

# Hazard Characterization in Rail and Other Sectors

---

Aashay Patel, BSPH Health Policy &  
Management, University of North Carolina  
at Chapel Hill

Esther Epps, MPH Environmental Health  
Science, Eastern Kentucky University



# Teamsters Union (IBT) Background



The IBT trailer transports the PPE used in the HAZWOPER trainings

- Represents 1.4 million workers, ~50,000 rail workers
- Safety & Health department:
  - Develops worker health and safety policy
  - Trains ~7,800 workers per year
  - Needs hazard info to improve training curriculum & collective bargaining agreements (CBAs)

# Objectives

- Identify major health & safety risks
  - By interviewing and surveying workers
- Translate factsheets into Spanish (giveback products)
- Research Solid Waste Environmental Excellence Protocol (SWEEP) best practices



Students and OHIP interns practice donning Level A PPE at a training in Sacramento, CA

# Methods

- Developed two surveys
- Administered surveys in written format and through interviews
- Compiled and analyzed significant themes of concern
- Developed recommendations



The two surveys developed in Google Forms

# Survey Population

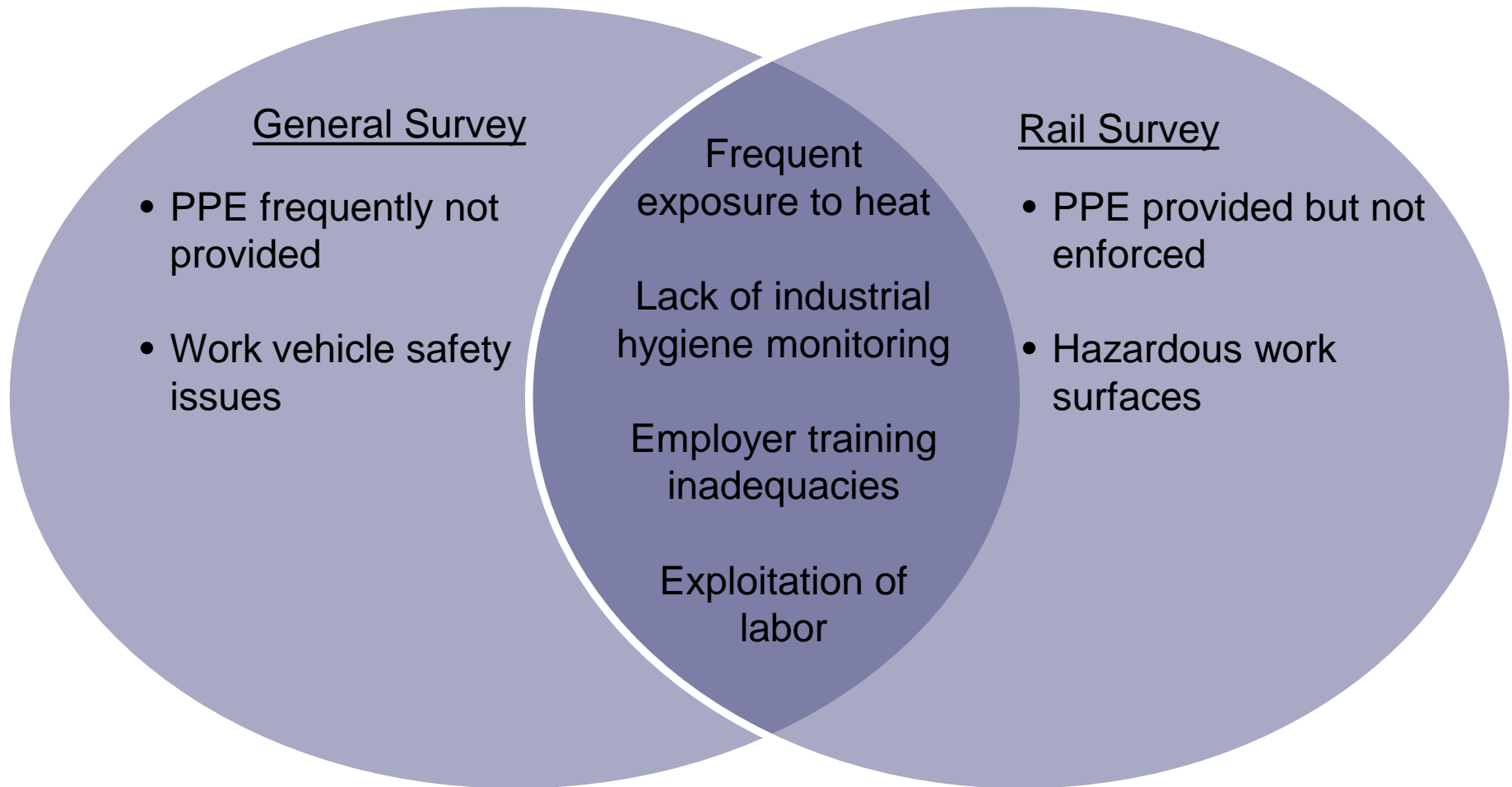
- 16 workers surveyed using the General Survey, 11 / 16 had supplementary oral interviews
- 9 rail workers who serve as hazmat trainers were surveyed & interviewed using the Rail Survey



OHIP interns with IBT staff and trainers at a Train the Trainer class in Salt Lake City, UT

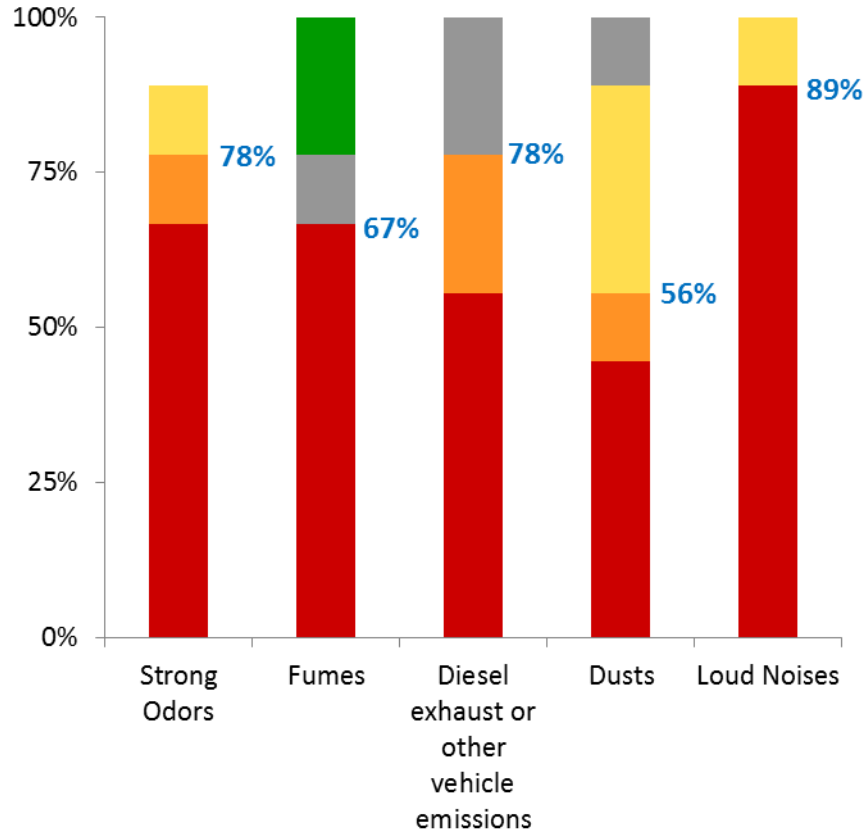


# Survey & Interview Results

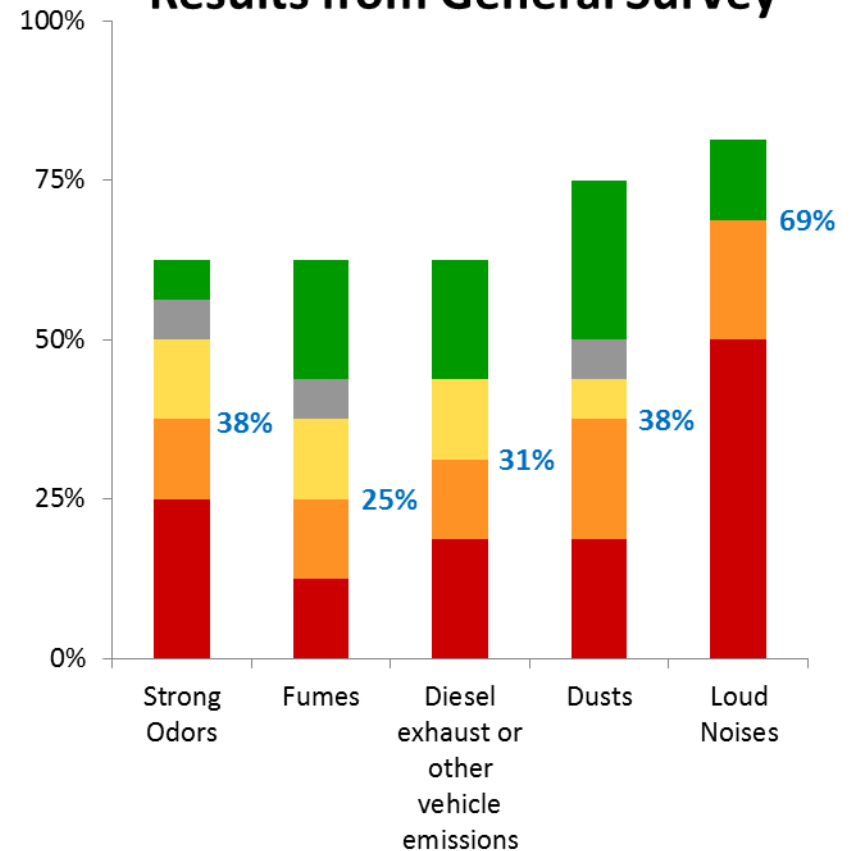


# “How often are you exposed to the following?”

## Results from Rail Survey



## Results from General Survey



■ Several times a day   ■ About once a day   ■ Less than 3 times/week   ■ 3-4 times a week   ■ Rarely

*Data labels in blue are the sum of “several times a day” and “about once a day” responses*

# Worker Stories

I didn't tell my employer about my workplace injury because I didn't want to be drug tested

Five people I know on the railroad have died from brain cancers. I think it's from chemical exposures

The train schedules change. You end up scrambling to get a sufficient amount of sleep

Over the course of my career on the railroad, I've seen safety become less of a priority to management



# Challenges

- Variety of topics & trades covered
- Union dynamics
- Small sample size
- Variable literacy levels

# Successes

- Variety of topics & trades covered
- Info from subject matter experts in rail industry
- Gained workers' trust
- Informative data from a wide geographic area

# Recommendations

- Negotiate contract language:
  - to ensure access to adequate boots and other PPE
  - to strengthen worker rights
- Work with NIOSH and other research institutions to conduct studies about brain, lung, and liver risks in railroad industry
- Emphasize worker rights in trainings
- Continue emphasis on heat stress, ergonomics, and chemical exposures
- Continue refining drug and alcohol testing policies

# Personal Reflections



Esther Epps

# Acknowledgements

- Mentors: Lamont Byrd & Asher Tobin (IBT)
- Site Coordinators: Rebecca Reindel & Matt London
- IBT Worker Training Program Trainers & Staff, especially Charmaine Woolard
- Funders: AOEC, NIOSH, NIEHS, Stephen M. Levin Foundation

