Original Article

Community Health Workers' Role In Enhancing Cost-Effectiveness In A Running Tuberculosis Case-Finding Program

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Abstract

Active case finding (ACF) strategies must be a good value for money if they are to be widely used in national TB programs. Our goal was to determine whether community health workers' (CHWs') awareness of families' health status could reduce the cost of care. 3 Studies' advantages and disadvantages. As part of a practical active case-finding method, community health workers who already worked for the health care system were used. Used a close control location to measure the intervention's incremental impact. Without negatively compromising the provision of other health services for which they are accountable. The efficiency of the ACF program. ACF programs that use CHWs who are already working in the healthcare system are doable, affordable, and don't hurt the other services that CHWs provide in the healthcare system.

OVERVIEW

WHO estimates that in 2018, approximately 1.5 million people died from tuberculosis (TB), and about 10 million became infected. The estimations for 2018 forecast a gap of up to 30% between the occurrence and reported cases globally, notwithstanding the ongoing rise in notifications in previous years. By waiting for patients to seek care at a medical facility, current passive case-finding procedures severely hamper efforts to meet the WHO target of a 90% decrease in the TB incidence rate by 2035. So, these methods don't do enough to deal with big problems that make it hard to get care, like not being able to get there or pay for it, social stigma, and not knowing about it. By identifying cases that had gone unnoticed and quickly starting therapy, active case finding (ACF) can deal with these problems. Such tactics are thought to be able to reduce TB incidence, according to modelling research. Unlike passive alternatives, ACF is a screening method started by the health system.[1]

It uses diagnostic algorithms that are tailored to the situation and can be used in different ways, such as through mass radiography, contact investigation, and house-to-house surveys. Although modeling studies have demonstrated the cost-effectiveness of ACF techniques, the cost per diagnosed case of such programs can be very high, preventing their widespread adoption. As a result, it is challenging to make critical operational decisions about ACF programmes, such as who will carry out ACF activities, how they will be integrated into the health system, and how these additional activities will affect other health services, without sufficient empirical evidence from high-burden and resource-constrained settings. In this study, we look at these problems using data from a unique intervention in rural India that used community health workers (CHWs) already working for the public health system.[2]

Our goal is to find out if CHWs' knowledge of the health conditions of their families can make the ACF program more cost-effective without affecting the other health services they are responsible for. ACF has received solid endorsements for its early diagnosis and care of patients. Numerous modelling studies conducted in various settings, including India, China, and Uganda, have demonstrated its cost-effectiveness. But when resources are limited, it is often necessary for both cost-effectiveness and cost-efficiency for health interventions to be widely accepted. Sadly, there is scant and contradictory research on cost-effective interventions in high-prevalence, resource-constrained areas. In this work, we describe one such intervention that utilized the already present CHWs in the healthcare system and their understanding of the state of community health to promote cost-effectiveness. The intervention increased the notification rate significantly to roughly US$134 for each case identified.[3]

Also, the CHWs' involvement in TB programs didn't interfere with the work they were already doing. People have said it might be good to use current CHWs to combine TB screening services with other community health projects, like immunizing children. However, our study is one of the first to show how this strategy is practicable. CHWs are well-liked members of their communities who know a lot about how the healthcare system works. Because of this, they are in a unique position to act as patient navigators and make sure that their patients follow the right paths to finish their treatment. Involving CHWs can also help engage other actors, such as community members and informal health providers, in the way they recommend persons for screening as part of our intervention. However, they played a supporting role while the CHWs handled the diagnosis and treatment of these cases, and the FCs handled screening. Compared to comparable ACF efforts in recent years, the unit cost of our intervention was significantly cheaper. Door-to-door screening costs in Cambodia for ACF techniques, including CHWs, range from US$249 to 316 for symptomatic. In urban Uganda, a household contact investigation technique estimated a cost of US$444 for each extra case identified. One of the key reasons for its high cost-effectiveness is that our strategy depends on CHWs' experience and knowledge of the community to locate people at risk for TB rather than mass screening or door-to-door surveys.[4]

It may not be practicable to target particular high-risk population groups as advised by WHO guidelines in situations when TB incidence is evenly distributed among the general population. More so than would have been possible with door-to-door screening, CHWs use their social networks to filter referrals from the general populace and enhance the stream of presumed cases. The before-noted lower loss to follow-up also results in a cheaper cost per case diagnosed and started on treatment. Another Indian project that used CHWs to do door-to-door screening in a tribal population said it cost US$31 per patient, excluding the cost of medicines and tests. Our intervention's comparable components cost US$91 per patient. A high incidence rate in the community (more than ten times the national estimate) and a smaller catchment area (about 1/9th of our study population), which led to much-reduced personnel and administrative costs, were the critical factors in that intervention's lower cost. The cost disparity needs to be interpreted carefully, though, because studies differ significantly in terms of their context (choice of ACF strategy, intervention design, diagnostic algorithm, TB epidemiology, and characteristics of the healthcare system), costing methodology (costing perspective (patient, provider, societal), and outcome measure), as well as their costing methodology. The key benefits of our study come from the practical ACF implementation we used, which made use of the CHWs already working in the healthcare system. The study was conducted in a typical programming setting, simulating a low-resource environment with a standard healthcare system. We also used average programmatic data on case notifications for impact evaluation and other health outcomes to identify any externalities in providing other health services. We used a comparable CR within the same district to determine the intervention's cumulative effect above and beyond other secular changes in program delivery. Finally, we had access to detailed activity-level costing information, which reduced—but did not eliminate—the requirement to allocate indirect costs. Our study does, however, have certain shortcomings. It was not created as a randomized control experiment to start. Based on the catchment area of the preceding work carried out by the community-based organization that oversaw this intervention, we purposefully selected blocks in the IR. The CR was also purposefully chosen, despite sharing many significant and pertinent similarities with the IR. As a result, we cannot firmly assert that the impact we derived from our research is due to the intervention and is indicative of state- or country-level effects. Second, we excluded patient expenses incurred or avoided and expenditures incurred by the RNTCP to coordinate with our intervention. Instead, we concentrated only on the additive health system cost imposed by the intervention. Finally, because of the short intervention duration, we could not record longer-term health effects, such as practical treatment completion and an impact on TB epidemiology. To conduct a thorough cost-effective study of a nationwide scale-up of our intervention from a societal perspective, careful accounting of these costs and benefits is required.[5, 6, 7, 8]

CONCLUSION

The cost-effectiveness of TB ACF programs can be improved by using the current CHWs in the health system. This won't hurt the delivery of other healthcare services in their portfolio. The national scale-up of this strategy for TB ACF will require an in-depth assessment of how CHWs are currently being used. This is because CHWs have regular tasks, and supportive supervision can help them handle new work on top of their regular tasks.

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CONFLICTS OF INTEREST: The authors declare no conflicts of interest.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This evaluation does not require ethical approval because no patient data will be collected. Plagiarism, confidentiality, malfeasance, data falsification and/or falsification, double publishing and/or submission, and duplication are among the ethical problems examined in this study.

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