

# MPH Final Presentation

Michele Kerns

# Plan

*(It's always good to have one of those)*

- Field Experience
- Hearing Protection/Final project
- Tying in to the MPH education

*Field Experience*

# Branches

- Nursing
- Environmental Health
- Industrial Hygiene
- Occupational Health
- Army Hearing Program
- Veterinary Services

# Nursing

- Child and Youth Services Health Inspections
- Health education with soldiers
- STDs
- Immunization Screening and review of vaccination policies

# Environmental Health

- Food Service Sanitations and Inspections
- Water Quality and Surveillance
- Disease Vector Surveillance
- Hospital Waste Management
- Child Development Center Sanitation and Inspections

# Industrial Hygiene

- Ventilation
- Noise
- Air Sampling
- Radiation
- Ergonomics
- Indoor Air Quality

# Occupational Health

- Medical Surveillance
- Reproductive Hazards
- Blood borne pathogens
- Hearing conservation and readiness
- Vision conservation and readiness
- Injury prevention and control
- Work related immunizations
- Worksite evaluations
- Personal protective equipment
- Employee health and wellness
- Occupational illness prevention and mitigation

# Army Hearing Program

- Relevant Regulation Review
- Hearing readiness
- Hearing conservation
- Clinical hearing services
- Operational hearing services
- Education

# Veterinary Services

- Sanitary inspection of the Commissary
- Audit of a commercial food processing facility
- Inspections of food items and food facilities on the installation
- Food defense assessment
- Zoonotic disease prevention
- Rabies bite reports

# Hearing Protection

Final Project

# Getting Started

- Reason for the curiosity
- Direction of research
- Execution
- Location
- Sampling plans vs. reality

# Survey Questions

- 1: Noise exposure
- 2: Type of protection
- 3: Usage
- 4: Problems
- 5: Potential to change

# Options for 4

- My hearing protector hurts my ears
- My hearing protector is uncomfortably hot
- My own voice sounds weird when I wear the hearing protector
- I am not able to communicate on the radio when I wear my hearing protector
- I have difficulty communicating with the other members of my squad when I wear the hearing protector
- My hearing protector interferes with the other equipment I need to use for my mission
- I am unable to hear quiet sounds in my environment when I wear my hearing protector
- I am unable to determine the direction of sounds in the environment when I wear my hearing protector
- I am not able to determine how far away sounds are when I wear my hearing protector
- My hearing protector is too complicated or is hard to use properly

# Results

➤ Myriad of noises

➤ Potential for improvement

➤ Comfort

# Interpretation of problems

- Communication
  - Other soldiers 73.9%; 50.6%
  - Radio 72.6%; 47.9%
- Detecting Sounds
  - Picking up quiet sounds 67.1%; 36.9%
  - Direction 73.9%; 35.6%
  - Distance 58.9%; 34.2%

# TCAPS

- Tactical Communication and Protective Systems
- Latest hearing protection technology
- Designed to improve communication as well as protect

## Shnazzy details

- Built in noise dosimeters
- Compatibility with various equipment
- Utilize bone vibrations for communication

# Comparison of need to potential

- Addresses the most prevalent concerns
- Communication between members of a squad as well as compatibility with radios and other equipment
- Allowing detection of quiet sounds while still protecting against noise damage
- Compliance

# Conclusions/ Moving forward

- Integration of this technology is the next step in improving the effectiveness of hearing protection
- Trials
- Education

**MPH education**

# Field experience

- Admin of Healthcare Organizations
- Environmental Toxicology
- Epidemiology
- Statistics
- Food Safety and Security

# Project

- Behavior/Social PH
- Prevention
- Global Health Issues
- Statistics

# Veterinary Services

(as I managed to convince them to let me in on the fun)

- Epidemiology
- Pathogenic Diseases
- Food Safety and Security
- BacT, Parasit, Tox
- Global Health Issues
- Statistics



Questions?