

Regular review of, and action on, markers of quality of care is an integral part of quality improvement. It is important to build processes into clinical governance frameworks to allow routine collection, review and action on timely and targeted data.

To support this, the Commission has provided detailed specifications for a number of measures that facilities can use to review their processes and outcomes relating to recognising and responding to clinical deterioration. The measures included in this Appendix are those that the Commission suggests are the most useful for facilities to use to enable robust evaluation of recognition and response systems.

Facilities are not required by the Commission to collect data on these measures and can choose the quality measures that best fit with their circumstances. However, the Commission suggests that all facilities should include the following key measures in their evaluation systems:

- rates of failed escalation with mortality
- unexpected in-hospital death rates
- unexpected cardiopulmonary arrest rates
- in-hospital death rates
- cardiopulmonary arrest rates
- rapid response activation rates.

Facilities may choose which additional measures to focus on depending on the stage of implementation of their recognition and response systems. For example, facilities could audit the documentation of core physiological observations and compliance with monitoring plans or policies frequently when a new observation and monitoring policy is introduced. Facilities with well-embedded systems may focus on rates of failed escalation with mortality, rapid response activation rates and unexpected in-hospital death rates as measures of ongoing performance.

The frequency of data review or audit will also vary according to the measure being used. Measures such as unexpected cardiopulmonary arrest or rates of failed escalation with mortality may be measured quarterly or biannually, while audits of the documentation of core physiological observations may be undertaken weekly or monthly. Individual clinical areas may like to consider doing ‘swoop’ audits of practices such as the documentation of core physiological observations where any variance from the expected standard is discussed on the spot with the relevant clinical staff.

The quality measures have been put forward to support local evaluation and quality improvement. They are not designed for performance monitoring or benchmarking. The Commission does not require collection of information about these measures. However these measures have been designed to align with the *National safety and quality health service standards*, current and proposed processes for data collection where they exist at a state and territory level, and with the rapid response system indicators included in the *Australian Council of Healthcare Standards Intensive Care Clinical Indicators Version 4*.

The quality measures have been developed using an adapted version of the Australian Institute of Health and Welfare’s METeOR framework.

**Facilities may choose which additional measures to focus on depending on the stage of implementation of their recognition and response systems.**

## Documentation of core physiological observations

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Documentation of core physiological observations
<b>DESCRIPTION:</b>	The proportion of patients audited that have complete sets of core physiological observations documented as part of their last set of recorded observations.
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	There is an increasing body of work demonstrating the association between abnormal physiological observations and the occurrence of clinical deterioration leading to critical illness and serious adverse outcomes. Facilities need to ensure that acute care areas are measuring the core physiological observations required to identify clinical deterioration
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment.</p> <p>Complete set of core physiological observations: a set of documented observations that includes respiratory rate, heart rate, blood pressure, temperature, oxygen saturation, level of consciousness.</p> <p>Last observation set: set of observations conducted most recently before the audit and documented on the patient's observation chart or other record.</p> <p>Monitoring plan: a document that outlines the physiological observations to be measured and the frequency of this measurement</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients who require core physiological observations to be measured according to their monitoring plan
<b>COMPUTATION:</b>	<p>Percentage of last observation sets with complete sets of core physiological observations documented</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 100$
<b>NUMERATOR:</b>	Number of last observation sets audited with complete sets of core physiological observations documented
<b>DENOMINATOR:</b>	Total number of last observation sets audited

### COMMENTS

<b>COMMENTS:</b>	<p>A high percentage of last observation sets with complete sets of core physiological observations documented is desirable</p> <p>Data collection for this quality measure may be combined with data collection for 'Compliance with monitoring plans or policies.' There is an audit tool available on the Commission's website for this purpose</p> <p>It may be useful to audit a variety of clinical areas at different times of day to examine whether there are differences in practices</p> <p>In incomplete sets of observations, collecting data about which observation is missing can assist with targeting education sessions to improve compliance</p> <p>Collecting data for this quality measure will require review of the patient's observation chart or other records where observations are documented</p>
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## Documentation of core physiological observations

### REFERENCES

#### REFERENCE DOCUMENTS:

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

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

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Jacques T, Harrison GA, McLaws M-L, Kilborn G. Signs of critical conditions and emergency responses (SOCCER): A model for predicting adverse events in the inpatient setting. *Resuscitation* 2006;69(2):175-183

Mitchell I. Patients at risk and the observation chart. *Innovation workshop: Development and use of observation charts to identify patients at risk*. Sydney, 2008

## Compliance with monitoring plans or policies

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Compliance with monitoring plans and policies
<b>DESCRIPTION:</b>	The proportion of patients audited for whom physiological observations were measured and documented according to the specifications of the monitoring plan or policy
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	<p>Clinicians can only recognise and respond to clinical deterioration if appropriate observations and assessments are measured with adequate frequency</p> <p>Physiological observations are often not measured with sufficient frequency to detect clinical deterioration and not all clinicians may have enough knowledge and experience to identify the assessments and observations needed to detect clinical deterioration</p> <p>Facilities need to ensure that all acute care areas are measuring appropriate physiological observations with adequate frequency</p>
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Monitoring plan or policy: a document that outlines the physiological observations to be measured and the frequency of this measurement</p> <p>Observations correctly documented: set of observations documented within 30 minutes of the specified frequency outlined in the monitoring plan and/or policy</p> <p>Physiological observations: may include measures of respiratory rate, heart rate, blood pressure, temperature, oxygen saturation, level of consciousness and/or other observations specified in the monitoring plan</p> <p>Complete sets of observations: physiological observations recorded against a legible time entry that include all physiological observations specified in the monitoring plan</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Patients with specified physiological observations and the frequency for monitoring identified in their monitoring plan or to whom a general monitoring policy applies who have been admitted for 24 hours or more
<b>COMPUTATION:</b>	<p>Percentage of patients with complete observation sets documented according to the specified frequency</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 100$
<b>NUMERATOR:</b>	Number of patients audited who have the correct number of complete sets of observations documented according to the monitoring plan and/or policy, over the 24 hours prior to the audit
<b>DENOMINATOR:</b>	Total number of patients audited

## Compliance with monitoring plans or policies

### COMMENTS

#### COMMENTS:

A high percentage of patients with complete observation sets documented according to the specified frequency is desirable

Patients who have additional observations, or observations that are recorded more frequently than specified in the monitoring plan or policy should be included in the sample and noted to have their observations correctly documented

Data collection for this quality measure may be combined with data collection for 'Documentation of core observations'. There is an audit tool on the Commission's website for this purpose

It may be useful to audit a variety of clinical areas to examine whether there are differences in practice in different parts of the facility

Collecting data for this measure will require review of the patient's observation chart or other records where monitoring plans and physiological observations are documented

### REFERENCES

#### REFERENCE DOCUMENTS:

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

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

## Escalation of care

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Escalation of care
<b>DESCRIPTION:</b>	The proportion of patients audited that failed to have their care escalated according to the local escalation protocol
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	Delays in escalating care can result in patient morbidity and mortality. An escalation protocol outlines the thresholds of abnormal physiological observations and/or aggregated scores that trigger an escalation of care response, and the response required when these triggers occur. Facilities need to ensure that escalation protocols are operating as planned to reduce the risk of adverse outcomes for patients
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Escalation protocol: protocol that sets out the organisational response required for different levels of abnormal physiological measurements or other observed deterioration</p> <p>Triggers: abnormalities in physiological observation measurements, aggregated scores or other clinical assessments that require an escalation of care according to the escalation protocol</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients to whom the local escalation protocol applies
<b>COMPUTATION:</b>	<p>Percentage of patients who failed to have their care escalated in accordance with the local escalation protocol</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 100$
<b>NUMERATOR:</b>	Number of patients audited with documented triggers for escalating care whose care was not escalated according to the requirements of the local protocol
<b>DENOMINATOR:</b>	Total number of patients audited who reached a trigger threshold

## Escalation of care

### COMMENTS

#### COMMENTS:

A low percentage of patients who failed to have their care escalated in accordance with the local escalation protocol is desirable

Populations that have specific escalation protocols should be audited separately. These populations may include general adult and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be audited separately

Some patients may have modifications to triggers to reflect their clinical circumstances, but still require a response according to the local escalation protocol. These patients should be included in the sample

Escalation of care should also include calls to the rapid response system where required by the protocol

The focus of audit should be on data that can be examined objectively in retrospect, i.e. the 'worried' criterion cannot be included

Where failures to escalate care appropriately are identified, it may be useful to conduct a more detailed review of these cases. Such a review can provide information about why the failures occurred and how systems and processes can be improved. Organisations should consider adding a new category (e.g. 'failure to escalate' or 'failure to rescue') to electronic incident reporting systems to enable identification and review of these cases

Collecting data for this quality measure will require review of the patient's observation chart and healthcare record

### REFERENCES

#### REFERENCE DOCUMENTS:

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

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

Calzavacca P, Licari E, Tee A, Egi M, Haase M, Haase-Fielitz A, et al. A prospective study of factors influencing the outcome of patients after a Medical Emergency Team review. *Intensive Care Medicine* 2008;34(11):2112-2116

Downey AW, Quach JL, Haase M, Haase-Fielitz A, Jones D, Bellomo R. Characteristics and outcomes of patients receiving a medical emergency team review for acute change in conscious state or arrhythmias. *Critical Care Medicine* 2008;36(2):477-481

Quach JL, Downey AW, Haase M, Haase-Fielitz A, Jones D, Bellomo R. Characteristics and outcomes of patients receiving a medical emergency team review for respiratory distress. *Journal of Critical Care* 2008;23:325-331

## Failed escalation with mortality

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Failed escalation with mortality
<b>DESCRIPTION:</b>	The rate of patients who died in hospital without a treatment-limiting decision in place and who had documented triggers for an escalation of care that were not acted on
<b>TYPE OF QUALITY MEASURE:</b>	Outcome measure
<b>RATIONALE:</b>	If patients die without limitations on treatment and with documented triggers for escalation of care that were not acted on, the recognition and response system may be operating sub-optimally. Facilities need to ensure that escalation protocols are operating as planned to reduce the risk of adverse outcomes for patients.
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical</p> <p>Treatment-limiting decision: decisions that involve the reduction, withdrawal, or withholding of life-sustaining treatment. These may include 'no cardiopulmonary resuscitation', 'not for resuscitation' and 'do not resuscitate' orders</p> <p>Escalation protocol: protocol that sets out the organisational response required for different levels of abnormal physiological measurements or other observed deterioration</p> <p>Triggers: abnormalities in physiological measurements, aggregated scores or other clinical observations that require an escalation of care according to the escalation protocol</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients who died in hospital without a treatment-limiting decision in place
<b>COMPUTATION:</b>	<p>Number of patients who died in hospital without a treatment-limiting decision in place, where there were documented triggers that should have prompted an escalation of care in the 24 hours prior to death that were not acted on per 1000 hospital separations for the time period audited</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of patients who died in hospital without a documented treatment-limiting decision in place, where there were documented triggers that should have prompted an escalation of care in the 24 hours prior to death that were not acted on
<b>DENOMINATOR:</b>	Number of patient separations in the time period audited



## Failed escalation with mortality

### COMMENTS

#### COMMENTS:

A low rate of failed escalation with mortality is desirable

Patients who were declared dead on arrival at the hospital should be excluded

Populations that have different rapid response system processes should be reviewed separately. These populations may include general adult and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be reviewed separately

Collecting data for this quality measure will require access to routine hospital data regarding separations and in-hospital deaths. It will also require information from the patient's healthcare record regarding the presence of treatment-limiting decisions and triggers for escalation

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

Health Data Standards Committee 2008. National health data dictionary. Version 14. Cat. no. HWI 101. Canberra: Australian Institute of Health and Welfare

Buist M, Harrison J, Abaloz E, Van Dyke S. Six year audit of cardiac arrests and medical emergency team calls in an Australian outer metropolitan teaching hospital. *British Medical Journal* 2007;335:1210-1212

Jones D, Opdam H, Egi M, Goldsmith D, Bates S, Gutteridge G, et al. Long-term effect of a Medical Emergency Team on mortality in a teaching hospital. *Resuscitation* 2007;74:235-241

Jones D, Bates S, Warrillow S, Goldsmith D, Hart G, Opdam H, et al. Long term effect of a medical emergency team on cardiac arrests in a teaching hospital. *Critical Care* 2005; 9:R808-R818

Peberdy MA, Cretikos M, Abella BS, DeVita M, Goldhill D, Kloeck W, et al. Recommended guidelines for monitoring, reporting and conducting research on medical emergency team, outreach and rapid response systems: An Utstein-style scientific statement. *Circulation* 2007;116:2481-2500

Sebat F. *Designing, implementing and enhancing a Rapid Response System*. Mount Prospect: Society of Critical Care Medicine, 2009

## Rapid response system activation

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Rapid response system activation
<b>DESCRIPTION:</b>	The rate of rapid response system activation in a facility
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	Monitoring the rate of rapid response system calls provides information about the effects of the rapid response system on workload
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Rapid response system: system that provides emergency assistance to patients whose condition is deteriorating</p> <p>Rapid response system call: presence of a rapid response system call record form in the patient's healthcare record or other relevant documentation</p> <p>Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients
<b>COMPUTATION:</b>	<p>Number of rapid response system activations per 1000 hospital separations for the time period audited</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of rapid response system calls to patients during the time period audited
<b>DENOMINATOR:</b>	Number of patient separations in the time period audited

### COMMENTS

<b>COMMENTS:</b>	<p>Interpretation of this data will vary depending on the type of rapid response system in use. In systems where there is only one response, such as the medical emergency team, there is some evidence that increased activation rates are associated with better patient outcomes. In graded response systems there is not yet any evidence regarding the optimal rapid response system calling rate. It is possible that a high call rate is desirable, as it may indicate that patients who are rapidly deteriorating are being identified and reviewed promptly. Alternatively, a high calling rate may represent a failure of the hospital organisation to develop and implement other strategies for preventing, detecting or responding to patient deterioration</p> <p>Populations that have different rapid response system processes should be reviewed separately. These populations may include general adult, obstetric and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be reviewed separately</p> <p>Collecting data for this quality measure will require information from the records of rapid response system calls and routine hospital data</p>
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## Rapid response system activation

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian and New Zealand Intensive Care Society and Australian Council on Health Care Standards. Intensive care indicators clinical indicators users' manual version 4. 2011

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

Chen J, Bellomo R, Flabouris A, Hillman K, Finfer S, The MERIT Study Investigators for the Simpson Centre and the ANZICS Clinical Trials Group. The relationship between early emergency team calls and serious adverse events. *Critical Care Medicine* 2009;37(1):148-153

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Jones D, Bellomo R, DeVita M. Effectiveness of the Medical Emergency Team: the importance of dose. *Critical Care* 2009;13(5):313

Peberdy MA, Cretikos M, Abella BS, DeVita M, Goldhill D, Kloeck W, et al. Recommended guidelines for monitoring, reporting and conducting research on medical emergency team, outreach and rapid response systems: An Utstein-style scientific statement. *Circulation* 2007;116:2481-2500

Sebat F. *Designing, implementing and enhancing a Rapid Response System*. Mount Prospect: Society of Critical Care Medicine, 2009

## Unexpected cardiopulmonary arrest

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Unexpected cardiopulmonary arrest rate
<b>DESCRIPTION:</b>	The rate of occurrence of cardiopulmonary arrest where there was no 'not for resuscitation' order
<b>TYPE OF QUALITY MEASURE:</b>	Outcome measure
<b>RATIONALE:</b>	Several studies have demonstrated that rapid response systems have resulted in significant reductions in unexpected cardiopulmonary arrest rates
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Unexpected cardiopulmonary arrest: either cardiac or respiratory arrest in the absence of a 'not for cardiopulmonary resuscitation' order</p> <p>Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical</p> <p>Cardiac arrest: absence of pulse, consciousness and respiratory effort, necessitating the commencement of cardiopulmonary resuscitation</p> <p>Respiratory arrest: absence of respiratory effort and the presence of palpable pulse and measurable blood pressure necessitating the commencement of artificial ventilation (either manual or mechanical)</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients
<b>COMPUTATION:</b>	<p>Number of patients who have experienced an unexpected cardiopulmonary arrest per 1000 hospital separations for the time period audited</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of patients who experienced an unexpected cardiopulmonary arrest in the time period audited
<b>DENOMINATOR:</b>	Number of patient separations in the time period audited

### COMMENTS

<b>COMMENTS:</b>	<p>A low unexpected cardiopulmonary arrest rate is desirable. It may be that this figure is influenced more by inadequate prescription of 'not for resuscitation' orders than by rapid response system processes</p> <p>Populations that have different rapid response system processes should be reviewed separately. These populations may include general adult and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be reviewed separately</p> <p>Collecting data for this quality measure will require information from the records of in-hospital cardiopulmonary arrests and routine hospital data</p>
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## Unexpected cardiopulmonary arrest

### REFERENCES

#### REFERENCE DOCUMENTS:

- Australian and New Zealand Intensive Care Society and Australian Council on Health Care Standards. Intensive care indicators clinical indicators users' manual version 4. 2011
- Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)
- Buist M, Harrison J, Abaloz E, Van Dyke S. Six year audit of cardiac arrests and medical emergency team calls in an Australian outer metropolitan teaching hospital. *British Medical Journal* 2007;335:1210-1212
- Health Data Standards Committee 2008. National health data dictionary. Version 14. Cat. no. HWI 101. Canberra: Australian Institute of Health and Welfare
- Jones D, Opdam H, Egi M, Goldsmith D, Bates S, Gutteridge G, et al. Long-term effect of a Medical Emergency Team on mortality in a teaching hospital. *Resuscitation* 2007;74:235-241
- Jones D, Bates S, Warrillow S, Goldsmith D, Hart G, Opdam H, et al. Long term effect of a medical emergency team on cardiac arrests in a teaching hospital. *Critical Care* 2005; 9:R808-R818
- Peberdy MA, Cretikos M, Abella BS, DeVita M, Goldhill D, Kloeck W, et al. Recommended guidelines for monitoring, reporting and conducting research on medical emergency team, outreach and rapid response systems: An Utstein-style scientific statement. *Circulation* 2007;116:2481-2500
- Sebat F. *Designing, implementing and enhancing a Rapid Response System*. Mount Prospect: Society of Critical Care Medicine, 2009

## In-hospital deaths

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Number of in-hospital deaths
<b>DESCRIPTION:</b>	The total number of patients who died in hospital
<b>TYPE OF QUALITY MEASURE:</b>	Outcome measure
<b>RATIONALE:</b>	Several studies have demonstrated that rapid response systems have resulted in significant reduction of in-hospital deaths
<b>DEFINITIONS:</b>	Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires overnight care or treatment  Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients
<b>COMPUTATION:</b>	Number of patients who died per 1000 hospital separations for the time period audited  $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of patients who have died in hospital for the time period audited
<b>DENOMINATOR:</b>	Number of patient separations for the time period audited

### COMMENTS

<b>COMMENTS:</b>	<p>Patients who were declared dead on arrival at the hospital should be excluded</p> <p>Populations that have different rapid response system processes should be reviewed separately. These populations may include general adult and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be reviewed separately</p> <p>Collecting data for this quality measure will require access to routine hospital data regarding separations and in-hospital deaths</p>
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### REFERENCES

<b>REFERENCE DOCUMENTS:</b>	<p>Australian and New Zealand Intensive Care Society and Australian Council on Health Care Standards. Intensive care indicators clinical indicators users' manual version 4. 2011</p> <p>Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/327206">http://meteor.aihw.gov.au/content/index.phtml/itemId/327206</a>.)</p> <p>Health Data Standards Committee 2008. National health data dictionary. Version 14. Cat. no. HWI 101. Canberra: Australian Institute of Health and Welfare</p> <p>Peberdy MA, Cretikos M, Abella BS, DeVita M, Goldhill D, Kloeck W, et al. Recommended guidelines for monitoring, reporting and conducting research on medical emergency team, outreach and rapid response systems: An Utstein-style scientific statement. <i>Circulation</i> 2007;116:2481-2500</p> <p>Sebat F. <i>Designing, implementing and enhancing a Rapid Response System</i>. Mount Prospect: Society of Critical Care Medicine, 2009</p>
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## Unexpected in-hospital deaths

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Unexpected in-hospital deaths
<b>DESCRIPTION:</b>	The total number of patients who died in hospital who did not have a treatment limiting decision in place
<b>TYPE OF QUALITY MEASURE:</b>	Outcome measure
<b>RATIONALE:</b>	Several studies have demonstrated that rapid response systems have resulted in significant reduction of in-hospital deaths
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical</p> <p>Treatment-limiting decision: decisions that involve the reduction, withdrawal, or withholding of life-sustaining treatment. These may include 'no cardiopulmonary resuscitation', 'not for resuscitation' and 'do not resuscitate' orders</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients
<b>COMPUTATION:</b>	<p>Number of patients who died per 1000 hospital separations for the time period audited</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of patients who died in hospital without a treatment-limiting decision in place
<b>DENOMINATOR:</b>	Number of patient separations in the time period audited

### COMMENTS

<b>COMMENTS:</b>	<p>A low rate of unexpected in-hospital deaths is desirable</p> <p>Patients who were declared dead on arrival at the hospital should be excluded</p> <p>Populations that have different rapid response system processes should be reviewed separately. These populations may include general adult and paediatric patients. If specific escalation protocols apply in other settings (such as maternity), these should also be reviewed separately</p> <p>Collecting data for this quality measure will require access to routine hospital data regarding separations and in-hospital deaths. It may also require reviews of the patient's healthcare record regarding the presence of treatment-limiting decisions</p>
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## Unexpected in-hospital deaths

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian and New Zealand Intensive Care Society and Australian Council on Health Care Standards. Intensive care indicators clinical indicators users' manual version 4. 2011

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

Health Data Standards Committee 2008. National health data dictionary. Version 14. Cat. no. HWI 101. Canberra: Australian Institute of Health and Welfare.

Peberdy MA, Cretikos M, Abella BS, DeVita M, Goldhill D, Kloeck W, et al. Recommended guidelines for monitoring, reporting and conducting research on medical emergency team, outreach and rapid response systems: An Utstein-style scientific statement. *Circulation* 2007;116:2481-2500

Sebat F. *Designing, implementing and enhancing a Rapid Response System*. Mount Prospect: Society of Critical Care Medicine, 2009



## Clinical documentation after rapid response system calls

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Clinical documentation after rapid response system calls
<b>DESCRIPTION:</b>	The proportion of rapid response system calls for which there is documentation in the clinical record of the details of the event
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	Inadequate clinical documentation has been identified as an important contributing factor to adverse events in healthcare. Poor written and verbal communication between health professionals can result in discontinuity of care, delays in treatment, adverse events and increased morbidity and mortality. Poor communication also poses risks to patient safety when patients are transferred between clinical areas and during critical events such as rapid response system calls
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Evidence of clinical documentation: documentation in the healthcare record that summarises the details of the rapid response call and meets any requirements outlined in the facility's rapid response policy</p> <p>Rapid response system: system that provides emergency assistance to patients whose condition is deteriorating</p> <p>Rapid response system call: presence of either a rapid response system call record form in the patient's healthcare record or other relevant documentation</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients who receive a rapid response system call
<b>COMPUTATION:</b>	<p>Percentage of rapid response system calls for which there is a documented summary of the details of the call in accordance with the requirements of rapid response policy</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 100$
<b>NUMERATOR:</b>	Number of audited rapid response system calls for which there is a documented summary of the details of the call in accordance with the requirements of rapid response policy
<b>DENOMINATOR:</b>	Total number of audited rapid response system calls

### COMMENTS

<b>COMMENTS:</b>	<p>A high rate of clinical documentation after rapid response calls is desirable</p> <p>Evidence of clinical documentation should be assessed in accordance with the agreed documentation process outlined in the facility's rapid response policy</p> <p>Collecting data for this quality measure will require information from the records of rapid response system calls and from the patient's healthcare record</p>
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## Clinical documentation after rapid response system calls

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian Commission on Safety and Quality in Health Care. OSSIE Guide to Clinical Handover Improvement. Sydney. ACSQHC, 2009

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

National Institute for Health and Clinical Excellence. Acutely ill patients in hospital: Recognition of and response to acute illness in adults in hospital. National Institute for Health and Clinical Excellence, 2007

Sebat F. *Designing, implementing and enhancing a Rapid Response System*. Mount Prospect: Society of Critical Care Medicine, 2009

## Activation of patient, family and carer escalation

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Patient, family and carer escalation activation
<b>DESCRIPTION:</b>	The rate of patient, family and carer escalation activation in a facility
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	Systems to allow patients, families and carers to directly trigger an escalation of care are becoming more common. They provide an additional safety net for patients that complement other recognition and response systems. Monitoring the use of these systems provides information about whether they are being used by patients, families and carers, the impact on hospital resources and can identify issues that may improve care for all patients
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Patient, family and carer escalation: a system that provides assistance to a patient when concerns about clinical deterioration, care or treatment exist. The system is triggered by the patient, family or carer resulting in the attendance of an individual, or team of individuals who are capable of assessing the patient, undertaking initial therapeutic intervention and escalating care to a health professional with advanced life support skills (if required)</p> <p>Patient, family and carer escalation activation: the presence of a patient, family and carer escalation system call record form in the patient's healthcare record or other relevant documentation</p> <p>Separation: the process by which an episode of care for an admitted patient ceases. This may be formal or statistical</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients
<b>COMPUTATION:</b>	<p>Number of patient, family and carer escalation activations per 1000 hospital separations for the time period audited</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 1000$
<b>NUMERATOR:</b>	Number of patient, family carer escalation activations patients during the sample time period
<b>DENOMINATOR:</b>	Number of patient separations in the time period

### COMMENTS

<b>COMMENTS:</b>	<p>It is possible to interpret the results of this measure in different ways. High call rates may indicate that patients, family and carers are aware of, and comfortable to use the system. Alternatively, a high calling rate may represent a failure of the hospital organisation to develop and implement other quality improvement initiatives that prevent or detect patient deterioration. This measure should be interpreted with other quality measures and knowledge of local policies and systems</p> <p>Populations that have different processes for patient, family and carer escalation (such as adult and paediatrics) should be audited separately</p> <p>Collecting data for this quality measure will require review of records of patient, family and carer escalation. This may include all records where care is escalated, including rapid response system calls. Data for this measure will also require information about the number of hospital separations in the audit period</p>
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## Activation of patient, family and carer escalation

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian and New Zealand Intensive Care Society and Australian Council on Health Care Standards. Intensive care indicators clinical indicators users' manual version 4. 2011

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

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Bogert S, Ferrell C, Rutledge DN. Experience with family activation of rapid response teams. *MEDSURG Nursing* 2010;19(4):215-223

Dean BS, Decker MJ, Hupp D, Urbach AH, Lewis E, Benes-Stickle J. Condition HELP: A pediatric rapid response team triggered by patients and parents. *Journal for Healthcare Quality* 2008;30(3):28-31

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## Awareness of patient, family and carer escalation

### IDENTIFYING AND DEFINITIONAL ATTRIBUTES

<b>SHORT NAME:</b>	Awareness of patient, family and carer escalation
<b>DESCRIPTION:</b>	The proportion of patients, family and carers that can describe the patient, family carer escalation system
<b>TYPE OF QUALITY MEASURE:</b>	Process measure
<b>RATIONALE:</b>	Successful operation and use of the patient, family and carer escalation system is closely linked to patients, family and carers understanding of when and how to activate the system. High levels of awareness suggest that the system has been well integrated within a facility
<b>DEFINITIONS:</b>	<p>Admitted patient: any patient for whom the hospital accepts responsibility for the provision of inpatient care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same day or overnight care or treatment</p> <p>Patient, family and carer escalation: system that provides assistance to a patient when concerns about clinical deterioration, care or treatment exist. The system is triggered by the patient, family or carer resulting in the attendance of an individual, or team of individuals who are capable of assessing the patient, undertaking initial therapeutic intervention and escalating care to a health professional with advanced life support skills (if required)</p>

### COLLECTION AND USAGE ATTRIBUTES

<b>POPULATION:</b>	Admitted patients, visiting family members and carers who consent to provide information
<b>COMPUTATION:</b>	<p>Percentage of patients, family members and carers aware of the patient, family and carer escalation system</p> $\frac{\text{Numerator}}{\text{Denominator}} \times 100$
<b>NUMERATOR:</b>	Number of patients, family and carers surveyed who are aware of the patient, family and carer escalation system
<b>DENOMINATOR:</b>	Number of patients, family and carers in the sample

### COMMENTS

<b>COMMENTS:</b>	<p>A high percentage of patients, family and carers who are aware of the patient, family and carer escalation system is desirable</p> <p>Populations that have different processes for patient, family and carer escalation (such as adult and paediatrics) should be audited separately</p> <p>Collecting data for this quality measure will require the collection of information from patients, families and carers. This could be done through short surveys at discharge or during rounds. Appropriate approvals (such as from a human research ethics committee) may be needed for this activity</p>
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## Awareness of patient, family and carer escalation

### REFERENCES

#### REFERENCE DOCUMENTS:

Australian Institute of Health and Welfare Index. (Accessed 5 August 2011, at <http://meteor.aihw.gov.au/content/index.phtml/itemId/327206>.)

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