



Center for Worker Health

Wake Forest School of Medicine

POLICY BRIEF

Latinx Child Farmworkers in North Carolina: Heat-Related Illness

Summary

Children as young as 10 years old are hired to work on farms in the United States (US). In North Carolina, these children are most often Latinx. They often work long hours in hot, humid summer weather, placing them at risk for heat-related illnesses (HRI) with symptoms that range from rashes and nausea to heat stroke, which can be fatal. Little information about the prevalence of HRI in child farmworkers is available. This policy brief provides information on child farmworkers' experiences of working in heat and estimates the prevalence of HRI among child farmworkers.

Child farmworkers reported that heat and HRI were among the worst parts of farm labor. Children had mixed knowledge about how to prevent HRI, employers did not always provide sufficient water for their workers, and employers sometimes withheld breaks until a task was completed. Nearly half (47.9%) of the child farmworkers experienced at least one HRI symptom; 29.1% reported feeling dizziness, 21.8% reported having muscle cramps, and 8.5% experienced nausea or vomiting.

Providing child farmworkers with frequent break times in the shade, shorter work hours, sufficient and clean water, fostering a stronger work safety culture, and implementing HRI prevention education are key to reducing HRI among child farmworkers. Formal workplace protections must be implemented to address HRI among child farmworkers.

Why does it matter?

An estimated 30,000-79,325 children, as young as 10 years, are hired to work in US agriculture annually. In addition, children of any age can work on their parents' farms. They work long hours in the summer heat, placing them at high risk for HRI. There is little formal workplace protection to prevent HRI in agricultural labor in most states, and the protections that are in place are not always enforced. Many children hired to work on farms in North Carolina and elsewhere in the US are Latinx and are at increased risk of HRI due to limited access to healthcare, social vulnerability because of immigration status, and limited control over their work environment. Farm safety regulations are needed that acknowledge the dangers of HRI and seek to prevent HRI, especially in the case of children.

What did the researchers do?

In 2016, researchers completed semi-structured, in-depth interviews with 30 Latinx child farmworkers aged 10 to 17 years working across North Carolina. In 2017, they completed structured interviews with 165 Latinx child farmworkers who stated that they worked in extremely hot conditions. In-depth and structured interviews addressed issues of workplace HRI.



Photo courtesy of Student Action with Farmworkers

Research for this policy brief is reported in: Arnold TJ, Arcury TA, Sandberg JC, Quandt SA, Talton JW, Mora DC, Kearney GD, Chen H, Wiggins MF, Daniel SS. Heat-Related Illness Among Latinx Child Farmworkers in North Carolina: A Mixed-Methods Study. *New Solut.* 2020 Aug;30(2):111-126

For more information, contact:

Thomas A. Arcury, PhD, Director
Center for Worker Health
Wake Forest School of Medicine
Phone: 336-716-9438
E-mail: tarcury@wakehealth.edu

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What did the researchers find?

Child Farmworker Experiences of Heat and HRI (in-depth interviews, n=30)

- **Experiencing HRI:** Child farmworkers reported experiencing and observing HRI.

"I felt tired. Well, like tired and frustrated because, I don't know, when I had the headaches I felt like I was going to get frustrated and throw a plant to the ground but I never did that but I felt like it. It was like—my—I don't know—my head was like another world or something."-12-year old boy working at a nursery

"It was actually my grandparents. When we were working with them, she fainted. I got scared because I was kind of small. I would say she was dead. She kind of just passed out, and we were all freaking out. She got hurt by one of the branches, because when she fell, there was a branch there, and she got hurt on her arm."-13-year-old girl

- **Importance of Water:** Children have mixed knowledge about hydration and some supervisors do not provide adequate water. Drinking water is another key practice to combat HRI; drinking caffeinated beverages can contribute to HRI and dehydration.

"I drink lots of water. But sometimes you can't drink water the whole day. It starts hurting your stomach. So you have to drink at least one soda . . . you get tired of the water, and the grown-ups, the older people, they drink a little, like, beer 'cause they get tired of the soda."-15-year-old boy

"They do give us some [water], but I don't like to drink it from there . . . maybe there's germs or something there that. I don't want to get any diseases."-15-year-old-boy

- **Productivity Prioritized Over Safety:** Child farmworkers reported work environments that prioritized productivity over safety. Some supervisors discouraged workers from taking breaks to continue production.

"Well, if they're rushing you, then you will feel stressed out. It's like, you need a break, or you'll pass out or something. You feel like if you don't take a break, you're going to pass out."-16-year-old girl working in tobacco

"Well it's hot. It's really hot, and you have to work with everybody's pace so you won't be left behind. And if you're left behind, the boss man will like scream at you and just tell you to go faster, or, if not, then he's going to replace you with someone else."-16-year-old boy working in tobacco

Heat-Related Illness Symptoms and Protective Behaviors (structured interviews, n=165)

- 47.9% of the children reported experiencing at least one symptom of heat-related illness while working in extreme heat in the previous year, and 21.7% reported experiencing at least two symptoms.
- Dizziness was reported by 29.1%, sudden muscle cramps were reported by 21.8%, hot, dry skin by 17.6%, nausea or vomiting by 8.5%, confusion by 6.1%, and fainting by 1.8%.
- The vast majority (90.9%) of children listed drinking water as a preventative measure against HRI, but very few (10.9%) reported being able to change farm work tasks.

Recommendations

- The age limits in agriculture should be reevaluated in the context of current labor laws in sectors outside of agriculture and updated to reflect the same measure of safety.
- A federal heat standard, similar to state standards passed by California, Minnesota, and Washington, could help protect agricultural workers from HRI.
- Risk of HRI could also be minimized by reducing the number of hours that children can work in agriculture per day, enforcing laws that already exist with regard to providing farmworkers with potable water, training children to recognize early warning signs of HRI, and providing educational and recreational alternatives to farmworker children.

Additional Reading

- Arcury TA, Arnold TJ, Mora DC, et al. "Be careful!" Perceptions of work-safety culture among hired Latinx child farmworkers in North Carolina. *Am J Ind Med.* 2019;62:1091–1102.
- Quandt SA, Arnold TJ, Mora DC, et al. Hired Latinx child farm labor in North Carolina: The demand-support-control model applied to a vulnerable worker population. *Am J Ind Med.* 2019;62:1079–1090.