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## **Protecting Young Agricultural Workers: The Development of an Online Supervisor Training**

Rohlman, D. S., Campo, S., & TePoel, M. (2021). Protecting Young Agricultural Workers: The Development of an Online Supervisor Training. *Journal of agromedicine*, 1-9.

Adolescents and young adults working in agriculture are at greater risk of injury. We describe the development of an online safety and health training for people who hire, teach, or supervise young agricultural workers. The online training targeted specific skills supervisors can use to effectively supervise, train, and communicate with young workers about health and safety hazards that impact injury risk. Consistent with NIOSH's evidence-based Total Worker Health® approach, the training integrated safety and health promotion and was also informed by behavioral change theories. An iterative approach was used to develop and evaluate the training. A content review provided feedback on topics and organization of material. Safety and health experts assessed the revised training content and rated the training topics on clarity, accuracy, and completeness. Finally, a pilot study with employers and health and safety professionals was used to evaluate the training materials. The content review suggested ways to reorganize the material to improve flow and reduce redundancy. Ratings of clarity, accuracy, and completeness were high, ranging from 5 to 7 (mean ratings from 5.8 to 7.0) on a scale of 1 ("does not do this at all") to 7 ("does this very well"). The pilot study led to changes in wording and items used to assess knowledge. A theoretically-informed approach was used to develop an online supervisor training to increase awareness and build skills. An iterative process that included expert review, evaluation of learning competencies, and a pilot study with the end-users is described.

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## **Occupational safety and health of young adult agricultural workers**

Rudolphi, J. M. (2017). *Occupational safety and health of young adult agricultural workers*. The University of Iowa.

Agriculture is the most hazardous occupational industry for young adults. Young adults are engaging in agricultural work and interacting with machines and equipment that are known to cause fatal and nonfatal injuries and illnesses. However, it is unknown how young adults are engaging with equipment and machinery. Methods to reduce exposures to occupational hazards are defined in the Hierarchy of Controls, which suggest elimination, substitution, or engineering controls are most effective and therefore most desirable. However, there are barriers to applying these controls in agriculture including cost and the decision making capacities of young adults in the workplace. Therefore, administrative controls and personal protective equipment (PPE) may be more appropriate controls for young adult agricultural workers. However, the influence of administrative controls, including workplace organizational factors and social influences in the workplace on work behaviors, are unknown and interventions to increase the use of personal protective equipment use among the population are limited. An online survey was developed and administered to young adult agricultural workers in Iowa. Workplace safety and health behaviors within six common agricultural work areas were assessed and information on social influencers, workplace policies, farm characteristics, and individual characteristics were collected. An intervention was developed that coupled behavioral theory with technology to increase the use of hearing protection among young adult swine facility workers. Members of

the intervention groups logged their daily use of hearing protection use when working in vi swine facilities. Reported use of hearing protection was collected at baseline, immediately post-intervention, and three-month follow-up and compared among study groups. Results from the cross-sectional, online survey concluded supervisor influence, more so than peers or parents, is most strongly associated with safe work practices. We also observed an association between safe working practices and the number of policies young adults reported in effect at the farm they are employed. In addition, an increase in reported hearing protection use was found among three study groups (intervention with goal setting, intervention without goal setting, and control) at immediate postintervention in a randomized controlled trial. The greatest increase in hearing protection use was among the intervention group that also set a daily goal for hearing protection use, however, these changes were not maintained at delayed postintervention follow-up. Associations between workplace organizational factors and reported safety practices indicate an opportunity for interventions. Results from our theory-based intervention to increase the use of hearing protection among young adults working in swine facilities suggested that incorporating constructs of the Social Cognitive Theory and integrating technology are effective in changing safety behaviors, however, simply providing hearing protection to young adult workers may be most effective in sustaining behavior change.

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## **Overcoming Language and Literacy Barriers in Safety and Health Training of Agricultural Workers**

Arcury, T. A., Estrada, J. M., & Quandt, S. A. (2010). Overcoming language and literacy barriers in safety and health training of agricultural workers. *Journal of agromedicine*, 15(3), 236-248.

The workforce in all areas of United States agriculture and forestry is becoming increasingly diverse in language, culture, and education. Many agricultural workers are immigrants who have limited English language skills and limited educational attainment. Providing safety and health training to this large, diverse, dispersed, and often transient population of workers is challenging. This review, prepared for the 2010 Agricultural Safety and Health Council of America/National Institute for Occupational Safety and Health conference, "Be Safe, Be Profitable: Protecting Workers in Agriculture," is divided into five sections. First, we describe the occupational and demographic characteristics of agricultural workers in the United States to highlight their safety and health training needs. Second, we summarize current research on the social and cultural attributes of agricultural workers and agricultural employers that affect the provision of safety and health training. Worker and employer attributes include language, literacy, financial limitations, work beliefs, and health beliefs. Third, we review current initiatives addressing safety and health training for agricultural workers that consider worker language and literacy. These initiatives are limited to a few specific topics (e.g., pesticides, heat stress); they do not provide general programs of safety training that would help establish a culture of workplace safety. However, several innovative approaches to health and safety training are being implemented, including the use of community-based participatory approaches and lay health promoter programs. Fourth, the limited industry response for safety training with this linguistically diverse and educationally limited workforce is summarized. Finally, gaps in knowledge and practice are summarized and recommendations to develop educationally, culturally, and linguistically appropriate safety and health training are presented.