

The Great ICU Debate: One Unit, Two Philosophies – To Open or Not to Open?

Deepika Joshi¹

¹Grande International Hospital, Dhapasi, Kathmandu, Nepal

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Corresponding Author:

Deepika Joshi
 NBMS Critical Care Medicine Fellow,
 Grande International Hospital,
 Dhapasi, Kathmandu, Nepal
 Email: joshidpka26@gmail.com

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Abstract

Introduction: The debate between open and closed Intensive Care Units (ICUs) remains unresolved, with each model offering distinct advantages and challenges. Open ICUs allow primary physicians to manage their patients, promoting continuity of care but risking fragmented decision-making. In contrast, closed ICUs ensure standardized, evidence-based management by intensivists, leading to improved efficiency and better patient outcomes. A hybrid ICU model offers a compromise, balancing flexibility with structured care. In Nepal, ICU structures vary based on resource availability, with tertiary centers favoring closed or hybrid models. Ultimately, the ideal ICU model depends on institutional policies, staffing, and patient needs, prioritizing optimal care delivery.

Keywords: closed ICU; hybrid ICU; intensive Care Unit (ICU); open ICU

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Introduction

The leadership and seamless operation of an Intensive Care Unit (ICU) play a crucial role in shaping team dynamics and patient outcomes. ICU management typically follows one of two distinct models: the open and closed systems, each with its own philosophy—and its own set of loyal supporters.

If ICUs had personalities, the open ICU would be the ever-welcoming host, allowing any physician with admitting privileges to step in and manage their patients. It sounds inclusive, perhaps even democratic, but with too many voices in decision-making, things can quickly spiral into organized chaos. Who is in charge? Why do rounds feel like a never-ending discussion panel? In addition, more importantly, when is the coffee break?

On the other hand, the closed ICU functions like an exclusive, high-stakes production where only intensivists take center stage. Decision-making is efficient and grounded in evidence; however, some specialists may feel as though they are constantly waiting for a consultation.

Both models claim to be the gold standard in critical care. The question of which system truly reigns supreme remains unresolved, ensuring that this discussion – much like ICU rounds, will continue in the future.

Understanding the Models

1. The Open ICU Model: Free-for-All?

In an open ICU, any physician with admitting privileges can manage their patients. This model offers flexibility and continuity of care from the primary physician but can lead

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to differences in opinion, chaos in decision-making and potential conflicts.

The open ICU model offers several advantages that can positively impact patient care and physician collaboration. One of the primary benefits is the greater autonomy it provides to admitting physicians, allowing them to manage their patients throughout the ICU stay without relinquishing control to intensivists. This continuity of care ensures that patients receive treatment from a physician who is already familiar with their medical history, which can lead to more personalized and consistent care. Additionally, the open model may foster stronger rapport between physicians and families, as ongoing relationships can improve communication and trust. In resource-limited settings, this model can be especially beneficial by maximizing the available workforce and avoiding the need for dedicated intensivists. Moreover, patients and families may receive better emotional support from physicians they already know and trust, contributing to a more reassuring and stable care environment.¹

The open ICU model, while offering certain benefits, also comes with notable drawbacks that can impact on the quality and efficiency of care. One significant concern is the potential for workflow disruptions, as multiple physicians managing different patients can lead to coordination challenges within the ICU team. The absence of standardized ICU management may result in inconsistent treatment approaches and variability in care, which can compromise patient outcomes. Additionally, the involvement of various specialists may contribute to polypharmacy, increasing the risk of drug interactions and adverse effects. Decision-making can also be delayed due to the need for consultations and the lack of a centralized authority figure in the ICU. Furthermore, intensivists in an open ICU may have limited authority over critical decisions, reducing their ability to promptly implement life-saving interventions or standardized protocols, which could negatively affect the overall effectiveness of intensive care delivery.²

2. The Closed ICU Model: Discipline?

In a closed ICU, only intensivists are responsible for managing ICU patients, ensuring standardized, evidence-based care. While this approach improves efficiency, it limits the role of other specialists in direct patient care.

The closed ICU system offers several key advantages that contribute to more efficient and effective patient care. One of the most significant benefits is the delivery of consistent, protocol-driven care, which ensures that all patients are managed according to established best practices. This approach is associated with shorter hospital stays³ and lower mortality rates, as intensivists are specifically trained to handle critically ill patients and can manage higher-severity cases more effectively.³⁻⁵

The closed model also enhances communication among healthcare providers by centralizing decision-making and streamlining coordination within the ICU team. For families, this structure reduces confusion regarding treatment plans, as there is a clear point of contact and a unified care strategy. Additionally, the clarity and organization of a closed ICU often lead to improved job satisfaction and morale among nurses, who benefit from working within a more structured and collaborative environment.

Despite its many advantages, the closed ICU system also presents several challenges. One notable drawback is the limited involvement of primary physicians, which can disrupt continuity of care and may lead to dissatisfaction among both patients and their long-term providers. This model can also face resistance from non-intensive specialists who may be reluctant to relinquish control over their patients' management during critical care. Additionally, the reliance on a smaller group of intensivists to manage all ICU patients can result in increased workload and the potential for burnout, particularly in high-volume or understaffed units. These factors can impact both the efficiency of care delivery and the well-being of ICU staff.

Which Model Works Best? Evidence So Far

Several studies suggest that closed ICUs lead to better outcomes, including lower mortality rates, shorter length of stay, and fewer complications.

A Middle Ground? The Hybrid ICU Model/ Semi-Closed ICU

Some institutions have adopted a hybrid ICU, combining elements of both models. This allows primary physicians to remain involved while ensuring intensivists lead critical decisions. This approach maintains continuity, physician satisfaction while benefiting from standardized care. This approach may lean more toward either open or closed structures depending on the institution's policies.

The Nepalese Perspective

In Nepal, ICU structures vary significantly across hospitals. Tertiary centers in urban areas often adopt closed or hybrid models, whereas peripheral hospitals rely on open ICUs due to a shortage of intensivists. Resource limitations play a crucial role in determining ICU structures.

Conclusion: The Verdict?

The choice between open and closed ICUs depends on multiple factors, including hospital resources, staffing, and institutional policies. While closed ICUs are associated with better patient outcomes, open ICUs provide continuity and flexibility. The debate continues, and perhaps the best approach lies in a well-balanced hybrid model. So, to open or not to open? The answer may not be universal—but one thing is certain: every ICU must function in a way that prioritizes patient care, efficiency, and teamwork.

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