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GOOD HEALTH IS ESSENTIAL for the well-being of migrant farmworkers' children and directly affects their educational performance. However, there is little nationwide, accurate information on the health status of migrant farmworkers, and even less on that of migrant children. Many baseline indicators of the health status of this population, such as the population size, mortality and survival rates, perinatal outcomes, and chronic diseases are unknown (Rust, 1990). The literature contains mostly local or regional data and often only presents medical reasoning by referring to studies that were not directly targeted on the migrant population. This digest summarizes available information on migrant children's health status, drawn from literature reviews and major primary research published in recent years.

### Migrant Children's Health in General

Migrants and their families have severely poorer physical health compared to the general population. The infant mortality rate among migrants is 125 percent higher than the general population, and the life expectancy of migrant farmworkers is 49 years in contrast to the nation's average of 75 years (National Migrant Resources Program, 1990). A survey of migrant women and children in Wisconsin found a cumulative mortality rate by age 5 for the migrant sample of 46 deaths per 1,000 children, 1.6 times greater than the rate of 29 deaths per 1,000 children for the U.S. population in the same period (Slesinger, Christenson, & Caultley, 1986). The same study also found a 10.9 percent rate for chronic health conditions among migrant children, as compared to the same period's national rate of 3 percent.

Commonly reported health problems among migrant farmworkers and their children include: lower height, weight, and other anthropometric attainments; respiratory disease; parasitic conditions; skin infections; chronic diarrhea; vitamin A deficiency; and undiagnosed congenital and developmental problems. In addition, accidental injuries, heat-related illness, and chemical poisoning are highly prevalent among the population (American Academy of Pediatrics, 1989; Shotland, 1989; Koch, 1988; National Rural Health Care Association, 1986). With some overlaps, these problems may be grouped into two categories: occupation-related health problems and poverty-related health problems.

# Occupation-Related Health Problems

Agriculture is the most dangerous occupation in the U.S., with about 23,800 children and adolescents injured and 300 deaths from these injuries between 1979 and 1983 (General Accounting Office, 1992; National Rural Health Care Association, 1986). Legal protection for migrant workers and their children, however, has been limited (National Migrant Resources Program, 1990; General Accounting Office, 1992). About 25 percent of farm labor in the U.S. is performed by children (Farmworker Justice Fund, 1990). Studies

show that at least one-third of migrant children, as young as 10, work on farms to help earn family incomes; others may not be hired laborers but are in the fields to help their parents or simply due to a lack of child care services (General Accounting Office, 1992).

The health of these children is at high risk from farm injuries and pesticide poisoning. Agricultural work is associated with various types of accidents: falling from heights; drowning in ditches; and injuries from knives, machetes, faulty equipment, and vehicles (National Rural Health Care Association, 1986). Exposure to pesticides (including touching the residues, breathing the air, drinking the water, and eating the food) plus the lack of sanitary facilities (for washing, drinking water, and toilets) often cause acute effects such as irritation in the respiratory tract, skin, and eyes; systemic poisoning; and sometimes death. Chronic effects include cancer, birth defects, and neuropsychological problems (General Accounting Office, 1992). Children are more susceptible than adults because they absorb more pesticides per pound of body weight and their developing nervous systems and organs are vulnerable. A recent study in New York State (Pollack, 1990) found over 40 percent of interviewed children had worked in fields that were wet with pesticides, and 40 percent had been sprayed while in the fields. Cases of pesticide poisoning among migrant workers were repeatedly reported (Farmworker Justice Fund, 1990).

Presence in the fields also causes children many other health problems that occur frequently among their parents, particularly heat-related illness (heat stroke, heat cramps, and heat exhaustion) and dermatitis (skin rash). The effects of skin rash are often intensified because of sun, sweat, and lack of sanitary facilities.

Occupational hazards also affect migrant children's health by generating maternal health problems. Exposure to pesticides during pregnancy is found to be associated with fetal limb defects and Down's syndrome. Human milk may be contaminated as a result of exposure to toxic chemicals. 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 (National Rural Health Care Association, 1986).

# **Poverty-Related Health Problems**

The poverty status of migrant families is well documented (White-Means, 1991). Most recent data show one-half of migrant farmworker families have incomes below the poverty level despite the high rate of families with two wage earners (Department of Labor, 1991). Poverty leads to poor nutrition and sanitation, which contribute to abnormally high rates of chronic illnesses and acute problems among migrant children.

Malnutrition is associated with poverty. Migrant children com-

monly suffer vitamin A, calcium, and iron deficiencies (Koch, 1988; National Rural Health Care Association, 1986). A survey of Florida migrant workers (Shotland, 1989) found that many migrant families did not receive food stamps despite their eligibility; that 30.6 percent of the respondents had experienced a period during which they ran out or had a shortage of food; and that 43.8 percent of them had seasonal food shortages. Ethnically and regionally specific dietary inadequacies include zinc, riboflavin, vitamins B6 and B12, and folate. The study also says that females among the ethnic groups consumed inadequate nutrients significantly more frequently than males. An implication is that migrant children may suffer from maternal malnutrition.

Closely related to both malnutrition and poverty, another health problem for migrant children is parasitic infestations, including bacterial, protozoan, viral, and worm infections. A 1983 regional survey of migrant women and children found that 34.2 percent of the sample were infected with 12 different types of intestinal parasites, with Haitians having the highest rate (45.2%), Hispanics second (30%), and American Blacks lowest (23.2%) (cited by Shotland, 1989). Studies in other regions identified a comparable prevalence of infections. The estimated parasitic infections rate for migrants is 11 to 59 times higher than that of the general U.S. population (National Rural Health Care Association, 1986).

Parasitic infections are detrimental to migrant children's nutrition status in addition to the harm of inadequate or imbalanced dietary intakes. They may also cause acute diarrhea and vomiting. Especially threatening to children is the fact that parasites radically decrease iron absorption. Moreover, pathogenic parasites, which are carried by over half of the parasitic-infected migrant population, may generate more severe physiological disorders (Shotland, 1989).

Respiratory diseases are also related to poverty and poor sanitation. Problems such as tuberculosis, pneumonia, asthma, emphysema, and bronchitis occur very frequently among the migrant population (Koch, 1988; Schneider, 1986). Death rates from influenza and pneumonia are 20 to 200 percent higher among migrant farmworkers than among the general population (Shotland, 1989).

Another commonly untreated health problem among migrant children is dental caries (Koch, 1988; Schneider, 1986). A study in California found that dental care was the most common health need among migrant children before they enter kindergarten; up to 21 percent of migrants had acute dental problems (Good, 1990). A Wisconsin study reported that only one-third of migrant children had annual dental examinations, compared to the national rate of one-half (Slesinger, et al., 1986).

#### **Implications**

Despite some improvement since the 1960s, migrant children are still the most disadvantaged group among the U.S. youth population. To improve their health conditions, several approaches have been proposed in the literature:

- strengthening the legal protections for child labor from agricultural hazards;
- providing day care services for migrant farmworkers;
- incorporating culturally sensitive practices as a key strategy in planning and implementing services;
- recruiting outreach staff with backgrounds similar to those of migrant groups;

- integrating the efforts of various professionals, particularly medical professionals, social workers, educators, and legal professionals to help migrant families and children;
- providing preventive measures, particularly in the areas of residential sanitation, diet, and dental care;
- conducting comprehensive assessments of migrant health needs; and
- continuing the development of MSRTS as a nationwide tracking system to help schools and migrant programs identify and serve the population.

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