

MIGRANT LABORERS AND AIDS IN THE UNITED STATES: A REVIEW OF THE LITERATURE

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This article reviews the literature on the threat of AIDS to migrant laborers and seasonal farmworkers in the United States. The review includes a sociodemographic profile of migrants in the United States, estimations of HIV prevalence, and a summary of AIDS- and condom-related knowledge, beliefs, and behaviors. In addition, migration-related HIV exposure categories and cultural factors that frame the risk for contracting AIDS in the migrant population are summarized. Finally, directions for future research and prevention interventions needed to address an emerging epidemic are discussed.

Migrant laborers and seasonal farmworkers in the United States are rapidly becoming yet another high-risk group for contracting AIDS. According to the National Commission to Prevent Infant Mortality (NCPIM) (1993), a confluence of migration-related factors increase the likelihood of an AIDS epidemic in the migrant laborers. These factors include limited education; cultural, linguistic, and geographical barriers to health services; constant mobility; and the usual health-compromising factors such as hazardous working conditions, low wages, chronic underemployment, and substandard housing. This paper reviews the current AIDS literature on migrant laborers and seasonal farmworkers to summarize what is known about this group's sociodemographic characteristics, HIV prevalence, AIDS-related knowledge, attitudes, and behaviors, and the unique migration-related and cultural factors that frame risk in this marginal population. Implications for prevention intervention strategies and future research are also discussed.

SOCIODEMOGRAPHIC PROFILE OF MIGRANT LABORERS

Estimating the number of migrant laborers and seasonal farmworkers is quite difficult given their seasonal and random migration in and out of the United

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States as well as different definitions of migrants used by government agencies to provide estimates (Rust, 1990). For example, the U.S. Department of Labor's estimate of between 1 million and 2.7 million is based on a definition of migrants as employed farmworkers over 14 years of age. In contrast, the Office of Migrant Health's estimate of 4.1 million is based on migrant laborers and farmworkers as well as their dependents (U.S. Department of Health and Human Services, 1990). Rust (1990) has noted that the lack of an exact population size leaves researchers without a denominator for estimating the prevalence of health problems in this population.

The socioeconomic status (SES) of migrant laborers is very low with annual incomes estimated to be around \$6,000 annually (Bertolli, 1993; Rust, 1990) and average years of education reported to be between 4 and 7 for Mexican migrants (Bronfman, Camposortega, & Median, 1989; Bronfman & Minello, 1992; Conner, 1992; Organista, Balls Organista, Garcia de Alba G., Castillo Moran, & Carrillo, 1996) and approximately 9 years for blacks (Schoonover Smith, 1988). Bronfman et al. (1989) estimate that about 10% of Mexican migrants are illiterate.

The NCPIM (1993) reported that migrants are a heterogeneous group consisting mostly of Latinos (about 70%) and blacks such as African Americans and Caribbean Islanders (about 27%). According to the NCPIM, migrant farmworkers typically labor in three major agricultural streams in the eastern, western, and midwestern regions of the United States, although recent migration has been following a less discernible pattern. In some areas, single males follow the crops north in crews of two to four dozen without their families; in other areas, up to a third of migrant farmworkers are women and children. About 20% to 25% of foreign-born farmworkers are undocumented workers.

With regard to Mexican migrants, who comprise the majority of migrant laborers in the United States, Bronfman et al. (1989) reported that in the late 1970s Mexican migrants were 84% male, averaged 25 years of age, and that 86% worked in the southwestern states ($N = 990,719$). These researchers also cited data from 1983, which showed a decrease in the proportion of males (73%), an increase in average age (39 years), and the percentage of single migrants to be 17% for men and around 30% for women. Hence the demographics of Mexican migrants appear to be widening.

ESTIMATES OF HIV

Although HIV prevalence rates are exceedingly difficult to attain on this population, preliminary reports strongly suggest disproportionately high rates of infection. In South Carolina, HIV screening at 15 labor camps revealed a 13% prevalence rate in 198 predominantly single, black migrant workers (Jones et al., 1991). This figure is three times higher than a previous report of 4.1% for 263 black migrant and seasonal farmworkers screened in North Carolina (Centers for Disease Control [CDC], 1988). In Florida, screening at 14 migrant farmworker labor camps during peak season revealed a 5% prevalence for HIV in a predominantly Latino and black sample ($N = 310$) (CDC, 1992), a figure that also contrasts with a previous Florida report of 3.5% (Castro et al., 1988).

The 1988 Florida survey (Castro et al., 1988) also showed that U.S.-born migrants had higher rates of HIV infection than foreign-born migrants (11% and

3%, respectively) and that about half of the respondents reported never having used a condom. The fact that 53% of these migrants were Latino and 42% were black also highlights the critical role of culture in migrant response to the AIDS epidemic and the need for culturally responsive prevention policies and strategies.

In southeastern states, higher rates of HIV in migrants are associated with black farmworkers. For example, in the North Carolina screening mentioned above (CDC, 1988), 4.1% of 263 black farmworkers were HIV positive as compared with 0% of 125 Latinos and 0% of 38 non-Latino white farmworkers in the sample. One possible reason for this ethnic difference is that black farmworkers are more likely to be predominantly single and to live in camps with other single farmworkers whereas Latinos are more likely to be married and to live in family units. For example, Schoonover Smith (1988) found in her North Carolina sample that 85% of Mexican American farmworkers were married as compared with 28% of black farmworkers ($N = 120$).

The predominantly black, rural area of Belle Glade, Florida, is now the migrant epicenter for AIDS with a rate of 295 cases per million, reported in the mid-1980s, which was comparable to rates in San Francisco (316 per million) and Manhattan (270 per million) (Castro et al., 1988; CDC, 1986), areas with the highest incidence of AIDS in the United States. To evaluate the prevalence of risk factors in Belle Glade, a community-wide survey was conducted by the CDC and the Florida Department of Health and Rehabilitative Services in 1986. Results of this survey revealed that HIV infection resulted predominantly from heterosexual intravenous drug use and from sexual relations with high-risk partners in young men and women, age 18 to 29 years (CDC, 1986).

Glococchez-Balbona (1994) reported that Belle Glade is the base for eastern stream migrants that harvest sugar, fruit, and vegetables in Florida and the Eastern Atlantic area. This author described a complex web of economic, political, and cultural factors that appear to have facilitated the spread of AIDS and hampered prevention efforts. Such factors include lack of outreach by health services, low trust of health services on the part of laborers, government policies that drive HIV positive workers underground (e.g., deportation), and the region's long history of exploitative business that suppresses AIDS information for fear that their products may become associated with the disease.

With regard to western stream migrants, the little information that exists suggests much lower rates of HIV, as compared with eastern migrants, but a high number of preepidemic risk factors. In northern California, Lopez and Ruiz (1995) found 0% HIV prevalence in 176 northern California Mexican farmworkers. However, these researchers did find a 9% lifetime history of sexually transmitted diseases (STDs) and two active cases of syphilis. They concluded that although no cases of HIV were identified, the high rates of unsafe sex practices found in their survey warrant prevention efforts with this population.

In southern California, the AIDS Community Education Project of Orange County found 0% HIV prevalence in 50 sexually active male Mexican farmworkers and less than 2% HIV infection in 3,000, mostly Latino, men that used their STD clinic in 1988 and 1989 (Carrier & Magaña, 1991). In this same report, it was noted that epidemics of syphilis and chancroid had recently occurred in migrant laborers and prostitutes in the area.

A report by Bronfman et al. (1989) concluded that there does appear to be a relation between AIDS in Mexico and migration to the United States. For

example, out of the 165 registered AIDS cases in Mexico in 1988, 10.4% had lived in the United States and 33% of the cases were from states with the highest outmigration to the United States (e.g., of the AIDS cases in Baja California, 20% had lived in the United States). Taken together, these reports suggest that while HIV appears to be low in western stream, predominantly Mexican migrants, an epidemic is imminent if prevention efforts are not forthcoming.

AIDS-RELATED KNOWLEDGE

Studies of Mexican migrant laborers (Bronfman & Minello, 1992; Organista, Balls Organista, García de Alba G., Castillo Moran, & Carrillo, 1996), predominantly Mexican farmworkers in the United States (Bletzer, 1990), and a mixed sample of black and Latino farmworkers in the United States (Fouk, Lafferty, Ryan, & Robertson, 1989) are consistent in reporting that migrants are knowledgeable about the major modes of AIDS transmission (e.g., blood, semen) but that a third to half of these samples also believe that they can contract AIDS from various casual modes such as mosquito bites, public bathrooms, kissing on the mouth, being coughed on, giving blood, and so on. Interestingly, this pattern of AIDS transmission knowledge is very consistent with research on nonmigrant Latinos in the United States (Araba-Owoyale & Littaua, 1992; Epstein, Dusenbury, Botvin, & Diaz, 1994; Marín & Marín, 1990).

Fouk et al. (1989) studied a small, male sample ($N = 67$) of predominantly black (54.8%) and Latino (38.7%) farmworkers in rural Georgia. Their results showed that only 61.2% knew AIDS was fatal and that over 50% reported never having used a condom, despite the fact that 75% of the sample were sexually active, 33% reported multiple sex partners, and 35% reported at least one STD during the last year.

Schoonover Smith (1988) examined differences in knowledge of STDs in North American black ($n = 60$) and Mexican ($n = 60$) farmworkers, 18 to 35 years of age, and found that Mexicans knew less about transmission, treatment, and prevention. Mexican women were the least knowledgeable of all subjects.

In a sample of 176 northern California, predominantly Mexican farmworkers, Lopez and Ruiz (1995) reported that 21% of subjects surveyed said that they did not even know what AIDS was. These findings strongly suggest AIDS education efforts are needed with migrant laborers. In terms of prevention strategies, condom use has been the most widely studied safer sex behavior in migrant laborers.

CONDOM KNOWLEDGE, ATTITUDES, AND USE

Surveys of Mexican migrants showed that 57% of one sample reported that condoms were an effective way to prevent STDs (Schoonover Smith, 1988), and 74% of another sample agreed that condoms were an effective way to prevent HIV and AIDS (Bletzer, 1990). In a survey of 87 Mexican migrant laborers, knowledge of proper condom use was found to be quite problematic. Two-thirds of the sample said either "yes" or "don't know" to the items asking if Vaseline was a good lubricant for condoms and if one should unroll a condom before putting it on the penis. Also, only a little more than half of the sample

knew to grab a condom while withdrawing from a partner after ejaculation. No differences were found between subjects differing by age, gender, marital status, education or number of sex partners, indicating a general lack of condom use knowledge in the Mexican migrant sample (Organista, Balls Organista, Garcia de Alba G., Castillo Moran, & Carrillo, 1996).

In a qualitative study of 60 migrant and nonmigrant Mexicans interviewed in both the Mexican "sending" town and California "receiving" town of an old migration stream, Bronfman & Minello (1992), found that both men and women reported that they rarely if ever used condoms. Reasons given for not using condoms included the prominent belief that condoms reduce sexual pleasure and that (according to female respondents) their spouses were faithful. On the rare occasions when condoms were used, it was primarily as a method of birth control or for hygienic reasons (e.g., sex around menstrual cycle).

Quantitative data also indicate low condom use in migrant laborers with about 50% of mixed black and Latino samples reporting that they have never used a condom (CDC, 1992; Foulk et al., 1989; Jones et al., 1991). Lafferty (1991) reported that while over a third of his eastern stream migrants ($N = 411$) reported multiple sex partners, only 25% of these subjects said that they used condoms. Lopez and Ruiz (1995) similarly found that 64% of their single and sexually active male respondents reported no condom use.

Assessment of condom use, with regular as well as occasional sex partners, revealed the expected pattern in the survey of Mexican migrants (Organista, Balls Organista, Garcia de Alba G., Castillo Moran, & Carrillo, 1995). That is, the reported frequency of condom use during the past 12 months was significantly less with a regular sex partner than with occasional sex partners. For example, the percentage of subjects that "always" used condoms with regular and occasional sex partners during the past year was 12.6% and 24.1%, respectively, and the percentage that "never" used condoms with regular and occasional sex partners was 40.2% and 18.4%, respectively. These findings underscore the need for condom promotion efforts targeting Mexican migrants to emphasize condom use with both regular and occasional sex partners.

Given that condom use is generally low in the migrant population, it is important to conduct research that examines factors that predict condom use in this group. Organista, Balls Organista, Garcia de Alba G., and Castillo Moran (1995) examined a variety of predictor factors in Mexican migrants ($N = 87$) and found that condom use was predicted by social-interpersonal factors. Condom use with both occasional and regular sex partners, as well as carrying condoms, were all predicted by having friends that carry and use condoms and by being married.

This finding on marital status contradicts research on nonmigrant Latinos in the United States, which has shown that being married does not predict condom use with occasional sex partners and that carrying condoms is predicted by being single (Marín, Gomez, & Tschann, 1993). It appears that married migrants may carry and use condoms, more than single migrants, as a way of protecting their spouses who often remain in Mexico while they are working in the United States. In a study of recent Mexican immigrants ($N = 190$), Mikawa et al. (1992) found that using condoms to "protect the woman" predicted condom use in their sample. Thus, urging Mexican migrants to use condoms with occasional sex partners, as a way of protecting their primary sex partners, in the event of extramarital sex, appears to be a culturally congruent strategy.

Another factor particularly relevant to the migrant experience is amount of time spent in the United States, which predicted condom use with occasional sex partners in Mexican migrants (Organista, Balls Organista, Garcia de Alba G., & Castillo Moran, 1996). It seems that although greater exposure to U.S. society places migrants at greater risk for contracting AIDS (Bronfman et al., 1989), it also heightens their AIDS awareness (Bronfman & Minello, 1992) and hence their perceived vulnerability and motivation to take some precautions. Indeed, there are a variety of HIV exposure categories of particular relevance to the migrant experience that should be considered by prevention intervention programs.

MIGRATION-RELATED HIV EXPOSURE CATEGORIES

PROSTITUTION

Worldwide, it is well known that the migratory labor system plays a central role in the geographical spread of HIV because of such migration-related factors as being away from home for long periods of time, family breakdown, and increased number of sexual partners including prostitutes (Hulewicz, 1994; Hunt, 1989). In Belle Glade, Florida, Giocoechea-Balbona (1992) described the migrant town's nightlife as festive and filled with single men, many bars, and female prostitutes who visit migrant laborers on payday, sometimes in vans that serve as makeshift brothels.

With regard to Mexican farmworkers, prostitute use has been reported to be as high as 30% in northern California (Lopez & Ruiz, 1995) and 18% among eastern stream migrants (Lafferty, 1991). These figures appear to be much higher than those reported on nonmigrant Latino samples in the United States. For example, Marín and Marín (1992) found that only 5.7% of their San Francisco Latino sample ($N = 522$) reported prostitute use.

Bronfman and Minello (1992) reported on an interesting pattern of prostitution use in the cantinas in which Mexican migrants typically cashed their paychecks, being unaccustomed to using U.S. banks. These researchers noted that inexpensive, drug-abusing prostitutes would commonly solicit these male migrants as they drank in the cantinas. In addition to the disinhibiting effects of alcohol, Bronfman and Minello also noted the vulnerability of these migrants to prostitute use given their prolonged loneliness, isolation, and deprivation of affection.

These findings were corroborated in an ethnographic study of prostitute use by Mexican male migrant laborers in southern California. Magaña (1991) interviewed 50 male Mexican migrants and 38 injection-drug-using female prostitutes and found that the prostitutes actively solicited the men at the labor camps, bars, and other locations where they congregated. In addition to the obvious risks of this situation, Magaña also found that the migrants reported episodes in which groups of men would have sex with one prostitute in rapid succession. In fact, men who engaged in this sexual practice referred to themselves as *hermanos de leche* (milk brothers), apparently in the spirit of a male-bonding experience. Low condom use was reported by both the migrants and the sex workers in this study. Ironically, the chief reason given by both groups was that suggesting condom use would be self-incriminating (i.e., the person would probably be perceived as having AIDS or another STD).

Carrier and Magaña (1991) reported that the information above has been used to inform AIDS prevention efforts with migrants and prostitutes in the area. For example, prostitutes were used as outreach workers to provide AIDS education to prostitutes that solicit Mexican migrants. In addition, migrants were approached at labor camps and given AIDS prevention information in the culturally familiar form of *fotonovelas* (i.e., mini-soap operas in comic book-like form).

In a rare intervention study with migrant farmworkers, Connor (1992) evaluated the effectiveness of an intervention strategy designed to increase condom use with prostitutes, as well as improve AIDS-related knowledge and attitudes, in Mexican male farmworkers ($N = 193$). Subjects in the treatment condition were provided AIDS prevention information in the form of *fotonovelas* and *radionovelas* that were broadcasted daily on a local Spanish language stations (subjects were given radios and program times). These *novelas* depicted scenarios in which three male farmworkers, respectively, used a condom with a prostitute, abstained from sex, and infected a wife and child with HIV. Also included were instructions on proper condom use and information on the risks of needle sharing.

All subjects were given pretests and posttests, and results showed that men in the treatment condition made significant gains in AIDS knowledge and attitudes and in reported use of condoms with prostitutes. For example, of those men who had occasion to use prostitutes during the course of the study, 20 of 37 reported condom use at posttreatment versus 1 of 32 at pretreatment.

The study by Connor (1992) is noteworthy for its use of a culturally sensitive intervention strategy to target a specific HIV exposure category in a specific migrant cultural group. In addition, Connor conducted substantial ground work that included focus groups with farmworkers, low-literacy wording of measures and their extensive pilot testing with farmworkers from nonstudy sites in the area.

NEEDLE SHARING

In addition to the obvious risk factor of illegal injection drug use, some Mexican migrants also practice therapeutic injection of vitamins and antibiotics. For example, Lafferty (1991) found that while only 2.9% of 411 predominantly Mexican farmworkers reported illegal injection drug use, 20.3% reported therapeutic self-injecting of vitamins and antibiotics. Of these, 3.5% reported sharing needles for therapeutic injections.

HOMOSEXUAL AND BISEXUAL CONTACT

Although information on homosexual contact in Mexican migrants is lacking, it is known that homosexual and bisexual contact accounts for 65% of AIDS cases in immigrant Latinos born in Mexico, Central America, Cuba, and South America (Diaz, Buchler, Castro, & Ward, 1993). Hence, there is ample reason to assume that this exposure category is the most prominent one for Mexican migrants as well.

For Latinos, the issue of homosexual contact is complicated by the cultural factor that some Latino men who have sex with men do not consider themselves homosexual. Research in Mexico has indicated for some time that masculine men

that occasionally play the active inserter role with passive, effeminate men may continue to identify as heterosexual and lead predominantly heterosexual lifestyles (Carrier, 1985). In focus groups conducted by Lopez (Organista, Balls Organista et al., 1996), Mexican migrants commonly acknowledged the practice of men having sex with men, as described above, but stopped short of admitting any such personal experience. In one anonymous survey, only 3.5% of male Mexican migrants have admitted to homosexual contact (Lopez & Ruiz, 1995).

In Bronfman and Minello's (1992) in-depth interviews with Mexican migrants, they concluded that homosexual contact increases with migration because of such factors as extended periods of loneliness, isolation, and emotional deprivation, as well as greater sexual freedom in the United States. Thus, for Mexican migrant laborers, who make up the majority of such workers in the United States, prevention strategies will need to consider the dual impact of Mexican culture and migration on homosexual contact. Specific messages will need to be developed for heterosexual-identified men who occasionally have sex with men in addition to messages for homosexual- and bisexual-identified men. For blacks, more sex research is needed to understand how members of this group define homosexual and bisexual experience, particularly with the influx of eastern stream migrants from Caribbean countries like Haiti.

MIGRANT WOMEN AT RISK FOR AIDS

During the past 10 years, women have become the fastest growing group likely to contract AIDS in the United States, and women of color constitute the majority of these cases (Nyamathi, Bennett, Leake, Lewis, & Flaskerud, 1993). For example, although Latinos make up only 8% of the U.S. population, Latino women represent 21% of all adult female AIDS cases (Amaro, 1988). Reviews of the literature show that the risk for contracting AIDS is between 8 and 11 times greater in Latinas as compared with non-Latino white women due mostly to unprotected sex with high-risk partners (Marín & Marín, 1992; Singer et al., 1990; Yep, 1995). Although little is known about female migrant laborers, Lopez and Ruiz (1995) found that 9.1% of women in their Mexican farmworkers sample reported sex with someone who injected drugs during the past year.

Compared with white women, Latinas also differ in having higher fertility rates, lower contraceptive use (Amaro, 1988), lower condom use (Marín, Tschann, Gomez, & Kegeles, 1993), greater reluctance to suggest condom use to male partners (Marín & Marín, 1992), and less confidence about avoiding HIV (Marín, Tschann, et al., 1993). With regard to Mexican migrants, Organista, Balls Organista, Garcia de Alba G., Castillo Moran, and Carrillo (1995) found that subjects in general and women in particular believed that women would be seen as promiscuous for carrying condoms. Hence, while Latinas are at considerable risk for contracting AIDS, there are also many cultural and gender-related barriers to initiating protective behaviors.

CONCLUSIONS

To address the current AIDS epidemic in eastern stream migrant laborers, and to reduce the probability of such an epidemic occurring in western stream, predominantly Mexican farmworkers, it is necessary to design and evaluate AIDS

prevention programs that are responsive to the unique migration-related and cultural factors that frame the risk for contracting AIDS in different ethnic subgroups of the migrant laborer population. For example, prostitution use, needle sharing, sex between men, and women with high-risk partners are HIV exposure categories of particular relevance to migrant laborers. In addition, cultural factors that mediate risk taking within these exposure categories need to be understood and targeted.

While the majority of migrant laborers and seasonal farmworkers are of Mexican background, considerable cultural diversity exists in the remainder of this population, necessitating a variety of culturally responsive intervention strategies. To begin this task, careful groundwork is needed to develop, field-test, revise, and evaluate AIDS prevention interventions. Such groundwork should include focus groups with migrants and with health care workers such as outreach workers who are currently providing AIDS education to the target population. These qualitative methods are important for gathering information to be used to develop hypotheses about risk behaviors and factors that inhibit as well as facilitate risk reduction.

Current critiques and reviews of the AIDS intervention literature now emphasize the need to develop specific models of intervention based on detailed knowledge of the sociocultural and ethnic realities of different at-risk groups (Marín, 1995, Wyatt, 1994). Thus, although information dissemination is still viewed as necessary, it is no longer a sufficient way of changing complex, contextually influenced risk behaviors. Wyatt (1994) stated that an ideal intervention would be based on an understanding of the normative sex practices for a target group as influenced by variables such as cultural values, gender, socioeconomic status, sexual orientation, and the group's degree of social marginality within society. She noted that the sex norms of certain ethnic groups (e.g., African American women) often run counter to the assumptions of current prevention models in which sex is viewed as a planned and verbally negotiated activity in which women have equal say. Wyatt also recommended considering more global sex-related issues such as contraceptive use (or nonuse) and desired pregnancy for different groups as well as sex partner characteristics (e.g., secondary vs. primary, etc.).

Marín (1995) similarly challenged the assumption of cognitive models of risk taking in which it is presumed that the threat of AIDS is superordinate in the lives of people. Marín stressed that the threat of AIDS is often subordinate to the pressing economic needs of groups such as prostitutes, drug-addicted individuals, and economically dependent and abused women who remain in high-risk relationships. Like Wyatt (1994), Marín emphasized the need to understand variables that mediate risk taking and recommended combining qualitative and quantitative research methodologies for constructing models of risk taking for specific target groups. With regard to Latinos, she stressed the importance of understanding traditional gender roles as well as homosexuality within the culture in order to maximize the effectiveness of intervention strategies.

Another way of potentiating prevention efforts with migrants is to collaborate with community-based agencies that appear to do the best job of serving hard to reach migrants. A recent survey of 181 California agencies that provide AIDS prevention services to Latinos showed that community-based agencies are more effective than federal, state, and private agencies because of their greater number of bilingual staff, volunteers, and culturally sensitive approaches to

service delivery (Castañeda & Collins, 1995). Hence, such agencies represent ideal research and service provision sites that can also be involved in the development of AIDS prevention models for their service populations.

Finally, evaluation instruments that assess the specific targets of prevention intervention programs are critical for substantiating the degree of program efficacy and revision directions. In closing, concerted prevention intervention and research efforts are urgently needed to address the growing HIV epidemic in migrant laborers and seasonal farmworkers whose unique characteristics as a population at risk present a formidable challenge to health promotion and disease prevention in the United States.

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