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EDITORIAL

Pioneering Open Science in Bangladesh: A call to action for Data Article adoption

M Mostafa Zaman[1] | Tanvir C Turin[2] | Md Shahinul Alam[3]

[1]Department of Public Health and Informatics, Bangabandhu Sheikh Mujib Medical University (currently, Bangladesh Medical University), Dhaka, Bangladesh

[2]Department of Family Medicine, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada

[3]Department of Hepatology, Bangabandhu Sheikh Mujib Medical University (currently, Bangladesh Medical University), Dhaka, Bangladesh

Correspondence
M Mostafa Zaman
zamanmm@bsmmu.edu.bd

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Open Science principles demand that research data be accessible and reusable [1]. This commitment is acutely very relevant for Bangladesh, where vast health datasets remain siloed despite their potential to accelerate scientific progress. As one of the world's most densely populated nations (~170 million) [2], Bangladesh's healthcare infrastructure includes large hospitals managing thousands of inpatient admissions and vast outpatient volumes on a daily basis. These facilities generate a wealth of patient data both in the form of health administrative data (*e.g.,* diagnoses, vital statistics, billing records) and health care records (*e.g.,* clinical notes, lab results). Though primarily generated for operational purposes or clinical care—not research—these datasets exhibit significant potential for secondary use in health research [3]. Recognised globally as secondary data, they enable research in epidemiology, surveillance, healthcare utilisation patterns, health economics, health system performance or policy research [3]. Data Articles [4] offer a powerful mechanism to align these secondary data with Open Science goals [1] and accelerate the growth of scientific research in Bangladesh. Data Article, also known as a Data Note, Data Paper, or Database Article, is a type of scientific publication focused on the detailed description of a dataset, rather than presenting new research findings, theories, or interpretations [4]. The primary aim is to make datasets more visible, accessible, and reusable for the wider research community. For Bangladesh's rapidly evolving health research landscape, this represents a strategic opportunity. Systematically publishing existing data as Data Articles will democratise access to local evidence, incentivise data quality, and position Bangladeshi institutions as contributors to global science.

Publishing Data Articles is still relatively underutilised, despite the presence of more than 200 dedicated journals [5]. A few journals began this journey long ago. These articles are peer-reviewed publications that exclusively describe datasets, detailing their structure, collection methodologies, and reuse potential without hypothesis testing (such as using statistical tests typically employed in conventional analytical studies) or novel interpretation. Crucially, they transform raw data into FAIR-aligned [6] scholarly assets by providing comprehensive contextual metadata that exceeds standalone repository documentation. This is especially important for the secondary data due to the concern exist regarding their quality, completeness, preservation, sensitivity/specificity, and reusability.

Datasets published through Data Articles are increasingly being recognised as scholarly products [7]. These are citable publications conferring academic credits to authors. While distinct from analytical research papers, these peer-reviewed papers provide essential contextual metadata that

Key messages

Big hospital datasets in Bangladesh remain siloed despite their potential to accelerate scientific progress. Though primarily generated for clinical care—not research—these datasets exhibit significant potential for secondary use. Data Articles offer a powerful mechanism to align these data to accelerate the growth of scientific evidence. A Data Article focuses on describing a dataset and key findings rather than testing hypothesis or interpretations. It makes datasets more visible, accessible and reusable. Pioneering this movement in Bangladesh, the Bangabandhu Sheikh Mujib Medical University Journal launches a dedicated Data Article category, creating a pathway for sharing routine hospital data of scientific importance.

exceeds standalone repository records, enhancing reproducibility and reuse potential. To ensure ethical compliance and FAIR alignment, datasets must be rigorously anonymised, deposited in certified repositories, and shared under open licenses.

Pioneering this movement in Bangladesh, the Bangabandhu Sheikh Mujib Medical University Journal (BSMMUJ) will launch a dedicated Data Article category in July 2025. This initiative creates a formal pathway for sharing routine healthcare data of scientific importance, following the FAIR (Findable, Accessible, Interoperable, and Reusable) principles [6].

The format of Data Articles differs from that of other conventional research articles. As Bangladesh's inaugural initiative, we outline the key features of Data Article for implementation by BSMMUJ:

A. The anonymised dataset and metadata must be deposited in a certified repository and made available for reuse under a standard open licence (*e.g.,* CC BY 4.0) and DOI [4]. Manuscripts must include a permanent repository link. Trusted data repositories (such as Figshare, Mendeley Data, Zenodo, Harvard Dataverse) need to be used. In the long run, BSMMUJ shall create its own repository.

B. A Data Article should include the following components:
   1. The Introduction should provide the background and introduce the dataset. It should justify the publication of such a dataset with a confocal objective.
   2. The Methods should describe the acquisition of data, processing/cleaning procedures, its completeness, accuracy, limitations, and accessibility. Any transformation of data (*e.g.,* the creation of new or dummy variables) should be described. Any related articles already published from the dataset should be mentioned.
   3. The Findings should be limited to descriptive summary only (*e.g.,* frequencies, distributions) using ≤5 tables/figures. Inferential statistics should be avoided.
   4. The Discussion should focus on the value of the data, comparing and contrasting similar datasets. However, interpretation and conclusion should be avoided. Data limitations and potential areas for improvement should be identified. Finally, comments may be made regarding the utility of the dataset without drawing any conclusions.

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Conflict of interest

We do not have any conflict of interest

Data availability statement

We confirm that the data supporting the findings of the study will be shared upon reasonable request.

Supplementary file

None

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