

LHS Critical Care Patient Classification Criteria Incorporating both Intensive Care and Coronary Care Services Guidelines

Critical Care Patient Classification Criteria

Intensive Care

1. General Definition

Specialized and monitored health care provided for critically ill and immediately postoperative patients by specialist multidisciplinary staff in a specially designed hospital unit.

A Dictionary of Nursing. Oxford University Press. 2008. *Encyclopedia.com*. 15 Jun. 2009 <<http://www.encyclopedia.com>>.

ARHG recognises that the intensity of Intensive Care varies in accordance with the patient's condition. Therefore intensive care funding accommodates the range of interventions from level 3 ICU through to level 1 ICU for each critical care admission Benefits will be paid at the highest level of interventions provided for each day of the critical care admission.

Level 3 Intensive Care

A tertiary referral unit providing the highest level of intervention including complex multi-system life support for an indefinite period

Interventions consistent with Level 3 Intensive Care (for a claim to be considered as a Level 3 ICU at least 1 of the following interventions are required for each day of claim)

- Continuous Mechanical Ventilation – including BiPAP/CPAP and initial weaning process whilst patient is ventilated.
- Extracorporeal renal Support – for management of Acute Renal Failure including Continuous arterio-venous haemofiltration (CAVH) and continuous veno-venous haemofiltration (CVVH) excluding management of a patient that has CRF and undergoes dialysis routinely
- Ventricular Assist Device
- Intra-aortic Balloon Pump (IABP)
- ECMO (pumping blood through an external oxygenator to help lower carbon dioxide levels)

Will also include any combination of interventions provided in level 2 & level 1 Intensive Care

2. Level 2 Intensive Care

A level of intensive care that provides interventions that are of a less intensity than that of level 3

Interventions consistent with Level 2 Intensive Care (for a claim to be considered as a Level 2 ICU at least 1 of the following interventions are required for each day of claim)

- BiPAP/CPAP
- Invasive Arterial Pressure Monitoring
- Pulmonary Artery Pressure Monitoring - Swan Ganz Catheter
- Continuous infusion IV/IA Inotropes
- Continuous infusion IV/IA vasodialators
- Continuous infusion IV/IA antiarrhythmics
- Continuous infusion IV/IA thrombolytics, TPA (Tissue Plasminogen Activator), Streptokinase, Urokinase
- Temporary Pacing (epicardial, transvenous or transthoracic)
- Massive Blood Replacement (>5 units of blood)
- Invasive neurosurgical monitoring –Intracranial Pressure (ICP monitoring) including management of Intraventricular drain
- Continuous electroencephalogram (EEG)

Will also include any combination of interventions provided in level 1 Intensive Care

3. Level 1 Intensive Care (referred to as High Dependency Unit in some HPPAs)

A level of care that provides interventions that fall between general ward management and ICU management that has a direct link to higher level intensive care services

Interventions consistent with Level 1 Intensive Care

- Arterial Line – insitu but not being used for monitoring or administration of therapies
- CVP monitoring
- Mechanical airway protection (nasopharyngeal)
- Continuous insulin infusion
- Establishment of TPN therapy
- Pleural Chest tube <72hrs
- Tracheostomy <72hrs

And at least 4 or more of the following

- Non invasive monitoring (continuous ECG, telemetry, oximetry, Intermittent NIBP, CNAP Continuous non-invasive BP monitoring)
- Multiple continuous intravenous infusions
- Continuous oxygen via nasal/mask
- 2 Hourly or > nebulisers
- 2 Hourly or > airway suctioning including tracheostomy care
- Continuous intravenous/ epidural analgesia
- 2 Hourly or > urine measurements
- 2 Hourly or > neuro observations (Glasgow Coma Score)
- 2 Hourly or > vascular observations
- 2 Hourly or > blood glucose monitoring
- 2 Hourly or > vital signs

Coronary Care

1. General Definition

A type of intensive care developed in order to provide for the needs of critically ill and immediately postoperative patients with cardiac and coronary artery disease.

A Dictionary of Nursing. Oxford University Press. 2008. *Encyclopedia.com*. 15 Jun. 2009 <<http://www.encyclopedia.com>>.

ARHG recognises that the intensity of Coronary Care varies in accordance with the patient's condition. Therefore coronary care caters for a range of interventions from level 1 CCU to level 2 CCU regardless of the physical location of the patient. That is a patient accommodated in a recognised Level 2 CCU may be receiving care equivalent to level 1.

2. Level 2 Coronary Care

A unit providing the highest level of intervention for the management of cardiac patients

Interventions consistent with Level 2 Coronary Care (for a claim to be considered as a Level 2 ICU at least 1 of the following interventions are required for each day of claim)

- Invasive Arterial Pressure Monitoring
- Pulmonary Artery Pressure Monitoring - Swan Ganz Catheter
- Continuous infusion IV/IA Inotropes
- Continuous infusion IV/IA vasodilators
- Continuous infusion IV/IA antiarrhythmics

- Continuous infusion IV/IA thrombolytics, TPA (Tissue Plasminogen Activator), Streptokinase, Urokinase
- Temporary Pacing (epicardial, transvenous or transthoracic)
- Assisted ventilation (including intermittent CPAP and BiPAP)
- Includes any combination of interventions provided in level 1 Intensive Care

ARHG recognises that Best Practice Principles support the management of patients at a level 2 CCU classification for a period of 24hrs post the following interventional cardiac procedures even when the patient is haemodynamically stable:

- Angioplasty
- Transluminal Stent Insertion
- Permanent Pacemaker insertion
- Electrophysiological studies (Automatic Defibrillator insertion)
- Cardioversion
- Angiogram (only if haemodynamically compromised or severe lesion is detected and awaiting urgent definitive care)
- ASD/PFO/PDA closure device – (Atrial Septal Defect, Patent foramen ovale, Patent ductus arteriosus - only if patient haemodynamically compromised)

ARHG recognises that Level 2 CCU classification may be required for a period >24hrs for the above procedures in a patient that is haemodynamically compromised. Validation of this will be required in accordance to the definition of haemodynamic compromise outlined below.

ARHG recognises that in line with best practice principles of non-interventional cardiac care patients may be admitted to coronary care unit and not meet the required criteria as outlined above. In the following circumstances a patient will meet a Level 2 CCU classification providing adequate supporting documentation validates the Level 2 classification

High risk NSTEMI (non ST elevation Acute Coronary Syndrome) as defined by

- Repetitive or prolonged (>10min) ongoing chest pain/discomfort
- Elevation of at least 1 cardiac biomarker (troponin or CK-MB)
- Persistent or dynamic ST depression ≥ 2 mm
- Transient ST segment elevation (≥ 0.5 mm) in more than 2 contiguous leads
- Haemodynamic compromise: systolic B/P <90mmHg, cool peripheries, diaphoresis, Killip class >1 and/or new onset mitral regurgitation
- Sustained VT
- LV systolic dysfunction (LVEF, <40%)
- Prior Percutaneous Coronary Implant (PCI) i.e. Stent or CAGs within 6 months
- Presence of known diabetes

- Chronic kidney disease – estimated GFR,60ml/min (Glomerular Filtrate Rate)

Intermediate risk NSTEMI – That has recurrent ischaemia or elevated troponin at follow up testing

- Chest pain or discomfort within past 48hrs that occurred at rest, or was repetitive or prolonged (but currently resolved)
- Age >65yrs
- Known CHD: Prior MI with LEVF \geq 40% or known coronary lesion >50% stenosed
- No high risk ECG changes
- 2 or more of: known hypertension, family history, active smoking, hyperlipidaemia
- Presence of known diabetes
- Chronic kidney disease – estimated GFR,60ml/min (Glomerular Filtrate Rate)
- Prior aspirin use
- AND NOT meeting the criteria for high risk NSTEMI

3. Level 1 Coronary Care

A level of care for cardiac patients that provides interventions that fall between general ward management and CCU management that has a direct link to higher level coronary care services

Interventions consistent with Level 1 Coronary Care

Any one of the following

- Arterial Line – insitu but not being used for monitoring or administration of therapies
- Femoral Arterial/Venous Sheath
- Central Venous Pressure (CVP) monitoring
- Mechanical airway protection (nasopharyngeal)

And/or at least 4 or more of the following

- Non invasive monitoring (continuous ECG, telemetry, oximetry, Discontinuous NIBP, CNAP Continuous non-invasive BP monitoring)
- Multiple continuous intravenous infusions
- Continuous oxygen via nasal/mask
- 2 Hourly or > nebulisers
- 2 Hourly or > airway suctioning including tracheostomy care
- Continuous intravenous/ epidural analgesia
- 2 Hourly or > urine measurements
- 2 Hourly or > neuro observations (Glasgow Coma Score)
- 2 Hourly or > vascular observations

****NICU** a unit providing intensive care for preterm, very low-birth-weight, and seriously ill babies.

A Dictionary of Nursing. Oxford University Press. 2008. *Encyclopedia.com*. 15 Jun. 2009 <<http://www.encyclopedia.com>>.

****PICU** a unit providing intensive care for seriously ill children

A Dictionary of Nursing. Oxford University Press. 2008. *Encyclopedia.com*. 15 Jun. 2009 <<http://www.encyclopedia.com>>.

**** Note:** there is only one HPPA containing these services – Mater Misericordiae Women’s and Children’s Hospital in Brisbane, Qld. Provider Number 0055110F. Refer to this facility on ARHG’s Website for copies of the Certificates if required.

Literature Search

The following documents have been sourced for reference in this review

1. Joint Faculty of Intensive Care Medicine IC-1 2003 Standards as adapted by ANZICS & ACCCN
2. AHIA in association with ANZICs & ACCN- National Private Sector ICU Survey Questionnaire -2006
3. Minimum Standards for Coronary Care Services
4. NSW Intensive Care Certificate & Instruction Guide
5. NSW Coronary Care Certificate & Instruction Guide
6. NSW Special Care Nursery Certificate & Instruction Guide
7. ARHG Criteria for Adult Critical Care Services (including Coronary Care Services)
8. ARHG Certificates Level 1,2 &3
9. Queensland Health Clinical Services Capability Framework Version 2.0 2005
10. NSW Government Action Plan for Health Intensive Care Service Plan – Adult Services
11. Epworth Hospital Bed Classification Guidelines – Admission Criteria to CCU & SNU
12. Emergency departments/CCU guidelines for the Management of Acute Coronary Syndromes – ACS Therapy Algorithm – Heart Foundation
13. Australian Health Service Alliance Critical Care Certificate
14. Cabrini Health Coronary Care Unit Additional Clinical Supporting Information

Current Tools in use throughout Industry

1. ARHG Critical Care Criteria and associated certificates
2. NSW have established Guidelines for the payment of Intensive Care, Coronary Care & Neonatal Special Care benefits based on level of interventions. It appears from the Medibank Private Website that implement the use of these Guidelines

3. AHSA Critical Care Certificate