END-OF-LIFE CARE AUDIT TOOLKIT

End-of-life care audit toolkit analysis plan

This analysis plan is designed to assist sites who have undertaken the Australian Commission on Safety and Quality in Health Care's end-of-life care audit and clinician surveys. The analysis of individual site data may vary dependent on the variations sites have made to their audits and surveys.

The primary aims of the audit and clinician surveys are to:
- Compare the patterns of end-of-life care practice in four cohorts:
  - Patients that died on an in-patient ward, within 4-48 hours of admission.
  - Patients that died on an in-patient ward, more than 48 hours after admission.
  - Patients that died in ICU, within 4 to 48 hours of admission.
  - Patients that died in ICU, more than 48 hours after admission.

- Compare the perceptions of health care professionals (nursing, consultant, junior doctor and allied health) in their ability to recognise dying and their self-reporting of other health professionals' ability at end-of-life care practice.

The audit toolkit has three different components:
- A clinical audit to review medical records to collect information on documented end-of-life decisions and aspects of treatment during final admission.
- A clinician survey to obtain data on the perceptions and experiences of healthcare professionals involved in delivering end-of-life care in acute hospitals.
- A hospital information survey collecting hospital demographics to allow comparisons.

Audit tool eligibility criteria

Eligibility criteria will vary amongst sites and will be dependent on the aims of each audit. The eligibility criteria used in both pilot studies and recommended for hospitals to use is as follows:

Patients are eligible for inclusion in the audit if all the following criteria are met:
1. Patient was an in-patient at the hospital
2. Patient died after 4 hours of hospital admission and during the hospital admission

Patients will be excluded from the audit if one or more of the following criteria are present:
1. Aged less than 18 years old
2. Patient died in less than 4 hours after hospital admission
3. Patient died in the emergency department
4. Patient died in the operating theatre
5. Patient died in the adult mental health unit
6. Patient died in the delivery suite
7. Patient classified as an in-patient but residing at home e.g. receiving care through a hospital in the home service

Patients are identified by reviewing the hospital administrative data between a fixed period to determine those that died in hospital. Four groups of patients should be identified for inclusion in the audit:
- Patients that died on an in-patient ward, within 4-48 hours of admission.
- Patients that died on an in-patient ward, more than 48 hours after admission.
- Patients that died in ICU, within 4 to 48 hours of admission.
- Patients that died in ICU, more than 48 hours after admission.

Sample size should be determined on hospital size and the aim of the audit. In both pilots undertaken by the Commission, where possible, sample sizes of 200 patients across all four patient recruitment groups were used at each site. However if the audit is being undertaken on a more routine basis, smaller sample sizes could be used.

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Clinician eligibility criteria

Clinicians (allied health, nursing staff, junior medical officers, and consultants) employed, contracted or credentialed to work in the site and who have cared for more than two dying patients at the site.

Clinicians not employed or contracted to work directly with patients. Clinicians who work predominately in:
- Emergency department
- Delivery suite
- Paediatrics and paediatric surgery
- Mental health
- Operating theatre complex

Clinicians should be contacted using the various methods outlined in the implementation guide.

A period of six weeks from the launch of the survey is recommended to collect responses.

Data checking and cleansing

It is recommended that data checking and cleansing be undertaken on all variables, using frequency distributions to check for incorrect values, potential outliers and missing values. Sites may also wish to use histograms (as appropriate for continuous variables) to assess the distribution of variables.

Audit tool data analysis

Sites will be able to report on data from the audit tool across the four cohorts:
- Patients that died on an in-patient ward, within 4-48 hours of admission.
- Patients that died on an in-patient ward, more than 48 hours after admission.
- Patients that died in ICU, within 4 to 48 hours of admission.
- Patients that died in ICU, more than 48 hours after admission.

Comparable patient characteristics such as gender, age, and type of admission will be presented by the audit tool.

Sites may wish to analyse the mean or median duration of time between initiation of recognising dying to the time of death, and between initiation of comfort care to the time of death. These outcomes can be compared between the four cohorts using linear regression or Cox proportional hazards regression (depending on the nature of the available data).

Sites will be able to report on which demographic of clinicians are involved in the drafting of resuscitation and advance care plans and how timely these plans are put into place. The proportion of patients receiving medical interventions can be reported and compared across cohorts using the chi-squared test.

An example of key analysis areas for the audit tool data can be found at **appendix 1.**

Clinician survey data analysis

Data from the clinician's survey can be used to assess clinician's perceptions against seven key areas of end-of-life care:
- how well end-of-life care is done
- recognition of dying
- team work
- timeliness of decision making
- talking to patients and families
- experience of caring for dying patients
- palliative care team involvement

Sites will be able to report on characteristics of participants (gender, years of clinical experience, specialty and education/ training); these are further reportable by clinician demographic.

Perceptions of end-of-life planning and documentation of resuscitation and advance care plans can be report by clinician demographic. Sites may wish to report on the percentage number of participants who strongly agree or agree with each of the likert scale questions, by clinician demographic or using overall outcomes.

Questions with frequency response options (always, usually, sometimes, rarely or never) can be dichotomised, depending on the distribution of responses, the number and percentage reporting a 'positive' outcome. Data can be compared between the different clinician demographics using the Chi-squared test.

Appendix 1- Key analysis areas- Audit tool data

Patient details
- gender
- age at death
- date and time of hospital admission
- date and time of death
- admission source
- recent hospital admission

Advance care plan and resuscitation plans
- pre-admission advance care plan
- resuscitation plan
- date and time of resuscitation plan
- MET call only
- staff involved
- authorisation of resuscitation plan
- patient/family conflict with resuscitation plan
- patient and/or family initiated discussion for resuscitation plan or treatment limitations

Recognising dying
- dying is recognised and documented
- date dying is recognised
- the dying is communicated to the patient/family

Palliative care/ comfort care plans
- Evidence of palliative/comfort care ONLY plan
- Date of first evidence of palliative/comfort care plan
- The palliative/comfort care plan is communicated to the patient/family
- Palliative care only medications
- Stopping non palliative care interventions
- Date of first contact with palliative care team
- Seen by a palliative care team member

Life sustaining medical treatments
Final 48 hours
- Resuscitation attempts at time of near death
- Did the patient receive CPR when patient documented not for CPR
ICU
- ICU admission
- Number of ICU admissions
- Mechanical Ventilation
Rapid Response Team Review
- Any MET Reviews during hospital admission
- Total number MET reviews
- Death at MET
- MET recommend end of life/goals of care discussions
- Did MET initiate palliative/comfort care