

Field Based Research in the Era of the Pandemic in Resource Limited Settings: Challenges and Lessons for the Future

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COVID-19 disrupted health systems, especially in the LMICs. However, **health illiteracy & scepticism, technological bottlenecks and ethical issues** hindered remote research methods. Utilizing **digital technology, promoting science communication, and encouraging research participation** could bolster future pandemic preparedness while making traditional approaches more holistic.

BACKGROUND

The COVID-19 pandemic caused over 776 million cases and 7 million deaths globally, severely impacting healthcare systems and economies, especially in low- and middle-income countries (LMICs). Research activities were delayed due to physical distancing, travel restrictions, and fund reallocation. This led to the adoption of remote methods like telephonic and web-based data collection, but LMICs faced challenges due to lower education levels and technological concerns. The paper focused on documenting some of these barriers and offered solutions based on a 2-year hospital-based prospective cohort study.

BARRIERS

We described a few impediments to epidemiological research during COVID-19 in a resource constrained setting, ranging from economic and digital issues, to privacy and ethical concerns.

Economic constraints, lack of awareness, and scepticism

Unavailability of digital records

Ensuring correctness of contact information

Dependence on smartphones and connectivity issues in rural areas

Decreased patient footfall in hospitals

Issues with privacy and ethical challenges

Maintaining respondent engagement and interest

Increased frequency of non-response and higher attrition

POSSIBLE SOLUTIONS

The importance of research increases multifold during a public health crisis. The new learnings can help elevate existing scientific approaches. We provided some short-term and long-term solutions to address a few of the above setbacks.

POSSIBLE SOLUTIONS (Contd.)

Improving health literacy

Encouraging science communication

Digitizing patient health records

Enhancing participation in scientific research

- Sharing benefits & risks of participation
- Instilling a sense of altruism
- Making data collection processes transparent
- Facilitating access to healthcare providers
- Addressing research hesitancy & building trust
- Offering flexible communication times
- Establishing multiple levels of contact
- Optimizing funds & utilizing technology

CONCLUSIONS

The pandemic has transformed research practices, revealing both challenges and opportunities. While remote research introduces unique concerns, it offers effective ways to refine research processes by leveraging technology, improving infrastructure, and increasing awareness. Experiences from COVID-19 highlight the value of integrating remote and traditional methods, promising more cost-effective outcomes. The transition may be complex, but the potential benefits make it a worthwhile endeavor for future scientific progress.

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