



## **FACTS ABOUT FARMWORKERS**

### **Basics**

It is estimated that there are over 3 million migrant and seasonal farmworkers in the United States.<sup>1</sup> These farmworkers travel throughout the U.S. serving as the backbone for a multi-billion dollar agricultural industry<sup>2</sup>. According to the 1997-1998 findings of the National Agricultural Workers Survey (NAWS), the average age for farmworkers is 31; 80% are men, 84% speak Spanish; 12% are able to speak English; and the median level of education is the 6<sup>th</sup> grade.<sup>3</sup>

### **Economic Contribution**

Migrant farm labor supports the 28 billion dollar fruit and vegetable industry in the U.S.;<sup>4</sup> 85% of which are hand harvested and/or cultivated.<sup>5</sup> The production of fruit and vegetable crops in the U.S. has steadily increased over the last decade. Without the seasonal influx of migrant farm labor during peak periods the production of many fruit and vegetable crops would not be possible.<sup>6</sup> The presence of farmworkers has been shown to increase the overall economic output of the regions in which they work. Eliminating the presence of farmworkers or switching to less labor-intensive crops has been shown to have a negative impact on regions and to reduce the number of jobs available to permanent local residents.<sup>7</sup>

### **Legal Status**

The farmworker population is racially and culturally diverse, and there are varying opinions on their legal status. The data from the most recent NAWS study indicates that 52% of farmworkers are not citizens or legal residents of the United States<sup>8</sup>, while another report from the same time period argues that the majority of migrant and seasonal farmworkers are U.S. citizens or legal residents.<sup>9</sup> Regardless of their residency status, many farmworkers report experiencing prejudice and hostility in the communities in which they live and work.

### **Wages and Benefits**

Migrant and seasonal farmworkers represent some of the most economically disadvantaged people in the U.S.<sup>10</sup> According to the most recent findings of the NAWS, nearly three-quarters of U.S. farmworkers earn less than \$10,000 per year and three out of five farmworker families have incomes below the poverty level.<sup>11</sup>

In addition to the low wages, farmworkers rarely have access to workers compensation, occupational rehabilitation, or disability compensation benefits.<sup>12</sup> Only 12 states, the District of Columbia, Puerto Rico and the Virgin Islands provide farmworkers with workers compensation to the same degree as other workers; in 13 other states, farmworker coverage is optional but not required by state law.<sup>13</sup> Although many farmworkers fit eligibility profiles for programs such as Medicaid and the Food Stamp Program, very few are able to secure these benefits. Migrant health centers estimate that less than 12% of their revenues are derived from Medicaid, and it is believed that fewer than 25% of eligible farmworkers receive food stamps.<sup>14, 15</sup> Different state eligibility requirements and the lack of portability or reciprocity in Medicaid and SCHIP, create administrative barriers to coverage for mobile populations. Therefore, when farmworker families move from state to state seeking employment, Medicaid and SCHIP benefits stop at the state border, making Medicaid and SCHIP unobtainable for most farmworkers and their families<sup>16</sup> Likewise, after a lifetime of work, many farmworkers are unable to prove their claim for Social Security benefits.<sup>17</sup>

## Housing

Farmworker housing is often substandard or non-existent. The housing that does exist is often very overcrowded, and lacks adequate sanitation and working appliances, and contains severe structural defects. Under these conditions, many farmworkers are unable to store food safely, prepare a warm meal, or even shower after a long day of working the fields. In addition, a recent study found that 22 percent of farmworker housing units had serious structural problems and 26 percent of the units were directly adjacent to pesticide-treated fields.<sup>18</sup> The same study also found that 29 percent of farmworkers paid more than 30 percent of their income for housing.<sup>18</sup> Building farmworker housing has been shown to increase a region's economic output, and to create jobs for local residents.<sup>19</sup> The U.S. Department of Agriculture's Rural Housing Service, the Department of Labor, and the U.S. Department of Housing and Urban Development all provide housing services to migrants and can be contacted with farmworker housing questions.<sup>20</sup>

## Health and Social Services

The health status of migrant farmworkers is at the same standard of most Third World Nations, while the country in which they work, the United States, is one of the richest nations on earth.<sup>21</sup> Unsanitary working and housing conditions make farmworkers vulnerable to health conditions no longer considered to be threats to the general public. Poverty, frequent mobility, low literacy, language, cultural and logistic barriers impede farmworkers' access to social services and cost effective primary health care.<sup>22</sup> Economic conditions make farmworkers reluctant to miss work in order to seek health services. Farmworkers are not protected by sick leave and risk losing their jobs if they miss a day of work.<sup>23</sup> These circumstances cause farmworkers to postpone seeking health care unless their condition becomes so severe that they cannot work. At this point, many farmworkers must rely on expensive emergency room care for their health care needs. Migrant health centers provide accessible care for farmworkers, but existing centers have the capacity to serve fewer than 20% of the nation's farmworkers.<sup>23</sup>

## Legislative Protection

Agriculture is consistently ranked one of the three most dangerous occupations in the nation.<sup>24</sup> Exposure to the elements, pesticides and dangerous equipment are common in farm labor. Falls, heat stress, dehydration and pesticide poisoning are frequent injuries. However, agriculture is not subject to the safety legislation that protects workers in other industries.<sup>25</sup> Laws have been put into place that allow small farms with less than 11 workers to be exempt from the Fair Labor Standards Act.<sup>25</sup> Only recently has OSHA required employers of eleven or more farmworkers to provide toilet facilities or drinking water for workers in the fields.<sup>26</sup> The EPA and OSHA regulate pesticide production and application and both require that workers receive comprehensive training. However, recent studies found that a significant number of migrant and seasonal farmworkers still were not receiving training<sup>26</sup>. The EPA estimates that 300,000 farmworkers are poisoned by pesticides each year.<sup>27</sup>

<sup>1</sup>Larson, Alice; Plascencia, Luis. "Migrant Enumeration Study". Washington, D.C.: Office of Minority Health, 1993

<sup>2</sup>Economic Research Service, "Farm Income and Costs". US Department of Agriculture. 2002

<sup>3</sup>United States Department of Labor. "National Agricultural Workers Survey " March 2000

<sup>4</sup>Hawkins, Daniel. "Monograph Series: Introduction." Buda, TX: National Center for Farmworker Health, Inc., 2001

<sup>5</sup>Oliveira, V.; Efland, J. Runyan; and Hamm, S. "Hired Farm Labor Use on Fruit, Vegetable, and Horticultural Specialty Farms." Washington, DC: U.S. Department of Agriculture, 1993.

<sup>6</sup>Runyan, Jack L. "Profile of Hired Farmworkers, 1998 Annual Averages" 1998

<sup>7</sup>Slesinger, Doris P. "Economic Impact of Migrant Workers on Wisconsin's Economy", 2003

<sup>8</sup>Runyan, Jack L. "Profile of Hired Farmworkers, 1998 Annual Averages" 1998

<sup>9</sup>United States Department of Labor. "National Agricultural Workers Survey " March 2000

<sup>10</sup>Oliveira, V.; Efland, J. Runyan; and Hamm, S. "Hired Farm Labor Use on Fruit, Vegetable, and Horticultural Specialty Farms." Washington, DC: U.S. Department of Agriculture, 1993.

<sup>11</sup>United States Department of Labor. "National Agricultural Workers Survey " March 2000

<sup>12</sup>Villarejo, Don Ph.D. "The Occupational Health Status of Hired Farm Workers." Davis, CA: California Institute for Rural Studies, 1999

<sup>13</sup>Davis, Shelley. "Improving Farmworker Access To Workers Compensation Benefits." Migrant Health Newslines. Buda, TX: National Center for Farmworker Health, November/December 2003.

<sup>14</sup>National Association of Community Health Centers, Inc. Medicaid and Migrant Farmworker Families: Analysis of Barriers and Recommendations for Change. Washington, DC: National Association of Community Health Centers, Inc., July 1991.

<sup>15</sup>Public Voice for Food and Health Policy. Migrant Nutrition Study Fact Sheet. Washington, DC: Public Voice for Food and Health Policy, undated

<sup>16</sup>Arendale, Elizabeth "Monograph Series: Medicaid and the State Children's Insurance Program". Buda, TX: National Center for Farmworker Health, 2001

<sup>17</sup>National Advisory Council on Migrant Health. 1993 Recommendations of the National Advisory Council on Migrant Health. Rockville, MD: U.S. Department of Health and Human Services, Bureau of Primary Health Care, May 1993.

<sup>18</sup>Holden, Christopher. "Monograph Series: Housing". Buda, TX: National Center For Farmworker Health, 2001

<sup>19</sup>Sills, Erin O.; Alwang, Jeffrey; and Driscoll, Paul (Department of Agricultural Economics, College of Agriculture and Life Sciences, Virginia Tech University). "The Economic Impact of Migrant Farmworkers on Virginia's Eastern Shore." Blacksburg, VA: Virginia Cooperative Extension Service, 1993."

<sup>20</sup>Holden, Christopher. "Monograph Series: Housing". Buda, TX: National Center For Farmworker Health, 2001

<sup>21</sup>Leon, Edgar. "The Health Condition of Migrant Farmworkers." Julian Samora Institute 2001

<sup>22</sup>Villarejo, Don Ph.D. "The Occupational Health Status of Hired Farm Workers." Davis, CA: California Institute for Rural Studies, 1999

<sup>23</sup>National Advisory Council on Migrant Health. 1993 Recommendations of the National Advisory Council on Migrant Health. Rockville, MD: U.S. Department of Health and Human Services, Bureau of Primary Health Care, May 1993.

<sup>24</sup>U.S. General Accounting Office. Hired Farmworkers Health and Well-Being at Risk: Report to Congressional Requesters. Washington, DC: U.S. General Accounting Office, February 1992.

<sup>25</sup>Embrey, Kay. "Farmworkers in the United States". Ithaca, NY: Cornell Migrant Program, 2002

<sup>26</sup>Larson, Alice. "Environment/Occupational Safety and Health". National Center for Farmworker Health. 2000

<sup>27</sup>Villarejo, Don Ph.D. "The Occupational Health Status of Hired Farm Workers." Davis, CA: California Institute for Rural Studies, 1999



### Migrant and Seasonal Farmworker Demographics Fact Sheet

*It is estimated that there are over 3 million migrant and seasonal farmworkers in the U.S.<sup>1</sup>. In order to plan, monitor, and evaluate the health status and health needs of migrant farmworkers, demographic information is needed. Because of the difficulties in counting and surveying this highly mobile population, it is only possible to estimate and approximate information on migrants. For years, the data gathered by the National Agricultural Workers Survey (NAWS)<sup>2</sup> has been one of the most accurate sources for obtaining demographic information on migrant and seasonal farmworkers. A summary of their most recent findings is provided below.*

#### **General Farmworker Information**

81% of all farmworkers were foreign born, of these 95% were born in Mexico, 2% in Latin America, 1% in Asia, and 1% in other countries. The NAWS research also showed that foreign-born farmworkers had spent an average of 10 years in the United States and that one-third of the foreign-born had arrived within the last two years.

The average age of farmworkers surveyed was 31. Half of the 2,000 farmworkers surveyed in the 1997-1998 NAWS were under 29, 31% between 25-34, 21% between 20-24, and 18% between the ages of 35-44.

80% of migrant and seasonal farmworkers surveyed were men, 20% were women. The women were more likely to be U.S. born than the men, 34% and 15% respectively.

One half of farmworkers surveyed were married, and slightly less than one half were parents. Among those farmworkers who were parents, one half were not accompanied by their children when they migrated.

Farmworker women were more likely to live with their nuclear family than men (74% vs. 27% and 91% of farmworker mothers lived with their children as compared to 42% of farmworker fathers.

84% of farmworkers surveyed spoke Spanish, 12% English and 4% other languages such as Tagalog, Ilocano, Creole and Mixtec. The median level of education completed was 6<sup>th</sup> grade; 20% had less than three years of education. Only 15% of farmworkers surveyed had completed the 12<sup>th</sup> grade. 73% of farmworkers completed their education in Mexico, 21% in the U.S., 3% in Puerto Rico, 2% in Central America, 1% in South East Asia or the Pacific Islands.

Using school completion data as an indicator of ability to process written information, 85% of farmworkers would have difficulty in processing the written information regardless of the language in which the materials were printed.

56% of farmworkers surveyed migrate in order to secure employment. Of those 56%, 17% had at least two farm jobs more than 75 miles apart, and 39% moved between two or more jobs close in location yet more than 75 miles from their home base. 44% of farmworkers surveyed were non-migrants, working farm jobs less than 75 miles away from their home base.

58% of farmworkers make their homebase in the U.S., with 42% based out of the country. Survey results indicate that international migration decreases with farmworker exposure to life in the U.S.

Non-Mexican-born Latinos spent 56% of their year in farm labor, Mexican-born spent 48%, U.S. born spent 46%, and Asian-born spent 43%.

Farmworkers surveyed had worked an average of 8 years in U.S. agriculture. 30% of farmworkers 18 years and older had worked in U.S. crop agriculture for more than 10 years.

Labor contractors employ 19% of farmworkers. 61% of farmworkers worked in fruits, nuts, or vegetables; 1/3 were employed in crop harvesting and 1/4 were in semi-skilled technical jobs.

77% of farmworkers surveyed were paid by the hour, with an average hourly wage of \$5.94. 20% by piece rate and 2% were paid in combination. 56% of farmworkers worked between 31-50 hours per week, 30% worked 30 hours or less, and 15% worked more than 50 hours per week. 14% of farmworkers worked for their employer year round while 83% worked for employers on a seasonal basis.

- “Nearly three-quarters of U.S. farmworkers earned less than \$10,000 per year; three out of five farmworker families had incomes below the poverty level.”

“Underemployment is widespread within the farm workforce. In 1997-98, farmworkers spent, on average, about 47 percent of their time in U.S. farm work, 24 percent of their time living abroad, 19 percent of their time residing but not working in the U.S., and 8 percent of their time in U.S. nonfarm employment.”

Only 20% were covered by unemployment insurance, with a very low 5% being covered by employer provided health insurance. 45% of farmworkers reported being covered by unemployment insurance, 46% reported not being covered, and 9% did not know. 10% of farmworkers received paid holidays and/or vacations.

- 17% of farmworkers used needs-based services; 13% used Medicaid; WIC and Food Stamps were used by only 10%, and only 1% of farmworkers used Aid to Families with Dependent Children, Public Housing, or General Assistance.

### Population Demographics

The following chart breaks down the number of migrant and seasonal farmworkers and their dependents by state and national totals. The 1990 Atlas of Migrant and Seasonal Farmworkers and the 1993 Farmworker Enumeration Study are the two most common studies used by researchers when trying to determine the number of farmworkers within a given state. Both studies use different methodologies and come up with different numbers. The 2000 enumeration study is an update of 11 states using the methodology originally formulated in the 1993 Enumeration.

<u>STATE NAME</u>	<u>1990 ATLAS MSFW POPULATION<sup>4</sup></u>	<u>1993 ENUMERATION MSFW POPULATION<sup>1</sup></u>	<u>2000 ENUMERATION MSFW POPULATION<sup>3</sup></u>
Alabama	6,483	8726	
Alaska	0	91	
Arizona	31,795	41,130	
Arkansas	0	18,734	27,613
California	1,362,534	700,233	1,302,797
Colorado	49,347	39,290	
Connecticut	9,421	4,418	
Delaware	5,397	6,583	
Florida	435,373	238,247	286,725
Georgia	93,604	104,101	
Hawaii	0	18,728	
Idaho	119,968	49,625	
Illinois	20,840	86,214	
Indiana	7,716	30,299	
Iowa	34,230	10,010	
Kansas	18,533	3,150	

Kentucky	0	11,289	
Louisiana	0	7,357	12,349
Maine	8660	19,039	
Maryland	4,267	24,267	9,522
Massachusetts	7,813	4,414	
Michigan	67,227	161,020	
Minnesota	13,344	53,145	
Mississippi	0	15,139	18,191
Missouri	20,324	21,555	
Montana	13,026	14,480	
Nebraska	18,756	12,697	
Nevada	0	666	
New Hampshire	726	2,639	
New Jersey	13,522	32,007	
New Mexico	9,255	20,784	
New York	30,811	73,423	
North Carolina	344,944	142,144	156,893
Ohio	11,621	33,631	
Oklahoma	0	16,599	14,202
Oregon	128,564	147,245	103,453
Pennsylvania	24,711	43,963	
Puerto Rico	231,889	77,075	
Rhode Island	459	469	
South Carolina	18,560	52,445	
Tennessee	6,571	16,824	
Texas	500,138	370,815	362,724
Utah	8,983	17,991	
Vermont	1,785	2,148	
Virginia	15,079	41,876	
Washington	442,444	193,437	289,235
West Virginia	2,700	9,697	
Wisconsin	8,199	24,138	
Wyoming	6,800	3,299	
<b>TOTALS</b>	<b>4,171,419</b>	<b>3,038,644</b>	

<sup>1</sup> Larson, Alice; Plascencia, Luis. "Migrant Enumeration Study". Washington, D.C.: Office of Minority Health, 1993

<sup>2</sup> National Agricultural Workers Survey 1997-1998, Washington, D.C.: U.S. Department of Labor, 1999

<sup>3</sup> Larson, Alice. "Migrant Enumeration Study Update". Washington, D.C.: Office of Minority Health, 2000

<sup>4</sup> "An Atlas of State Profiles Which Estimate Number of Migrant and Seasonal Farmworkers and Members of Their Families", Rockville, MD. US Department of Health and Human Services, 1990



# NCFH

National Center for Farmworker Health, Inc.

## HIV/AIDS FARMWORKER FACT SHEET

*Lack of access to health care due to financial, geographical, cultural, and linguistic barriers coupled with often scant material and social support resources cast farmworkers into a high-risk arena for exposure to the HIV/AIDS virus. The migrant lifestyle characterized by frequent mobility, geographic isolation, lack of health education and socio-economic attitudes towards the use of condoms, and needle sharing among family members exacerbate these risks.*

### General Information

- In 2001, the cumulative number of AIDS cases reported was 816,149. Adult and adolescent AIDS cases total 807,075 with 666,026 cases in males and 141,048 cases in females. Through the same time period, 9,074 AIDS cases were reported in children under age 13.<sup>1</sup>
- Total deaths of persons reported with AIDS in 2001 were 467,910, including 462,653 adults and adolescents, and 5,257 children under age 15, and 388 persons whose age at death was unknown.<sup>2</sup>

The ethnic breakdown of AIDS/HIV cases were 343,889 cases among White, non Hispanics, 313, 180 cases among African Americans; and 149,742 cases among Hispanics.<sup>3</sup>

- In 2000, Hispanics represented 13% of the U.S. population (including residents of Puerto Rico), but accounted for 19% of the total number of new U.S. AIDS cases reported that year (8,173 of 42,156 cases). The AIDS incidence rate per 100,000 population (the number of new cases of a disease that occur during a specific time period) among Hispanics in 2000 was 22.5, more than 3 times the rate for whites (6.6), but lower than the rate for African Americans (58.1).<sup>4</sup>

Cumulatively, males account for 81% of AIDS cases reported among Hispanics in the United States, although the proportion of cases among females is rising. Females represent 19% of cumulative AIDS cases among Hispanics, but account for 23% of cases reported in 2000 alone. 60% of Hispanics reported with AIDS in 2000 were born in the U.S.; of those, 42% were born in Puerto Rico.<sup>5</sup>

- From the beginning of the epidemic through December 2000, 114,019 Hispanic men have been reported with AIDS in the US. Of these cases, men who have sex with men represent 42%, intravenous drug users account for 35%, and 6% of cases resulted from heterosexual contact. About 7% of cases were among Hispanic men who both had sex with men and injected drugs. Among men born in Puerto Rico, however, injection drug use accounts for a significantly higher proportion of cases than male-male sex.<sup>5A</sup>

### Farmworker Data

#### Prevalence

While the exact data on farmworkers infected with HIV is hard to determine, some researchers have identified rates of infection that range from as low as 2.6% of farmworkers to as high as 13%.<sup>6</sup> While the accurate rate is unknown it may be as much as 10 times the national average<sup>7</sup>

A South Carolina study found a 13 percent positive rate among 198 migrant workers tested for HIV and syphilis at migrant labor camps.<sup>8</sup> This contrasts with a 1987 study of migrant and seasonal farmworkers attending health clinics in North Carolina, which showed a 2.6 % seropositivity.<sup>9</sup>

In the summers of 1990 and 1991, a study of farmworkers who were tested for HIV after attending an hour-long AIDS prevention program in labor camps in New Jersey indicated that 3.2 percent of the 554 workers tested were HIV-positive. This rate is eight times the national seroprevalence of 0.4 percent, and also eight times the rate found in a 1988 study by the Centers for Disease Control.<sup>10</sup>

### **Risk Factors**

Some labor camps are composed primarily of single males. This factor, combined with very limited recreational facilities, social isolation, and cultural sanction of prostitution, has resulted in a high incidence of sexually transmitted disease in these camps.<sup>11</sup> A high incidence of both prostitution and intravenous drug use has been observed within some farmworker communities, especially in the east coast stream where single migrant men interact with day-haul workers from large cities with large IV drug-using populations.<sup>12</sup>

A study of 176 Mexican farmworkers in Northern California found that 9% had a history of STDs with two active cases of syphilis. While, 9% of the female respondents reported having a sexual partner that used injection drugs.<sup>13</sup>

### **Intravenous Drug Use**

- Because of the high price and inconvenience of going to a physician, many farmworkers often purchase and use medications, including injectable medications such as vitamins and antibiotics, from outside the U.S. In border areas, many classified medications are readily available without a prescription or the advice of a medical doctor. Injections are very popular because they are thought to work fast, and disposable syringes and needles are sometimes shared among family members<sup>14</sup>

In a study of 411 Mexican Farmworkers 20% reported self-administering lay therapeutic injections, 3.5% of whom shared needles with family members.<sup>15</sup> A 1997 study found similar results, with 12% of 532 Mexican farmworkers using lay injections to administer antibiotics or vitamins.<sup>16</sup>

### **Unprotected Sexual Activity**

Although the use of injectable drugs and needle sharing is a significant factor in some areas, a more common risk behavior is unprotected sex, and more particularly, patronage of a prostitute.<sup>17</sup> Organista conducted a survey that found that 44% of the 342 male respondents had had sex with prostitutes while working in the United States. A 1991 study revealed low condom use among both migrant workers and the prostitutes they patronize.<sup>18</sup>

Knowledge concerning the use of condoms is a problem among farmworkers. When asked about Vaseline as a lubricant with condoms, two-thirds either felt it was good or weren't sure. The majority also exhibited little knowledge about safe condom usage.<sup>19</sup> Fewer than half had ever used condoms, and of those that had been sexually active during the previous year, less than a third had used condoms each time. 75% "almost never carry condoms."<sup>20</sup>

"Mexican migrant women, as well as the wives of migrant men back in Mexico, are at risk for HIV due to risky behaviors of their male sex partners, which include IV drug use, prostitution use without condoms, sex between men, and needle sharing." One study found that 75% of 159 female migrants reported never carrying condoms. Many believed that carrying a condom would be perceived as a sign of promiscuity.<sup>21</sup>

### **Knowledge, Attitudes & Beliefs**

- Before bearing the cost of going to a doctor, many farmworkers will attempt self-treatment with herbal compounds and other folk remedies. Thus, HIV infection may not be diagnosed until AIDS-related disorders begin manifesting, and HIV may be spread unknowingly by the HIV-positive patient.<sup>22</sup>

A 1998 survey of migrants showed a low level of accurate knowledge about HIV/AIDS. Although the farmworkers displayed accurate knowledge concerning AIDS transmission, misconceptions were common. 43.8% thought mosquitoes could transmit AIDS, while 37.5% thought transmission was possible through public bathrooms or kissing. A quarter of those surveyed felt AIDS was solely a problem for homosexuals and drug addicts. Furthermore, one fifth felt they could determine if someone was infected by physical appearance. One-fifth also felt the test for HIV could cause AIDS.<sup>23</sup>

Respondents in a study of migrant and seasonal farmworkers in Georgia had a low level of accurate knowledge about the AIDS virus. One-third to one-half thought AIDS could be caught by sharing a drinking glass, swimming in a public pool, being coughed on, or giving blood. One fourth answered incorrectly on questions reflecting critical knowledge of transmission routes: 24.8% did not know that AIDS could be transmitted from women to men, 25.4% did not know it could be transmitted from men to women, and 25.9% did not know it could be transmitted through shared hypodermic needles. Over 35% did not realize that AIDS is a fatal disease.<sup>24</sup>



- In a study of 60 farmworker women visiting a health center in Virginia, 52% of the respondents answered incorrectly that AIDS could not be transmitted from women to men, 52% did not know if drugs were available to treat AIDS, 58% did not know if a vaccine was available, and 50% did not know AIDS could damage the brain or that it was a condition in which the body could not fight off disease. 39% answered incorrectly that you can get AIDS by being around someone who has it, and 23 percent did not know the answer to this question.<sup>25</sup>

International migration between Mexico and the United States has recently been highlighted as a source of rising HIV/AIDS rates in Mexico. Circumstantial connections include the relationship between California, with the highest incidence rate in the U.S., and the state of Jalisco, which has the second-highest incidence rate in Mexico. Most Mexican migrants make their temporary home in California, and Jalisco sends more migrants to the U.S. than any other Mexican state. In migrant-sending communities in Jalisco, women tended to have limited but accurate information regarding AIDS transmission (76% of those surveyed). However, few of those surveyed acknowledged condoms as an effective preventive measure. 34% felt at-risk for infection, yet many (64%) did nothing to prevent infection. When asked, 63% said they never used condoms, though 74% knew where to obtain them.<sup>26</sup>

<sup>1</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>2</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>3</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>4</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>5</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>5A</sup> Centers for Disease Control and Prevention. (31 March 2003). *Basic Statistics* [Online]. Available: <http://www.cdc.gov/hiv/stats.htm> [3 June 2003].

<sup>6</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>7</sup> Fitzgerald, K., Chakaborty, J., Shay, T., Khuder, S., & Duggan, J. (2003). HIV/AIDS knowledge among female farm workers in the Midwest. *Journal of Immigrant Health*, 5 (129-136).

<sup>8</sup> Jones, J. et al. (1992) HIV-Related Characteristics of Migrant Workers in Rural South Carolina. *Migrant Health Newline*, Clinical Supplement p. 4.

<sup>9</sup> Centers for Disease Control and Prevention. (1988) HIV Seroprevalence in Migrant and Seasonal Farmworkers North Carolina, 1987. *Morbidity and Mortality Weekly Report*, 37. 517-519.

<sup>10</sup> Lyons, M. [1992] Study Yields HIV Prevalence for New Jersey Farmworkers. *Migrant Health Newline*, Clinical Supplement pp. 1-2.

<sup>11</sup> Ryan, R., Foulk, D., Lafferty, J., and Robertson, A. (1988). Health Knowledge and Practices of Georgia's Migrant and Seasonal Workers Relative to AIDS: A Comparison of Two Groups. *Georgia Southern College, Center for Rural Health*.

<sup>12</sup> Information Release on Viviremos/Se Pou Nou Viv/Learn to Live. *National Coalition of Advocates for Students*, Boston, MA, p. 2.

<sup>13</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>14</sup> Be Aware! Common Cultural Practices and AIDS. (1987). *Migrant Health Newline*, 4.

<sup>15</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>16</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>17</sup> Bletzer, Keith, V. *No Da, No, Si Da! HIV Risk Reduction Education and Latino Farmworkers in Rural Michigan*, JSRI Working Paper #18, The Julian Samora Research Institute, Michigan State University, East Lansing, Michigan, 1999., 1.

<sup>18</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>19</sup> Organista, P.B., Organista, K.C.; et. al. (1998). Exploring AIDS-Related Knowledge, Attitudes, and Behaviors of Female Mexican Migrant Workers. *Health & Social Work*, 23, 96-103. Retrieved March 27, 2003 from Academic Search Premier database

<sup>20</sup> Organista, P.B., Organista, K.C.; et. al. (1998). Exploring AIDS-Related Knowledge, Attitudes, and Behaviors of Female Mexican Migrant Workers. *Health & Social Work*, 23, 96-103. Retrieved March 27, 2003 from Academic Search Premier database.

<sup>21</sup> Organista, K.C., (1998). Culturally Competent HIV Prevention With Mexican/Chicano Farmworkers. *JSRI Occasional Paper #47*, The Julian Samora Research Institute.

<sup>22</sup> Be Aware! Common Cultural Practices and AIDS. (1987). *Migrant Health Newline*, 4.

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# NCFH

National Center for Farmworker Health, Inc.

## MATERNAL & CHILD HEALTH FACT SHEET

*Nearly four million babies are born in the United States each year. Many of the high costs associated with poor pregnancy outcomes are preventable and unnecessary. Due to mobility, the pregnant farmworker woman and infant child face great obstacles in obtaining adequate and timely prenatal and postnatal care. Likewise, once born, the health of farmworker children is one of the poorest of any group in the country and is a major concern within the migrant health field. The migratory lifestyle, language barriers, poor living conditions, and a lack of sufficient financial resources or health insurance make access to health care and the continuity of care incredibly difficult.*

### General Information

On an average day in the United States 11,120 babies are born. Of these births 1,280 babies are born preterm, 841 babies are born with low birth weights, 418 babies are born to mothers who started prenatal care in the third trimester or who received no prenatal care at all, 411 babies are born with a birth defect, and 76 of these babies will die before they reach their first birthday.<sup>1</sup>

According to the World Population Bureau, the United States' 2002 infant mortality rate was 6.6 deaths per 1000 births.<sup>2</sup> Though the United States has the largest Gross Domestic Product in the world (2000/2001)<sup>3</sup>, its current infant mortality rate is higher than such significantly poorer nations as Ireland and Cuba.<sup>4</sup>

Latinas have the highest birth and fertility rates in the U.S. Nationally, the number of live births per 1,000 women ages 15-44 years (fertility rate) in 1990 was 107.7 for Latinas compared to 67.1 for non-Latino women, the highest fertility rates being among Mexican women.<sup>5</sup>

In 1998, for mothers of Mexican ethnicity, 5.6 out of every 1000 children under one year of age died. The rate for babies with non-Hispanic white mothers was 5.98 per 1000 births for 1998, a decline from the previous year's rate of 6.02. The rate for babies with non-Hispanic black mothers was 13.88 per 1000 births.<sup>6</sup>

Proper management of nutrition and dietary intake is essential for both maternal and infant health. Excessive intake of vitamins and minerals are as destructive to the growing fetus as deficient intakes. Intake of folate and vitamins A and D in the early stages of pregnancy have been linked to malformations in the baby<sup>7</sup> while inadequate nutrition can cause not only birth defects like neural tube defects and mental retardation<sup>8</sup>, but also increase the risks for heart disease, diabetes and high blood pressure later in the baby's life.<sup>9</sup>

According to the CDC, "an estimated 700,000 children aged 1-2 years are iron deficient, putting them at increased risk of developmental delays and impaired cognitive ability." Nearly a third of low-income women are anemic by the third trimester, and a quarter of these women do not gain enough weight throughout their pregnancies, thus increasing the risk of pre-term and low-weight babies.<sup>10</sup>

Hispanics and Latinos typically exhibit lower levels of immunization than their White counterparts. In 1995, 58.8% of Latino children in North Carolina were immunized compared to 66.4% of White children.<sup>11</sup>

According to a recent study, 15.8 percent of people in the United States, or 42.8 million people, were without health insurance coverage. Among people under 65, 17.9 %, or 42.6 million people, were uninsured. Young adults 19-24 years of age are more likely than other age groups to be uninsured. Almost one-third (32 percent) of young adults were uninsured in the first half of 1999. Among people under 65, Hispanics (36 percent) and blacks (21 percent) are much more likely than whites (14 percent) to be without health insurance. Among children under 18, 13.6 percent, or 9.8 million children, were uninsured in the first half of 1999.<sup>12</sup>

### **Farmworker Data**

There are an estimated 3-5 million migrant and seasonal farmworkers in the United States, 16% of whom are women.<sup>13</sup>

Of the farmworkers with children, 66% migrate with their children, and an estimated 250,000 children migrate with their parents each year.<sup>14</sup> This high mobility inhibits long-term relationships with health providers and creates barriers to continuous and follow-up care.<sup>15</sup>

A 1998 study in Wisconsin reported that 1/3 of the mothers participating in that study self-rated their health as either fair or poor, compared to only 1/10 of the corresponding population in the U.S.<sup>16</sup>

### **Prenatal Care**

- Geographic isolation inhibits access to prenatal care, and barring any obvious problem, migrant women are not likely to seek out prenatal care.<sup>17</sup> In one study, only 42% of pregnant migrant farmworkers sought care during the first trimester of their pregnancy. Comparatively, 76% of all pregnant women nationally sought care during the first trimester.<sup>18</sup> Another study, based in California, found that 29% of the participants did not seek prenatal care until their second trimester, while 14% waited until the final trimester.<sup>19</sup>

Based on hospital claims data, the estimated average cost for postnatal care for women without prenatal care was \$3,930, compared to \$1,589 for a woman who had had prenatal care. The average long-term cost of care (incremental cost of health care, child care, and special education from birth to 15 years) for women without prenatal care is estimated to be \$4,839, compared to \$1,592 for women who have had prenatal care.<sup>20</sup>

Data from the Pregnancy Nutrition Surveillance System found that of 4840 migrant women monitored, 52 percent (1835) had less than recommended weight gain throughout their pregnancies. 23.8 percent had undesirable birth outcomes: 6.7 percent had low birthweight, .7 percent had very low birthweight, 9.9 percent had preterm births, while 6.5 percent were small for gestational age.<sup>21</sup>

### **Pediatric Care**

- In a study done by Alan Dever, he found that migrant clinics had twice as many visits with children younger than 15 years of age as ambulatory care settings in general. Overall, 43.9% of the migrant workers surveyed had more than one morbidity. The highest rate of co-morbidity was for those patients younger than 5 years of age and older than 64 years of age.<sup>22</sup>
- In two other studies, one found that 61% of the migrant children had at least one health problem while 43% had two or more problems.<sup>23</sup> While another found more than a third of the migrant children examined suffered from "intestinal parasites, severe asthma, chronic diarrhea, Vitamin A deficiency, chemical poisoning or continuous otitis media."<sup>24</sup>

### **Nutrition**

- A study examining the diet of Mexican-origin migrants found that 61.2% of the diets were deficient in Vitamin A; 30.6% deficient in Vitamin C; 57.1% deficient in calcium, and 42.8% deficient in Riboflavin.<sup>25</sup>

Although studies have shown that migrant parents understand the importance of a balanced diet for their children, a lack of money prohibited them from providing such diets. Poor dental health, obesity, diabetes, anemia and cardiovascular disease are among the most common nutrition-related health problems found in migrants of Mexican descent.<sup>26</sup>

### **Occupational Health & Safety**

- Occupational hazards associated with farmwork pose significant risks to pregnant women. "Prolonged standing and bending, overexertion, extremes in temperature and weather, dehydration, chemical exposure, and lack of sanitary washing facilities in the fields. These occupational hazards might lead to spontaneous abortion, fetal malformation, or growth retardation and abnormal postnatal development."<sup>27</sup>

Exposure to pesticides, infectious disease, and sub-standard living conditions makes farmworker children susceptible to poor health.<sup>28</sup>

Another significant health risk for migrant children is their exposure to pesticides. A study conducted in New York State found that 48% of the migrant children surveyed worked in fields still wet with pesticides with 36% having been sprayed directly with pesticides.<sup>29</sup>

### Other

- A study found that migrant farmworker children consistently receive their immunizations “significantly later than the recommended schedule.” This study found that, while migrant children are eventually adequately protected, they are unprotected at an early age when they are most susceptible to diseases.<sup>30</sup>

Although most migrant farmworkers are eligible for Medicaid, few are able to take advantage of such benefits. The constant movement associated with migration prevents enrollment in State-administered public health insurance programs. 72.8% of migrant and seasonal farmworker children have no health insurance.<sup>31</sup> In a 1998 Wisconsin-based study, 64% of migrant children’s medical bills were paid for by Medicaid, with 20% being paid by Migrant Health funds and 16% paid by private insurance. However, 20% of the families surveyed paid for some or all medical bills “out of pocket.”<sup>32</sup>

Migrant children are also at a greater risk for maltreatment. Another study in New York State “found a child maltreatment incident rate of 40.2/1000 per person years, six times the state average.”<sup>33</sup>

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- <sup>17</sup> Ibid.
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## OCCUPATIONAL SAFETY

*The agriculture industry is consistently one of the most dangerous industries in which to work in the United States. The occupational safety risks involved in farm labor are numerous and can include exposure to pesticides, skin disorders, infectious diseases, lung problems, hearing and vision disorders, and strained muscles and bones. Because of their general lack of access to quality medical care, these risks are even greater for the 2.5 million migrant and seasonal farm workers who work in the fields every year.*

### General Information

Although agricultural crop and livestock production constitutes only 2% of the workforce, from 1994 to 1999, it represented 13% of all occupational deaths.<sup>i</sup> It is among the most dangerous occupations in the nation.<sup>ii</sup> In 2001, for every 100,000 agricultural workers in the U.S. there were 22.8 deaths for a total of 228 occupational deaths in agriculture. This compares to a rate of 4.3 deaths for every 100,000 workers in the total U.S. workforce during this same period.<sup>iii</sup>

Injuries are not limited to adults. Child Labor Laws differ from state to state and many children work in the fields, sometimes alone, other times accompanied by parents. In *Agricultural Safety Information* published by NIOSH in 2001, they report that an average of 103 children are killed annually working on farms (1990-1996).<sup>iiib</sup>

Every day, about 500 agricultural workers suffer lost-work-time injuries, and about 5% of these result in permanent impairment.<sup>iiib</sup>

In a study of 287 migrant workers, 25 had reported an injury in the previous 3 years. Of these, 17 considered medical attention necessary. 41% of the injured workers did not receive medical attention within 24 hours, while 24% received no attention at all.<sup>iii</sup> Another study found sprains and strains to be the most common occupational injury, constituting 43% of agricultural injuries. Fieldwork was the activity most commonly associated (39%) with injury.<sup>iv</sup>

### Musculoskeletal

Musculoskeletal injuries are inherent to agricultural labor. Harvesting requires heavy and repetitive lifting and quick wrist and hand movements, and the piece-rate wage system encourages a rapid work pace. Such ergonomic conditions lend themselves to back and muscle pain. "In 1996, 34% of lost-time injuries were sprains and strains and 24% were back injuries."<sup>v</sup>

### Respiratory Illness

Agricultural work exposes laborers to pesticides, dust, plant pollen, molds and other respiratory irritants. Prolonged exposure can lead to chronic respiratory illness.<sup>vi</sup>

Obstructive lung disease has been linked to livestock and grain work, and asthma, hypersensitivity pneumonitis, and other respiratory problems have been linked to organic dusts.<sup>vii</sup>

## Skin Disorders

Skin disorders are common in agricultural workers, which have the highest incidence of skin disorders of all industrial classifications. In 1996, the incidence rate for all agricultural production was 27.6 per 10,000 workers, climbing to 28.1 per 10,000 workers for crop production. Comparatively, the rate was 6.9 per 10,000 workers for all private industry.<sup>viii</sup>

A 1991 study published by the Migrant Clinicians Network concluded that dermatitis was the primary cause for clinic visits for males ages 20-29. Dermatitis was 150% more likely in the migrant study group than in the general population.<sup>ix</sup>

## Eye Injury

“Similar to dermatitis causing agents, farmworkers are exposed to potential eye irritants as they work including dust, pollen and chemicals. Untreated chronic eye problems can lead to serious damage; tree branches and accidents with agricultural tools can cause abrasions.”<sup>x</sup>

Caused by exposure to chemicals, dusts and plant materials, eye problems are common in agricultural workers.<sup>xi</sup> In 1996, eye injuries in agricultural employees occurred 14.2 times for every 10,000 workers, representing 4.8% of all lost-workday injuries.<sup>xii</sup> Exposure to pesticides is a common cause of eye injuries. “About 25% of California reports of pesticide effects involve the eye.”<sup>xiii</sup>

## Infectious Diseases

Infectious diseases have been found to be associated with agricultural employment. Such diseases are often due to poor sanitation at work and home sites, including inadequate washing and drinking water.<sup>xiv</sup> In the 2000 National Agricultural Workers Survey (NAWS) 15% of the farmworkers reported having no access to water for washing, while 16% had no access to toilets in the fields.<sup>xv</sup> In an examination of 27 North Carolina labor camp water supplies, 44% tested positive for coliform contamination. A study in Utah “found that workers on farms without sanitation facilities had a clinic utilization rate for diarrhea 20 times higher than that of the urban poor.”<sup>xvi</sup>

In one study, 28% of a California farm worker community lived in ‘back houses’—sheds, garages, and shacks. Such poor, crowded living conditions are conducive to the spread of infectious diseases, particularly tuberculosis. A CDC study suggests that farmworkers are six times more likely to become infected with tuberculosis than the general population.<sup>xvii</sup>

Urinary tract infections are common among migrant farmworkers due to the lack of toilet facilities; they are particularly prevalent among women because their shorter urethra allows bacteria easy access to the bladder. These infections during pregnancy may contribute to miscarriages, fetal or neonatal deaths, and premature delivery.<sup>xviii</sup>

In one study, 28% of migrants surveyed had some form of parasitic infection. It is estimated that this rate is anywhere from 11 to 59 times higher than the rate of parasitic infection in the general population of the United States.<sup>xix</sup>

## Pesticide Exposure

Pesticide exposure is the cause of a variety of occupational illnesses, including eye injuries, cancer, respiratory illnesses and dermatitis. Between 1982 and 1993, California averaged 1500 reports of pesticide exposure each year. 41% of these exposures occurred in agricultural workers.<sup>xx</sup>

Despite improvements in the enforcement of the Worker Protection Standard, many workers have not received training in pesticide application.<sup>xxi</sup> Between 1992 and 1996, nearly one-fifth of all hired crop workers had mixed or applied pesticides. Only 50% of these received training, while only 79% are able to read English well.<sup>xxii</sup> “The result is that agricultural workers are often ill prepared to protect themselves from the potentially hazardous chemicals found around them.”<sup>xxiii</sup>

High air temperatures and humidity put agricultural workers at special risk of heat stress. Pesticide workers and early-entry workers are at particularly great risk. The special clothing and equipment they wear for protection from exposure to pesticides can restrict the evaporation of sweat, blocking the body's natural way of cooling itself, which results in a buildup of body temperature. Exposure to certain pesticides can also produce sweating, and there can be combined effects with exposure to heat. In addition, pesticides are absorbed through hot, sweaty skin more quickly than through cool skin.<sup>xxia</sup>

Although high cancer incidence rates indicate a link between cancer and agricultural labor, the migrant lifestyle has made conclusive studies difficult.<sup>xxii</sup>

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# NCFH

National Center for Farmworker Health, Inc.

## ORAL HEALTH

*According to an analysis of migrant health center encounter data, dental disease ranks as one of the top five health problems for farmworkers ages 5 through 29, and remains among the top twenty health problems for farmworkers of all other ages presenting for care. For children ages 10 to 19, dental disease is the chief complaint.<sup>1</sup> Over the last eighteen years, numerous local level studies of the oral health of farmworker children and adults have been conducted. The findings consistently show farmworkers of all ages to have a level of oral health far worse than what is found in the general population.<sup>2,3,4,5,6</sup>*

### General Information

Tooth decay is the most common oral health problem in the United States. Tooth decay is caused by the bacteria *Streptococcus Mutans* which are transmitted by the mouth through saliva by sharing eating utensils, food or drink, and kissing. Once these bacteria come in contact with certain carbohydrates (sugars) they absorb them and produce acid. This acid breaks down the enamel of teeth, creating tooth decay.<sup>7</sup> About one-third of persons across all age groups have untreated decay. Over one-third of poor adults (18 years and older) have at least one untreated decayed tooth compared to 11 percent of non-poor adults.<sup>8</sup>

As of 2002, the Centers for Disease Control and Prevention (CDC) statistics show that only 66% of the U.S. population receives fluoridated water through the taps in their homes. This means that close to 100 million people do not receive the benefits of fluoridated water<sup>9</sup>.

Tooth decay remains one of the most common diseases among children. More than half of children aged 5-9 have had at least one cavity or filling. 78 % of 17-year-olds have experienced tooth decay. By age 17, more than 7 % of children have lost at least one permanent tooth to decay. The daily reality for children with untreated oral disease is often persistent pain, inability to eat comfortably or chew well, embarrassment at discolored and damaged teeth, and distraction from play and learning. More than 51 million school hours are lost each year because of dental-related illness.<sup>10</sup>

According to the Surgeon General's 2000 report on oral health, only 30% of Mexican American children aged 12-17 were free of caries. 32% of Caucasians and 41% of African Americans in the same age group were free of caries. However, Caucasians were more likely to have their caries treated (87%). Only 63% of Mexican Americans and 60% of African Americans had their caries treated.<sup>11</sup>

- A recent CDC study found that, for years 1988-1994, 34.9% of the Mexican American population aged 2-5 years had untreated dental caries, while the rate for those aged 6-17 years was 37.2%. Untreated caries were found in 39.9% of those aged 18-64, and in 43.8% of those 65 and older. The same study examined Mexican Americans living below the poverty line, and found significant increases in the prevalence of untreated caries. 46.4% of those aged 6-17 and 52.4% of those aged 18-64 had untreated caries.<sup>12</sup>

More than half of all adolescents suffer from some form of periodontal disease. The proportion among Hispanic adolescents is much higher, at 81% for Mexican American adolescents, 72% for Cuban adolescents, and 95% for



## Puerto Rican adolescents

Over the past 20 years, the number of adults missing all their natural teeth has declined from 33 percent to 20 percent for those aged 55 to 64 years, and from 2 percent to 0.4 percent for those adults between 18 to 34 years. However, 0.4 percent means a surprising 1 out of 250 younger adults are missing all their teeth.<sup>14</sup>

In 1998, a total of \$53.8 billion was spent on dental care – 48 percent was paid by dental insurance, 4 percent by government programs, and 48 percent was paid out-of-pocket. Expenditures in the year 2000 exceeded \$60 billion.

Over 108 million people lack dental insurance, which is over 2.5 times the number who lack medical insurance.<sup>16</sup>

An estimated 30 million children 18 years and under in the United States do not have dental insurance. Only about 50% of Caucasian children, 39% of African American children, and 32% of Mexican American children have dental insurance.

In 1996, only 1/5 of the children covered under Medicaid received any dental care. Only 30% of the children from families living below 200% of the federal poverty level received any dental care.<sup>17</sup>

Although 65.1% of the U.S. population had visited the dentist in 1999, disparities in utilization of dental services persist. According to the Center for Disease Control (CDC), only 57.1% of Hispanics had visited a dentist in 1999. During the same year, 60.3% of African Americans and 71.5% of Caucasians visited a dentist.<sup>18</sup>

Health centers' capacity to provide dental care is limited by costs of dental equipment, inability to recruit and retain dental care providers, and insufficient revenues to support dental care (Allen, 20). Only 14% of the 8.6 million people who used health centers received center-based dental care in 1998.<sup>19</sup>

## Farmworker Data

A study in Colorado found that of 231 adult Hispanic migrant and seasonal farmworkers, 22% had never seen a dentist, and 56% had not received regular dental care. 85% of the participants required dental care.<sup>20</sup>

The most common barriers to receiving proper oral health care are cost and time.<sup>21</sup> 57% of the migrant farmworkers in one study cited limited clinic hours as a barrier to care, while 33% reported high fees as a deterrent.<sup>22</sup> Language and cultural differences are also significant barriers. One study examining utilization rates found that 57% of those that spoke English had visited the dentist while only 34% of Spanish speakers had done so.<sup>23</sup> Another reason for the broad disparity between the oral health of farmworkers and the rest of the population is that farmworkers typically do not seek care unless they have an oral health emergency.<sup>24</sup> Preventive applications and health education to promote prevention are not part of emergency care. Most oral health prevention education is conducted during the course of visits to the dentist for check-ups and cleanings. In other words, prevention is put into practice with the delivery of care that farmworkers usually do not receive.<sup>25</sup>

A study in Washington State found that oral health problems reflected the lack of early professional treatment, sporadic exposure to optimal fluoride intake due to migratory patterns, and dietary patterns that when combined with inadequate oral hygiene practices are highly cariogenic.<sup>11</sup>

A study of migrant farmworkers in Illinois found that 51% of the participants had not sought care in the previous year. Most respondents reported seeking care only in the presence of pain or discomfort.<sup>26</sup> Another study examined the children of Mexican American workers, and found only 46% had visited the dentist before.<sup>27</sup>

Studies focusing on Baby Bottle Tooth Decay (BBTD), a particular type of early childhood caries, found high rates of decay among farmworker children. BBTD is a disease of young children, characterized by a distinctive pattern of severe tooth decay in the primary dentition. BBTD has been associated with the practice of lulling babies to sleep with a bottle of milk or sweet liquid. The practice allows liquid to pool in the mouth, which can promote decay. Treatment of severe BBTD, especially for children less than 2 ½ years of age requires physical restraint, sedation or general anesthesia, and sometimes hospitalization and can be very expensive. The prevalence of BBTD in the general population is 5% or less, while among disadvantaged urban children it was found to be 20%. In a study of 125 farmworker children under the age of 4 in Yakima, Washington, published in 1992, 29.6 % of the children had BBTD.<sup>28</sup>

A 1999 NAWS Study revealed that poor dental health outcomes persist among farmworkers. 49.5% of male farmworkers surveyed and 44.4% of women reported never going to a dentist.<sup>29</sup> In a clinical assessment done of farmworkers in California, the study documented that 33.5% showed at least one untreated decayed tooth. 30% of male subjects and 37.5% of females presented missing or broken teeth. 14.4% of the total subjects had gingivitis.<sup>30</sup>

Migrant farmworkers experience tooth decay and periodontal disease twice as often as the general population.<sup>31</sup> Migrant groups appear to exhibit more advanced periodontal disease than do non-migrant Hispanic groups. 83% of farmworkers exhibited pocketing as compared to 49% in non-migrant Hispanics.<sup>32</sup>

Studies have shown that migrant school children have significantly higher rates of decay and lower rates of treatment compared to the general U.S. school population. One University of Michigan study found that, compared to U.S. school children of the same age, migrant farmworker children had higher rates of decay (65% vs. 16%) and lower rates of treatment (29% vs. 76%).<sup>33</sup> In a California-based survey of Hispanic children, 85% of those surveyed had decayed tooth surfaces. Rates were highest amongst those aged 5 to 6 (74.6%), followed by those aged 3 and 4 (55.3%).<sup>34</sup>

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# NCFH

National Center for Farmworker Health, Inc.

## TUBERCULOSIS

*Tuberculosis is an infectious disease that continues to be a significant health problem among migrant and seasonal farmworkers. Farmworkers are at greater risk for becoming infected with TB than the general population.<sup>1</sup> Efforts to control TB have been successful in many cases world wide leading to overall declines in those infected with the disease, however this decline has not been seen in the migrant farmworker population.*

### General Information

Currently, 1.9 billion people are infected with tuberculosis world wide each year, while 1.9 million people annually die from the disease<sup>1</sup>

The tuberculosis organism is transmitted primarily through the air on small airborne droplets which are produced when persons with tuberculosis of the lung or larynx sneeze, cough, speak, or sing. These droplets can linger in the air for extended periods of time, and anyone who inhales them may become infected<sup>2</sup>. Caused by *Mycobacterium tuberculosis*, tuberculosis is usually not as infectious as some other communicable diseases such as measles, but infectiousness varies considerably from case to case. When persons repeatedly share the same air with an infectious patient, they can be infected.<sup>3</sup>

TB sometimes affects parts of the body other than the lungs. This is called extra-pulmonary TB, and it may affect bones, joints, the nervous system, urinary tract, and other areas. This happens more frequently in persons with HIV infection.<sup>4</sup>

Although infection lasts for years, those with strong immune systems will not typically exhibit symptoms. While in this asymptomatic state, also known as latent tuberculosis infection, those infected are not contagious. In such a case, a positive skin test is the only indication of infection. However, anti-tuberculosis medicine is still needed to eliminate the infection, and if left untreated, as many as 10% will develop active TB disease.<sup>5</sup> Fever, weight loss and cough usually accompany active tuberculosis.<sup>6</sup>

Based on information from local reporting systems, tuberculosis infection rates steadily declined through much of the 20<sup>th</sup> century. In 1953, when the national reporting system was established, the infection rate was 53 per 100,000 population. By 1984 the incident rate was only 9.4 per 100,000 population, resulting in an average annual decline of 5.8%. However, between 1985 and 1992 this trend reversed, and incidents of infection rose. In 1985, the annual case total was 22,201. By 1992, the total was 26,673. Since then however, the annual total has declined—7.3% annually between 1992 and 2001.<sup>7</sup> In 2000, 16,377 cases of tuberculosis were reported, representing a 7% decrease from 1999<sup>8</sup>.

Multi-Drug Resistant Tuberculosis, or MDR-TB, is commonly associated with compromised immune systems, inconsistent treatment, and multiple infections. In a 1992 survey conducted in New York City, 33% of all cases of tuberculosis were resistant to at least one anti-tuberculosis drug. 19% were resistant to two or more. From 1990 to early 1992, the CDC investigated outbreaks in institutional settings in New York and Florida (such as prisons and homeless shelters). Over 200 cases were reported, mostly in HIV patients. MDR-TB extends treatment from 6 to up to 24 months, with a mortality rate up to 89%<sup>9</sup>. On average, foreign-born persons are more likely to develop MDR-TB than the rest of the population. Of the

41 MDR-TB cases reported in 2000, 72% occurred in foreign-born persons<sup>10</sup>.

HIV infection appears to have increased the incidence of tuberculosis. Because HIV-infected people have weakened immune systems, they have much greater chances of developing active TB disease, either by activation of latent infection or by being newly infected. It has been estimated that an individual who is infected with both HIV and TB has a seven to ten percent chance per year of developing active TB, as opposed to the 10 percent lifetime chance of someone who is infected with tuberculosis but not HIV. An estimated 11 million people worldwide are infected with both HIV and TB. Estimates of the proportions of individuals similarly infected in the United States have varied greatly. Worldwide, TB is the leading cause of death among people who are HIV positive, accounting for 15% of AIDS deaths, 50% in Africa alone. However, this is not the case in the US. TB is a much less common cause of death in HIV infected individuals. However, unlike other diseases associated with AIDS, tuberculosis is especially serious because it can be spread by airborne transmission to adults and children in the community who are not at risk for AIDS.<sup>11</sup>

### Farmworker Data

Migrant Farmworkers have especially high rates of Tuberculosis infection, and studies of screening tests among migrant farmworkers have revealed that 37% of farmworkers tested positive for TB in the Delmarva Peninsula,<sup>12</sup> 41% were positive in North Carolina,<sup>13</sup> 44% in Florida,<sup>14</sup> and 48% in Virginia.<sup>15</sup>

Farmworkers are at an increased risk for tuberculosis for a variety of reasons. An important factor to consider is the place of origin of many farmworkers. While the total number of cases in the United States has declined, the rate at which minorities and the foreign-born are infected has increased.<sup>16</sup> This stable morbidity rate amongst foreign-born persons, relative to decline rates amongst the U.S.-born population, indicates that most are infected in their country of origin.<sup>17</sup> In 1986, 4,925 foreign-born persons were infected, representing 22% of the total.<sup>18</sup> In 1992, they represented 27% of the total, while by 2000 they constituted 46% with 7,554 of the total 16,377. Of these, 41% were from Central and South America and the Caribbean.<sup>19</sup> 81% of all farmworkers are foreign-born, and 77% of the total coming from Mexico. An additional 2% are from various points in Latin American. 88% of all farmworkers are Hispanic.<sup>20</sup>

Many farmworkers enter this country from areas of the world where tuberculosis rates are much higher than in the U.S., such as Southeast Asia, Latin America, and Haiti. Mexico for instance, which is the point of origin of many farmworkers, has a rate of 27 cases of Tuberculosis per 100,000 people.<sup>21</sup>

By 2000, 77% of all TB cases in the United States were among racial and ethnic minorities.<sup>22</sup> Rates for Asians/Pacific Islanders (32.9 per 100,000), African Americans (15.2 per 100,000), Hispanic (10.8 per 100,000) and Native Americans (11.4 per 100,000) are several times higher than that of Caucasians (1.9 per 100,000).<sup>23</sup> Haitian and Caribbean farmworkers are at the greatest risk overall (up to 85%).<sup>24</sup>

In 1996, a report by the CDC stated that single drug resistant tuberculosis rates are 1.7 – 5 times higher among foreign-born Hispanic patients compared to Hispanics born in the United States. Similarly, prevalence of multi-drug resistant strains of tuberculosis was 6.8 times higher among foreign-born Hispanics.<sup>25</sup>

In part, the increased risk of tuberculosis can also be considered an occupational hazard of migrant farmworkers with malnutrition and poor, crowded housing conditions among these hazards.<sup>26</sup> An examination of pulmonary tuberculosis deaths from 1979 to 1990 indicated that farmworkers were twice as likely to contract tuberculosis as any other employed group. According to one CDC survey, farmworkers represented 5% of all employed TB cases.<sup>27</sup>

Tuberculosis in migrant farmworkers presents special problems because of the need for long-term treatment or preventive efforts, contact examinations, population mobility, fear of deportation, cost of treatment, and other barriers to health care.<sup>28</sup> The transient nature of farm work and the long duration required for tuberculosis treatment make it difficult to assure patient compliance with screening programs, preventive therapy, and chemotherapy for farmworkers.<sup>29</sup> Language barriers and limitations in knowledge about tuberculosis may contribute to misunderstandings about the importance of screenings and if identified, completing the treatment regimen.<sup>30</sup>

Complete eradication of the tuberculosis infection requires 6 months of consistent treatment, which is often very difficult to accomplish with the transient nature of migrant farmwork and the economic conditions faced by many migrant farmworkers. When treatment is interrupted, patients are more likely to develop MDR-TB.<sup>31</sup>

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