

The Health and Well-being of North Carolina's Farmworkers: The Importance of Inclusion, Accessible Services and Personal Connection

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Farmworkers contribute significantly to North Carolina's communities and economy; however, they incur significant occupational risks with limited workplace protections. Many barriers complicate their access to health care services. Recommendations include increased number of outreach workers, extended clinic hours, strengthening workplace protections, and inclusion of farmworkers in community needs assessments.

North Carolina is among the most diversified agricultural states in the nation with approximately 50,200 farmers growing over 80 different commodities [1]. It is the nation's largest producer of tobacco and sweet potatoes, the second largest producer of Christmas trees, and ranks eighth nationally for the total value of agricultural products sold [2]. Farmworkers are an integral part of North Carolina's economy, helping to respond to the demand for seasonal labor to plant, cultivate, harvest, and pack the state's varied agricultural products. However, farmworkers remain an often invisible, underserved population.

The North Carolina Department of Commerce estimates that there were approximately 80,000 migrant and seasonal farmworkers (MSFW) in our state in 2017 (North Carolina Department of Commerce, unpublished data, 2017). Although farmworkers reside in all of North Carolina's 100 counties, 60% of the MSFW population lives in just 16 counties (see Figure 1).

Farmworkers are classified as seasonal (living in North Carolina year round but working in agriculture on a seasonal basis) or migrant (moving to North Carolina on a temporary basis to work in agriculture). Migrant workers come to North Carolina with family or friends or are recruited through the federal H2A visa program. The H2A program provides temporary visas for agricultural workers after recruiters demonstrate that there are no US citizens willing to be hired. This program supplies 27% of all of North Carolina farmworkers, with the majority of H2A workers recruited from Mexico. Although estimates indicate that the overall farmworker population in North Carolina has decreased by 5% between 2014 and 2017 (North Carolina Department of Commerce,

unpublished data, 2017), the number of workers with an H2A visa increased by 49% during this time, making North Carolina third in the nation for number of H2A workers [3].

Demographic data for the farmworker population in North Carolina is limited. However, data is collected on the subset of workers and their family members who receive care at federally qualified health centers (FQHCs), including the Office of Rural Health's North Carolina Farmworker Health Program (NCFHP). This data provides a snapshot of the population's ethnicity, gender, age, federal poverty level (FPL), worker type, and insurance status (see Figure 2).

Health Risks Facing Migrant Farmworkers

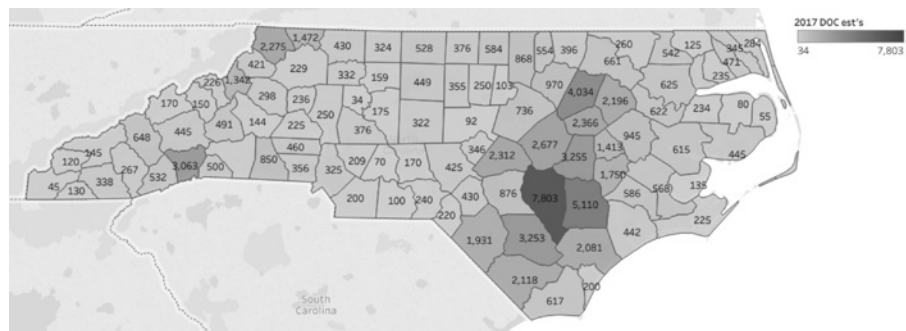
Health risks are associated with farmworkers' living and working environments. Agriculture is one of the most dangerous industries in the United States [4]. In 2017, it had the highest rate of fatal occupational injuries with 23 deaths per 100,000 full-time equivalent workers compared with a rate of 12.9 in mining, quarrying, and oil and gas and 15.1 in transportation and warehousing (see Figure 3). In addition to fatalities due to heavy equipment and transportation, heat stroke is another leading cause of death among agricultural workers. According to the Centers for Disease Control and Prevention (CDC), farmworkers die from heat-related illness at a rate 20 times greater than that of the entire US civilian workforce [5]. North Carolina, Florida, and California lead the nation in heat-related fatalities among farmworkers [5]. H2A workers are particularly susceptible to heat illness because many start work immediately upon arrival to North Carolina without a period of acclimation to the state's heat. The availability of water breaks varies significantly, and shade is often scarce in the fields. As one farmworker interviewed by an intern with Durham-based Student Action with Farmworkers said:

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FIGURE 1.
Distribution of Farmworkers in North Carolina by County, 2017



North Carolina Department of Commerce - Workforce Solutions - Agricultural Services, 2017 Estimate of Migrant and Seasonal Farmworker During Peak Harvest per County

“We were all shaking because it was so hot, almost dehydrated. You know what I did? I left them... It was less than an hour before finishing, and I thought for \$6 I am not going to die here. I’m leaving. In the field, there were no shade trees. It is just a ditch full of weeds, but that’s where I stayed, and it didn’t matter if there were snakes or thorns. It didn’t matter... All I wanted was shade.”

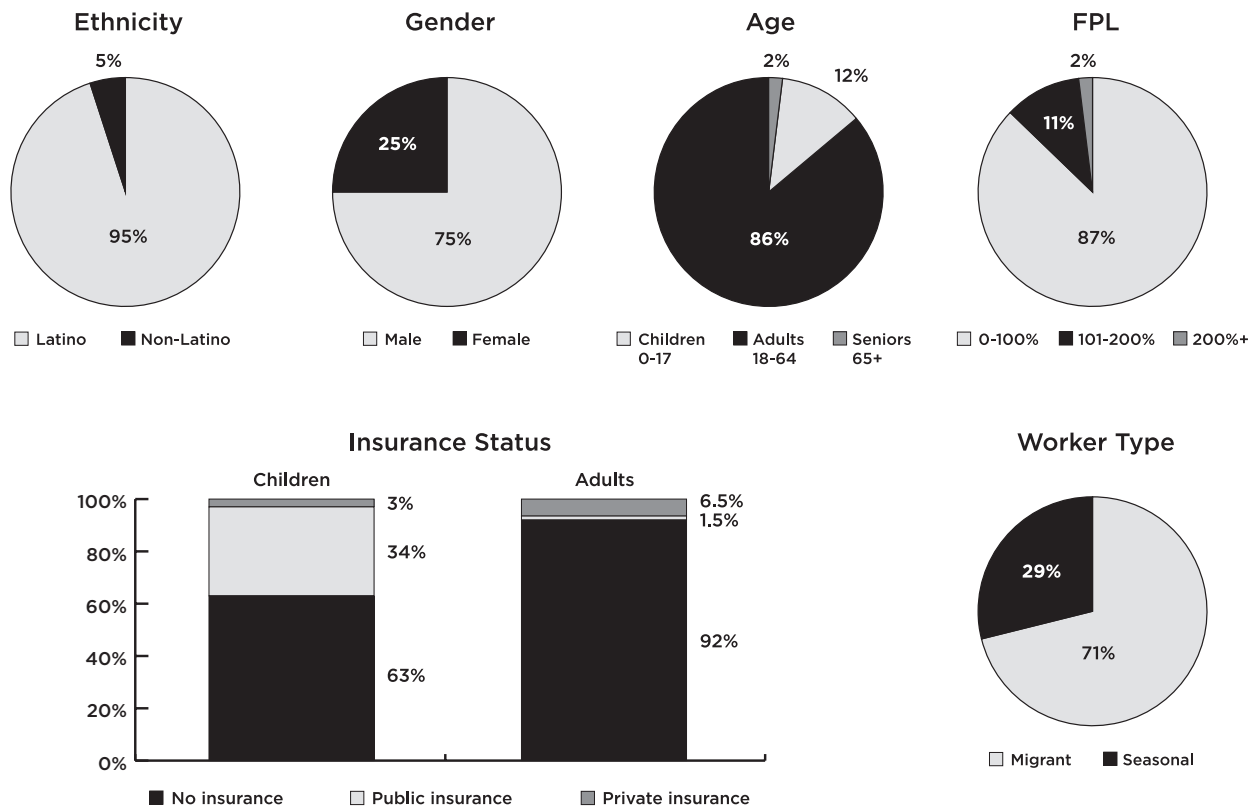
Other occupational illnesses faced by farmworkers include increased rates of respiratory illness, noise-induced hearing loss, skin disorders, and pesticide exposure [6]. Symptoms of acute pesticide poisoning range from respiratory failure, seizures, and death, to nonspecific symptoms such as nausea, vomiting, intestinal cramping, and eye irritation [7]. Long-term health effects of chronic pesticide exposure include certain cancers, Parkinson’s disease, memory loss, and depression [8]. Children of farmworkers are particularly vulnerable to pesticide exposure. They are exposed to pesticides in multiple venues including while working in the fields, living in housing located in the fields, and through pesticides inadvertently brought home on their parents’ clothing and shoes. Current regulations allow youths as young as 14 to be employed as hired farmworkers without parental permission; youths aged 10 to 13 can be employed as hired farmworkers with parental permission [9]. Additionally, sometimes the youngest children accompany their parents to work due to lack of child care [10]. The National Institute for Occupational Safety and Health (NIOSH) estimates that hundreds of thousands of children under age 18 work in US agriculture each year, but there is no comprehensive estimate of the number of child farmworkers in the United States [11]. Pesticide exposures in children are especially significant since children have a greater surface to volume ratio than do adults and achieve absorption of disproportionately higher level of pesticides. They also metabolize toxins more slowly than do adults, so the pesticide dose they receive remains with them longer [12]. Additionally, their immature nervous systems are susceptible to permanent damage from pesticide exposures [13]. Women also experience reproductive complications due to pesticide exposure,

including increased risk of infertility, premature delivery, and infants with congenital defects [13, 14]. Green tobacco sickness is another occupational illness caused by the absorption of nicotine through the skin while working with tobacco. This causes dizziness, vomiting, muscle cramps, anorexia, and insomnia. One North Carolina study showed that 24% of tobacco workers suffer from green tobacco sickness at least once in a growing season [15].

Migrant housing, including barracks, trailers, houses, and other structures, can pose health hazards, especially if it does not meet the minimum standards established in migrant housing regulations. Gentry et al. found that most dwellings in their study did not meet the US Department of Housing and Urban Development’s minimum criteria for health and safety [16]. Vallejos et al. found that of the 43 migrant homes examined in North Carolina in 2008, only 11% met the migrant labor housing standard, with 67% found to be moderately substandard, and 22% severely substandard [17]. Violations included overcrowding, structural problems, and lack of required facilities and appliances [17]. In addition, because migrant housing often lacks air conditioning, the in-home temperatures can be over 100 degrees, making it difficult to cool down after long work days in high temperatures, which significantly contributes to heat illness [18]. These conditions can increase the risk for not only physical illness such as pesticide exposure and infectious diseases, but also emotional illness such as depression and anxiety [19].

Adding to the burden of physical and emotional disease, immigrant farmworkers often face isolation, fear regarding immigration status, discrimination, and separation from family, all of which can result in loneliness, depression, anxiety, substance use, and other behavioral health concerns. Research shows extremely high rates of depression and anxiety among North Carolina farmworkers, with a prevalence of over 50% in one study [20]. Female farmworkers again face unique risks. In one study of California female farmworkers, 80% reported some form of sexual harassment, including 24% reporting sexual coercion or on-the-job blackmail

FIGURE 2.
Demographic Data of Farmworkers and their Dependents seen by FQHCs in NC in 2017



Source. Uniform Data System Roll Up Report for North Carolina Migrant Health Centers, unpublished data, 2017.

affecting their physical and psychological health [21]. In this study, women field laborers experienced headaches (49%), trouble sleeping (52%), shaking hands (51%), perspiring or sweaty hands (49%), heart palpitations (48%), and chronic tiredness (48%) as a result of their harassment [21].

Legal and Policy Gaps

Many of the occupational risks experienced by farmworkers result from the lack of legal protections and the lack of resources to enforce existing protections. For example, the federal Worker Protection Standard (WPS) is intended to reduce the risks of pesticide exposure among agricultural workers. However, it is dependent upon workers receiving and understanding the required WPS training and farm owners complying with the regulations. These include providing protective equipment when required, abiding by the listed re-entry intervals after pesticide application, and providing the required water stations and hygiene facilities [22]. Additionally, there are very few WPS or housing inspectors in North Carolina, making enforcement of both the WPS and the housing regulations difficult. Finally, there are no federal or North Carolina state occupational safety and health standards that address heat illness [23]. California, Washington,

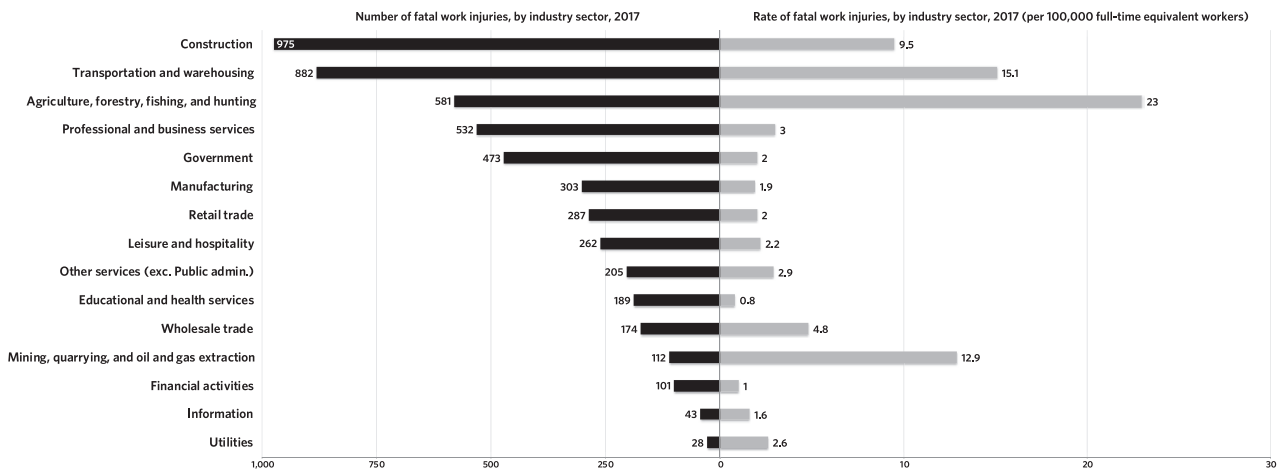
and Minnesota are the only states to currently have such legislation.

In the 1930s agriculture was excluded from almost all federal labor laws created to protect workers, leading to what is now referred to as “agricultural exceptionalism.” The National Labor Relations Act of 1935 excluded farmworkers from the right to act collectively to form unions. The Fair Labor Standards Act of 1938, which originally excluded all farmworkers from minimum wage protections, now only requires agricultural workers on large farms to be paid the minimum wage. This act also excluded most farmworkers from receiving overtime pay and allows children as young as age 12 to work in agriculture, not age 16 as in other jobs [24]. Despite the dangers inherent in their work, most workers are not covered by workers’ compensation insurance, as it is limited to H2A workers and those who work on a farm with 10 or more year-round employees.

Current Services

Under the Public Health Service Act, the Health Resources and Services Administration (HRSA) provides federal funds to FQHCs to provide high-quality medical, dental, and behavioral health services to underserved communities in rural

FIGURE 3.
Rate of Fatal Work Injuries by Industry, 2017



Source: US Department of Labor, Bureau of Labor Statistics, Number and rate of fatal work injuries, by industry <https://www.bls.gov/charts/census-of-fatal-occupational-injuries/number-and-rate-of-fatal-work-injuries-by-industry.htm>.

and urban areas [25]. Some health centers receive Migrant Health Center Program funding designated for farmworkers in order to respond to the unique needs and barriers they experience. In North Carolina, there are 39 FQHCs, 12 of which are funded to increase access to care for farmworkers and their family members. The Office of Rural Health's NCFHP is one of these 12 centers, considered by HRSA as a Migrant Health Voucher Program. Unlike a free-standing health center, NCFHP's service delivery model involves contracting with agencies throughout the state to provide and leverage comprehensive health services for farmworkers in regions where there are significant unmet needs. The model relies heavily on enabling services through outreach staff who identify farmworker patients, assess their needs, manage referrals, and are essential members of the medical care team for patients with chronic illnesses and other significant health needs. NCFHP and its network of service providers and partners served a total of 10,060 patients in 2017 [26]. The unique model allows for the flexibility to expand, decrease, and move services as the needs in communities throughout North Carolina change.

In 2017, all FQHCs with targeted services for farmworkers served a total of 48,090 farmworker patients and their dependents. Of these patients, 79% received an enabling service (health education and case management), 40% had a medical visit, 9.5% a dental service, 1.8% a mental health service, and 0.17% a substance abuse service (Uniform Data System, Roll Up Report for North Carolina Migrant Health Centers, unpublished data, 2017). Of the farmworkers and their family members who had a medical visit at an FQHC in North Carolina, being overweight or obese, hypertensive, or diabetic were the top three most common diagnoses (Uniform Data System, Roll Up Report for North Carolina Migrant Health Centers, unpublished data, 2017). Similarly,

in 2015, 25.6% of all the farmworkers seen by NCFHP had blood pressures greater than 140/90 and 79% had a body mass index over 24 (Reinsvold M, master of public health thesis, UNC Gillings School of Global Public Health, unpublished data, 2016). Not surprisingly, among the 250 MSFWs surveyed in 2018 by NCFHP, the most frequently requested additional health education was on diabetes, hypertension, and nutrition (NCFHP, internal farmworker feedback survey, unpublished data, 2018).

Despite these targeted services, access to health care services by farmworkers remains limited, especially in counties where there are no targeted services or where the size of the population is extremely large. Based on our population estimates inclusive of farmworker families, fewer than 37% of the population received any service from an FQHC in 2017 (Uniform Data System, Roll Up Report for North Carolina Migrant Health Centers, unpublished data, 2017). Barriers to care include: cost, transportation, hours of operation, inability to miss work, fear, lack of awareness of available services, and language and cultural differences. The top three barriers to care cited by farmworkers served by NCFHP in 2018 were transportation, language, and cost (Lipscomb, A, NCFHP Farmworker Feedback Survey Results, unpublished data, 2018). Health care providers also have difficulty serving farmworkers, many of whom are unable to leave work during daylight hours and whose frequent migration for work makes continuity of care for chronic or complex health conditions challenging. Referring patients for specialty services is especially difficult because these services are often only available during the work day, in English, and without a sliding fee scale for patients without insurance. In addition, having an H2A visa is a barrier to eligibility for some hospital charity care programs because the expectation is that workers will have insurance through the Affordable Care Act.

However, although North Carolina has been a leader in farmworkers' enrollment in insurance, most H2A workers are not enrolled during the short time they reside in North Carolina.

Conclusion

Migrant and seasonal farmworkers come from diverse communities with vibrant and rich traditions but are often a hidden population working on remote farms. Their temporary residences and long work hours leave little time to intersect and interact with their host communities. Fear, language barriers, and cultural differences increase this divide, making it difficult for farmworkers to feel connected and access health care services. FQHCs, health departments, free clinics, hospitals, rural health centers, community-based non-profits and others are often part of the efforts to increase access to care for farmworkers and minimize their health risks. Partnerships among these groups are integral to North Carolina's response to the complex health needs of farmworkers. However, despite current efforts there are significant unmet needs.

NCFHP's 25-year history of serving farmworkers has demonstrated that outreach staff are an essential part of the care team to build relationships with farmworkers, assess their needs, link them with appropriate services, and provide health education and case management services. NCFHP's collaborative work has led to a list of recommendations for individuals, communities, and organizations interested in responding to the unmet needs of North Carolina's farmworker population (see Table 1). These local and statewide activities to engage, serve, and protect farmworkers and their families will help lead to a safer environment where workers can easily and confidently access needed services and improve their health and well-being. NCMJ

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TABLE 1.
North Carolina Farmworker Health Program (NCFHP)
Recommendations for Responding to Unmet Needs of the
State's Farmworker Population

- Listen to valuable input from farmworkers to create services that are responsive to their needs.
- Expand support for outreach workers and community health workers.
- Make service delivery modifications when possible to reduce barriers to care, including increased evening hours and language capabilities.
- Expand support for patient transportation services to reduce the transportation barrier.
- Increase opportunities for health science students, trainees, and service providers to engage with farmworkers and farmworker programs so that they can provide care that is occupationally aware and culturally sensitive.
- Support efforts to enroll farmworkers in insurance through the Affordable Care Act.
- Support policies that protect farmworkers and the designated agencies' ability to enforce standards to create safer living and working environments.

Source: North Carolina Farmworker Health Program

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