
Commentary

On American farms, youth are not just a vulnerable population, they are the next population. In an occupation steeped in culture and tradition, there lies great opportunity to break habits that can increase the quality of life of the young persons involved. In turn, this generation has the opportunity to make a difference for future generations when they become parents and grandparents.

In their review of childhood agricultural injuries, the author team of Drs. Wright, Marlenga, and Lee provide a comprehensive perspective of the issues faced in agriculture. The broad scope of youth exposed to agricultural environments includes those children living on farms, children and teens employed on farms, as well as those minors who accompany migrant and seasonal laborers to the worksite. Unlike other occupations the existence of children in the workplace is culturally accepted and culturally encouraged for a variety of reasons. Because of this practice, the nature and incidence of injuries parallel those reported in agricultural occupational data; however because the injuries occur to minors, they often go undocumented. NIOSH reports reveal the strongest body of evidence of youth injuries and fatalities^{1,2}. In the past twenty years an emphasis on improved surveillance and survey research has enhanced data collection methods for farm-related youth injuries. Having a better assessment of the types of injuries, kinds of injury agents, and demographics of the victim has improved the potential for injury prevention strategies. Yet agricultural surveillance systems are far from perfect, and continually under-report occupational injuries as well as recreational injuries that occur on farms. There is a margin of gray when injuries occur with horses, livestock, and all-terrain vehicles (ATVs) as to how these injuries are coded and reported. This limitation is identified in the article, however, its importance bears repeating. Most of the agricultural hazards and prevention strategies are known; lacking a national, comprehensive reporting system for agricultural injuries, makes for an incomplete and possibly grossly miscalculated database.

The authors identify the underlying reasons for childhood agricultural injuries. Financial limitations may also be a limiting factor for the American farm family to implement the recommendations of prevention specialists and insurance companies. In the discussion on economic impact, the authors suggest using cost analysis data of medical treatments as a persuasion technique to justify investments in injury protection systems. While this business-model approach may work for a few, it will be discounted by the majority of traditional farm operators. Two well-known facts exist within the farming culture: (1) agricultural work is inherently dangerous and (2) farmers are natural risk-takers. This combination is apparent and extremely difficult to tackle when persuading farm families to adopt and invest in safety practices; farm operations do not accurately prioritize safety improvements based on financial evidence alone. Safety improvements are typically made based on insurance requirements, medical recommendations (i.e., to accommodate physical impairments, asthma, allergies, etc.), or following a traumatic incident involving a family or community member.

The financial discussion is no different at the national level in that safety research and education is identified within the U.S. Farm Bill³ (specifically Section 7204(38): Agricultural Worker Safety Research Initiative for pesticide use, Section 7204(48) Farm and Ranch Safety which includes education and training, and Section 14204: Grants to Improve Supply, Stability, Safety and Training of Agricultural Labor Force). However political cajolery and budget reductions surrounding the plethora of other issues included in any year's Farm Bill leaves a legislative void in the capacity to support health and safety topics. This tactic is unlike that of the Canadian Agricultural Safety Association,⁴ whereby a national non-profit organization works collaboratively with government, agricultural businesses, occupational safety specialists, and local producers to curb deaths and injuries in all

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provinces and territories. The cornerstone of Canada's successful organization is a well-established surveillance system that guides both their prevention strategies and industry standards.

In December 2008, NIOSH released an updated National Occupational Research Agenda (NORA)⁵ of which Agriculture, Forestry and Fishing (AgFF) made up one of the sectors. The AgFF Sector Council compiled a set of goals, action steps, and performance measures to reduce negative health outcomes for young workers involved in farming operations. More recently, NIOSH sponsored a document published by the Marshfield Clinic in May 2012 "Blueprint for Protecting Children in Agriculture"⁶ that suggests solutions to confront the conventional practices found in traditional agricultural operations with specific strategies in education, research, and organizational policy; the editors of this 2012 National Action Plan provide supporting documentation to the views expressed in this accompanying article. The plan also discusses the role of public policy and stretches the boundaries that currently exist in an attempt to challenge the cultural acceptance of youth working in hazardous environments.

Solving rural child injuries is not something that can be done by one group of people; nor can it be accomplished in a rapid fashion. Changing health and safety practices on U.S. farms will require changes at various levels. Using the underlying concepts contained in a popular public health model, the Theory of Planned Behavior,⁷ it will rely upon a change in the attitudes of farm families, a change in the subjective norm of what is accepted by farm families, and the change of perceived control farm families have over that behavior. All of these factors contribute to the traditional practices within the culture of farming; and they also contribute in some ways to the exposure of hazards youth face while in the farm environment.

Rural pediatricians have the opportunity to engage with farm families and open the dialogue for injury reduction strategies that may work for that particular household or entire community. A local physician's perspective and encouragement to follow known safety practices will support national efforts to reduce childhood injuries on farms, while at the same time add another dimension to the existing network of agricultural safety advocates that are concerned about the next generation when they inherit the farm.

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