Bottlenecks in integrating TB and HIV services in the Philippines: a qualitative implementation research

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Abstract

Background

The Philippines is subdivided into 17 regions, with a devolved health system. It has a high burden of tuberculosis (TB) (554 per 100,000 population), and more than 25% increase in human immunodeficiency virus (HIV) incidence. However, years after the World Health Organization's (WHO) recommendations on TB/HIV collaborative activities, only 24% of Filipinos with TB know their HIV status. The present study aims to describe implementation bottlenecks that hamper integration of TB and HIV services in the Philippines.

Methods

Ten focus group discussions with program managers, non-government organizations (NGO), patient organizations, and primary healthcare centers from different levels of the Philippine health system were conducted. Thematic analysis was used to analyze qualitative data.

Results

Implementation bottlenecks can be categorized into four areas: policy, operational, human resources, and patient-related factors. Mechanisms to cascade TB/HIV knowledge and policies from the national to the municipality level have been identified as barriers to integrated TB/HIV services. Double stigmatization among TB patients was also linked to poor uptake of HIV testing.

Conclusion

National policies and health promotion efforts need to be revisited to operationalize how information about TB/HIV policies is cascaded to the grassroots. Interventions to address double stigmatization should also be explored.

Background

Tuberculosis is a disease of global priority, with approximately 9.6 million people affected and 1.5 million fatalities. It is also considered a leading killer of people living with HIV that led to 1 in 3 deaths in 2015 [1], while HIV fuels the second wave TB epidemic [2]. WHO in 2012 recommended three pillars of collaborative TB/HIV activities: 1) establish and strengthen the mechanisms for delivering integrated TB and HIV services; 2) reduce the burden of TB in people living with HIV and initiate early antiretroviral therapy; 3) and reduce the burden of HIV in patients with presumptive and diagnosed TB [3].
Ample studies were published on factors that hamper the integration of TB and HIV services. Patient factors (TB/HIV knowledge, attitudes, practices) reduced uptake of HIV testing among TB patients [4–8]. Logistical factors (type of health facility, distance, and transportation) affected willingness of TB patients [7, 9]. Demographic factors (age, gender, education, civil status, and previous HIV testing) influenced perceived appropriateness of receiving provider-initiated HIV counseling and testing (PICT) [5, 6, 10, 11]. Health system barriers (lack of coordination between TB and HIV programs, skills, and supervision) affected the integration of TB/HIV services [12].

The Philippines has a high burden of both TB and HIV. WHO estimates that 554 per 100,000 population have TB, while 7 per 100,000 have both TB and HIV [13]. The country was also identified in a United Nations Global Report as one of nine countries with 25% increase in HIV incidence [14], from 13 new HIV cases per day in 2013 to 32 cases per day in 2018 [15]. Despite WHO’s recommendations on TB/HIV collaborative activities in 2012, only 24% Filipinos with TB know their HIV status [13]. A scientific study examining why the Philippines is lagging on the implementation of TB/HIV activities has not yet been done.

The 2017–2022 Philippine Strategic TB Elimination Plan: Phase 1 (PhilSTEP1) of the National tuberculosis control program (NTP) of the Philippines’ Department of Health (DOH) identified “valuing clients and patients through integrated patient-centered TB services” as an elimination strategy. This included activities such as: (1) ensuring TB-HIV co-infected patients are treated, and (2) developing models for TB services (and supporting Directly Observed Treatment Strategy or DOTS facilities) with focus on gender, human rights, and patient-centeredness. However, the NTP previously noted some challenges encountered in TB/HIV collaboration: “ineffective referral mechanisms for TB and HIV services, limited access to HIV services that is centralized in urban areas and inadequate logistics, fast turnover of staff especially medical technologists or MTs (laboratory technicians) providing HIV testing, and recording and reporting system was not yet functional” [16].

The current implementation research aims to fill the scientific gap describing bottlenecks that hamper integration of TB and HIV services in the Philippines using a cross-sectional approach across health-system levels, considering that existing studies on TB/HIV in the country are prevalence estimates [17, 18].

**Methods**

The Philippines has 7,107 islands, with a population of 105 million, subdivided into 17 regions. In 1991, the Local Government Code of the Philippines devolved health services to local government units [19]. As such, the Philippine health system has five levels: national, regional, provincial, municipality/city, and barangays or villages [20]. The NTP is being coordinated by the Infectious Disease Office of the National Center for Disease Prevention and Control (IDO-NCDPC) of the DOH, which in turn coordinates with Regional Offices to manage NTP activities at the regional level. Provincial/City Health Office (P/CHO) is responsible for overseeing NTP efforts at provincial, and municipal/city level where the primary health
care centers (or as they are locally called, rural health units or RHUs) are located [20]. The smallest service delivery facilities in the Philippine health system are the barangay/community health stations that are mostly managed by midwives or nurses.

This is a qualitative study utilizing ten focus group discussions (FGDs) with different stakeholders. Two FGDs were done with regional TB/HIV program managers (total, n = 6) and one with provincial infectious-disease program managers (n = 3). Three FGDs (n = 17) were done with various non-government, patient, and community-based organizations involved in TB and HIV care service delivery in the Philippines. One FGD with physicians and MT (n = 6) and one FGD with nurses and midwives (n = 12) were conducted. Two FGDs with barangay health workers (n = 8) and barangay leaders (n = 8) in San Jose del Monte City, a high-HIV prevalence city, were conducted to elicit their experiences in implementing TB/HIV collaboration at the grassroots. Respondents were recruited through snowball sampling based on recommendations from NTP and the National AIDS/STI Prevention and Control Program and the participants. Results validation sessions were done with national TB/HIV program managers (n = 3). Data collection was done from March to April 2017.

The first author used semi-structured guides to facilitate the FGDs. A research assistant also assisted in documenting the focus groups. The semi-structured guides focused on two areas: (1) experiences in TB/HIV implementation, and (2) challenges to TB/HIV implementation and service delivery.

FGDs were recorded using two voice recorders and transcribed verbatim in Filipino using InqScribe Software. Transcriptions were validated in two stages: a different transcriber verified the transcriptions with the audio files, and the principal investigator verified the transcriptions again. The transcribers, both proficient in English and Filipino, translated the transcripts to English. The first author conducted thematic coding of the transcripts (e.g. coding significant sentences vis-à-vis the research objectives, then clustering codes into themes). The codes and themes were then discussed and validated with the co-authors. OpenCode 4.03 was used as qualitative data analysis software.

The University of the Philippines Manila Research Ethics Board provided ethical approval for the study (Decision Letter 2017-045-01). All respondents were given informed consent forms prior to their participation in the study.

**Results**

Department of Health's Administrative Order (AO) 2014-0005 [21] mandated that PICT be offered to TB patients in TB DOTS facilities in Category A (high HIV prevalence) and Category B (medium to high HIV prevalence) as identified by the Priority Areas for HIV Intervention [22]. In other non-priority areas, TB patients are informed of the benefits of HIV testing and referred to Social Hygiene Clinics (primary health care facilities that specifically provide sexually transmitted diseases (STI) testing and treatment). AO 2017-0019 [23] limited the conduct of HIV testing to MTs who are certified as “HIV-test proficient”, and that reactive samples from patients be brought to the National Reference Laboratory / San Lazaro Hospital STD AIDS Cooperative Central Laboratory (NRL / SLH SACCL) for confirmatory testing. This AO
also distinguished between ‘HIV screening’ and HIV ‘testing’, the former is considered as the first step in the diagnostic algorithm, while the latter is only considered as a risk-screening tool.

The themes that emerged from the thematic analysis are as follows: (1) Policy bottlenecks affecting implementation of current policies related to TB/HIV (or lack thereof); (2) Operational bottlenecks in the form of operationalization differences between the TB and HIV programs; (3) Human resource bottlenecks in the coordinated approach between HIV and TB focused programs resulting from manpower issues, and lastly, (4) Patient-related factors such as their perceptions and health seeking behavior contributing to the hurdles in TB/HIV collaboration in the Philippines.

Policy bottlenecks to integrated TB/HIV collaboration

That the Philippine health system is devolved, and therefore programmatic decision-making is in the hands of mayors, was identified as one of the health system variables that affected TB/HIV collaboration. Stakeholders lamented that in some cities, mayors do not consider TB and HIV co-infection as priority hence limit allocation of resources; upper-level program managers felt powerless as they can only advocate increasing TB/HIV activities to the local governments. Thus, most of the TB/HIV programs are dependent on donor-driven programs.

\[\text{Implementation is highly dependent on how a city is run. The region cannot meddle as well, we can only augment the manpower, advocate the mayors so they invest in health. We also need to convince barangay officials to get on board… we need to have good partnerships with our local governments so that they believe TB/HIV activities are good for the community… ask them also to be part of activities because if you just hand them down from top to bottom, it will not happen. They will be insulted, they are devolved.} \text{ (Regional Infectious Diseases Program Manager)}\]

Stakeholders felt that the AO on TB/HIV collaboration limited HIV testing among TB patients to certain areas when there should be a need to implement it, especially in adjacent areas bordering Category A and B areas.

Operational bottlenecks to integrated TB/HIV collaboration

Differences in how the TB and HIV programs handle patient information were also identified as bottlenecks to integration. A program manager said that the epidemiology of HIV among TB patients in their area is not known because of privacy restrictions set by Republic Act 8504 (Philippine HIV/AIDS Act of 1994, the applicable law at the time of the study). Thus, it became difficult for upper-level managers to advocate the importance of TB/HIV collaboration in cities.

\[\text{In a devolved system, the real bosses are the mayors and governors. When they ask us about the burden of TB and HIV, we are only able to provide a general picture. From a political person's perspective, they would want to see the 'real' burden right, in terms of statistics? But we don't have that now. There's no study which shows how many TB patients have HIV, or what is the risk of acquiring TB among HIV patients and vice-versa.} \text{ (Provincial Infectious Diseases Program Manager)}\]
AO 2017-0019’s provision that blood samples of reactive patients in rapid diagnostic test kits be sent for confirmatory testing in NRL / SLH SACCL has been identified as one of the contributors to delays in linkage to care. Stakeholders reported issues in TB/HIV service delivery networks, in particular, when TB patients diagnosed in Category A cities return to their hometowns, which are not ‘priority’ areas.

There are patients who get diagnosed with TB in the National Capital Region, but they go back to the provinces and they continue their treatment there. But PICT is yet to be introduced in those areas. So, their condition gets worse, undetected. (PLHIV organization representative)

While staff are trained to provide PICT to TB patients, some health centers do not have resources to provide integrated TB/HIV care. Hence patients are referred to social hygiene clinics within service delivery networks. Stakeholders felt that these networks need institutionalization, as these are currently informal physician-to-physician referrals.

We are still struggling with the concept of service delivery networks. For small health centers, they struggle to look for social hygiene clinics or satellite treatment hubs for HIV. (Regional Infectious Disease Program Manager)

Stakeholders also mentioned the lack of communication between government and private healthcare institutions, between TB and HIV care providers, and TB and HIV NGOs; some even reported encountering resistance from local government units.

The way to go is to expand the network of available providers because the public sector is overburdened. The private sector is there, but we have not really formally engaged with them so each has its own pockets of population where they deliver services but it is not a concerted effort. (International HIV non-government organization (NGO) representative)

TB/HIV collaboration's implementation also needs to be more operationally defined in the community. Stakeholders further attributed this discordance between the upper and lower levels of the health system is because those at the community may not be able to comprehend the technical language of AOs written in English. They also felt that mechanisms of knowledge transfer from program managers to grassroots needed to be more specific.

The reality is when you get down to the grassroots, you have one TB program manager, one for HIV and they don't talk. So, each one runs their own program, separately. I think it’s the information, the way information is cascaded downwards, everything is discussed here at the program level with all partners, and then there's this assumption this information will trickle down. But without a really clear process for the program to bring down information, make everybody at the grassroots understand this co-infection. And because all of our guidelines are written in English, of course not all at the grassroots can appreciate or are familiar with the technical language of the issuance. (International HIV NGO Representative)

**Human resource bottlenecks to integrated TB/HIV collaboration**
Not all MTs can provide HIV testing; they have to undergo HIV testing-proficiency certification (costing US$ 350 to US$ 400, either paid by local governments or themselves). The lack of certified MTs was perceived as the most significant impediment to delivering TB/HIV services at the grassroots.

A stakeholder shared that in one city, HIV testing is only conducted once a month because of the insufficient number of MTs. They are also overburdened; one MT caters to 3 to 4 primary healthcare centers, in addition to processing specimens from other health services. The release of patients’ test results also gets significantly delayed when MTs are asked to attend trainings, or to report to other official functions during work hours.

*Even if the patient is available for PICT but the medical technologist isn’t? Our medical technologist was in a seminar for the whole week, that’s why we don’t have any results yet, our specimens are already piling up.* (Midwives)

Most MTs also have insecure job positions with salaries ranging from US$ 200 to US$ 300 a month, contributing to fast turnover. To make PICT accessible, HIV screening was implemented to circumvent existing policies that limits HIV testing to certified MTs; providers who were trained by the Department of Health are allowed to do the former, while only HIV-proficient MTs can do the latter (only by the results of HIV testing will a patient be enrolled in HIV care).

*They tell us ‘why do you allow a layperson to test’? We replied it’s ok because this is just pricking, not extraction. We trained these lay providers. It’s like we’re playing around the gray areas of the policies just so that we can implement.* (Regional HIV Program Manager)

Stigmatization behaviors among health providers were also reported to hamper TB/HIV collaboration. A stakeholder shared his experience in a social hygiene clinic in a province north of Manila:

*There are social hygiene clinics where the doctors are conservative and when you enter they will scold you and ask you ‘why do you want to be tested for HIV?!’* (PLHIV organization representative)

Some, however, felt that not offering PICT to at-risk populations was not a result of stigma but of being overburdened by other equally-important responsibilities and health programs.

*Maybe it’s not really because of stigma, but it’s more of our commitment in providing PICT. For example, if you have so many things to do, will you still do PICT, or report it? This patient is already old, will I still offer PICT, maybe he doesn’t even have sex anymore. Health care workers have those kinds of biases.* (Infection Control Coordinator)

Community health workers filling-up surveillance forms account for the highest workload burden, which in turn, limit the time they could spend monitoring the health of households under their responsibility.

*With the number of forms they ask us to fill-up, we don’t even know the difference anymore, or what we will prioritize. They always change the forms, like now there’s going to be a new form, and it will change*
**Patient-related factors influencing integrated TB/HIV collaboration**

Poor knowledge about the relationship between TB and HIV was also identified as a barrier to providing HIV testing among TB patients. Stakeholders were aware of the need to link these two diseases in information dissemination campaigns but were also wary that doing so may lead to “double stigmatization” among patients, as is the case for some now:

*Even the physical identity, when other patients see a thin patient, they would say he has TB maybe even HIV. That's how they perceive it, they come up with their own indicators.* (Local HIV patient organization representative)

Program managers also felt that some patients might be more ‘conservative’, hence they felt ashamed to have themselves tested for HIV, especially when they already have TB.

*There are so many reasons for the delay. Firstly, they would say, ‘I only have TB why do you need to test me for HIV?’ Because with HIV, it connotes something, a practice that they cannot accept.* (Regional HIV program manager)

They also pointed to the health-seeking behavior among Filipinos of only going for check-up when there are already overt symptoms.

**Conclusions**

Our study is the first to describe implementation challenges to integrate TB and HIV services in the Philippines, a country with high burden of both TB and HIV. We add to the scientific literature on the implementation challenges in the context of a country with a devolved health system.

The challenges we found in this study can be clustered into four themes: policy, operations, human resources, and patient-related factors (Table 1). These are similar to previous studies found in this area, lending evidence to the idea that centralized and devolved health systems experience similar challenges when it comes to integration of TB and HIV services. In our study, however, we found that existing policies (AO 2014-0005 and 2017-0019) on TB/HIV collaboration have an unintended effect of disregarding the mobile nature of patients with TB, especially in a country with archipelagic features. While these policies aimed to integrate TB and HIV services, it promoted in parallel the division of Category A/B areas versus other areas not deemed as ‘priority’ areas of intervention. This is even worsened when other non-priority areas have non-supportive local governments that do not prioritize integration of TB and HIV services. Policies thus need to be reformulated to account for the mobility of key populations and the devolved decision-making dynamics in the local governments.
Lack of coordination between TB and HIV programs have also been found as barriers to successful TB/HIV integration. In our study, we expanded this to include lack of coordination and collaboration between TB and HIV service providers from the public and private sectors, and between civil society organizations towards concerted efforts to respond to potential TB/HIV epidemic. Currently, there are efforts to build service delivery networks within cities in the Philippines, but these networks should be institutionalized as interconnected networks across geopolitical borders so that patients are cared for, whether they are in ‘priority’ areas or not.

We also found that unclear mechanisms to cascade information from the upper to the lower levels of the health system also hamper TB/HIV integration, especially concerning key programmatic thrusts, which was also worsened by the technical language of policy documents.

In effect, these knowledge and language barriers resulted in unharmonized implementation of policies especially at the grassroots. Policymakers in a devolved health system should thus create key messages in the local languages to be cascaded at each level of the health system.

Concrete efforts need to be done to avert the fast turnover of health professionals, especially certified MTs, who can conduct HIV testing. Better yet, and as already being done by MSM and transgender peoples’ organizations, provision of HIV testing could be delegated to trained community lay providers. AO 2017-0019 allowed community-based HIV screening but only to key populations, and only by health care workers (doctors, nurses, MTs, midwives). It can also be cost-efficient to utilize community health workers in the provision of HIV testing services; evidence suggests that lay providers can achieve similar HIV testing quality as trained healthcare providers [24], and that delegating HIV counseling to community health workers in the Philippines is feasible and acceptable provided they are adequately trained [25].

Our study adds to evidence that perceived TB and HIV double stigmatization among patients can be bottlenecks in integrating TB/HIV services in countries with concentrated epidemics. This refines previous findings that TB-related stigma is declining in low HIV prevalence communities but increasing in high-burden settings [3,26]. As the TB and HIV program in the Philippines becomes integrated, there may be a need to craft communication strategies addressing double stigmatization. More importantly, TB patients’ consciousness needs to be raised so that they can speak and act collectively against double stigmatization [27].

The present study limited its inquiry on the first of the three pillars of WHO-recommended collaborative TB/HIV activities (establishing and strengthening the mechanisms for delivering integrated TB and HIV services). Future studies should aim to identify implementation challenges in the Philippines to the two other pillars of TB/HIV collaboration.

While measures have been taken to ensure scientific rigor in the representativeness of the participants from the different levels and sectors of the Philippine health system, participants were selected through recommendations from national program managers, and most were based in northern and central Philippines. Hence their experiences may not capture those in the southern Philippines, most especially
geographically-isolated areas. Health providers from the private sectors were also limited to those based in civil society organizations; future studies should aim to investigate experiences of the private sector in TB/HIV services in the Philippines.

Despite these limitations, our findings could be generalizable in other settings where there is concentrated HIV epidemic, and TB prevalence is high in the general population. The study may also provide evidence to program managers as to the unintended effects of TB/HIV policies that limit the implementation of TB/HIV services in select high-burden areas, centralized confirmatory testing, and limiting the provision of HIV testing to certified laboratory personnel.

Abbreviations

AIDS: Acquired immunodeficiency syndrome, AO: Administrative Order, CHO: City health office, DOH: Department of Health, DOTS: Directly Observed Treatment Strategy, FGD: Focus group discussions, HIV: Human immunodeficiency virus, IDO-NCDPC: Infectious Disease Office of the National Center for Disease Prevention and Control, MT: Medical technologist, NGO: Non-government organization, NTP: National tuberculosis control program, PhilSTEP1: Philippine Strategic TB Elimination Plan: Phase 1, PhilSTEP1: Nigerian Association for the Study of Tuberculosis and Lung Diseases, PICT: Provider-initiated HIV counseling and testing, PLHIV: People Living With HIV, RHU: Rural health unit, STD: Sexually transmitted diseases, STI: Sexually transmitted infections, TB: tuberculosis, WHO: World Health Organization

Declarations

Ethics approval and consent to participate

The University of the Philippines Manila Research Ethics Board provided ethical approval for the study (Decision Letter 2017-045-01). All respondents were given informed consent forms prior to their participation in the study.

Consent for publication

Not applicable.

Availability of data and materials

The data that support the findings of this study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.
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Authors’ contributions

TRS and JCG contributed to the study conceptualization, data collection, data analysis/interpretation and creation of the first draft of the manuscript. RSP, RI, RAA contributed to supervision of data collection, data analysis/interpretation and revisions of the manuscript. All authors have given final approval of the version to be published.

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Tables

Table 1. Implementation Issues in HIV testing among TB patients in the Philippines
### Policy bottlenecks

1. Devolved programmatic decision-making on TB/HIV collaboration
2. AO on TB/HIV collaboration limit HIV testing to TB patients in Category A / B areas

### Operational bottlenecks

1. Surveillance system differences between TB and HIV
2. Delays in confirmatory testing results from NRL / SLH SACCL
3. Loss of patients who migrate to non-HIV priority areas
4. Lack of communication between TB and HIV service providers (to include non-institutionalized patient referral mechanisms)
5. Unclear knowledge transfer mechanisms from upper to lower levels of the health system
6. Guidelines written in language that some providers at the grassroots may not completely understand

### Human Resource bottlenecks

1. Low salary and lack of permanent positions for HIV-proficient medical technologists (leading to fast turnover)
2. Overburdened healthcare personnel. Stigmatization behaviors among staff.

### Patient-related factors

1. Poor knowledge of TB/HIV co-infection among TB patients
2. Conservative culture and delayed health-seeking behavior among patients