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A TUBERCULOSIS SCREENING AND TREATMENT PROGRAM FOR MIGRANT FARMWORKER FAMILIES

There are an estimated 3 to 5 million migrant and seasonal farmworkers in the United States working in every state. Migrant farmworkers have more health problems and suffer from infectious diseases more frequently than the general population.[1-4] Tuberculosis is one of the chief public health concerns in migrant farmworkers, up to 48 percent of whom have positive purified protein derivative (PPD)-tuberculin skin tests.[5] This paper describes the results of a community health outreach program conducted during the 1994 and 1995 migrant seasons to provide tuberculosis screening and treatment for migrant farmworkers and their families in Orleans and Monroe Counties in northwest New York State. This area is home to an estimated 3,000 migrant and seasonal farmworkers during the months of June through November.

Migrant farmworkers face a number of barriers in obtaining health care, including lack of health insurance, language and cultural differences, uncertain immigration status, fear of deportation, and different interpretations of health and illness.[6,7] Several studies have documented the multiple problems migrant farmworkers encounter in obtaining health care services.[6,8-10] It is estimated that migrant health centers serve less than 20 percent of migrant farmworkers in the United States.[1,11]

The prevalence of tuberculosis is higher among persons born outside of the United States. In 1995, about 36 percent of all reported cases of tuberculosis in the United States were among foreign-born persons.[12] Migrant farmworkers have especially high rates of tuberculosis infection, and studies of PPD skin test results among migrant farmworkers have revealed positivity rates of 37 percent among those living on the Delmarva Peninsula,[13] 41 percent in North Carolina,[14] 44 percent in Florida,[15] and 48 percent in Virginia.[5] Medical treatment of tuberculosis infection or disease generally extends between 6 and 12 months. Treatment is especially difficult in migrant farmworkers because of their highly mobile existence. Overcrowded living and traveling conditions are thought to contribute to the spread of tuberculosis among farmworkers.[8]

To bridge the gap between migrant farmworkers and the official health care system, health promoters have been used effectively in some health centers. They function as culture brokers to help migrant workers obtain health care services.[16] Variously termed *community health workers*, *lay health advisors*, and *indigenous health aides*, health promoters are persons of the same culture and

linguistic background as the clients they serve.[17] Trained both in the classroom and on the job, community health promoters have been shown to be especially effective in providing prenatal education and postnatal care.[18-20]

Methods

Based at the Oak Orchard Community Health Center (OOCHC) in Brockport, New York, the outreach team, which consisted of five bilingual health promoters and two bilingual nurse practitioners, worked in cooperation with nurses and outreach staff from the Orleans County Health Department (OCHD) and the Monroe County Health Department (MCHD). The health promoters were recruited from the community and had received special training in tuberculosis education, screening, and treatment methods. The outreach staff from the health departments also received training and were experienced in tuberculosis screening and management. Screening supplies, chest radiographs, and medications were paid for by the health departments.

The outreach team provided screening in migrant camps between June and August, 1994 and 1995. The evening before a tuberculosis screening program, the health promoters visited the camps. They spoke with migrant farmworkers and their families, explained that the outreach team would return the following evening, and posted announcements in Spanish about the screening. Screening programs were also conducted in a number of day care centers attended by the children of farmworkers and in the migrant education summer school program held at a local university.

In the camps, the outreach team provided tuberculosis education using popular education methods that included a short skit, demonstrations, and audience participation. The health promoters, along with the bilingual nurse practitioners and health department personnel, then completed a health history for each farmworker who wished to participate in the screening. This screening form elicited demographic information and receipt of previous tuberculosis skin testing, chest radiographs, or treatment for tuberculosis. Farmworkers were also asked about specific symptoms of active tuberculosis such as cough, night sweats, and weight loss. A list of current medications was obtained for each participant as well as his or her history of smoking, alcohol, or intravenous drug use. Although testing for human immunodeficiency virus (HIV) infection was not included in the screening program, each participant was asked if he or she had ever had this testing.

Persons with a positive skin test were interviewed more extensively to determine whether they had any health problems that would either complicate prophylactic therapy or increase their risk for the development of active tuberculosis. These participants were asked whether they had a history of medical conditions such as liver disease, diabetes mellitus, or malignancy. In addition, all females in the program were asked whether they were pregnant or lactating.

Skin tests were placed on the volar surface of their forearms using an intradermal injection of 0.1 ml of 5 tuberculin units (TU) of PPD. Two days later the health promoters returned to the camp to read the skin tests. The methods used in the day care centers and summer school program were similar.

PPD skin tests were interpreted according to guidelines from the Centers for Disease Control and Prevention: a reaction of ≥ 5 mm of induration was classified positive in persons with HIV infection or who were in close contact with those with infectious tuberculosis, and a reaction of ≥ 10 mm was positive in all others.[4] Persons with positive skin tests were transported by the health promoters to local hospitals for chest radiographs as soon as possible, often on the same day the skin test was read. In Monroe County, the chest radiographs were reviewed by the Monroe County Health Department pulmonologists, while in Orleans County the readings were done by radiologists at the hospital.

Persons younger than 35 with positive skin tests and no radiographic evidence of active disease were started on prophylactic isoniazid (INH) if there were no contraindications to therapy and if they would be staying in the area for six months. Follow-up care was provided by nurse practitioners or health department physicians. Monthly evaluations were conducted using a checklist to screen for adverse reactions to INH, to assess patient self-reports, and to determine compliance with pill counts. Health promoters served as interpreters for the physicians. Patients were either transported to the health center for care or visited in the migrant camps. As long as patients were asymptomatic and were not drinking heavily, laboratory evaluation of liver enzymes was not generally performed.

The method of providing INH differed between the two counties because of the health department policies. In Orleans County, farmworkers were given prescriptions for a month's supply of INH with five refills to have filled free of charge. They were reminded to obtain refills at the time of each monthly follow-up appointment. In Monroe County, a month's supply of INH was given to farmworkers at the time of each visit. In addition, personnel from the MCHD participated actively in monthly evaluations of INH therapy primarily at the OOCHC. In both counties, health promoters visited the camps to contact farmworkers who had missed follow-up visits.

All participants were given written documentation of their skin test and chest radiograph results. Persons aged 35 and older with positive skin tests who were not given INH therapy were provided with education about the signs and symptoms of tuberculosis and instructed to seek health care if problems developed. Those under 35 who were not staying in the area long enough to complete a course of INH were advised to seek treatment at their next destination or to contact the OOCHC the following summer if they returned to western New York.

Results

During the summer of 1994, the outreach team placed PPD skin tests on 415 migrant workers and their families; persons ranged in age from 2 to 64 years old. There were 398 (96 percent) Hispanics and 17 (4 percent) African Americans in the group tested. Of the 415 tested, 8 (2 percent) could not be located; therefore, skin test readings were completed on 407 persons. The ages of those who were located for PPD readings are shown in Table 1. Of those whose PPD skins tests were read, 97 (24 percent) had positive readings. The ages of those with positive skin tests are shown in Table 2. Of those with positive skin tests, 73 agreed to have chest X rays, all of which were negative for active tuberculosis. Of these, 34 were started on INH prophylaxis. INH was not given to the other 37 because they were age 35 and older, could not be followed adequately, refused treatment, drank alcohol heavily, or had moved from the area. In Monroe County, 16 persons started INH and 15 (94 percent) completed six months of therapy. The one person who did not complete the therapy died of unrelated causes. In Orleans County, 18 persons were started on INH and 1 (5 percent) finished the entire course of treatment.

In 1995, 438 farmworkers were tested with PPD, and readings were obtained on 436 (99 percent), all of whom were Hispanic. The ages of those who were located for PPD readings are shown in Table 1. Of those whose PPD skins tests were read, 100 (23 percent) had positive readings. The ages of those with positive skin tests are shown in Table 2. Of the 100 persons with positive skin tests, 83 agreed to have chest X rays, all of which were negative for active tuberculosis. Of these, 50 were started on INH.* INH was not started on the other 33 for the reasons outlined above, including age, alcohol abuse, and refusal to take medication. In Monroe County, 13 persons started INH and 6 (46 percent) completed at least six months of therapy. In Orleans County, 37 persons were started on INH and none completed the entire treatment. Moving within the county or out of western New York was the primary reason workers did not complete therapy. Other reasons included failure to obtain medications, unwillingness to decrease alcohol use, and unwillingness to take daily medication. A comparison of the treatment results for 1994 and 1995 in the two counties can be found in Table 3.

Discussion

A total of 853 migrant farmworkers attended education programs and were screened for tuberculosis in 1994 and 1995. During the health history interview, all participants reported that they either had not been tested for HIV infection or were HIV negative. Of those screened, 843 (99 percent) were located for skin test readings. This high percentage is due to the diligence of the health promoters in locating farmworkers to read their skin tests and the good rapport between the two groups.

* One person aged 36 was included in this group because he had been exposed to active tuberculosis;

TABLE 1
AGES OF PERSONS HAVING PURIFIED PROTEIN DERIVATIVE READING, 1994 AND 1995

	1994		*1995*	
AGE	*NUMBER*	*%*	*NUMBER*	*%*
1-10	136	33	105	24
11-20	98	24	133	31
21-30	89	22	102	23
31-40	43	11	51	12
> 40	41	10	45	10
Total	407	100	436	100

TABLE 2
AGES OF PERSONS WITH POSITIVE PURIFIED PROTEIN DERIVATIVE SKIN TESTS, 1994 AND 1995

	1994		*1995*	
AGE	*NUMBER*	*%*	*NUMBER*	*%*
1-10	3	3	4	4
11-20	28	29	18	18
21-30	32	33	38	38
31-40	19	20	24	24
> 40	15	15	16	16
Total	97	100	100	100

A total of 197 (23 percent) had positive PPD skin tests, a percentage somewhat lower than reported in the literature. There are two likely explanations for this difference. The vast majority of those screened were Hispanic, and they generally have rates of PPD positivity lower than those of African Americans or Haitians.[8] In addition, screening programs were conducted in day care centers and at the migrant education summer school program. In these sites, 472 persons were under 21 years of age, and 53 (11.2 percent) showed positive PPD skin tests. For farmworkers aged 21 to 40, the rate of positive readings was 39.6 percent, and for those over age 40, the rate was 36 percent.

Chest radiographs were performed on a total of 158 persons in 1994 and 1995. Of 843 persons who had their skin test read, none had symptoms or radiographic evidence of active tuberculosis. Of 153 persons eligible for pro-

TABLE 3
COMPARISON OF ISONIAZID (INH) THERAPY BY COUNTY AND BY YEAR

	1994		*1995*	
	ORLEANS	*MONROE*	*ORLEANS*	*MONROE*
Started INH	18	16	37	13
Completed six months of INH	1	15	0	6

phylactic therapy, INH was not given to 70 because they were aged 35 and older or because of other factors discussed earlier. INH was started for 84 persons during the two years of the tuberculosis program, 34 in Monroe County and 50 in Orleans County. Of those who started INH, 21 (62 percent) completed at least six months of treatment in Monroe County and 1 (2 percent) finished in Orleans County. Several factors may account for the difference between the two counties. Personnel from the MCHD were more actively involved in both screening and follow-up care than those from Orleans County. In addition, the method of providing INH may have been more effective in Monroe County because the medication was dispensed on a monthly basis, whereas in Orleans County, farmworkers had to travel to a pharmacy to obtain their medication.

A number of measures were taken to enable farmworkers in both counties to complete INH therapy, including intensive follow-up by health promoters and health department personnel, use of bilingual health care workers who visited farmworkers in the migrant camps, and assistance with transportation to clinic appointments. Farmworkers were contacted whenever they missed appointments, and health promoters inquired about adherence to therapy during visits to migrant camps. In spite of this, nearly all of those who started on INH in Orleans County did not complete therapy. Numerous factors mitigate against successful completion of INH therapy in migrant farmworkers, including their highly mobile existence.

Conclusion

The Oak Orchard Community Health Center has been in existence for 21 years; thus, a long-standing, trusting relationship exists between the center and the migrant farmworker community. This fact, coupled with the use of health promoters who are members of the migrant community, made it possible to educate and screen large numbers of farmworkers for tuberculosis and to provide supervised follow-up care for those on therapy.

The number of persons completing therapy was higher when health department personnel were actively involved throughout both the screening and follow-up phases. There were many reasons that farmworkers could not either

begin or complete six months of INH therapy, including excessive alcohol use, unwillingness to take medication, moving to different camps during the period of treatment, or leaving the area entirely. There is a need for further research into factors that foster participation in screening programs and promote adherence to therapy in migrant farmworkers.

The methods used in this program, which included culturally sensitive popular education, use of bilingual/bicultural health promoters, cooperation of the county health departments, and intensive follow-up, may be applicable for other health centers in providing tuberculosis screening and treatment programs for migrant farmworkers.

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ACCESS TO FAMILY PLANNING SERVICES: RELATIONSHIP WITH UNINTENDED PREGNANCIES AND PRENATAL OUTCOMES

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Abstract: Family planning services are important because they can prevent unintended pregnancies and improve prenatal outcomes. This paper uses secondary data to analyze trends in access to family planning services, with a particular focus on poor women and young women. Trends from the 1980s showed a small decline in family planning visits and an upsurge in the percentage of births that were unwanted at the time of conception. These changes were particularly marked for poor women. Over the same decade, public expenditures for contraceptive services declined dramatically. The health insurance system with respect to family planning must be modernized to meet the needs of women and couples today. Future improvements in infant health and survival will depend in large part on ensuring that pregnancies are intended and not the result of lack of access to effective family planning services.

Key words: Family planning, access, poverty

Family planning services allow women and men to determine when and if they would like to conceive a child. Family planning in its most broad sense can include and be achieved in several ways: by periodic abstinence, by contraception, by contraceptive sterilization, by abortion, or by some combination of these methods. Although women who have health insurance may be adequately covered for most ambulatory and inpatient medical services, they often lack coverage for basic family planning services. This is true for individuals in both private and publicly sponsored health insurance plans.[1]

A recent survey of private insurers found that coverage of family planning services varied considerably, with managed care plans being more likely to cover routine gynecological care and reversible contraception compared with conventional indemnity (i.e., fee-for-service) plans.[2] None of the five reversible

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