



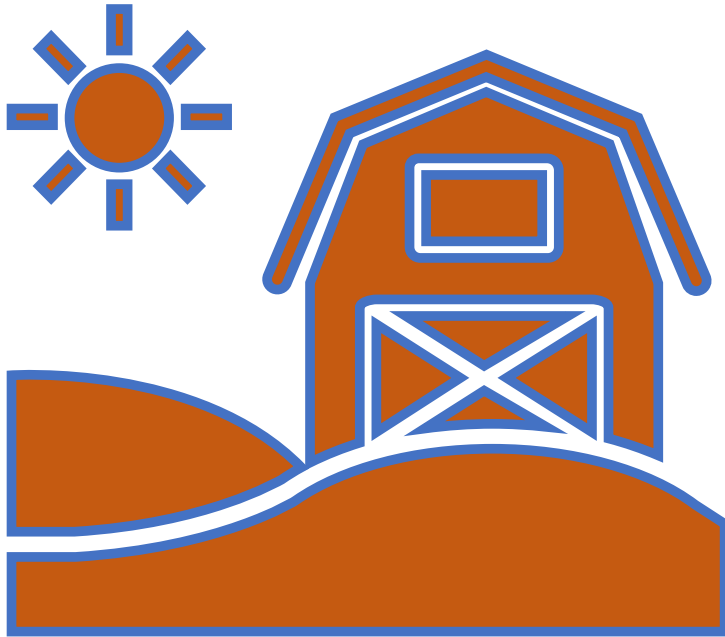
Integrating Safety and Health into Health Care Practice

Producers Perspective

Carolyn Sheridan RN, BSN, COHC
Executive Director, Founder
Ag Health and Safety Alliance



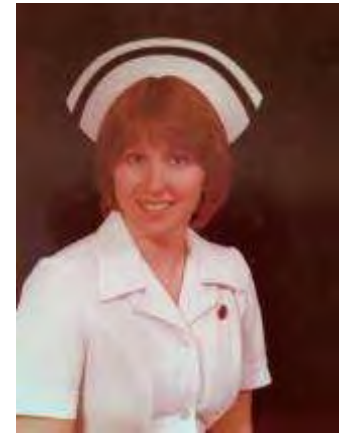
The Power of Ag Producers



- Farmers and farm workers contribute billions of dollars to our economy.
- They have a love of land, community, and heritage.
- Risks are an accepted trait.
- Farmers are self-reliant, stoic and determined to succeed.
- Agriculture includes multi – generations.
- Agriculture includes a wide range of types of operations:
 - family-owned farms, large scale farms, workers and ag businesses.

My Story

- Farmer, Daughter, Wife, Mother, Grandmother
- CNA, EMT
- Registered Nurse
 - Med Surg
 - Obstetrics
 - Dialysis Director
- AgriSafe of Spencer Hospital
 - College Ag Program
 - 4-7 Program
 - Local clinic
 - Farm Safety Day Camps
- National Program
 - AgriSafe Network Clinical Director
- Ag Health and Safety Alliance
 - Ag Medicine Training
 - Focus on the next generation of Agriculture



Health and Safety Issues in Agriculture

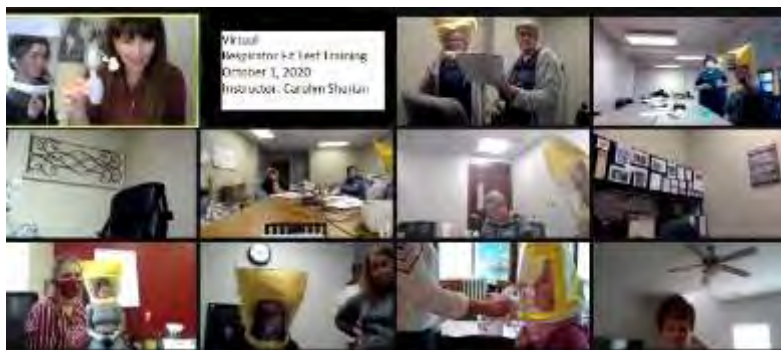
**Understand what our hazards and exposures are
and the risks we are taking to feed the world.**

- Respiratory exposures
- Zoonotic disease
- Chemicals / Pesticides
- Sun exposures
- Noise
- Stress
- Musculoskeletal injuries
- Veterinary pharmaceuticals
- Hazardous equipment
- Acute and chronic trauma
- Grain bins
- Ladders, slips, trips and falls

Challenges

Challenges for the ag population seeking care from health care providers in rural agricultural communities:

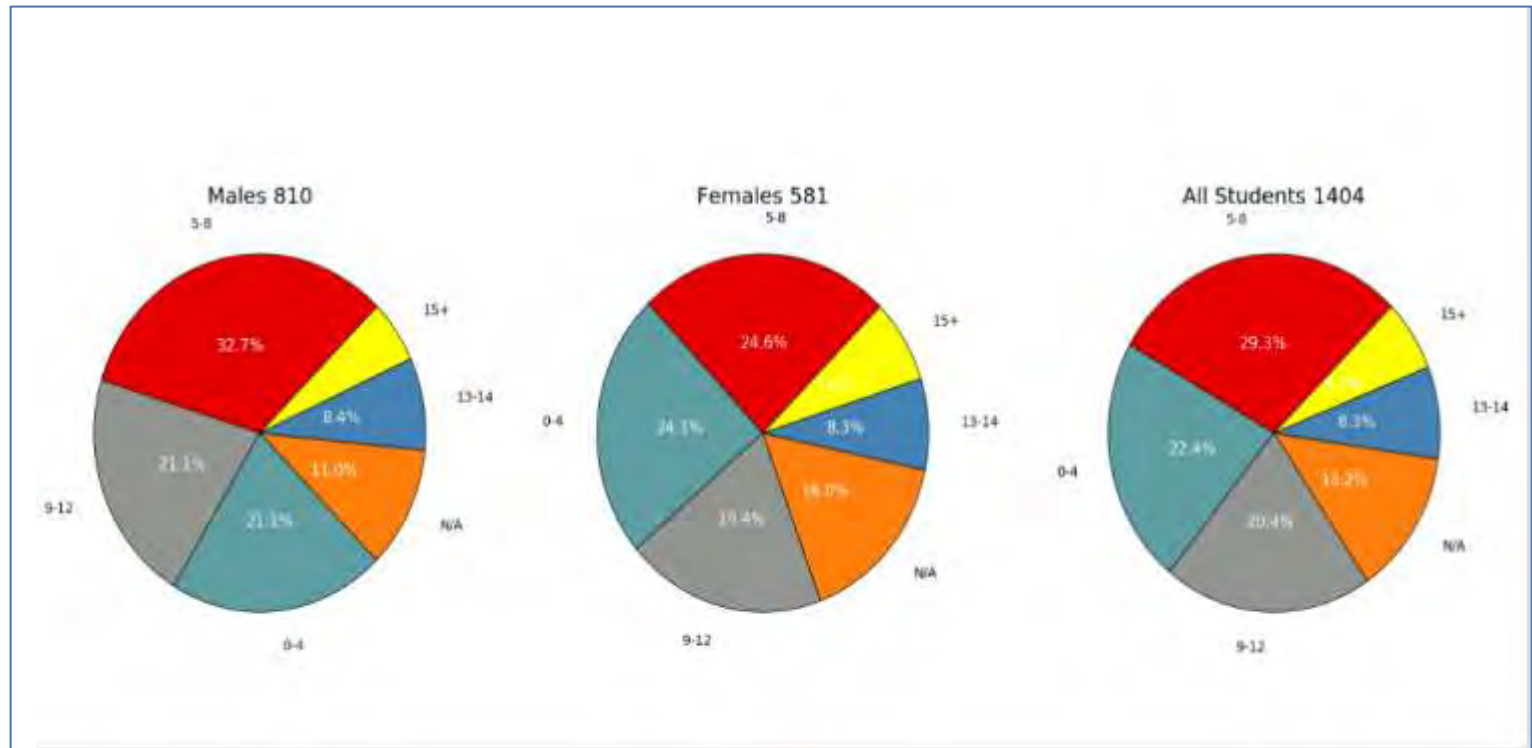
- Few Ag businesses and large Ag operations have identified safety managers
- Health care providers may have limited access to education and training in ag medicine
- Health care providers have limited resources related to agricultural prevention strategies
- Regulations change and we are required to perform our jobs differently.



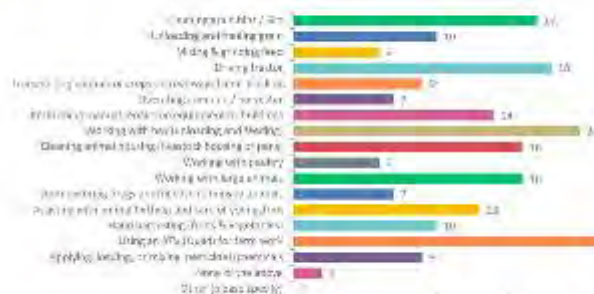
We Need Trained Agricultural Health Care Providers

- The health care community has little, if any, training in agricultural occupational health.
- Knowledge of farm exposures, ergonomics, work practices, social/cultural differences, economics, and health care utilization can improve the health of the farming community.

Q4: How old were you when you first started helping/working on the farm?



Received 23 October 2004



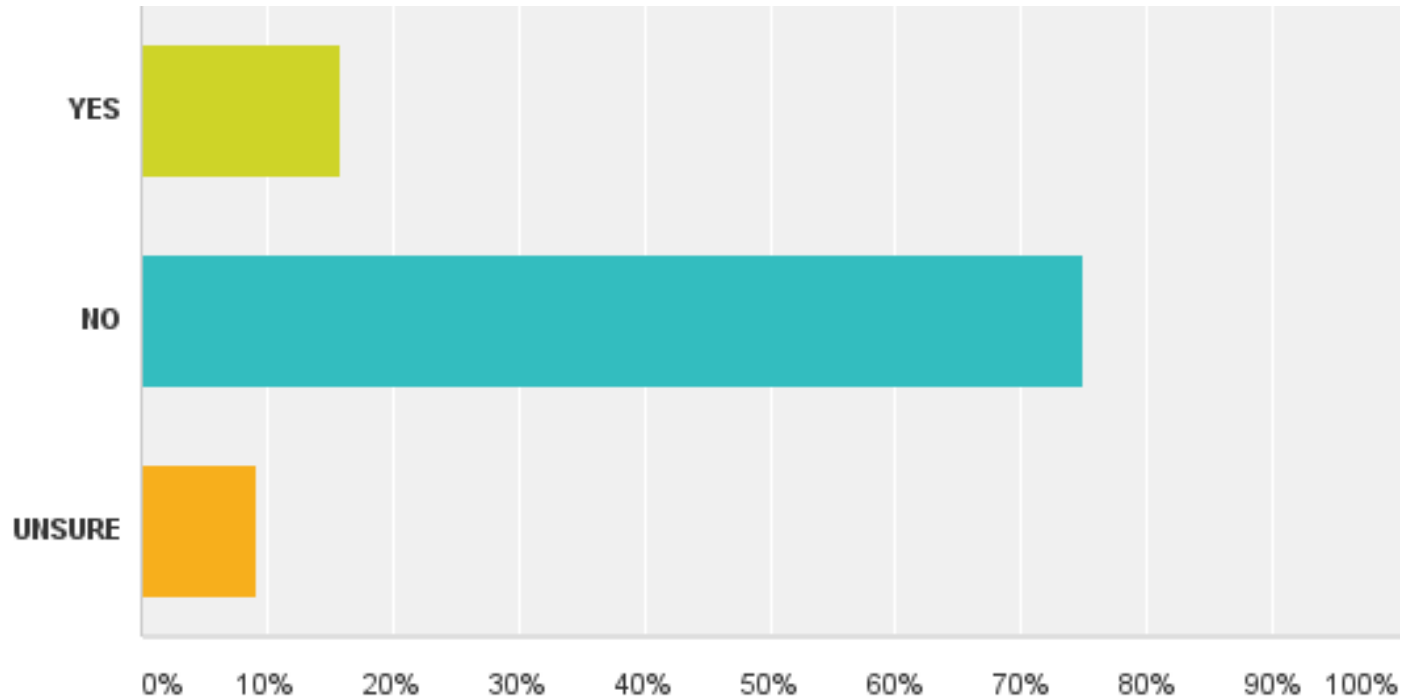
— www.legis.state.nj.us

Abstract: 541. 24 November 2012



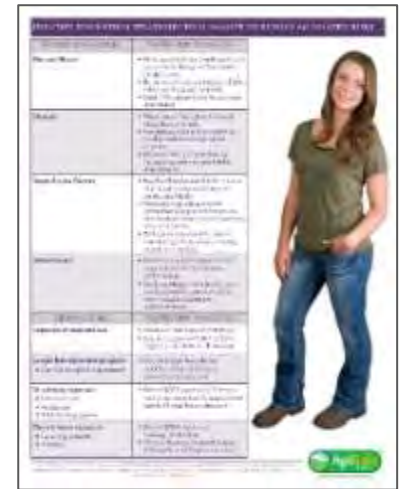
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VERY SIMILAR
BEFORE 14
YOUNG ADULT



Has your doctor or other healthcare provider discussed farm-related health or safety injuries or illness with you?

The Number of females in Agriculture is increasing.



Continuum of life

All stages of life can be impacted when we are living and working in the agricultural workplace which is also our home.





Continuum
of Life



Extended
Families

Next Generations



PRIORITIES



Ways, we can protect ourselves from hazards in the best-case scenario.



- Situational awareness
- Attention to hazards
- Windows of increased risk (harvest)
- Apply managerial skills to health and safety for overall well being
- Have a plan for external demands while maintaining health.

Hierarchy of Controls

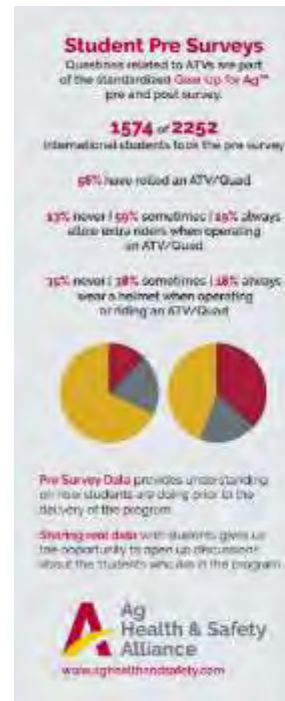
What does that mean to us?

Where does PPE fit?



Engineering Controls

Previous survey results from >800 Midwestern young adults in the AHSA Gear Up for Ag™ Program show that 56% have rolled an ATV, yet 76% report allowing extra riders and only 18% report wearing helmets when operating the device



Use of Appropriate Personal Protective Equipment



We want Choice and Comfort

Personal Protective Equipment Fit, Education and Sales



Availability -Information

Prevention Strategies



PPE Worksheet
 Name: _____
 Date: _____

What are your hazards?

What Personal Protective Equipment (PPE) do you need?

Head ✓ 3" brim ✓ ANSI Z89.1 ✓ CSA Z94.1	<ul style="list-style-type: none"> • Sun Safe Hat - COST varies <i>Donated by Goodhart - Value is \$79</i> • Hard Hat - COST Varies 	
Eyes ✓ Right Size & Shape ✓ 100% UVA/UVB ✓ ANSI Z87.1/ CSA Z94.3	<ul style="list-style-type: none"> • Safety Glasses Clear - COST: \$2.10 • Safety Glasses Tinted - COST: \$3.25 • 3M™ SecureFit with Inram COST: \$ 8.50 • Goggles COSTS: Honeywell Uvex Futura COST: \$12.50 Honeywell Uvex Stealth® COST: \$18.00 • Welding Helmet- COST varies 	
Ears ✓ NRR Rating ✓ Noise above 85dB ✓ Good fit	<ul style="list-style-type: none"> • Earmuffs (3M Peltor) COST: \$17.00 • Ear Plugs: COST: \$2.00 per pair for non-foam type • Moldex Rock bands - Cost: \$6.50 each 	
Body ✓ Read Label	<ul style="list-style-type: none"> • Reusable chemical resistant gloves COST: \$2-20 each • Single Use chemical resistant gloves COST: \$25 box of 50 pairs/ \$.05 pair • Chemical Resistant Boots- COST varies • Coveralls- COST: \$8 - \$10 each 	
Skin ✓ SPF 30 ✓ UPF 30	<ul style="list-style-type: none"> • Sun Safe Hat- COST varies <i>Donated by Goodhart (Value \$79)</i> • Sun Safe Clothing- COST varies • Sunscreen - COST varies 	
Foot ✓ ASTM F-2412-1995 ✓ Chemical Resistant	<ul style="list-style-type: none"> • Work Shoes: • Steel Toed Shoes • Chemical Resistant Boots • Crampons for boots COST for all items varies 	

Contact Information: info@ag-healthandsafety.org | Website: www.ag-healthandsafety.org

Q19 I would find value in receiving personal protective equipment such as hearing protection, chemical gloves, coverall, respirator and safety glasses.



Understand the cost of PPE
Know where PPE is available.

Appropriate Respiratory Protection

- Understand Respiratory Hazards
- Engineering controls- what is feasible
- Avoid High Risk Exposures if Possible
- **Protection – how can you help?**
 - Understand what is the right mask for the job so you can help us.
 - The right fit for the mask. Be able to do fit testing.
 - Are masks available? Find out where so you can help us find the right respirator.
 - Be able to education us on the care, maintenance and storage of respirators.



Respirator Fit Testing Business Case

Community-Based Respirator Fit Testing

Respirator fit testing is a growing need in many agricultural communities due to changes in the Worker Protection Standard requirements for producers who apply pesticides. Respirator fit testing is also important for other types of exposures, but many communities do not have someone who is trained to perform fit testing.

One individual may have the capacity to perform all aspects of the respirator fit test including administering the questionnaire, review of the medical questionnaire, medical evaluation and perform the fit test but this is not common. In most cases people will need to rely on more than one individual to accomplish having a respirator fit test that complies with OSHA standards. This will require building a network consisting of individuals and organizations to ensure individuals can easily receive a respirator fit test. The chart on the previous page provides appropriate roles and responsibilities for a variety of individuals and professionals that may be responsible for respirator fit testing. Two different examples of how these individuals can work together are as follows:

Example #1 ABC Manufacturing Company

- ABC Manufacturing Company determines their employees need a respirator fit test and implements a Respiratory Fit Test Program.
- The Safety Officer at ABC Manufacturing Company administers the medical questionnaire.
- A registered nurse (RN) or licensed health care professional (LHCP) reviews the medical questionnaire to determine if a medical evaluation is required.
- A local physician does the medical evaluation for the employee(s).
- The safety officer at ABC Manufacturing Company is qualified to perform respirator fit testing.
- The safety officer establishes and maintains a Respiratory Program per OSHA requirements. This includes education, respirator cleaning, storage and cartridge changing schedule.



Example #2 Farmer Swanson Applies Pesticides

- Farmer Swanson determines his family members need a respirator fit test based on the pesticide label.
- Farmer Swanson contacts his health care provider (HCP Office) to find out how to get a respirator fit test.
- The HCP Office discusses the need for a medical questionnaire to be completed with Farmer Swanson. She/he directs Farmer Swanson pick up the medical questionnaire or sends it by mail or email to Farmer Swanson and his family members.
- Farmer Swanson and family members complete the medical questionnaire and return it to the HCP Office.



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Community-based Respirator Fit Testing Business Case

Finding a way to make respirator fit testing accessible in communities can be challenging. In many cases, several organizations and/or individuals may need to be involved to accomplish a respirator fit test program that complies with OSHA and/or the Worker Protection Standard.

Having all aspects of respirator fit testing in one organization is the easiest but not always feasible. A health care provider has the potential to have this ability by having an individual(s) trained in performing respirator fit testing within the office.

In other scenarios, someone trained in fit testing would refer to a health care provider for the medical evaluation services. In all scenarios, communication, networking and establishing a fee structure is important. The following items will most likely require some type of fee for service structure:

- Medical evaluation questionnaire review
- Medical evaluation (this may include a physical and a lung function test)
- Respirator Fit Test
- Respirator use education
- Respirator program administration
- Retail sales of respirator supplies

Fit testing a respirator is an important part of the entire process of appropriate respiratory protection. Other aspects of respirator fit testing include the availability of respirators and cartridges for specific respiratory hazards. Individuals or health care providers who perform respirator fit testing and assist with the administration of a respirator program are many times also the resource for assisting the individual in finding the right respirator and purchasing decisions. Creating a community-based respirator fit test model will assist in making certain that all aspects of appropriate respirator protection are available.

Questionnaire

Community-based Respirator Fit Test Program Planning

When establishing a community-based respirator fit testing in your community consider the following items:

1. What are your qualifications? (Safety officer, nurse, pharmacist, farmer, farm wife, physician, nurse practitioner)
Are you willing and able to administer the OSHA Medical Questionnaire? Yes / No
If no, who can administer this questionnaire?
2. Are you qualified and willing to review the medical questionnaire? Yes / No
If no, who can review the medical questionnaire?
3. Are you qualified and willing to perform the medical evaluation? Yes / No
If no, who can perform the medical evaluation?
4. Do you plan to perform respirator fit tests in your community? Yes / No
If no, who would be able to do this?
5. Are you confident in your ability to recommend appropriate respiratory protection? Yes / No
If no, who would be your resource to recommend appropriate respiratory protection?
6. List the organizations or individuals who would be part of your community-based respirator fit testing:
 - a. Medical professional _____
 - b. Safety professional _____
 - c. Professional Licensed Health Care Providers (PLHCP) _____
 - _____
 - d. Others _____
7. Where can people purchase respiratory protection in your community?
 - a. Research what respirators are available in the community
 - b. Make a list (including prices) for people seeking fit testing
 - c. If respiratory protection is not available or is limited in your community, where else can people buy respiratory protection.
8. Do you know the cost of respirators of all types? Yes / No
 - a. Make a list of respirators commonly used
 - b. Research local and online prices of respirators

Have good resources available that are easy to follow.

Respirator Selection Quick Reference Guide

In agriculture, you may encounter hazardous particles in the air while you are working. A respirator can protect you from breathing in these particles.

To select and use the appropriate respirator:

- ✓ Identify the hazard
- ✓ Understand the hazard
- ✓ Select the appropriate respirator
- ✓ Use NIOSH approved respirators
- ✓ Have your respirator fit tested
- ✓ Do a user seal check

NIOSH Approved: A respirator must be certified by the National Institute for Occupational Health and Safety (NIOSH) and worn properly to provide appropriate protection. NIOSH's classification ratings describe the ability of the device to protect the wearer from dust and liquid droplets in the air.

Disposable Respirators

Generally single use, but repurposing may be appropriate in some situations.

N95 filtering facepiece respirators are the most common types of disposable respirators. They are used in agriculture for working with hay, handling grain, in livestock housing, with infected livestock, and while welding or shop work. They are also recommended for use when working with moldy materials. Certain types of pesticide labels will recommend the use of N95 respirators.

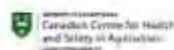
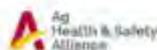
Disposable Respirator Examples	B210-N95	B211-N95	B511-N95	B271-P95	B233-N100	B515-N95
Uses	Organic Dust, Mold, Livestock, Healthy Hogs, Cattle, Hens, Grain, Woodworking, Pesticide Handling (refer to label), Zoonotic Disease Prevention					Welding, Grinding, Metal Surfers
Benefits	<ul style="list-style-type: none"> • Easy to use • Disposable 	<ul style="list-style-type: none"> • Excellent value • Small face shape • Nylon packaging 	<ul style="list-style-type: none"> • Excellent value • Good for long periods of use • Good for large face shapes 	<ul style="list-style-type: none"> • Excellent value • Good for use with eye wear • Good seal 	<ul style="list-style-type: none"> • Excellent value • Good straps • Longer use • Good seal • Breath off-center 	<ul style="list-style-type: none"> • Excellent value • Excellent for welding • Flame resistant

Particulate Filter Types: NIOSH-approved filters are rated as HEPA, H95, P95, R95, R99, P99, P100, HEPA or P100. The number 95, 99, or 100 indicates the percent NIOSH filtration efficiency. N-Series: Used in particular environments free of oil particles. R-Series: Used for oil and non-oil particles with low-to-medium concentrations approved by NIOSH. P-Series: Used for oil and non-oil particles with low-to-medium concentrations specified by manufacturer.

Exhalation valves: are designed to improve breathability by allowing hot, humid exhaled breath to exit quickly, helping to reduce heat build-up and moisture inside the respirator. They can help prevent fogging of glasses. An exhalation valve can also prevent the exhalation of vapors and should not be worn for protection during a pandemic.

Non-Respirator

These mask types are not certified by NIOSH for use as a respirator and will not provide protection from occupational or agricultural hazards. They are only effective for nuisance dusts and can help prevent the spread of viruses.



Reusable Respirators

Reusable Respirators are cost effective options that offer protection from hazardous gases, vapors, and particles found in many agricultural environments.

Half Facepiece: Different sizes available, can add cartridges.



Full Facepiece: Includes eye protection and provides more protection.



Cartridge Options

P100 Pink or White		Organic Dust, Grain, Feeds, Hogs, Poultry, Welding, Mold, Woodworking, Shipwork
Particulate Pre-Filter		Can be used with the gas cartridges below to also filter particulates.
Organic Vapor Black		Pesticides, Paints, Use Pre-Filter/Filter Cover
Amonia Green		Anhydrous Ammonia (rescue or exit situations), Hogs, Poultry, Use Pre-Filter/Filter Cover
Organic Vapor Acid Gas Yellow		Paints, Disinfectants, Bleach, Use Pre-Filter/Filter Cover
Multi-Gas Blue		Paints, Disinfectants, Bleach, Use Pre-Filter/Filter Cover

Remember: Schedule times to change your cartridges based on all the warnings on the product label. A warning becomes difficult to breathe, or if you can taste or smell the hazard.

Advanced Respirators

Powered Air Purified Respirator (PAPR)

Use for cleaning out grain bins, working with hay, in dusty livestock buildings, shop work (grinding, cutting), power washing, pesticide handling (with cartridges if label specifies). Can be used with a beard or medical condition such as asthma, claustrophobia, heart, or lung conditions.



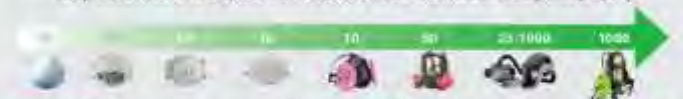
Self Contained Breathing Apparatus (SCBA)

Use in confined spaces that may be low in oxygen, such as storage bins, tankers, and manure pits with high levels of hydrogen sulfide. An SCBA should be used in situations where airborne hazards are immediately dangerous to life and health.



Assigned Protection Factor

The assigned protection factor (APF) describes the decrease of harmful substances in inhaled air. It is used to describe how well a respirator can protect someone. The higher the number the higher the APF. The protection factor is only true if the respirator fits the wearer and is being used properly.



Respirator Fit Test: Everyone has a unique face size and shape. A fit test should be conducted by qualified personnel before an individual enters the respirator in a hazardous environment.

User Seal Check: Do not confuse a fit test with a user seal check. Once you have identified a fitting respirator, a "seal check" should be performed each time you wear the respirator to make sure it is properly on the face and adjusted as needed.

Pesticides

Have the ability to help us read the label or MSDS/SDS

Information on Personal Protective Equipment

I am thinking about application rate not the precautionary statement.

Ask me the right questions: Have you been applying pesticides?



Ask me what pesticides I use. Know if I should be tested.

- [illegible]

Staying Safe During an Avian Influenza Outbreak

Human infections with avian influenza are rare, but possible, mainly through direct contact with sick poultry and livestock.

PROTECT YOUR LIVESTOCK

Be prepared by using biosecurity practices to prevent avian influenza in your livestock.



- ✓ Avoid attracting wild birds and waterfowl to your home.
- ✓ Keep feed contained and enclose outdoor feeding areas.
- ✓ Keep visitors to a minimum.
- ✓ Limit travel with birds to sales and shows.
- ✓ Wear routine protective gear, including work clothing, rubber boots, and work gloves.
- ✓ Wash hands before and after handling animals, raw milk, feces & other bodily fluids.
- ✓ Keep poultry away from livestock.
- ✓ Look for signs of illness.



For more information: umash.umn.edu/avianflu

IF WORKING WITH SICK ANIMALS

Protect yourself by wearing the proper personal protective equipment (PPE).

- ✓ **Head protection**
disposable headcover or hair cover
- ✓ **Eye protection**
vented goggles or full facepiece respirator
- ✓ **Gloves**
disposable nitrile or neoprene gloves that can be disinfected
- ✓ **Respirators**
minimum protection is a NIOSH-approved N95 disposable respirator
- ✓ **Protective clothes**
disposable coveralls or coveralls that can be disinfected
- ✓ **Foot protection**
disposable coverings or boots that can be disinfected



GET CONNECTED



Emerging Issues

Avian Influenza

Human Infection with Equine Influenza

Avian Influenza Outbreaks

Avian influenza viruses cause outbreaks of disease in poultry and wild birds. In recent years, several outbreaks of avian influenza have been reported in poultry and wild birds. These viruses can sometimes infect humans and other animals.

Respiratory Infections

Avian influenza viruses can cause respiratory infections in humans. Symptoms include fever, cough, sore throat, and difficulty breathing. In some cases, the infection can be severe and even fatal.

Prevention

To prevent avian influenza, avoid contact with sick birds, wear protective gear, and wash hands frequently.

COVID-19 AND HEALTH ON THE FEEDLOT

There is no evidence that cattle can transmit COVID-19 to people or that people can transmit it to cattle.

There are no restrictions on cattle sales, but it is possible to postpone cattle auctions, do so, first, and appropriate social distancing practices.

- Feedlot work is considered essential.
- If you feel sick, you should notify your supervisor, stay at home, and avoid close contact with other people.
- If you do not have COVID-19, you can interact with the animals as normal. However, you should practice good hygiene during these interactions.

Wash your hands for 20 to 30 seconds

Avoid touching your face, mouth, nose, and eyes

Clean and disinfect equipment and tools

Use appropriate personal protective equipment

Keep at least 6 feet of distance between people

Agricultural Occupational Health

- Identification of High-Risk Areas
 - Producer /worker
 - Young adults
 - Women in agriculture
 - Older adults
 - Spouse, children, other family members



Occupational Health Services

Know the difference between Occupational and Agricultural Health Services

Agricultural Specific Screening Services

- Occupational History
- Lung Function screening
- Hearing Test
- Skin Cancer Screening
- Back/Spine Lifting Safety Assessment
- Cholinesterase
- Tetanus Immunization

General Health Screening Services

- Height/weight evaluation
- Blood Pressure
- Cholesterol

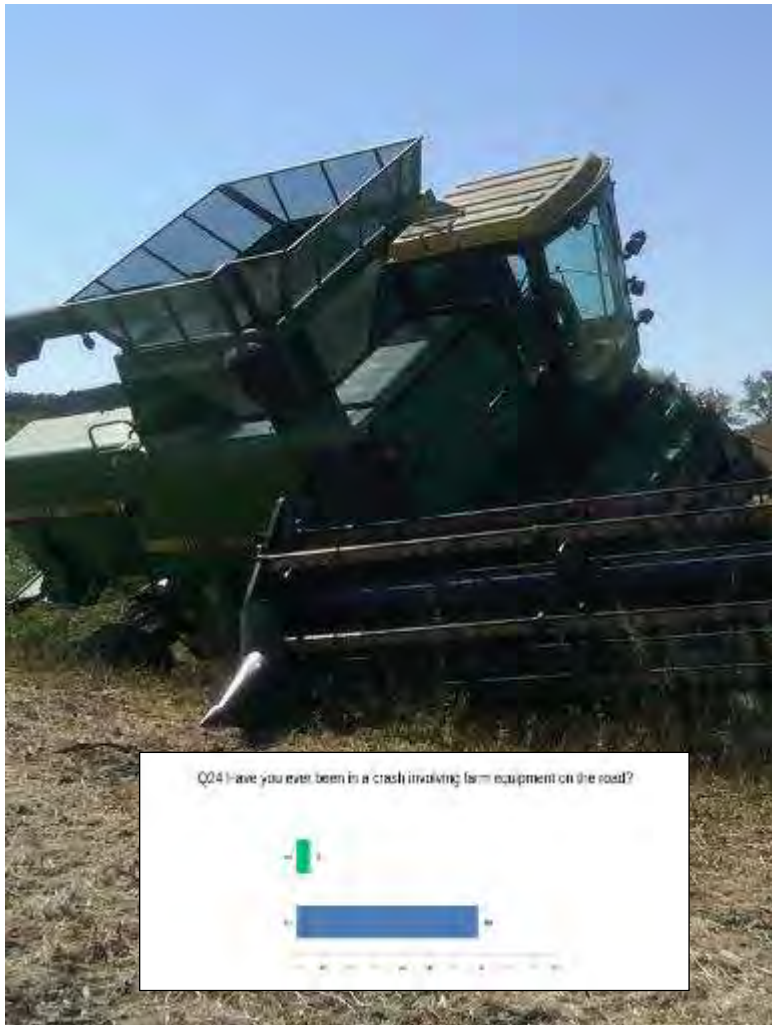


Where I Seek CARE

- Family Physicians
 - Nurses
- Advanced Practice Nurse
- Nurse Practitioner
- Hospitals
- Public Health
- Emergency Departments
- Specialists
 - Ear/Nose/ Throat
 - Pulmonologists
 - Audiologists
- Chiropractor
- Mental Health Services
- Pharmacists
- Social Services
- Occupational Health
- Public Health Nurses
- *Veterinarian*

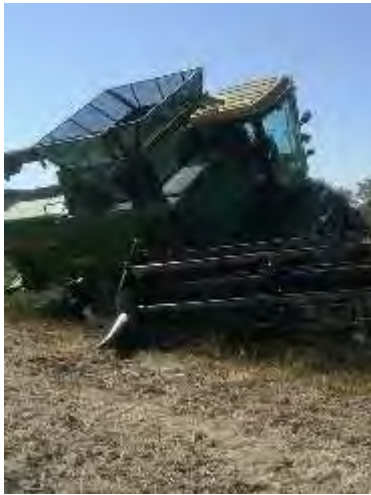
Natural Disasters & Man made Disasters

Q25 Have you ever been in a near-miss incident with farm equipment on the road?



Q24 Have you ever been in a crash involving farm equipment on the road?





Immediate

- Safety
- Reaction to event (neighbors, family, friends)

Immediate

- Stress
- Reaction to event (neighbors, family, friends)
- Watching and Waiting

Short term

- Harvest
- Stress
- Insurance

Short term

- Stress
- Modify established farming practice
- Crop Insurance

Long term

- Financial
- Behavior change
- Motivators (Experience? Incentives?)

Long term

- Stress
- Modify established farming practice
- Crop Insurance
- Financial
- **Health care**



Outcomes

Outcomes – Healthcare Access



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Our Staff



Sue Brugman
Board Certified Family Nurse Practitioner

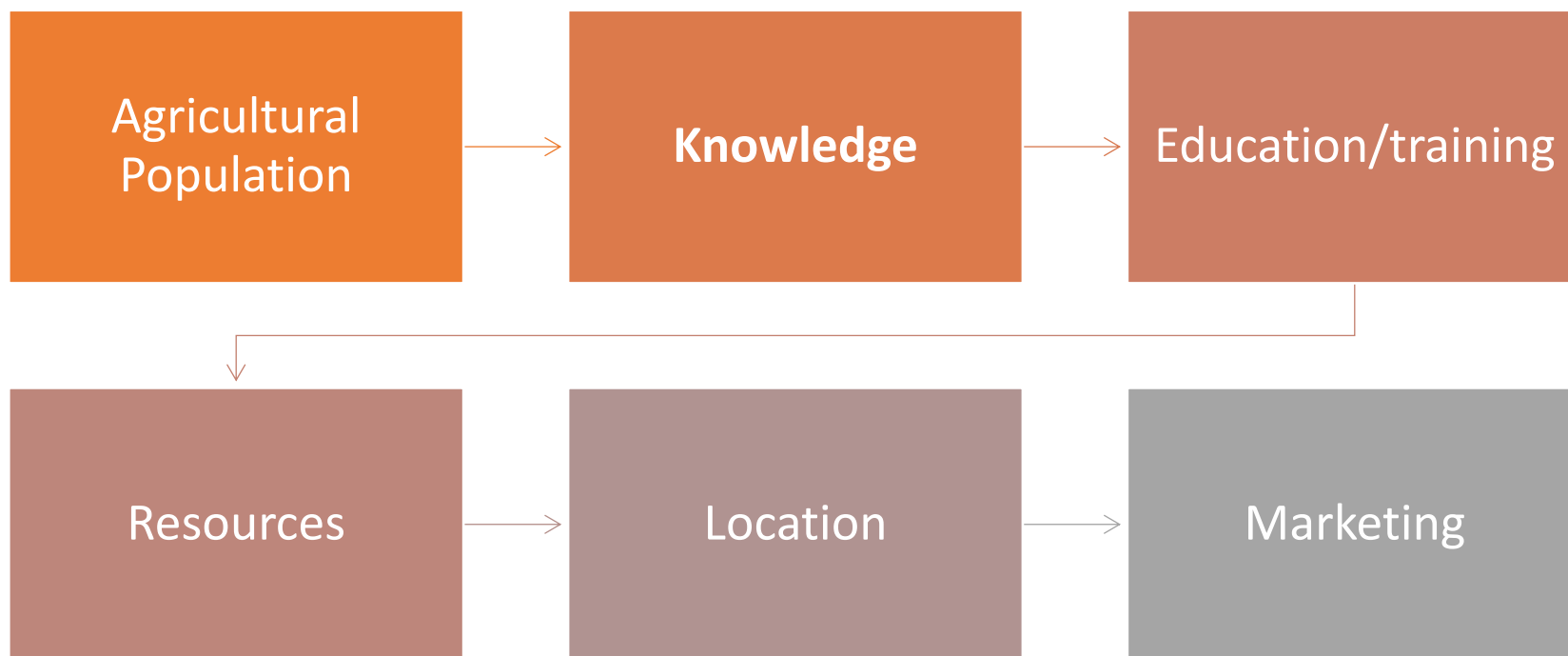
Sue earned a nursing diploma from St. Joseph Mercy School of Nursing, a bachelor of science in nursing (BSN) degree from the University of Iowa, and a master of science in nursing (MSN) degree from D'riat Cliff University. She has over 35 years of nursing experience, and has spent the majority of her career working in orthopedics and surgery. She has served as an adjunct instructor at Iowa Lakes Community College, and is currently providing healthcare services to patients at the Grand Avenue Free Medical Clinic in Spencer, IA, as well as caring for Crown Clinics patients. In her spare time, Sue enjoys playing the piano, traveling, and spending time with her family and friends.



- Provide services that fit the need in your area.
- Include Ag specific questions in exam
- Research what is currently available in PPE
- Review current literature
- Incorporate element of preventive health care into current job
- Be a reliable resource
- Have appropriate products available
- Find ways to ask what they need & want
- Be the expert
- Know what is happening in agriculture
- Learn how to do fit testing



IMPORTANT STEPS IN DEVELOPING AGRICULTURAL HEALTH AND SAFETY SERVICES



SERVICE LOCATIONS

- Commodity Groups Meetings/conferences
- Pesticide Applicator Training
- Farm Association Meetings/conferences
- Grain Elevators
- County Fairs
- Seed Dealers
- Stockyards
- Machine Dealerships

Example: Clay County Fair

9 days

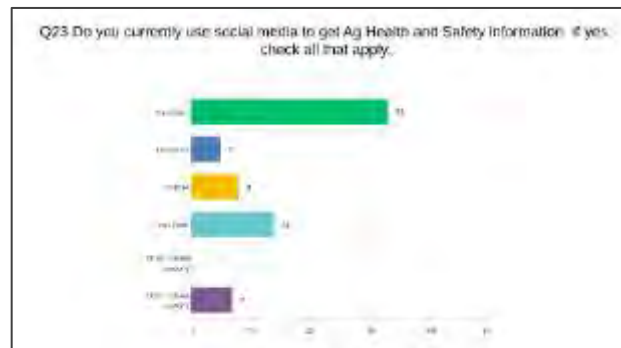
\$7000 PPE Sales

Contacts



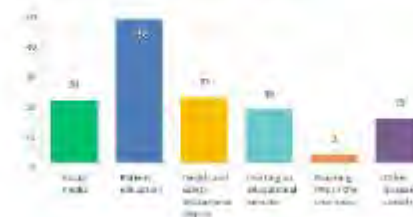
Health and Safety Messages

- Social Networking
 - Facebook – live streaming
 - Instagram
 - Snap Chat
 - Blogs
 - Twitter
- Radio Show
- Internet Newsletters
- Displays in new places
- Online catalogs and ordering
- New Partners





Q29 How do you plan to share your Ag Health and Safety knowledge with your patients?



To Do List

Learn about Ag in your region

Demonstration PPE

Find out what PPE is available locally

Set up programs

Be the expert at something (hearing, respiratory, PPE)

Network

Resources



What is Gear Up for Ag?

[illegible][illegible]

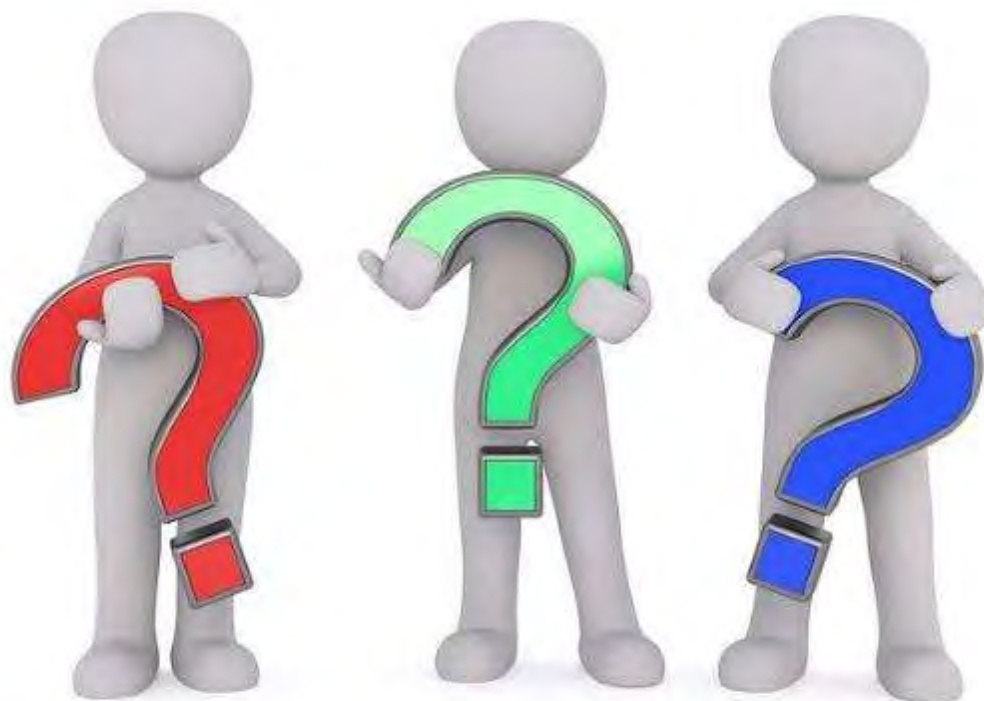
Protection From Hazards

Farming as an Occupation

Not just a Life Style

Work Place is also Home





Contact Information

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