Addressing HIV/AIDS Issues in TB Contact Investigation: A Guide for Contact Investigators, Managers, and Trainers

CHARLES P. FELTON
NATIONAL TUBERCULOSIS CENTER
AT HARLEM HOSPITAL

Addressing HIV/AIDS Issues in TB Contact Investigation: A Guide for Contact Investigators, Managers, and Trainers

CHARLES P. FELTON
NATIONAL TUBERCULOSIS CENTER
AT HARLEM HOSPITAL

ACKNOWLEDGEMENTS

The impetus for this project was Task Order 4 ("Incorporating HIV Counseling, Testing, and Referrals into TB Contact Investigation") of the Tuberculosis Epidemiologic Studies Consortium. This project was funded by the Centers for Disease Control and Prevention to develop a model that could be used in TB control program settings.

This booklet is divided into three sections. Research for the implementation part of this booklet was conducted by Jiehui Li and Cynthia Driver of the New York City Department of Health and Mental Hygiene, Bureau of Tuberculosis Control, and Suzanne Marks of the Division of Tuberculosis Elimination, Centers for Disease Control and Prevention. The introduction and training sections were developed and written by Kenneth Holley, Khadija Y. DeLoaché, Bill Bower, and Christopher Davis of the Charles P. Felton National Tuberculosis Center at Harlem Hospital.

A special note of appreciation is extended to Wafaa El-Sadr, Sonal Munsiff, Paul Colson, Erica Moore, Elizabeth Drackett, Brian Toro, Timothy Adeleyd, Mario Williams, Ranesh Chakravarity, Anne Murray, and Felecia Stubblefield, for their support and assistance. Thank you to all of our reviewers: Rajita Bhavaraju of the New Jersey Medical School National Tuberculosis Center, Cynthia Driver and Valerie Gunn of the New York City Department of Health and Mental Hygiene, Bureau of Tuberculosis Control, and Krissy Vinup of the Public Health Department, County of Santa Clara, California.

The Charles P. Felton National Tuberculosis Center is a joint project of Harlem Hospital, Columbia University, New York City Health & Hospitals Corporation, and the New York City Department of Health and Mental Hygiene, funded by the Centers for Disease Control and Prevention.

Suggested citation:
Charles P. Felton National Tuberculosis Center at Harlem Hospital.
Addressing HIV/AIDS Issues in TB Contact Investigation. 2004.

This document is available through the:
Charles P. Felton National Tuberculosis Center
Harlem Hospital Division of Infectious Diseases
506 Lenox Avenue
New York, NY 10037
Phone 212-939-8254 Fax 212-939-8259
Website: www.harlemtbcenter.org

Graphic design: Judith Rew

TABLE OF CONTENTS

ABBREVIATIONS

AIDS	acquired immunodeficiency syndrome
CBO	community-based organization
CDC	U.S. Department of Health and Human Services—Centers for Disease Control and Prevention
CI	contact investigator
CM	case manager
CXR	chest x-ray
DCI	disease control investigator
DOH	Department of Health
HIV	human immunodeficiency virus
LTBI	latent tuberculosis infection
MD	medical doctor
PHN	public health nurse
TB	tuberculosis
TST	tuberculin skin test
VCT	voluntary counseling and testing
MDR-TB	multidrug-resistant tuberculosis

INTRODUCTION

Tuberculosis (TB) contact investigations are conducted to find persons who have been exposed to patients with active tuberculosis and to evaluate and treat those persons for TB infection and active TB. Someone with latent TB infection (LTBI) and HIV is up to 800 times more likely to develop active TB disease during his or her lifetime than someone without HIV.[1] HIV is the leading factor for activation of LTBI to active disease. Until recently, the efforts to control TB among HIV-infected people have focused mainly on active TB patients.

While voluntary HIV testing for TB contacts has been recommended since 1996, a recent CDC study[2] has shown that most of the country had limited documentation of HIV status of TB contacts. As a result of not knowing their HIV status, some contacts might experience delayed diagnoses of LTBI or active TB, resulting in missed opportunities for TB treatment and the prevention of TB transmission. This Guide aims to strengthen the Contact Investigator's skills in engaging clients in discussion about HIV counseling, testing, and referral. HIV counseling and testing must be seen as the standard of care for TB assessment and treatment of tuberculosis.

The guide is divided into three major parts. The first part is designed to provide the Contact Investigator with the essential HIV/AIDS information he or she will need when engaging in a family-friendly discussion to encourage TB contacts to agree to HIV counseling and testing. The second is designed to give TB program managers guidelines for implementing a program tailored to their jurisdiction. The last part details a training course that will impart the skills, attitudes, and knowledge one will need to include HIV in tuberculosis contact investigations. This course can be conducted for a half or full day.

1 Centers for Disease Control and Prevention. TB and HIV Coinfection: What Can HIV/AIDS Service Organizations Do to Help?

2 Centers for Disease Control and Prevention. Missed opportunities for the prevention of tuberculosis among persons with HIV infection–Selected locations, United States, 1996-1997. MMWR 2000; 49 (No. 30; 685).

CONTACT INVESTIGATORS' RESOURCE GUIDE

The purpose of this part of the guide is to provide Contact Investigators (CIs) with the necessary information to assist them in engaging TB contacts in discussions about voluntary counseling and testing (VCT) for HIV. The field staff that conduct contact investigations must be equipped with the appropriate knowledge, skills, and sensitivity to encourage TB contacts to volunteer for HIV counseling and testing. It is the role of the CI to educate contacts of persons with active TB about the risk of TB and the link with HIV infection. In addition to routine information about TB, the CI must explain the greater risk of TB if the person is HIV positive and has LTBI.

After reading this guide, a CI will be empowered with an HIV/AIDS education message that is family friendly and can be used in a variety of contact investigation situations. A confident and skilled CI can develop better communications with contacts and establish a trusting relationship that will lead to referrals for HIV VCT.

There are many barriers that prevent contacts from accepting HIV VCT. This guide identifies and examines some of those barriers. Exploring these barriers better prepares the CI for the task of encouraging contacts to accept HIV VCT. The CI will need to recognize these barriers and be able to offer valid reasons why the contact should find it important and necessary to accept HIV VCT. Ultimately, the CI should be able to communicate that HIV VCT is a standard component of care for persons with LTBI.

INTRODUCTION

Contact investigations are conducted to find persons who have been exposed to someone with active TB and to evaluate and treat those contacts for LTBI and active disease, if detected. Persons in close contact with patients with active TB are at high risk for LTBI. The risk for progression of latent LTBI to TB disease is increased greatly if the person is infected with HIV. Therefore, it is very important for Contact Investigators to engage close contacts in discussion regarding the importance of knowing their HIV status through HIV counseling and testing.

In 2000, the CDC published a study on the missed opportunities for the prevention of TB among persons with HIV infection.[3] The study examined the clinical records of TB programs to determine whether these programs used recommended practices to manage HIV-positive persons exposed to TB.

The results of this study suggested that TB programs need to review their contact investigation policies, procedures, and outcomes to reduce missed opportunities for preventing active TB among HIV-infected close contacts. It was reported that few close contacts were assessed for HIV and one-fourth of those known to be HIV-infected did not receive complete screening for TB. Of the HIV-infected contacts eligible for LTBI treatment, only one-third started LTBI treatment, and only one-sixth completed it.

3 Centers for Disease Control and Prevention. Missed opportunities for the prevention of tuberculosis among persons with HIV infection–Selected locations, United States, 1996-1997. MMWR 2000; 49 (No. 30; 685).

The findings in this study indicate a need for better integration of HIV assessment into TB contact investigation procedures and improved coordination between local TB and HIV programs to facilitate voluntary counseling, testing, and follow-up for HIV-infected close contacts. Both healthcare providers and HIV-infected persons need to be aware of optimal management of close contacts and of the benefits of prompt and well-supervised LTBI treatment to prevent active TB.

Definition of Terms

Endemic

A disease that is prevalent in a certain group of people or in people living in a particular location.

Incubation Period

The time between when a person gets HIV (initial infection) to the time that AIDS develops. AIDS is considered a very advanced stage of HIV infection. Specific criteria are used to diagnose AIDS.

Perinatal Transmission

The transmission of HIV infection from an HIV-infected mother to her infant during pregnancy, labor and delivery, or breastfeeding.

T Cell

A key infection fighter in the human body's immune system. The term generally refers to a specific kind of T Cell called a CD4 positive T Cell. Sometimes these cells are also called CD4 Cells.

Window Period
The time between when a person is infected with HIV and when there are enough antibodies to be detected using current HIV testing methods. Most people infected with HIV will develop enough antibodies to be detected by one month. Virtually all people infected will develop antibodies by three months.

TB AND HIV/AIDS

In a needs assessment conducted for Contact Investigators in a local public health department, Contact Investigators were interviewed and observed in the field.

The observation revealed that many TB Contact Investigators were very confident in their ability to communicate with people about TB disease and LTBI. However, they did not have the same comfort level when addressing HIV/AIDS issues. Most felt they did not have enough detailed information on HIV/AIDS to engage in a discussion on this subject and to refer the person for HIV testing. They feared being asked questions they could not answer. They were also concerned that discussion regarding HIV may need to include sensitive topics such as sexuality or substance use, issues that are difficult to discuss in a setting with limited privacy such as the home.

The following is basic information that a Contact Investigator might need when discussing voluntary HIV counseling and testing.

The TB-HIV Link

HIV weakens the immune system, and TB thrives in a person with a weakened immune system. Thus, HIV speeds development of TB:

- Someone who is HIV infected and infected with TB (i.e., with LTBI) is up to 800 times more likely to become sick with TB than someone who is HIV negative and infected with TB.
- HIV is the most powerful known risk factor for progression of LTBI to active TB disease
- TB is the leading cause of death among people who are HIV-infected in many parts of the world. In Africa, one-third of all AIDS-related deaths are due to TB.

Risk Factors for LTBI and TB Disease[4]

High risk for TB infection (LTBI)

- Contact with someone with TB
- Born in or visited countries where TB is common
- Use drugs or excessive alcohol
- Live or work in nursing homes, shelters, or prisons
- Exposed to TB on the job
- **HIV infected**
- Conditions such as diabetes, old TB, kidney problems, or cancer

High risk for TB disease once infected

- **People with HIV infection**
- People with other medical conditions that appear to increase the risk for TB
- People recently infected within the past two years
- People with chest x-ray findings suggestive of previous TB disease
- People who inject illicit drugs

Multidrug-Resistant TB (MDR-TB)

MDR-TB is becoming an increasing problem in the world. It is now thought that up to four percent of the world's TB cases are MDR-TB. Because MDR-TB cannot be treated with standard TB therapies, treatment requires up to two years. During that time, the patient is infectious longer than patients with non-resistant TB. MDR-TB is more often fatal than non-resistant TB.

HIV-infected individuals who are exposed to MDR-TB, if infected with such organisms, are at greater risk of progressing to MDR-TB disease. Therefore, it is very important to rigorously screen and evaluate contacts of patients with MDR-TB for possible HIV co-infection.

While the number of cases of MDR-TB has remained stable in the United States over the past few years, cases of MDR-TB have been reported in 43 states and the District of Columbia.

4 U.S. Department of Health and Human Services Public Health Services, Centers for Disease Control, Self-Study Modules on Tuberculosis, March 1995, Modules 1& 2."

UNDERSTANDING HIV/AIDS

The Basics

What is HIV?

HIV stands for **Human Immunodeficiency Virus**. HIV causes the gradual deterioration of the body's immune system by killing T Cells. The body then becomes susceptible to various other diseases. These diseases are called "opportunistic Infections", because they do not normally infect healthy people.

What is AIDS?

AIDS stands for **Acquired Immunodeficiency Syndrome**. The term "AIDS" applies to the most advanced stages of HIV infection. The official criteria for the definition of AIDS were developed by the CDC. The definition includes all people with T Cell counts less than 200. In addition, the definition of AIDS includes 26 specific clinical conditions, most of which are opportunistic infections.[5]

A normal person starts with 1,000–1,200 T Cells in every cubic millimeter of blood. HIV attacks the body by infecting and destroying those T Cells, thereby reducing the body's ability to defend itself against infections. Even when there are no symptoms of HIV infection, the virus is actively multiplying and infecting and killing T Cells. As the immune system weakens, a variety of things begin to happen to the body. Sometimes, the first signs of HIV infection are swollen lymph nodes. Other symptoms that can be experienced before the onset of AIDS include:

- Lack of energy
- Weight loss
- Frequent fevers and sweats
- Persistent or frequent yeast infections (oral or vaginal)
- Persistent skin rashes or flaky skin
- Pelvic Inflammatory Disease (PID) in women, which does not respond to treatment
- Short-term memory loss

When a person progresses to AIDS, the immune system is so weakened that the body cannot fight off many kinds of bacteria, viruses, fungi, parasites, and other microbes. In addition, people living with AIDS are more susceptible to some kinds of cancers, such as Kaposi's sarcoma (KS) or lymphomas. These cancers are difficult to treat in people living with AIDS.

5 Material in this section is drawn in part from National Institute of Allergy and Infectious Diseases, "HIV Infection and AIDS: An Overview" (October 2003). This can be accessed on the Internet at the following URL. www.niaid.nih.gov/factsheets/hivinf.htm

The Two Types of HIV

1. HIV-1 is most commonly found worldwide.
2. HIV-2 is found mostly in West Africa. Many African immigrants in the United States are from West Africa.

Comparing HIV-1 and HIV- 2

HIV-1	vs.	HIV-2
• Predominant virus found world wide • Rate of perinatal transmission is 14–35% (without treatment) • 3 times more infectious than HIV-2 • Rate of T Cell loss is 105 per year • Incubation period is shorter than HIV-2		• Found mostly in West Africa, not a worldwide pandemic • Risk of perinatal transmission is 0–4% (without treatment) • Less infectious (not as easily transmitted) as HIV-1 • Rate of T Cell loss is 1% per year (slow progression) • Incubation period is longer than HIV-1

If a person is from a country where HIV-2 is prevalent, that person should be tested for HIV-1 and HIV-2. The CDC reports that the following persons are at risk for HIV-2 infection.

- Persons from a country where HIV-2 is endemic
- Sex partners of a person from a country where HIV-2 is endemic
- Persons who received a blood transfusion or a nonsterile injection in a country where HIV-2 is endemic
- Persons who shared needles with a person from a country where HIV-2 is endemic or with a person known to be infected with HIV-2
- Children of women who have risk factors for HIV-2 infection or are known to be infected with HIV-2
- Persons with an illness that suggests HIV infection but whose HIV-1 test result is not positive

It is important to note that TB is endemic in the same countries in which HIV-2 is endemic. It is therefore important for the CI to have knowledge about HIV-2 when dealing with persons from these countries.[6]

HIV-2 endemic areas include: Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Ghana, Guinea/Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome, Senegal, Sierra Leone, Togo, and other African countries such as Angola and Mozambique.

6 For- more information about HIV-2, see CDC-NCHSTP—Division of HIV/AIDS Prevention—Fact Sheet—Human Immunodeficiency Virus Type 2. This can be accessed on the Internet at the following URL. www.cdc.gov/hiv/pubs/facts/hiv2.htm.

Where HIV Can Be Found in the Body

HIV is most commonly found in human body fluids. People with HIV infection can spread HIV to others through the following body fluids:

- Blood
- Semen
- Fluids from a women's vagina and/or cervix (wetness in a woman's vagina)
- Breast milk

The following body fluids have not been shown to contain significant amounts of HIV:

- Saliva
- Tears
- Perspiration
- Urine
- Feces

How HIV Is Transmitted

There are many misperceptions about how HIV is spread from person to person.[7] In order for any virus to spread, certain steps must happen:

1. Someone or something must carry (or have) the virus. This is the source of the infection.
2. The virus needs a way to exit (leave) the body. With HIV, infected body fluids can exit and be passed to others in these ways:
   - During sex (anal, oral, or vaginal intercourse)
   - Sharing injection drug "works"
   - From mother to baby in the womb, during birth, or during breast feeding
   - In accidental needle sticks or splashes, where infected blood or body fluids may infect healthcare workers.
   - Through infected blood or body parts that are donated to others (very low risk).
3. The virus needs a way to enter another person's body. Body fluids from a person infected with HIV can enter another's body in the ways listed above.
4. A virus needs someone able to get infected, a susceptible host. In the case of HIV, almost every human is susceptible. A person only becomes infected if he or she does something to put him or herself at risk of coming into contact with HIV infected body fluids.

7 TheBody.com is an important Internet resource for information about HIV/AIDS. In addition to posting up-to-date information, it has an "Ask The Experts" section to answer individual questions. TheBody.com has compiled a valuable document called "Misperceptions About HIV and Its Transmission." It can be accessed on the Internet at the following URL. www.thebody.com/cdc/factv.html.

How HIV Is Transmitted Through Sex

If the person infected with HIV has unprotected sex with another person, the HIV-infected semen or vaginal fluid can enter the other person through their rectum, vagina, penis, or mouth. So, the following sexual activities can transfer HIV from one person to another:

- Anal intercourse (penis to rectum)
- Vaginal Intercourse (penis to vagina)
- Oral Sex (mouth to penis or mouth to vagina)
- Blood in semen or vaginal fluids, directly on broken skin or mucus membranes
- Sharing of sex toys

How HIV Is Transmitted Through Sharing Needles or Drug "Works"

When a person infected with HIV shoots up and then shares the "works" with others, infected blood gets in the "works" and will be directly injected into someone else. The following items are part of the "works":

- A needle
- A syringe (barrel and plunger)
- A cooker (container used to dissolve drugs from solid to liquid; may be a spoon or bottle top)
- A cotton/filter (used to strain the drug)
- A water glass (used to rinse the syringe and/or dilute the drugs).

The HIV Test

An HIV test administered by a physician, clinic, or anonymous testing site generally consists of two parts. Both parts of the test check for the presence of HIV antibodies that are made by the immune system after a person gets infected with HIV. Most people infected with HIV will develop enough antibodies to be detected by one month. Virtually all people infected will develop antibodies by three months. If no HIV antibodies are found, the second test is not performed.

If HIV antibodies are found in the first part of the test, an additional test is performed to confirm their presence. The most common confirming test is called the Western Blot test. It detects specific antibodies that are developed against HIV.

There are currently several rapid tests for HIV. These tests can provide preliminary results in as little as 15–20 minutes. A positive test result from a rapid test must be confirmed by an additional test, such as the Western Blot.

How HIV Test Result Are Reported

- **Negative**. A negative result means no antibodies were detected. Infection cannot be excluded without follow-up testing, however, if client has a recent history of possible exposure.
- **Positive**. A positive result means that antibodies were detected, and a Western Blot or other test was then done to confirm the presence of HIV. This means the person is infected and can transmit HIV to someone else.
- **Indeterminate.** Clients with an indeterminate Western Blot result should be retested for HIV infection one month later. If a person with an indeterminate Western Blot test is from an area where HIV-2 is found, an HIV-2 test may be performed. Persons with continued indeterminate Western blot results after one month are unlikely to be infected and should be treated as though they are not infected unless recent exposure has taken place.

The Difference Between Anonymous and Confidential Testing

Anonymous Testing

- The person's identity is unknown. No name is given at the antibody-testing site. A code number is given to the person being tested. This code number is used instead of a name on the Informed Consent to perform an HIV Test.
- Anyone who is tested anonymously for HIV at an anonymous test site has the option to convert a positive or indeterminate result to a confidential result. They may choose to have the result forwarded to their medical care provider. Anonymous testing sites do not provide medical care, but they do provide counseling.

Confidential Testing

- The person's name is known, but it can be shared only with those who need to know the result of the HIV antibody test. A list of those who may be able to have information about a person's HIV antibody test should be included in the Informed Consent to perform an HIV test.
- The person who is being tested must sign the consent with his or her name. The result of the HIV antibody test is entered into the medical record. To get a confidential HIV test, an individual should go to his or her doctor or clinic and ask to be tested for HIV. This is the preferred standard of HIV testing because it is easier to follow up with the patient.

INTRODUCTION TO VALUES CLARIFICATION

The goal of this section is to provide the CI with the knowledge and skills for effective communication when addressing the subject of HIV/AIDS counseling and testing. The previous section of this booklet presented scientific information the CI will need in order to effectively answer questions and engage in knowledgeable dialogue about HIV/AIDS. This section offers a strategy for engaging in sensitive dialogue for HIV/AIDS testing and counseling. Most importantly, the CI must make certain that the contact understands that VCT is the standard of care for TB assessment of someone who has been exposed to active TB.

A script is provided that reviews key facts about TB and HIV and reinforces the need for VCT. The script included in this booklet as an appendix suggests the basic information needed to engage in such dialog.

The effectiveness of the discussion will depend on the CI's comfort level with the subject. The practical application of this training involves a review of the script and various role-playing scenarios the CI may encounter in the field. The following section is intended for the CIs to explore their own feelings about their personal values.

Personal Values Can Affect Communications

Effective communication with TB close contacts on the subject of HIV/AIDS issues requires sensitivity and respect for others who may have different ideas and values. The CI is required to engage in personal and sometimes intimate discussions with TB close contacts. The CI must first be aware of his or her values and feelings around HIV/AIDS issues before any attempt can be made to engage in a discussion with TB close contacts who may need to volunteer for HIV counseling and testing.

Everyone has values—strong beliefs that may influence behavior. Values can be formed by the larger community or within the individual. A good place to start looking at one's own values is to ask oneself, "What are the elements in my life that are truly very important to me?" The answer to that question is an example of that person's values.

Below are a few points that may trigger thinking about values.

Values

- Are strongly held beliefs that tend not to change
- May vary from culture to culture, group to group, etc.
- Are things that a person might fight over or die for
- May be so much a part of the person that he or she may take them for granted
- Are long-standing assumptions that do not change easily
- Can be something that all the information in the world may not change

Values can be formed by:

- Parents
- Teachers
- Peers
- Religious organizations/affiliations
- Media
- Community
- Life experiences
- Family

It is important to note that while values are strong beliefs, they can change because of different influences, events, people, and experiences. For example, the events of September 11, 2001, could change how one might value one's life. The death of a loved one from smoking may change one's values about smoking. Attitudes about seatbelts, gun control, and high blood pressure are just a few values that could be subject to change in one's life.

Contact Investigators can be more effective in providing HIV/AIDS information if they are aware of their own values, and if they understand that values will vary from client to client. Most important, the CI must be willing to respect people who have values different from their own.

Effective Contact Investigators are aware of their personal values and develop strategies that allow them to work with situations when their values differ from those of a person whom they are educating, or when their personal values are in conflict with the HIV/AIDS information that must be provided.[8]

A Values Clarification exercise and a questionnaire are included in the training part of this booklet. (p. 27)

8 Community HIV/AIDS Educator Curriculum, Trainers Manual, Office of the Medical Director, AIDS Institute, New York State Department of Health.

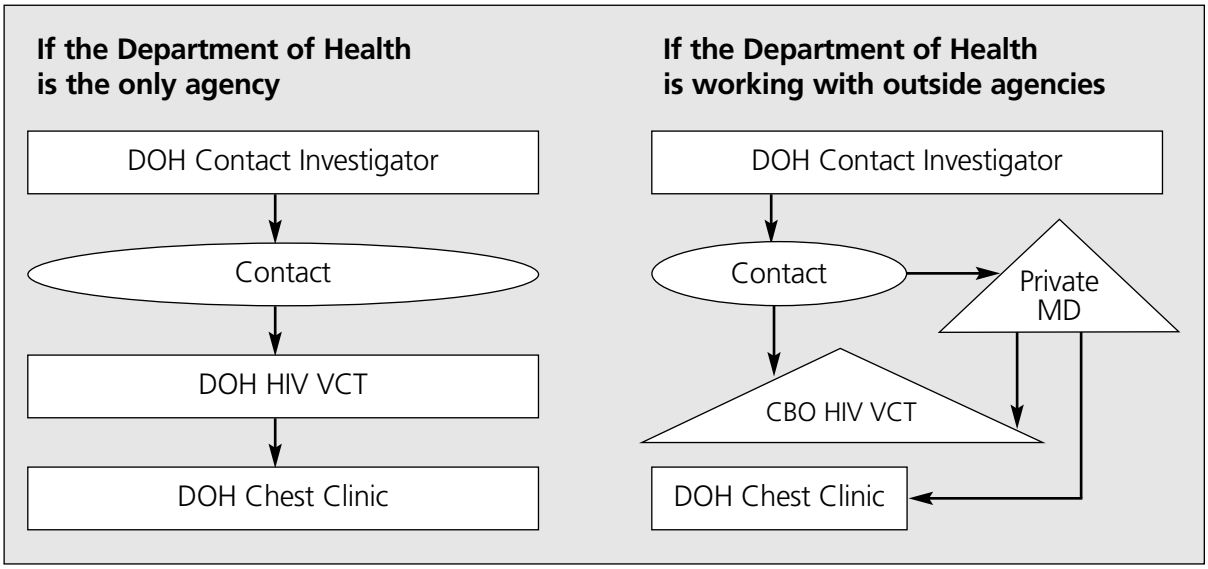
This section is for program managers. It is intended to provide guidelines for designing a program that will integrate efforts to address HIV/AIDS issues in conducting TB contact investigations. Flexible communication and coordination are the keys to establishing a program that may link TB and HIV testing services and other institutions. The following is a simple outline to assist in planning a program.

TB/HIV PROGRAM ESSENTIALS

A few key questions need to be asked before program implementation. The first step is to assess the program area's regulations and protocols for networking TB services and VCT for HIV. The program manager should delineate in detail how the network is designed and currently functioning. This delineation should include the network's delivery of services, referral links, documentation, reporting, and local regulations. This will enable the program manager to make decisions about how to implement the program and conduct training.

Determine Patient Flow

The following are possible paths for the flow of patient information, testing, and services:



Conduct a Needs Assessment

A needs assessment is always helpful in deciding how to address a new issue in any program. Once information has been gathered and analyzed, it will become the foundation on which to continue program planning. The most common approaches to needs assessment are listed below. Each method has certain advantages and disadvantages.

1. A needs assessment questionnaire can be helpful, as it can supply documented data as to the various issues that will need to be addressed in the training.
   - List specific questions or concerns CIs may have about the topic.
   - Ask CIs to do a self assessment or to fill out a questionnaire.
   - Gather and sort the responses to incorporate in planning the program and the training.
2. Here is a suggested observation and interview approach.
   - Interview CIs and observe their work in the field.
   - Conduct focus groups with CIs.
   - Interview a person who would do VCT for TB contacts referred by a CI and observe the interaction with clients (if the client's permission can be obtained).
   - Observe the clinic and/or field setting where VCT would take place (permission is needed).
   - Test CIs' knowledge.

Below is an example of findings from a needs assessment conducted in a local health department:

> In one municipal health department, a needs assessment revealed that CIs were confident about their general knowledge of TB, could establish trust, and could inform their contacts about all aspects of the TB testing and treatment process. However, they did not feel confident about engaging TB contacts in discussions about HIV voluntary counseling and testing. Most CIs admitted having sufficient knowledge of TB and the HIV connection, but they did not feel confident about engaging contacts in any type of discussion around voluntary counseling and testing of HIV.
>
> Most CIs felt that they did have some knowledge of HIV, but not enough to educate close contacts in a family-friendly manner. In addition, without additional training, they were not confident that they could bring the intimate subject up in a manner that would not offend or be misinterpreted by the close contact.
>
> The health department decided to arrange for VCT to be offered at the chest clinic, the same place where clients are diagnosed and treated for TB disease and LTBI. A formal letter from the Director of the TB control program was sent to all supervisors and contact investigators.[9] The letter stated the need to inform close contacts that HIV testing is part of the standard evaluation of a TB contact.

9 See the Sample Letter From the Department of Health found on page 35 of this booklet.

Set Goals

By setting goals, everyone will have a clear vision of what the program is intended to accomplish and what the expected outcomes are. It is a good idea to involve staff from all groups who will be involved in this new coordinated effort: CI staff, VCT staff, and chest clinic staff. Here are a few suggested goals.

- To increase HIV voluntary counseling and testing of close contacts to infectious TB patients
- To promptly identify active TB in HIV-infected close contacts
- To prevent active TB through treatment of LTBI in HIV-infected contacts once active TB has been excluded
- To prevent AIDS in HIV-infected persons through referrals to HIV care
- To reinforce HIV assessment skills
- To reinforce knowledge and understanding of relationship between TB and HIV

Identify priority population and decide who should be offered HIV counseling, testing, and referral.

For example, one health department decided to offer HIV VCT to:

- All persons 13 years of age and older who are close contacts to a pulmonary (sputum smear +, cavitary CXR, or culture positive) or laryngeal TB case and who do not know their HIV status, regardless of TST result
- Close contacts younger than 13 years, whose biological mother is HIV infected.
- All persons 13 years of age and older who are contacts to an active TB case and/ or have at least one risk factor for HIV infection.

Create policy for how HIV results will be documented.

Below is an example of one health department policy on the documentation of HIV status:

- HIV status must be recorded on all patients placed on treatment for LTBI.
- Patients who self-report having tested for HIV positive or negative without documentation must be further probed to ensure the authenticity of the information. If this cannot be determined, the status should be documented as unknown.
- To assist a patient in obtaining the documentation of HIV test results, the information can be requested from the provider who performed the test. For this, the patient must sign the State-approved consent form for the release of HIV information.

The HIV status should be documented as **negative** if the patient has had a documented negative HIV antibody test within the year prior to diagnostic evaluation for tuberculosis. It is not acceptable if the patient reports being HIV negative, but there is no documentation. The patient should be offered the opportunity to be tested for HIV.

HIV status should be documented as **positive** if:

- The patient is tested for HIV and the laboratory result is interpreted as positive according to published criteria, or
- The patient has documented medical history of a previous positive HIV test or a previous diagnosis of HIV infection or AIDS, or
- The patient gives history (e.g., an oral statement) of a previous positive HIV test or can document treatment for HIV infection. In this case, the patient should be asked to provide a record of a prior test or be retested.

There are other possibilities for HIV status that must be documented:

- HIV status is **indeterminate** if HIV test results are recorded as such.
- HIV status is **refused** if the patient was offered an HIV test but declined to be tested.
- HIV status is **not offered** if patient was not offered the test at the time of the TB diagnostic work up. If patient had a documented negative HIV test more than a year ago and was not retested, consider the status as not offered.
- HIV status is **test done, results unknown** if patient has been tested and the tuberculosis program does not know the results.
- HIV status is **unknown** if none of the previous categories apply.

Decide when appointments should be scheduled for VCT.

1. If contact is TST positive, a VCT appointment should be given on the same day as CXR/MD appointment.
2. If contact is TST negative, provide VCT appointment within 24 hours. If there is not enough time to set up an appointment in advance, give a Clinic Visit Card to the contact to be used as a pass to the Chest Center for immediate VCT. In a group setting where more than one TST-negative close contact is present, if one of them agrees to come to clinic for counseling, give Clinic Visit Cards to all contacts who are present even if they decline.

Set Objectives

Setting objectives gives the program director and trainer a comprehensive plan of action and idea of the anticipated outcome. It will also be helpful for future participant and training evaluations. Below are a few suggested program objectives:

1. To offer HIV VCT services to all close contacts of infectious TB patients.
2. To screen all HIV-positive close contacts for active TB disease, and to provide referral for HIV care and supportive services.
3. To offer LTBI treatment to HIV-positive close contacts who do not have active TB disease.

Decide how and when communications between CI, VCT, and Health Dept Clinic staff should be conducted.

Effective communication is the key to successfully linking the CI, VCT, and chest clinic. Staff will need to maintain frequent communication to ensure that contacts are identified, that they are evaluated for TB and HIV, and that appropriate follow-up is conducted.

For example one health department decided that they needed detailed protocols governing the following issues in situations where follow-up was needed.

- Appropriate documentation of all activity
- System for referrals
- Timeframes for administrative communication

The health department also decided to use a Clinic Visit Card for VCT of a distinct design, easily recognizable by all clinic staff, especially the receptionists in the chest clinic. This card indicates that the person wants to see an HIV counselor on the same day as they receive their chest x-ray and medical evaluation for LTBI. Persons carrying the card see an HIV counselor without delay.

Sample Clinic Visit Card for VCT

Patient Name:_____

Case number_____ DOB: ____ /____ /____ Home phone #_____

Home address: _____

_____

City _____State_____ Zip_____

TST date ____ /____ /____ TST reading date____ /____ /____ TST results mm_____

Accepted appointment for VCT counseling _____yes _____no

CI code _____ Date card was issued ____ /____ /____

Date chest clinic visit__/___/____ Counselor_____

Decline testing Yes _____ No _____

Referral Procedure

Decide what to do if a contact is *"not sure"* or says *"definitely no"* about accepting HIV VCT.

1. Document that the contact refuses HIV VCT and the reason for refusal if one is given.
2. Discuss the case with a supervisor and make additional effort for HIV VCT on the day of the TST reading.

If contact is TST positive and

- Accepts HIV VCT: Make an immediate appointment for a medical evaluation.
- Declines HIV VCT: Make an appointment for a medical evaluation at Chest Clinic and obtain physician's assistance to clarify the patient's need for VCT. Continue to offer VCT again during treatment for LTBI or active TB disease.

If contact is TST negative and

- Accepts HIV VCT: Make appointment within 24 hours.
- Declines HIV VCT: Try again on the post-window TST date, if applicable.

If a contact says he/she has been tested for HIV previously

- Find out if the HIV test was documented.
- Get the date and location the test was administered.
- Record the results and follow-up accordingly.

Decide what documentation is needed between field and office staff.

CI should report the TST and VCT results for each contact to the supervisor using a log that includes:

- Patient's name or case number
- Patient's address
- Testing Date
- Reading date and time
- Reading location (detail the address for follow-up)

Document the following;

- Acceptance of HIV VCT appointment (yes/no)
- Clinic Visit Card given to contact
- CXR and medical evaluation appointment date and clinic
- Include comments or specific request
- Any concerns mentioned by the contact

TRAINING GUIDE

INTRODUCTION

This part of the booklet is designed as a guide to furnish the trainer with the necessary tools to prepare contact investigators to engage in discussions with contacts around the issues of HIV and VCT. Specific qualifications of the trainers are essential for this unit; different sessions require trainers with different backgrounds. Trainers should be considered based on their HIV/AIDS background and their understanding of local health services.

The time allotted for each lesson may vary from 30 to 90 minutes. The following materials should be available for the learning process.

Materials and equipment

You will need one of the following ways to share information with the group:

- Laptop with PowerPoint slides and multimedia projector
- Transparencies and overhead projector
- Newsprint and markers and easel or masking tape

TRAINING SCHEDULE

Time	Content	Methodology
9:00	**Introduction of participants, schedule**	
9:15	**Pre-test (p. 23)**	Ten minutes
9:30	**Lesson One** **TB/HIV Background (p. 24)** Risk factors, role of VCT in CI, MDR-TB	**Lecture & Discussion** Appendix 1-MMWR art. Booklet p. 4–7
10:00	**Lesson Two (p. 25)** **What is HIV?** Definition of HIV, AIDS, 2 types of HIV, HIV transmission	**Lecture & Discussion** Booklet p. 8–11 Appendix 2
11:00	**Break 15 minutes**	
11:15	**Lesson Three** **HIV Testing (p. 26)** Define *window period*, explain test results, types of testing	**Lecture & Discussion** Booklet p. 11–12
11:45	**LUNCH**	
1:15	**Lesson Four** **Values Clarification (p. 27)** Explore what influences values, change in values, adapting to change in one's values	**Lecture & Discussion** Values Clarification Questionnaire p. 37
1:45	**Lesson Five** **TB-HIV Project Implementation (p. 29)** Program information and data reporting system	**Lecture & Discussion** Local program area will provide the materials
2:15	**Break 15 Minutes**	
2:30	**Lesson Six** **Barriers in the field (p. 30)** Explore barriers and brainstorm solutions	**Lecture & Discussion** Newsprint easel, paper and marker
3:00	**Lesson Seven** Simulation exercise in small groups	**Role Plays & Feedback** Role-Plays p. 40
4:00	**Post-test (p. 23)**	Ten minutes

ADDRESSING HIV/AIDS ISSUES IN TB CONTACT INVESTIGATION

Pre- and Post-Test

1. What is HIV?

   _____

2. What is AIDS?

   _____

3. What is the Incubation Period?

   _____

4. What is the Window Period?

   _____

5. Circle the body fluids that transmit HIV
   - Sweat
   - Breast milk
   - Saliva
   - Blood
   - Urine
   - Tears
   - Semen
   - Vaginal fluids

6. HIV infects the white blood cells. T or F

7. CIs should offer HIV counseling and testing referral to all close contacts of infectious TB patients. T or F

8. Describe two ways an HIV-infected person can pass the infection to another person.

   _____

   _____

9. CI should never discuss HIV information when there are several people in one apartment. Tor F

10. List four risk factors for developing TB disease.

    _____

    _____

    _____

    _____

11. If we do not offer HIV counseling and testing to close contacts of infectious TB patients, we will miss opportunities to prevent TB disease. T or F

12. The window period for HIV to be detected in the body is two to three weeks. T or F

13 HIV confidentiality means no HIV information can be given out without an individual's consent. T or F

LESSON ONE

TB/HIV BACKGROUND

Objectives

By the end of the session, participants will be able to:

1. Explain how the risk of TB disease is increased if close contact is HIV positive
2. State why it is important to engage close contact in discussions regarding VCT

Lecture/Discussion

- Risk factors for LTBI and TB disease
- The role of VCT in contact investigation
- Significance of MDR-TB

Trainer's Notes

Trainer should be familiar with local health services. He or she will need to prepare lectures notes ahead of time by using materials from Section II of the Resource Guide. Explain to participants that the MMWR article "Missed opportunities for preventing active TB among HIV positive close contacts" is a background source for this training.

Preparation

Include Appendix 1 from this booklet.

LESSON TWO

WHAT IS HIV?

Objectives

By the end of the session, the participant will be able to:

1. State the difference between HIV and AIDS
2. State how HIV is transmitted and not transmitted
3. Explain how HIV affects the immune system

Lecture/Discussion

- The definition of HIV and the two types of HIV
- The definition of AIDS
- How HIV is transmitted and how it affects the immune system

Trainer's Notes

Trainer should be knowledgeable about HIV/AIDS issues in the local context. He or she will explain that HIV stands for the Human Immunodeficiency Virus. Give a brief overview of HIV, including HIV-1 and HIV-2. Encourage participants to respond and record the responses on newsprint or transparency. Explore other resources, such as the NIAID fact sheet "HIV Infection and AIDS: an Overview".

Preparation

Include Appendix 3, "Myths and Facts Associated With HIV Transmission."

LESSON THREE

HIV TESTING

Objectives

By the end of the session, participants will be able to:

1. Define the window period for HIV
2. Explain how HIV test results are reported
3. Describe the difference between anonymous and confidential testing

Lecture/Discussion

- The window period for HIV
- The meaning of the HIV test results
- Anonymous and confidential testing

Trainer's Notes

Trainer should be knowledgeable about HIV/AIDS issues in the local context. He or she will explain that an HIV test is a test done in two parts. If the first part is positive for HIV antibodies, a Western Blot or similar test is done to confirm the results. Participants will need to be informed of the following points.

1. Antibodies to HIV begin being made by the immune system as soon as a person is infected.
2. It is important to remember that if a person is infected with HIV, he or she can transmit the virus to someone else even if the HIV test does not yet detect any antibodies.
3. Because of the window period, the best time for the first HIV test is about four weeks after being exposed to HIV.
4. If the first HIV test does not detect antibodies, the person at risk needs to be tested again three months after the risk for HIV infection happened. After three months, virtually everybody who is infected with HIV will have enough antibodies to show up on the HIV test and HIV will show up on the confirming Western Blot. At this time, if the test is negative, the person does not have HIV infection, but should continue to avoid risky behavior to prevent getting infected in the future.

Preparation:

This booklet is the only resource needed.

LESSON FOUR

VALUES CLARIFICATION

Objectives

By the end of the session, the participant will be able to:

1. Explain what a value is
2. State influences that shape values
3. Explain how values can change

Group Discussion

- Definition of "values"
- Influences that form values
- How a person's values can change

Trainer's notes

Trainer should be experienced in group facilitation. Explain that participants in this training will have different values. Explain that values are not right or wrong, that they are important part of being human. Ask the group "what is a value?" Record all the participants' answers on transparency or newsprint. Encourage participants to write down their responses.

Make sure to touch on the following in the definition:

- Values are strongly held beliefs.
- Values may vary from culture to culture, group to group, etc.
- Values are something a person might argue over.
- A value is something that a person might fight or even die for.
- A value may be so much a part of the person that he or she may take it for granted.
- A value is a long standing assumption that does not change easily.
- A value is something that all the information in the world may not change.

Make sure to include the following

- Parents
- Teachers
- Peers
- Religious organizations/affiliations
- Media
- Community
- Life experience
- Family

Discuss with participants that values may change with outside influences.

You may want to include the following:

- The events that occurred on September 11, 2001
- The birth of a child
- Death of a close relative or friend
- Marriage
- Move to another country

Preparation

Have newsprint/transparencies and markers ready to share the group's input.

LESSON FIVE

TB-HIV PROJECT IMPLEMENTATION

Objectives

By the end of the session, the participant will be able to:

1. Describe the goals of the TB program when referring close contacts for HIV VCT.
2. Identify close contacts that should be recommended for VCT.
3. Describe the plan for action for VCT referral for TST positive and TST negative contacts.
4. Explain the links for VCT between DOH and private MD or Community Based Organizations.
5. Discuss required local documentation.

Lecture/Discussion

- Explain the TB program goals for referring close contacts for VCT.
- Explain the criteria for which close contact should be referred.
- Explain the plan of action for referring contacts who have positive TST and negative TST results.
- Discuss the links for VCT between DOH and private MD's or Community Based Organizations.
- Explain and demonstrate the use of forms for documenting tests, referrals, and actions.

Trainer's Notes

Trainer should be familiar with local health services. Trainer will explain to the participants the TB Control program's goals for referring close contacts for VCT. Identify priority population to whom the TB Control program will offer HIV counseling, testing, and referral. Explain the plan of action for referring clients with both positive and negative TSTs for VCT, and when appointments should be scheduled for VCT. Discuss TB Control program links between DOH and private MD or Community Based Organization for VCT. Explain to participants what forms are needed, what information needs to be documented, and who is responsible for follow-up.

Preparation

TB Control program needs to provide materials that will state purpose and goals for the VCT project and all forms that will be used for the VCT project, and all forms that will be used.

LESSON SIX

BARRIERS IN THE FIELD

Objectives

By the end of the session, the participant will be able to:

1. Identify barriers to discussing VCT for HIV when conducting a TB contact investigation.
2. Identify solutions for barriers.

Lecture/Discussion

- Barriers when conducting contact investigations
- Breaking down those barriers

Trainer's Notes

Trainer should be experienced in group facilitation and familiar with contact investigation procedures. He or she should engage participants in discussion about barriers that they encounter in the field when they are investigating close contacts. Identify barriers and brainstorm solutions.

You may want to include the following barriers:

- Lack of private space for discussion of HIV
- Presence of spouse, parents, or children
- Cultural values which discourage the discussion of sex
- Stigma about HIV

LESSON SEVEN

FIELD SCENARIOS

Objectives

By the end of the session, the participant will be able to:

- Demonstrate skills learned in training

Group Activity/Discussion

- Practice Role-plays

Trainer's Notes

Trainer should be experienced in group facilitation. He or she will divide participants into groups of three. Have one participant play the role of the CI, the second participant will play the close contact, and the third will be the observer who will give feedback. Have each participant play all three roles. End the session by discussing participants' comments.

Preparation

Include Appendix 7, "Role-Plays."

TRAINER SUPPLEMENTAL MATERIALS

APPENDIX 1

MMWR Article

Weekly
August 04, 2000 / 49(30);685-7

Missed Opportunities for Prevention of Tuberculosis Among Persons With HIV Infection –Selected Locations, United States, 1996–1997

Public health contact investigations are conducted to find persons who have been exposed to patients with active tuberculosis (TB) and to evaluate and treat those contacts for TB infection and active TB. Persons in close (i.e., prolonged, frequent, or intense) contact with patients with active TB are at high risk for TB infection. The risk for TB infection is increased greatly if the close contact is infected with human immunodeficiency virus (HIV) (1,2). Isoniazid (INH) treatment for latent TB infection (LTBI) reduces the risk for developing active TB by 41%–92% (1). This study examined the clinic records of TB programs to determine whether these programs used recommended practices to manage HIV-positive persons exposed to TB (3–8). The study suggests TB programs need to review their contact investigation policies, procedures, and outcomes to reduce missed opportunities for preventing active TB among HIV-positive close contacts.

Study investigators collected data during June 1998–January 1999 site visits. Eleven U.S. urban areas were selected by the highest number of contacts completing LTBI treatment. After case reports were linked to personal identifiers, study staff reviewed the clinic records for 6225 close contacts to 1080 sputum–smear–positive TB patients reported to CDC during July 1996–June 1997.

Of the 6225 close contacts, HIV status was unknown for 5415 (87%). Of the 810 close contacts with known HIV status, 109 (13%) were HIV-infected, of whom 79 (72%) received a chest radiograph; 14 (13%) had TB symptoms (e.g., cough, night sweats, and weight loss); 90 (83%) received an initial tuberculin skin test (TST); and nine (8%) did not receive a chest radiograph or an initial TST. Forty (53%) of 75 TST-negative contacts did not receive follow-up TSTs; 21 (28%) received neither a follow-up TST nor a chest radiograph. Fourteen (13%) of 109 HIV-positive contacts were identified as having active TB compared with 120 (2%) of 6116 HIV-negative contacts or contacts with unknown HIV status. HIV-infected close contacts were less likely to be TST-positive than HIV-negative contacts or contacts with unknown HIV status (14% and 36%, respectively).

Among 95 HIV-infected contacts without active TB, 11 (92%) of 12 TST-positive contacts were placed on LTBI treatment compared with 19 (23%) of 83 TST-negative or TST-unknown contacts. A median of 50 days passed before starting an HIV-positive contact on LTBI treatment compared with 33 days for HIV-negative contacts or contacts with unknown HIV status. TB programs employing public health nurses to conduct investigations placed 11 (92%) of 12 TST-negative or TST-unknown contacts on LTBI treatment compared with eight (11%) of 71 at programs that employ TB outreach workers.

Of the 30 HIV-positive contacts started on LTBI treatment, approximately half (14) completed treatment. Directly observed treatment (DOT) for LTBI was given to three HIV-positive contacts; two completed treatment. During the course of LTBI treatment, 10 HIV-infected contacts had interruptions of >1 month (when treatment was self-administered) or >2 weeks (when placed on DOT); three of the 10 completed treatment. Of 16 HIV-positive close contacts who did not complete treatment, six (38%) refused or were unwilling to continue treatment, two (12%) were lost to follow-up, one (6%) had alcoholism, one (6%) could not tolerate medication, and six (38%) had undocumented reasons.

Reported by: TB programs in Los Angeles County, San Diego County, San Francisco, and Santa Clara County, California; Fulton County, Georgia; Chicago, Illinois; Newark, New Jersey; New York, New York; Shelby County, Tennessee; Houston, Texas; and King County, Washington. Prevention Effectiveness Section, Research and Evaluation Br, Div of TB Elimination, National Center for HIV, STD, and TB Prevention, CDC.

Editorial Note:

The study showed that few close contacts were assessed for HIV and that one quarter of those known to be HIV-infected were not screened completely for TB. Of eligible HIV-positive contacts, a third started and a sixth completed LTBI treatment. Because HIV positivity alters the approach to TB screening and the use of LTBI treatment, early knowledge by the health-care provider of a close contact's HIV status is essential. Active TB is curable and can be prevented in HIV-positive contacts when health-care providers know a close contact's HIV status and follow CDC guidelines for TB screening and treatment and facilitate adherence to TB treatment.

Health-care providers should assess all close contacts for HIV infection by asking about their serostatus and offering voluntary HIV counseling and testing when the status is unknown (8). TB staff should be trained to offer HIV counseling and testing to close contacts or should collaborate with HIV programs to offer these services. The use of rapid diagnostic tests may facilitate timely assessment of HIV status. All HIV-positive close contacts should be evaluated for active TB by medical history, symptom screening, and chest radiograph, and those with an abnormal chest radiograph or symptoms should receive a sputum examination (5). HIV-positive close contacts should receive an initial TST regardless of previous TST results (5); those with initial TST-negative reactions should receive a follow-up TST 10—12 weeks after last exposure to the patient with active TB (4). As soon as active TB is excluded, LTBI treatment should begin for all HIV-infected close contacts regardless of age, TST results, or history of previous LTBI treatment (5). Most HIV-positive close contacts should complete a full course of LTBI treatment (9). Because the HIV-positive population is less likely to react to TST and more likely to have atypical chest radiographs, health-care providers need to be diligent in diagnosing TB infection and active TB. Two treatment regimens, 9 months of INH (to be taken with pyridoxine to prevent peripheral neuropathy) or 2 months of daily rifampin (or rifabutin for those taking protease inhibitors or certain nonnucleoside reverse transcriptase inhibitors) and pyrazinamide, are preferred for the treatment of HIV-positive persons with LTBI (10). The use of 2-month LTBI regimens for HIV-infected adults may facilitate treatment implementation and increase completion rates (10). However, INH is the only recommended regimen for children and pregnant women (5). The findings in this study are subject to at least three limitations. First, because the study relied on existing clinic records, documentation of HIV status often was incomplete or nonexistent. Laws restricting the recording of HIV status in databases may have affected such documentation.

Second, the timing of health-care provider knowledge of HIV status and chest radiograph results was unknown because these dates were not collected and often were not recorded. Third, this study was designed to represent urban TB programs not rural programs or programs not using LTBI treatment.

These findings indicate a need for better incorporation of HIV assessment into contact investigation procedures and improved coordination between local TB and HIV programs to facilitate voluntary HIV counseling, testing, and follow-up for HIV-infected close contacts. Health-care providers and HIV-infected persons should be aware of optimal management of close contacts and of the benefits of prompt and well-supervised LTBI treatment to prevent active TB.

References

1. Ferebee SH. Controlled chemoprophylaxis trials in tuberculosis: a general review. Advances in Tuberculosis Research 1970;17:28—106.
2. Markowitz N, Hansen NI, Hopewell PC, et al. Incidence of tuberculosis in the United States among HIV-infected persons. Ann Intern Med 1997;126:123—32.
3. American Thoracic Society. Treatment of tuberculosis and tuberculosis infection in adults and children. Am J Respir Crit Care Med 1994;149:1370.
4. CDC. Core curriculum on tuberculosis: what the clinician should know. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, 1994:33—4.
5. CDC. Prevention and treatment of tuberculosis among patients infected with human immunodeficiency virus: principles of therapy and revised recommendations. MMWR 1998;47(no. RR-20):37—41.
6. CDC. Self-study modules on tuberculosis: contact investigations for tuberculosis. Atlanta, Georgia: US Department of Health and Human Services, CDC, 1999.
7. CDC. 1997 USPHS/IDSA guidelines for the prevention of opportunistic infections in persons infected with human immunodeficiency virus. MMWR 1997;46(no. RR-12):10.8. American Thoracic Society. Control of tuberculosis in the United States. American Review of Respiratory Disease 1992;6:1623—33.
9. CDC. Anergy skin testing and preventive therapy for HIV-infected persons: revised recommendations. MMWR 1997;46(no. RR-15):7.
10. American Thoracic Society and CDC. Targeted tuberculin testing and treatment of latent tuberculosis infection. Am J Respir Crit Care Med 2000;161(part 2):S221—S247.

APPENDIX 2

SAMPLE LETTER FROM THE DEPARTMENT OF HEALTH

Bureau of Tuberculosis Control

Dear TB Control Staff

HIV is the most powerful known risk factor for reactivation of LTBI to active disease. Persons infected with both TB and HIV are up to 800 times more likely to develop TB disease. Until recently, the efforts to control TB among HIV-infected people have focused mainly on active TB patients.

While voluntary HIV testing of TB contacts has been recommended by CDC since 1996, a recent CDC study entitled " Missed opportunities for prevention of tuberculosis among persons with HIV infection selected locations, United States, 1996-1997" (MMWR 2000; 49 (30): 685. http://www.cdc.gov/mmwr/preview/mmwrhtm/mm4915a1.htm) found low knowledge by TB providers of HIV status of close contacts to infectious TB patients. In the study, HIV status was documented for only 13% of 6,225 close contacts to 1,080 infectious TB patients.

There is no doubt that some contacts may, as a result of not knowing their HIV status, have delayed diagnoses of active TB, resulting in missed opportunities for TB treatment and prevention of TB transmission. In addition, HIV infected contacts in whom TB disease has been excluded may miss the opportunity to treated for LTBI prophylatically to prevent the development of active TB. Moreover, the low reporting of HIV-status prevents our TB control program from knowing the extent of HIV-infection among person at risk for tuberculosis.

To expand our efforts to control TB among HIV-infected persons who are close contacts to infectious TB patients, **the Bureau of Tuberculosis Control recommends that HIV counseling, testing and referral be offered to all persons who are close contacts to a pulmonary or laryngeal TB case and who do not know their HIV status, regardless of the TST result**. DOH staff will assist in identifying individuals who are exposed. The DOH Chest Clinic, Community-Based Organization, Managed Care Organization, ___, or ___ will provide HIV counseling and testing, and make the appropriate referral for counseling, testing, and referral services. Please see attached protocol. The Department appreciates your assistance and cooperation in our efforts to eliminate TB.

Sincerely,

Jane Doe, MD
Director, Bureau of Tuberculosis Control

APPENDIX 3

Trainer's notes:

This is an exercise that can be used with participants to explore myths and facts associated with HIV transmission. Hand out work sheets and give the participants about 3 minutes to check items that do not transmit HIV. Then discuss each item as a group to see which do and do not transmit HIV.

Myths and Facts Associated With HIV Transmission

Check the items NOT associated with transmission

Toilet Seats
Beaches
Swimming
Pools
Hot Tubs
Door Knobs
Clothes
Tooth Brushes
Food
Razors
Sex Toys
Sneezing
Needles
Pets
Mosquitoes
Insects
Touching
Donating Blood
Bites
Handshaking
Water Fountains
Telephones
Hugging
Kissing

Answer Key

Myths and Facts Associated With HIV Transmission

Here are the correct items not associated with transmission

Toilet Seats
Beaches
Swimming
Pools
Hot Tubs
Door Knobs
Clothes
Tooth Brushes
Food
Telephones
Sneezing
Pets
Mosquitoes
Insects
Touching
Donating Blood
Bites
Handshaking
Water Fountains
Kissing
Hugging

APPENDIX 4

Values Clarification Questionnaire

Write the number (5–1) that most closely shows how you feel in the blank before each question.

Strongly Agree		Doesn't Matter		Strongly Disagree
5	4	3	2	1

1. _____ I would judge someone who injected drugs and kept this a secret from his or her sexual partner a negative person.
2. _____ I think same sex relationships are acceptable.
3. _____ Schools should be more active in sex education for students.
4. _____ Using a condom is a sin.
5. _____ It is natural for partners to talk about sex before they have it.
6. _____ Substance users deserve compassion.
7. _____ I would be embarrassed to show someone of the opposite sex how to use a condom.
8. _____ It is OK for unmarried adults to have sex.
9. _____ Everyone should know their HIV status.
10. _____ Anal sex is unnatural.
11. _____ HIV infected women should not have babies.
12. _____ I think we should teach drug users to clean their works.

APPENDIX 5

Sample Script for Contact Investigator

Note: To be used with close contacts in the field

I am here to talk to you about tuberculosis because you have been in contact with someone who is sick with tuberculosis.

What is TB?
Tuberculosis is a disease that can seriously damage the lungs and other organs in the body. However, TB can be prevented with treatment. It also can be cured.

How is TB spread?
TB is spread through the air from one person to another. The germs are put into the air when a person with tuberculosis disease of the lungs or throat coughs or sneezes. People nearby may breathe in the bacteria and become infected. However, not everyone infected with TB bacteria becomes sick. Tuberculosis is preventable and curable.

Tuberculin test
For this reason, the Health Department recommends that you have a tuberculin test to determine whether you have been infected. If you are infected you can receive confidential treatment, free of charge at our clinic. The tuberculin test is given using a small needle to inject material into the upper layers of the skin on the forearm. The result of the test is seen 2 to 3 days later by examining the arm.

Offer the TST (Offer and implant TST first, then provide HIV information.)

Other conditions that affect the result of the test
There are some medical conditions that weaken the body's immune systems, which can affect the result of the test. These conditions include: HIV, diabetes, kidney failure, and others. For example, if a person has both TB and HIV infection, they are 30 to 100 times more likely to get TB disease. And, the TB will speed up the HIV infection. Here is a brochure that has more information about this.

What should I do?
The Health Department recommends that all persons who are close contacts to a TB case and who do not know their HIV status speak with one of the counselors in our clinic to determine whether you would benefit from testing for other conditions such as HIV.

May I make appointment for you to see a counselor?

APPENDIX 6

Addressing HIV/AIDS Issues in TB Contact Investigation

Pre & Post Test Answer Key

1. Human Immunodeficiency Virus

2. Acquired Immunodeficiency Syndrome. It is an advanced stage of HIV infection.

3. The time between initial HIV infection and the development if AIDS.

4. The time between initial HIV infection and the development of HIV antibodies

5. Breast Milk
   Blood
   Semen
   Vaginal fluids

6. True

7. True

8. Unprotected sex
   Mother to baby
   Injection drug use

9. True

10. HIV infection
    Substance abuse
    Recent infection
    Other immunosuppressive illness

11. True

12. False

13. True

APPENDIX 7

Role-Plays

Scenario 1

Muhammad and his family are from Africa, and practice the Muslim faith. The family is living in a one-bedroom apartment in the city. The family consists of three children ages 5, 8, and 15. The family has been exposed to TB, and a Contact Investigator has set up an appointment to screen the family.

Objective: CI needs to discuss HIV status with a Muslim family.

Conflict: The family is fearful of discussing such issues with strangers and health care worker.

Scenario 2

Sung Li is a 68-year-old Japanese born grandmother who has been living in the city for 30 years. Sung Li has recently lost her husband to illness. Sung Li has been contacted by a health care worker who explained that she may have been exposed to TB and that she needs to be screened.

Objective: CI needs to discuss HIV status with an elderly Asian woman.

Conflict: Sung Li does not see the need to talk about her HIV status.

Scenario 3

James is a 22-year-old African American college graduate who recently moved to the city from college in the South. A Contact Investigator has contacted James and explained that he might have been exposed to TB and needs to be screened.

Objective: CI needs to discuss HIV status.

Conflict: James feels that the CI should only be asking him questions that pertain to TB, and should not be discussing his HIV status.

Scenario 4

Maria, an 18-year-old Latina, lives with her mother and younger brother in a two-bedroom apartment. Maria was exposed to TB at her part time job. A Contact Investigator has come to Maria's house to screen her.

Objective: CI has to discuss Maria HIV status.

Conflict: Maria's mother wants to know why the CI is asking her daughter questions about her HIV status.

Scenario 5

Juan is an undocumented Mexican construction worker who shares a two-bedroom apartment with five other Mexican men. Juan speaks very little English and works long hours. After many tries, the Contact Investigator is able to contact Juan. He informs him that he may have been exposed to TB and needs to be screened.

Objective: CI has to discuss HIV status with Juan in the crowded apartment.

Conflict: Juan is afraid to talk to a representative of a public health department and is fearful that if he has TB or HIV, he will be deported.

Scenario 6

John is a young white professional who has been contacted by a CI, who explained that he might have been exposed to TB.

Objective: CI must discuss HIV status.

Conflict: John is giving CI a hard time. He refuses to cooperate, he will not reveal his HIV status, he wants information on who may have exposed him to TB, and he demands to know the relevancy of his HIV status.

REFERENCES AND OTHER RESOURCES

The best source of information about TB and HIV in your program area is your local heath department. Organizations providing advocacy and/or services for people living with HIV/AIDS may also have useful information.

A good place to start when looking for additional information about HIV and Tuberculosis is the CDC's National Center for HIV, STD, and TB Prevention: Division of Tuberculosis Prevention. It can be reached at http://www.cdc.gov/nchstp/tb/default.htm.

The CDC have many free publications. Two of particular interest to TB Contact Investigators are

1. "Tuberculosis: The Connection Between TB and HIV". This is a pamphlet designed for client use.
2. "TB and HIV Coinfection: What Can HIV/AIDS Service Organizations do to help?" This pamphlet is appropriate for CIs.

General Information about HIV is available from CDC's National Center for HIV, STD, and TB Prevention: Division of HIV/AIDS Prevention
http://www.cdc.gov/hiv/dhap.htm

For general information about Tuberculosis, see
"Core Curriculum On Tuberculosis: What the Clinician Should Know"Fourth Edition, 2000. Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, Division of Tuberculosis Elimination

For information about HIV counseling, testing and referral, see
"Revised Guidelines for HIV Counseling, Testing, and Referral and Revised Recommendations for HIV Screening of Pregnant Women"
MMWR 2001, Vol. 50, No. RR-19.

For information about TB in HIV-infected patients, see
"Prevention and Treatment of Tuberculosis Among Patients Infected with Human Immunodeficiency Virus: Principles of Therapy and Revised Recommendations"
MMWR 1998, Vol. 47, No. RR-20.

Other useful resources are listed below.

CDC National Prevention Information Network (NPIN)
www.cdcnipn.org

HIV Insite
www.hivinsite.ucsf.edu

National HIV Testing Resources (A service of the CDC)
www.hivtest.org

"Identifying Missed Opportunities for Preventing TB—Resource Manual"
NJM National TB Center

"Performance Guidelines for Contact Investigation: TB Interview—Resource Manual"
NJM National TB Center

"TB Interview for Contact Investigation: Practical Resource for Health Care Worker—Resource Manual"
NJM National TB Center

Culture & Nursing Care: A Pocket Guide
School of Nursing
University of California, San Francisco
http://nurseweb.ucsf.edu/www/book4.htm

Reichler MR Bur S, Reves R, Mangura B, Thompson V, Ford J, Castro KG. Results of testing for human immunodeficiency virus infection among recent contacts of infectious tuberculosis cases in the United States.
Int J Tuberc Lung Dis 2003 Dec;7 (12 Suppl 3) : S471-8.

Self-Study Modules on Tuberculosis 1-9
Centers for Disease Control and Prevention

Tuberculosis Education and Training Resource Guide
Centers for Disease Control and Prevention

NOTES

NOTES

NOTES

Charles P. Felton National Tuberculosis Center
Harlem Hospital Division of Infectious Diseases
506 Lenox Avenue
New York, NY 10037
telephone: 212-939-8254
fax: 212-939-8259
Website: http://www.harlemtbcenter.org