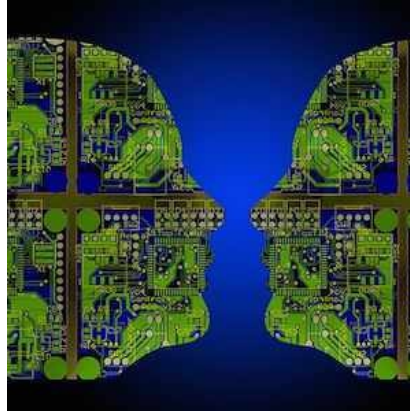




5 Steps Towards ICU Care for the 21st Century



The intensive care unit (ICU) is an organisational intervention in itself, gathering the sickest patients in a single space, with care from a multidisciplinary team. Debate continues on the optimal organisation and staffing of the ICU. However, the changing healthcare landscape means that it is unlikely there will be enough healthcare staff to meet the rising demand from ageing populations and increasing incidence of critical illness, argue the authors of a Viewpoint article in the 23 February issue of [JAMA](#). [Deena Kelly Costa](#), PhD, RN, of the Department of Systems, Populations, and Leadership, University of Michigan School of Nursing, Ann Arbor; and Institute for Healthcare Policy and Innovation, University of Michigan, Ann Arbor and [Jeremy Kahn](#), MD, MS, of the CRISMA Center, Department of Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania; and Department of Health Policy and Management, University of Pittsburgh Graduate School of Public Health, Pittsburgh, Pennsylvania propose 5 steps towards a flexible, feasible and sustainable approach to ICU organisation for the 21st century.

1. New Organisational Models

Acknowledging that there is no model that fits all ICUs, due to variation in illness severity and required staffing, Kelly Costa and Kahn suggest:

- a) ICU teams led by non-intensivists, such as nurse practitioners, physician assistants or hospitalists. Intensivists on site or using telemedicine can provide support.
- b) Tiered hospitals with guidelines on how to identify patients for transfer to tertiary hospitals with intensivist-staffed ICUs.
- c) Consensus on training and certification pathways for staff working in the ICU.

2. New Quality Improvement Strategies

Kelly Costa and Kahn recommend new strategies based on decision science and industrial engineering, to “nudge” practitioners towards evidence-based practice. They acknowledge that strategies need to be tested to avoid unintended consequences such as over-standardisation of care, but these strategies have the advantage of being independent of any specific care model.

3. Smarter Use of IT

This could include real-time risk prediction in the electronic health record, smarter monitoring systems with multidimensional data streams and better clinical prompts, with benefits for triaging, workflow and workload.

See Also: [A Model for the Intensive Care Unit as a High Reliability Organisation](#)

4. Renewed Emphasis on Organisational Behaviour

Teamwork is central to critical care, but rigorous research is needed on the “how” rather than the “who”. Social sciences offers methods to study how teams learn and interact, such as network science, medical anthropology, and organisational behavior.

5. Reducing Demand for Critical Care

Particularly in the U.S., organisational problems arise from high demand for critical care. “Taking steps to reduce the number of ICU admissions could substantially reframe the ICU organisational debate,” write Kelly Costa and Kahn.

“None of these proposed steps is a panacea, and none should be interpreted as discounting the unique skills and experiences of trained critical care physicians, nurses, and allied health professionals”, conclude Kelly Costa and Kahn. New approaches are needed, however: “Otherwise the delivery of critical care risks falling into a dangerous rut, in which expansion of the intensivist-led, interprofessional model of critical care is advocated without the workforce to realise that ideal; in which greater teamwork in the ICU is advocated without the know-how to make it happen; and in which ever greater numbers of patients are admitted to the ICU without a meaningful plan for providing them with the highest-quality care.”

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