ABSTRACT

Triple Jeopardy: Analyses where care coordination, migration, and tuberculosis intersect

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By Cynthia A. Tschampl

Tuberculosis (TB) is an airborne disease and the second leading infectious killer globally. Even more troubling is the increase in drug-resistant strains described as "Ebola with wings." Approximately two billion people live with TB infection (LTBI), including over 11,000,000 in the US. Aggressive control measures reduced incident TB cases, and policy is largely focused on TB elimination, defined as one case per 1,000,000. TB elimination strategy includes the following three interventions: increasing TB prevention efforts (e.g., treating LTBI), reaching vulnerable populations, and addressing cross-border TB. These three papers provide insights into these complementary interventions.

The first paper shows the magnitude of a unique surveillance population, i.e., cross-border TB cases at risk of treatment interruption due to mobility and the proportion receiving care continuity services. For the time period 2008-2012, 14,134 incident TB cases were estimated within the study population, with 8% having been referred for transnational care continuity services. Scale up of such services is feasible and encouraged because of potential health and economic gains to both the US and receiving countries.

The second paper describes characteristics associated with LTBI treatment failure in a vulnerable population receiving Health Network's bridge case management (BCM) and mobile within the US. For every additional BCM call to clinicians on behalf of patients, the hazard of failure declined 5.3%. Living in a farmworker camp and self-reported alcohol abuse were associated with treatment failure. Unexpectedly, foreign birth was a protective factor. BCM offers clinicians a unique way to assure care continuity for patients who relocate.

The final paper demonstrates that BCM is highly cost-effective in US-based, mobile LTBI patients. Scale-up of BCM among primary care clinicians would be advantageous. Health

Network also offers BCM for other conditions such as diabetes, pre- and post-natal visits, and HIV, all of which should be evaluated for cost-effectiveness. Furthermore, BCM can help as evolving health delivery systems seek prevention opportunities (e.g., targeted LTBI treatment) and increased treatment efficacy (e.g., better care and continuity coordination). Overall these findings are reason for optimism that significant progress toward TB elimination in the US is possible, even among the most vulnerable.

Committee:

Donald S. Shepard, PhD, Chairperson
Deborah W. Garnick, ScD
Seyed Moaven Razavi, PhD
Edward Zuroweste, MD; Chief Medical Officer, Migrant Clinicians Network (MCN); Assistant Professor of Medicine, Johns Hopkins School of Medicine; Staff physician, Pennsylvania Department of Health

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