

Translational Impact Research Helps Generate Action-based Programmes for the Community in Need: Highlights of Published Papers in Global Esteemed Journals

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ABSTRACT

(1) This Brazil-based study on the cost-effective issue of tuberculosis preventive treatment (TPT) about disability-adjusted life-years (DALYs) is appreciated, but we don't know whether or not the cost of US\$242 per DALYs is a cost-effective model for all resources in poor countries because the individual countries have their own different economic indices, which may not be applicable to the same model for all. It will need to check the situation in individual countries to set the TPT initiative. (2) Flu-like symptoms and pus-filled skin lesions are usually the clinical manifestation of Monkey Pox (mpox). This month, WHO declared mpox a global public health emergency. An outbreak has happened in the Democratic Republic of Congo with a new version of mpox, i.e., clade 1b. Certainly, there is a potential threat of cross-border transmission (human-to-human) of this infection. WHO has arranged funding to disburse among the member-state countries suffering from the outbreak. In the United Kingdom, there are a few cases have been reported. We must be vigilant to avoid any outbreak of this infection. (3) It is a challenge for all countries to deliver their primary health services (PHS) for non-communicable diseases (NCDs) today. On this challenge, a study using the convergent mix method was carried out. In this study, the contextual factors were well-identified in low or middle-income countries (LMIC) located in East Asia and Pacific, sub-Saharan Africa, South Asia, Latin America and the Caribbean countries, including less-well-off population groups, located within high-income countries. The outcome was measured by collating data from 84 similar studies. The study recommends that individual countries will require a consistent strategy to strengthen their public health care (PHC) system to improve their NCDs.

Keywords: British Medical Journal, Medical Care, Outbreak, The Lancet Global, Translational research, WHO Global Health.

The British Journal of Translational Global Health (2024): 10.5005/bjotgh-11016-0009

(1) Title: The Lancet Global Health

Cost-effectiveness and health impact of screening and treatment of *Mycobacterium tuberculosis* infection among formerly incarcerated individuals in Brazil: a Markov modelling study.

Source: van Lieshout Titan, Ana, et al. *The Lancet Global Health*, Volume 12, Issue 9, e1446–e1455.

ABSTRACT

Background

Individuals who were formerly incarcerated have high tuberculosis incidence but are generally not considered among the risk groups eligible for tuberculosis prevention. We investigated the potential health impact and cost-effectiveness of *Mycobacterium tuberculosis* infection screening and tuberculosis preventive treatment (TPT) for individuals who were formerly incarcerated in Brazil.

Methods

Using published evidence for Brazil, we constructed a Markov state transition model estimating tuberculosis-related health outcomes and costs among individuals who were formerly incarcerated by simulating transitions between health states over time. The analysis compared tuberculosis infection screening and TPT to no screening, considering a combination of *M. tuberculosis* infection tests and TPT regimens. We quantified health effects as reductions in tuberculosis cases, tuberculosis deaths and disability-adjusted life-years (DALYs). We assessed costs from a tuberculosis programme perspective. We

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report intervention cost-effectiveness as the incremental costs per DALY averted and tested how results changed across subgroups of the target population.

Findings

Compared with no intervention, an intervention incorporating tuberculin skin testing and treatment with 3 months of isoniazid and rifapentine would avert 31 (95% uncertainty interval 14–56) lifetime tuberculosis cases and 4.1 (1.4–5.8) lifetime tuberculosis deaths per 1,000 individuals and cost US\$242 per DALY averted. All test and regimen combinations were cost-effective compared with no screening. Younger age, longer incarceration, and more recent prison release were each associated with significantly greater

health benefits and more favourable cost-effectiveness ratios, although the intervention was cost-effective for all subgroups examined.

Interpretation

"M. tuberculosis infection screening and TPT for individuals who were formerly incarcerated appear cost-effective and would provide valuable health gains."

Source: [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(24\)00221-3/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(24)00221-3/fulltext).

Our Comment

This Brazil-based study on the cost-effective issue of Tuberculosis preventive treatment (TPT) about disability-adjusted life-years (DALYs) is appreciated, but we don't know whether or not the cost of US\$ 242 per DALYs is a cost-effective model for all resources in poor countries because the individual countries have their own different economic indices, which may not be applicable to the same model for all. It will need to check the situation in individual countries to set the TPT initiative.

(2) Title: WHO Global Health

ABSTRACT

"Global strategic preparedness and response plan launched by WHO to contain the mpox outbreak".

The World Health Organization (WHO) today launched a global Strategic Preparedness and Response Plan to stop outbreaks of human-to-human transmission of mpox through coordinated global, regional and national efforts. This follows the declaration of a public health emergency of international concern by the WHO Director-General on 14 August.

The current plan is subject to inputs by Member States, who were briefed on the plan on Friday, 23 August.

The plan covers the 6-month period of September 2024–February 2025, envisioning a US\$135 million funding need for the response by WHO, Member States, partners including Africa Centres for Disease Control and Prevention (Africa CDC), communities and researchers, among others. A funding appeal for what WHO needs to deliver on the plan will be launched shortly.

The plan, which builds on the temporary recommendations and standing recommendations issued by the WHO Director-General, focuses on implementing comprehensive surveillance, prevention, readiness and response strategies; advancing research and equitable access to medical countermeasures like diagnostic tests and vaccines; minimising animal-to-human transmission; and empowering communities to actively participate in outbreak prevention and control.

Strategic vaccination efforts will focus on individuals at the highest risk, including close contacts of recent cases and healthcare workers, to interrupt transmission chains.

At the global level, the emphasis is on strategic leadership, timely evidence-based guidance, and access to medical countermeasures for the most at-risk groups in affected countries.

World Health Organization is working with a broad range of international, regional, national and local partners and networks to enhance coordination across key areas of preparedness, readiness and response. This includes engagement with the ACT-Accelerator

Principals group; the Standing Committee on Health Emergency Prevention, Preparedness and Response; the R&D Blueprint for Epidemics; and the interim Medical Counter Measures Network (i-MCM Net).

The WHO R&D Blueprint, along with Africa CDC, the Coalition for Epidemic Preparedness Innovations (CEPI) and the National Institute of Allergy and Infectious Diseases, will host a virtual scientific conference on 29–30 August 2024 to align mpox research with outbreak control goals.

"The mpox outbreaks in the Democratic Republic of the Congo and neighbouring countries can be controlled, and can be stopped," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "Doing so requires a comprehensive and coordinated plan of action between international agencies and national and local partners, civil society, researchers and manufacturers, and our Member States. This SPRP provides that plan, based on the principles of equity, global solidarity, community empowerment, human rights, and coordination across sectors."

World Health Organization headquarters and regional offices have established incident management support teams to lead preparedness, readiness and response activities and are significantly scaling up staff in affected countries.

Within the Africa Region, where need is greatest, the WHO Regional Office for Africa (AFRO), in collaboration with Africa CDC, will jointly spearhead the coordination of mpox response efforts. WHO AFRO and Africa CDC have agreed on a one-plan, one-budget approach as part of the Africa Continental Mpox Strategic Preparedness and Response Plan, currently under preparation.

"At the national and sub-national level, health authorities will adapt strategies in response to current epidemiological trends."

Source: <https://www.who.int/news/item/26-08-2024-global-strategic-preparedness-and-response-plan-launched-by-who-to-contain-mpox-outbreak>

Our Comment

Flu-like symptoms and pus-filled skin lesions are usually the clinical manifestation of Monkey pox (mpox). This month, WHO declared mpox a global public health emergency. An outbreak has happened in the Democratic Republic of Congo with a new version of mpox, i.e., clade 1b. Certainly, there is a potential threat of cross-border transmission (human-to-human) of this infection. World Health Organization has arranged funding to disburse among the member-state countries suffering from the outbreak. In the United Kingdom, there are a few cases that have been reported. We must be vigilant to avoid any outbreak of this infection.

(3) Title: British Medical Journal

"Global lessons on delivery of primary healthcare services for people with non-communicable diseases: convergent mixed methods."

Robert Mash, Lisa R Hirschhorn et al.

ABSTRACT

Objective

To extract key lessons on primary health care (PHC) service delivery strategies for non-communicable diseases (NCDs) from the work of researchers funded by the Global Alliance for Chronic Diseases (GACD).

Design

A convergent mixed methods study that extracted data using a standardised template from research projects funded by the GACD that focused on PHC. The strategies implemented in these studies were mapped onto the PHC Performance Initiative framework. Semistructured qualitative interviews were conducted with researchers from purposefully selected projects to understand the strategies and contextual factors in more depth.

Setting PHC contexts from low or middle-income countries (LMIC) as well as vulnerable groups within high-income countries. Projects came from all regions of the world, particularly East Asia and Pacific, sub-Saharan Africa, South Asia, Latin America and the Caribbean.

Participants

The study extracted data on 84 research projects and interviewed researchers from 16 research projects.

Results

Research projects came from all regions of the world and mainly focused on diabetes (35.3%), hypertension (28.3%) and mental health (27.6%). Mapped onto the PHC Performance Initiative framework: 49.4% focused on high-quality PHC (particularly the comprehensiveness of NCD care, 41.2%); 41.2% on the availability of PHC services (particularly the competence of healthcare workers, 36.5%); 35.3% on population health management (particularly community-based services, 35.3%); 34.1% on facility organisation and management (particularly team-based care, 20.0%) and 31.8% on access (particularly digital technology, 23.5%). The most common strategies were task shifting and training to improve

the comprehensiveness of NCD care through community-based services. Contextual factors related to inputs: infrastructure, equipment and medication; workforce (particularly community health workers); finances; health information systems; and digital technology.

Conclusion

“Key strategies and contextual factors to improve PHC service delivery for NCDs in LMICs were identified. These strategies should combine with other strategies to strengthen the PHC system as a whole, while improving care for NCDs.”

Our Comment

It is a challenge for all countries to deliver their primary health services (PHS) for non-communicable diseases (NCDs) today. On this challenge, a study using the convergent mix method was carried out. In this study, the contextual factors were well-identified in Low or Middle-income Countries (LMIC) located in East Asia and Pacific, sub-Saharan Africa, South Asia, Latin America and the Caribbean countries, including less-well-off population groups, located within high-income countries. The outcome was measured by collating data from 84 similar studies. The study recommends that individual countries will require a consistent strategy to strengthen their public health care (PHC) system to improve their NCDs.

Source: <https://fmch.bmj.com/content/12/3/e002553?rss=1>.

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