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REVIEWER'S REPORT

Manuscript No.: IJAR-55338

Title: THE EVOLVING ROLE OF POINT-OF-CARE ULTRASOUND (POCUS) IN ICU AND EMERGENCY ANAESTHESIA**Recommendation:**

Accept as it is
 Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		x		
Techn. Quality			x	
Clarity			x	
Significance			x	

Reviewer Name: Dr. Mohammad Nadeem Khan

Detailed Reviewer's Report**General Assessment**

This manuscript presents a comprehensive and clinically relevant narrative review on the expanding role of point-of-care ultrasound (POCUS) in intensive care units (ICUs) and emergency anaesthesia. The topic is timely, high-impact, and aligned with current critical care practice, especially given the rapid integration of bedside ultrasound into anaesthesia, emergency medicine, and critical care workflows. The manuscript is well structured, covers a broad spectrum of applications, and integrates clinical protocols, procedural guidance, educational aspects, and future technological directions. The article will be valuable for anaesthesiologists, intensivists, emergency physicians, and postgraduate trainees. Overall, the manuscript is scientifically sound and suitable for publication after minor revisions.

Title and Abstract

- The title is clear, specific, and accurately reflects the manuscript's scope.
- The abstract is concise, informative, and well aligned with the main text.
- Key clinical applications (cardiac, lung, FAST, airway, vascular access) are appropriately highlighted.
- Consider adding one sentence in the abstract explicitly stating that this is a narrative review, for transparency.
- Minor language polishing is suggested to improve readability (spacing and typographical consistency).
- Provides a strong clinical rationale for POCUS adoption in ICU and emergency anaesthesia.
- Clearly explains the evolution of POCUS from a supportive tool to a core competency.
- Appropriately references established protocols (FAST, E-FAST, lung and cardiac ultrasound).
- Briefly mention the global variation in POCUS adoption (resource-rich vs. resource-limited settings) to strengthen contextual relevance.
- Some typographical inconsistencies (spacing, special characters in citations) should be corrected.

Materials and Methods

- The literature selection process is briefly described and acceptable for a narrative review.
- Time frame (2000–2021) is appropriate for capturing the evolution of POCUS.

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- Add a short clarification on:
 - Databases searched (e.g., PubMed, Scopus, Google Scholar)
 - Key inclusion criteria (clinical relevance, ICU/emergency focus)

This will improve methodological transparency.

Clinical Applications Section

This is the strongest section of the manuscript.

- Excellent coverage of:
 - Cardiovascular assessment
 - Lung ultrasound and BLUE protocol
 - FAST/E-FAST in trauma
 - Hemodynamic monitoring and fluid responsiveness
 - Airway, gastric, and regional anaesthesia applications
 - DVT detection and neurological assessment
- Clinical points are clearly explained and well referenced.
- The bullet-point format enhances readability and practical utility.

Educational Integration and Training

- Appropriately emphasizes competency-based training, mentorship, and simulation.
- Correctly identifies the need for structured curricula and standardized assessments.
- Consider adding a brief table or schematic suggestion (optional) summarizing training components (theory, simulation, supervised practice).

Challenges and Barriers

- Realistic and well-balanced discussion.
- Addresses operator dependence, cost, legal issues, and lack of certification standards.
- Consider explicitly linking challenges to low- and middle-income country settings, which would broaden the manuscript's global relevance.

Technological Advancements and Future Directions

- Forward-looking and well articulated.
- AI-assisted interpretation, tele-ultrasound, and IoMT integration are appropriately highlighted.
- References are current and relevant.

Conclusion

- Well synthesized and clinically meaningful.
- Effectively reinforces POCUS as a cornerstone of modern critical care and emergency anaesthesia.
- Clearly balances current benefits with future opportunities.
- A brief concluding line on policy-level or institutional adoption could further strengthen impact.

References

Assessment

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- Comprehensive and authoritative reference list.
- Classic and contemporary studies are well balanced.
- Please verify and complete Reference 30 (year missing).
- Ensure uniform formatting of superscripts and citation symbols throughout the text.

Language and Presentation

- Overall language quality is good.
- Minor grammatical corrections, spacing issues, and typographical inconsistencies should be addressed during revision.
- No major rewriting is required.

Ethical and Scientific Integrity

- No ethical concerns identified.
- No conflicts of interest apparent.
- Review content is accurate, evidence-based, and responsibly presented.