

# Safety Perceptions and PPE Provision of Thoroughbred Farm Representatives

Jessica Miller Clouser, MPH<sup>1</sup> Jennifer Swanberg, PhD, MMSH<sup>2</sup>; Henry Bundy, MA, PhD Candidate<sup>3</sup>

<sup>1</sup>University of Kentucky College of Public Health; <sup>2</sup>University of Maryland School of Social Work;

<sup>3</sup>University of Kentucky Department of Anthropology



## Background

Agriculture is one of the leading industries for occupational illness or injury (BLS, 2013). Although some of the inherent risks associated with working in agriculture may be well understood by farm operators, safety behaviors do not always follow (Sorensen, May, Paap, Purschwitz, & Emmelin, 2008). Literature assessing PPE use in agriculture reveals that many farmers recognize the prevalence of risk, but may not use PPE or take safety precautions (Sorensen et al. 2006). However, few studies have looked at the relationship of managements' risk perception and subsequent provision of personal protective equipment (PPE), especially in large animal operations. In order to better understand the degree to which PPE is provided to workers on horse farms, and the reasons why it is or is not provided, this qualitative study had three aims:

**1) to describe the risk perceptions of thoroughbred farm representatives (owner, manager, or office manager), 2) to describe the personal protective equipment (PPE) provided by farms, and 3) to explore the factors that influence farms' provision of PPE.**

## Methods

Farms were eligible if they (1) defined horse breeding/boarding as their primary operation; (2) employed at least one Latino worker; (3) were located in the southeastern U.S.. Employer representatives were eligible if they were at least 18 years old and held a position of farm owner, manager, or personnel administrator. Of the 62 eligible farms, 35 representatives from 26 farms participated in a 1-4 hour in-depth, face-to-face, semi-structured interview (42% participation rate) covering topics such as farm characteristics, workforce demographics, work organization factors (e.g., job tasks, scheduling practices), and perceived risks associated with horse work. A checklist of PPE provided and/or mandated by farms was also completed. Interviews were audio-recorded, transcribed, entered into ATLAS.ti, and analyzed by three coders. Constant comparative analysis was utilized in order to ground emergent themes in the original text of the transcripts. During weekly meetings, codes and themes were discussed and democratically decided upon. Survey data on PPE provision were entered into Statistical Analysis Software (SAS) and univariate analyses conducted.

## Acknowledgments

This work was supported by the Southeast Center for Agricultural Health and Injury Prevention, University of Kentucky College of Public Health, under CDC/NIOSH Cooperative Agreement 5U54OH007547-14. The contents of this poster are solely the responsibility of the authors and do not necessarily represent the official views of CDC/NIOSH.

## Results

Farm representative demographics N=35*	
<b>Gender</b>	<b>n (%)</b>
Male	26(74)
Female	9(26)
<b>Race/Ethnicity</b>	<b>n (%)</b>
Non-Hispanic White	33(94)
Non-Hispanic Black	1(3)
Hispanic White	1(3)
<b>Position on farm</b>	<b>n (%)</b>
Manager	17(49)
Owner/Manager	12(34)
HR/Office manager	6(17)
<b>Farm Size Represented, N=26</b>	<b>n (%)</b>
Small (≤10 workers)	11(42)
Medium (11-25 workers)	8(31)
Large (>25 workers)	7(27)

On 6 farms, multiple people were interviewed.

### AIM 1: Risk perceptions of thoroughbred farm representatives

**Top Risk = The Horse**

“Leading one in, picking feet...the number one most dangerous job is working with the horses.”

“One of the more dangerous things we do is bringing horses in and out ...4 or 5 mares at the gate, 2 people bringing them in, one bully wants to wheel and kick the other ones when they're all up there crowded at the gate and it's a dangerous spot.”

“Far and away the most injuries occur when somebody's on the end of a shank leading a horse.”

**Other Risks= Equipment, Ergonomics, Respiratory Hazards, Medicines**

“I guess operating equipment. Statistically, that's probably the number one [most hazardous job].”

“I think it's something that you almost get used to and don't realize it, but dust is terrible in the barns.”

“Supposedly Furacin can cause cancer; I didn't know that and used it for years.”

### AIM 2: Personal protective equipment provided and mandated, N=26

PPE Type	Farms Provide [%]	Farms Mandate [%]	Tasks mandated for
<b>Horse-Related*</b>			
Helmets	10(38.5)	7(26.9)	Riding, Breeding horses, Chainsaws, Being in stalls (1 farm)
Padded vests	7(26.9)	6(23.1)	Riding, Breeding horses
Steel-toe boots	1(3.9)	1(3.9)	No tasks given
<b>Non-Horse Related</b>			
Latex gloves	26 (100)	11(42.3)	Administering medicines, Chemical use
Eye protection	24(92.3)	16(61.5)	String trimming, Pressure Washing, Fence repair, Chemical use, Chain saws, Equipment
Masks/ Respirators	15(57.7)	5(19.2)	Chemical use, Mowing
Hearing protection	13(50)	6(23.1)	Equipment
Cut-resistant gloves	8(30.8)	2(7.7)	Fence repair, Painting, Hay
Paper suit	2(7.7)	1(3.9)	Chemical use

\*Horse-Related refers to equipment that protects one against the horse. Non-horse related refers to equipment that protects from any other sort of mechanism of injury or illness on the farm.

### AIM 3: Factors that influence farms' provision of personal protective equipment

**Differences in farm context**

“I see a lot of other farms that can probably afford a lot of practices that I'm just simply financially unable to, but again you know I just try, since I'm kind of pretty much a hands on owner/manager.”

**Workers as most important agents in their safety**

“If someone comes down to the complex and all of a sudden said ‘You know, I want to start wearing a vest down there,’ we'd have to, we'd certainly get it for them.”

**Lack of confidence in PPE's effectiveness to avert horse-related injury**

“You could probably arm yourself with a suit of armor if you wanted but it's impractical so you just have to be careful, careful and calculating throughout your day.”

**Perception that risk can never be eliminated**

“It's not if you're going to get hurt it's when you're going to get hurt.”

## Conclusions

Representatives of thoroughbred farms identified the horse as the most hazardous exposure and horse-related tasks as the most dangerous tasks on thoroughbred farms. Despite this perception, PPE designed to protect against the horse (e.g., helmets, vests, steel-toe boots) was not as commonly provided to workers as PPE designed for non-horse related tasks (e.g., gloves and safety glasses). Findings suggest that farm representatives perceived that horse-related PPE was not effective in mitigating the great risk associated with working with horses and that other barriers, such as worker adherence and cost of equipment, prevented PPE from being a widely accepted solution. Future research is needed to understand workers' perception of PPE and risks associated with thoroughbred farm work as well as communication dynamics between managers and non-native workers. It should also explore the use of horse-related PPE for tasks beyond the breeding shed and track. Finally, research should incorporate community-based participatory principles to engage thoroughbred management in developing and evaluating strategies to reduce risk on horse farms.

## More information

The contents of this poster will be published in a forthcoming issue of the *American Journal of Industrial Medicine*. For more information, please contact Jess Miller Clouser at [jess.clouser@uky.edu](mailto:jess.clouser@uky.edu), Dr. Jennifer Swanberg at [jswanberg@ssw.umaryland.edu](mailto:jswanberg@ssw.umaryland.edu), or visit [www.workersafetyandhealth.com](http://www.workersafetyandhealth.com).

