

I46.0 Cardiac arrest with successful resuscitation

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Codes from block I46 are only assigned where a resuscitation intervention is undertaken, regardless of the patient outcome. Codes in this block exclude cardiogenic shock (R57.0).

Cardiac arrest occurs when the heart stops pumping blood around the body. This is usually the result of an underlying heart condition such as ventricular fibrillation but may also be the result of non-cardiac causes such as respiratory arrest, choking, trauma, electric shock or drowning.



As per National coding advice Reference Number Q3079 (Published 15 June 2017), where a patient has a cardiac arrest prior to admission, and is admitted following successful resuscitation (e.g. performed by paramedics):

- if there is documentation of an underlying cause, assign a code for the underlying cause only
- if there is no documentation of an underlying cause, assign I46.0 *Cardiac arrest with successful resuscitation*.

Ongoing data analysis of diagnosis code I46.0 *Cardiac arrest with successful resuscitation* continues to identify episodes of care where both this code and the underlying cause are incorrectly assigned.

Another data quality issue identified in the analysis is the assigning of the incorrect Condition onset flag (COF). For example, I46.0 has COF 1 'Condition present on admission', but the cardiac arrest and associated resuscitation occurred during the episode of care.

Key points:

- When coding an out of hospital arrest, only assign I46.0 *Cardiac arrest with successful resuscitation* if there is no underlying cause(s) documented.
- Ensure that the COF accurately reflects where the cardiac arrest and resuscitation occurred.
- As noted in Australian Coding Standards (ACS) 0048 Condition onset flag, Directive 7, if the patient came in with cardiac arrest (known underlying cause) and suffers with another cardiac arrest requiring resuscitation (successful) during admission, COF for I46.0 will be 2 (QLD) Condition arose during the episode of care.

Example 1:

Patient brought in by ambulance following out of hospital cardiac arrest. Out of hospital cardiac arrest deemed as secondary to catastrophic brainstem haemorrhage secondary to hypertension. As underlying cause of cardiac arrest is known, code for cardiac arrest is not required.

PD	I61.3	Intracerebral haemorrhage in brain stem
OD	I10	Essential (primary) hypertension

Example 2:

Child brought in by ambulance following cardiac arrest due to drowning post fall in swimming pool at home. Cardiopulmonary resuscitation (CPR) performed by parent of the child. Patient admitted in Intensive Care Unit (ICU) and shortly had another cardiac arrest. CPR performed-futile. Cardiac arrest meets ACS 0002 as resus is performed and coded as arising during admission.

PD	T75.1	Drowning and nonfatal submersion
EX	W68.0	Drowning and submersion following fall into swimming-pool
EX	Y92.01	Place of occurrence, outdoor areas
EX	U73.9	Unspecified activity
OD	I46.9	Cardiac arrest, unspecified

Example 3:

Patient presented in cardiogenic shock following late presentation of anterior ST elevation myocardial infarction (STEMI). Past medical history of Type 2 diabetes mellitus (T2DM). Bedside echo in emergency department (ED) - preliminary report: left ventricle ejection fraction (LVEF) 25% with extensive left anterior descending (LAD) territory regionals. Admitted in coronary care unit with plan for catheter laboratory next day. Patient suddenly collapsed with loss of cardiac output. Patient underwent 2 rounds of cardiopulmonary resuscitation (CPR), cold intubation, 3 x Adrenaline 1mg IV bolus. Venous Blood Gas after 1 round of CPR showed no reversible electrolyte disturbance to cause arrest. Resuscitation efforts ceased after 30 minutes. Documented cardiac arrest likely secondary to ventricular free wall rupture leading to mortality. Cardiac arrest is coded with underlying cause.

PD	I21.0	Acute transmural myocardial infarction of anterior wall
OD	I23.3	Rupture of cardiac wall without haemopericardium as current complication following acute myocardial infarction
OD	I46.9	Cardiac arrest, unspecified
OD	E11.9	Type 2 diabetes mellitus without complication

Document History

Version	Date	Status	Key changes made	Author/s
1.0	May 2020	Approved	Version 1.0 published.	Data Quality Team
2.0	November 2023	Approved	Addition of examples, formatting.	Data Quality Team
3.0	October 2025	Approved	ICD-10-AM Thirteenth Edition updates.	Data Quality Team