Integrating Active Case-Finding for TB with Prevention of Mother-to-Child Transmission of HIV Services in Antenatal Clinics

South Africa
Celine Gounder
Organization type: nonprofit/ngo/citizen sector
Budget: $100,000 - $250,000

- Health care
- Gender equity
- HIV/AIDS
- Infant health
- Maternal health
- Poverty alleviation
- Reproductive health

Project Summary

Elevator Pitch

Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.

HIV and TB are the leading infectious causes of death among women of reproductive age worldwide. In South Africa is a significant cause of maternal and infant morbidity and mortality. The Perinatal HIV Research Unit (PHRU) provides counseling and testing for HIV and prevention of mother-to-child transmission (PMTCT) regimens through 13 government-run antenatal clinics in Soweto, South Africa. I hypothesized that integrating PMTCT services and active case-finding for TB among pregnant women would be a high yield intervention for detection of active pulmonary TB. In collaboration with the PHRU, I rolled out TB screening in 6 of 13 antenatal clinics in Soweto, including the antenatal clinic at Chris Hani Baragwanath Hospital. All pregnant women presenting to the antenatal clinics, regardless of their HIV status, were screened for symptoms of active pulmonary TB: cough for ≥2 weeks, sputum production, fevers, night sweats or weight loss. All women with any symptom of active TB were asked to cough up a single sputum specimen, which was then sent for sputum smear microscopy, mycobacterial culture and identification, and 1st line drug-susceptibility testing. Women with TB were referred for treatment at their nearest TB clinic.

About Project

Problem: What problem is this project trying to address?

1) TB is under-diagnosed among women due to a number of barriers to care. 2) Women are now disproportionately affected by TB due to there being a high prevalence of HIV among women than men. TB is the most important risk factor for HIV, and is the most common cause of death among persons living with HIV/AIDS. 2) TB is a leading cause of morbidity and mortality in women of reproductive age, in part because this group has also been most affected by the HIV/AIDS epidemic. 3) TB is a major cause of perinatal morbidity and mortality. 4) TB has not historically been recognized by a maternal and child health issue, even though it is one of the most important infectious diseases impacting on maternal and child health today. 5) TB case detection rates are far below the WHO target of 70% of sputum smear positive cases, and innovative approaches to case detection are needed. 6) Much of the early mortality from HIV following initiation of antiretroviral therapy is due to TB. Diagnosis of treatment of TB is necessary for antiretroviral therapy roll outs to achieve their full impact.

About You

Organization:
Johns Hopkins University Center for TB Research

First Name
Celine

Last Name
Gounder

Website
Organization
Johns Hopkins University

Country
MD

Are you an individual between the ages of 18 and 35 who would like to apply for a nine month Young Champions Program mentored by an Ashoka Fellow?

No

Section 2: About Your Organization

Organization Name
Johns Hopkins University Center for TB Research

Organization Phone
443-287-1035

Organization Address
CRB-2, Room M1.06, 1550 Orleans Street, Baltimore, MD 21231

The information you provide here will be used to fill in any parts of your profile that have been left blank, such as interests, organization information, and website. No contact information will be made public. Please uncheck here if you do not want this to happen.

Your idea

Country your work focuses on
GT

Website URL

Innovation

What makes your idea unique?
The WHO has recommended implementing the 3 I’s -- intensified case-finding for tuberculosis, isoniazid preventive therapy and infection control -- to reduce the burden of TB among HIV-infected persons. However, this has largely been interpreted to mean implementation of the 3 I’s in HIV clinics, not in other clinics with a high proportion of HIV-infected persons (e.g. voluntary counseling and testing clinics).


Antenatal services are a key point of contact between women with the health care system. Screening pregnant women who are at high risk for TB impacts not only on their health, but the health of their babies, their other children and their households.

Do you have a patent for this idea?

Impact

What impact have you had?
3,970 pregnant women were screened for TB between December 2008 and July 2009. Their ages ranged from 18 to 49 years-old (median 26). 36% of women enrolled were HIV-infected. Among those with HIV, 2% had a CD4+ T-cell count of 0-50, 17% of 51-200, 30% of 201-350, 22% of 350-500, 19% of over 500, and 9% unknown. 5% of women had a prior history of TB disease, and 21% had a history of exposure to someone with active TB. The prevalence of active pulmonary TB was 696 per 100,000 among HIV-infected pregnant women (10 cases), and 200 per 100,000 among HIV-uninfected pregnant women (5 cases).

Since July 2009, TB screening has been rolled out to all 13 antenatal clinics in Soweto.

Through funding from the South African Department of Health, I am continuing to work with PHRU to expand TB screening in antenatal clinics to Klerksdorp in Northwest Province in South Africa. I am now starting to work with JHPIEGO and the Aurum Institute for Health Research to roll out active case-finding for TB in antenatal clinics in Kenneth Kaunda District in Northwest Province and Uthukela District in KwaZulu Natal Province in South Africa. I am also working with the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) to integrate TB screening in their antenatal clinics, starting first with EGPAF programs in Rwanda.

Actions

We are now partnering with a broader range of NGOs, now including JHPIEGO, the Elizabeth Pediatric AIDS Foundation and the Aurum Institute for Health Research, to expand our reach and ability to roll out TB case-finding in antenatal clinics.

Results

By forming new partnerships with local NGOs, we also gain credibility with the governments with which they work, making it easier to develop...
programs in the areas served by these NGOs. These local NGOs also have infrastructure for rolling out programs, training staff and strengthening monitoring and evaluation. We can build and further strengthen the existing NGO and government infrastructures, enhancing the sustainability of our efforts.

What will it take for your project to be successful over the next three years? Please address each year separately, if possible.

1) Funding to support my salary and travel expenses such that I can continue to provide free technical assistance to partner NGOs and governments.

2) Funding to support strengthening of monitoring and evaluation systems that would allow for analysis of patient-level as well as facility- and district-level inputs, processes and outcomes.

3) Funding to strengthen referral systems and linkages between PMTCT, HIV and TB services.

4) Guidelines that emphasize the need for reducing the burden of TB among HIV-infected individuals not just through initiatives targeted at HIV clinics, but also to other services serving populations with a high prevalence of HIV (e.g. community-based care, voluntary counseling and testing, antenatal clinics, sexually transmitted infection clinics, reproductive health clinics).

5) Recognition by the Obama Administration's Global Health Initiative that tuberculosis is an important women's health issue.

What would prevent your project from being a success?

1) Inadequate buy-in from local departments of health. It is essential that we have local buy-in to ensure sustainability once TB screening activities in the antenatal clinics have been scaled up.

2) Poor follow-up referral systems and linkages. PMTCT services have greater success in testing pregnant women for HIV and identifying who is a candidate for receiving PMTCT regimens. PMTCT services have been less successful in referring HIV-infected pregnant women for initiation of cotrimoxazole preventive therapy, isoniazid preventive therapy and antiretroviral therapy. It is essential that if we identify TB suspect or TB cases that we have systems in place to follow-up these patients to assess whether they receive adequate care and treatment, to assess their outcomes, and to conduct contact investigations where others, particularly children, have been exposed. Thus strong linkages much be fostered between PMTCT, HIV and TB services.

How many people will your project serve annually?

More than 10,000

What is the average monthly household income in your target community, in US Dollars?

$100 - 1000

Does your project seek to have an impact on public policy?

Yes

Sustainability

What stage is your project in?

Operating for 1-5 years

Is your initiative connected to an established organization?

Yes

If yes, provide organization name.

Perinatal HIV Research Unit, JHPIEGO, Aurum Institute for Health Research, Elizabeth Glaser Pediatric AIDS Foundation

How long has this organization been operating?

More than 5 years

Does your organization have a Board of Directors or an Advisory Board?

Yes

Does your organization have a non-monetary partnerships with NGOs?

Yes

Does your organization have a non-monetary partnerships with businesses?

Yes

Does your organization have a non-monetary partnerships with government?

Yes

Please tell us more about how these partnerships are critical to the success of your innovation.

We have been collaborating with NGOs that work in public government clinics. It is essential to partner with the local government in order to get permission to work in public clinics, and to have the authority to train and provide technical assistance to health care workers in public clinics. It is also important that the work that we do feeds into government monitoring and evaluation systems.

A number of locally based NGOs already work in public clinics to strengthen capacity, provide technical assistance and roll out new initiatives (e.g. antiretroviral therapy and PMTCT services). By partnering with these local NGOs, we are making better use of existing infrastructure, strengthening local capacity to further expand on our work.

Thus it is essential to partner with both NGOs working locally, and to get buy-in from local government
What are the three most important actions needed to grow your initiative or organization?

1) Funding to support my salary and travel expenses such that I can continue to provide free technical assistance to partner NGOs and governments.

2) Funding to support strengthening of monitoring and evaluation systems that would allow for analysis of patient-level as well as facility- and district-level inputs, processes and outcomes.

3) Funding to strengthen referral systems and linkages between PMTCT, HIV and TB services.

The Story

What was the defining moment that you led to this innovation?

There was no one defining moment that led me to this innovation. I have been pursuing research on TB and HIV in collaboration with researchers at the Perinatal HIV Research Unit in Soweto, South Africa and at the Aurum Institute for Health Research in Johannesburg, South Africa for the past decade. This innovation was a natural result of my work on TB and HIV, interest in women's health, and interest in delivery comprehensive primary care in resource-limited settings.

Tell us about the social innovator behind this idea.

I'm Celine Gounder, an infectious diseases specialist and epidemiologist at Johns Hopkins, and the Director for Delivery for CREATE. Prior to coming to Johns Hopkins for a post-doctoral fellowship in Infectious Diseases, I completed a residency in Internal Medicine at the Massachusetts General Hospital in Boston, medical school at the University of Washington in Seattle, and a Master of Science in Epidemiology at Johns Hopkins.

I worked for Ralph Nader and Gordon Douglas in the late 1990s on issues around global and U. S. TB policy and funding, during which time I also met and began to collaborate with Richard Chaisson. I have been working with Dr. Chaisson for more than a decade now, studying TB diagnostics and screening programs to reduce the burden of TB among HIV-infected persons, first in Rio de Janeiro, Brazil and later in Soweto, South Africa.

Between August 2008 and July 2009, I integrated active case-finding (ACF) for TB with prevention of mother-to-child transmission (PMTCT) of HIV services delivered at the antenatal clinics in Soweto, which serve ~30,000 pregnant women per year, a third of whom are HIV-infected. Initial findings were presented at the Conference on Retroviruses and Opportunistic Infections (CROI) in February 2010.

While in South Africa, I also worked closely with Gavin Churchyard on studies in Tembisa of intensified case-finding (ICF) incorporating the urine LAM, and provider-initiated TB screening in primary health clinics. I provided technical support to the South African Resource Mobilization Committee in preparing and writing South Africa's Round 9 application to The Global Fund to Fight AIDS, Tuberculosis and Malaria, and was also invited to provide feedback on the South African Department of Health's new isoniazid preventive therapy (IPT) guidelines.

As Director for Delivery, I am now developing collaborations for scale-up of ICF/ACF and IPT beyond CREATE, including in Ethiopia, Malawi, Rwanda, Botswana, Tanzania and South Africa. I am pursuing these collaborations through U. S. President's Emergency Plan for AIDS Relief, the U. S. Center for Disease Control and Prevention, national Ministries of Health, the Elizabeth Glaser Pediatric AIDS Foundation, JHPIEGO, the Pan American Health Organization and various local implementers/NGOs.

How did you first hear about Changemakers?

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If through another, please provide the name of the organization or company

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