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A FOCUS ON PRECISION GLOBAL HEALTH:
WHAT ROLE CAN NOVEL TECHNOLOGIES AND PRACTICES PLAY IN THE PROVISION OF EQUITABLE ACCESS TO QUALITY CARE FOR TUBERCULOSIS (TB) PATIENTS IN LOW- AND MIDDLE-INCOME COUNTRIES?

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BACKGROUND

› Despite remarkable progress attributable to the TB control strategy, shortening the patients' pathways and reducing the economic burden of disease remain major global health challenges.

› Innovative practices in digital health reached the forefront for many stakeholders.

› In a context of medical pluralism, evidence is needed to highlight the potential impact of digital health to improve programmatic efficiency and effectiveness.

AIM

To showcase innovations intended to ease affordable access to quality care services and health equity.

METHOD

Simplified systematic review – A rapid review (RR) of the literature is being conducted over a 8-week period of time. Several components of the systematic review process have been simplified or omitted to produce the preliminary results.

Depth and breadth of the RR dimensions and steps:

Dimensions	Steps
Scope defined	› For the preliminary stage of research, the study question has been limited to novel interventions to improve TB diagnosis.
	› The scope of research will then be extended to TB treatment.
Research questions formulated	› Globally, Can precision global health be a critical investment to improve equitable access to quality care in resource-poor settings?
	› More particularly, the refined questions: From the user's perspective, what is the economic value associated with incremental beneficial that may result from novel diagnosis interventions, versus comparators?
Comprehensiveness	› Search strategy primarily targeted existing (systematic) reviews and RCTs and excluded grey literature, editorials or letters due to incomplete data.
	› Key search terms denoted rapid diagnostic testing, digital technologies and economic burden of disease. Combined terms were primarily used to explore relevant literature from MEDLINE/Pubmed.
Inclusion criteria	› Only studies with a control group and which reported effect estimates for the economic burden of disease will be retained.
Study selection and quality control process	› Dual study data selection and extraction has been eliminated for the preliminary stage of research.
	› After preliminary search, a peer review (external or internal) will be performed to independently screen all titles and abstracts for eligibility. Ultimately, a detailed review (full-text articles assessment) of the retained references will be conducted to appraise the final product.
Transparent reporting	› Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram for selection of studies will be completed.
	› Potential limitations or bias that may have been introduced by the methodological concessions will be described.
Conclusions	› Further knowledge synthesis from the studies included will be processed for the TB diagnostic and treatment aspects.

NARRATIVE SYNTHESIS OF THE PRELIMINARY RESULTS

› Early diagnosis and immediate initiation of treatment are essential for an effective TB control program.

› Numerous pilot studies are run for patient care, surveillance and monitoring, programmatic management and stakeholders' education to tackle the new global health challenges. Areas covered by novel technologies include rapid diagnostic testing, diagnosis accuracy, e-notification, e-learning and communication and management tools.

› Novel digital health interventions are primarily aimed to shorten time delays (patient and health system delays) in diagnosis and improve diagnosis accuracy.

› Relatively few TB-related studies have isolated the impact of digital health interventions such as rapid diagnostic testing on the incidence of catastrophic and impoverishing health expenditure.

DISCUSSION

› RR is intended to produce evidence in a short timeframe in support to the efforts and policy decisions made within the End TB Strategy to attain the third global goal of reducing the incidence of catastrophic expenditure associated with TB, a newly adopted goal for 2035. We attempted to review success formulas and pitfalls of digital health interventions with respect to the affordable and equitable access to quality TB diagnosis care services.

› The use of digital health in diagnosis may add value where delayed and inaccurate diagnosis tend to contribute to increased financial risk for the TB patients.

› Tackling the interconnected challenges of the global TB targets would require a better knowledge of the effects of the novel interventions, related challenges in precision global health, and subsequently effective translation of the evidence base into patient-centred solutions. The use of a framework analysis to assess the effects of digital health may support informed policy.

KEYWORDS

Precision global health, catastrophic health expenditure, digital health, equitable access to quality care, financial protection for health, informed policy-making

PRIOR REFERENCE

Laokri S. Collaborative Approaches and Policy Opportunities for Accelerated Progress toward Effective Disease Prevention, Care, and Control: Using the Case of Poverty Diseases to Explore Universal Access to Affordable Health Care. Front Med. 2017 [cited 2017 Aug 25];4.

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