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Caring for the critically ill in developing countries: a perspective from India

Cuidados com o paciente gravemente enfermo em países em desenvolvimento: uma perspectiva indiana

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India is a rapidly developing lower-middle income country.⁽¹⁾ There has been a tremendous increase in the knowledge, technology and skills that are required to treat critically ill patients in India over the last twenty years. Intensive care is expensive care, and the provision of critical care services can be challenging in the existing socio-economic environment.

COSTS OF CARE

Health care facilities in India are either privately run institutions or publicly funded. Most intensive care unit (ICU) beds in India are in private hospitals. The relatively few ICU beds in public hospitals, which offer free treatment, constitute approximately 10% of the critical care facilities in India. Health insurance and social security are almost nonexistent, and 57.6% of the total health care bill is paid out of pocket by the patient or their family.⁽²⁾ The daily cost of ICU care may be approximately 100 times the per capita income.⁽³⁾ Therefore, a single episode of ICU admission can impoverish families. However, innovative funding schemes by various state governments and contributions from social organizations have enabled increasing numbers of patients to access advanced healthcare facilities. There is a definite role for intensive care because of the relatively young population and the significant burden of severe tropical infectious diseases, trauma, poisonings and envenomations and the rising incidence of non-communicable diseases, such as diabetes, coronary artery disease and cancer. Indeed, intensive care in India may be no more expensive than the costs of treating non-Hodgkin's lymphoma.⁽³⁾ It is essential to increase the number of ICU beds and upgrade the facilities and staffing in public hospitals.⁽⁴⁾ Investment in intensive care, including that in equipment, organization, staffing and education, may increase the initial costs, but these efforts will prove to be cost-effective in the longer term.

INTENSIVE CARE MANPOWER

The Indian Society of Critical Care Medicine (ISCCM) was formed on October 9, 1993, and it has been the catalyst for the systematic growth of critical care in India.⁽⁵⁾ At the society's inception, critical care medicine was not recognized as a specialty by the Medical Council of India (MCI), which was the apex body for accreditation of postgraduate medical education. The

Conflicts of interest: None.

Submitted on February 3, 2015

Accepted on March 11, 2015

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Responsible editor: Jorge Ibrain Figueira Salluh

DOI: 10.5935/0103-507X.20150003

ISCCM introduced a 1-year Indian Diploma in Critical Care (IDCC) in 1996 to overcome this lacuna, followed by a two-year Indian Fellowship in Critical Care (IFCC) in 2007. Over 130 ICUs have been accredited, and more than 60 intensivists graduate annually.⁽⁶⁾ It was only in 2012 that the MCI recognized critical care as an independent specialty, which enabled 3-year training programs after a postgraduate base specialization that led to a university degree in critical care.

Similar problems exist in the development of manpower in critical elements of the Critical Care Medicine team, including critical care nurses, technicians, respiratory therapists, nutritionists, physiotherapists, and clinical pharmacists. Training programs and courses by professional societies, hospitals and medical colleges are required to develop the manpower to staff and run modern ICUs.

The ISCCM has guidelines and standards for ICU design, structure, function and quality of care.^(7,8) However, accreditation by the National Accreditation Board for Hospitals and Healthcare Providers (NABH) is voluntary, and a vast majority of hospitals and ICUs are not accredited or graded. The ISCCM has also produced guidelines on the roles and responsibilities of the consultant intensivist in hospitals.⁽⁹⁾ Many centers have trained intensivists manning their ICUs, and intensivists now command greater respect and salaries than in the past.

END-OF-LIFE CARE

Euthanasia and physician-assisted suicide are not legal, but the courts have not explored concepts such as autonomy and death with dignity. The ethical and legal status of withholding or withdrawing life-sustaining treatments (WH/WD) is ambiguous. The Supreme Court of India clarified that WH/WD in a terminally ill patient is permissible in a recent judgment that pertained to a patient in a persistent vegetative state, provided that prior approval is obtained from the concerned High Court. However, this procedure is impractical for the ICU setting.

Barriers to end-of-life care in India include fear of legal ramifications, unawareness of ethical issues, the culture of “fighting till the end”, lack of orientation to palliative

care, and the pressure to admit futile cases of self-paying patients.⁽¹⁰⁾ Nevertheless, WH/WD occurs in 19-50% of deaths in Indian ICUs.⁽¹¹⁾ The withholding of life support is more common, and withdrawal of life support occurs in only 8% of cases. Left against medical advice (LAMA) appears to be a common practice, in which the patient is transferred out of the ICU terminally for financial or other reasons. LAMA deprives the patient of palliative care, analgesia and comfort care at the end of life, and it is strongly discouraged in the position statement of the ISCCM and Indian Association of Palliative Care.⁽¹²⁾

NOSOCOMIAL INFECTIONS AND ANTIMICROBIAL RESISTANCE

One study⁽¹³⁾ conducted in 12 ICUs in seven Indian cities reported rates of healthcare-associated infections that were much higher than the United States NNIS benchmarks. There are several reports of an alarming proportion of infections with resistant *Pseudomonas*, ESBL-producing *Enterobacteriaceae* and *Acinetobacter*. One worrying feature is the increasing problem of carbapenem resistance.⁽¹⁴⁾ It is essential to have a nationwide program⁽¹⁵⁾ to monitor antibiotic resistance and strategies for education and antibiotic stewardship. The use of overall hospital data or Western literature to guide antimicrobial therapy in an ICU may be inappropriate. Professional and government organizations need to work together to fight the threat of antibiotic resistance.

RESEARCH

It is vital that research be performed in areas of critical care medicine that are relevant to India. We first require adequate information and baseline data about our ICUs, practices and patients. The Indian Intensive Care Case Mix and Practice Patterns Study (INDICAPS) study of the ISCCM acquired data of 124 ICUs and over 4000 patients. The results should be available soon.

This article focused on the progress and challenges in critical care medicine in India. Challenges remain in infrastructure, human resource development and critical care delivery across the country, and we continue to strive for solutions to make our ICUs safer and to provide better care and outcomes for our patients.

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