



< Back to results | 1 of 1

Export Download Print E-mail Save to PDF Add to List More... >

Full Text

Wellcome Open Research • Open Access • Volume 6 • 2021 • Article number 251

Document type

Article • Gold Open Access • Green Open Access

Source type

Journal

ISSN

2398502X

DOI

10.12688/wellcomeopenres.17122.1

Publisher

F1000 Research Ltd

Original language

English

View less ^

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

Pisani L.^{a,b} ✉, Rashan T.^a, Shamal M.^c, Ghose A.^d, Kumar Tirupakuzhi Vijayaraghavan B.^{e,f,g}, Tripathy S.^h, Aryal D.ⁱ, Hashmi M.^j, Nor B.^k, Lam Minh Y.^l, Dondorp A.M.^a, Haniffa R.^a

Show additional authors v Save all to author list

^a Mahidol Oxford Tropical Research Unit, Bangkok, Thailand

^b Doctors with Africa CUAMM, Padova, Italy

^c NICS-MORU collaboration, Crit Care Asia Afghanistan team, Kabul, Afghanistan

^d Department of Medicine, Chattogram Medical Centre, Chattogram, Bangladesh

View additional affiliations v

View PDF Full text options v

Abstract

Author keywords

SciVal Topics

Citations

Metrics

Funding details

Abstract

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Related documents

Operationalisation of the Randomized Embedded Multifactorial Adaptive Platform for COVID-19 trials in a low and lower-middle income critical care learning health system.

Beane, A. , Aryal, D. , Dondorp, A.M. (2021) *Wellcome Open Research*

The Japanese Intensive care Patient Database (JIPAD): A national intensive care unit registry in Japan

Irie, H. , Okamoto, H. , Uchino, S. (2020) *Journal of Critical Care*

Leveraging a cloud-based critical care registry for COVID-19 pandemic surveillance and research in Low- And middle-income countries

Care Asia, C.R.I.T. , Hashmi, M. , Beane, A. (2020) *JMIR Public Health and Surveillance*

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keyword >

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 unit-level 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.

Author keywords

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

SciVal Topics 



Metrics



Funding details 

Funding sponsor

Funding number

Acronym

Alfred Hospital

New Zealand Intensive Care Research Centre

School of Public Health and Preventive Medicine, Monash University

Funding text

We would like to thank the registries quality independent assessors: Jorge Salluh (D'Or Institute for Research and Education, Rio de Janeiro, Brazil), Dave Pilcher (Department of Intensive Care, The Alfred Hospital, Prahran, Melbourne; Australian and New Zealand Intensive Care Research Centre, School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia), John Victor Peter (Christian Medical College Hospital, Vellore, Tamil Nadu, India).


References (32)


[View in search results format >](#)

All

Export

 Print

 E-mail

 Save to PDF

Create bibliography

- 1 Kruk, M.E., Gage, A.D., Arsenault, C., Jordan, K., Leslie, H.H., Roder-DeWan, S., Adeyi, O., (...), Pate, M.

High-quality health systems in the Sustainable Development Goals era: time for a revolution ([Open Access](#))

(2018) *The Lancet Global Health*, 6 (11), pp. e1196-e1252. Cited 739 times.
<http://www.elsevier.com/journals/the-lancet-global-health/2214-109x>
doi: 10.1016/S2214-109X(18)30386-3

[View at Publisher](#)

- 2 Zampieri, F.G., Soares, M., Borges, L.P., Figueira Salluh, J.I., Ranzani, O.T.
The Epimed Monitor ICU Database[®]: A cloud-based national registry for adult intensive care unit patients in Brazil ([Open Access](#))

(2017) *Revista Brasileira de Terapia Intensiva*, 29 (4), pp. 418-426. Cited 41 times.
<http://www.rbti.org.br/exportar-pdf/0103-507X-rbti-29-04-0418-en.pdf>
doi: 10.5935/0103-507X.20170062

[View at Publisher](#)

- 3 Haniffa, R., Mukaka, M., Munasinghe, S.B., De Silva, A.P., Jayasinghe, K.S.A., Beane, A., de Keizer, N., (...), Dondorp, A.M.

Simplified prognostic model for critically ill patients in resource limited settings in South Asia ([Open Access](#))

(2017) *Critical Care*, 21 (1). Cited 24 times.
<http://ccforum.com/content/17>
doi: 10.1186/s13054-017-1843-6

[View at Publisher](#)

- 4 Soares, M., Bozza, F.A., Angus, D.C., Japiassú, A.M., Viana, W.N., Costa, R., Brauer, L., (...), Salluh, J.I.F.

Organizational characteristics, outcomes, and resource use in 78 Brazilian intensive care units: the ORCHESTRA study

(2015) *Intensive Care Medicine*, 41 (12), pp. 2149-2160. Cited 75 times.
link.springer.de/link/service/journals/00134/index.htm
doi: 10.1007/s00134-015-4076-7

[View at Publisher](#)

- 5 Pisani, L., Algera, A.G., Neto, A.S., Ahsan, A., Beane, A., Chittawatanarat, K., Faiz, A., (...), Schultz, M.J.

Epidemiological characteristics, ventilator management, and clinical outcome in patients receiving invasive ventilation in intensive care units from 10 Asian middle-income countries (PRoVENT-iMiC): An international, multicenter, prospective study ([Open Access](#))

(2021) *American Journal of Tropical Medicine and Hygiene*, 104 (3), pp. 1022-1033. Cited 9 times.
<https://www.ajtmh.org/view/journals/tpmd/104/3/article-p1022.xml>
doi: 10.4269/ajtmh.20-1177

[View at Publisher](#)

- 6 Beane, A., Aryal, D., Dondorp, A.M., Green, C., Haniffa, R., Hashmi, M., Jayakumar, D., (...), Umrani, Z.
Operationalisation of the Randomized Embedded Multifactorial Adaptive Platform for COVID-19 trials in a low and lower-middle income critical care learning health system.
([Open Access](#))

(2021) *Wellcome Open Research*, 6, art. no. 14. Cited 3 times.
wellcomeopenresearch.org/
doi: 10.12688/wellcomeopenres.16486.1

[View at Publisher](#)

- 7 Black, N.
High-quality clinical databases: Breaking down barriers

(1999) *Lancet*, 353 (9160), pp. 1205-1206. Cited 99 times.
<http://www.journals.elsevier.com/the-lancet/>
doi: 10.1016/S0140-6736(99)00108-7

[View at Publisher](#)

- 8 WHO Global diffusion of eHealth: making universal health coverage achievable
(2016) . Cited 241 times.
Reference Source

- 9 WHO PackagesDHIS2
Reference Source

- 10 Hung, Y.W., Hoxha, K., Irwin, B.R., Law, M.R., Grépin, K.A.
Using routine health information data for research in low-
And middle-income countries: A systematic review
([Open Access](#))

(2020) *BMC Health Services Research*, 20 (1), art. no. 790. Cited 11 times.
<http://www.biomedcentral.com/bmchealthservres/>
doi: 10.1186/s12913-020-05660-1

[View at Publisher](#)

- 11 Stow, P.J., Hart, G.K., Higlett, T., George, C., Herkes, R., McWilliam, D., Bellomo, R.
Development and implementation of a high-quality clinical
database: the Australian and New Zealand Intensive Care
Society Adult Patient Database

(2006) *Journal of Critical Care*, 21 (2), pp. 133-141. Cited 183 times.
doi: 10.1016/j.jcrc.2005.11.010

[View at Publisher](#)

- 12 Harrison, D.A., Brady, A.R., Rowan, K.
Case mix, outcome and length of stay for admissions to adult, general critical care units in England, Wales and Northern Ireland: The Intensive Care National Audit and Research Centre Case Mix Programme Database

(2005) *Critical Care*, 9 (SUPPL. 3), art. no. S1-S13. Cited 189 times.
<http://ccforum.com/content/17>

View at Publisher
-
- 13 Reference Source
-
- 14 Establishing a critical care network in Asia to improve care for critically ill patients in low- and middle-income countries (Open Access)

(2020) *Critical care (London, England)*, 24 (1), p. 608. Cited 6 times.
doi: 10.1186/s13054-020-03321-7

View at Publisher
-
- 15 Beane, A., De Silva, A.P., Athapattu, P.L., Jayasinghe, S., Abayadeera, A.U., Wijerathne, M., Udayanga, I., (...), Haniffa, R.
Addressing the information deficit in global health: Lessons from a digital acute care platform in Sri Lanka (Open Access)

(2019) *BMJ Global Health*, 4 (1), art. no. :e001134. Cited 13 times.
gh.bmj.com/
doi: 10.1136/bmjgh-2018-001134

View at Publisher
-
- 16 Black, N., Payne, M.
Directory of clinical databases: Improving and promoting their use (Open Access)

(2003) *Quality and Safety in Health Care*, 12 (5), pp. 348-352. Cited 64 times.
<http://qshc.bmj.com/>
doi: 10.1136/qhc.12.5.348

View at Publisher
-
- 17 Arts, D.G.T., De Keizer, N.F., Scheffer, G.-J.
Defining and improving data quality in medical registries: A literature review, case study, and generic framework (Open Access)

(2002) *Journal of the American Medical Informatics Association*, 9 (6), pp. 600-611. Cited 360 times.
doi: 10.1197/jamia.M1087

View at Publisher
-
- 18 Beane, A.
Registries performance CCAA NICSMORU 13-08-21 (2021) *figshare* Dataset.
<http://www.doi.org/10.6084/m9.figshare.15167406.v3>

- 19 Tirupakuzhi Vijayaraghavan, B.K., Adhikari, N.K.J., Arali, R., Attanayake, U., Balasundaram, S., Beane, A., Chakravarthy, V., (...), Vijayan, D.
Implementing an intensive care registry in India: Preliminary results of the case-mix program and an opportunity for quality improvement and research ([Open Access](#))
- (2020) *Wellcome Open Research*, 5, art. no. 182. Cited 5 times.
wellcomeopenresearch.org/
doi: 10.12688/wellcomeopenres.16152.2
- [View at Publisher](#)
-
- 20 Hashmi, M., Beane, A., Taqi, A., Memon, M.I., Athapattu, P., Khan, Z., Dondorp, A.M., (...), Haniffa, R.
Pakistan Registry of Intensive Care (PRICE): Expanding a lower middle-income, clinician-designed critical care registry in South Asia ([Open Access](#))
- (2019) *Journal of the Intensive Care Society*, 20 (3), pp. 190-195. Cited 13 times.
<http://inc.sagepub.com/>
doi: 10.1177/1751143718814126
- [View at Publisher](#)
-
- 21 Care Asia, C.R.I.T., Hashmi, M., Beane, A., Murthy, S., Dondorp, A.M., Haniffa, R.
Leveraging a cloud-based critical care registry for COVID-19 pandemic surveillance and research in Low- And middle-income countries ([Open Access](#))
- (2020) *JMIR Public Health and Surveillance*, 6 (4), art. no. e21939. Cited 2 times.
<https://publichealth.jmir.org/2020/4/e21939/PDF>
doi: 10.2196/21939
- [View at Publisher](#)
-
- 22 Hashmi, M., Taqi, A., Memon, M.I., Ali, S.M., Khaskheli, S., Sheharyar, M., Hayat, M., (...), Beane, A.
A national survey of critical care services in hospitals accredited for training in a lower-middle income country: Pakistan ([Open Access](#))
- (2020) *Journal of Critical Care*, 60, pp. 273-278. Cited 5 times.
<http://www.elsevier.com/inca/publications/store/6/2/3/1/4/3/index.htm>
doi: 10.1016/j.jcrc.2020.08.017
- [View at Publisher](#)
-
- 23 Tirupakuzhi Vijayaraghavan, B.K., Priyadarshini, D., Rashan, A., Beane, A., Venkataraman, R., Ramakrishnan, N., Haniffa, R., (...), Selva, J.
Validation of a simplified risk prediction model using a cloud based critical care registry in a lower-middle income country ([Open Access](#))
- (2020) *PLoS ONE*, 15 (12 December), art. no. e0244989. Cited 2 times.
<https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0244989&type=printable>
doi: 10.1371/journal.pone.0244989
- [View at Publisher](#)

- 24 Rabin, R., Gudex, C., Selai, C., Herdman, M.
From translation to version management: A history and review of methods for the cultural adaptation of the euroqol five-dimensional questionnaire ([Open Access](#))

(2014) *Value in Health*, 17 (1), pp. 70-76. Cited 106 times.
doi: 10.1016/j.jval.2013.10.006

[View at Publisher](#)
-
- 25 Herbert, M.A., Prince, S.L., Williams, J.L., Magee, M.J., MacK, M.J.
Are unaudited records from an outcomes registry database accurate?

(2004) *Annals of Thoracic Surgery*, 77 (6), pp. 1960-1964. Cited 68 times.
doi: 10.1016/j.athoracsur.2003.12.018

[View at Publisher](#)
-
- 26 Perner, A., Bellomo, R., Møller, M.H.
Is research from databases reliable? No ([Open Access](#))

(2019) *Intensive Care Medicine*, 45 (1), pp. 115-117. Cited 4 times.
link.springer.de/link/service/journals/00134/index.htm
doi: 10.1007/s00134-018-5073-4

[View at Publisher](#)
-
- 27 Litton, E., Guidet, B., de Lange, D.
National registries: Lessons learnt from quality improvement initiatives in intensive care

(2020) *Journal of Critical Care*, 60, pp. 311-318. Cited 2 times.
<http://www.elsevier.com/inca/publications/store/6/2/3/1/4/3/index.htm>
doi: 10.1016/j.jcrc.2020.08.012

[View at Publisher](#)
-
- 28 Dongelmans, D.A., Pilcher, D., Beane, A., Soares, M., del Pilar Arias Lopez, M., Fernandez, A., Guidet, B., (...), Salluh, J.I.F.
Linking of global intensive care (LOGIC): An international benchmarking in critical care initiative ([Open Access](#))

(2020) *Journal of Critical Care*, 60, pp. 305-310. Cited 6 times.
<http://www.elsevier.com/inca/publications/store/6/2/3/1/4/3/index.htm>
doi: 10.1016/j.jcrc.2020.08.031

[View at Publisher](#)
-
- 29 Arabi, Y.M., Phua, J., Koh, Y., Du, B., Faruq, M.O., Nishimura, M., Fang, W.-F., (...), Sadat, M.
Structure, Organization, and Delivery of Critical Care in Asian ICUs

(2016) *Critical Care Medicine*, 44 (10), pp. e940-e948. Cited 39 times.
<http://journals.lww.com/ccmjournal/pages/default.aspx>
doi: 10.1097/CCM.0000000000001854

[View at Publisher](#)
-

- 30 Frieden, T.R.
Evidence for health decision making-beyond randomized, controlled trials ([Open Access](#))
- (2017) *New England Journal of Medicine*, 377 (5), pp. 465-475. Cited 363 times.
<http://www.nejm.org/doi/pdf/10.1056/NEJMra1614394>
doi: 10.1056/NEJMra1614394


[View at Publisher](#)

- 31 Angus, D.C., Derde, L., Al-Beidh, F., Annane, D., Arabi, Y., Beane, A., Van Bentum-Puijk, W., (...), Gordon, A.C.
Effect of Hydrocortisone on Mortality and Organ Support in Patients with Severe COVID-19: The REMAP-CAP COVID-19 Corticosteroid Domain Randomized Clinical Trial ([Open Access](#))
- (2020) *JAMA - Journal of the American Medical Association*, 324 (13), pp. 1317-1329. Cited 301 times.
<http://jama.jamanetwork.com/journal.aspx>
doi: 10.1001/jama.2020.17022

[View at Publisher](#)

- 32 Gordon, A.C., Mouncey, P.R., Al-Beidh, F., Rowan, K.M., Nichol, A.D., Arabi, Y.M., Annane, D., (...), Derde, L.P.G.
Interleukin-6 receptor antagonists in critically ill patients with covid-19 ([Open Access](#))
- (2021) *New England Journal of Medicine*, 384 (16), pp. 1491-1502. Cited 414 times.
<http://www.nejm.org/medical-index>
doi: 10.1056/NEJMoa2100433

[View at Publisher](#)

 Pisani, L.; Mahidol Oxford Tropical Research Unit, Bangkok, Thailand;
email: luigipisani@gmail.com
© Copyright 2022 Elsevier B.V., All rights reserved.

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語に切り替える](#)

[切换到简体中文](#)

[切换到繁體中文](#)

[Русский язык](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗

Copyright © Elsevier B.V. ↗. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

