



Effective Health Care

Post-Operative ICU Care vs. Non-ICU Care

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Post-operative ICU care versus non-ICU care is not feasible for a full systematic review due to the limited data available for a review at this time.
- This topic could potentially be considered for new research in comparative effectiveness.

Topic Description

Nominator: Individual

Nomination Summary: The nominator expresses interest in new research to develop a simple, quantitative scoring system to measure the need for postoperative admission to intensive care units (ICUs) that could be used by surgeons, anesthesiologists, and intensive care practitioners. The nominator cites variations across hospitals and geographic regions in the utilization of ICU care postoperatively for patients undergoing the same procedures. The nominator states that this variation and the lack of a standardized protocol or guidelines for ICU admission after surgery impact healthcare costs and quality.

Staff-Generated PICO

Population(s): Individuals undergoing major or high-risk surgery

Intervention(s): Risk prediction tools to assess need for post-operative ICU placement, including preoperative scoring systems (e.g., ASA, Charlson Comorbidity Index), postoperative scoring systems (e.g., P-POSSUM, E-PASS, NSQIP, SAS), and intensive care scoring systems (e.g., APACHE I-IV, SAPS I-III, MPM I-III, SOFA, MODS)

Comparator(s): Above tools compared to one another

Outcome(s): Improved outcomes after surgery; reduction in perioperative complications (e.g., infection, respiratory failure, cardiac arrest, and acute kidney injury); reduction in mortality from surgical complications

Key Questions from Nominator: 1. For patients undergoing major surgical procedures, what is the comparative effectiveness of post-operative ICU care vs. non-ICU care?

Considerations

- The topic meets Effective Health Care (EHC) Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)

- There is very limited literature on the role of risk scoring systems in determining which perioperative patients should be admitted to ICUs after high-risk surgery. Existing clinical practice guidelines and systematic reviews describing perioperative management or risk scoring models do not discuss the use of any decision support tools in the triage of patients to the ICU after surgery. Recently published primary research includes no studies comparing risk scoring tools or studies testing any standardized mechanism for determining appropriateness of post-operative admission to the ICU after high-risk surgery. Therefore, this topic is not feasible for a full systematic review due to the limited data available for a review at this time.

Importance of New Research

- The topic of risk scoring systems for perioperative assessment of need for ICU admission is a topic with significant clinical practice and cost implications. There is very little literature on this topic, including primary evidence from studies testing risk scoring systems or decision support tools for this purpose.

Research Gaps

- There is a dearth of literature on the topic of risk scoring systems for perioperative management of need for ICU admission. Systematic reviews and guidelines on perioperative management highlight the lack of research in the area of risk assessment of perioperative patients for placement in ICUs after high-risk surgeries.