

National ICU registries as enablers of clinical research and quality improvement

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Clinical quality registries (CQRs) have been implemented worldwide by several medical specialties aiming to generate a better characterization of epidemiology, treatments, and outcomes of patients. National ICU registries were created almost three decades ago to improve the understanding of case-mix, resource use, and outcomes of critically ill



patients.

A new narrative review published in *Critical Care Medicine* describes the challenges, proposed solutions, and evidence generated by national ICU registries as facilitators for research and <u>quality improvement</u>.

To create the review, the authors considered and integrated data from relevant literature including original research, review articles, letters, and commentaries.

The initial CQR experience in European countries and in Oceania ensured that through locally generated data, ICUs could assess their performances by using risk-adjusted measures, and compare their results through fair and validated benchmarking metrics with other ICUs contributing to the CQR. The accomplishment of these initiatives, coupled with the increasing adoption of information technology, resulted in a broad geographic expansion of CQRs as well as their use in quality improvement studies, clinical trials as well as international comparisons, and benchmarking for ICUs.

ICU registries have provided increased knowledge of case-mix and outcomes of ICU patients based on real-world data and contributed to improve care delivery through quality improvement initiatives and trials. Recent increases in adoption of new technologies (i.e., cloud-based structures, artificial intelligence, machine learning) will ensure a broader and better use of data for epidemiology, health care policies, quality improvement, and clinical trials.

More information: Jorge I. F. Salluh et al, National ICU Registries as Enablers of Clinical Research and Quality Improvement, *Critical Care Medicine* (2023). DOI: 10.1097/CCM.0000000000000050



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