

Intensivists under threat: who's in charge here?

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In Australia and New Zealand, intensive care medicine has historically been administered, at least in public hospitals, under a so-called closed care model. Broadly, this model involves an individual physician who has received training in intensive care medicine accepting ultimate responsibility for all patients within the intensive care unit, with treatment being provided in consultation with other health care professionals.

While it is difficult to compare models of ICU care, there are relatively robust data demonstrating that compared with open models closed ICUs improve outcomes and reduce costs.¹ However, comparisons between models are somewhat limited because a physician's Gestalt is greater than a single variable, and quantification of intensivists' worth according to binary outcomes, even one as seemingly important as survival, is crude and has the capacity to lead to erroneous interpretations. Indeed, intensivists are more likely to initiate end-of-life discussions, and this has the capacity to increase mortality in closed ICUs.²

In Australia, there is currently a substantial and unprecedented increase in junior medical workforce numbers. The number of medical students doubled between 2003 and 2012.³ During these 10 years of growth in medical student numbers there was a similar twofold increase in the number of trainees in intensive care medicine, with the number of trainees remaining unregulated. In fact, there are now more than 450 trainees registered with the College of Intensive Care Medicine (CICM), with about 60 new CICM Fellows produced each year. To put this number into perspective: in 2002 there were fewer than 350 Fellows of the Joint Faculty of Intensive Care Medicine. Health Workforce Australia has identified that training pathways for medical graduates are poorly coordinated, which contributes to uneven distribution of numbers between specialties, lost opportunities to promote a better balance between generalist and specialist training, and training too many specialists in fields that may not match community needs.⁴ It is clear that such a situation will soon be realised in intensive care medicine. A recent survey of directors of public hospital ICUs indicated that over the next 5 years the number of new consultant positions becoming available might be as few as 79 full-time-equivalent appointments (Australian and New Zealand Intensive Care Society [ANZICS] Practice and Economics [PricE] Committee, 2013 Survey, personal communication, Dr Ian Jenkins). Based on current trends,

this will provide sufficient employment for about 25% of new Fellows.

What are the implications of a substantial increase in consultant intensivists? It has been suggested that the current model of consultant-driven care, where the intensivist instructs, supervises and mentors relatively experienced junior medical staff (registrars), be replaced by a model that has intensivists providing immediate care for fewer patients while supported by less experienced junior medical staff (residents).⁵ This would have the perceived dual advantages of increasing the number of consultant positions available while also reducing the need for trainees. Logically, an extension of this service model would require 24-hour consultant presence, which would provide a further increase in full-time-equivalent consultant appointments. In spite of the substantial increase in costs there are no data to support improved outcomes with such a service delivery model,⁶ and health care professionals should be circumspect about forcing expensive interventions onto taxpayers that have no evidence to support their implementation. It is also unknown whether such a service model is supported by current or future Fellows. Another option that has been proposed is that expanding work outside the ICU would provide employment options for future Fellows,⁵ but working in an environment in which advice is offered without responsibility would be a paradigm shift for the specialty of intensive care medicine. Furthermore, there are implications for intensivists, particularly those with fractional public hospital appointments, in obtaining sufficient exposure to high-acuity intensive care practice to maintain their clinical skills. Undoubtedly if there are insufficient positions created, many new Fellows will be underemployed or unemployed, which will be devastating for the individuals and represents a lost opportunity for medical graduates to train in areas that are under-represented.

The increase in Fellow numbers is not driven by community need for more consultant intensivists. However, the increase in Fellow numbers may well encourage the development of novel solutions to an oversupply of intensivists. Such options include "subspecialised" ICUs, as there have been suggestions in some areas of medicine that an increase in caseload improves outcomes.⁷ This concept is extrapolated from areas such as trauma services, in which improved outcomes have been reported from greater-volume centres.⁸ It is appealing for some

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administrators and specialist surgeons and physicians to create subspecialised ICUs (eg, cardiac, neurology, haematology/oncology and trauma ICUs that have “dedicated” intensivists). The rationale would be that greater intensivist experience with a single organ would improve performance. While it is possible that organisational structures will improve in high-caseload centres, it is less plausible that an individual intensivist would perform better by narrowing his or her clinical exposure. Moreover, in the largest and most relevant study to Australian and New Zealand adult ICU practice, Shahin and colleagues reported no association between increasing caseload of patients with severe sepsis and improved outcomes.⁹ Intensivists have traditionally had wide-ranging experience and interests, and to become “organ-specific” is antithetical to the multidisciplinary approach. Finally, and perhaps of more concern, in a climate of underemployment, intensivists may become overly concerned with what are flawed metrics (eg, mortality) or the opinions of other organ specialists, and regress to participating in less effective and more expensive models of care.

Summary

The model currently used in public hospitals in Australia and New Zealand — of closed, mixed medical–surgical ICUs, led by consultant intensivists who remain in charge but collaborate closely across multiple specialties and disciplines and are supported by well trained junior medical staff — is internationally admired and has provided cost-effective care. Careful workforce planning is essential to ensure that intensivists retain their identity and that an efficient model persists into the future.

Competing interests

None declared.

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