SURVEY OF RURAL HEALTH CARE PROVIDER KNOWLEDGE OF FARM TOXICOLOGY

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I have no financial interest or relationships to disclose
Health care workers in rural settings are likely to treat farm workers and must be prepared to diagnose and treat injuries caused by exposures to:

- Insecticides
- Rodenticides
- Fungicides
- Herbicides
- Fertilizers
- Waste Products
- Other Chemicals
- Environmental Exposures
Ist Goal: Survey health care workers in eastern North Carolina to determine:

- Level of training
- Knowledge
- Comfort
2nd Goal: Compare the knowledge of groups with different levels of education/exposure
BACKGROUND AND OBJECTIVES

3rd Goal: Assess need for continuing medical education (CME) on the subject of farm toxicology
Online survey developed using REDCap. Survey included questions about:

- Demographics
- Training
- Exposure to farm toxicology education
- Experience in treating farm workers
- Perceived knowledge of farm toxicology
METHODS

The survey also included a test of knowledge section with 8 multiple choice questions including topics such as:

- Pesticides
- Herbicides
- Fertilizers
- Toxic gases
- Cancer risks associated with farming
METHODS

Survey emailed to 12,855 health care workers who had previously attended Eastern Area Health Education Center (Eastern AHEC) CME courses

• Physicians
• Advanced Practice Providers
• Pharmacists
• Nurses
METHODS

• 65 health care workers completed the survey

• Results between different subgroups compared with a two tailed t-test
RESULTS

Respondents answered 3.49 of the 8 knowledge questions correctly on average (standard deviation 1.57)
RESULTS

- 15 (23.1%) Physicians
- 50 (76.9%) Non-physicians

- 8 (12.3%) Rated their knowledge as good or excellent
- 57 (87.7%) Rated knowledge as poor or needing improvement

- 16 (24.6%) Had prior farm toxicology CME exposure
- 49 (75.4%) Had no CME exposure
RESULTS

• Physicians
  4.00 questions correct on average

• Non-Physicians
  3.30 questions correct on average

p-value 0.119, confidence interval -0.18 to 1.58
RESULTS

- Prior CME exposure
  4.59 questions correct on average

- No CME exposure
  3.10 questions correct on average

p-value <0.001, confidence interval 0.67 to 2.30
RESULTS

- **Rated Knowledge as Good/Excellent**
  5.24 questions correct on average

- **Knowledge Poor/Needing Improvement**
  3.25 questions correct on average

p-value <0.001, confidence interval 0.92 to 3.09
CONCLUSIONS

Most health care workers practicing in rural areas have little formal training in the field of farm toxicology and feel they need to improve their knowledge.
Health care workers with exposure to farm toxicology CME outperformed those with no exposure on the test of knowledge portion of our survey.
Wider availability of farm toxicology continuing medical education would likely improve the care of patients suffering from farm related exposures.
Questions?