Document 18.0

Standard 9- Recognising and responding to Clinical deterioration in Acute Health Care

2.1.9.1 INTENSIVE CARE AT HOME's standards for a Response system for Clinical deterioration

The aim of this standard is to recognise and respond to clinical deterioration within an acute Intensive home health care nursing service provider, with the aim of maintaining safety, Quality of Life and/ or Quality of end of life, with a holistic view point for customer service.

Rationale

Serious adverse events are common in ventilated patients, and these events are usually preceded by warning signs that manifest as deteriorations of vital signs or a change in clinical condition up to 24 hours prior to an (in-hospital) death, cardiac arrest, or unplanned ICU admission. Early recognition of clinical deterioration, followed by prompt and effective action, can avert or minimise the probability of a poor clinical outcome for at-risk customers, and may mean that a lower level of intervention is required to stabilise a customer 5-6. The need

for early identification of at-risk customers has resulted in the introduction of a Rapid Response

System (RRS) in Australia and internationally in an in- hospital environment. This approach involves activation of a specialised Rapid Response Team (RRT) to review customers within less than five minutes in an in- hospital environment that fulfil pre-defined changes in vital signs above or below set criteria4.

The need for a response system is similar for an acute home Intensive health care nursing service provider like INTENSIVE CARE AT HOME Pty. Ltd. Syndromes commonly triggering a response include hypotension, arrhythmias, respiratory distress, neurologic derangements, oliguria, and concern about a customers' overall condition7. The response system is activated when a customer develops re-defined degrees of physiological instability that manifest as derangements in vital signs that are predefined. In addition, any staff member may activate the Response System(emergency call) if they become concerned about the customers condition for any reason and if the staff member is concerned about the level and circumstances of care provided and is concerned about the customers safety in the home care environment.

To ensure that INTENSIVE CARE AT HOME Pty. Ltd. as an acute home Intensive health care nursing service provider has the capacity to obtain appropriate emergency assistance or advice prior to the occurrence of an adverse event, the nature of the Response System needs to be appropriate to the acuity, size, role, resources, and staffing mix of the acute home health care nursing service provider such as INTENSIVE CARE AT HOME Pty. Ltd., however there should be access, at all times, to at least one Registered Nurse on the customers' site who can practise advanced life support.

The escalation protocol should include consideration of the needs and wishes of customers with an advance care directive (instructions that consent to, or refuse the future use of specified medical treatments) or where other treatment-limiting decisions have been made (decisions that involve the reduction, withdrawal, or withholding of life-sustaining treatment,

and includes not for resuscitation or no cardiopulmonary resuscitation orders)6. Events surrounding commencing advanced life support or the call for emergency assistance and actions resulting from the call should be documented in the health care record and considered as part of ongoing quality improvement processes6. A process of handover and communication between employees providing specialised Intensive Home Care nursing services and the clinicians that provide ongoing support and treatment should be developed.

Type of Indicator
These are rate-based indicators related to the process and outcome of patient care, and are reported as the number of events per 1,000 hospital admissions.
Desired Rate
The optimal emergency calling rate is currently unknown, both overall and for health care organisations with different characteristics, casemix, and patient load. It is possible that a high emergency call rate is desirable, as it may indicate that customers who are deteriorating are being identified and reviewed promptly. Alternatively, a high calling rate may represent a failure of the health care organisation to develop and implement other quality improvement initiatives that prevent or detect customer deterioration. Most mature Response Systems that report positive
effects on patient outcomes report an RRT call rate of between 18-50 calls/1000 admissions1.

Definitions of Terms

A Response system, refers to a system that provides emergency assistance to customers whose condition is deteriorating. It includes an afferent limb (the calling criteria and
mechanism of activation) and an efferent limb (which may include a medical emergency team or an ambulance call), that should be linked with governance and quality improvement arms3. The system will include the clinical team or individual providing emergency assistance, and may include on-site and off-site personnel.
Response System calls – refers to the presence of either a Response System call record form in the customers' health record or documented evidence by the Response System leader who
coordinated the Response System consultation. Documentation should at least address:

- Customer identification details
- Time and date of RRS call
- Primary reason for RRS call
- Observations at time of RRS team arrival
- Interventions implemented by RRS team
- RRS team details and
- RSS call outcomes, including implementation of limitations of medical treatment8
- The time frame of within 72 hours of admission to home is an arbitrary measure, which

aims to identify unwell customers that should not have been admitted to home with INTENSIVE CARE AT HOME's services.

Further Definitions:

- Cardiopulmonary arrest refers to either cardiac or respiratory arrest.

Cardiac arrest is defined as the absence of pulse and respiratory effort, and unconsciousness, necessitating the commencement of resuscitation in the absence of 'not for resuscitation' orders.

- Respiratory arrest is defined as the absence of respiratory effort and the presence of

palpable pulse and measurable blood pressure, necessitating the commencement of resuscitation in the absence of ‘not for resuscitation’ orders.

- NFR (not for resuscitation) – refers to documentation in the health record indicating that a

decision has been made to forgo any form of resuscitation in the event of cessation of breathing or circulation. This decision should have been made in consultation with the customer/ NOK/medical power of attorney as appropriate.

2.1.9.2 Suggested Data Collection for Quality purposes

- Numerator

Total number of rapid response system calls to adult customers, during the 6 month time period

- Denominator

Total number of INTENISVE CARE AT HOME Pty. Ltd. admissions, during the 6 month time period

- Numerator

Total number of rapid response system calls to adult customers within 24 hours of admission to hospital, during the 6 month time period

- Denominator

Total number of adult INTENSIVE CARE AT HOME’s admissions, during the 6 month time period

- Numerator

Total number of adult customers who have experienced a cardiopulmonary arrest, during the 6 month time period

- Denominator

Total number of INTENSIVE CARE AT HOME’s admissions, during the 6 month time period

- Numerator

Total number of deaths in adult customers who DO NOT have an NFR (not for resuscitation) order at the time of death, during the 6 month time period

- Denominator

Total number of adult INTENSIVE CARE AT HOME’s admissions, during the 6 month time period

- Numerator

Total number of adult deaths in all customers, during the 6 month time period

- Denominator

Total number of adult INTENSIVE CARE AT HOME’s admissions, during the 6 month time period

- Numerator

Total number of readmissions into hospital within <72 hours after home admission

- Denominator

Total number of adult INTENSIVE CARE AT HOME's admissions, during the 6 month time period

- Numerator

Total number of cardiac arrests with successful resuscitation

- Denominator

Total number of adult INTENSIVE CARE AT HOME's customers with cardiac arrests

- Numerator

Total number of respiratory arrests with successful resuscitation

- Denominator

Total number of adult INTENSIVE CARE AT HOME's customers with respiratory arrests

These indicators can be used to support the following criteria

- Assessments
- Care planning and delivery
- Evaluation of care
- Health record documentation
- Appropriateness of care
- Effectiveness of care

References:

1 Jones D, Bellomo R, DeVita MA. Effectiveness of the medical emergency team: the importance of dose. *Crit Care* 2009; 13(5): 313-317.

2 Hillman K. Critical care without walls. *Curr Opin Crit Care* 2002; **8**(6): 594-599.

3 DeVita MA, Bellomo R, Hillman K, et al. Finding of the first consensus conference on medical emergency teams. *Crit Care Med* 2006; 34(9): 2463-2478.

4 Barbetti J, Lee G. Medical emergency team: a review of the literature. *Nurs Crit Care* 2008;13(2): 80-85.

6 Thomas K, VanOyen Force M, Rasmussen D, et al. Rapid response team: challenges, solutions, benefits. *Crit Care Nurse* 2007; 27(1): 20-27.

7 Australian Commission on Safety and Quality in Health Care. National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration. Sydney: Australian Commission on Safety and Quality in Health Care; 2010.

8 Calzavacca P, Licari E, Tee A, et al. A prospective study of factors influencing the outcome of patients after a medical emergency team review. *Intensive Care Med* 2008; 34(11): 2112-2116.

9 Cretikos M, Parr M, Hillman K, et al. Guidelines for the uniform reporting of data for medical emergency teams. *Resuscitation* 2006; 68(1): 11-25.

Please see the following documents:

- Clinical Observation chart
- Ventilation Observation chart
- Glascow Coma Scale
- Standard clinical review and escalation of treatment
- Fluid Balance chart

This document is controlled

Version:	1.0.0.0	**Created Date:**	2/01/2012 1:53:18 PM
Created By:	Patrik Hutzel	**Modified Date:**	
Modified By:		**Status:**	Accepted
Tag:	Document 18.1- QP	**Approved By:**	Patrik Hutzel