

**EVALUATION OF
TUBERCULOSIS OUTREACH WORKER
ACTIVITIES**

FINAL REPORT

Prepared by



CASALS&ASSOCIATES

For

**The Division of Tuberculosis Elimination
National Center for HIV, STD & TB Prevention
Centers for Disease Control and Prevention
U.S. Department of Health and Human Services.**

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National Center for HIV, STD & TB Prevention
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U.S. Department of Health and Human Services
Atlanta, Georgia**

ACKNOWLEDGEMENTS

Many people contributed to this endeavor. Casals & Associates, Inc. (C&A) is very grateful to Dr. Bess Miller and Dr. Zachary Taylor of the Division of Tuberculosis Elimination, National Center for HIV, STD & TB Prevention, Centers for Disease Control and Prevention. Dr. Miller initially conceptualized this study, and Dr. Taylor served as Project Officer and guided it through to completion. Thanks are also due the directors, staffs, and patients of the TB control programs of Virginia's Arlington County and Russell County Health Departments who aided us in pilot testing the study's research methods and instruments. Further, we greatly appreciate the cooperation of the tuberculosis control program directors, staffs, and patients in the six sites where the study was carried out: the cities of Chicago, Houston, Los Angeles, and New York, and the states of Massachusetts and Mississippi. The willingness of these many individuals to accommodate and facilitate our field research was crucial to the successful outcome of this project.

Dr. Charles C. Cheney of C&A served as Principal Investigator and was primarily responsible for drafting this report. As C&A's Project Manager, Ms. **Deanna M. Crouse** was involved in all aspects of this effort. Dr. **William Millsap** and Ms. Kathleen M. Quirk helped develop and implement the project's research design. Under the supervision of Dr. Cheney and Ms. Crouse, intensive information gathering was conducted in the respective study sites by six locally based investigators: Ms. **Lynell Lacey** (Chicago), Ms. Diana Miller (Houston), Ms. Kathryn Azevedo (Los Angeles), Ms. Maria Hart (New York), Mr. Mark Karaczun (Massachusetts), and Dr. Carolyn Bryant (Mississippi). Dr. Sergio Diaz-Briquets and Mr. Carlos F. Peza, both of C&A, contributed significantly to the analysis of the collected data and the production of this report.

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I. INTRODUCTION

Mycobacterium tuberculosis (TB) represents a deadly threat to public health. Yet, although TB has **afflicted** humankind since ancient times, it was not until the 19th century's massive industrialization and the concomitant concentration of large numbers of poorly nourished people living in congested, unsanitary urban settings that this highly contagious disease became a major danger to large populations. In the mid-1800s, the TB mortality rate for New York City was 425 per 100,000 residents, and by the turn of the century "The White Death" had become the most frequently listed cause of mortality in all Temperate Zone countries where health records were kept. As recently as 1945, TB killed over 50 percent of those it infected in New York City, where it was responsible for 46 deaths per 100,000.'

However, the 1940s development of streptomycin, isoniazid, and other antibiotic drugs inspired hope that tuberculosis could be brought under control in the United States. By 1954, New York City's TB mortality rate had plummeted by more than two-thirds in less than a decade, and by 1960 tuberculosis had dropped from first to 16th among the causes of death in the nation. As a result, public health officials became confident that this disease was **almost** eliminated and therefore relaxed their efforts to complete its eradication, despite the continuing presence of the **tubercule** bacillus in segments of the national population.²

Beginning in the mid-1980s, America experienced a resurgence of tuberculosis that was generated by a number of factors. Many people were living in poverty under circumstances that facilitated TB contagion and transmission. These included poor physical health and inadequate nutrition combined with crowded and unsanitary living conditions in decrepit apartment buildings, makeshift migrant labor camps, flophouses, homeless shelters, prisons, and crack houses. This held

¹ Lemer, BH. New York City's tuberculosis control efforts: the historical limitations of the "war on consumption." *Am J Public Health*. 1993;83:758-764.

² Comstock, GW. Tuberculosis: is the past once again prologue? *Am J Public Health*. 1994;84:1068-1069.

especially true for members of refugee, immigrant, and racial/ethnic minority populations for whom economic, cultural, and language barriers impeded access to adequate health care. Also, the AIDS epidemic erupted and spread, devastating the immune systems of its hosts and rendering them incapable of combating the onslaught of opportunistic diseases like tuberculosis. Efforts to prevent and control TB were further complicated by past incomplete TB treatments and the development of new strains of this disease that were resistant to even multi-drug therapies (MDR). Finally, because their infrastructures had been allowed to deteriorate, TB control programs were caught unprepared by the renewed assault of this public health **menace**.³

In recognition of this alarming situation, the Centers for Disease Control and Prevention (CDC) increased funding available to state and local TB control programs to launch outreach efforts among at-risk populations in high-incidence areas. It was realized that an innovative approach would be required for outreach programs to be effective in locating and rendering health services to hard-to-reach target populations--such as chronic substance abusers, homeless former mental health patients, and undocumented immigrants--who were known to be distrustful of public health authorities and unlikely to seek medical help on their own.

Therefore, a key feature of outreach programs was to be the hiring, training, and deployment of persons who would serve as outreach workers (ORWs) in **the field** rather than in public health facilities. The ORWs would perform a number of functions:

- determine the whereabouts of individuals diagnosed with TB, visit them, and notify them of medical appointments;
- identify, locate, and facilitate the examination of persons who have been in contact with someone infected with TB;

³ Brudney K, Dobkin, J. Resurgent tuberculosis in New York City: human immunodeficiency virus, **homelessness**, and the decline of tuberculosis control programs. *Am Rev Respir Dis.* 199 1; 144:745-749.

-
- provide directly observed therapy (DOT) to TB patients or directly observed preventive therapy (DOT) to persons with whom TB patients have been in contact by watching them ingest prescribed medications on a daily or intermittent basis; and
 - locate TB patients who have stopped complying with their treatment regimens and return them to health care services, which will be resumed either **through** ORW visits or under conditions of enforced isolation.⁴

To enhance the likelihood that **ORWs** would be effective in gaining the compliance of at-risk minority and immigrant groups, CDC recommended that persons selected as **ORWs** be familiar with the cultures and languages of target populations. It was further suggested that, to the degree possible, **ORWs** should be recruited from the communities served.

By the early 1990s CDC funding for TB control outreach had grown five-fold. Yet it was difficult to assess the dimensions of outreach programs or to ascertain what roles the **ORWs** played in these efforts in the absence of standardized national guidelines specifying ORW job qualifications, training requirements, service delivery functions, and performance evaluation measures. Therefore, in order to be able to identify optimal methods for delivering outreach services and to target ORW training and supervision needs, CDC's Division of Tuberculosis Elimination (DTBE) carried out a mail survey in which state and local TB control program staff provided information on the ranges and costs of their programs' outreach efforts, including the characteristics, activities, and training and supervision needs of their **ORWs**.

In addition, to complement the survey data and gain a fuller understanding of outreach programs and ORW activities, DTBE decided to capture information through the actual observation of what **ORWs** do and where and how they do it,

⁴ In the health care literature, the terms *patient* and *client* are both used to denote a recipient of health care services, and the words *comply* and *adhere* are employed to connote different motivational orientations in the behavior of health care recipients. In this study's conduct of field research in public health settings, it was noted that the words *patient* and *comply* were used to the virtual exclusion of their alternatives, and therefore the same practice has been followed in this report.

including the amount of time they spend in various activities and the ways in which they interact with other health care personnel and with patients. To that end, CDC contracted with **the firm** of Casals & Associates, Inc. (C&A) to carry out a study of **ORWs** that would employ ethnographic research methods. In this project, researchers would conduct intensive field studies in a half-dozen sites around the country for periods of up to six weeks. Each week a field researcher would accompany a different ORW on his or her daily rounds, directly observe the **ORW's** activities and interactions, and conduct interviews with the ORW, the **ORW's** supervisor, and the patients to whom the ORW provided services.

The project's evaluative objective was to answer three basic research questions:

- What **activities** do TB outreach workers perform?
- In carrying out these activities, how do TB outreach workers **interact with** other health care personnel and patients?
- What factors influence the **effectiveness** of TB outreach worker activities?

II. METHODOLOGY

The research project Comprised five methodological steps:

- selection and **preliminary** assessment of field research sites
- development, pilot-testing, and refinement of field research instruments
- recruitment and training of field researchers
- conduct of field research and gathering of data
- analysis of data and writing of report

This endeavor was launched in the fall of 1994. DTBE staff selected six sites for the conduct of field research that included four city and two state TB control programs, and they secured the agreement of the respective program directors in these sites to cooperate in the study. The city programs were located in the nation's four largest metropolitan areas--Chicago, Houston, Los Angeles, and New York--all of which had relatively high TB incidence figures and large at-risk populations containing combinations of the homeless, the mentally and physically ill, and poor minority group members and immigrants. The state TB control program in Massachusetts dealt with an at-risk population that was notable in that it contained refugees and immigrants from a broad spectrum of developing countries who were located in a number of the state's cities and towns. And the Mississippi TB control program, encompassing many rural as well as urban settings, attracted interest because its records indicated an especially high rate of compliance with TB treatment regimens.

Once preliminary arrangements were completed, C&A project staff members made two-day site visits to the six programs. They explained the study's purpose and design to the respective directors and outreach personnel, who in turn provided them local epidemiological and programmatic data and offered suggestions on ways to conduct field research in the company of **ORWs** without disrupting their functions and interactions with patients. C&A staff also toured clinic facilities and target communities, and they observed **ORWs** as they carried out a

range of activities during their daily routines. The C&A staff then wrote site visit assessments.

Based on this information, the C&A staff developed a daily observation log to be used in conducting field research. The daily observation log was designed for noting the series of activities that comprise an **ORW's** working day. The log contained spaces for making brief notations on each activity's five components: time (when), setting (where), actors (who), actions (what), and manner (how).

Also, the C&A **staff** created three "guides" to be used in interviewing three types of informants: **ORWs**, their supervisors, and patients. Although geared to different categories of informants, however, the three guides possessed common elements. The **ORW** and Supervisor Interview Guides had the same domains of inquiry: **ORW** job entry, training, activities, supervision, and evaluation; informant perceptions and recommendations regarding **ORW** activities; and informant biographical information. The Patient Interview Guide also sought informant perceptions and suggestions concerning **ORW** activities, as well as informant biographical information.

DTBE reviewed the draft observation log and interview guides, and recommended some changes, which the C&A staff incorporated into their design. C&A staff then pilot-tested the instruments with the cooperation of two public health department TB control outreach programs in the State of Virginia. These two programs operated in very different settings. The Russell County Health Department Program was located in a rural Appalachian part of the state and had a TB at-risk population composed mostly of long-term resident poor Whites and a few Blacks. The Arlington County Health Department Program lay in northern Virginia within the greater Washington, D.C., metropolitan area and had an at-risk population that consisted mainly of recently arrived low-income immigrants from Africa, Asia, and Latin America. The C&A staff tested the daily observation log by using it while accompanying **ORWs** (one in sparsely populated Russell County, and two in Arlington County one) for a full working day. The three interview guides were also tested in both locations. In all, nine informants were interviewed: three **ORWs**, three supervisors, and three patients. Finally, during debriefings, TB control program members in both locations

provided valuable advice for reducing the obtrusiveness of field research and increasing the usefulness of the interview guides.

After analyzing the pilot test results in light of the study's three research questions, the C&A staff revised the four instruments. A couple of terminological changes were made in the daily observation log, and space was added for remarks. The interview guides were modified in a number of ways. Some items were deleted because they caused confusion or yielded little pertinent information. Apparent redundancies were either eliminated or items were reworded to better distinguish one from another. Some terms were modified to make them more applicable to the context of TB outreach, and others were rephrased to enhance their clarity. A number of structured questions were made more open-ended to make them easier to answer and more likely to trigger spontaneous responses. Finally, questions were added to elicit perceptions about factors that might influence the effectiveness of outreach activities. Overall, the three guides were shortened, thus reducing the time required to complete interviews.

Following DTBE's review and comments on these revisions, the C&A staff refined the four research instruments. The final versions are located in Appendices A-D of this report.

Next, the C&A staff recruited six individuals to serve as field researchers. These persons were identified through social and health science faculty members based at universities in or near the respective study locations. The selection criteria for field researchers included graduate level training in social/health sciences; field research experience; familiarity with their local sociocultural environments, including populations at risk for TB; and the recommendations of their faculty advisors.

The C&A staff provided the field researchers with background readings on the epidemiology of TB and at-risk populations, TB prevention and control methods and programs, and site visit assessments on their respective research locations. The C&A staff then developed a fieldwork manual and conducted a **two-**day orientation workshop for the field researchers in C&A's **offices** in Arlington, Virginia. The manual and workshop delineated the background and purpose of this research project, presented guidelines for employing ethnographic fieldwork methods within the context of public health systems and TB control programs, and explained how to use the research instruments (See Appendices E and F).

The orientation workshop also included a visit to the Arlington County Public Health Department TB Control Program. The program director and clinical staff gave the field researchers an overview of the program's outreach component and a tour of the clinic facilities, and the ORWs met with the field researchers and answered their questions about what their jobs involved, how they related to other health care personnel and patients, and what factors made their work more or less effective.

After being delayed by a number of factors (research protocol review by CDC and by the Office of Management and Budget, two "shut downs" by the Federal Government) fieldwork was carried out in the fall of 1996.

Two C&A staff members familiar with specific study sites and outreach programs served as monitors for the field researchers assigned to those locations. Each of the two staff members monitored three field researchers. In order to permit the two monitors to be present as fieldwork commenced in the three sites for which they were responsible, the beginning of research in the six locations was staggered, with fieldwork starting in two sites per week over a three-week period.

In each of the six locations, just prior to the outset of fieldwork, the site monitor met with the TB control program director and outreach personnel, and then introduced the field researcher to them. The group then determined the specific service delivery settings and ORWs to which the field researcher would be assigned, with the objective of providing the broadest possible exposure to the program's various outreach components, ORWs, and target populations. Upon completion of the first day of fieldwork, the field researcher met with the monitor, and together they analyzed the days' events and reviewed the procedures that the field researcher was to follow in gathering, documenting, and submitting data.

The six field researchers then carried out intensive fieldwork with the TB outreach programs in their respective study sites. Most spent six weeks in the field, each week in the company of a different ORW based in a different setting. Site-specific fieldwork features and variations are presented in the following section of this report.

The field researchers gathered data by accompanying ORWs during their daily routines and observing their activities and

interactions, as well as by conducting interviews with **ORWs**, their supervisors, and patients. The field researchers documented this information by making notations in daily observation logs and writing informant responses in interview guides. In addition, they compiled weekly summary reports on the basis of formal and **informal** observations, interviews, and conversations.

While fieldwork was in progress, the monitors maintained ongoing contact with the field researchers. This encompassed telephone communications at the end of each week that included brief oral reports and planning for the coming week, together with intermittent telephone calls and e-mail exchanges regarding scheduling adjustments and logistic matters. Contingency arrangements were in place for monitors to travel to study sites and address problems that might arise in the course of fieldwork, but such interventions did not prove necessary.

Starting in the second week of fieldwork, the C&A staff received packets from the field researchers that included the previous week's completed daily observation logs, interview guides, and summary reports. C&A staff members examined the materials, and when they noted any deficiencies (such as time gaps in the logs, unclear interview statements), they contacted the field researchers, who then corrected the problems. In one case, for example, the site monitor worked with the field researcher to carefully reconstruct time gaps in the daily observation logs.

The C&A staff analyzed the daily observation logs to identify **ORW** activities, actions that took place as part of these activities, settings where the activities occurred, the timeframes of these activities, the kinds of persons with whom **ORWs** interacted, and the manner in which the **ORWs** interacted with them. The C&A staff coded the types of **ORW** activities and calculated the amounts of time devoted to each on a daily basis for the six study sites. Also, C&A staff coded interview guide information into data entry files for analysis. Throughout the analysis process, C&A staff compared the perceptions of the different types of informants with one another and with the observations of field researchers regarding **ORW** activities, interactions, and effectiveness.

III. THE STUDY SITES

Chicago

This section presents a brief epidemiological profile and TB control program overview of the six study sites at the time of the C&A staff visits in the fall of 1994, together with sketches of the respective field researchers' subsequent experiences in the sites.

The total number of TB cases in Chicago reported for 1993 was nearly 800, up slightly from 1992 (**Feedback: Monthly Morbidity Report**, Chicago Department of Health, April 14, 1994). Most of these cases occurred on the west and south sides of the city. The majority of these cases involved Black males in the 45-64 age group, among whom alcoholism, drug abuse, and homelessness were fairly prevalent. The TB at-risk population also included numerous low-income Hispanics from Puerto Rico and Latin American countries, as well as immigrants from Africa, Asia, and Eastern European.

Within Chicago's Department of Health, the TB Control Program in 1994 had three levels of TB outreach worker: public health nurses (**PHNs**), communicable disease control investigators (**CDCIs**), and public health aides (**PHAs**), the last of these often being referred to as "DOT workers." All TB outreach workers were employed on a full-time basis. The **PHNs** did outreach work concerning a variety of communicable diseases, and about 55 percent included TB in their regular activities. In terms of TB outreach, **PHNs** served as case managers and were responsible for administering and evaluating skin tests, and collecting specimens and sputum. **CDCI** duties included locating patients and bringing them into clinics when necessary; tracking and conducting interviews with contacts; and giving medications to patients and observing them ingest the medications (DOT). **PHAs** located patients and conducted DOT. In 1994, the TB Control Program had 40 **PHNs**, nine **CDCIs**, and 11 **PHAs** based in seven health department nursing stations and four clinics.

The Chicago field researcher spent the first week with a PHA and the second with a PHN, both based out of the same nursing station in the predominantly Black southwest part of Chicago. Week three was spent in the company of a PHA working out of a community clinic on the largely Hispanic west side of the city.

Houston

The field researcher accompanied a CDCI covering the majority Black south side population from two nursing stations during week four. The last two weeks were spent, respectively, with a PHA and a CDCI, both of whom were based at a north side health center which served a population composed of many ethnic groups and immigrant nationalities.

In Houston and Harris County, the total number of TB cases reported for 1993 was 728, down from 778 in 1992 (**Annual Progress Report for January-December, 1993: Tuberculosis Surveillance, Prevention, and Control/Elimination**, Houston Department of Health and Human Services, 1994). **The** majority represented males (72%) in the 25-44 and 45-64 age ranges. **In** terms of **race/ethnicity**, TB was reported most often, in descending order, among Blacks, Hispanics, Whites, and "Other." **In** the Other category, Vietnamese, Indians, Pakistanis, and Filipinos were most highly represented. The foreign born accounted for 18 percent of all cases. **The HIV/TB coinfection** rate was 19.52 percent, down slightly from 1992 (20.05%).

In 1990, Houston's TB Control Program removed responsibility for outreach from public health clinic staff and formed the TB field team, which was then divided into three functional mobile units operating out of a central facility. This program designated **ORWs** as health inspectors. In 1994, TB outreach was carried out by (1) the Contact Investigation Team (3 supervisors and 14 **ORWs**), (2) the DOT Team (3 supervisors and 26 **ORWs**), and (3) the TB Van Transportation and Delinquency Referral Team (1 supervisor and 11 **ORWs**). The Contact Investigation Team's functions were to identify patient contacts; verify, arrange, and/or administer skin tests and sputum tests; interview patients; and refer patients. The DOT Team members were to deliver medications and provide DOT for patients on daily, bi-weekly, and **tri-weekly** treatment schedules; report to clinics regarding patient appointments/needs; educate patients about treatment regimens; monitor side effects of medication; and transport patients to health facilities when necessary. And the Transportation/Delinquency Referral Team's tasks entailed investigating referrals; arranging transportation; providing **on-the-spot** medication; finding and treating homeless and indigent patients; and providing **on-site testing** to large numbers of persons in such group settings as schools, homeless shelters, and workplaces.

Most **ORWs** were non-nursing staff but possessed previous experience in working with people. As a rule, **ORWs** would begin on the DOT Team and in time also work on the other two teams. All team supervisors were former **ORWs**.

The Houston field researcher spent the first week in the company of a DOT Team **ORW**, a nurse whose caseload mainly comprised poor Black males in a large service area that included the northeastern and northwestern parts of Houston. During week two the field researcher accompanied a DOT Team **ORW** in visiting patients in middle class southwestern neighborhoods and in poorer central and north central parts of the city with predominantly Black and Hispanic populations. The field researcher spent the third week with a DOT Team **ORW** visiting patients around the ship channel and other largely Hispanic areas of southeastern Houston, Week four involved outreach with a DOT **ORW** conducting **DOPT** in Houston schools in various locales. During week five the field researcher traveled all over the city in the company of a Contact Investigation Team **ORW**. And the sixth week of field research was spent in the company of two Transportation/Delinquency Referral Team **ORWs** searching for patients throughout the city, especially in run-down areas frequented by the indigent and homeless.

Los Angeles

The trend of new TB cases in Los Angeles County has shown two major shifts during the past quarter century. From 1970 to 1988, the incidence remained fairly level at approximately 1,400-1,500 per year; from 1988 to 1992, it rose to about 2,200 each year; and in 1993 it declined to 1,940, and by 1995 it fell further to 1,622 (1995 **Fact Sheet: Tuberculosis Epidemiology Update**, Tuberculosis Control Program, Los Angeles County Department of Health Services, 1996). More males (65%) than females were reported with TB. The age group with the highest number of cases was the 15-34 group (28%), followed by the 65 and older age group (19%). The racial/ethnic breakdown of cases was: Hispanic (44%), Asian (27%), Black (17%), and White (12%). The foreign born represented the majority (67%) of cases. The most frequently cited foreign countries of origin were Mexico (36%), the Philippines (16%), Vietnam (8%), the Republic of Korea (6%), and Guatemala (5%). The homeless comprised almost 10 percent of the total, and 13 percent of the TB cases were **coinfected with HIV**. Of these, 52 percent were Hispanic and 29 percent were Black.

In 1994, the Los Angeles County Department of Health Services TB Control Program conducted control and prevention activities at 33 DHS hospital and health center sites in the county, and in 1995 the number of clinical sites was reduced to nine. In addition to DOT, the TB Control Program carried out a number of other functions, including provision of food and housing incentives to the homeless, coordination with drug/alcohol treatment and rehabilitation centers, mobile x-ray screening, school TB testing, coordination with the DHS AIDS Program, HIV sero-surveys, and laboratory testing. PHN Supervisors (**PHNSs**) oversaw **PHNs** who were assigned to census tracts within health districts to conduct follow-up on TB cases and contacts, administer skin tests and sputum tests, and provide preventive treatment follow-up of infected persons at high risk of developing TB. **ORWs** were designated as community workers, and they, too, functioned under the supervision of **PHNSs**.

ORW duties included delivering medications to patients on daily and intermittent DOT regimens and observing them ingest the medications, communicating with patients to remind them of upcoming appointments, transporting patients to clinic appointments, and providing education and information to TB patients. In 1994, the TB Control Program had about 40 **ORWs**.

The Los Angeles TB Control Program focused much of its resources--including **ORWs**--on the central city's large homeless and skid row population, composed in the main of Black and Hispanic males. This part of Los Angeles also included neighborhoods with sizable numbers of low-income immigrant patients from Asia and Latin America. The Los Angeles field researcher spent the first three of six weeks accompanying in turn three **ORWs** who were based in this one central urban area and had the same supervisor. The fourth and fifth weeks were spent with two **ORWs** based out of two clinics in South Central Los Angeles visiting patients in the area's extensive poor Black and Hispanic communities. The field researcher's sixth week was spent in the company of an ORW whose patient caseload was composed largely of immigrants from a broad spectrum of countries who resided in middle-class neighborhoods of North Hollywood, West Hollywood, and Burbank.

New York

In 1993, 3,235 new cases of TB were reported in New York City, representing a decline of approximately 15 percent from 1992, but nonetheless an increase of 114 percent over 1980. New York City had **almost** 13 percent of the nation's reported 25,313 cases, and its case rate of 44.2 per 100,000 was four and one-half times the national rate of 9.8 (1993 **Annual Report**, Bureau of Tuberculosis Control, New York City Department of Health, 1994). The male/female ratio of those reported with TB was approximately 2:1. The breakdown of reported TB cases by **race/ethnicity** was: Black (53%), Hispanic (27%), White (12%), and Asian (8%). The segments of the population among whom TB was found to be most prevalent were immigrants (mainly from East Asia, Latin America, and the Caribbean), U.S.-born (including Puerto Rico) minorities, the inner-city poor, the homeless, substance abusers, and those with AIDS. Asians were the **only** group to experience an increase in cases (2.2%) over 1992. The homeless, composed in the main of Black and Hispanic males, accounted for approximately nine percent of reported cases, and nearly 50 percent of homeless TB cases had a reported HIV status.

The New York City Department of Health's Bureau of TB Control in 1994 comprised **five** administrative components: operations, education and training, epidemiology and surveillance, clinical services, and outreach services. Outreach services had seven programmatic areas: school follow-up, correctional health (in prison facilities), regional managers, homeless outreach, the MDR project, regulatory affairs (hospital confinement of non-compliant patients), and DOT. Each of the Department of Health's five geographical regions had a manager and assistant manager for TB outreach and five service units: (1) IE (Initial Evaluation): following up on hospital TB diagnosis, searching for and locating patients if they have **left** the hospital; (2) CI (Contact Investigation): following up--including skin and sputum testing--on TB patient contacts and suspected contacts; (3) CM (Case Management): monitoring of TB patients through non-DOH providers; (4) DOT (Directly Observed Therapy): conducting daily and intermittent DOT, and (5) RTS (Return to Service): rigorous search for patients that had dropped out of therapy.

In 1994, of the Bureau of TB Control's approximately 650 staff members, about 350 were outreach workers, or Public Health Advisors (**PHAs**), of whom 30 were assigned to epidemiology and surveillance services, and the remainder to outreach services. Entry-level **PHAs** (**ORWs**) conducted IE, CI, CM,

DOT, and RTS functions. Senior PHAs conducted (or supervised PHAs conducting) IE, CI, CM, DOT, and RTS functions and assisted in ORW training. Supervisor PHAs coordinated all TB control activities in the area of assignment; trained, supervised, and evaluated all outreach personnel assigned to the area; and maintained working relations with all area facilities involved in the treatment of TB. Most PHAs had a combination of post-secondary school education and prior experience in working with people. PHAs were rotated through the outreach units. All Supervisor and Senior PHAs had worked their ways up from the level of PHA (ORW).

The New York field researcher spent the first week with an IE ORW based in a Bronx hospital surrounded by a dense urban community composed largely of recent Hispanic and Asian immigrants. During the second week the field researcher accompanied a DOT ORW visiting mainly Black and Haitian patients living in the most impoverished parts of Brooklyn. The third week was spent with a DOT ORW making rounds among Blacks and African immigrants in Harlem. Week four was devoted to observing an ORW providing mainly clinic-based DOT services to a multi-ethnic population in Queens. In the fifth week the field researcher traveled with a CI ORW throughout the Bronx. The sixth week was spent with two RTS ORWs looking for predominantly male Black and Hispanic indigent and homeless patients in shelters, in flophouses, and on the streets of Lower and Midtown Manhattan.

Massachusetts

In 1993, a total of 370 new cases of TB were reported in Massachusetts, signaling a decrease in morbidity of 13 percent from 1992 (**1993 Tuberculosis Cases Overview**, Bureau of Communicable Disease Control, Massachusetts Department of Health, 1993). Approximately half (49%) of these were reported in the greater Boston area. Males represented the majority (64%) of new cases. In terms of age, the highest percentage (35%) was in **the 25-44 age** group, of which 75 percent comprised racial/ethnic minorities. The breakdown of reported TB cases by **race/ethnicity** was: White (40%), Asian/Pacific Islander (24%), Black (23%), and Hispanic (13%). The foreign born accounted for about 50 percent of all cases in the state. The refugee and immigrant population represented more than 40 countries in the following world **regions: the former USSR and countries of Eastern Europe; South, East, and Southeast Asia and Pacific Islands; North and East Africa; and Latin America and the Caribbean.** The foreign

born accounted for 61 percent of drug resistant cases. A total of 104 new TB cases were dually diagnosed with HIV. Dual HIV/TB diagnosis occurred more often in men (81%) than women, and 72 percent of cases involved members of racial/ethnic minorities.

The Massachusetts Department of Public Health's Bureau of Communicable Disease Control in 1994 was composed of five components: the epidemiology program, the STD control division, the AIDS surveillance program, the TB control division, and the refugee and immigrant health program, which was formerly part of the TB control division and remained closely linked with it in terms of administration and service delivery. The state was divided into five designated tuberculosis surveillance areas or regions. Each region had at least one free tuberculosis clinic and a PHN responsible for TB health education and case monitoring. The TB control outreach program coordinator worked in cooperation with the PHNs in the five regions and assigned ORWs to high-risk communities, which were defined as those with (1) a seven-year average of three or more cases per year, and (2) a seven-year case rate greater than that of the state. ORW functions included: accompanying PHNs to patients' homes to perform initial assessments; conducting DOT; administering and evaluating skin tests and collecting sputum; monitoring drug compliance and side effects; providing patient education; identifying TB case contacts; and locating patients who had missed appointments.

In 1994, there were 13 TB control program (TBC) ORWs, six full-time and seven part-time, working in the five regions. Also, refugee and immigrant health program (RIH) ORWs were deployed to reach non-English speaking foreign born population segments at risk for communicable health problems that included TB. In 1994, there were nine RIH ORWs (4 full-time, 5 part-time) working in the Boston Region and another seven (3 full-time, 4 part-time) based out of the city of Tewksbury in the Northeast Region.

The Massachusetts field researcher spent the first week accompanying a TBC ORW making visits to predominantly Hispanic patients in the northern city of Lawrence. The second week was spent in and around the north coast community of Lynn with a TBC ORW whose caseload was also mainly Hispanic. During week three, the field researcher observed a TBC ORW making rounds on Haitian patients in the Boston

Mississippi

area cities of Cambridge, Malden, and Somerville. Week four was spent with an **RIH ORW** visiting mainly Vietnamese patients and their families in East Boston, Cambridge, and Revere. The fifth week was devoted to traveling with a **TBC ORW** making home visits to a clientele consisting of Cape Verdeans and U.S.-born Blacks and Whites in two of Boston's poorest districts and in the small city of Brockton to the south. And week six was spent with an **RIH ORW** among Cambodians in the northern city of Lowell.

There were 242 reported cases of TB in Mississippi in 1993, down from 279 in 1992 (**Mississippi Tuberculosis Statistics**, Mississippi State Department of Health, 1994). The male/female ratio of cases was approximately **2:1**. The age group of 65 years and older had the largest number of cases (**30%**), and the combined 25-49 age ranges accounted for another 35 percent. In terms of **race/ethnicity**, the greatest number reported for TB was for Blacks (**57%**), followed by Whites (28%). Other small segments of the state population showing high incidence were residents of the Choctaw Indian Reservation near the western city of Philadelphia, Vietnamese immigrants in coastal West **Gulfport** and Biloxi, and foreign, mainly Japanese, students at the University of Southern Mississippi in south central Hattiesburg. Also, there were five reported cases of **HIV/TB coinfection** in and around the eastern city of Meridian.

In 1994, the Mississippi State Department of Health comprised nine health districts encompassing more than 70 counties. Within each district, the State TB Control Program had a district coordinator, usually a TB nurse, who coordinated activities with the respective county TB staff nurses, who in turn coordinated the activities of TB **ORWs** who worked at the county level. Staff nurses were responsible for administering skin tests, managing cases, and counseling patients. **ORW** duties included delivering medications, observing them being taken, and recording the activity, but not providing patient counseling. Also, with additional training, **ORWs** could read skin tests (but not administer them), as well as take blood pressures and collect specimens and sputum. The **ORW** workweek was restricted to 20 hours. In 1994, there were 18 half-time **ORWs** in the state.

By the **1990s**, the State TB Control Program was focusing on TB prevention through the use of **DOPT**. Increased screenings

in casinos along the Mississippi River and the Gulf Coast, in institutions of higher learning, and in correctional facilities were. expected to expand the need for **ORWs** conducting DOPT, and in 1994 it was anticipated that eight additional **ones** would be hired in the near future.

Because Mississippi's TB Control Program was smaller than those in the other five study sites and because many of its **ORWs** had half-day work schedules, it was determined that the Mississippi field researcher would spend three (rather than six) weeks conducting fieldwork and during that period would observe the activities of between four and six **ORWs**. Week one was devoted to (separately) accompanying two **ORWs** as they visited a predominantly Black patient population in Hinds County, seat of the state's capital, Jackson. The field researcher spent the second week observing two **ORWs** in a correctional facility north of Jackson as they administered DOT and DOPT to prison inmates, including Blacks and Whites, and males and females. The third and last week was spent with an **ORW** in the city of Meridian and in rural enclaves in surrounding Lauderdale County making rounds on mainly Black patients and their families.

* * *

The six study sites demonstrated both similarities and differences in their epidemiological characteristics, the organizational features of their TB control programs, and the division of labor among different categories of outreach **staff**. Clearly, the statuses, roles, and functions of **ORWs** varied considerably across the sites.

These programmatic and functional differences in turn affected the experiences and methods of the project's field researchers. For example, it had been originally estimated that the field researchers would conduct interviews each week for six weeks in the six study sites with a different **ORW**, the **ORW's** supervisor, and two patients with whom the **ORW** had worked long enough to establish an ongoing relationship. The total projection of interviewees had been 36 **ORWs**, 36 supervisors, and 72 patients. However, the realities of field research modified this scenario. In fact, 36 **ORWs** were interviewed, but these included seven in Houston, five in Mississippi, and six each in the remaining four sites. Thirty-four instead of 36 supervisors were interviewed because three **ORWs** in Los Angeles had the same supervisor. Further, only 47 out of a

potential 72 patients in all of the sites met the dual criteria for interviewing: willingness to participate in the study, and the existence of an established relationship with an ORW, which was usually the case only when the ORW concerned was engaged in providing DOT services rather than **performing** such other TB control functions as initial evaluation, contact investigation, and return to service.

IV. TB OUTREACH WORKER ACTIVITIES

Types of Activities

In order to answer the research question as to what activities do TB outreach workers perform, an analysis was conducted of data contained in the daily observation logs, informant interviews, and weekly summaries regarding ORW activities. The ORWs' observed and described activities fell into the following types:

- prepare for outreach day
- travel and search for patients and contacts
- visit patients and contacts
- wait for patients, contacts, or providers
- transport patients and contacts
- transport other (specimens, health care providers)
- communicate by phone with patients/contacts/relatives
- communicate by phone with providers
- communicate directly with providers
- attend TB outreach program meetings
- gain access to/make notes in charts and records
- assist in public health TB clinic
- assist in other public health clinics
- provide informal services
- conduct personal **affairs**
- complete outreach day

The following is a composite description of these ORW activities that includes the kinds of actions of which the activities were composed and the various settings in which they took place.

1. Prepare for Outreach Day

Except in Houston, where most ORWs began their workdays traveling and visiting patients and later checked in at the central office, ORWs usually arrived early each weekday morning in the public health facilities that served as their bases of operations. They began by completing any unfinished log notes concerning previous day patient visits attempted (indicating whether they were successful or not) and medications given (**noting if ingestion was observed or not**).

ORWs received public health nurse instructions on which persons should be visited on that day, and the ORWs then were provided with individualized packets of medications to be administered to them. The ORWs were also given items used by the health departments as incentives to gain the cooperation of patients in adhering to their treatment regimens, such as liquid food supplements, fast food coupons, cafeteria vouchers, cash, public transportation tokens, and housing vouchers.

For further information on cases newly assigned to them, ORWs checked patient records and contact reports. If any changes were required in their daily schedules, they telephoned patients and contacts (or members of their households) to adjust the time and place of visits. Also, if preliminary arrangements had been made for any of the ORWs' assigned patients or contacts to undergo TB-related examinations or other procedures on that day, the ORWs would communicate with the staffs of the public health chest clinics or other health care facilities concerned and confirm the appointments. Finally, the ORWs would meet with their supervisors and review with them their outreach plans for the day.

2. **Travel and Search for Patients and Contacts**

ORWs used their own cars or public health department vehicles in traveling and searching for patients and contacts. In the main, their routines entailed driving between scheduled visits to patients and contacts in their homes, institutional settings, or on the street. Travel frequently involved driving through run-down, sometimes dangerous, inner-city neighborhoods to reach patients whose participation in treatment was involuntary and sometimes recalcitrant. Therefore, the process of traveling and searching was often fraught with complications and frustrations for ORWs, as is illustrated by the following examples:

In order to follow up on a newly assigned adult male patient, an ORW drove to the address given by this individual during his initial evaluation interview at the hospital where his TB was detected. After arriving at the designated location--a desolate landscape of boarded-up tenements and empty warehouses--the ORW concluded that the address she was looking for did not actually exist. While driving back to the public health clinic, she speculated that the patient might have provided an incorrect address in error, but more likely he

did so on purpose to escape the attention of public health authorities.

His progress slowed by dense traffic, an OR W with a heavy patient caseload and tight appointment schedule drove to provide DOT to a little girl. Upon his arrival at her family's apartment, he was greeted by the girl's mother, who explained that the child had been awake coughing all night and had just fallen asleep, and the mother requested that the patient not be disturbed for a while. The ORW agreed He quickly made a couple of telephone calls and adjusted his schedule, then drove a few blocks to the apartment of a new adult female contact whom he interviewed together with the other members of her household after which he returned and administered DOT to the now awake child

While making his daily rounds, an OR W stopped to make a scheduled DOT visit to an adult male patient who had recently begun residing at his mother's house. Not finding the patient there, the ORW proceeded to the apartment of the man's estranged wife, who denied knowledge of his whereabouts. A skid row area where the patient often drank and socialized was the OR W's next destination, through which he drove slowly while searching for the patient and inquiring about him to men standing in clusters on the streetcorners. The ORW also searched and asked for other patients who had quit their medical regimens and were known to frequent this locale. Upon realizing he was running behind schedule, the ORW gave up this effort and sped to his next appointment, not having succeeded in administering DOT to his assigned patient or in locating others.

In addition to driving to and between visits, ORWs also traveled on foot, especially when going to see patients in large institutions, including shelters, hospitals, and prisons. In their daily routines, ORWs also stopped at public health offices and clinical facilities to confer with health care providers and secure documents. While waiting at stoplights and in traffic between

3. ***Visit Patients
and Contacts***

different points, **ORWs** often took the opportunity to record notes in patient logs and medication logs and to fill out their daily plans, and if they had telephones in their vehicles, they communicated with other public health personnel and with patients and contacts while on the road.

ORWs made visits to patients and contacts in numerous kinds of settings. These ranged from homes (houses, apartments, and single-occupancy hotel lobbies and rooms), to residential institutions (hospitals, homeless shelters, and prisons), to worksites and other group settings (offices, labor halls, schools, churches). The spectrum of settings also contained skid row bars, abandoned buildings, and crack houses. Further, **ORWs** made visits to patients and contacts that took place outdoors in parks and on sidewalks and streets, as well as next to and inside of **ORW** vehicles.

In making visits, **ORWs** would commonly adapt their schedules to the patterns of patients and their families. For example, some patients and parents requested to have DOT or DOPT administered to themselves or their children at home very early in the morning before leaving for work or school, others chose to receive treatment on a sidewalk or in an **ORW's** vehicle near workplaces at specified times during the day, and still others wished to receive **ORW** visits at home in the evening **after** work. Also, in tracking contacts and in searching for patients lost to service who were known to have irregular routines, **ORWs** would try to reach them at those places and times at which they were most likely to be found, such as in single occupancy hotels and skid row areas, at night or on weekends.

ORW visits varied widely in the numbers of actions they contained. Sometimes they were confined to a single function, such as administering DOT. Yet often a single visit encompassed many individual actions, some of which transpired simultaneously. These included administering DOT and DOPT, checking TB skin tests; collecting sputum; gathering symptomatic data and giving information on potential reactions to medications; providing education on TB, its relation to other diseases, and the control and prevention of TB and other infectious diseases; interviewing to identify potential contacts; and providing referral for other health problems to various components of the public health department.

Moreover, ORWs were frequently observed to render **unofficial** services to patients and their **family** members during visits. Typically, ORWs answered questions, gave advice, and provided the names of resource persons outside health departments to help them deal with various issues. ORWs helped patients and their relatives to gain access to other elements of the local health care system, mitigated the negative impact of their disease on their employment, housing, and insurance status, and--especially for newly arrived immigrants--instructed them about social service, employment, and educational opportunities. Moreover, some ORWs would arrive for visits with small gifts of food, such as candy for children and pastries for adults, which they had purchased with their own money.

Their visits to homes and institutions also provided ORWs with chances to respond to their beepers and to call their supervisors and other public health personnel about such matters as changes in medication, collecting specimens, and determining which patients to transport to chest clinics for examination. Further, during visits ORWs sometimes telephoned ahead to patients or to patient relatives to confirm or modify the times of the ORWs' visits to them later in the day.

4. ***Transport Patients and Contacts***

In Chicago, Houston, central Los Angeles, and Mississippi, ORWs regularly picked up patients and contacts at their homes, institutions, or other sites and transported them--singly or in groups--to chest clinics and other public health clinics and medical facilities. Upon completion of clinical procedures (physical examinations, tests, x-rays, and consultations), ORWs conveyed the patients and contacts back to their points of origin. However, in other parts of Los Angeles and in New York and Massachusetts, ORWs were not supposed to provide this service. However, ORWs in various sites would unofficially give rides to patients and their family members as a favor.

5. ***Transport Other***

Across the sites ORWs were observed to transport patient specimens and sputum cultures to health care facilities, and to convey x-rays between medical settings during the course of their daily travels. Also, in Houston and central Los Angeles, ORWs used departmental vans to pick up physicians and public health nurses at their administrative **offices**, drive them to clinics, and then later return them to their offices.

6. **Wait**

The workdays of ORW contained periods of waiting. These included waiting for health care personnel to provide them patient medications, incentives, and x-rays; for patients and contacts to appear or make themselves available for ORW visits; and for patients, contacts, and health care personnel to be ready to be picked up for transport and for them to be prepared to be returned to their points of origin. The process of waiting to gain access to patient records is discussed separately under number 11 below.

7. **Communicate by Phone with Patients/ Contacts/ Relatives**

In scheduling visits and arranging clinic appointments, ORWs tried to reach patients, contacts, or their household members by phone when preparing for the outreach day, during home visits, or (if possible) from their vehicles when on the road. However, it was generally necessary for ORWs to also stop and make such calls at other points during the day from their offices, clinic facilities, or public telephones along their routes of travel.

8. **Communicate by Phone with Health Care Providers**

In order to resolve questions concerning such issues as changes in patient health status, adverse reactions to medications, and scheduling of clinic appointments, ORWs attempted to speak to other health care providers (ORWs, supervisors, public health nurses, clinic physicians) on the telephone when preparing for the outreach day, during patient visits, or (if possible) from their vehicles when on the road. However, it was usually necessary for ORWs to also make such calls at other points during the day from their offices, clinic facilities, or public telephones when they were en route between locations.

9. **Communicate Directly with Health Care Providers**

In addition to discussing patients and treatment issues with other health care providers at the beginning and end of the outreach day, ORWs also did so as necessary when stopping in public health offices and clinics, residential institutional settings, and other medical facilities during their travels.

10. **Attend TB Outreach Program Meetings**

Aside from meetings with public health nurses and supervisors at the beginning and end of each workday, ORWs in general participated in weekly patient conferences in which staff addressed the status of assigned TB patients, reviewed their medications, and determined what modifications, if any, should be made in their treatment plans. In some sites, TB educational sessions for ORWs were held as often as once a month,

although sometimes **ORWs** could not attend due to a lack of coordination between TB control program training and service delivery components.

11. ***Gain Access to and Make Notes in Charts and Records***

When the pace slowed during the workday, **ORWs** would generally take **the** opportunity to gain access to patient charts and records in order to catch up on writing notes. It was often necessary for them to make numerous requests, go from office to **office**, and wait for extended periods of time to secure these documents, glean salient information, and make notes and update records. Moreover, it was common for **ORWs** to work on their notes at night after work hours.

12. ***Assist in Public Health TB Clinics***

ORWs provided assistance in public health chest clinics in various ways. This assistance included registering patients, weighing them in, checking TB skin tests, administering DOT, providing education, record keeping, and serving as translators between patients and clinic **staff**.

13. ***Assist in Other Public Health Clinics***

Some **ORWs** also rendered assistance in other public health clinics, including those for AIDS patients, for **refugees** and immigrants, and for mothers and infants. **ORW** services entailed registering patients, weighing them in, administering immunizations, recording procedures, and translating.

14. ***Provide Informal Services***

In addition to rendering **unofficial** services during home visits, **ORWs** often made special efforts on behalf of patients and their family members while on the road. For example, one **ORW** was observed to enter a trash-filled, noisome alley and recover two plastic bags of clothing that he delivered to their owner, a TB patient who had just moved into a men's homeless shelter. Another **ORW** stopped by a pharmacy and bought a birthday card and small box of chocolates to give to an elderly female patients. And a few **ORWs** regularly purchased ice cream that they would mix with medications when conducting DOT or DOPT with young children. **ORWs** performed these acts on their own initiative, without official sanction or compensation.

**15. Conduct
Personal Affairs**

While carrying out their daily routines, **ORWs** also addressed their own personal needs. These included purchasing food and drink, taking breaks for coffee and meals, visiting washrooms, making phone calls to family members and baby-sitters, and stopping to do business at stores, laundries, banks, and government agencies. However, instead of taking time out for coffee and meals during the working day, **ORWs** would commonly eat while engaged in other activities, such as telephoning, doing paperwork, and attending meetings.

**16. Complete
Outreach Day**

In all sites except Houston, **ORWs** went back to their public health bases of operation at the end of the workday. If they were using health department vehicles, they would now turn them in. At this point, **ORWs** returned unused medicines and incentives, checked their messages, and returned telephone calls. Also, they sometimes gave brief accounts of their day's activities and explained difficulties encountered to their supervisors and public health nurses, who would indicate any changes in routine or corrective actions that the **ORWs** should undertake the following day.

**17. Interact with
Field
Researchers**

During the course of this study, **ORWs** in the six sites interacted with the field researchers who accompanied them on their daily rounds. Field researchers made every effort to be unobtrusive and to not disrupt **ORWs** in the conduct of their work. Nonetheless, **ORWs** and other health care personnel took time and effort to explain operating procedures to them and participated in interviews, as did patients, who sometimes expressed curiosity about their presence and engaged them in conversation.

**Categories of
Activities**

In terms of locus and function, these 17 types of **ORW** activities fell into five broad categories. These comprised the following:

1. Outreach Direct Services

- visit patients and contacts
- transport patients and contacts
- transport other (specimens, **health** care providers)

Timeframes of Activities

2. Outreach Support Services

- prepare for outreach day
- travel and search for patients and contacts
- wait for patients, contacts, or providers
- communicate by phone with patients/contacts/relatives
- communicate by phone with providers
- communicate directly with providers
- attend TB outreach program meetings
- gain access to/make notes in charts and records
- complete outreach day

3. Clinical Setting Services

- assist in public health TB clinics
- assist in other public health clinics

4. Personal Affairs

5. Other

- provide informal services
- interact with field researchers

The ORW activity of traveling and searching could logically be designated an outreach direct service because it occurred **in the field** and often involved the functions of investigating contacts, locating patients, and returning patients to service. ORW provision of informal services, too, took place in the field and might also be classified as outreach direct services. Finally, although ORW interaction with field researchers transpired during this study, this activity is of course not normally part of ORW work routines.

The field researchers accompanied the ORWs for approximately six hours per day during regular hours for about 30 hours each week, and therefore their observations included most but not all of the time that the ORWs actually worked. According to information provided during interviews with ORWs and their supervisors, most ORWs officially worked seven or eight hours per day, 35 or 40 hours per week, with the exception of those in the Mississippi TB Control Program. However, through observations, interviews, and informal conversations with the various types of actors it became clear that some ORWs traveled, visited patients, and did paperwork during their lunch hours, before and after

regular working hours, and on weekends--and thus spent more time working than **officially** required. The full-time **ORWs** gave estimates that ranged from 35 to 70, for an overall average of 40 hours per week.

Overall, **ORWs** were found to devote greater amounts of time to certain types of activities on both a daily and weekly basis. Clearly, the activity of traveling and searching for patients and contacts commanded a considerable portion of **ORWs'** time, as did to a lesser extent those of making visits to patients and contacts and of gaining access to and making notes in charts and records. Moreover, on the whole, **ORWs** spent significantly more time providing direct and support outreach services than in rendering services in clinical settings. See Tables 1 and 2 on the following pages.

Table 1
Average Weekly Amount of Time Spent per Activity: All Weeks*;
All Sites, Excluding Mississippi

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			0-149	150-299	300-449	450-599	600 & Over
1. Prepare for outreach day	157	8.7%	10	5	2		
2. Travel and search	534	29.6%	1	1	6	3	
3. Visit patients and contacts	232	12.9%	5	9	1	1	
4. Wait	32	1.7%	16	1			
5. Transport patients and contacts	49	2.7%	14	2	1		
6. Transport other	9	0.5%	17				
7. Communicate by phone with patients	20	1.1%	17				
8. Communicate by phone with providers	30	1.7%	16	1			
9. Communicate directly with providers	39	2.1%	15	2			
10. Attend TB outreach program meetings	85	4.7%	12	4	1		
11. Gain access to/make notes in charts	227	12.6%	7	5	2	2	
12. Assist in public health TB clinics	134	7.4%	11	2		2	
13. Assist in other public health clinics	13	0.7%	16	1			
14. Provide informal services	8	0.4%	17				
15. Conduct personal affairs	143	7.9%	8	8	1		
16. Complete outreach day	44	2.4%	15	2			
17. Interact with field researchers	38	2.1%	16	1			
Total**	1804	100%					

*The figures only refer to the 17 weeks with **five** working days during which field researchers observed **ORWs**.

Since some of the outreach workers in Mississippi worked **only** half time, data from this state were excluded from this table.

For further details, please see text.

The weekly average of **observed** hours was about 30 hours, not the actual **35-40** hour work weeks of **ORWs**.

Table 2
Average Daily Amount of Time Spent per Activity: All Days*;
All Sites, Excluding Mississippi

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			O-29	30-59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	36	6.7%	66	37	16	7	4
2. Travel and search	121	29.4%	15	7	22	28	62
3. Visit patients and contacts	59	14.4%	49	39	11	12	23
4. Wait	10	2.4%	117	12	1	2	2
5. Transport patients and contacts	11	2.6%	121	3	6		4
6. Transport other	2	0.4%	131	3			
7. Communicate by phone with patients	7	1.7%	122	9	3		
8. Communicate by phone with providers	5	1.2%	132	1			1
9. Communicate directly with providers	6	1.4%	126	4	3	1	
10. Attend TB outreach program meetings	14	3.3%	115	7	7	1	4
11. Gain access to/make notes in charts	53	12.8%	68	19	18	10	19
12. Assist in public health TB clinics	35	8.4%	102	8	6	4	14
13. Assist in other public health clinics	2	0.5%	131	2			1
14. Provide informal services	1	0.3%	133	1			
15. Conduct personal affairs	35	8.4%	64	37	27	3	3
16. Complete outreach day	8	2.1%	125	7	1		1
17. Interact with field researchers	8	1.9%	120	8	3	2	1
Total**	412	100.0%					

*Since some of the outreach workers in Mississippi worked only half time, data from this state were excluded from this table.

The daily average of **observed hours was about 6 hours, not the **actual** 6 hour work days of ORWs.

The timeframes of ORW daily activities were **affected** by the sizes and natures of their patient caseloads.

During informal conversations, **ORWs** and their supervisors stated that parity in the size of ORW caseloads was the ideal, but these discussions together with observations revealed that considerable variation existed in the sizes of ORW caseloads both within and across sites, as well as in the number and duration of daily visits **ORWs** made to patients and contacts. For example, lighter caseloads were sometimes assigned to new personnel in the learning stage, to senior staff to allow time for supervisory tasks, and to **ORWs** visiting patients that were widely separated by distance and/or travel time. On the other hand, **ORWs** with cases clustered in certain institutions and locales, such as prisons and skid row areas, tended to have heavier caseloads. Other important variables affecting ORW caseload size were the relative availability of outreach program personnel in general and of **staff** possessing certain language skills and cultural knowledge in particular. Moreover, given that most caseloads comprised patients on both daily and intermittent treatment regimens, the number of patients visited by an ORW and the duration of visits **often** varied from day to day. Based on ORW estimates and field observations, the number of ORW daily visits ranged from three to 20, and usually numbered between seven and 15, for an overall daily average of 13 visits. On average, **ORWs** were observed to spend 59 minutes per day making visits, each of which lasted approximately five minutes (see Table 2). It should also be noted that this was the median amount of time estimated per visit by the interviewed patients.

Tables 3-8 on the following pages present the timeframes of ORW daily activities in the six study sites over six weeks. These tables show interesting similarities and variations that reflect the characteristics of the respective TB control programs and the respective roles and functions of their **ORWs**.

Table 3
Average Daily Amount of Time Spent per Activity: All Days*;
Chicago

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			O - 29	30-59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	45	11.7%	9	14	3	1	1
2. Travel and search	114	30.0%	1	1	8	6	12
3. Visit patients and contacts	39	10.4%	15	8	2	1	2
4. Wait	13	3.4%	22	4		2	
5. Transport patients and contacts	3	0.7%	27	1			
6. Transport other	1	0.2%	28				
7. Communicate by phone with patients	7	1.8%	26	1	1		
8. Communicate by phone with providers	11	3.0%	27				1
9. Communicate directly with providers	1	0.4%	28				
10. Attend TB outreach program meetings	15	4.0%	24	1	1	1	1
11. Gain access to/make notes in charts	63	16.7%	11	4	6	1	6
12. Assist in public health TB clinics	6	1.5%	26	2			
13. Assist in other public health clinics	2	0.5%	27	1			
14. Provide informal services	2	0.5%	28				
15. Conduct personal affairs	46	12.0%	11	10	2	2	3
16. Complete outreach day	6	1.7%	27	1			
17. Interact with field researchers	6	1.7%	25	3			
Total**	380	100.0%					

* In Chicago, the field researchers observed ORWs for a total of 28 days.

**The daily average of observed hours was about 6 hours, not the actual 8 hour work day of ORWs.

Table 4
Average Daily Amount of Time Spent per Activity: All Days*;
Houston

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			0 - 29	30 - 59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	44	11.4%	13	3	4	2	2
2. Travel and search	170	44.5%			2	6	16
3. Visit patients and contacts	63	16.4%	5	10	2	4	3
4. Wait	15	3.9%	21	2			1
5. Transport patients and contacts	1	0.2%	24				
6. Transport other	1	0.3%	24				
7. Communicate by phone with patients	3	0.8%	24				
8. Communicate by phone with providers	4	1.1%	24				
9. Communicate directly with providers	8	2.0%	22		2		
10. Attend TB outreach program meetings	11	2.7%	20	1	3		
11. Gain access to/make notes in charts	34	8.8%	14	5	3	1	1
12. Assist in public health TB clinics	5	1.3%	22	1	1		
13. Assist in other public health clinics	0	0.0%	24				
14. Provide informal services	1	0.2%	24				
15. Conduct personal affairs	19	5.0%	16	6	2		
16. Complete outreach day	2	0.5%	24				
17. Interact with field researchers	4	0.9%	23		1		
Total**	383	100.0%					

* In Houston, the field researchers observed ORWs for a total of 24 days.

**The daily average of observed hours was about 6 hours, not the actual 6 hour work day of ORWs.

Table 5
Average Daily Amount of Time Spent per Activity: All Days*;
Los Angeles

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			0 - 29	30 - 59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	48	11.0%	8	9	6	2	1
12. Travel and search	94	21.5%	6	2	4	5	9
3. Visit patients and contacts	92	21.0%	7	4	3	2	10
4. Wait	19	4.4%	20	4	1		1
5. Transport patients and contacts	39	8.9%	16	2	5		3
6. Transport other	6	1.4%	24	2			
7. Communicate by phone with patients	5	1.1%	25	1			
8. Communicate by phone with providers	4	0.9%	26				
9. Communicate directly with providers	0	0.1%	26				
10. Attend TB outreach program meetings	7	1.6%	22	3	1		
11. Gain access to/make notes in charts	41	9.4%	14	4	5		3
12. Assist in public health TB clinics	27	6.3%	21	1	1	1	2
13. Assist in other public health clinics	0	0.1%	26				
14. Provide informal services	4	0.9%	25	1			
15. Conduct personal affairs	41	9.3%	10	9	6	1	
18. Complete outreach day	6	1.3%	23	3			
17. Interact with geld researchers	3	0.8%	24	1	1		
Total-	439	100.0%					

*In Los Angeles, the geld researchers observed **ORWs** for a total of 28 days.

The **daily average of observed hours was about 6 hours, not the actual 8 hour work day of **ORWs**.

Table 6
Average Daily Amount of Time Spent per Activity: All Days*;
New York

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			0 - 29	30 - 59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	28	5.8%	16	9		2	
2. Travel and search	142	29.6%	5		2	5	15
3. Visit patients and contacts	48	9.9%	10	10	1	3	3
4. Wait	3	0.6%	25	2			
5. Transport patients and contacts	1	0.1%	27				
6. Transport other	0	0.0%	27				
7. Communicate by phone with patients	20	4.1%	18	7	2		
8. Communicate by phone with providers	4	0.8%	26	1			
9. Communicate directly with providers	20	4.2%	21	4	1	1	
10. Attend TB outreach program meetings	5	1.0%	24	2	1		
11. Gain access to/make notes in charts	107	22.2%	6	5	1	6	9
12. Assist in public health TB clinics	39	8.1%	22	11	1		3
13. Assist in other public health clinics	0	0.0%	27				
14. Provide informal services		0.0%	27				
15. Conduct personal affairs	35	7.3%	12				
16. Complete outreach day		4.7%	24				
17. Interact with field researchers		1.0%	27	4			
Total**	481	100.0%					

*In New York, the field researchers observed ORWs for a total of 27 days.

**The daily average of observed hours was about 6 hours, not the actual 8 hour work day of ORWs.

Table 7
Average Daily Amount of Time Spent per Activity: All Days*;
Massachusetts

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			O-29	30-59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	17	4.6%	22	2	5		
2. Travel and search	93	24.7%	3	4	6	6	10
3. Visit patients and contacts	56	14.8%	12	7	3	2	5
4. Wait	1	0.3%	29				
5. Transport patients and contacts	10	2.5%	27		1		1
6. Transport other	0	0.0%	29				
7. Communicate by phone with patients	1	0.3%	29				
8. Communicate by phone with providers	1	0.4%	29				
9. Communicate directly with providers	0	0.0%	29				
10. Attend TB outreach program meetings	29	7.7%	25		1		3
11. Gain access to/make notes in charts	18	4.8%	23	1	3	2	
12. Assist in public health TB clinics	90	23.9%	11	3	3	3	9
13. Assist in other public health clinics	7	1.8%	27	1			1
14. Provide informal services	0	0.1%	29				
15. Conduct personal affairs	31	8.3%	15	4	10		
16. Complete outreach day	5	1.4%	27	1	1		
17. Interact with field researchers	16	4.4%	25		1	2	1
Total**	378	100.0%					

*In Massachusetts, the field researchers **observed ORWs** for a total of 29 days.

The daily average of *observed* hours was about 6 hours, not the actual 8 hour work day of **ORWs.

Table 8
Average Daily Amount of Time Spent per Activity: All Days*;
Mississippi

Activities	Time		Quintiles (In Minutes)				
	Minutes	Percent	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
			0 - 29	30 - 59	60 - 89	90 - 119	120 & above
1. Prepare for outreach day	40	16.8%	7	3	1	2	
2. Travel and search	83	34.8%	1	1	5	4	
3. Visit patients and contacts	28	11.5%	9	6	3		
4. Wait	5	2.1%	13	1			
5. Transport patients and contacts	6	2.4%	13			1	
6. Transport other	0	0.0%	14				
7. Communicate by phone with patients	0.17	0.1%	14				
8. Communicate by phone with providers	7	2.8%	12	1	1		
9. Communicate directly with providers	0.28	0.1%	14				
10. Attend TB outreach program meetings	0	0.0%	14				
11. Gain access to/make notes in charts	27	11.4%	8	2	1	3	
12. Assist in public health TB clinics	0	0.0%	14				
13. Assist in other public health clinics	0	0.0%	14				
14. Provide informal services	0	0.0%	14				
15. Conduct personal affairs	16	6.7%	10	1	3		
16. Complete outreach day	13	5.3%	11	2	1		
17. Interact with field researchers	15	6.2%	10	2	2		
Total	239	100.0%					

* In Mississippi, the field researchers observed **ORWs** for a total of 14 days.
The Mississippi TB Control Program stipulated that **ORWs** were supposed to work **20-hour** weeks. Generally, two **ORWs** each worked about half of an 8 hour work day position.

V. TB OUTREACH WORKER INTERACTIONS

ORWs interacted with a spectrum of persons in the course of their workdays. An analysis of information contained in formal interviews as well as in observation logs and weekly summaries was carried out in order to answer the research question as to the nature of ORW interactions with varying kinds of people. The following pages describe the types of actors involved and the manner and tone that characterized their interactions.

Actors

Three principal types of actors were interviewed and observed: ORWs, their supervisors, and patients.

ORWs

Of the 36 ORWs interviewed, 35 provided personal information. Table 9 on the following page presents a composite picture of their demographic characteristics, including gender, age, birthplace, **race/ethnicity**, **languages** spoken, and educational level.

A number of the ORWs possessed diplomas, certificates, or some level of training in health-related disciplines, including a BS in nursing (1), licensed practical nurse (1), nursing or medical aide (4), pharmacy (1), nutrition (1), and social work (1). The remainder held degrees or had training in a spectrum of other fields, such as broadcasting, cosmetics, electronics, business administration, and political science.

The two ORWs from Puerto Rico and the 11 from other countries had resided in the continental United States for between three and 36 years, for an average of 20 years. Twenty-six U.S. and foreign-born ORWs said they had resided in the respective study sites between 11 and 48 years, an average of 22 years.

Prior to their current jobs, seven of the ORWs had worked in the arena of TB in the capacities of medical aide, nursing home assistant, pulmonary care center records clerk, and TB control **outreach worker**. **Further, 11 others had been involved in various** other kinds of outreach efforts: prenatal health care,

**Table - 9
Demographic Characteristics of ORWs**

Gender		Age		Place of Birth*	
Male	15	Under 25	1	U.S. born	24
Female	20	25 – 34	12	Foreign born	11
		35 – 44	8		
		45 – 54	11		
		55 and over	3		
Race/Ethnicity**		Languages Spoken***		Education	
Anglo	4	English	34	High School	18
African American	8	Spanish	17	Bachelors	
Hispanic	11	French	3	Degree	11
Puerto Rican	2	Other	9	Some Graduate	
Other	9			Work/Masters	
				Degree	5

*Two ORWs were born in Africa (Cape Verde and Nigeria); two in Asia (Cambodia and Vietnam); and seven in Latin America and the Caribbean (two in Mexico and one each in Colombia, Guatemala, Haiti, Jamaica, and Nicaragua).

• * Terms of self-identification. Other: one each identified themselves as Black, Mexican American, Haitian, Jamaican, Cape Verdean, Nigerian, Chinese American, Cambodian, and Vietnamese. (Only 34 ORWs provided information on race/ethnicity, languages spoken, and education.)

***The 34 ORWs all spoke English. In addition, 17 spoke Spanish; three French; and one each Haitian Creole, Jamaican Creole, Greek, Portuguese, Cape Verdean Creole, Edo, Yoruba, Chinese, Khmer, and Vietnamese.

maternal and child health care, community day care, home health care, and refugee **health** care.

One ORW had been in his current job since 1979, and another six had become **ORWs** during the 1980s. The other 26 had held their present ORW positions only since 1992.

Thirty **ORWs** indicated that they had received orientation training upon commencing their jobs, and four stated they had not. This training was most frequently given by public health department nurses or supervisors, CDC staff, or health department managers for between one and ninety days, mainly between one and 20 days. Topics included the causes and transmission of TB, at-risk populations (e.g., homeless, substance abusers, HIV/AIDS infected), methods for interacting with and interviewing patients, outreach techniques, TB control and prevention, DOT, drawing blood, skin testing, sputum collection, self protection, chart and record keeping, and policies and procedures.

Out of 36 **ORWs**, 34 stated that they were provided in-service TB outreach training, usually by health department nurses and other staff, from one to three times per year on average. Areas of focus encompassed TB information updates, HIV/AIDS, co-infections, new TB medications and side effects, sexual harassment, and violence. Twenty-nine also indicated that they received on-the-job training from other **ORWs**, supervisors, and public health nurses on an ongoing basis concerning the above types of subjects and in accordance with the informational and educational needs of service units and individual **ORWs**.

Supervisors

Of the 34 supervisors interviewed, 30 provided personal information. Their demographic characteristics are presented in Table 10 on the following page.

Of the 26 supervisors who specified the disciplines in which they held degrees, 16 were in nursing, and the remainder were in such fields as public health, public administration, biology, and sociology.

Those from abroad had been in the United States for 15 to 29 years, for an average of 22 years. Twenty-seven American and foreign-born supervisors had been living in the study site for between five and 46 years--on average, 23 years.

**Table - 10
Demographic Characteristics of Supervisors**

Gender		Age*		Place of Birth**	
Male	9	Under 25	-	U.S. born	20
Female	21	25 – 34	4	Foreign born	10
		35 – 44	7		
		45 – 54	17		
		55 and over	1		
Race/Ethnicity***		Education			
Anglo	5	High School:	2		
African American	8	Bachelors			
Hispanic	5	Degree	19		
Filipino	3	Some Graduate			
Other	9	Work/Masters			
		Degree	9		

*Only 29 of the 30 supervisors who gave personal information provided their ages.

* Three supervisors were born in the Philippines, and one each in China, Colombia, Haiti, Korea, Nigeria, St. Lucia, and Vietnam.

*** Terms of self-identification. Other: one each identified themselves as White, Asian American, Native American, Nigeria in, Chinese, Korean, Vietnamese, Haitian, and West Indian.

Patients

Prior to their current jobs, 14 out of 31 had worked in the arena of TB during nursing training or as staff or clinic nurses. Also, 17 had previously done outreach work concerning various issues, such as maternal and child health, adolescent health and gang behavior, mental health, AIDS, and TB.

Twenty supervisors stated that they had started in their current jobs during the 1980s, and nine said that they had been in these positions since 1990.

The patients with whom the 36 ORWs interacted were characterized by the ORWs in terms of the following categories (the number that accompanies each category indicates the number of ORWs that cited that category):

- low income (36)
- unemployed (36)
- youth (36)
- elderly (35)
- immigrants (35)
- HIV+ (33)
- non-injecting drug users (32)
- homeless (31)
- injecting drug users (30)
- excessive alcohol users (30)
- physically/mentally disabled (29)
- refugees (24)
- prisoners (23)
- migrant/seasonal farmworkers (12)
- gays and lesbians (4)
- infants and children (3)
- middle, upper, and high income (3)
- ex-prisoners (1)

Forty-seven patients were interviewed. Their demographic characteristics are presented in Table 11 on the following page.

The 17 patients from abroad had resided in this country from between two months and 35 years, averaging 16 years. The periods for which 30 U.S.-born and foreign-born patients indicated they had been located in the respective study sites ranged between four months and 53 years, for an average of 21 years.

**Table - 11
Demographic Characteristics of Patients**

Gender		Age		Place of Birth*	
Male	20	Under 25	2	U.S. born	30
Female	27	25 – 34	14	Foreign born	17
		35 – 44	17		
		45 – 54	7		
		55 and over	7		
Race/Ethnicity**					
Anglo	3				
Black	21				
Hispanic	13				
Native American	1				
Other	9				
<p>*Two of the U.S. born patients were born in Puerto Rico. Of the 15 foreign born patients who gave their places of birth, four were born in Mexico, three in Cambodia, and one each was born in the Dominican Republic, France, Haiti, Honduras, Jamaica, Nigeria, Trinidad, and Vietnam.</p> <p>• * Terms of self-identification. Other: nine patients identified themselves in terms of legal [residence] status rather than race/ethnicity. A review of the birthplaces given by the patients indicated that four of them were probably of Asian origin.</p>					

Out of the **44** patients who spoke about employment, 25 said they were currently employed, and 19 said they were not. The patients cited a variety of past and present occupations. Most of these were in manual labor and lower-level service fields, but they also included a few jobs in skilled crafts, information systems, and health care.

Forty-six patients stated when they first found out they had TB. Of these, 36 said that they had learned they had the disease in 1996, nine had discovered they had TB in the preceding two or three years, and one explained that his case had first been detected in 1991.

Out of 47 patients, 45 stated how long they had been provided care by their current **ORWs**. The time periods ranged widely, from two weeks to 20 months, for an average of 17 weeks. However, the amount of time most frequently given was ten weeks.

Interactions

ORWs interacted daily with various types of health care providers, especially with other **ORWs**, public health nurses, and the **ORWs'** supervisors. Other health care personnel that **ORWs** dealt with included laboratory technicians, record clerks, clinic nurses, physicians, administrative officials, and residential institution staff, such as custodians and dietitians. **ORWs** also interacted with patients and with members of their households and other relatives, as well as **with** patients' acquaintances and neighbors. Direct observation and informant comments about these interactions lent insights into the relationships of the actors concerned.

Health Care Personnel

The ways in which **ORWs** interacted with one another and the tenor of their relationships reflected the social organization and interpersonal dynamics of the different study locations and specific health care settings. In all of the sites, **ORWs** identified inequality in caseloads--in terms of the numbers, health problems, languages, and geographical distributions of patients--as a major source of dissatisfaction. **ORWs** were acutely aware of any such differences in caseloads, and any perceived unfairness generated anger toward administrative superiors and sometimes resentment toward fellow **ORWs** whose burdens seemed lighter. Also, inter-ethnic tensions were sometimes revealed. For example, one Black **ORW** spoke of resenting Hispanic workers who spoke Spanish rather than

English among themselves when in the presence of non-Spanish-speaking ORWs. And an Hispanic ORW complained of feeling intimidated by verbally aggressive behavior on the part of Black ORWs. However, in a number of health care settings, ORWs seemed to enjoy a strong sense of camaraderie. They joked and commiserated among themselves about their work and their patients, and they covered for each other in assuring that assignments were completed. Moreover, in the main, these mutually supportive relationships appeared to extend and hold across ethnic lines.

The 32 ORWs who indicated how often they met with public health nurses gave estimates that ranged from zero to seven meetings per week. Almost half of these ORWs indicated that they met daily with public health nurses, and three was the weekly average number given for such meetings. Also, 25 ORWs stated that they communicated on the phone with public health nurses between three and seven times per week. These same ORWs said that public health nurses went with them on patient visits approximately three times a year, but 11 other ORWs said they were not accompanied by public health nurses during visits.

The ways that ORWs and public health nurses interacted varied considerably. Especially in those TB control programs where nurses exercised direct authority over ORWs (in addition to that of the ORWs' assigned supervisors) and where there was a very strict division of labor between nurses and ORWs that sharply delimited the range of ORW functions, ORW-nurse interactions tended to be more formal and sometimes tense. In contrast, in programs where ORW roles were broader and more flexible and in which ORWs were encouraged to take initiative, their interactions with public health nurses seemed to be more informal and collaborative.

As noted above, most ORWs met with their supervisors at the beginning and at the close of the workday. The 31 ORWs who stated how often they communicated by telephone with their supervisors gave numbers that varied considerably, ranging from less than once to nine times per week, for an average of three. The most frequent estimate offered was once per day. Fifteen ORWs indicated that their supervisors accompanied them on patient visits about three times a year, whereas 18 of them stated that their supervisors never went with them on such visits.

***Patients and Their
Family Members***

In both formal interviews and informal conversations, most of the **ORWs** expressed keen annoyance in having to report to more than one person. Among the interviewed **ORWs**, 13 said they had only one supervisor, but 20 stated that they had more and identified them in the following kinds of ways: one in the clinic and one for outreach; a supervisor and a chief nurse; a team leader and a supervisor; three public health nurses and a supervisor; a second supervisor; "all public health nurses call on **ORWs**"; and [There are] "many chiefs and few Indians" [**ORWs**].

In circumstances where **ORWs** perceived supervisors to treat other **ORWs** more favorably than themselves due to shared ethnicity, gender, or for some other reason, they conveyed their anger to the field researchers. Also, if **ORWs** thought their supervisors lacked experience in conducting outreach or showed a disinterest or misunderstanding of what was involved in fieldwork, the **ORWs** indicated that they respected them less. On the other hand, **ORWs** seemed well disposed toward supervisors who had themselves once been **ORWs** and who demonstrated empathy and understanding of the difficulties of outreach. Moreover, **ORWs** were especially appreciative of supervisors who protected them from being pressed into conducting translation or other services by clinical **staff** and who prevented vehicles assigned them from being commandeered by others of higher rank in health department hierarchies.

Finally, it was the supervisors and other managerial level personnel who set both the atmosphere of **TB** outreach program offices and the manner of staff interactions.

The 47 interviewed patients stated that **ORWs** were currently visiting them at the following intervals:

- daily (22)
- 2 to 3 times per week (12)
- weekly (12)
- every two or three months (1)

Patient estimates of the length of these visits ranged widely, from two to 90 minutes. However, the estimate that was given most frequently (10 times) was five minutes per visit.

Twenty-nine of the patients noted that **ORWs** were accompanied by others when visiting them, whereas 18 patients said the **ORWs** were always alone when they came to see them. The patients identified the accompanying health care providers as:

- supervisors/public health nurses/social workers (11)
- other **ORWs** (12)
- trainees/assistants (3)

The languages most frequently used in communication between **ORWs** and patients and their families were English or a combination of English and Spanish. Other languages cited by **ORWs** and patients were Haitian Creole, Chinese, Khmer, and Vietnamese. Thirteen of the 36 **ORWs** noted that they sometimes had **difficulty** in communicating with patients. In terms of language, the problems lay in the **ORWs'** lack of knowledge of Spanish and of various Asian languages, such as Chinese, Korean, and Vietnamese. **ORWs** also indicated that they found difficulty in trying to exchange ideas and information with people who were under the influence of intoxicating substances or who were mentally ill, hearing impaired, illiterate, or lacking minimal schooling.

The basis of the **ORW**-patient interactional dyad was compulsion: **ORWs** had the task of ensuring that patients complied with prescribed treatment regimens by carefully watching as patients ingested medications. A few patients and their family members were observed to be uncooperative, verbally abusive, or even physically threatening toward **ORWs** and other health care personnel, but under such circumstances the **ORWs** appeared to remain calm and firmly in control both of themselves and the situations. Also, although **ORWs** sometimes made unobtrusive remarks to the field researchers regarding potentially violent or infected patients, they did not show any indication of fear in front of patients. Nor were they heard to make negative comments to patients or their relatives during visits about the often unpleasant conditions of their dwellings.

Rather, review of the observation logs and weekly summaries revealed that the field researchers continually noted the friendly yet **firm** manner in which **ORWs** interacted with patients and the obvious concern that they exhibited for the well-being of patients and their family members, as well as by the polite and

often appreciative way that people commonly received the ORWs into their homes. In a few cases, ORWs who had built a relationship of trust with certain patients would visit their homes and, if they were not there, leave medications for the patients to take unobserved. The one consistently negative comment that patients made on the subject of ORWs was that TB control outreach programs kept shifting ORWs' assignments, thus disrupting positive relationship that had been established between ORWs and patients. All but one of the interviewed patients indicated that their respective ORWs had formed good relations with them and that the ORWs understood their needs and problems. Further, 21 of the patients noted that the ORWs did things for them that were not part of their jobs, such as helping them gain access to other health and social services, as well as doing them personal favors. These acts of kindness ranged from bringing candy to children, to taking up collections for impoverished patient families among health care providers.

VI. TB OUTREACH WORKER EFFECTIVENESS

Knowledge and Skills, Attitudes and Personal Attributes

ORWs

To address the third research question as to what factors affect the effectiveness of ORWs in carrying out their activities, an analysis was conducted of the data contained in the interviews in which ORWs, their supervisors, and patients presented their perceptions of the kinds of knowledge, skills, attitudes, and personal attributes that ORWs should possess in order to be effective in their work. Also, the three types of informants offered suggestions for increasing the effectiveness of ORWs and of the TB outreach programs in which they served.

ORWs gave the following examples of knowledge and skills they felt were essential to the effectiveness of their activities. Each item is followed in parentheses by the number of ORWs who mentioned it.

- knowledge of TB (25)
- communication skills (17)
- knowledge of the local health care system (8)
- knowledge of other diseases (7)
- knowledge of the language of patients (7)
- knowledge of the culture of patients (5)
- knowing how to get along with patients (5)
- knowing how to get along with people (4)
- knowing how to educate patients (4)

Further, they identified a number of attitudes and personal attributes that they thought also enhanced the effectiveness of ORWs.

- good attitude (19)
- interest in patients (17)
- patience (13)
- flexibility (9)
- communication skills (8)
- being caring (8)

Supervisors

- getting along with people (5)
- punctuality (2)
- being cooperative with staff (1)

The supervisors presented the following list of knowledge and skills that **ORWs** should possess in order to carry out their activities effectively:

- communication skills, get along with people (24)
- knowledge of TB transmission and prevention (18)
- knowledge of the language and culture of patients (12)
- knowledge of the community (11)
- knowledge of social service system (5)
- knowledge of medical basics (6)
- understanding of adult learning (3)
- investigative ability (1)
- ability to work in a team (1)

Also, the supervisors offered their views on the attitudes and personal traits they thought maximized ORW effectiveness:

- being caring, nonjudgmental, empathic (19)
- patience and persistence (13)
- flexibility, consistency (9)
- communication skills (7)
- honesty, empathy, good disposition (7)
- ability to solve problems (4)
- ability to work in tough settings (2)
- professionalism (1)

Patients

Patients presented a number of examples of knowledge and skills that they thought **ORWs** should have to be effective in their work:

- knowledge about TB (25)
- communication skills (16)
- knowledge about culture of patients (13)
- knowledge about local health care (8)
- be caring, care about patients (7)
- knowledge about language of patients (4)

Suggestions for Improving the Effectiveness of TB Outreach Services

ORWs

- knowledge about other communicable diseases (3)
- patience (2)
- ability to explain (1)

Further, the patients identified attitudes and personal attributes they felt made for effective **ORWs**:

- interest in patients (24)
- patience (21)
- caring, thoughtful, understanding (8)
- flexibility (6)
- communications skills (6)
- know patient's language (3)
- humor (2)
- reliable, responsible (2)
- punctuality (1)
- friendliness (1)

The above-cited characteristics offered by the different types of informants during interviews were complemented in the observation logs and weekly summaries in terms of documented ORW comments, behaviors, and interactions with others.

Nineteen **ORWs** thought that changes should be made in their respective outreach programs that could make them more effective. They offered suggestions in various areas:

1. Increase the flexibility of the roles of **ORWs** (for example, permit them to draw blood).
2. Increase the number of **ORWs**.
3. Increase the time allowed to serve the population.
4. Increase the funds available for patient incentives.
5. Increase the number of available vehicles and phones.
6. Instruct supervisors and public health nurses about the **difficulties** involved in travel and transportation, including the long distances and time required to drive from clinics to DOT sites.
7. Supervisory staff should try harder to match patients with **ORWs** in matters such as language and culture.
8. Reduce the excessive and extremely time consuming paperwork.
9. Provide **ORWs** more training for dealing with patients and in writing monthly reports.

Supervisors

Seventeen supervisors felt that some modifications should be made in their outreach programs to increase ORW effectiveness. Their recommendations fell into four general categories: resources, training, organization, and management:

1. Increase program operating funds and staff salaries.
2. Designate TB **ORWs** as special category workers and provide them their own organization.
3. Increase, improve and intensify ORW classroom and in-service training, especially in regard to interviewing skills.
4. Provide **ORWs** more supervision and hands-on management.

Seventeen patients provided suggestions for changes in the TB control outreach programs in which they were involved. These proposed modifications addressed issues of access to clinic services and concerns about stigma and privacy rather than ORW effectiveness:

1. Provide more tokens to help patients travel.
2. Make it easier to get medicines.
3. Improve the taste of medicines.
4. Maintain more flexible clinic schedules.
5. Make doctors more available.
6. Take more time with patients.
7. Trust patients to take medications later.
8. Make DOT less intrusive.
9. Protect patients' privacy.
10. Do not use identified health department cars when visiting patients.
11. Provide the option to patients of not having **ORWs** go to their homes.
12. Do not do DOT where people work.

VII. CONCLUSIONS

In order to gain a better understanding of TB control outreach programs and ORW functions, in 1994 DTBE decided to capture information through the actual observation of what **ORWs** do and where and how they do it, including the amount of time they spend in various activities and the ways in which they interact with other health care personnel and with patients. To that end, CDC contracted with C&A to carry out a research project whose objective was to answer three basic research questions:

- What **activities** do TB outreach workers perform?
- In carrying out these activities, how do TB outreach workers **interact with** other health care personnel and patients?
- What factors influence the **effectiveness** of TB outreach worker activities?

At the outset of the project, DTBE selected six study sites, which were then visited by C&A staff. The sites demonstrated both similarities and differences in their epidemiological characteristics, the organizational features of their TB control programs, and the division of labor among different categories of outreach staff. The statuses, roles, and functions of **ORWs** varied considerably across the sites.

The C&A staff recruited and trained six individuals who in 1996 carried out intensive field research in the respective sites for periods of up to six weeks. Each week a field researcher would accompany a different ORW on his or her daily rounds, directly observe the ORW's activities and interactions, and conduct interviews with the ORW, the ORW's supervisor, and the patients to whom the ORW provided services. The field researchers compiled data in daily observation logs, interview forms, and weekly summaries, which they then forwarded to the C&A staff for analysis.

Analysis of ORW activities found that they fell into the following types:

- prepare for outreach day
- travel and search for patients and contacts
- visit patients and contacts
- wait for patients, contacts, or providers
- transport patients and contacts
- transport other (specimens, health care providers)
- communicate by phone with patients/contacts/relatives
- communicate by phone with providers
- communicate directly with providers
- attend TB outreach program meetings
- gain access to/make notes in charts and records
- assist in public health TB clinic
- assist in other public health clinics
- provide informal services
- conduct personal affairs
- complete outreach day

Overall, **ORWs** devoted greater amounts of time to certain activities on both a daily and weekly basis. The activity of traveling and searching for patients and contacts commanded a large portion of **ORWs'** time. In the main, ORW routines involved driving between scheduled visits to patients and contacts in their homes, institutional settings, or on the street.

Travel frequently involved passing through run-down, sometimes dangerous inner-city neighborhoods to reach patients whose participation in treatment was reluctant if not recalcitrant. Therefore, the process of traveling and searching was often fraught with difficulties. The next two most **time-consuming** ORW activities were making visits to patients and contacts, and gaining access to and making notes in charts and records. On the whole, **ORWs** spent significantly more time providing direct and support outreach services **in the field than** working in clinical settings.

To a considerable degree, the **ORWs** who participated in the study were familiar with the cultures and spoke the languages of the populations to which they **provided** services. The foreign born represent an increasing proportion of TB patients, and therefore it will be important for TB outreach programs to continue to recruit and hire individuals with the

requisite cultural knowledge and language skills to meet the needs of this at-risk population.

The ways in which **ORWs** interacted with one another and the nature of their relationships reflected the social organizations and interpersonal dynamics of the different study locations and specific health care settings. **ORWs** were acutely aware of any differences in their caseloads, and the perception of unfairness in distribution generated their anger toward administrative superiors and resentment toward fellow **ORWs**. Also, inter-ethnic tensions were sometimes revealed. However, in most of the health care settings, **ORWs** appeared to communicate freely and to maintain mutually supportive relationships amongst themselves.

In those TB control programs where there was a very strict division of labor between nurses and **ORWs** that sharply delimited the range of **ORW** functions, **ORW**-nurse interactions tended to be more formal and sometimes tense. In contrast, in programs where **ORW** roles were broader and more flexible and in which **ORWs** were encouraged to take initiative, their interactions with public health nurses seemed to be more informal and collaborative.

ORWs expressed negative feelings when they were required to report to more than one supervisor, when supervisors appeared to favor some **ORWs** over others, and when supervisors lacked personal experience or showed a lack of interest or understanding concerning TB outreach. In contrast, **ORWs** were very positive toward supervisors who showed understanding of the difficulties entailed in their field work, and they conveyed a sense of mutual loyalty in their relations with supervisors who protected them from the demands of other administrative or clinical health department **officials**. Positive **ORW**-supervisor relations were reflected in frequent and open interactions.

A few patients and other persons encountered by **ORWs** in the course of their work were observed to be uncooperative or argumentative toward them, but in these cases the **ORWs** remained calm and firm. They did not demonstrate fear of potentially violent or infectious persons in their presence or otherwise indicate trepidation for their personal safety. Nor did they make disparaging remarks to patients or their relatives regarding the often unpleasant conditions of their homes. Rather, most **ORWs** treated patients and their

relatives with consideration and even personal concern, and generally patients and household members politely received, and sometimes welcomed warmly, the visits of **ORWs** into their homes. Indeed, patients voiced dismay when **ORWs** with whom they had established positive relationships were reassigned and replaced by others. Further, **ORWs** often did things for patients and their families that were not officially part of their jobs. These actions ranged from helping them gain access to other health and social services, to bringing them small gifts, to helping distraught family members of deceased patients to make funeral arrangements.

During the course of interviews, **ORWs**, their supervisors, and patients indicated the kinds of knowledge and skills, and the nature of attitudes and personal attributes, that they thought TB outreach workers should possess in order to be effective in their work. The three types of actors generated different lists of such factors, but these lists all shared a core of common elements:

- knowledge of TB
- knowledge of other diseases
- knowledge of the local health care system
- knowledge of the language of patients
- knowledge of the culture of patients
- communication skills
- interest in patients
- patience
- flexibility
- empathy

Moreover, the importance of these factors was clearly shown in field research observations and notations. **This** combination of characteristics--together with **ORW** and supervisor recommendations for increased and improved **ORW** training in interacting with patients, interviewing techniques, and report writing--can serve to inform TB control programs that are seeking to recruit appropriate individuals and transform them into effective **ORWs**.



Appendix A:

Outreach Worker Interview Guide

Form Approved
OMB Approval No.: 0920-0393
Expiration Date: 6/30/98

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
OUTREACH WORKER INTERVIEW GUIDE

Public reporting burden for this collection of information is estimated to average 45 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance Officer; Paper Work Reduction Project (0920-0393); Room 531-H. H. Humphrey Bg.; 200 Independence Ave., SW; Washington, DC 20201.

Outreach Worker Activities

1. How did you learn about this TB outreach worker job?
2. Why did you apply for this job?
3. Why do you think you were selected for this job?
4. When did you begin this job?

Outreach Worker Training

5. Did you get TB outreach program orientation training?
Yes No If yes,
 - a. Who gave the orientation?
 - b. How long was the orientation?
 - c. What topics were covered?
 - d. What information was most useful?
6. Do you get TB outreach program in-service training?
Yes No If yes,
 - a. Who gives it?
 - b. How often?
 - c.** What topics are covered?
 - d. What information is most useful?

7. Do you get TB outreach program on-the-job training?
Yes _____ No _____ If yes,

- a. Who gives it?
- b. How often?
- c. What topics are covered?
- d. What information is most useful?

Outreach Worker Activities

8. How many hours a week do you spend as a TB outreach worker?

9. Are the outreach activities you perform as an outreach worker concerned only with TB?
Yes _____ No _____
If **no**, please describe your other outreach activities.

10. Does the source of funding used to support your TB outreach job influence the types of activities that you perform?
Yes _____ No _____ If yes, please explain.

11. What kinds of patients do you serve? [Read list; circle all that apply.]

- elderly 1
- youth 2
- refugees 3
- immigrants 4
- migrant/seasonal farm workers 5
- HIV+ 8
- physically/mentally disabled 7
- injecting drug users 8
- non-injecting drug users 9
- excessive alcohol users 10
- low income 11
- unemployed 12
- homeless 13
- prisoners 14
- other: 15

12. What are the racial, ethnic, or country backgrounds of the patients you serve?

13. What language(s) do you use to speak to the patients?

14. Do you have difficulty communicating with the patients?
Yes No If yes, please explain.

15. a. How many patients are you currently serving each day?

b. How many patients are you supposed to serve each day? **[If there is a difference between (a) and (b), ask why.]**

16. In what places do you serve patients?

17. In an average week, how much time do you spend on the following activities? [Read list; document all that apply. If the outreach worker does not spend any time on the activity, write 0 **(zero)**]

Activities

Time

- meeting/on** the phone with supervisor(s) _____
- meeting/on** the phone with public health nurses _____
- meeting/on the phone with other outreach workers _____
- meeting/on** the phone with other TB clinic staff _____
- meeting/on** the phone with other health care providers _____
- on the phone with patients/families _____
- visiting patients/families; conducting **DOT** _____
- visiting patients/families; educating them about TB _____
- looking for patients who miss appointments _____
- transporting patients _____
- investigating contacts _____
- delivering medications/x-rays/sputum _____
- assisting in the chest clinic _____
- keeping records _____
- traveling between appointments _____
- other _____

Total hours per week _____

18. Please list five of the activities you perform that you think are very important, starting with the most important activity.

Activities: **a.** _____
 b. _____
 c. _____
 d. _____
 e. _____

19. In which of these activities do you think you are very effective? Please explain.

20. In which of these activities do you think you are less effective? Please explain.

21. What techniques do you use to try to establish good relations with new patients?

22. What techniques do you use to try to get patients to remain in the TB outreach program and to follow treatment plans?

Supervision and Evaluation

23. Do you have more than one supervisor?
Yes No If yes, please explain.

24. How often do you meet with your supervisor(s) in an average week? [Refer to their answer for question **17**]

a. Alone?

b. With other outreach workers?

25. How often do you communicate by telephone with your supervisor(s) in an average week? [Refer to their answer for question **17**]

26. How often do you meet with public health nurses in an average week? [Refer to their answer for question 171]

a. Alone?

b. With other outreach workers?

27. How often do you communicate by telephone with public health nurses in an average week? [Refer to their answer for question **171**]

28. Are you accompanied on patient visits by your supervisor(s)?
Yes No If yes, how often?

29. Are you accompanied on patient visits by public health nurses?
Yes No If yes, how often?

30. Do you submit written activity reports to your supervisor(s)?
Yes No If yes, how often?

31. Are formal written evaluations made of your performance?
Yes No If yes, how often?

32. Who makes these evaluations?

33. **On** what activities or performance measures are you evaluated?

Perceptions and Recommendations

34. What kinds of knowledge and skills do You think it takes to make an effective TB outreach worker? **If** necessary, probe: e.g., knowledge about TB, other communicable diseases, local health care system, culture(s) of patients; skills in communicating, language(s) of patients.]
35. What kinds of attitudes and ways of behaving do You think it takes to make an effective TB outreach worker? [If necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.]
36. What do You like most about Your job?
37. What do You like least about Your job?
38. Do You think changes should be made in the TB outreach program outreach worker activities?
Yes No If yes, please explain.

Personal Information

- 39.** Gender:
Female Male
40. What is Your age?
41. Where were You born?
42. What is Your racial, ethnic, or country background?
43. When did You come to the United States? [ask only if relevant.]

44. When did you come to this area? [ask only if relevant.]

45. What languages do you speak?

46. What is your educational background?

a. Years of schooling completed: _____

b. Diploma(s)/Degree(s) earned: _____

47. Did you work in the area of TB before you joined this TB outreach program?
Yes No If yes, please explain.

48. Did you work in outreach before you joined this TB outreach program?
Yes No If yes, please explain.

49. What work were you doing just before you joined this program?

[Note: At the conclusion of the interview, remember to ask the outreach worker if **he/she** has any questions about the study or the interview, and provide answers to any such questions. Thank the outreach worker for his/her participation in the interview.]

Appendix B:

**Supervisor
Interview
Guide**

Form Approved
OMB Approval No.: 0920-0393
Expiration Date: 6/30/98

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
SUPERVISOR INTERVIEW GUIDE

Public reporting burden for this collection of information is estimated to average 45 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance Officer; Paper Work Reduction Project (0920-0393); Room 531-H. H. Humphrey Bg.; 200 Independence Ave., SW; Washington, DC 20201.

Outreach Worker Activities

1. How does this **TB** outreach program recruit outreach workers?
2. What qualifications are required?
3. How was [name of outreach worker] selected to be a TB outreach worker?
4. When did **he/she** begin to work for the TB outreach program?

Outreach Worker Training

5. Did [name of outreach worker] get TB outreach program orientation training?
 - a. Who gave the orientation?
 - b. How long was the orientation?
 - c. What topics were covered?
6. Does **he/she** get TB outreach program **in-service** training?
Yes No If yes,
 - a. Who gives it?
 - b. How often?
 - c. What topics are covered?
7. Does **he/she** get TB outreach program on-the-job training?
Yes No If yes,
 - a. Who gives it?
 - b. How often?
 - c. What topics are covered?

Outreach Worker Activities

8. How many hours a week does [name of outreach worker] spend as a TB outreach worker?

9. Are the outreach activities **he/she** performs as an outreach worker concerned only with TB?
Yes No If no, please describe his/her other outreach activities.

10. Does the source of funding used to support his/her TB outreach job influence the types of activities that **he/she** performs?
Yes No If yes, please explain.

11. What kinds of patients does **he/she** serve? [Read list; circle all that apply.]

- elderly 1
- youth 2
- refugees 3
- immigrants 4
- migrant/seasonal farm workers 5
- HIV+ 6
- physically/mentally** disabled 7
- injecting drug users 8
- non-injecting drug users 9
- excessive alcohol users 10
- low income 11
- unemployed 12
- homeless 13
- prisoners 14
- other: 15

12. What are the racial, ethnic, or country backgrounds of the patients **he/she** serves?

13. How many patients is **he/she** now serving each day?

14. How many patients is **he/she** supposed to serve each day? [If there is a difference between answers to questions 13 and 14, ask why.]

15. In what places does **he/she** serve patients?

16. What language(s) does **he/she** use to speak to the patients?

17. Does **he/she** have difficulty communicating with the patients?
Yes No If yes, please explain.

18. In an average week, how much time does **he/she** spend on the following activities? (Read list; document all that apply. If the outreach worker does not spend any time on the activity, write 0 **(zero)**)

Activities

Time

meeting/on the phone with supervisor(s)	_____
meeting/on the phone with public health nurses	_____
meeting/on the phone with other outreach workers	_____
meeting/on the phone with other TB clinic staff	_____
meeting/on the phone with other health care providers	_____
on the phone with patients/families	_____
visiting patients/families; conducting DOT	_____
visiting patients/families; educating them about TB	_____
looking for patients who miss appointments	_____
transporting patients	_____
investigating contacts	_____
delivering medications/x-rays/sputum	_____
assisting in the chest clinic	_____
keeping records	_____
traveling between appointments	_____
other	_____
Total hours per week	_____

19. Please list five of the activities **he/she** performs that you think are very important, starting with the most important activity.

a

Activities: **a** _____
 b: _____
 c. _____
 d. _____
 e. _____

20. In which of these activities do you think **he/she** is very effective? Please explain.

21. In which of these activities do you think he/she is less effective? Please explain.

22. What techniques does **he/she** use to try to establish good relations with new patients?

23. What techniques does **he/she** use to try to get patients to remain in the TB outreach program and to follow treatment plans?

Supervision and Evaluation

24. When did you join the TB outreach program?

25. How many hours a week do you spend supervising TB outreach workers?

26. How many outreach workers do you supervise?

27. How many full-time equivalent outreach workers do you supervise? [if there is a difference between the answers to questions 26 and 27, ask why.]¹

26. When did you start supervising [name of outreach worker] ?

29. Does **he/she** have more than one supervisor?
Yes No If yes, please explain.

30 .

How often does **he/she** meet with you in an average week? [Refer to answers for question 181

- a. Alone?
- b. With other outreach workers?

31. How often does **he/she** communicate by telephone with you in an average week? [Refer to answers for question 181

32. Is **he/she** accompanied on patient visits by you?
Yes No If yes, how often?

33. How often does **he/she** meet with public health nurses in an average week? [Refer to answers for question 181

- a. Alone?
- b. With other outreach workers?

34. How often does **he/she** communicate by telephone with public health nurses in an average week? [Refer to answers for question 181

35. Is **he/she** accompanied on patient visits by public health nurses?
Yes No If yes, how often?

38. Does **he/she** submit written activity reports to you?
Yes No If yes, how often?

37. Are formal written evaluations made of **his/her** performance?
Yes No If yes, how often?

38. Who makes these evaluations?

39. On what things is **he/she** evaluated?

Perceptions and Recommendations

- 40. What kinds of knowledge and skills do you think it takes to make an effective TB outreach worker? **If** necessary, probe: e.g., knowledge about TB, other communicable diseases, local health care system, culture(s) of patients; skills in communicating, language(s) of patients.]

- 41. What kinds of attitudes and ways of behaving do you think it takes to make an effective TB outreach worker? **If** necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.]

- 42. Do you think changes should be made in the TB outreach program outreach worker activities?
Yes No If yes, please explain.

Personal Information

- 43. Gender:
Female Male

- 44. What is your age?

- 45. Where were you born?

- 46. What is your racial, ethnic, or country background?

- 47. When did you come to the United States? [ask only if relevant.]

- 46. When did you come to this area? [ask only if relevant.]

- 49.** What is your educational background?
 - a. Years of schooling completed: _____
 - b. **Diploma(s)/Degree(s)** earned: _____

50. Before you joined this TB outreach program:

- a. Did you work in the area of TB?
Yes No If yes, please explain.

- b. Did you work in outreach?
Yes No If yes, please explain.

[Note: At the conclusion of the interview, remember to ask the supervisor if **he/she** has any questions about the study or the interview, and provide answers to any such questions. Thank the supervisor for his/her participation in the interview.]

Appendix C:

Patient Interview Guide

Form Approved
OMB Approval No.: 0920-0393
Expiration Date: 6/30/98

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
PATIENT INTERVIEW GUIDE

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance **Officer**; Paper Work Reduction Project (0920-0393); Room 531-H. H. Humphrey Bg.; 200 Independence Ave., SW; Washington, DC 20201.

Outreach Worker Activities

1. When did you find out you have TB?
2. When did Jname of outreach worker1 become your TB outreach worker?
3. What language(s) does **he/she** use to speak with you?
4. Do you have trouble communicating with him/her?
Yes No If yes, please explain.
5. Where does **he/she** usually visit you?
6. How often does **he/she** visit you?
7. Does anyone else from the TB outreach program visit you?
Yes No If yes, please explain.
8. How long do Jname of outreach worker1's visits to you last?
9. What happens during **his/her** visits to you?
10. Did **he/she** try to form good relations with you when **he/she** first became your outreach worker?
Yes No Please explain.
11. Does **he/she** try to get you to stay in the TB outreach program and to follow your treatment plan?
Yes No Please explain.
12. Do you think **he/she** understands your needs and problems?
Yes _ No _ Please explain.

13. Does **he/she** do things for you that he/she does not have to do as part of his/her job?
Yes No If yes, please explain.

Perceptions and Recommendations

14. What kinds of knowledge and skills do you think it takes to make a good TB outreach worker? [If necessary, probe: e.g., knowledge about TB, other communicable diseases, local health care system, culture(s) of patients; skills in communicating, language(s) of patients.]
15. What kinds of attitudes and ways of behaving do you think it takes to make a good TB outreach worker? [If necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.]
16. What things about the TB outreach program do you like the most?
17. What things about the TB outreach program do you like the least?
18. Do you think changes should be made in the TB outreach program?
Yes No If yes, please explain.

Personal Information

19. Gender:
Female Male
20. What is your age?
21. Where were you born?

22. What is your racial, ethnic, or country background?

23. When did you come to the United States? **[ask** only if relevant.]

24. When did you come to this area? [ask only if relevant.]

25. What was your **last/what** is your current occupation or job?

[Note: At the conclusion of the interview, remember to ask the patient if **he/she** has any questions about the study or the interview, and provide answers to any such questions. Thank the patient for his/her participation in the interview.]

Appendix D:

Daily Observation
Log

DAILY OBSERVATION LOG

Activity (Number Each Activity)	Activities				
	Time (When)	Setting (Where)	Actors (Who)	Actions (What)	Manager (How)

Week #	Date:
Site:	ORW ID#:
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Appendix E:

Field Researcher Orientation Workshop Program

**TUBERCULOSIS OUTREACH
WORKER ACTIVITIES
EVALUATION PROJECT
(Centers for Disease Control and Prevention)**

**FIELD RESEARCHER
ORIENTATION WORKSHOP**

AGENDA

October 7 - 8, 1996

**Casals & Associates, Inc.
Crystal Park Three, Suite 814
2231 Crystal Drive
Arlington, Virginia 22202**

PARTICIPANTS

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
National Center for Prevention Services, Division of Tuberculosis Elimination

Zachary Taylor, M.D., M.S., Medical **Officer** and
Project Officer for the "Evaluation of Tuberculosis Outreach Worker Activities"

ARLINGTON COUNTY (VIRGINIA) DEPARTMENT OF HUMAN SERVICES
Communicable Disease Program

Charlotte Carneiro, RN., M.S., Nurse Epidemiologist
Gayle Lovato, R.N., M.S., Chest Clinic Coordinator

CASALS & ASSOCIATES, INC.

Charles C. Cheney, Ph.D., Principal Investigator
Deanna M. Crouse, M.H.S., Project Manager
William **Millsap**, Ph.D., Methodology Specialist
Linnea Carlson, Project Assistant

FIELD RESEARCHERS

Kathryn Azevedo, Los Angeles
Maria Hart, New York City
Mark **Karaczun**, Massachusetts
Lynell **Lacey**, Chicago
Diana Miller, Houston
TBA, Mississippi

FIELD RESEARCHER
ORIENTATION WORKSHOP

October 7 - 8, 1996
Arlington, Virginia

DAY ONE

8:30 - 9:00 a.m. **Public Health and TB Control Programs** [Taylor]

- Recent Trends in the Epidemiology of TB in the United States
- TB Control Methods: Detection, Treatment, Prevention, Follow-Up
- Functions and Projects of **CDC's** Division of Tuberculosis Elimination

9:00 - **9:30 a.m.** **Overview of the Tuberculosis (TB) Outreach Worker Activities Evaluation Project** [Cheney]

- . Background
 - Objectives and Approach
 - Preliminary Site visit Assessments
- . Development of Observation and Interview Guides
- . Field Research Activities
- Site Monitor Activities

9:30 - 10:30 a.m. **Overview of Project Study Sites** [Cheney, Crouse, Taylor,]

- . Chicago
- . Houston
- Los Angeles
- . Massachusetts
 - New York City
- Mississippi

10:30 - 10:45 a.m. **BREAK**

DAY ONE (continued)

- 10:45-11:15 a.m.** **Field Research Logistics** [Crouse]
- Research and Monitoring
 - Reporting Schedule
 - Equipment and Supplies
 - Travel and Communications
 - Expenses and Documentation
 - Invoices and Payment Schedules
- 11: 15 a.m.-Noon** **Ethnographic Fieldwork in Health Care Settings** [Cheney]
- . Overview
 - Context
 - . Guidelines
 - Gaining entry and **defining** status and role
 - Learning about and adapting to local customs, languages, and behaviors
 - Avoiding infection and hazards
 - Maintaining contact with site monitors
- Noon-1:00 p.m.** **LUNCH**
- 1:00-1:45 p.m.** **Observation Methods** [Cheney]
- Direct and Participant Observation
 - Observing ORW Weekly Activities
 - Daily Observation Log Components
 - Unobtrusiveness, “Shadowing,” Notetaking
- 1:45-2:30 p.m.** **Review of Completed Observation Logs: Pilot Test Examples** [Cheney]
- 2:30-3: 15 p.m.** **Key Informant Interviewing** [Crouse]
- Types of Key Informants
 - Review of Interview Guide
 - **Informed** Consent/Site TB Program Requirements
 - Selection of Informants and Scheduling of Interviews
- 3: 15-3:30 p.m.** **BREAK**
- 3:30-4: 15 p.m.** **Weekly Summary Reports** [Millsap]

- Purpose and Contents
- Format, Components, and Length
- Elements to be Included

4: 15-5:00 p.m.

Overview of Recording and Reporting

[Millsap]

- Documents
 - Recording
- Maintenance of Confidentiality
- Reporting Methods and Schedules
- Data Review, Feedback and Modification

5:00-5:30

Questions and Answers

5:30 p.m.

Close of Day One of Orientation Workshop



Appendix F:
Field Researcher
Manual

Centers for Disease Control and Prevention

**TUBERCULOSIS OUTREACH WORKER
ACTIVITIES EVALUATION PROJECT:**

MANUAL FOR FIELD RESEARCHERS

Prepared by:

Casals & Associates, Inc.
Crystal Park Three, Suite 814
2231 Crystal Drive
Arlington, Virginia 22202

Under contract with:

Centers for Disease Control and Prevention
National Center for Prevention Services
Division of Tuberculosis Elimination
Atlanta, Georgia

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C. Patient Interview Guide	
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Overview

The Clinical Research Branch (CRB), Division of Tuberculosis Elimination (DTBE), National Center for Prevention Services (NCPS) of the Centers for Disease Control and Prevention (CDC) has contracted with Casals & Associates, Inc. (C&A), to conduct an evaluation of tuberculosis (TB) outreach worker (ORW) activities. The study's objectives are threefold:

- To determine **what** activities **ORWs** perform and the **time** they spend performing these activities
- To ascertain with **whom** **ORWs** interact and **where** and **how they** do so in carrying out their activities
- To assess what factors affect the **effectiveness** of **ORWs** and their activities

Under the supervision of Casals & Associates (C&A) project staff, field researchers will conduct intensive fieldwork using ethnographic methods. This field research will entail the direct observation of ORW activities and the key informant interviewing of **ORWs**, their supervisors, and patients over a six-week period in four local and two State TB control. outreach program sites:

- | | |
|---------------|-----------------|
| ▪ Chicago | ▪ New York City |
| ▪ Houston | ▪ Massachusetts |
| ▪ Los Angeles | ▪ Mississippi |

Over the course of six weeks, each field researcher will spend one week in the company of a different designated ORW, for a total of six **ORWs** in each study site. The specific settings in which field researchers work may change from week to week, depending upon the configurations of the different TB control outreach programs.

The C&A project staff consists of four persons: Charles Cheney, Ph.D., Principal Investigator; Deanna Crouse, M.H.S., Project Manager; William **Millsap**, Ph.D., Research

Methodologist; and Linnea **Carlson**, Project Assistant. Dr. Cheney and Ms. Crouse will serve as site monitors for the field researchers in the following field locations:

CHARLES CHENEY

Houston
Los Angeles
New York City

DEANNA CROUSE

Chicago
Massachusetts
Mississippi

Fieldwork Context and Guidelines

Context

The specter of TB generates considerable fear in any community, and to be identified as a person who has this disease can result in a sense of shame and social stigmatization. TB control outreach program patients do not participate in treatment regimens as a matter of choice, but because they have been detected to be infected or to be in contact with an infected person and are, therefore, required to undergo treatment by public health officials that are mandated to control and prevent this highly communicable disease. Patients may resent the intrusion of health care personnel into their lives, as well as dislike having to take medications, especially when this involves adverse physiological reactions-including those resulting from interactions with other drugs, legal or illegal. Yet, despite these negative elements, many TB patients adhere conscientiously to their treatment regimens, look forward to being visited in their often lonely homes, and express gratitude to health care personnel who provide them treatment and evince concern for their well-being.

TB control outreach programs do not represent easy working environments for **ORWs**, public health nurses, and other health care personnel. Patient caseloads are often heavy, schedules tight, inter-provider relations tense, patients uncooperative, and visits to some residential settings unpleasant. On the other hand, some **ORWs** and other health care personnel share workplace relationships of camaraderie and mutual assistance, enjoy a high level of rapport with patients and families, and gain considerable satisfaction from helping people to escape a life-threatening disease.

Guidelines

Conducting ethnographic research in the context of TB control outreach programs and in clinical and **community** settings is interesting and challenging. The following guidelines are presented to assist field researchers in carrying out their fieldwork.

**Gaining Entry and
Defining Status,
Role, and Activities**

A crucial element in ethnographic fieldwork is gaining entry to study sites. In this project, this process is facilitated by the site monitors. They have made preliminary site visits to the TB control outreach programs with which the field researchers will be working and have explained the project's research objectives and methods to the program directors and representatives of their staffs, including some **ORWs** and their supervisors. During these visits, the site monitors have secured the commitment of program directors and personnel to cooperate in the conduct of this study and have gleaned their advice on ways to make field research in their respective settings less obtrusive and more effective. The site monitors will introduce the field researchers to the TB program staff members, answer any of the staff's questions regarding the research project's purpose and methods, and participate in assigning field researchers to a representative range of **ORWs** and service delivery settings. In those study sites where the field researchers will work in various service delivery settings, TB program staff will facilitate the field researchers' entry into and transition between service delivery settings.

Public sector health care delivery systems-including TB control outreach programs-are characterized by hierarchical relationships and sharply delineated divisions of labor among the various categories of personnel. Although some staff have administrative, liaison, and mediation functions, the health care arena has essentially only two types of actors: providers and recipients of services. For the actors in this realm-as in most others-the ethnographic field researcher's status, role, and activities are anomalous and therefore subject to misunderstanding. For example, to health care providers, the presence and activities of a field researcher might represent a potential source of disruption of provider-patient interactions and tight service delivery schedules, adverse scrutiny of program staff and functions, or a waste of scarce public sector dollars on frivolous social research that should be spent instead on health care personnel and services. For patients, their family members, and their associates, a field researcher might be perceived as a health care provider who perversely offers neither treatment nor advice, an administrative superior of health care providers who is looking for defects in their performance, or a public health official who is considering having patients confined due to suspicion that they are not complying with

their treatment regimens. Obviously, such misconceptions can be disastrous for the conduct of fieldwork.

Therefore, it is extremely important that the status, role, and activities of field researchers be defined in the study sites in a manner that is not only accurate, but also meaningful to the actors concerned. This will be addressed initially by the site monitors in their discussions with TB program directors and personnel, and later by program staff as they facilitate the field researchers' entry into different service delivery settings.

However, field researchers will need to provide a definition of who they are, what they are doing, and why. This should be done in a simple, straightforward manner, especially when conversing with **ORWs** and with patients and their families and associates. It will be sufficient for field researchers to say that they are social science researchers (not health care providers) who have the job of finding out what **ORWs** do and how they do it (without interfering with their activities) by observing them at work and by talking to them and other people about **ORW** activities; that the field researchers will keep confidential the names of **ORWs** and other people they talk to; that the field researchers are working for a company that is carrying out a study for the federal government in different parts of the country about what **ORWs** do; and that the government needs information about ways that **ORW** activities work best so that it can give this information to all TB control outreach programs to help them do their jobs better.

During preliminary site visits and pilot tests, the site monitors found that this type of explanation seemed to satisfy health care recipients-and to actually please providers. That is, some TB program directors and staff noted that, to the extent that CDC is looking for "best practices," the fact that their programs and service delivery settings were selected as study sites represents a compliment to their personnel and outreach efforts.

**Learning About and
Adapting to the
Local Culture**

As in any ethnographic fieldwork, it will be necessary for the field researchers to learn about and adapt to local cultures-the customs, languages, and behaviors of the people among whom they will work. This will include TB control outreach program social

organization and patterns of health care delivery, administrative and clinical terminology, and interactions among different types of providers and between providers and patients.

Orientation workshop descriptions, preliminary site visit reports, relevant literature, and initial encounters and conversations with TB program staff will introduce the field researchers to the contexts and people they will study and should be especially useful for grounding them in TB program social organization, functions, and terminology. Of far more importance to the learning process, however, will be the **field** researchers' own powers of observation, conversations with informants, and increasing experience in the field. This will be especially true for understanding behaviors, which will require keen awareness of human interactions, including the uses of terms of reference and address and the nuances of body language and demeanor, which will lend insights into interpersonal relations.

Successful adaptation to the field settings will entail flexibility in adjusting to circumstances and people. To accomplish this, the field researchers should look to the **ORWs** as guides. The **ORWs** have gained experience in moving among different arenas-administrative offices, clinics, local neighborhoods, patient dwellings-and in dealing with the various types of actors concerned, including a range of providers, patients, their families, and members of their communities. It is of particular importance that field researchers adjust their behaviors to those of the **ORWs** in order to not disrupt the **ORWs'** schedules and patterns of activities. Further, although they cannot be invisible, field researchers should try to make their presence as unobtrusive as possible. Otherwise, service delivery will be impaired and field observations will be distorted. Therefore, in addition to observing and taking their cues from **ORWs** regarding appropriate attire and deportment, field researchers should also seek the **ORWs'** initial advice and ongoing appraisals concerning their presence and behavior-including the identification and remediation of any related problems-to ensure that the field researchers are not interfering with the **ORWs'** activities and interactions.

In conducting preliminary site visits and pilot tests, the site monitors made daily rounds with **ORWs** and found them receptive

Avoiding Infection and Hazards

and responsive to requests for advice on how best to observe ORW activities without being disruptive or obtrusive. Moreover, as their days together in the field progressed, the ORWs appeared to become increasingly comfortable in the company of the site monitors and to appreciate their interest in them, their perceptions, and their activities.

Field researchers should bear in mind that TB is a highly communicable disease. However, the patients that field researchers will encounter while making rounds with ORWs will as a rule be undergoing DOT and not in a contagious stage. In the rare instances where ORWs deal with patients whose TB is suspected to have become active, they will wear protective masks, and field researchers accompanying them will also be provided with masks, shown how to wear them, and follow the examples of ORWs. TB program directors and staff take the matter of TB infection very seriously, and field researchers may expect them to be very protective in this regard. Field researchers will be required to have a PPD skin test just prior to initiating fieldwork, and again at three months and at six months from that date.

In making rounds with ORWs, most of the patients that the field researchers visit will be found in their apartments and houses. However, some patient visits will take place in less pleasant locales, such as street corners, homeless shelters, flop houses, and various kinds of institutional residences. The patients and other denizens of these settings are accustomed to the regular visits of ORWs, nurses, and other public health personnel, and therefore the presence of field researchers may arouse mild curiosity, but probably little more. The field researchers should follow the cues of ORWs, and they should visit these locations only in their company. If field researchers feel their safety to be jeopardized in certain environs due to threatening behavior or any other form of possible danger, they should immediately leave and make no future visits to those places. As in all fieldwork situations, the field researchers should exercise good judgment- and avoid potential hazards.

**Maintaining
Contact with Site
Monitors**

During the first week of fieldwork, the site monitors will be present to provide guidance to the field researchers as **they** commence their work, and in the final week the site monitors will visit the study sites to help the field researchers close out their research. Also, at the end of each week of fieldwork, the field researchers will telephone their respective site monitors (collect) to review the past week's research, to discuss any difficulties that may have arisen, the manner in which they were handled, and ways to avoid their recurrence; and to plan the conduct of field research in the coming week's designated service delivery setting.

At any time that field researchers experience serious problems-such as illness, stress, adverse reactions to their activities, loss of data, or inability to meet reporting deadlines-they should telephone their site monitors **immediately**. Further, if at some points field researchers feel they would like guidance on seemingly minor matters--such as questions about culture-specific concepts of TB, study site dynamics, scheduling difficulties, misgivings about home visit environs, or lack of transcribing materials-they should not wait until Friday afternoons to telephone their site monitors, but should do so as soon as the need arises. Field researchers should keep in mind the fact that the site monitors will be available to them at all times during the **six-week** field research period to communicate by telephone or if necessary to visit the study sites to provide guidance and to address any difficulties that might occur in the course of fieldwork.

DIRECT -OBSERVATION

The field researchers will directly observe **ORWs** in their daily round of activities, noting on Daily Observation Logs the types of events carried out. For each event, the field researcher will observe and note the time and setting, who the “actors” are, what actions take place, and how the **ORW** interact with the actors.

Each field researcher will spend the full first day of each working week in the company of an **ORW**. During that time the field researcher will inquire as to how representative that day’s routine is of the **ORW's** working week and ascertain how the other days may differ in terms of places visited, patients seen, and tasks performed. On the basis of this information, the field researcher will select parts of the remaining four days for conducting direct observation. By accompanying the **ORW** for all or part of the five days, the field researcher will observe the full range of activities performed by the **ORW** and thereby gain a comprehensive picture of the **ORW's** working week.

The field researchers will keep a Daily Observation Log in which notations will be made on the **ORW** events being observed. The series of events will form the total picture of the **ORWs'** working day. In other words, there is no part of the working day that does not entail an event. Some events, such as home visits, are obvious. Others, such as driving to see a patient, are less so. Nonetheless, it will be important for field researchers to carefully observe and note each event.

Every event will be composed of five elements: time (when), setting (where), actors (who), actions (what), and demeanor (how).

Time (When)

Each event in the course of a day will take place within the framework of a time period. Field researchers will note the time at which events begin and end.

**Daily Observation
Log Components:
Events and
Elements**

Setting (Where)

All events will entail a time period and setting. Clear examples of settings would be a TB clinic, a patient's home, or a homeless shelter. However, settings could also include an ORW's car, a street corner where DOT and conversation take place, or a fast food restaurant where an ORW has lunch.

Actors (Who)

Every event will include a time period, a setting, and one or more actors. Examples of actors would be an ORW, an ORW's supervisor, a public health nurse, another type of health care provider, a patient, a patient's family member, or a patient's neighbor or acquaintance. Moreover, although field researchers are the observers and not the subjects of observation, they will be present during many if not all of the day's events. If they are present during a given event, this should be noted.

Actions (What)

Each event will entail a time period, a setting, and one or more actors engaging in one or more actions. Examples of actions would be one or more ORW receiving the day's assignment from a supervisor or public health nurse, an ORW driving to a patient's home, an ORW stopping at a street corner to ask a patient's acquaintance about the whereabouts of the patient, an ORW asking a patient how the patient is feeling, a patient taking medications, or a patient's spouse stating that taking medications seems to make the patient sick.

Demeanor (How)

All events will include a time period, a setting, one or more actors engaging in one or more actions, and demeanor--how one or more actors behave. Examples would be a supervisor appearing **distracted** while giving the day's instructions to an ORW, and the ORW reacting with seeming **confusion**; a public health nurse acting **politely** toward a patient but speaking **very firmly** in insisting that the patient keep an upcoming clinic appointment, and the patient remaining **silent** and appearing **nervous**; or an ORW indicating **annoyance** in inquiring of a patient's mother as to why the patient is not present for an arranged appointment, and the patient's mother

Daily Observation
Log: Procedures
for Completion

showing embarrassment while saying that she does not know. Also, in addition to demeanor, each event will have an overall manner: an atmosphere, or mood. Examples of an event's atmosphere would include hurried, tense, serious, relaxed, or friendly. The atmosphere that characterizes a given event should be included in noting its demeanor.

A blank copy of the Daily Observation Log is located in Appendix I. Also included is an example of a completed log followed by a detailed description of the events that were observed during one of the project's pilot tests.

Field researchers should gear the making of log notations to the style of **ORWs** and the contingencies of their routines. **ORWs** tend to carry a clipboard holding a log sheet on which they make notations either during visits to patients or immediately thereafter, often in transit to the next appointment. Field researchers should pattern their note-taking behavior on that of the **ORWs** they accompany. In this way, the making of notations is less likely to be intrusive, to interfere with the process of observation, or to delay the pace at which **ORWs** make their rounds.

Log notations will be necessarily brief, but they should provide enough information to enable the field researcher to draw upon them to write their Weekly Summary Report (see page 16).

KEY INFORMANT INTERVIEWING

The field researchers will conduct semistructured interviews with key informants—ORWs, their supervisors, and patients—in order to capture the varying perspectives of these different types of actors. Each week, the field researchers will interview one ORW, one or two ORW supervisors (in state TB control outreach programs with large catchment areas, ORWs sometimes have two supervisors in different locations), and two patients, for a total of 24 to 30 interviews in each study site. In instances where field researchers find they are assigned to an ORW who has the same supervisor as another ORW with whom they have worked, the same supervisor will be interviewed again regarding the second ORW.

Interview Guide Components

There are three interview guides that field researchers will use: the ORW Interview Guide, the Supervisor Interview Guide, and the Patient Interview Guide (see samples in Appendix II, Sections A-C). Although geared to different types of actors, the three instruments have common components. The ORW and Supervisor Interview Guides address ORW selection, ORW training, ORW activities, supervision and evaluation, perceptions and recommendations regarding ORWs and informant biographical information; the Patient Interview Guide's categories are ORW activities, perceptions and recommendations on ORWs, and biographical information. Thus, the focus of all three interview guides is on ORWs.

Informed Consent and Fact Sheet

Prior to conducting interviews, field researchers will follow the instructions given on the interview guide cover sheets. These instructions tell field researchers what they should say to informants regarding the voluntary nature of their participation in interviews and the fact that they will not be identified in any report resulting from this study. Also, the field researchers will read the contents of the informed consent form to informants and secure their signatures before proceeding with interviews. After the

Procedures

informants have agreed to be interviewed and signed the consent form, the field researchers will provide copies of the Fact Sheet to the informants (see Appendix II, Section D). Further, if signed statements of informed patient consent are required by local or state health departments, the field researchers will provide a copy of the signed form to the appropriate officials.

Who Must be Interviewed

Each week the field researchers will interview the ORWs they are accompanying; the ORWs' supervisor(s); and two patients.

Length of Time for Each Interview

Both the ORW and supervisor interviews will take about 45 minutes each to complete. The patient interview will take approximately 20 minutes.

When Interviews Should Be Conducted

Interviews should be scheduled at the convenience of informants in such a way that they do not disrupt service delivery or interrupt the direct observation process (see Exhibit 1, "Daily Field Work Tasks" on page 15 for suggested days to conduct interviews).

The field researchers' first day in each setting should be devoted to making rounds with ORWs and thus will probably not allow time for interviewing. The second day would probably be best for interviewing the supervisor(s). By the third day, the field researchers should have established sufficient rapport with the ORWs and knowledge of their schedules to have fruitful interviews with them. Also, by that time the field researchers will have become familiar with the patients visited by the ORWs and can decide with the ORWs which two individuals would be good candidates for interviewing on the basis of their likelihood of being amenable to participating and open in expressing themselves, as well as being representative of the ORWs' patient caseloads in terms of age, gender, race/ethnicity, and socioeconomic status. The two patient interviews should probably take place on the fourth and/or fifth day of the week. Because the patient interviews will include items regarding the ORWs, the latter should not be present in the same room at the time that patients are

interviewed. It would be better to conduct these interviews while the **ORWs** are making visits to patient homes elsewhere in the same neighborhood or after the field researchers have ceased their daily rounds.

Where to Conduct Interviews

Likely locations for interviews with supervisors would be in their offices; for interviews with **ORWs**, in their cars while in transit between visits; and for interviews with patients, in their residences.

Exhibit 1: Daily Field Work Tasks

TASKS	DAYS				
	1	2	3	4	5
1. Direct Observation of ORWs	•	•	•	•	•
2. Complete Daily Observation Log	•	•	•	•	•
3. Supervisor Interview ¹		•			
4. ORW Interview ¹			•		
5. Patient Interviews (2) ¹				•	•
6. Submit to C&A:					
Daily Observation Logs (hard copy only)					•
Interview Guides (hard copy only)					•
Weekly Summary Report (diskette)					•

¹ Interview key informants when it is convenient for the interviewee and when it does ~~not interview~~ with observation.

WEEKLY SUMMARY REPORTS

In addition to structured observation and semi-structured interviewing, field researchers will be making general observations of health care systems and converse with a range of providers and community members. These will provide the opportunity to gain a broader, more holistic view of the study sites.

The field researchers will write information gained from both general and structured observations and interviews in Weekly Summary Reports. The report will address the basic research questions:

- **What** activities do **ORWs** perform and how much **time** do they spend performing these activities
- With **whom** do **ORWs** interact and **where** and **how** do they do so in carrying out their activities
- What factors affect the **effectiveness** of **ORWs** and their activities.

Each Weekly Summary Report will include a brief overview of the TB program; a description of community contexts and patterns; service delivery settings; and the perspectives of different health care providers and of patients and their family members. Attention should be given to exploring combinations of factors that seem to enhance or diminish the effectiveness of **ORWs** and their activities. The C&A project staff will be reviewing and analyzing the weekly reports to assess potential themes concerning TB control outreach efforts and ORW activities that may emerge from the fieldwork and prove to be relevant across TB program study sites and service delivery settings.

The Weekly Summary Reports will be 7 to 10 pages in length and take no more than 4 to 5 hours per week to complete (see the outline given in Appendix III for the type of information and presentation format for the report). Weekly reports will be submitted on diskette in accordance with the schedule given in

Exhibit 2 found on page 20. It is preferred that the reports be completed in WordPerfect 6.1. However, if a field researcher does not have access to this software program, the diskette should be clearly labeled with the word processing package used. The label should also include the name of the researcher and the dates and site location of the report period.

RECORDING AND REPORTING

During each 40-hour working week in the study sites, the field researchers will spend the majority of time observing ORWs, maintaining the Daily Observation Logs, and conducting key informant interviews. Approximately 8 hours per week will be devoted to writing the Weekly Summary Report and submitting materials to the C&A Project Manager.

To ensure confidentiality, no individual names will appear on any of the forms used for completing the required observation and interviewing tasks. Documents will be coded in the following way:

Study sites

CH - Chicago
HO - Houston
LA - Los Angeles
NY - New York City
MA - Massachusetts
MI - Mississippi

Day/Week

A space has been provided on both the logs and interview guides in which to write the date on which the log or interview guide is being completed. In addition, each week of the research period should be recorded in the appropriate space in sequential order. For example, if the field researcher is completing the logs and guides in third week of research this will be known as “WK3.”

Key informants

ORW - Outreach worker
SPV - Supervisor
PNT - Patient

There will be more than one of the same type of key informant, therefore, each key informant will be identified by the appropriate

letters and an Arabic number. For example, on the Daily Observation Log completed by the Chicago field researcher observing an outreach worker in the third week of field research will be **CH.ORW1.WK3**. An interview guide completed by the Mississippi field researcher with the second patient of the fourth outreach worker in the fourth week of field researcher will be **MI.PNT2.ORW4.WK4**. A master code sheet is shown in Appendix IV.

Submission of Materials

At the end of each week, the field researchers will send their Weekly Summary Reports on computer diskettes, together with copies of the completed Daily Observation Logs, interview guides, and the master code sheet to the Project Manager at the C&A offices. These materials will be sent via Federal Express. Mailing forms and envelopes will be provided to the field researcher by C&A (see Exhibit 2, "Weekly Field Work Tasks," on page 20 for a listing of materials to be submitted).

Throughout the research period Dr. **Millsap** will review all materials sent to the Project Manager by the field researchers. If any problems are detected in a field researcher's materials (e.g., incongruence between data reported in field reports and observation logs, interview guide coding errors, illegible or missing documents), Dr. **Millsap** will notify the field researcher's site monitor, who will in turn contact the individual concerned and assist the field researcher in correcting the problem.

Upon completion of the field research period, the C&A project staff will thoroughly analyze all collected data and prepare a final report for submission to CDC.

Exhibit 2: Weekly Field Work Tasks

TASKS	WEEKS								
	Field Work Period								
	1	2	3	4	5	6	7	8	9
1. Field Researcher Orientation Workshop	.								
2. C&A Site Monitor Field Visits		-- --						- --	
3. Submit to C&A									
Daily Observation Logs (hard copy only)		•	•	•	•	•	•		
Interview Guides (hard copy only)		•	•	•	•	•	•		
Weekly Summary Report (diskette)		•	•	•	•	•	•		
4. Field Researchers call C&A Site Monitors		•	•	•	•	•	•		
5. C&A Reviews/Enters Field Data			•	•	•	•	•	•	
6. C&A Submits Data to CDC					•				•

File: D:TBFLDSCH.WK1

C&A POLICIES AND PROCEDURES

Field Researcher Agreement

The tasks and responsibilities of the field researchers will be governed by an Agreement entered into between each of the field researchers and C&A. This Agreement will include language binding the field researchers. The Agreement consists of the following sections:

Cover Page

1. Statement of Work
2. Price
3. Payment
4. Travel and Per Diem
5. Other Expenses
6. Health and Personal Safety
7. Reports
8. Attachments
 - Attachment A: Statement of Work
 - Attachment B: General Conditions of Agreement
9. Entire Agreement

APPENDIX I

DAILY OBSERVATION LOG

- A. **BLANK DAILY OBSERVATION LOG FORM**
- B. **SAMPLE OF COMPLETED LOG WITH PILOT STUDY NOTES**

DAILY OBSERVATION LOG

EVENTS	ELEMENTS				
	Time (When)	Setting (Where)	Actors (Who)	Actions (What)	Demeanor (How)
MEET WITH PUBLIC HEALTH NURSES 1.	8:30 - 8:50	CLINIC — NURSING OFFICES	• ORW - CAMBODIAN ♂ • 3 PUBLIC HEALTH NURSES - 2 WHITE ♀ • 1 FILIPINA ♀	• DISCUSS PATIENTS/MEDICATIONS (e.g., COMPLIANCE, M.D.R.) • ORW INSTRUCTIONS FOR DAY • PLAN ORW SCHEDULE FOR DAY • PROVIDE ORW MEDICATIONS	NOT OBSERVED
MEET WITH SUPERVISOR 2.	8:51 - 9:12	CLINIC — SUPERVISOR OFFICE	• ORW • SUPERVISOR - NURSE - WHITE ♀	• DISCUSS PATIENTS/MEDICATIONS • REVIEW ORW INSTRUCTIONS AND SCHEDULE FOR DAY • FINALIZE SCHEDULE	NOT OBSERVED
INTERVIEW* 3.	9:13 - 9:57	CLINIC — OFFICE	• ORW • RESEARCHER	CONVERSATIONS, QUESTIONS AND ANSWERS	ORW: COOPERATIVE, ** SLIGHTLY NERVOUS RESEARCHER: INQUIRING ATMOSPHERE: CLINIC: BUSY, HURRIED WORKPLACE
UPDATE PATIENT RECORDS 4.	9:58 - 11:39	CLINIC — RECORDS ROOM	• ORW	MAKE NOTATIONS IN PATIENT RECORDS FROM LOG	NOT OBSERVED
DRIVE TO PATIENT HOME 5.	11:40 - 12:00	ORW'S CAR	• ORW • RESEARCHER	DRIVING; DISCUSSING NEXT PATIENT, WHO IS OUT OF COMPLIANCE IN TAKING MEDICATIONS	ORW: A LITTLE HESITANT TO TALK, CONCERNED ABOUT PATIENT RESEARCHER: ATTENTIVE ATMOSPHERE: HURRIED, TAUT

Date: 4/27/95
Site: P2

Page 1 of 4
ORW ID#: 2

* ORDINARILY, THE ORW WOULD BE MAKING HOME VISITS TO TB OR REFUGEE PATIENTS DURING THESE PERIODS. MODIFICATION CAUSED BY ADJUSTMENT TO RESEARCH PROJECT. HOME VISITS COVERED BY STUDENT INTERVIEW.
** RAPPORT NOT YET ESTABLISHED WITH ORW. IN FUTURE, INTERVIEWS SHOULD BE CONDUCTED LATER IN THE DAY TO AVOID A BUSY WORKPLACE ATMOSPHERE.

DAILY OBSERVATION LOG

EVENTS	ELEMENTS				
	Time (When)	Setting (Where)	Actors (Who)	Actions (What)	Demeanor (How)
HOME VISIT TO PATIENT 1.	12:01 - 12:14	PATIENT APARTMENT SPARSELY FURNISHED, TIDY	- ORW - P.H. NURSE - FILIPINA ♀ - PATIENT - YOUNG VIETNAMESE ♂ - RESEARCHER	• ORW, PH NURSE, RESEARCHER WEAR MASKS • PH NURSE CONDUCTS DOT • PH NURSE DISCUSSES PATIENT • PH NURSE PROVIDES COMPLIANCE CONTRACT • PH NURSE PROVIDES PATIENT SPUTUM CUP - GIVES DIRECTIONS ON USE	• PH NURSE: CONVEYS IMPLICIT WARNING TO PATIENT; CALM, FIRM, BUT CARING • ORW: FRIENDLY, SMILING, SILENT • PATIENT: QUIET, UNHAPPY • RESEARCHER: SILENT
DRIVE TO PATIENT HOME 2.	12:15 - 12:18	- ORW'S CAR	- ORW - RESEARCHER	• PH NURSE PROVIDES LETTER INDICATING BREAKING OF CONTRACT TO PATIENT; PATIENT SIGNS • PH NURSE PUTS LETTER IN FOLDER • ORW MAKES NOTATION IN LOC; PATIENT SIGNS LOG → DRIVING; DISCUSSING LAST PATIENT	ATMOSPHERE: SERIOUS, A LITTLE TENSE ORW: CONCERNED RESEARCHER: ATTENTIVE → ATMOSPHERE: HURRIED
HOME VISIT TO PATIENT 3.	12:19 - 12:23	PATIENT APARTMENT RUN-DOWN BUILDING; SPARE, UNTIDY	- ORW - PATIENT - YOUNG SOMALI ♂ - RESEARCHER	• ORW CONDUCTS DOT, MAKES NOTATIONS IN LOC • PATIENT SIGNS LOG • ORW EXPLAINS RESEARCHER PRESENCE • ORW ASKS IF PATIENT HAS ANY QUESTIONS; PATIENT SAY NO	• ORW: FRIENDLY • PATIENT: POLITE, ALERT, MILDLY CURIOUS ABOUT RESEARCHER'S ROLE ATMOSPHERE: RELAXED
DRIVE TO FAST-FOOD RESTAURANT i.	12:24 - 12:32	ORW'S CAR	- ORW - RESEARCHER	DRIVING; DISCUSSING LAST PATIENT	ORW: FRIENDLY, DISCURSIVE RESEARCHER: ATTENTIVE PLEASANT ATMOSPHERE: HURRIED
BUY LUNCH (TO GO) i.	12:33 - 12:37	ORW'S CAR; FAST-FOOD RESTAURANT	- ORW - RESEARCHER	ORDER FOOD; PAY BILL	ORW: FRIENDLY RESEARCHER: SAME PLEASANT, BUT ATMOSPHERE: HURRIED

Date: 4/27/95
Site: P2

Page 2 of 4
ORW ID#: Z

DAILY OBSERVATION LOG

EVENTS	ELEMENTS				
	Time (When)	Setting (Where)	Actors (Who)	Actions (What)	Demeanor (How)
1. DRIVE TO CLINIC	12:38 - 12:42	ORW'S CAR	<ul style="list-style-type: none"> ORW RESEARCHER 	DRIVING; DISCUSSING ORW'S PERSONAL HISTORY	ORW: FRIENDLY, DISCURSIVE RESEARCHER: ATTENTIVE PLEASANT, BUT ATMOSPHERE: HURRIED
2. EAT LUNCH	12:43 - 1:03	CLINIC - CONFERENCE ROOM	<ul style="list-style-type: none"> ORW RESEARCHER 	CONTINUE DISCUSSING ORW'S PERSONAL HISTORY	ORW: FRIENDLY, DISCURSIVE RESEARCHER: ATTENTIVE PLEASANT, ATMOSPHERE: CALM
3. TAKE PART IN TEAM MEETING	1:04 - 2:18	CLINIC - CONFERENCE ROOM	<ul style="list-style-type: none"> 2 ORWs - CAMBODIAN ♂, HISPANIC ♀ 4 PUBLIC HEALTH NURSES - 3 WHITE, 1 FILIPINA ♀ TEAM LEADER, ORW SUPERVISOR 7 RESEARCHERS 	<ul style="list-style-type: none"> DISCUSSION OF TB PATIENT STATUSES, MEDICATIONS, PLANS FOR TREATMENT DISCUSSION LED BY TEAM LEADER/SUPERVISOR, 1 NURSE 	<ul style="list-style-type: none"> DISCUSSION DIRECTED, BUT FREE INTERCHANGE AMONG PARTICIPANTS CONSIDERABLE PERSONAL KNOWLEDGE ABOUT PATIENTS SHOWN; SOME HUMOR ATMOSPHERE: PROFESSIONAL, BUT NOT FORMAL
4. GO TO RESTROOM	2:19 - 2:25	CLINIC - RESTROOM	<ul style="list-style-type: none"> ORW RESEARCHER 	<ul style="list-style-type: none"> ELIMINATORY, ABSOLUTIONARY; DISCUSSING YOUNG VIETNAMESE ♂ PATIENT, PROBLEMS OF SOCIAL SITUATION, NON-COMPLIANCE 	ORW: CONCERNED RESEARCHER: ATTENTIVE ATMOSPHERE: CALM
5. DRIVE TO PATIENT HOME	2:26 - 2:33	ORW'S CAR	<ul style="list-style-type: none"> ORW RESEARCHER 	DRIVING; DISCUSSING NEXT PATIENT	ORW: FRIENDLY, TALKATIVE RESEARCHER: ATTENTIVE PLEASANT, ATMOSPHERE: CALM

Date: 4/27/95
Site: PZ

Page 3 of 4
ORW ID#: Z

DAILY OBSERVATION LOG

EVENTS	ELEMENTS				
	Time (When)	Setting (Where)	Actors (Who)	Actions (What)	Demeanor (How)
1. HOME VISIT TO PATIENT	2:34 - 2:54	PATIENT APARTMENT - MODESTLY FURNISHED, TIDY	- ORW - PATIENT - 40 YO CAMBODIAN ♂ - PATIENT'S ADULT SON - PATIENT'S YOUNG DAUGHTER - RESEARCHER (AT END)	• DOT • LOG NOTATIONS, SIGNING • DISCUSSION OF PATIENT SYMPTOMS, CAUSES, LACK OF CLARITY REGARDING CAUSES • DISCUSSION OF DANGER OF PATIENT LOSING JOB/HEALTH INSURANCE,	• ORW: FRIENDLY, CONCERNED; CONDUCTS CONVERSATION PARTLY IN KHMER • PATIENT: POLITE, HOSPITABLE; COUGHING, IN OBVIOUS DISCOMFORT
2. DRIVE TO PATIENT HOME	2:55 - 3:04	ORW'S CAR	- ORW - RESEARCHER	WAYS TO SAVE JOB, OTHER WAYS TO SECURE HEALTH CARE - BEEPER CALL FROM PH NURSE, ORW DISCUSSES PATIENT ON PHONE DRIVING; DISCUSSING LAST PATIENT; DISCUSSING NEXT PATIENT TO BE INTERVIEWED	SON: VERY POLITE, WORRIED ABOUT FATHER, GRATEFUL FOR ORW'S INTEREST DAUGHTER: OBJECT OF AFFECTIONATE BANTER, SHYLY SMILING RESEARCHER: AT FIRST QUIET, LATER JOINS IN CONVERSATION ABOUT CAMBODIAN COMMUNITY, BUDDHIST TEMPLE ATMOSPHERE: WARM, CONCERNED
3. HOME VISIT TO PATIENT	3:05 - 3:40	PATIENT APARTMENT - WELL FURNISHED, IMMACULATE	• ORW • PATIENT - 67 YO VIETNAMESE ♂ • PATIENT'S WIFE • RESEARCHER	• DOT • LOG NOTATIONS, SIGNING • DISCUSSION OF PATIENT'S HEALTH • DISCUSSION OF PATIENT'S FAMILY HISTORY • INTERVIEW* →	• ORW: FRIENDLY, ENGAGED; CONDUCTS CONVERSATION PARTLY IN VIETNAMESE • PATIENT: JOLLY, VOLUBLE • PATIENT'S WIFE: SMILING, INTERESTED • RESEARCHER: ENGAGES IN CONVERSATION
4. DRIVE TO CLINIC	3:41 - 3:47	ORW'S CAR	• ORW • RESEARCHER	DRIVING; DISCUSSING LAST PATIENT, ORW'S JOB, SCHEDULE	• PATIENT: JOLLY, VOLUBLE • PATIENT'S WIFE: SMILING, INTERESTED • RESEARCHER: ENGAGES IN CONVERSATION
5. CHECK OUT	2:48 - 3:51	CLINIC - NURSING OFFICES	• ORW • PH NURSE • RESEARCHER	• RAPID REVIEW OF DAY'S ACTIVITIES/CHECK OUT • PH NURSE REQUESTS ORW TO RETURN DOCUMENT TO PATIENT DURING TOMORROW'S VISIT	ATMOSPHERE: CONVIVIAL; CENTERED AROUND TOPIC OF PATIENT'S MANY HEALTH PROFESSIONAL CHILDREN. ORW: PLEASANT, DEFERENTIAL PH NURSE: DIRECTIVE, POLITE RESEARCHER: SILENT

Date: 4/27/95
Site: PZ

Page 4 of 4
ORW ID#: Z

* INTERVIEW CONDUCTED WHILE ORW PRESENT IN SAME ROOM. IN FUTURE, INTERVIEWS SHOULD BE CONDUCTED (1) WITH ORW'S NOT IN THE SAME ROOM AND (2) LATER IN WEEK ONCE RESEARCHERS HAVE ESTABLISHED RAPPORT WITH PATIENTS

Description of Events and Elements for Site Visit
April 27, 1995
ORW ID #2

Event 1. The ORW, a 39-year-old Cambodian male, arrives at the clinic and meets with four public health nurses (three White, one Filipino, all female) in the central nursing office from 8:30 to 8:50 a.m. The nurses and ORW discuss the health statuses and medications, e.g., levels of compliance with treatment regimens, problems regarding multi-drug resistance, of the TB patients for which the nurses are responsible and to whom the ORW has been making home visits. The nurses instruct the ORW on which patients to visit today, indicate what medications they should take, outline the schedule of the ORW's daily activities, and provide the ORW with the required medications. [Note: The researcher does not directly observe this event or its elements; the ORW describes them to the researcher later in the day.]

Event 2. The ORW next meets with the TB control program team leader, who is also his supervisor, in her office from 8:51 to 9:12 a.m. The supervisor reviews the nurses' instructions regarding patients and medications, and the supervisor and ORW finalize the latter's schedule for the day. [Note: The researcher does not directly observe this event or its elements; the ORW describes them to the researcher later in the day.]

Event 3. The supervisor introduces the ORW to the researcher, a 54-year-old White male, who interviews the ORW in a small clinic office between 9:13 and 9:57 a.m. The researcher asks a series of questions; the ORW provides answers. The researcher is politely inquiring; the ORW is cooperative, but slightly nervous. The atmosphere is one of a busy clinic, with the hurried pace of an active health care delivery setting. [Note: Ordinarily, the ORW would be making home visits to TB or refugee patients during this period. Today's modification is made to adjust to the C&A research project. The home visits are being covered by a student nurse completing her practicum training. The researcher has not yet had the opportunity to establish rapport with the ORW. Recommendation: In the future, interviews with ORWs should be conducted later in the week once rapport has been established, in a way that will not interfere with the ORW's schedule, and in a more relaxed atmosphere, perhaps over lunch or in transit between patient home visits.]

Event 4. The ORW draws from his daily log to update patient files in the clinic records room between 9:58 and 11:39 a.m. [Note: Although the ORW would usually be making home visits to TB or refugee patients during this period, this change is made to accommodate the C&A research project. This scheduling modification

provides the ORW with the opportunity to make updates in patient files at this time. The ORW normally does so during the course of the week whenever open periods in his schedule permit. The researcher does not directly observe the ORW during this event or its elements; the ORW describes them to the researcher later in the day. 1

Event 5. The ORW, accompanied by the researcher, drives his car to a patient home between 11:40 a.m. and 12:00 p.m. In driving, the ORW discusses with the researcher the next patient, who has been out of compliance (adherence) in taking medications. The ORW is concerned about the patient, and at first is a little hesitant in talking, but grows more confident. The researcher is attentive. The atmosphere of the drive--and conversation--is hurried, taut.

Event 6. The ORW makes a visit to a 22-year-old Vietnamese male who lives in a sparsely furnished, tidy apartment. Present are the ORW, the Filipino female nurse who has responsibility for this patient, the patient, and the researcher. This visit takes place between 12:01 and 12:14 p.m. The ORW, nurse, and researcher wear masks. The nurse conducts DOT, points out to the patient that he has broken his "contract" regarding taking medications, presents him a letter stating so (which he signs and returns to her, and which she places in her folder), and provides the patient with a sputum cup and instructs him on how to use it. The ORW makes notations in his log, which the patient signs. The nurse conveys an implicit warning about what might happen if the patient breaks his contract again, and she interacts with him in a calm, firm, but caring manner. The ORW acts in a friendly way toward the patient, often smiling encouragement, but saying nothing. The patient is very quite and appears unhappy. The researcher observes in silence. The atmosphere is serious and a little tense.

Event 7. The ORW drives to the next patient's home between 12:15 and 12:18 p.m. On the way, he expresses his concern about the last patient and his life style of hanging around a group house with other unemployed young Vietnamese males who are likely to engage in substance abuse and other risky behaviors--which could cause the patient to be out of compliance and the potential TB infection of the other youths. During this conversation, the ORW is concerned, the researcher attentive, and the mood hurried.

Event 8. Between 12:19 and 12:23 p.m., the ORW makes a visit to a 25-year-old Somali male patient, whose spare, untidy apartment is located in a run-down building. Present are the ORW, the patient, and the researcher. The ORW introduces the researcher to the patient. The ORW then conducts DOT, with which the patient is cooperative; and he makes notations in his log, which the patient signs. The ORW asks if the patient is having any health problems or has any questions, and the patient replies no. The patient politely asks the researcher what kind of work he is doing, which the researcher briefly explains. During this visit, Somali music

is gently playing in the background.

The atmosphere is fairly relaxed. the ORW is friendly toward the patient; the patient is polite, alert, and mildly curious about the researcher; and the researcher is responsive when addressed.

Event 9. The ORW and researcher then proceed to a fast-food restaurant in the ORW's car (12:24-12:32 p.m.). While driving, the ORW explains that the last patient had previously been out of compliance and argumentative. As a result, the patient was warned that he could be placed on a closed hospital ward, which caused him alarm. The ORW points out that since then the patient has been very concerned about what the TB control program might do to him, but was not present for yesterday's appointment, which probably explains why he is curious about the researcher as representing a possible authority. The ORW is friendly and discursive, the researcher attentive, and the mood hurried, but pleasant.

Event 10. Between 12:33 and 12:37 p.m., the ORW and researcher arrive at the fast-food restaurant, where from the car window they order food to go and pay the bill.

Event 11. The ORW then drives to the clinic. During this period (12:38-12:42 p.m.), the ORW and researcher discuss the ORW's personal history in Cambodia, as a refugee in Thailand, and in the United States. The ORW is friendly and discursive, the researcher attentive and inquiring. The atmosphere is pleasant, but hurried, for they are trying to arrive in time for a TB control program team meeting.

Event 12. The ORW and researcher arrive at the clinic and proceed to the conference room, where they eat their lunches (12:43-1:03 p.m.). While eating, they continue their discussion of the ORW's family and experiences in a calmer mood.

Event 13. A weekly TB control program team meeting takes place in this clinic conference room from 1:04 to 2:18 p.m. Participants include the team leader/ORW supervisor, four public health nurses, and two ORWs--the Cambodian male and an Hispanic female. Two researchers observe the meeting and say nothing. A discussion is led by the team leader and one nurse concerning current TB patient health statuses, medications, and treatment plans. Although the discussion is directed, there is a free interchange of thoughts and opinions. The participants demonstrate considerable personal knowledge about patients. The discussion is lively, and both concern and humor are expressed. The tenor of the meeting is professional, but not formal.

Event 14. Immediately after the meeting, the ORW and the researcher go to the clinic restroom. While completing other functions, they further discuss the case of the young Vietnamese male patient who is out of compliance (2:19-2:25 p.m.).

Event 15. The ORW drives in the company of the researcher to the home of the next patient (2:26-2:33 p.m.). The ORW describes the patient as a 40-year-old Cambodian male whose medical condition seems to be responding to medication, but whose coughing symptoms are unrelieved. The ORW is friendly and talkative, and the researcher is attentive. The mood is focused, the tenor pleasant.

Event 16. Between 2:34 and 2:54 p.m., the ORW visits the patient in the latter's modestly furnished apartment. Present are the ORW, the patient, the patient's adult son, the patient's young daughter, who enters the apartment near the close of the visit, and the researcher. The ORW introduces the researcher to the patient and his son, who graciously receive him and offer him a chair. The ORW then conducts DOT. The patient is cooperative, but he has difficulty in taking the medications due to his coughing spasms. The ORW makes notations in his log, which the patient signs. The ORW, patient, and patient's son discuss the patient's symptoms and the problem that a cause cannot be identified for them. The patient's son remarks that his father's employer is complaining about his long absence from work and is seriously considering replacing him, which would also entail loss of health insurance. The ORW assures the patient and his son that he will inquire at the clinic about ways to determine the cause of the patient's coughing, find out what public health professionals might do to help save the patient's job and health insurance, and determine what additional health services might be provided through the clinic.

The conversation then turns to life and employment in the immigrant Cambodian community and the importance of the Cambodian Buddhist Temple, in which this family's members are very active. The ORW's beeper sounds, and he goes to the wall telephone near the kitchen, calls the clinic, speaks with the patient's public health nurse, and responds to her questions regarding the patient's appearance and symptoms [Note: The researcher does not hear the telephone conversation; the ORW describes it to him later in the day].

The ORW is very friendly and expresses sympathy for the patient, and he conducts the conversation partly in Khmer. The patient, although obviously in considerable discomfort, is polite and hospitable. The patient's son appears very worried about his father. He is respectful toward the ORW and seems grateful for the latter's interest and wish to help. The patient's young daughter arrives near the end of the visit and is the object of playful, affectionate bantering on the part of the patient, his son, and the ORW, which she acknowledges with shy smiles. The mood is one of both concern and warmth.

Event 17. The ORW and researcher drive to the home of the next patient (2:55-3:04 p.m.). While driving, the ORW indicates his worries about the last patient and speculates about whom he should talk to enlist help for him.

The ORW then describes the next patient, a 67-year-old Vietnamese male, whom he has selected to be interviewed by the researcher because this individual is very open and likes to talk. The ORW states that this patient is willing, even eager, to be interviewed.

Event 18. Between 3:05 and 3:40 p.m., the ORW visits the next patient in the latter's well-furnished, immaculate apartment. Present are the ORW, the patient, the patient's wife, and the researcher. The ORW introduces the researcher to the patient and his wife, who receive him hospitably. The ORW conducts DOT, and the patient is cooperative, but jokingly protests that the government is spending too much time and effort on him. The ORW then makes notations in his log, which the patient signs. The ORW initiates a conversation about the patient's health, which leads into a discussion of the patient's background and many children, a number of whom are pursuing professional health-related degrees in the United States. The researcher then interviews the patient, who frequently digresses during the process. [Note: The ORW is present during the interview and provides some translation help in Vietnamese. However, because some of the interview questions concern the ORW, the situation is somewhat awkward. Recommendation: Interviews with patients should be held later in the week once the researchers have the opportunity to become familiar with them, and the ORWs should not be present in the same room during the interview process.]

The atmosphere is convivial, and the ORW clearly enjoys being in this setting and his relationship with the patient, who says that the ORW is like another son to him and takes wonderful care of him. The patient is jolly and voluble, and his wife quietly smiles and shows keen interest. The researcher engages actively in the social conversation.

Event 19. The ORW and the researcher return to the clinic in the ORW's car between 3:41 and 3:47 p.m. While driving, the ORW expands further upon the careers of the patient's children, about whom he evidently knows a good deal. The atmosphere is pleasant, relaxed.

Event 20. Between 3:48 and 3:51 p.m., the ORW arrives at the clinic together with the researcher, proceeds to the nursing office, and gives a brief overview of his day's activities and checks out with the public health nurse present, who presents him a document that she requests that he give to a patient tomorrow during his round of home visits. The ORW is pleasant and deferential, the nurse directive but polite. The researcher is silent during this process.

The ORW then leaves the clinic and offers the researcher a ride in his car to a metro station which is located on the way to the ORW's night-time job of maintaining conditioners in a large hotel. The ORW and researcher review the day's activities on the way to the metro station, where the researcher thanks the ORW for his help and Patience, and the ORW wishes the researcher good luck in his work.

APPENDIX II

KEY INFORMANT INTERVIEW GUIDES

- A . OUTREACH WORKER INTERVIEW GUIDE
- B. SUPERVISOR INTERVIEW GUIDE
- c. PATIENT INTERVIEW GUIDE
- D. INFORMED CONSENT **FORM AND** FACT SHEET

A. Outreach Worker Interview Guides

Form **Approved**
OMB Approval No.: 0920-0393
Expiration Date: 6/30/98

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
OUTREACH WORKER INTERVIEW GUIDE

Public reporting burden for this collection of information is estimated to average 45 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance Officer; Paper Work Reduction Project (09209393); Room 531-H. H. Humphrey Bg.; 200 Independence Ave., SW; Washington, DC 20201.

Outreach Worker Activities

1. How did you learn about this TB outreach worker job?
2. Why did you apply for this job?
3. Why do you think you were selected for this job?
4. When did you begin this job?

Outreach Worker Training

5. Did you get TB outreach program orientation training?
Yes No If yes,
 - a. Who gave the orientation?
 - b. How long was the orientation?
 - c. What topics were covered?
 - d. What information was most useful?
6. Do you get TB outreach program in-service training?
Yes No **if** yes,
 - a. Who gives it?
 - b. How often?
 - c. What topics are covered?
 - d. What information is most useful?

7. Do you get TB outreach program on-the-job training?
Yes _____ No _____ If yes,

- a. Who gives it?
- b. How often?
- c. What topics are covered?
- d. What information is most useful?

Outreach Worker Activities

8. How many hours a week do you spend as a TB outreach worker?

9. Are the outreach activities you perform as an outreach worker concerned only with TB?
Yes _____ No _____
If **no, please describe your** other outreach activities.

10. Does the source of funding used to support your TB outreach job influence the types of activities that you perform?
Yes _____ No _____ If yes, please explain.

11. What kinds of patients do you serve? [Read list; circle all that apply.]

- elderly 1
- youth 2
- refugees 3
- immigrants 4
- migrant/seasonal farm workers 5
- HIV+ 8
- physically/mentally** disabled 7
- injecting drug users 8
- non-injecting drug users 9
- excessive alcohol users 10
- low income 11
- unemployed 12
- homeless 13
- prisoners 14
- other: 15

12. What are the racial, ethnic, or country backgrounds of the patients you serve?

13. What language(s) do you use to speak to the patients?

14. Do you have difficulty communicating with the patients?
Yes No If yes, please explain.

15. a. How many patients are you currently serving each day?
b. How many patients are you supposed to serve each day? **If** there is a difference between (a) and **(b)**, ask why.]

16. In what places do you serve patients?

17. In an average week, how much time do you spend on the following activities? [Read list; document all that apply. If the outreach worker does not spend any time on the activity, write 0 **(zero)**]

Activities

Time

meeting/on the phone with supervisor(s)	_____
meeting/on the phone with public health nurses	_____
meeting/on the phone with other outreach workers	_____
meeting/on the phone with other TB clinic staff	_____
meeting/on the phone with other health care providers	_____
on the phone with patients/families	_____
visiting patients/families; conducting DOT	_____
visiting patients/families; educating them about TB	_____
looking for patients who miss appointments	_____
transporting patients	_____
investigating contacts	_____
delivering medications/x-rays/sputum	_____
assisting in the chest clinic	_____
keeping records	_____
traveling between appointments	_____
other	_____
Total hours per week	_____

18. Please list five of the activities you perform that you think are very important, starting with the most important activity.

Activities: a. _____
b. _____
c. _____
d. _____
e. _____

19. In which of these activities do you think you are very effective? Please explain.

20. In which of these activities do you think you are less effective? Please explain.

21. What techniques do you use to try to establish good relations with new patients?

22. What techniques do you use to try to get patients to remain in the TB outreach program and to follow treatment plans?

Supervision and Evaluation

23. Do you have more than one supervisor?
Yes No If yes, please explain.

24. How often do you meet with your supervisor(s) in an average week? [Refer to their answer for question 171]

a. Alone?

b. With other outreach workers?

25. How often do you communicate by telephone with your supervisor(s) in an average week? [Refer to their answer for question **171**]

26. How often do you meet with public health nurses in an average week? [Refer to their answer for question 171

a. Alone?

b. With other outreach workers?

27. How often do you communicate by telephone with public health nurses in an average week? [Refer to their answer for question 171

26. Are you accompanied on patient visits by your supervisor(s)?
Yes No If yes, how often?

29. Are you accompanied on patient visits by public health nurses?
Yes No If yes, how often?

30. Do you submit written activity reports to your supervisor(s)?
Yes No If yes, how often?

31. Are formal written evaluations made of your performance?
Yes No If yes, how often?

32. Who makes these evaluations?

33. On what activities or performance measures are you evaluated?

Perceptions and Recommendations

34. What kinds of knowledge and skills do you think it takes to make an effective TB outreach worker? **[If** necessary, probe: e.g., knowledge about TB, other communicable diseases, local health **care** system, culture(s) of patients; skills in communicating, language(s) of patients.]
35. What kinds of attitudes and ways of behaving do you think it takes to make an effective TB outreach worker? [If necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.]
36. What do you like most about your job?
37. What do you like least about your job?
38. Do you think changes should be made in the TB outreach program outreach worker activities?
Yes No If yes, please explain.

Personal Information

- 39.** Gender:
Female Male
40. What is your age?
41. Where were you born?
42. What is your racial, ethnic, or country background?
43. When did you come to the United States? [ask only if relevant.]
- 

44. When did You come to this area? **[ask** only if relevant.]

45. What languages do You speak?

46. What is Your educational background?

a. Years of schooling completed: _____

b. **Diploma(s)/Degree(s)** earned: _____

47. Did You work in the area of TB before You joined this TB outreach program?
Yes No If Yes, please explain.

48. Did You work in outreach before You joined this TB outreach program?
Yes No If Yes, please explain.

49. What work were You doing just before You joined this program?

[Note: At the conclusion of the interview, remember to ask the outreach worker if helshe has any questions about the study or the interview, and provide answers to any such questions. Thank the outreach worker for his/her participation in the interview.]

B. Supervisor Interview Guide

Form Approved
OMB Approval No.: 0920-0393
Expiration Date: 6/30/98

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
SUPERVISOR INTERVIEW GUIDE

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Outreach Worker Activities

1. How does this TB outreach program recruit outreach workers?
2. What qualifications are required?
3. How was [name of outreach worker] selected to be a TB outreach worker?
4. When did **he/she** begin to work for the TB outreach program?

Outreach Worker Training

5. Did [name of outreach worker] get TB outreach program orientation training?
 - a. Who gave the orientation?
 - b. How long was the orientation?
 - c. What topics were covered?
6. Does **he/she** get TB outreach program in-service training?
Yes No If yes,
 - a. Who gives it?
 - b. How often?
 - c. What topics are covered?
7. Does **he/she** get TB outreach program on-the-job training?
Yes No If yes,
 - a. Who gives it?
 - b. How often?
 - c. What topics are covered?

Outreach Worker Activities

- 8. How many hours a week does [name of outreach **worker**] spend as a TB outreach worker?

- 9. Are the outreach activities **he/she** performs as an outreach worker concerned only with TB?
 Yes No If no, please describe **his/her** other outreach activities.

- 10. Does the source of funding used to support his/her TB outreach job influence the types of activities that he/she performs?
 Yes No If yes, please explain.

11. What kinds of patients does he/she serve? [Read list; circle all that apply.]

- elderly 1
- youth 2
- refugees 3
- immigrants 4
- migrant/seasonal farm workers 5
- HIV+ 8
- physically/mentally disabled 7
- injecting drug users 8
- non-injecting drug users 9
- excessive alcohol users 10
- low income 11
- unemployed 12
- homeless 13
- prisoners 14
- other: 15

- 12. What are the racial, ethnic, or country backgrounds of the patients **he/she** serves?

- 13. How many patients is **he/she** now serving each day?

14. How many patients is **he/she** supposed to serve each day? **[If** there is a difference between answers to questions 13 and 14, ask why.]

15. In what places does **he/she** serve patients?

16. What language(s) does **he/she** use to speak to the patients?

17. Does **he/she** have difficulty communicating with the patients?
Yes No If yes, please explain.

16. In an average week, how much time does **he/she** spend on the following activities? **[Read** list; document all that apply. If the outreach worker does not spend any time on the activity, write 0 **(zero)**]

Activities

Time

meeting/on the phone with supervisor(s)	_____
meeting/on the phone with public health nurses	_____
meeting/on the phone with other outreach workers	_____
meeting/on the phone with other TB clinic staff	_____
meeting/on the phone with other health care providers	_____
on the phone with patients/families	_____
visiting patients/families; conducting DOT	_____
visiting patients/families; educating them about TB	_____
looking for patients who miss appointments	_____
transporting patients	_____
investigating contacts	_____
delivering medications/x-rays/sputum	_____
assisting in the chest clinic	_____
keeping records	_____
traveling between appointments	_____
other	_____
Total hours per week	_____

19. Please list five of the activities **he/she** performs that You think are very important, starting with the most important activity.

Activities: **a.** _____
 b. _____
 c. _____
 d. _____
 e. _____

20. In which of these activities do You think **he/she** is very effective? Please explain.

21. In which of these activities do You think **he/she** is less effective? Please explain.

22. What techniques does **he/she** use to try to establish good relations with new patients?

23. What techniques does **he/she** use to try to get patients to remain in the TB outreach program and to follow treatment plans?

Supervision and Evaluation

24. When did You join the TB outreach program?

25. How many hours a week do You spend supervising TB outreach workers?

26. How many outreach workers do You supervise?

27. How many **full-time** equivalent outreach workers do You supervise? [if there is a difference between the answers to questions 26 and 27, ask why.]

28. When did You start supervising [name of outreach worker] ?

29. Does **he/she** have more than one supervisor?
Yes No If Yes, please explain.

30. How often does **he/she** meet with you in an average week? [Refer to answers for question 181]
- a. Alone?
 - b. With other outreach workers?
31. How often does **he/she** communicate by telephone with you in an average week? [Refer to answers for question 181]
32. Is **he/she** accompanied on patient visits by you?
Yes No If yes, how often?
33. How often does **he/she** meet with public health nurses in an average week? [Refer to answers for question 181]
- a. Alone?
 - b. With other outreach workers?
34. How often does **he/she** communicate by telephone with public health nurses in an average week?
[Refer to answers for question 18]
35. Is **he/she** accompanied on patient visits by public health nurses?
Yes No If yes, how often?
38. Does **he/she** submit written activity reports to you?
Yes No If yes, how often?
37. Are formal written evaluations made of his/her performance?
Yes No If yes, how often?
38. Who makes these evaluations?
39. **On** what things is **he/she** evaluated?

Perceptions and Recommendations

40. What kinds of knowledge and skills do you think it takes to make an effective TB outreach worker? [If necessary, probe: e.g., knowledge about TB, other communicable diseases, local health care system, culture(s) of patients; skills in communicating, language(s) of patients.]
41. What kinds of attitudes and ways of behaving do you think it takes to make an effective TB outreach worker? [If necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.]
42. Do you think changes should be made in the TB outreach program outreach worker activities?
Yes No If yes, please explain.

Personal Information

43. Gender:
Female Male
- 44.** What is your age?
- 45.** Where were you born?
46. What is your racial, ethnic, or country background?
47. When did you come to the United States? [ask only if relevant.]
46. When did you come to this area? [ask only if relevant.]
- 49.** What is your educational background?
- a. Years of schooling completed: _____
- b. **Diploma(s)/Degree(s)** earned: _____

50. Before you joined this TB outreach program:

- a. Did you work in the area of TB?
Yes N o _ If Yes, please explain.

- b. Did you work in outreach?
Yes N o _ If yes, please explain.

[Note: At the conclusion of the interview, remember to ask the supervisor if **he/she** has any questions about the study or the interview, and provide answers to any such questions. Thank the supervisor for **his/her** participation in the interview.]

C. Patient Interview Guide

Form Approved
OMB Approval No.: 0920.0393
Expiration Date: **6/30/98**

CASALS AND ASSOCIATES, INC.
CENTERS FOR DISEASE CONTROL AND PREVENTION **(CDC)**
EVALUATION OF TUBERCULOSIS OUTREACH WORKER ACTIVITIES
PATIENT INTERVIEW GUIDE

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance Officer; Paper Work Reduction Project (0920-0393); Room 531-H. H. Humphrey Bg.; 200 Independence Ave., SW; Washington, DC 20201.

Outreach Worker Activities

1. When did you find out you have TB?
2. When did **iname of outreach worker]** become your TB outreach worker?
3. What language(s) does he/she use to speak with you?
4. Do you have trouble communicating with him/her?
Yes ___ No ___ If yes, please explain.
5. Where does he/she usually visit you?
6. How often does **he/she** visit you?
7. Does anyone else from the TB outreach program visit you?
Yes ___ No ___ If yes, please explain.
6. How long do **iname of outreach worker]'s** visits to you last?
9. What happens during his/her visits to you?
10. Did he/she try to form good relations with you when **he/she** first became your outreach worker?
Yes ___ No ___ Please explain.
11. Does **he/she** try to get you to stay in the TB outreach program and to follow your treatment plan?
Yes ___ No ___ Please explain.
12. Do you think **he/she** understands your needs and problems?
Yes ___ No ___ Please explain.

13. Does **he/she** do things for you that **he/she** does not have to as part of his/her job?
Yes No If yes, please explain.

Perceptions and Recommendations

14. What kinds of knowledge and skills do you think it takes to make a good TB outreach worker? [If necessary, probe: e.g., knowledge about TB, other communicable diseases, local health care system, culture(s) of patients: skills in communicating, language(s) of patients.¹
15. What kinds of attitudes and ways of behaving do you think it takes to make a good TB outreach worker? [If necessary, probe: e.g., patience, flexibility, punctuality, interest in patients, cooperation with other staff.¹
16. What things about the TB outreach program do you like the most?
17. What things about the TB outreach program do you like the least?
16. Do you think changes should be made in the TB outreach program?
Yes No If yes, please explain.

Personal Information

19. Gender:
Female Male
20. What is your age?
21. Where were you born?

22. What is your racial, ethnic, or country background?

23. When did you come to the United States? **[ask only if relevant.]**

24. When did you come to this area? [ask only if relevant.]

25. What was your **last/what** is your current occupation or job?

[Note: At the conclusion of the interview, remember to ask the patient if **he/she** has any questions about the study or the interview, and provide answers to any such questions. Thank the patient for his/her participation in the interview.]

D. Informed Consent Form and Fact Sheet

Instructions for Field Researcher:

READ THE FOLLOWING STATEMENT TO THE INTERVIEWEE:

Introduction

My name is interviewername Consultants & Associates, the firm carrying out a study under contract with the Federal government's Centers for Disease Control and Prevention to gain an understanding of how tuberculosis outreach work is performed. Tuberculosis is an important public health problem in the United States and outreach workers are an integral part of the effort to control tuberculosis. The study will consist of interviews with TB outreach workers (**ORW**), their supervisors, and the patients **ORWs** serve who have personal experience regarding TB outreach worker activities. In addition there will be direct observation of ORW daily activities. The study is being conducted in six locations in the United States and will include 36 outreach workers, their supervisors, and 72 patients served by outreach workers. This interview will take approximately 45 minutes and has been scheduled for a time that is convenient for you.

Purpose of the Research

The purpose of this research is to gather information on TB outreach worker activities at six TB outreach programs across the United States.

Procedures

The questionnaire contains information about outreach worker activities, training, supervision and evaluation. The interview with you will last approximately 45 minutes. This study is being conducted under the authority of Section 301 of the Public Health Service Act, participation is voluntary, and responses will be reported in aggregate form only.

Risks or Discomforts

There are no risks associated with your participation in this study. There is a question asking about activities in which you believe you are less effective, which may make you feel uncomfortable.

Benefits

The goal of this study is to gain understanding of how and under what conditions TB outreach work is performed to help in the development of more appropriate methods for training outreach workers and better ways to evaluate the effectiveness of outreach work. There is no personal benefit to you in participating in this study.

Confidentiality

Your answers will be safeguarded against unauthorized disclosures to the fullest extent legally possible in accordance with applicable statutes. This means that your individual answers will be protected from disclosure to the fullest extent legally possible according to Federal, state and local laws. The applicable statutes are the Privacy Act, the Freedom of Information Act, and any state or local laws protecting disclosure of research information. Individually identified data will be linked to a code number maintained by Casals and Associates only until the study is complete and no data that could be used to identify respondents will be entered into the computer database used for data analysis. Records collected during this study will be kept in a locked file and will only be accessible to study personnel.

cost

There is no cost to you other than the time you spend answering the questions on this questionnaire.

Right to Refuse or Withdraw

Participation is entirely voluntary, you may refuse to answer any questions that make you feel uncomfortable, and you may stop the interview at any time. Refusal to participate will not affect your job performance appraisal.

Do you have any questions about the study or interview? (If so, provide answers; if not, continue.)

Have you had the opportunity to ask questions regarding this study? Have your questions been answered to your satisfaction? Are you willing to participate in the study? (IF "YES" **TO ALL QUESTIONS**, COMPLETE THE FOLLOWING **TO** VERIFY HAVING READ STATEMENT AND OBTAINED CONSENT **OF** PARTICIPANT:)

Interview date: _____ Signature of Interviewer: _____

PROVIDE PARTICIPANT WITH FACT SHEET THAT EXPLAINS STUDY AND PROVIDES NAME **OF** INDIVIDUAL **WHO** CAN BE CONTACTED **TO** ANSWER ADDITIONAL QUESTIONS.

(IF "ND", SAY: "Thank you for talking to us." TERMINATE THE CONVERSATION)

Interview Date: _____
Field Researcher Code No. _____

Instruction: Check one.

- Outreach Worker Code No. _____
- Supervisor Code No. _____
- Patient Code No. _____

FACT SHEET

Centers for Disease Control and Prevention **(CDC)**

Ethnographic Study of Tuberculosis Outreach Worker Activities

The firm of Casals & Associates is carrying out a study of **TB** Outreach worker activities under contract with the Centers for Disease Control and Prevention **(CDC)**. This study is being conducted under the authority of Section 301 of the Public Health Service Act, participation is voluntary, and only the combined responses will be reported.

The study will consist of interviews with TB outreach workers **(ORW)**, their supervisors, and the patients **ORWs** served who have personal experience regarding TB outreach worker activities. In addition, there will be direct observation of DRW daily rounds of activities.

Data will be safeguarded against unauthorized disclosures to the fullest extent legally possible in accordance with applicable statutes. This means that your individual answers will be protected from disclosure to the fullest extent legally possible according to Federal, state, and local laws. The applicable statutes are the Privacy Act, the Freedom of Information Act, and any state or local laws protecting disclosure of research information. Individually identified data will be maintained by Casals & Associates only until data collection is complete. No names or identifying characteristic will be used by the CDC or the Casals & Associates research team in any publication about this report. Refusal to participate will not affect my treatment, care, or job performance appraisal.

The purpose of this study, a CDC Ethnographic Study of Tuberculosis Outreach Worker Activities, is a qualitative, cross-site evaluation of six TB outreach programs across the United States, and is designed to gather information on TB outreach worker activities.

Thank you for agreeing to participate. If you have additional questions, contact (field researcher1 of Casals & Associates at (local phone number). You may also contact Deanna Crouse of Casals & Associates at **703-920-1234** or Dr. Zachary Taylor of the Centers for Disease Control and Prevention at **404-639-8123**.

APPENDIX III

WEEKLY SUMMARY REPORT OUTLINE

Weekly Summary Report Outline

INTRODUCTION

Give site; general description of area of outreach (neighborhood, region of community): inclusive dates (day/month/ to day/month/year); field researcher code. Refer to outreach workers and key informant interviewees only by codes.

I. **TB** PROGRAM OVERVIEW

- A. TB Program Design
 - (1) Basic Assumptions
 - (2) Strategy & Methods of TB Outreach
 - (3) Outreach Workers: selection; recruitment, etc.
- B. Community Needs Being Addressed
- c. Intended Beneficiaries (from perspective of program)
 - (1) Patients
 - (2) Others

II. **COMMUNITY/NEIGHBORHOOD** CONTEXT OF OUTREACH

- A. General Overview of the Community/Neighborhood Setting
- B. Description of Target Population(s)
- c. Observed Variations, if any, for outreach activities
 - (1) By neighborhood
 - (2) By respondent types

III. ATTITUDES OBSERVED IN **TB** OUTREACH PROGRAM OPERATIONS

note: Think of this section in terms of program design, methods, process, results, and suggested changes.]

- A. TB Control Program Staff (**e.g.**, directors, supervisor and training staff; CDC staff, health department staff, etc.)
- B. Outreach Worker
- C. Patients who receive outreach
- D. Family members; friends; neighbors, etc.

IV. WEEKLY SUMMARY OF OUTREACH EVENTS

- A. Timing of Outreach Activities
- B. Composite of Week's Activities
- C. Outreach Settings and Demeanor Observed
 - (1) Most Conducive Situations Observed
 - (2) Least Conducive Situations Observed
- D. Outreach Worker Composite
 - (1) Approach to Outreach
 - (2) Conducting Outreach Activities

V. CONCLUSIONS: FIELD RESEARCHER VIEWS

- A. Outreach as Process
 - (1) Fit to Program Design
 - (2) Any Perceived Difficulties
- B. Closing Comments on Week's Activities

APPENDIX IV

MASTER CODE SHEET

MASTER CODE SHEET

/Note: The Master Code Sheet is a confidential form. It is the responsibility of the field researcher to ensure that no person sees or has the opportunity to retrieve this form. The completed Master Code Sheet is to be submitted with each Weekly Summary Report. J

Field Researcher: _____

Date (month/day to month/day/year): _____

Week of study (check one):

WK1 WK 2 WK3 WK4 WK 5 *OWK6*

Study Site (check one):

CH - Chicago HO - Houston LA - Los Angeles
 NY - New York City MA - Massachusetts MI - Mississippi

Key Informant Interviewees:

Outreach Worker #

ORW #1
 ORW #2
 ORW #3
 ORW #4
 ORW #5
 ORW #6

Outreach Worker Name

Supervisor #

SPV #1
 SPV #2

Supervisor Name

Patient #

PNT #1
 PNT #2
 PNT #3
 PNT #4

Patient Name

APPENDIX V

SAMPLE OF COMPLETED C&A ADMINISTRATIVE FORMS

- A. **TIMESHEET**
- B. **TRAVEL EXPENSE REPORT**
- C. **EXPENSE REIMBURSEMENT REPORT**

FACT SHEET

Centers for Disease Control and Prevention (CDC)

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