METEOR identifier: 285277

Registration status: Health!, Superseded 07/12/2005

DSS type: Data Set Specification (DSS)

Scope: The collection of acute coronary syndrome core data (ACS-Data) is a voluntary data collection with individual hospitals or health service areas developing collection methods and policies appropriate for their service.

Acute coronary syndromes reflect the spectrum of coronary artery disease resulting in acute myocardial ischaemia, and span unstable angina, non-ST segment elevation myocardial infarction (NSTEMI) and ST-segment elevation myocardial infarction (STEMI). Clinically these diagnoses encompass a wide variation in risk, require complex and time urgent risk stratification and represent a large social and economic burden.

The definitions used in this data set specification are designed to underpin the data collected by health professionals in their day-to-day acute care practice. They relate to the realities of an acute clinical consultation for patients presenting with chest pain/ discomfort and the need to correctly identify, evaluate and manage patients at increased risk of a coronary event.

The data elements specified in this metadata set provide a framework for:

1. promoting the delivery of evidenced-based acute coronary syndrome management care to patients;
2. facilitating the ongoing improvement in the quality and safety of acute coronary syndrome management in acute care settings in Australia and New Zealand;
3. improving the epidemiological and public health understanding of this syndrome; and
4. supporting acute care services as they develop information systems to complement the above.

This is particularly important as the scientific evidence supporting the development of the data elements within the ACS data set specification indicate that accurate identification of the evolving myocardial infarction patient or the high/intermediate risk patient leading to the implementation of the appropriate management pathway impacts on the patient's outcome. Having a nationally recognised set of definitions in relation to defining a patient's diagnosis, risk status and outcomes is a prerequisite to achieving the above aims.

The ACS data set specification is based on the American College of Cardiology (ACC) Data Set for Acute Coronary Syndrome as published in the Journal of the American College of Cardiology in December 2001 (38:2114-30) as well as more recent scientific evidence around the diagnosis of myocardial infarction. The data elements are alphabetically listed and grouped in a similar manner to the American College of Cardiology's data set format. These features of the Australian ACS data set should ensure that the data is internationally comparable.

The data elements described here have been identified as high priority for inclusion in the NHDD for the collection of data relating to ACS management, along with supporting elements already existing within the NHDD (as listed). It is recommended that other data elements be collected as best practice - however, these are not listed here, as they are considered to be of a secondary priority. Such data elements include date of Coronary Artery Bypass Grafting (CABG), Percutaneous Coronary Intervention (PCI) and diagnostic cardiac catheterisation/angiography and recording the number of units of blood transfused.

However, the working group will approach the Australian Institute of Health and METeOR website.

Many of the data elements in this data set specification may also be used in the collection of other cardiovascular clinical information.

Where appropriate, it may be useful if the data definitions in this data set specification were used to address data definition needs in non-clinical environments such as public health surveys etc. This could allow for qualitative comparisons between data collected in, and aggregated from, clinical settings (i.e. using application of the ACS data set specification), with that collected through other means (e.g. public health surveys, reports).

A set of core ACS data elements and standardised definitions can inform the development and conduct of future registries at both the national and local level.

The working group formed under the National Heart Foundation of Australia (NHFA) and the Cardiac Society of Australia and New Zealand (CSANZ) initiative was diverse and included representation from the following organizations: the NHFA, the CSANZ, the Australasian College of Emergency Medicine, the Australian Institute of Health and Welfare, the Australasian Society of Cardiac & Thoracic Surgeons, Royal Australian College of Physicians (RACP), RACP - Towards a Safer Culture, National Centre for Classification in Health (Brisbane), the NSW Aboriginal Health & Medical Research Council, the George Institute for International Health, the School of Population Health at the University of Western Australia and the National Cardiovascular Monitoring System Advisory Committee.

To ensure the broad acceptance of the data set, the working group also sought consultation from the heads of cardiology departments, other specialist professional bodies and regional key opinion leaders in the field of acute coronary syndromes.

Collection and usage attributes

Collection methods:

This data set specification is primarily concerned with the clinical use of ACS-Data. Acute care environments such as hospital emergency departments, coronary care units or similar acute care areas are the settings in which implementation of the core ACS data set specification should be considered. A wider range of health and health related establishments that create, use or maintain, records on health care clients, could also use it.

Relational attributes

Related metadata references:

Has been superseded by Acute coronary syndrome (clinical) DSS Health!, Superseded 01/10/2008

Is re-engineered from Acute coronary syndrome (clinical), DSS, NHIMG, Superseded 01/03/2005.pdf (134.6 KB)
No registration status

Metadata items in this Data Set Specification

Seq No.	Metadata item	Obligation	Max occurs
-	Episode of admitted patient care—separation date, DDMMYYYY	Mandatory	1
-	Episode of admitted patient care—separation mode, code N	Mandatory	1
-	Health service event—presentation date, DDMMYYYY	Mandatory	1
-	Health service event—presentation time, hhmm	Mandatory	1
-	Health service event—referral to rehabilitation service date, DDMMYYYY	Mandatory	1

DSS specific information:

Required to derive those referred to a rehabilitation service from those eligible to attend and who actually attend. This metadata item can be used to determine the time lag between referral and commencement of rehabilitation.

Seq No.	Metadata item	Obligation	Max occurs
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, index code X[XXX]	Mandatory	1
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, percentage N[NNN]	Mandatory	1
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, total international units N[NNN]	Optional	1
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, total kCat per litre N[NNN]	Optional	1
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, total micrograms per litre N[NNN]	Optional	1
-	Laboratory standard—upper limit of normal range for creatine kinase myocardial band isoenzyme, total nanograms per decilitre N[NNN]	Mandatory	1
-	Laboratory standard—upper limit of normal range for troponin assay, total micrograms per litre N[NNN]	Optional	1
-	Non-admitted patient emergency department service episode—triage category, code N	Optional	1
-	Non-admitted patient emergency department service episode—type of visit to emergency department, code N	Mandatory	1
-	Person—acute coronary syndrome concurrent clinical condition, code NN	Mandatory	1
-	Person—acute coronary syndrome procedure type, code NN	Mandatory	1
-	Person—acute coronary syndrome risk stratum, code N	Mandatory	1
-	Person—angiotensin converting enzyme inhibitors therapy status, code NN ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).	Mandatory	1
-	Person—aspirin therapy status, code NN ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).	Mandatory	1
-	Person—beta-blocker therapy status, code NN ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).	Mandatory	1
-	Person—bleeding episode status, code N ***DSS specific information:*** Can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).	Mandatory	1
-	Person—blood pressure (diastolic) (measured), millimetres of mercury NN[N]	Mandatory	1
-	Person—blood pressure (systolic) (measured), millimetres of mercury NN[N]	Mandatory	1

Seq No.	Metadata item	Obligation	Max occurs
-	Person—chest pain pattern, code N	Mandatory	1

DSS specific information:

The Canadian Cardiovascular Society classes of angina can be used to support categorisation of chest pain patterns. Canadian Cardiovascular Society (CCS) classes of angina (Campeau L. Grading of angina pectoris. Circulation 1976; 54:522.)

1. Ordinary physical activity (for example, walking or climbing stairs) does not cause angina; angina occurs with strenuous or rapid or prolonged exertion at work or recreation.
2. Slight limitation of ordinary activity (for example, angina occurs walking or stair climbing after meals, in cold, in wind, under emotional stress, or only during the few hours after awakening; walking more than 2 blocks on the level or climbing more than 1 flight of ordinary stairs at a normal pace; and in normal conditions).
3. Marked limitation of ordinary activity (for example, angina occurs with walking 1 or 2 blocks on the level or climbing 1 flight of stairs in normal conditions and at a normal pace).
4. Inability to perform any physical activity without discomfort; angina syndrome may be present at rest.

-	Person—cholesterol level (measured), total millimoles per litre N[N].N	Mandatory	1
-	Person—clinical evidence status (chronic lung disease), code N	Mandatory	1

DSS specific information:

This data element seeks to ensure that patients with self-reported past symptoms pertinent to acute coronary syndrome, have objective evidence supporting reported diagnoses, using current medical practice.

-	Person—clinical evidence status (heart failure), code N	Mandatory	1

DSS specific information:

This data element seeks to ensure that patients with self-reported past symptoms pertinent to acute coronary syndrome, have objective evidence supporting reported diagnoses, using current medical practice.

-	Person—clinical evidence status (peripheral arterial disease), code N	Mandatory	1

DSS specific information:

This data element seeks to ensure that patients with self-reported past symptoms pertinent to acute coronary syndrome, have objective evidence supporting reported diagnoses, using current medical practice.

-	Person—clinical evidence status (sleep apnoea syndrome), code N	Mandatory	1

DSS specific information:

This data element seeks to ensure that patients with self-reported past symptoms pertinent to acute coronary syndrome, have objective evidence supporting reported diagnoses, using current medical practice.

Seq No.	Metadata item	Obligation	Max occurs
-	Person—clinical evidence status (stroke), code N	Mandatory	1
	DSS specific information: This data element seeks to ensure that patients with self-reported past symptoms pertinent to acute coronary syndrome, have objective evidence supporting reported diagnoses, using current medical practice.		
-	Person—clinical procedure timing, code N	Conditional	1
-	Person—clopidogrel therapy status, code NN	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).		
-	Person—country of birth, code (SACC 1998) NNNN	Mandatory	1
-	Person—creatine kinase myocardial band isoenzyme level (measured), index code X[XXX]	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		
-	Person—creatine kinase myocardial band isoenzyme level (measured), percentage N[NNN]	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		
-	Person—creatine kinase myocardial band isoenzyme level (measured), total kCat per litre N[NNN]	Optional	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		
-	Person—creatine kinase myocardial band isoenzyme level (measured), total nanograms per decilitre N[NNN]	Optional	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		
-	Person—creatine kinase myocardial band isoenzyme measured date, DDMMYYYY	Optional	1
-	Person—creatine kinase myocardial band isoenzyme measured time, hhmm	Optional	1
-	Person—creatine kinase-myocardial band isoenzyme level (measured), total international units N[NNN]	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		

Seq No.	Metadata item	Obligation	Max occurs
-	Person—creatine kinase-myocardial band isoenzyme level (measured), total micrograms per litre N[NNNN] ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.	Optional	1
-	Person—creatinine serum level, micromoles per litre NN[NN]	Optional	1
-	Person—date of birth, DDMMYYYY	Mandatory	1
-	Person—diabetes mellitus status, code NN	Mandatory	1
-	Person—electrocardiogram change location, code N	Conditional	1
-	Person—electrocardiogram change type, code N ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, used to determine diagnostic strata.	Mandatory	1
-	Person—fibrinolytic drug administered, code N ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, this data element pertains to the administering of fibrinolytic therapy drugs at any time point during this current event.	Mandatory	1
-	Person—fibrinolytic therapy status, code NN ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, to be collected with the data elements Triage—triage date, DDMMYYYY, Triage—triage time, hhmm, Person—risk stratum, code N. This data element pertains to the administering of fibrinolytic therapy drugs at any time point during this current event.	Mandatory	1
-	Person—first angioplasty balloon inflation or stenting date, DDMMYYYY ***DSS specific information:*** For Acute Coronary Syndrome (ACS) reporting, refers to the date of first angioplasty balloon inflation or coronary stenting for this admission.	Conditional	0
-	Person—first angioplasty balloon inflation or stenting time, hhmm ***DSS specific information:*** For Acute coronary syndrome (ACS) reporting, refers to coronary arteries.	Mandatory	1
-	Person—functional stress test element, code N	Mandatory	1

Seq No.	Metadata item	Obligation	Max occurs
-	Person—functional stress test ischaemic result, code N	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.		
-	Person—glycoprotein IIb/IIIa receptor antagonist status, code NN	Mandatory	1
-	Person—heart rate, total beats per minute N[NN]	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, collected at time of presentation. If heart rate is not recorded at the exact time of presentation, record the first heart rate measured closest to the time of presentation.		
-	Person—heart rhythm type, code N[N]	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, the ECG used for assessment on presentation.		
-	Person—height (self-reported), total centimetres NN[N]	Mandatory	1
-	Person—high-density lipoprotein cholesterol level (measured), total millimoles per litre [N].NN	Mandatory	1
-	Person—Indigenous status, code N	Mandatory	1
-	Person—intravenous fibrinolytic therapy date, DDMMYYYY	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, refers to coronary arteries.		
-	Person—intravenous fibrinolytic therapy time, hhmm	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, refers to coronary arteries.		
-	Person—Killip classification, code N	Mandatory	1
	DSS specific information: For Acute Coronary Syndrome (ACS) reporting, this data element describes the objective evidence of haemodynamic compromise by clinical examination at the time of presentation. Rales or crepitations represent evidence of pulmonary interstitial oedema on lung auscultation and an S3 is an audible extra heart sound by cardiac auscultation.		
-	Person—lipid-lowering therapy status, code NN	Mandatory	1
	DSS specific information: For Acute coronary syndrome (ACS) reporting, can be collected at any time point during the management of the current event (i.e. at the time of triage, at times during the admission, or at the time of discharge).		

Seq No.	Metadata item	Obligation	Max occurs
-	Person—low-density lipoprotein cholesterol level (calculated), total millimoles per litre N[N].N	Mandatory	1
-	Person—myocardial infarction (history), code N	Mandatory	1

DSS specific information:

Myocardial infarction (MI) generally occurs as a result of a critical imbalance between coronary blood supply and myocardial demand. Decrease in coronary blood flow is usually due to a thrombotic occlusion of a coronary artery previously narrowed by atherosclerosis. MI is one of the most common diagnoses in hospitalised patients in industrialised countries.

The most widely used in the detection of MI are creatinine kinase (CK) and (CK-MB), aspartate aminotransferase (AST) and lactate dehydrogenase (LD). Characteristic ECG changes include ST elevation, diminution of the R wave and a Q wave development. A recent study on Diabetes and Insulin-Glucose Infusion in Acute Myocardial Infarction (DIGAMI study) indicated that in diabetic patients with AMI, mortality is predicted by age, previous heart failure, and severity of the glycometabolic state at admission, but not by conventional risk factors or sex (*American Heart Association 1999*).

-	Person—person identifier, XXXXXX[X(14)]	Mandatory	1
-	Person—premature cardiovascular disease family history status, code N	Mandatory	1
-	Person—reason for readmission following acute coronary syndrome episode, code N[N]	Mandatory	1
-	Person—sex, code N	Mandatory	1
-	Person—tobacco smoking status, code N	Mandatory	1

DSS specific information:

Smoker type is used to define sub-populations of adults (age 18+ years) based on their smoking behaviour. Smoking has long been known as a health risk factor. Population studies indicate a relationship between smoking and increased mortality/morbidity. This metadata item can be used to estimate smoking prevalence.

Other uses are:

- To evaluate health promotion and disease prevention programs (assessment of interventions)
- To monitor health risk factors and progress towards National Health Goals and Targets

-	Person—triglyceride level (measured), total millimoles per litre N[N].N	Mandatory	1
-	Person—troponin assay type, code N	Mandatory	1

DSS specific information:

For Acute coronary syndrome (ACS) reporting, record the type of troponin assay (I or T) used to assess troponin levels during this presentation.

-	Person—troponin level (measured), total micrograms per litre NN.NN	Mandatory	1

DSS specific information:

For Acute coronary syndrome (ACS) reporting, can be used to determine diagnostic strata.

-	Person—troponin level measured date, DDMMYYYY	Mandatory	1

Seq No.	Metadata item	Obligation	Max occurs
-	Person—troponin level measured time, hhmm	Mandatory	1
-	Person—vascular condition status (history), code NN	Mandatory	1
-	Person—weight (self-reported), total kilograms NN[N]	Mandatory	1
-	Triage—triage date, DDMMYYYY	Mandatory	1
-	Triage—triage time, hhmm	Mandatory	1