Submission to the Journal Of Biomedical Engineering Systems and Technologies for Low- and Middle-Income Countries (BEST-LMIC)

Instructions to authors

Use this template, replacing all parts highlighted in yellow by your own text (remove the highlighting). For **guidance** see the *Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals*.
http://www.icmje.org/recommendations

Before preparing manuscript for submission, read carefully the **submission guidance of the journal**:

Select 3-6 **keywords**

Each **bibliographic reference** in the text should be identified by a number in superscript[1] in order of appearance and be listed in numerical order at the end. That is, the piece of literature that is referred to first in the text should also be the first one in the list of references at the end, regardless of the alphabetic order. Word's *Insert Cross-reference* function (under the *References* pull-down menu / *Captions*) can be used to insert a **semi-automatically updating** reference in the text. Select *Reference type: Numbered item*, *Insert reference to: Paragraph number*, clear the box *Insert as hyperlink*. To refer to authors by name, use 'according to Author et al.[2] …'. Software for referencing such as EndNote Basic, Mendeley (free), RefWorks, Zotero (Select the "Vancouver (Superscript)" style template) can be used To refer to more than one piece of literature in the same place, list the references with commas between them [1,2].

Apply the **referencing style** as used by the U.S. National Library for Medicine (NLM) for examples, see http://www.nlm.nih.gov/bsd/uniform_requirements.html

Abbreviations for journals can be found e.g. at
http://www.ncbi.nlm.nih.gov/nlmcatalog/journals
http://www.efm.leeds.ac.uk/~mark/ISIabbr/

This first page will not be included in the **double-blind review** process – reviewers will not know the identity of the author(s) and the author(s) will not know the identities of the reviewer(s). The author information will be moved to the final camera-ready submission.

Author information page

This page has to be submitted in a separate file which is clearly named Author Information for the manuscript on …..(title of the manuscript).

Title (style title)

First Author [1,*], Second Author [2], Third Author [1,3]

[1] First Institution, City, Country
[2] Second Institution, City, Country
[3] Third Institution, City, Country

***Corresponding author**: First Author (email: name@domain)

Acknowledgements

To pertain anonymity, the acknowledgements section is included here and not in the manuscript file submitted for reviewing. In the final camera-ready version this shall be included at the end of the conclusion section as it appears in the published manuscripts on our platform, remember to acknowledge funding, project, persons other than the authors who contributed significantly, etc.

Authors' Contributions

To pertain anonymity, the Author's Contribution section is included here and not in the manuscript file submitted for reviewing. In the final camera-ready version this shall be included at the end of the acknowledgement section as it appears in the published manuscripts on our platform, remember to highlight the work that each author did in the carrying out of the study and development of this manuscript.

Declaration of Interests

To pertain anonymity, the Declaration of Interests section is included here and not in the manuscript file submitted for reviewing. In the final camera-ready version this shall be included at the end of the Author's Contribution section as it appears in the published manuscripts on our platform either remove the paragraph on conflicts of interest or state if an author was for example employed by an organization that was studied. A possible conflict of interest does not prevent the paper from being published, but it must be declared explicitly.

Title Of Field Report Or Case Study (style title)

(Author names will go here in the final paper - leave empty when submitting for reviewing)

(Author affiliations will go here in the final paper - leave empty when submitting for reviewing)

Abstract

Provide an abstract of up to 261 (headings included) words structured under the headings provided.

Background and Purpose: Provide a structured abstract of up to 256 words. Detail the clinical facility setting, asset profile, and baseline downtime barriers and or the healthcare sector affected and being studied or reported.

The Problem / Case Presentation: Detail the hardware failure modes, supply chain bottlenecks, or environmental factors that caused clinical service disruption.

Solution and Field Intervention: Summarize the clinical engineering repair workflow, localization adaptations, tool validation, or open hardware integrations executed.

Impact and Lessons: State the quantified improvements in percentages, recommendations and or policy conclusions.

Keywords: *First keyword, Second keyword, Third keyword*.

1 Introduction

Provide a clear technical explanation of the specific medical device/technology vulnerability, infrastructure constraint, or cost barrier currently affecting equipment uptime or safety in LMIC clinics. Explain precisely why standard commercial architectures fail or are unsustainable in resource-constrained contexts. (style Normal)

More text. (style Normal)

1.1 Subheading (style heading2)

Subheadings that signpost the presentation are encouraged, especially in the *Results* section. If subsections or sub-subsections are used, there must always be at least two of them within the higher level section in question.

More text. (style Normal)

1.1.1 Sub-subheading (style heading3)

Sub-subheadings are **not** recommended but can be used if needed for clarity. (style Normal)

More text. (style Normal)

1.1.2 Sub-subheading (style heading3)

Sub-subheadings are **not** recommended but can be used if needed for clarity. (style Normal)

More text. (style Normal)

1.2 Subheading (style heading2)

Subheadings that signpost the presentation are encouraged. (style Normal)

The use of figures and tables is encouraged. To insert a figure, first add a paragraph using the style *image* and then insert the figure (select *Wrapping*: *In line with text*). Then click the figure, select *References -> Insert caption* (Select *Label*: *Figure*) and enter the caption text. Then click the caption text and change the paragraph style to *figurecaption*. See the example below. A figure must always be explained in the text (Figure 1).

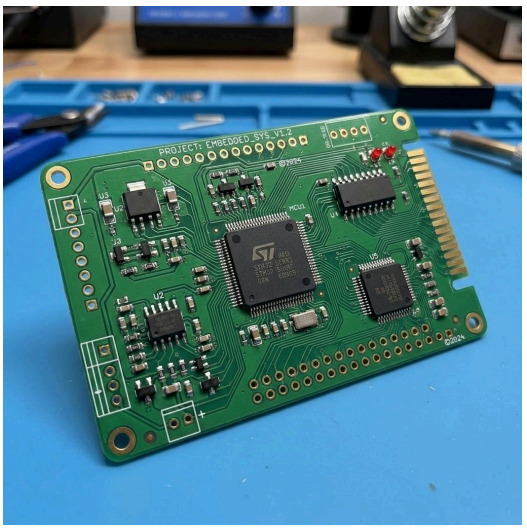

Figure 1. *This is caption text.*

The paragraph following a figure or table should be in the style *Normal*. A table must always be explained in the text (Table 1). It must also have a caption (above the table) in the style *tablecaption*. See the example below.

Table 1. *This is a sample table caption.*

Table heading	**Table heading**	**Table heading**
Table entry	Table entry	Table entry

Table entry	Table entry	Table entry

The paragraph following a figure or table should be in the style *Normal*. A short quotation citing a person or taken word-by-word from can be embedded in the normal text in quotation marks in italics, indicating the source after the quotation: "*this is a quotation from B.A. Bauthor*".[2] Longer quotations should be inserted as separate paragraphs in quotation marks as follows, indicating the source of the quotation:

"This is a verbatim quotation from what a person said." (Interviewee 23)

The paragraph following a quotation should be in the style *Normal*.

- This is an example of a bulleted list. (style List Paragraph)
- This is an example of a bulleted list. (style List Paragraph)

2. Material and Methods

The Methods section should include only information that was available at the time the plan or protocol for the study was being written; all information obtained during the study belongs in the Results section. Identify the *methods and procedures* in sufficient detail to allow others to reproduce the results. Give references to established methods; provide references and brief descriptions for methods that have been published but are not well-known; describe new or substantially modified methods, give the reasons for using them, and evaluate their limitations.

If the research involved human subjects, you must include a clear statement of the *ethical approvals* by appropriate bodies and of the way the subjects' *free and informed consent* was obtained. Describe your selection of the observational or experimental participants clearly, including eligibility and exclusion criteria and a description of the source population.

3. Results

Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat all the data in the tables or illustrations in the text; emphasize or summarize only the most important observations. Extra or supplementary materials and technical detail can be placed in an appendix where they will be accessible but will not interrupt the flow of the text.

When data are summarized in the Results section, give numeric results not only as derivatives (for example, percentages) but also as the absolute numbers from which the derivatives were calculated, and specify the statistical methods used to analyze them. Restrict tables and figures to those needed to explain the argument of the paper and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables.

4. Discussion

Emphasize the new and systemic insights gained from this field deployment and the operational

conclusions that follow in the context of broader LMIC clinical engineering challenges. Briefly summarize the main field interventions, explore the underlying technical causes behind maintenance success or recurrent failures, state specific regional supply chain limitations, analyze technician capacity requirements, and explore economic replication scaling barriers.

5. Conclusion (and Recommendations)

Link the operational conclusions with the initial goals of the field report but avoid unqualified narrative statements not supported by log data. Deliver actionable, systemic recommendations directed at facility procurement heads, technology donors, or national ministries of health to prevent identical technology failure loops from recurring across regional health facilities.

The AI Declaration

Option A; If Generative AI or AI-Assisted Tools Were Utilized:

Tool / Engine Details: [Specify tool name and version, e.g., ChatGPT-4o, Claude 3.5 Sonnet, Grammarly Pro]

Operational Scope: Explicitly detail sections and tasks modified, e.g., "Generative AI assistance was utilized strictly for grammatical refining, line-editing translation phrasing, and structural formatting in Section 2 (Material and Methods) and Section 4 (Discussion)."

Affirmation of Human Oversight: The authors formally affirm that all core scientific calculations, experimental findings, diagnostic data, biological assay results, and literature interpretations were verified by human oversight, and the authors assume full responsibility for the absolute authenticity and scientific integrity of the manuscript content.

Option B; If NO Generative AI Tools Were Utilized: "The authors declare that no generative artificial intelligence tools or automated language models were used during the creation, experimental analysis, translation, or structural formatting of this manuscript.

References

1. Author A, Bauthor BA, Cauthor C. Title of journal article: Subtitle of journal article. Journal Abbreviation. year;vol(number):firstpage-lastpage. Available from: http://www.domain/page
1. Bauthor BA. Title of Book: Subtitle of Book. Publisher-hometown: Publisher; year.
2. Cauthor C, Author A. Title of conference paper. In: Editor E,

Feditor F, editors. Title of Proceedings. Conference Name; conference-year month dates; City, Country. Publisher-hometown: Publisher; year. p. firstpage-lastpage.

3. Website title [Internet]. Publisher-hometown: Publisher; [cited year month date]. Available from: http://www.domain/page