

Template for eResearch Africa 2017

Poster Submissions

Stevan Bruijns (1), Mmapeladi Maesela (2), Suniti Sinha (2), Megan Banner (3)

1. Senior lecturer, University of Cape Town, Cape Town, SOUTH AFRICA, stevan.bruijns@uct.ac.za
2. Medical student, University of Cape Town, Cape Town, SOUTH AFRICA, MSLMMA003@myuct.ac.za and SNHSUN002@myuct.ac.za
3. Services coordinator, African Federation for Emergency Medicine, Cape Town, SOUTH AFRICA, banner.megan@gmail.com

Title	DR
Full name	STEVAN RAYNIER BRUIJNS
Institution	UNIVERSITY OF CAPE TOWN
Country	SOUTH AFRICA
Corresponding Author's Email	STEVAN.BRUIJNS@UCT.AC.ZA
Focus area	KNOWLEDGE GAP, PUBLICATIONS

ABSTRACT

Notes:

- The abstract should be no longer than two pages using this template. A third page can be used for information about the authors.
- Your submission should include a short abstract of no more than 300 words in the space provided above. Submit all extended abstracts as a PDF attachment to your submission via email, conference@ereseach.ac.za and cc: cindy.mathys@uct.ac.za.
- Navigate to www.ereseach.ac.za | **Participate** for information on submission guidelines.

Poor local access to African emergency care publications without publisher subscription, a cross-sectional study

Background: Based on relative population size, burden of disease, morbidity, and mortality emergency care publication output from low- and middle-income regions is disproportionately lower than that of high-income regions. Ironically, output from regions with higher publication rates often doesn't apply in the African context. Resultantly the dissemination of, and access to local research is essential to local the local knowledge economy. However, access to, and the cost of access to African research remains unknown.

Objective: To describe access to African emergency care publications in terms of publisher-based access (open access or subscription), alternate access (self-archived or author provided), and the cost of access.

Methods: A retrospective, cross-sectional study using all emergency medicine publications included in Scopus between 2011 and 2015. A sequential search strategy described access to each article, and mean article access or processing charges were calculated against the World Health Organization Purchasing Power

Parity index, to describe out-of-pocket expense. Purchasing power parity is based on the hypothesis that similar items cost the same everywhere irrespective of currency differences. The index describes the deviation from parity.

Results: We included 666 publications from 49 journals and 395 (59.3%) were open access. For subscription-based articles, 106 (39.1%) were self-archived, 60 (22.1%) were author-provided, and 105 (38.8%) were inaccessible. The mean article access, and process charges were respectively \$41.50 (standard deviation of \$9.60) from 30 journals, and \$2412.67 (standard deviation of \$784.10) from 32 journals. Regarding purchasing power, \$41.50 had the same purchasing power in the United States that \$17.96 had in South Africa, \$11.87 had in Ghana, and \$14.86 had in Tanzania. Likewise, \$2412.67 had the same purchasing power in the United States that \$1044.26 had in South Africa, \$690.14 had in Ghana, and \$863.75 had in Tanzania. Accordingly, the cost of a single unit article access/ process charge will require 2.3, 3.5 and 2.8 times more out-of-pocket expenditure respectively for South African, Ghanaian and Tanzanian authors, than for American authors.

Conclusion: One-in-six African emergency care publications are inaccessible outside institutional library subscriptions. Researchers without library access must be content with searching for self-archived publications or contacting authors for a copy, as article access charges are very prohibitive. These costs are likely a major driver for access through less ethical means of access (such as Libgen and Sci-Hub). Low-and middle-income populations (eg. Eastern Europe, Africa, South America, Asia, etc.) make up around 85% of the world's population, of which the vast majority will have similar access issues. Publishers should strongly consider revising pricing policies to allow more equitable access to publications for researchers from poorer regions.

Short abstract (250 words)

Background: Based on relative population size, burden of disease, morbidity, and mortality emergency care publication output from low- and middle-income regions is disproportionately lower than that of high-income regions. Ironically, output from regions with higher publication rates often doesn't apply in the African context. Resultantly the dissemination of, and access to local research is essential to local researchers. However, access to, and the cost of access to African research remains unknown.

Objective: To describe access to African emergency care publications in terms of publisher-based access (open access or subscription), alternate access (self-archived or author provided), and the cost of access.

Methods: A retrospective, cross-sectional study using all emergency medicine publications included in Scopus between 2011 and 2015. A sequential search strategy described access to each article, and mean article access or processing charges were calculated against the purchasing power parity index (to describe out-of-pocket expense).

Results: We included 666 publications from 49 journals and 395 (59.3%) were open access. For subscription-based articles, 106 (39.1%) were self-archived, 60 (22.1%) were author-provided, and 105 (38.8%) were inaccessible. The mean article access, and processing charges was \$41.50, and \$2412.67 respectively. Based on purchasing power, out-of-pocket cost was respectively 2.3, 3.5 and 2.8 times more for South African, Ghanaian and Tanzanian authors than American authors.

Conclusion: One-in-six African emergency care publications are inaccessible outside institutional library subscriptions; additionally, the cost of access to publications locally appears prohibitive. Publishers should strongly consider revising pricing for more equitable access for researchers from low- and middle-income settings.

ABOUT THE AUTHOR(S)

1. Stevan Bruijns

Stevan Bruijns is a senior lecturer at the University of Cape Town. His interests include triage, research mentorship and the emergency care knowledge gap. He is the editor-in-chief for the African Journal of Emergency medicine and has held this position since the journal was founded seven years ago. He lives in Wellington with his family.

2. Mmapeladi Maesela (medical student)

3. Suniti Sinha (medical student)

4. Megan Banner

Megan Banner is from Rhode Island in the US, and has a background in microbiology and wilderness first response. She has recently completed an MSc in Emergency Medicine from the University of Cape Town. She is the services coordinator for African Federation for Emergency Medicine, and works primarily as the manager of the Author Assist program and as AfJEM's technical editor.