Scoping review on enabling environments to support the digital health solutions in Bangladesh, India, Indonesia, Malaysia and Pakistan

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Introduction

Digital health can support healthcare in low- and middle-income countries (LMICs). We used five RESPIRE countries as exemplars (Bangladesh, India, Indonesia, Malaysia, Pakistan) to identify the digital health solutions that are valued in their local setting. Working together with local clinicians and researchers, we used open sources statistics and literature to explore digital health policy, available electricity/IT infrastructure, and socio-cultural factors influencing users' ability to access, adopt and utilise digital health

Methods

1. Establishing value

Questionnaire to local clinicians and researchers in RESPIRE

2. Identifying digital health public policy

Global Digital Health Index (GDHI) [1]

[1] HealthEnabled. Global Health Index. https://www.digitalhealthindex.org

3. Searching for evidence of infrastructure, design, and end user adoption

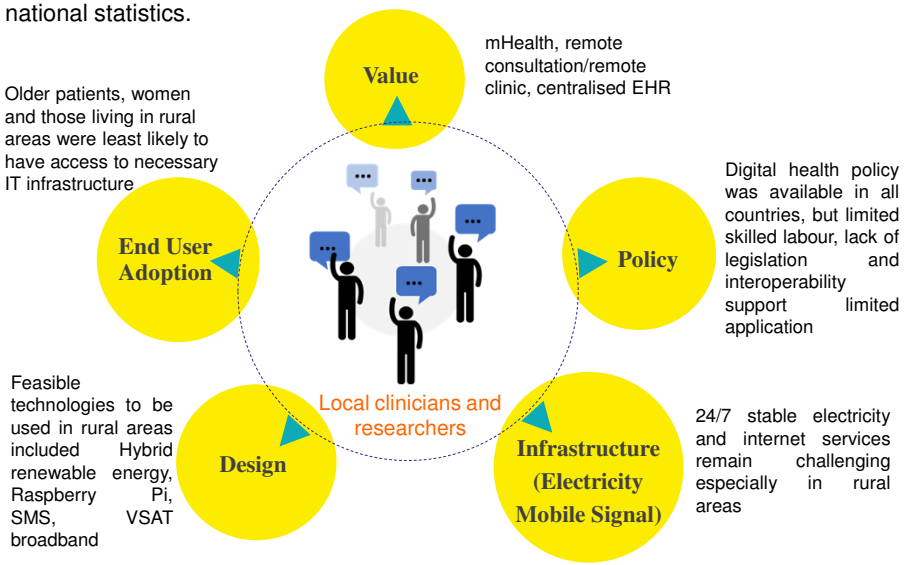
- Current status: open-source national/international statistics. E.g. National/WHO/International Telecommunication Union(ITU)/Groupe Spécial Mobile (GSMA)) and local news/articles/ government statistics
- Local relevant exemplars: 5 databases (2015-2021)

4. Local input to interpret relevance and adoption factors

Iteratively discussion with RESPIRE colleagues (co-authors)

Results

118 studies (2015-2021) and 114 supplementary online news articles and national statistics.



Implementation and Operation of Mobile Health projects roadmap [2]

[2] Zalzala AM, Roy A. Management of mobile health projects in developing countries: An empirical study. In 2017 IEEE 3rd International Forum on Research and Technologies for Society and Industry (RTSI) 2017 Sep 11 (pp. 1-6). IEEE.

Strength and limitations

- Our findings are specific to their South/South East Asian countries, though the approach and the open access sources used are likely to be applicable to other LMIC countries.
- In line with scoping review methodology, we did not assess quality and were reliant on the accuracy and completeness of the original authors' descriptions of their results and conclusions. There were missing data in the open source statistics, though we used studies and the local news articles to supplement the missing information.
- Finally we will have missed emerging technologies that were not indexed in the databases.

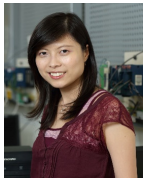
Conclusion

Digital health technology can support healthcare in LMIC communities, but projects need to consider the available infrastructure(especially in rural areas), adopt low-cost options and address the age/gender disparities.

Checklist for developing digital health

- Policy, legislation and standards compliance
- Explore the reality, unstable supply or 'patchy' coverage in rural areas
- Explore and ensure interoperability
- Allow adequate resources to support deployment and training for existing staff to operate the technologies
- Adoption cost. Understand local costing structure (landline internet vs mobile data/voice package)
- Digital inequalities. Be aware of the barriers. E.g. social norms and gender disparities in accessing mobile and internet, digital literacy and online safety to woman and disadvantaged groups
- Encourage adoption features. age, gender, and literacy, perceived usefulness, ease of use, service quality, the perceived trust and respond to users' needs.

Questions?



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Conflict of interest: CyH has received grant funding from the NIHR Global Health Research Centres: Research and Institutional Capacity Strengthening In NCDs (NIHR203250) and the Scottish Funding Council, The University of Edinburgh and GCRF Partnership Fund (PF_48) to plan and carry out the study works with the co authors in the RESPIRE team.