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Submission to the Australian Commission on Safety and Quality in Health Care: December 2018

Targeted consultation for the National Consensus Statement: Essential elements for recognising and responding to acute physiological deterioration (3rd edition) and the Sepsis supplement

The Australasian College for Emergency Medicine (ACEM) welcomes the opportunity to provide feedback to the Australian Commission on Safety and Quality in Health Care on their Targeted Consultation for *the National Consensus Statement: Essential elements for recognising and responding to acute physiological deterioration (3rd edition) and the Sepsis supplement.*

1. Are you completing this survey on behalf of a targeted group or organisation

Yes

2. Which group or organisation are you representing?

ACEM

3. Has the importance of determining the reason for acute physiological deterioration been sufficiently highlighted in the third edition of the Consensus Statement?
   a. Yes
   b. No
   c. Unsure

4. Does the Consensus Statement have:
   a. Gaps = Yes/**No**/Unsure
   b. Duplication = Yes/**No**/Unsure
   c. If yes, please specify

5. Is there any additional feedback you would like to provide about this document?
   N/A

6. Does the Sepsis Supplement have:
   a. Gaps = **Yes**/No/Unsure
   b. Duplication = **Yes**/No/Unsure
   c. If yes, please specify
      Please see response to Question 7.

7. Is there any other feedback you would like to provide on this document?

Overall feedback

In general, ACEM considers that the Sepsis Supplement provides a combination of specific clinical practice recommendations and advice to health care organisations on sepsis program management. The document tends to have practice recommendations that are both general and specific.

ACEM's expert members in sepsis expressed some concern that the document does not adequately fulfil its stated purpose, which may be better placed on page 3 before the Background, rather than on page 5 under Application. The document may benefit from tighter conformity to its stated purpose as a reference source that points health care organisations currently in the process of considering sepsis programs to appropriate recognition and response strategies and recommendations.

ACEM recommends that the Commission distils the Sepsis Supplement into a succinct resource that describes the importance of screening and surveillance of high risk groups, recognition of clinical features, treatment according to accepted consensus guidelines (including resuscitation), obtaining micro cultures, appropriate antibiotics directed at the source, and source control where indicated. The Supplement could additionally encourage use of screening tools and pathways, standardised collection of clinical data and consistent outcome coding to enhance the understanding of sepsis epidemiology and drive improvements in clinical care.

Specific conditions feedback

ACEM members queried the list of common diagnoses that can lead to acute physiological deterioration. ACEM considers that common diagnoses like non-trauma bleeding and pulmonary embolism in hospitalised patients should also be included in this section. Alternatively, this list could be omitted as it is not relevant to a document specifically focused on sepsis.

Background feedback

ACEM recognises the findings from Kaukonen's paper, which suggests that the mortality rate for sepsis in intensive care units (ICU) is decreasing (JAMA 2014; 311(13):1308-16). However, currently data on the mortality of sepsis outside of ICU is not available. A recent publication by Heldens et al challenges the assertion that sepsis mortality has declined (MJA 2018; 209:255-60). The causes are likely to be multifactorial. While the link between declining sepsis mortality rates and the development of recognition and response systems is interesting, ACEM considers that a link could also be drawn between decreasing sepsis mortality and a number of other broad health care initiatives, such as antimicrobial stewardship programs, improved vaccination campaigns, hand hygiene programs, etc. As such, ACEM is concerned that the link may be over-stated between declining mortality rates and recognition and response systems. A 2014 paper by Rhee et al in the United States found that while hospital diagnostic classification coding increased three-fold between the period 2003 and 2011, rates of bacteraemia remained static. This finding suggests that changes in outcomes over time are at least in part a function of reporting bias. Furthermore, the statement in the third paragraph of the Background stating that consensus definitions and treatment guidelines have not always been supported in Australia refers to a 10 year old paper (Anaesth Intensive Care 2008; 36(2): 149-51), which contains a superseded sepsis definition and guideline.

Data feedback

ACEM's expert members in sepsis report that it is well-recognised that sepsis administrative datasets have limited utility for identifying the true burden of sepsis, and advise caution in using such data to draw definitive conclusions (e.g. see Crit Care Resusc 2012; 14:112-8).

ACEM also advises caution in use of the general statement in this section that "ICU admission often increases mortality". This is because admission to ICU does not in and of itself increase mortality, rather patients who require admission to ICU have a greater mortality risk than patients who are not admitted to ICU on the basis of their illness severity.

Application feedback

ACEM notes that the stated purpose of the Sepsis Supplement is to "provide information about considerations that should be made regarding sepsis when establishing, operating and reviewing recognition and response systems..." and that the Sepsis Supplement "does not seek to provide… guidelines… or endorse specific treatment strategies." ACEM considers that this statement of intent is reasonable. However, a range of suggested recommendations follows this section below, with three examples listed here.

- Responding to sepsis, section C, page 4: "A one-hour bundle for sepsis has been suggested as part of the Surviving Sepsis Campaign…"
- Responding to sepsis, section D, subsection i, page 5: "Rapid intravenous fluid resuscitation is recommended for sepsis-induced hypoperfusion in volume-responsive patients with the addition of vasopressors…"
- Responding to sepsis, section D, subsection ii, page 5: "Lactate measurement is suggested as one measure for determining the level of hypoperfusion in sepsis…"

ACEM considers that the Sepsis Supplement should either: (i) adhere to its stated intent, as outlined above, and provide a list of reference materials for further consideration, or (ii) the Commission should provide a definitive review of sepsis treatment strategies and comprehensive advice to clinicians. ACEM acknowledges that it is not possible to provide high quality advice to Australian clinicians about sepsis in an eight page document, and is concerned that the current Consultation Draft appears to be endorsing particular sepsis management strategies. Given the intent of the Sepsis Supplement, ACEM considers a broad statement of overarching aims and principles is more appropriate in this context, rather than specific recommendations.

Standard care algorithms, protocols and pathways for sepsis feedback

ACEM considers that the "Recognising sepsis" section is too general and queries the recommendation to measure procalcitonin as part of a monitoring plan, given there is not enough evidence for its use in this way.

ACEM considers that the "Responding to sepsis" section is too short to be meaningful in a clinical context. ACEM's expert members in sepsis contend that the one-hour bundle for sepsis treatment (page 4) is one of many proposed treatment strategies, all of which have their advocates and detractors. Furthermore, ACEM suggests that clinicians may be confused by the Commission's statements in the "Responding to sepsis" section on page 4 that says "standard care algorithms… [are] essential to reducing variation, improving patient outcomes…" when the next paragraph states "consequently in practice, clinicians may deviate from the bundle when they expect doing so will lead to better outcomes for the patient."

ACEM also wishes to highlight to the Commission that the use of specific blood pressure goals remains an area of controversy (section D, subsection i, page 5). For instance, the Surviving Sepsis guidelines on initial resuscitation include specific blood pressure goals as part of a complex strategy that favours dynamic over static variables, and emphasises repeated reassessment of a range of patient-specific perfusion indicators. ACEM considers that reducing this carefully considered practice recommendation to four lines of text may dangerously simplify a very complex issue.

ACEM considers that the content in section D, subsection ii (page 5) on investigating the source of infection and obtaining two sets of blood cultures is useful and non-controversial. However, the simplistic interpretation of lactate as a measure of hypoperfusion in sepsis is out of date with current pathophysiological understandings, given chasing 'lactate clearance' is considered controversial.

ACEM is somewhat concerned that the content in section D is an over-simplification of complex clinical guidelines. In addition, section E is similar to sections A and B in its generality, which in this context may lack purpose.

Finally, ACEM considers that the "Establishing rapid response processes for sepsis" section in the Supplement most closely adheres to the stated purpose of the document and commends the Commission for its clarity, brevity and forthrightness.

8. What is your name?
   Shelley Cogger

9. What state are you from?
   Only option to enter Victoria

10. What is your role?
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ACEM's survey responses provided to the Australian Commission on Safety and Quality in Health Care SurveyMonkey website on Wednesday 5 December 2018 prior to 4 pm: https://www.surveymonkey.com/r/VM8KGBJ.

Reviewed by Stephen MacDonald.

Approved by Simon Judkins.