CASE STUDY 1

THE SAN FRANCISCO MODEL:
TUBERCULOSIS OUTREACH PREVENTION SERVICES (TOPS)

Key elements of the program discussed in the following pages include:

- Providing DOT for LTBI
- Locating services in inner-city neighborhoods, close to the patients to be served
- Implementing patient-centered strategies, guided by a philosophy of harm reduction
- Utilizing incentives and enablers

INTRODUCTION

San Francisco has long been a city with diverse populations, including large numbers of individuals who are socially and culturally marginalized. Many of those individuals fall into one or more of the categories that put them at the greatest risk for progressing to tuberculosis (TB) disease once infected.

Beginning in the early 1980s, San Francisco's TB program became one of the first in the nation to treat high-risk individuals with latent TB disease through a dedicated targeted treatment program, which included patient-centered methods and directly observed therapy (DOT). By tailoring its treatment approach to the patients' needs, the program has achieved high treatment completion rates. The treatment approach included matching each patient to staff who were familiar with their respective cultural and language characteristics and employing patient-specific incentives and enablers to encourage the patients to maintain their commitment to the treatment process.

In 1993, the San Francisco Department of Public Health Tuberculosis Control Program (SFDPH TBC) extended its efforts to treatment of LTBI to very high risk, U.S.-born, disenfranchised populations, including persons who use illicit substances and those with HIV risk factors. SFDPH TBC implemented the Tuberculosis Outreach Prevention Services (TOPS) program to make testing and treatment affordable, accessible, and acceptable to those at high risk of progression to TB disease by providing services within their own community. As part of the selection process for determining where to locate TOPS, SFDPH TBC used its RFLP (Restriction Fragment Length Polymorphism) data to evaluate transmission data. This data confirmed disease transmission within the targeted area known as the Tenderloin district.

The TOPS program evolved over several years as more was learned about effective strategies.

POPULATIONS SERVED

TOPS brought TB testing and treatment services closer to the target populations living in the highest incidence area of the inner city. The TOPS satellite clinic is located in the Tenderloin/South of Market district of San Francisco, an area which has traditionally seen a concentration of people experiencing homelessness, addiction, or both.

People living in this area not only have high rates of latent TB infection, but commonly have multiple health problems, especially concurrent HIV, hepatitis C and other infections, and mental health or substance abuse issues. Additionally, many live in environments that may be unsafe and overcrowded or that offer poor ventilation and sanitation, such as shelters, low-cost hotels, jails, abandoned buildings, or even on the street. It is estimated that 8,000 to 13,000 individuals in San Francisco are homeless on any given day and many of the individuals so described spend time in and around these two districts.

PROGRAM GOALS

Goals of the TOPS program are to:

- Stop transmission and detect TB cases in high-prevalence neighborhoods
- Prevent potential TB transmission by identifying and treating infected persons living in high-risk settings as well as those at high risk for progressing to TB (e.g., those dually infected with TB/HIV)
- Prevent reactivation among those with latent infection—prioritizing those who are HIV-positive or at risk for HIV infection

LOCATION OF SERVICES

Initial efforts to provide DOT for LTBI in San Francisco occurred at the central TB clinic attached to San Francisco General Hospital. This strategy had some advantages: staffing shortages could be covered more easily and physicians, x-ray, and lab services were close at hand.

However, this location limited the staff's outreach, contact, and involvement with members of the target population and the agencies serving them. Patients with LTBI had poor access for receiving their DOT doses, which meant that many of them failed to complete their course of treatment.

The solution was to create a satellite site separate from central TB services. The high-risk patients more readily accepted the new clinic. The location was convenient and easily accessed, and being able to obtain the services in their own neighborhood enhanced patients' anonymity, privacy, and perceived safety.

PATIENT-CENTERED STRATEGIES

In its mission, strategies, and modes of operation, the TOPS program embodies the patient-centered philosophy. TOPS staff are committed to:

- Building long-term, trust-based relationships with their patients
- Using signed contracts with patients to set up clear expectations and outline each party's responsibilities during the treatment period
- Finding patients if doses are missed
- Problem-solving with the patient to overcome the barriers they face during the course of treatment

HARM REDUCTION PHILOSOPHY

This model successfully builds relationships of trust and acceptance between health staff and patient. Team members provide an unconditional positive approach to patients regardless of self-inflicted, harmful behavior. Building upon this premise, the TOPS team focuses on delivering the message that patients can play an active role in reducing adverse consequences related to their use of substances like drugs and alcohol. In particular, staff members encourage patients to understand that they are at risk for progressing to active TB disease and that they can prevent this by adhering to the prescribed therapy.

INCENTIVES AND ENABLERS

The TOPS program provides substantial incentives and enablers to all high-risk clients. Incentives and enablers that have proved effective include:

- Transportation assistance

- Food items, coupons, or vouchers
- Clothing or shoe vouchers from local thrift stores or low-cost stores
- Movie passes issued at specific threshold points during treatment and when other incentives no longer motivate
- Pre-packaged doses of LTBI medications or arrangements to receive DOT in another jurisdiction for patients who must be away from the area for a limited time
- Referral to housing assistance
- Referrals and advocacy for the patient's entry into a treatment or methadone maintenance program

The staff has established protocols that provide guidance on patient eligibility for various incentives and enablers, how often they may be offered and in what amounts, any limitations or conditions on the assistance provided, record keeping, and staff accountabilities.

ATTENTION TO PATIENT NEEDS BEYOND TB TREATMENT

The TOPS clinic has a social worker on staff. If the health worker or nurse perceives that a patient needs primary healthcare, mental health services, substance abuse services, or if the patient identifies such a need, the patient is referred to the social worker for assessment and referral. The patient agrees to accept all referrals that are provided.

Additionally, TOPS provides on-site HIV and STD testing. Both health workers and disease control investigators receive training in HIV pre- and post-test counseling, STD counseling, and HIV and STD specimen collection. Patients who agree to be tested and who receive positive results see the staff doctor or nurse for appropriate referrals.

PROACTIVE COLLABORATION WITH OTHER PROVIDERS

The TOPS team recognizes that it cannot succeed alone. To increase rates of TB screening and improve patients' access and adherence to DOT, the TOPS clinic collaborates with a number of community-based agencies.

TOPS's outreach is directed not only to potentially infected individuals but also to health and social services professionals serving those at high risk. TOPS provides educational in-services to bring these providers up-to-date on LTBI treatment recommendations and uses energetic, creative methods to develop effective referral patterns and to follow up on referred individuals.

TOPS has negotiated memoranda of understanding (MOUs) with several in-patient substance abuse treatment centers. Staff members of these agencies provide DOT to TOPS patients who are participating in their programs. Additionally, TOPS staff provide PPD testing at local shelters and work with health staff from the San Francisco jail to ensure continuity of care after release for active TB patients and HIV-positive patients on LTBI treatment. Methadone clinics have proved to be especially effective partners. Their clients, who tend to have many high-risk factors, are required by federal regulations to be screened for TB. As a result of San Francisco's partnership with three methadone clinics, all methadone clients were screened for active TB, and the majority of those with TB—who are eligible for treatment—are placed on appropriate therapy.

STAFFING

The TOPS program staff includes:

- Program coordinator (1)
- Part-time physician (1) or immediate daily access to a TB-knowledgeable physician

- Registered nurse (1)
- Senior disease control investigator (1)
- Social worker (MSW) (1)
- Outreach health workers (4)

The staffing reflects the effort required for outreach and follow-up on 90 to 100 patients with LTBI from targeted hard-to-reach populations.

RECRUITMENT

Recruited staff are those with experience in working with high-risk populations at shelters, social services programs, and substance-abuse detox and treatment centers.

STAFF TRAINING

All staff members receive the following training:

- "TB 101" training provided by experienced medical staff
- Completion of Centers for Disease Control and Prevention's *TB Self Study Modules*
- Training in the placement and reading of PPDs by the clinic's head nurse
- Regular attendance at HIV, TB, STD, and/or hepatitis workshops provided by the TB clinic, the City and County Health Department, or local community-based organizations
- Staff participation in health fairs, research projects, etc., to increase their knowledge and to help them become more comfortable and creative in carrying out their duties

Staff members are also asked for their input and feedback in developing new strategies for addressing patient needs, clinic protocol, and more.

DOT RESPONSIBILITIES OF TEAM MEMBERS

At TOPS, the administration of DOT is a team effort. Once the patient has been tested and evaluated by the physician and treatment of LTBI has been prescribed, several staff members work together to assist the patient in taking the medications.

Outreach Health Workers

Each outreach health worker carries a maximum caseload of 25 patients. The outreach health worker:

- Observes the patient swallowing the medication
- Dispenses food and other incentives to the patient after dosing
- Records each observed dose of medication on the medication log sheet
- Records any adverse reactions reported and refers the patient for immediate nursing or medical evaluation
- Requests any lab testing (e.g., blood draw) that may be indicated and facilitates the patient's providing of needed samples at the appropriate time and location
- Provides LTBI treatment for the patient in the field if the individual does not come to the program clinic site or has another arrangement regarding where and when to receive doses
- Searches for the patient who misses appointments for dosing
- Documents attempts to reach the patient

- Alerts other team members to search for the missing patient on daily rounds

Nursing

The registered nurse monitors LTBI treatment for the hardest-to-reach patients enrolled in the program and is available as needed for patient assessments and referrals to medical and health services. The registered nurse:

- Exchanges information with the physician concerning individual patient status or prescribed treatment
- Packages individual doses of medications for each patient (usually about two weeks in advance of need)
- Charts and maintains accountability for doses administered by program staff
- Provides DOT doses to patients attending the program clinic, as needed
- Monitors patients for symptoms of adverse reactions and evaluates patients referred by outreach staff
- Provides lab tests, HIV counseling and testing, STD screening, and other direct patient care services
- Makes and follows up on referrals to other providers for meeting the patient's health and medical needs
- Participates in team case conferences
- Develops patient-specific care plans

Social Workers

The TOPS program social worker takes an active role in monitoring the treatment doses received by patients as part of the comprehensive care offered to patients in the form of incentives and referrals. The social worker:

- Assesses the patient's psychosocial needs
- Makes appropriate referrals to care based on the assessment
- Makes recommendations to the team about specific incentives and enablers that will motivate and assist the patient

Supervisory Staff

The TOPS supervisory staff are experienced disease control investigators who participate in daily treatment activities and monitor the quality of services provided. Supervisory staff members:

- Recruit, train, and supervise TB team members
- Ensure that program protocols are being followed by staff
- Assess problems in adherence and assign outreach staff to extend field investigations
- Monitor the Review of Symptoms (ROS) forms for each patient receiving LTBI treatment. These forms are required monthly or more often, depending on medication regimen
- Ensure that an identification photograph is obtained for each patient enrolled in the program
- Ensure that Release of Information forms are signed for each patient

- Ensure that HIV/STD testing is offered to program participants and provided to those that give consent (HIV status can affect the length of treatment)

- Troubleshoot problems related to individual patient challenges

CASE MANAGEMENT RESPONSIBILITIES OF TEAM MEMBERS

TOPS uses a case management approach to assist its high-risk patients during their course of treatment and facilitate their ability to adhere to the treatment regimen.

Case Managers

Each patient enrolled in the program is assigned to a particular outreach worker or disease control investigator. The individual case manager:

- Receives new patients assigned to the caseloads and attempts to contact the patient within 24–48 hours of referral

- Establishes rapport with the patient

- Educates the patient in terms he or she can understand about:

  - TB and its transmission

  - TB infection versus TB disease

  - Treatment protocols for LTBI

  - Adverse reactions that should be reported immediately

- Obtains locating information from the patient

- Develops a plan with the patient concerning where and when to provide LTBI treatment doses

- Makes referrals to a physician, nurse, or social worker for other needs which are identified during patient encounters

- Participates in case conferences held by the LTBI program team and shares important information that can enhance team efforts to care for the patient

- Alerts medical and supervisory staff of missed medication doses or unobserved doses

- Follows up on any missed appointment or commitment by a patient within 48 hours

- Ensures the timely documentation of:

  - Treatment doses administered

  - Adverse symptom assessment

  - Outreach attempts when patient misses doses or appointments

Supervisors and All Team Members

Supervisors and staff coordinate and consult on cases daily and plan together to ensure that all patients have coverage if a case manager or other team member is absent. All TB staff share the patient care needs. Each team member:

- Takes an assigned rotating shift at clinic

- Provides and documents DOT doses to all patients presenting for doses

- Dispenses incentives

- Provides emergency transportation as needed for patients coming to the TOPS clinic

CONCLUSION

The success of the TOPS program has depended on the active application of patient-centered strategies by a well-supported staff. The concept of patient-centered care has been applied to the location of the program, the use of incentives and enablers, and a broad adoption of the philosophy of harm reduction. These techniques, combined with a mission of locating and treating both active and latent disease, and a willingness to collaborate, are key elements that should be incorporated into any LTBI program.