



Quality and Operational Standards for the Provision of Critical Care Outreach Services

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Quality and Operational Standards for the Provision of Critical Care Outreach Services Working Party

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Introduction

The aim of the Quality and Operation Standards for the Provision of Critical Care Outreach Services (the Standards) is to provide a framework that will guide the implementation and delivery of Critical Care Outreach (CCOS) or equivalent services across Aotearoa/New Zealand.

The Standards reflect current practice, is evidence based and clinically led. It includes core elements of critical care outreach and outlines the desired requirements for each element. A separate clinical competency document will be developed to supplement this document.

These documents coincide with the development of the four regions within Te Whatu Ora-Health New Zealand, and investment into Critical Care Services nationally. Our aim is to provide a set of core operational and quality standards that will be nationally recognised, used to standardise approaches, and improve equity of patient access to Critical Care Outreach Services. Additionally, as a benchmarking this tool will assist providers and governance groups of CCOS to identify areas requiring investment and development.

We recognise that CCOS or equivalent services have different configurations. However, it is imperative that a foundation and core standards are established in order to provide a robust service that achieves the aims of recognition and response to the deteriorating ward patients, and support for those patients admitted to and discharged from critical care. The standardisation of CCOS quality and operational standards across Aotearoa/New Zealand will aid any further research into CCOS model and changes required to improve effectiveness of this service (Williams G et al.,2022).

Quality and Operational Standards for the Provision of Critical Care Outreach Services

1. Definition

Critical Care Outreach Services can be defined as a nurse-led approach to ensure safe, equitable and quality care for all acutely unwell, critically ill and recovering hospitalised patients irrespective of location or pathway. Critical Care Outreach Nursing is the use of specialist critical care/acute care knowledge and skills when providing care to patients outside the Intensive Care Unit / High Dependency Unit (ICU/HDU). The key objectives of a Critical Care Outreach Service are to avert ICU admission, enable timely ICU admission, facilitate ICU discharge and share Critical Care/Acute care knowledge with the ward interdisciplinary team (Williams G et al., 2022). These specialist knowledge and skills enable early identification of the deteriorating patient and timely, appropriate intervention.

2. Core elements of critical care outreach services as a continuum is exemplified by:

1. Early Warning Scoring System (EWS)
2. Medical Emergency Team (MET) or Rapid Response Team (RRT)
3. Patient/Family/Whānau activated escalation

4. Education, training and support
5. Pathways to achieving excellence in critical care outreach services for Māori
6. Patient safety and clinical governance
7. Audit and evaluation; monitoring of patient outcomes and quality of care
8. Enhancing service delivery

3. Background

In the absence of a national strategy for their implementation, CCOS have developed on an ad hoc basis dependent upon local need and resources available (Pedersen, Psirides, & Coombs, 2014). Additionally, the level of investment in education and preparation of outreach personnel varies between organisations.

4. Purpose

The purpose of this document is to provide a standardised framework for the implementation and delivery of CCOS across Aotearoa/New Zealand. It sets out the Quality and operational framework of standards for the provision of CCOS.

5. Origins of the quality and operational standards framework

This document has been adapted for Aotearoa/New Zealand from the framework and competencies outlined in the National Outreach Forum Document “National Outreach Forum Operational Standards and Competencies for Critical Care Outreach Services. NORF 2012”(NorF, 2012) and the “National Outreach Forum (NORF) Quality and Operational Standards for Critical Care Outreach Services 2019 (NORF., 2019).

A Commitment to Te Tiriti o Waitangi

The Ministry of Health, as the kaitiaki and steward of the health and disability system, has the responsibility to enable Māori to exercise authority over their health and wellbeing and achieve equitable health outcomes for Māori in ways that enable Māori to live, thrive and flourish as Māori.

Meeting our obligations under Te Tiriti o Waitangi is necessary if we are to attain Pae Ora (healthy futures for Māori), under He Korowai Oranga: Māori Health Strategy, and achieve outcomes for the health and disability system as a whole.

Te Tiriti o Waitangi, including the preamble, three articles and the Ritenga Māori declaration, is the enduring foundation of Whakamaua: Maori Health Action Plan 2020-2025 and is our current approach to achieving health and independence under He Korowai Oranga.

The CCOS commits to the implementation of Te Tiriti O Waitangi based on the following four goals below, each expressed in terms of mana.

Mana whakahaere (Article 1)

Effective and appropriate kaitiakitanga (stewardship) over the health and disability system. Mana whakahaere is the exercise of control in accordance with tikanga, kaupapa and kawa Māori. This goes beyond the management of assets and resources and towards enabling Māori aspirations for health and independence.

Mana motuhake (Article 2)

Enabling the right for Māori to be Māori (Māori self-determination). To exercise their authority over their lives and to live on Māori terms and according to Māori philosophies, values and practices, including tikanga Māori.

Mana tangata (Article 3)

Achieving equity in health and disability outcomes for Māori. Enhancing the mana of people across their life course and contributing to the overall health and wellbeing of Māori.

Mana Māori (Declaration)

Enabling Ritenga Māori (Māori customary rituals), which are framed by te ao Māori (the Māori world), enacted through tikanga Māori (Māori philosophy and customary practices) and encapsulated within mātauranga Māori (Māori knowledge).

Principles of Te Tiriti o Waitangi

The principles of Te Tiriti o Waitangi, as articulated by the Courts and the Waitangi Tribunal, provide the framework for how we will meet our obligations under Te Tiriti o Waitangi in our day-to-day work. The principles that apply to our work across the health and disability system are:

Tino rangatiratanga

Providing for Māori self-determination and mana motuhake in the design, delivery and monitoring of health and disability services.

Equity

Being committed to achieving equitable health outcomes for Māori.

Active protection

Acting to the fullest extent practicable to achieve equitable health outcomes for Māori. This includes ensuring that the Crown, its agents and its Treaty partner under Te Tiriti are well informed on the extent, and nature, of both Māori health outcomes and efforts to achieve Māori health equity.

Options

Providing for and properly resourcing kaupapa Māori health and disability services. Furthermore, the Crown is obliged to ensure that all health and disability services are provided in a culturally appropriate way that recognises and supports the expression of hauora Māori models of care.

Partnership

Working in partnership with Māori in the governance, design, delivery and monitoring of health and disability services – Māori must be co-designers, with the Crown, of the primary health system for Māori.

How to use the framework

This document sets out a framework of quality and operational standards for CCOS or equivalent.

The framework has been developed in a “RAG” (red, amber, green) rating format to allow users to self-assess their service against NZCCOF recommendations thereby identifying areas they may wish to develop.

RED - Achieved less than 50% of the time with no current plans to review

AMBER - Partial provision and/or currently under development, only achieving the element between 50-80% of the time

GREEN - Achieving the individual elements in more than 80% of the time

N/A – Not applicable

The NZ College of Critical Care Nurses NZNO (NZCCCN) acknowledges that not all of these recommendations will apply depending on the level of the hospital e.g. tertiary, secondary, rural or private. The composition of teams e.g. Registered nurse (RN), nurse practitioner (NP), allied health and registered medical officer (RMO) may also impact on the level of care, investigations and interventions (Duncan, Wells, & Pearson, 2017; Jones & Bellomo, 2017; Pirret, Takerei, & Kazula, 2015).

The following self-assessment framework summary incorporates the core elements of CCOS, details of each element are further expanded throughout the document.

Self-Assessment Framework Summary

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
1. Early Warning Scoring System					
2. MET or RRT to respond to patient deterioration					
3. Patient/Family/Whānau activated escalation					
4. Education, training and support					
5. Pathways to achieving excellence in critical outreach services for Māori					
6. Patient safety and clinical governance					

7. Audit, evaluation, monitoring of patient outcomes and quality of care					
8. Enhancing service delivery					

Core Elements of Critical Care Outreach Services Framework

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Section A					
1. Early Warning Scoring System (EWS)/Track and Trigger System (TTS)					
1.1 Use of a TTS, such as the New Zealand Early Warning Scoring System (NZEWS), Maternity Early Warning Scoring System (MEWS) vital sign chart or similar chart, that allows for rapid detection of early clinical deterioration in all patients (HQSCNZ, 2017b)					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
<p>1.2 The TTS/EWS include the following vital sign observations: Respiration rate (RR), supplementary oxygen, oxygen saturations via pulse oximetry (SpO2), temperature, systolic blood pressure, heart rate, and level of consciousness. Other parameters may be used alongside the chosen track and trigger system e.g. urine output, pain scores, sedation scores (HQSCNZ, 2017b)</p>					
<p>1.3 Vital sign observations with a total score calculated will be undertaken a minimum of 4 hourly for acute patients, with escalation in frequency of recording vitals as per an agreed local escalation policy</p>					
<p>1.4 Vital sign observations will be undertaken and recorded by appropriately trained staff and assessed as competent in monitoring, measurement and interpretation.</p>					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
1.5 Escalation of care for any patient that they or their whānau are concerned about, regardless of EWS score (as per NZEWS)					
2. MET or RRT to respond to patient deterioration					
2.1 Use of graded escalation response to deterioration consisting of 4 levels (low, medium, high & immediate) or as per NZEWS (yellow, orange, red and blue) (HQSCNZ, 2017a)					
2.2 Each level of response details what is required from staff in terms of observational frequency, skills and competence (HQSCNZ, 2017a)					
2.3 Each level defines the urgency of response, including a clear escalation policy to ensure that					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
an appropriate response always occurs and is available 24/7 (HQSCNZ, 2017a)					
2.4 The appropriate clinical settings available (or ability to transfer to an appropriate facility) for ongoing care of the deteriorating patient including access to monitoring equipment and critical care					
3. Patient/Family/Whānau activated escalation					
3.1 Patient/ Family and Whānau access to an escalation service 24/7 e.g. Kōrero mai (Haskell, 2017; HQSCNZ., 2020; Strickland, Pirret, & Takerei, 2019) to trigger a review if any concern.					
3.2 Regular audits of service utilisation.					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
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4. Education training and support

Critical Care Outreach Service team personnel

<p>4.1 Each organisation ensures patients receive care from the appropriately trained and adequately prepared CCOS practitioners. This should include:</p> <ul style="list-style-type: none"> • An induction programme. • Access to and provision of a training programme • Te Tiriti o Waitangi and Health equity training • Annual competency-based assessment, continuous professional development and engagement with annual appraisals <p>4.2 All CCOS practitioners must demonstrate competency in the skills identified in the foundational clinical competencies and additionally, the extended clinical competencies</p>					
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Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
when the clinical setting dictates the requirement (see clinical competencies section B for criteria).					
4.3 All CCOS practitioners must have demonstrable evidence of post graduate study in relevant clinical modules in critical care and/or acute care which must include history taking, clinical examination and diagnostic skills.					
4.5 All CCOS practitioners must be certified advanced life support (ALS) providers appropriate to their area of practice e.g., ACLS, APLS, MOET etc.					
4.6 CCOS practitioners must be able to assess and provide first line treatment for the acutely ill and deteriorating hospital patient and be able to demonstrate continuous competency in the management of medical and surgical emergencies.					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
4.7 CCOS practitioners must be trained in the safe transfer and transport of the acutely ill patient.					
4.8 CCOS practitioners must be trained in the recognition of situations where consideration for withdrawal of treatment should be given and initiate review by appropriate medical staff, palliative care, or end of life teams.					
4.9 CCOS practitioners must be able to provide effective leadership and support for critical care teams and ward staff when caring for acutely ill ward patients.					
4.1.0 CCOS practitioners must understand their clinical limitations and scope of practice and enable direct referral to other members of the multidisciplinary specialist teams such as a senior medical officer, physiotherapy, pain team,					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
dietician, Māori Health team, speech and language therapist and psychology team.					
4.1.1 Where there is an expected role to deliver education and training regarding the acutely ill and/ or deteriorating hospitalised patient, CCOS teams should be given the necessary resources and support.					
Hospital/ward based personnel					
4.1.2 All staff should be trained in the locally used EWS and be aware of and be able to instigate the escalation process.					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
<p>4.1.3 Each organisation should provide accessible education and support for registered and non-registered ward staff in caring for the acutely ill ward patient in line with the clinical recogniser and non-clinician recogniser outlined in Health Quality and Safety Commission <i>Capabilities for recognising and responding to acute deterioration in hospital (HQSCNZ, 2017a)</i>.</p>					
5. Pathways to achieving excellence in critical outreach services for Māori					
<p>5.1 All members of the CCOS must show understanding of Te Tiriti o Waitangi and ensure that the five principles; Tino Rangatiratanga, Equity, Active Protection, Options and Partnership, are applied in everyday work towards achieving Māori health equity.</p>					
<p>5.2 All members of the CCOS must be familiar with Māori health strategies and how these underpin their practice when working with Māori and their whanau e.g. Whakamaua: Māori Health</p>					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Action Plan 2020-2025, He Korowai Oranga etc., and Māori health strategies specific to your DHB					
5.3 All members of CCOS must have attended training courses on Te Tiriti o Waitangi, racism and decolonisation, etc. and how they apply in Aotearoa NZ and healthcare.					
5.4 All members of the CCOS must have developed an ongoing relationship with their hospital's Māori health team and utilise the service as needed for Māori patients and their whānau					
5.5 All members of the CCOS must be able to demonstrate an understanding of the cultural and tikanga needs of Māori and ensure these needs are met, particularly in regard to deterioration, palliation, and death					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
5.6 All members of the CCOS advocate for cultural safety and health equity within their organisation and uphold commitment to equitable and improved outcomes for Māori					
5.7 All members of the CCOS must have an understanding of Hauora Māori model/s of care; Te Whare Tapa Whā, Te Pae Mahutonga, Te Wheke, particularly as it pertains to the overall wellbeing of Māori					
6. Patient safety and clinical governance					
6.1 Each organisation should deliver the core elements of critical care outreach services.					
6.2 Each organisation must have a clearly defined referral policy including CCOS and MET/RRT to support the acutely ill and the					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
deteriorating patient activity 24 hours a day, 7 days per week, 365 days a year.					
6.3 Each organisation must have a clear operational policy for CCOS teams that delineates the team's remit.					
6.4 Each team should regularly link in with patient safety teams within their organisation. This will enable two-way communications of any issues around patient safety.					
6.5 Each team should have a system in place for reporting, investigating and learning from adverse incidents and near misses. This should feed into organisation wide clinical governance processes to facilitate 'across organisation' scrutiny of practice					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
6.6 Organisational wide introduction of patient, family, whānau activated escalation e.g., Kōrero mai and Call for Concern.					
6.7 Each CCOS team contributes to policy, and protocol development and review, utilising local, national and international guidance which is agreed upon by the governing body.					
6.8 CCOS has representation at a hospital wide deteriorating patient forum which should meet regularly e.g. monthly					
6.9 Each team regularly participates in specialty-based mortality and morbidity meetings or similar.					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
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7. Audit, evaluation, patient outcomes and quality of care

Suggested monthly data collection

<p>7.1</p> <ul style="list-style-type: none"> a) Number of patient referrals to CCOS per 1000 admissions b) number of CCOS reviews per 1000 admissions 					
<p>7.2 Reason for referral to CCOS</p> <ul style="list-style-type: none"> a) Medical emergency call (+ per 1000 admissions) b) Surgical emergency call c) Cardiac arrest (+ per 1000 admissions) d) Other emergency e) EWS trigger f) Critical care discharge follow-up g) Patient, family, whānau call for concern 					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
<p>h) Other reasons/activities e.g. intravenous access etc</p>					
<p>7.3 Analysis of CCOS referrals to identify workload in addition to 7.2</p> <p>a) Day of week, time of day, specialty, and ward</p> <p>b) CCOS response times according to agreed criteria such as acuity</p>					
<p>7.4 Reasons for discharge from CCOS</p> <p>a) Clinically improved/stable</p> <p>b) Transfer to critical care or higher level of care</p> <p>c) Palliation</p> <p>d) Limitation of medical treatment</p> <p>e) Died</p> <p>f) Other</p>					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
7.5 Number of readmissions to critical care within 72 hours of ward transfer.					
7.6 Equity measures are included in quality standards and reports. Ensure that accurate ethnicity data is captured for patients.					
7.7 A minimum agreed upon data set is presented monthly to the hospital wide deteriorating patient forum.					
7.8 A minimum agreed upon data set is presented quarterly to the regional governance group					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
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8. Enhancing service delivery

Staffing requirements

8.1 Separately rostered CCOS or equivalent team must be available 24 hours per day, 7 days a week, 365 days a year					
8.2 CCOS support from a senior clinician in intensive care or acute care medicine to aid with ongoing development, dedicated sessions are required to do this e.g., case reviews, specific topical education etc					
8.3 CCOS should demonstrate involvement with patient, whānau, and cultural services to ensure that their views and opinions are reflected in the development of the service.					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
8.4 CCOS should demonstrate engagement with relevant stakeholders in their organisation.					
8.5 CCOS should be able to demonstrate involvement with and report to the appropriate local governance group/s.					
8.6 Size and composition of the CCOS team must be appropriate to the hospital activity and acuity as well as to facilitate other roles in the team e.g., education, governance groups etc.					
8.7 CCOS provision should be reviewed regularly to enable a proactive approach to development against local demands. These should be reflected in their operational policy.					
8.8 CCOS participate actively in research around CCOS					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
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Section B

Clinical Competencies

The goal of developing clinical competencies for critical care outreach nursing practice has been to set a standard of practice that sits firmly in the operational standards. The clinical competencies are predominantly task based and are only one element of the education and training required for a role in critical care outreach nursing. Knowledge and skill will be brought into the role and further built on in various ways such as; study days, academic study, bedside teaching, specialty courses and case reviews, and during orientation to the outreach nursing role.

The clinical competencies are separated into two sections: foundational clinical competencies and extended competencies. The foundational clinical competencies are deemed to be the minimum required for the role and if not possessing them coming into the role, achieving them by the end of the orientation period would be the goal. The extended clinical competencies refer to tasks that may not be relevant to some clinical settings so therefore are deemed optional and uptake should be in settings that they are relevant. Competencies can be signed off as they are achieved by a designated assessor from within each service and all foundational competencies completed by the end of orientation. Maintenance of the clinical competencies would ideally be reviewed every three years in alignment with the comprehensive performance reviews.

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Foundational Clinical competencies					
Can conduct a comprehensive physical assessment and utilise advanced clinical reasoning skills to inform on the patient management					
Neurological skills					
Can perform pupillary assessment and identify abnormalities					
Can perform a Glasgow Coma Score (GCS) and an AVPU assessment					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Can identify seizure activity/abnormal posturing/tone					
Can identify signs and symptoms of hypoglycaemia and manage appropriately					
Can identify signs and symptoms of raised intracranial pressures					
Cardiovascular skills					
Can perform auscultation of heart sounds and can identify abnormalities					
Can measure jugular venous pressure (JVP)					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Can assess peripheral pulses for volume, rate, regularity					
Can assess the capillary refill time (CRT) both centrally and peripherally					
Can perform and interpret ECG					
Can assess for signs of peripheral oedema					
Able to perform an accurate fluid review and identify hypovolaemia or fluid overloaded states – consider special populations i.e. frail elderly, cardiac failure, renal failure, sepsis					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Administration of IV fluids with consideration of specific populations and conditions					
Has gained relevant training and knowledge to expertly perform and manage advanced IV therapies, vascular access including specialty access devices					
Respiratory skills					
Can perform auscultation of the lungs and identify abnormal/absent/added sounds					
Can recognise increased work of breathing and accessory muscle use					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Recognise the indications for commencing oxygen therapy appropriately					
Can identify the appropriate oxygen delivery device and the associated complications					
Understands the mechanism of high flow nasal prong oxygen (HFNP) and indications for commencement and potential risks					
Able to assist with insertion of underwater seal drains (UWSD) and management					
Able to obtain both a percutaneous venous (VBG) and arterial blood sample (ABG) and interpret the results					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Abdominal assessment skills					
Can perform auscultation of bowel sounds and identify abnormalities					
Can perform examination of the abdomen by palpation and identify abnormalities					
Can assess urine output in the context of fluid volume status					
Can perform nasogastric tube insertion and can confirm position placement on chest x-ray					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Sepsis assessment skills					
Identify patients at risk for sepsis and signs and symptoms of early sepsis					
Can provide the rationale for rapid implementation of the sepsis protocol					
Infection prevention and control					
Able to identify credible, current resources for infection control procedures					
To demonstrate current knowledge of Covid-19 nursing practices					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Intra-hospital transfer of the deteriorating patient					
Identifies patients at risk during transport to another department and collaborates with the inter-disciplinary team to ensure safe transport and monitoring procedures are in place					
Uses portable monitoring equipment to measure heart rate, respiratory rate, blood pressure, oxygen saturations					
Ensures portable oxygen and suction equipment present					
Is familiar with the Geographic's of the hospital campus and what resources are available to ensure patient safety					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Demonstrates competency in the use of the transport ventilator					
Demonstrates effective communication skills between the multi-disciplinary team, patients/whānau to formulate a plan of care and implement it appropriately					
Communication and collaboration skills					
Demonstrates effective communication skills in the setting of the deteriorating patient					
Emergency Procedures					
Discuss the reasons for intubation					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Discuss the potential complications of intubation					
<p>Identify, locates and demonstrates knowledge of intubation equipment.</p> <ul style="list-style-type: none"> • Laryngoscope • Endotracheal tube • Magills forceps • Stylets/introducer • Bougie 					
<p>Identify, locates and demonstrates knowledge of difficult intubation equipment.</p> <ul style="list-style-type: none"> • intubating laryngeal masks • McCoy laryngoscope blade • Cryothyroidotomy set. • Video laryngoscope 					
Discuss roles and responsibilities of medical and nursing staff during intubation					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Discuss the rationale behind cricoid pressure and how it is applied					
Discuss the rationale behind the use of BURP and how it is applied					
Demonstrate the correct method of securing an endotracheal tube					
Identify, locate and demonstrate the application of capnography					
Demonstrate how to manually bag an intubated patient					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Can identify clinical signs and symptoms associated with a displaced endotracheal or tracheostomy tube					
Demonstrates the ability to manage displaced endotracheal or tracheostomy tube					
Discuss the management of a blocked tracheostomy tube					
<p>Demonstrate an understanding of administration route, dosage and actions of the following drugs and in which clinical situations they are likely to be used;</p> <ul style="list-style-type: none"> • Adrenaline • Metoprolol • Amiodarone • Digoxin • Phenylephrine • Metaraminol • Midazolam • Fentanyl 					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
<ul style="list-style-type: none"> Naloxone Suxamethonium Rocuronium Propofol 					
Able to insert, obtain bloods, manage and remove an intra-osseous (IO) needle					
Able to demonstrate knowledge of appropriate IO sites and needle sizes					
Demonstrate knowledge of the massive transfusion protocol					
Extended clinical skills					
Demonstrate ability to perform male catheterisation					

Core Elements of critical care outreach	RED	AMBER	GREEN	N/A	QUALIFYING NOTES
Demonstrates the ability to interpret chest xrays and identify lines, tubes and normal versus abnormal findings					
Demonstrates the knowledge and ability to initiate transcutaneous pacing and ongoing management					
Locate the magnet and discuss its use in patients with a permanent pacemaker during an emergency					
Discuss the indication for and use of the emergency pacing mode on temporary pacing boxes					
Demonstrates knowledge of indications for BiPAP, contraindications, setup and ongoing nursing management					

Glossary of Terms

<p>Rapid Response Team (RRT)</p>	<p>Non-ward-based clinical teams that are activated to respond to deteriorating ward patients. Often used interchangeably with Medical Emergency Team, May be either nurse or physician led (Williams G et al.,2022)</p>
<p>Medical Emergency Team (MET)</p>	<p>Non-ward-based predominantly physician-led teams that can initiate intensive care-level support at the patient's bedside. Often include staff from ICU (where available) and general medical specialties</p>
<p>Critical Care Outreach Service (CCOS) Patient at Risk (PAR) Acute Care Service</p>	<p>Critical care outreach services (CCOS), Patient at risk (PAR) teams, acute care service, intensive care outreach nurses, intensive care liaison nurses, after hours clinical team co-ordinator: predominantly nurse-led which provide clinical support to patients their families/whānau and ward staff for patients at risk of deterioration or experiencing deterioration. Provide education to patient's family/whānau and clinicians caring for the patient (Williams G et al.,2022)</p>

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Mission statement

NZNO is committed to the representation of members and the promotion of nursing and midwifery. NZNO embraces Te Tiriti o Waitangi and works to improve the health status of all peoples of Aotearoa/ New Zealand through participation in health and social policy development.

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