

Think Globally, Adapt Locally: The ISCCM Guidelines and Position Statements

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Keywords: End of life care, Guidelines ISCCM, Organ donation, Position statements, Sepsis.

Indian Journal of Critical Care Medicine (2024): 10.5005/jp-journals-10071-24784

Critical care medicine has undergone a paradigm change in India in the last few decades, with advanced tertiary care intensive care units (ICUs), focused critical care training programs, and evolving clinical research. However, there still exists wide variation in clinical practice and resources across the country. A majority of the Indian population still live in rural regions with limited access to healthcare. In the second Indian Intensive Care Case Mix and Practice Patterns Study (INDICAPS), an observational point prevalence study performed between 2018 and 2019 including 1,195 patients, the ICU mortality was 23%.¹ A total of 30% patients had sepsis during their ICU stay, with *gram-negative* infections being predominant in India (75.6%), much higher than in western countries.²

Though international guidelines are available, managing critically ill patients in resource limited settings (RLS) is particularly challenging. For guidelines to be beneficial, they must be pertinent to the local situation. International guidelines may have limited utility due to differing healthcare systems, available resources, geographical, socio-cultural characteristics, diverse patient populations and different patient preferences. The recent guidelines for the management of ARDS have suggested a separate clinical criterion for diagnosis of ARDS in RLS.³ In 2023, the leadership of the Indian Society of Critical Care Medicine (ISCCM) shortlisted 12 clinically important topics related to ICU management, relevant to the Indian needs and situation, where guidance from international literature was sparse. The ISCCM Guidelines Committee facilitated the development of 12 position statements and guidelines from the society, involving subject experts across the country.

Considering the high burden of sepsis, including gram negative and tropical infections, focused guidelines on sepsis management in RLS, severe peripartum infections, management of fungal infections and specific tropical infections in ICU were included. In addition to limited resources, there are many other contextual factors that restrict the applicability of international guidelines on sepsis management in RLS, these include differences in case-mix, disease etiology and comorbidities of the patients, necessitating different management strategies.^{4,5} In addition, international guidelines do not address the management of critically ill patients with sepsis outside the ICU in the absence of an ICU bed. High quality research on sepsis management in RLS is lacking. Therefore, to complement existing guidelines, a Delphi study was conducted among national experts in sepsis management to generate consensus on strategies for management of sepsis in RLS where

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How to cite this article: Myatra SN, Peter JV, Juneja D, Kulkarni AP. Think Globally, Adapt Locally: The ISCCM Guidelines and Position Statements. *Indian J Crit Care Med* 2024;28(S2):S1–S3.

Source of support: Nil

Conflict of interest: None

barriers to the implementation of existing international guidelines exist or where guidance for sepsis management issues relevant in these settings is lacking. The position statement on sepsis management in RLS provides 20 clinical practice statements derived from the Delphi process.

Puerperal sepsis is the leading cause of maternal mortality, after postpartum hemorrhage, accounting for 17.2% cases of maternal deaths. Developing countries have a higher incidence of puerperal sepsis, owing to a large proportion of population belonging to the lower socio-economic strata.⁶ Anemia, young maternal age, multiparity, and lack of healthcare resources prevalent in India, are all associated with higher rates of postpartum infections. The ISCCM position statement on peripartum infections highlights the unique challenges faced by the clinicians and provides comprehensive management strategies for safe patient care, including guidance for decision-making for transfer of a patient to a higher facility for further management.

Although tropical diseases are often considered as a public health issue, a significant number of these patients require intensive care. The INDICAPS study found an overall incidence of almost 5.7% tropical infections in the Indian ICUs, with a mortality of almost 7%.⁷ There is considerable regional variation in the prevalence of the various tropical diseases. In addition, there are long term changes in the pattern of tropical infections, as seen with malaria.^{8,9} Therefore, it is essential for critical care practitioners to be updated with the presentation, diagnosis, and management of these illnesses. The ISCCM position statements on the management of severe

dengue, malaria and tuberculosis will serve as an excellent guide for clinicians managing these patients in ICU.

India has the highest antibiotic usage and one of the highest rates of antibiotic resistance in the world.¹⁰ This adds to increasing healthcare costs and worse patient outcomes. Lack of relevant guidelines and deficiencies in implementing existing policies are major causes for increasing antibiotic misuse. Hence, there is an overwhelming need to develop antibiotic guidelines appropriate for Indian healthcare landscape, to ensure judicious use of antibiotics and foster antibiotic stewardship. The first such effort was made in 2019, when ISCCM published the guidelines for antibiotic prescription in ICU.¹¹ The changing critical care landscape, with increasing drug resistance and availability of newer antibiotics, requires frequent updating of such guidelines, which ISCCM has done through the recent guidelines developed. According to recent estimates, 4.1% of the Indian population is affected by serious fungal infections, amounting to millions of cases.¹² Invasive fungal infections are on the rise due to the frequent use of broad-spectrum antibiotics, immunosuppressive therapy and invasive catheters. The ISCCM position statement on managing invasive fungal infections in ICU, will help clinicians understand the risk factors, make a rationale diagnosis, and optimize antifungal therapy.

Another unique clinical issue, pertaining to the Indian scenario, is the profile of patients presenting with acute poisoning. Clinical outcomes of these patients largely depend on early recognition and targeted management of the offending agent. This necessitates having in-depth knowledge of the commonly implicated poisoning agents, which again depends on several local factors. Additionally, therapeutic interventions, including the availability of certain antidotes, may be affected by regional factors. Therefore, the ISCCM position statement on the approach to a critically ill patient with poisoning, will be helpful not only in recognizing and diagnosing the cause of poisoning, but also aid in initiating specific treatment based on the available resources.

As with other specialties, gender disparity is also prevalent in critical care medicine, not only in the work force but also in academic and leadership positions worldwide.^{13,14} There has been a long felt need to address the gender parity issue within society. In 2023, ISCCM constituted the first Diversity, Equity and Inclusion (DEI) Committee for the society. Observations made from surveys (unpublished) conducted by the committee highlighted the need for society to have a position statement to improve gender balance within the society. Since data on the subject is sparse, a Delphi methodology was used to generate consensus among members actively involved with society over the years. The ISCCM position statement on gender balance in critical care addresses both gender equity at the workplace and within society. This document will serve as a guide to improving gender balance within society.

The role of the intensivist is evolving and is not restricted by the confines of the ICU. Critically ill patients, especially those who require prolonged ICU care, frequently need close monitoring and intensive care even after discharge from the ICU. These patients are at higher risk of developing mental, physical, and even emotional complications. There is limited data on the incidence of post intensive care syndrome (PICS) among Indian patients. Further, re-admission rates to ICUs range from 4 to 14%.¹⁵ These patients have more prolonged hospitalization and 10-times higher mortality rates as compared to those who do not require ICU re-admission.¹⁵ Critical care outreach programs with a structured and systematic

plan to provide post-ICU care to these patients may help in reduce such complications and optimizing outcomes. The ISCCM position statement on post-ICU care, provides comprehensive guidance for the early identification of PICS and a multidisciplinary approach for setting up a post-ICU clinic and care.

Almost 18,000 solid organs are transplanted in India, annually. In terms of the number of transplants performed, India is just behind the USA and China. However, in terms of transplantation rates per million population (0.65), India still remains far behind, and the utilization of organs from deceased donors remains dismal.¹⁶ In addition to religious and cultural beliefs, lack of awareness, adequate healthcare infrastructure and political commitment are important factors leading to poor transplantation rates. Early identification and appropriate management of potential organ donors is an integral component of modern-day critical care. The ISCCM position statement on the management of a potential organ donor will help in improving, understanding, and bridging the gap between the need and availability of suitable organs. This update on the previous ISCCM guidelines on the subject incorporates the recent legalities related to organ donation in India.¹⁷ This position statement complements the recently published ISCCM and Indian Association of Palliative Care (IAPC) expert consensus and position statements for end-of-life and palliative care in the ICU, a part of the guideline project, which combines contemporary evidence, ethics, and law for decision support by the bedside in Indian ICUs.¹⁸

The quality of critical care delivered may be marred by wide variation in clinical practice. Presently, there exists no universally accepted process for adapting international guidelines to local contexts. Developing Indian guidelines is of paramount importance to ensure the delivery of ethical and quality healthcare in the country. The ISCCM incessantly strives to promote critical care research and bring forth recommendations and guidelines based on the Indian requirements and available resources. Such endeavors aim to help physicians managing critically ill patients provide standardized care, making the best use of the available resources. This issue of the Indian Journal of Critical Care Medicine, with position statements and guidelines from the ISCCM on the topics described above, is a true testament to such efforts.

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