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# Performance evaluation of a multinational data platform for critical care in Asia

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Background: The value of medical registries strongly depends on the quality of the data collected. This must be objectively measured before large clinical databases can be promoted for observational research, quality improvement, and clinical trials. We aimed to evaluate the quality of a multinational intensive care unit (ICU) network of registries of critically ill patients established in seven Asian low- and middle-income countries (LMICs). Methods: The Critical Care Asia federated registry platform enables ICUs to collect clinical, outcome and process data for aggregate and unitlevel analysis. The evaluation used the standardised criteria of the Directory of Clinical Databases (DoCDat) and a framework for data quality assurance in medical registries. Six reviewers assessed structure, coverage, reliability and validity of the ICU registry data. Case mix and process measures on patient episodes from June to December 2020 were analysed. Results: Data on 20,507 consecutive patient episodes from 97 ICUs in Afghanistan, Bangladesh, India, Malaysia, Nepal, Pakistan and Vietnam were included. The quality level achieved according to the ten prespecified DoCDat criteria was high (average score 3.4 out of 4) as was the structural and organizational performance -comparable to ICU registries in high-income countries. Identified strengths were types of variables included, reliability of coding, data completeness and validation. Potential improvements included extension of national coverage, optimization of recruitment completeness validation in all centers and the use of interobserver reliability checks. Conclusions: The Critical Care Asia platform evaluates well using standardised frameworks for data quality and equally to registries in resource-rich settings. © 2021 Collaboration for Research, Implementation and Training in Critical Care - Asia Investigators et al.

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Case mix; critical care; high-quality clinical database; intensive care units; low and middle income country; ICU; registry; Asia

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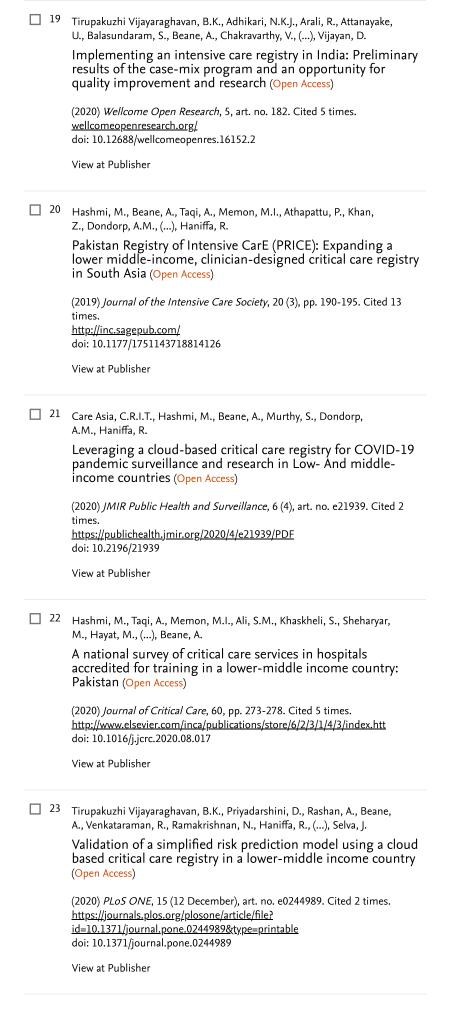
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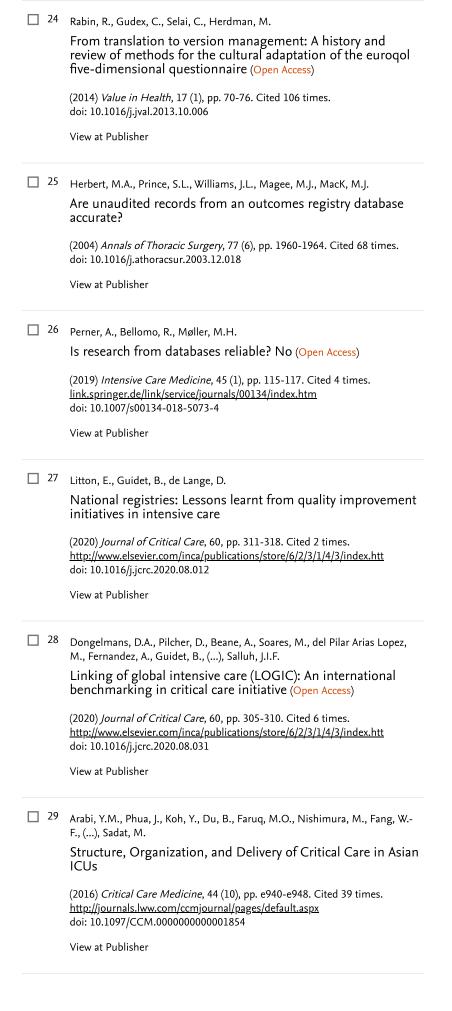
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