

# Occupational Health and Safety for Pork Producers and Employees



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The University of Iowa

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Iowa's Center for  
Agricultural  
Safety and Health



Great Plains  
Center for  
Agricultural  
Health



# Objectives

1. Why should one be concerned about occupational health?
2. What are 5 primary health concerns?
3. What are some preventive measures?
4. What is the Certified Safe Farm?
5. What is the Pork Industry Safety Training – Seminars / Online Courses?
6. What distance learning technology is available (demonstration)?



# Health Care Cost Concerns

Health Insurance - a major cost of doing business

- \$11,500 = Average cost for employment based health insurance in 2006 for a family of four
- \$3000 = Average employee's contribution
- 87% increase in premiums since 2000 (18% inflation during the same time)
- 73% of farmers in CSF study stated health care is a financial burden



# Worker (Human) Capital



Need to reduce:

- Health insurance cost
- Workers' comp cost
- Disability cost
- OSHA Concerns
- Liability risks
- Sick leave

Need to improve:

- Employee retention
- Worker morale
- Financial bottom line



# Five Areas of Producer/ Worker Health Concern

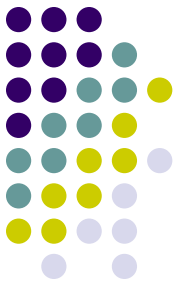


- Injuries
- Needle Sticks
- Noise
- Manure gases
- Respiratory exposures



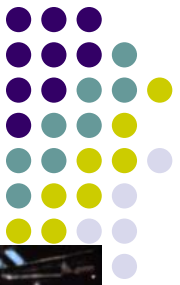
# Manure gases

- Hydrogen Sulfide
  - Methane
- 40% deep pits = risk
- Anaerobic conditions
- Agitation
- Acid conditions in pit
- Sulfates > 250 ppm in water
- When pit warms up (late spring)
- Prevention
  - Minimal agitation
  - Check sulfates in water
  - More frequent emptying
  - Lime the pit

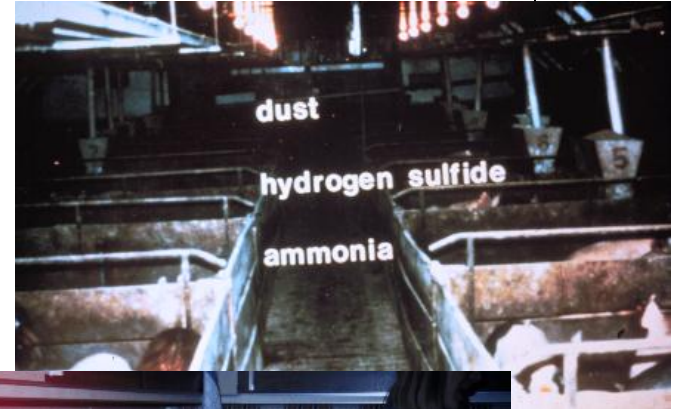




# Respiratory Concerns



- Exposures
  - Dust
  - Endotoxin
  - Ammonia
- Mostly Chronic Exposures concern
- Airways concern
  - Organic Dust Toxic Syndrome
  - Bronchitis
  - Asthma-like condition



# Respiratory Prevention



- Research since 1974
- Dust control
- Gas control
- How clean is clean?
- Wellness Checks
- Management
- Engineering
- Education







- Certified Safe Farm (CSF)



# CSF = Four Integrated Components



**On-Farm Safety Audit**  
(Standard checklist – performance based)

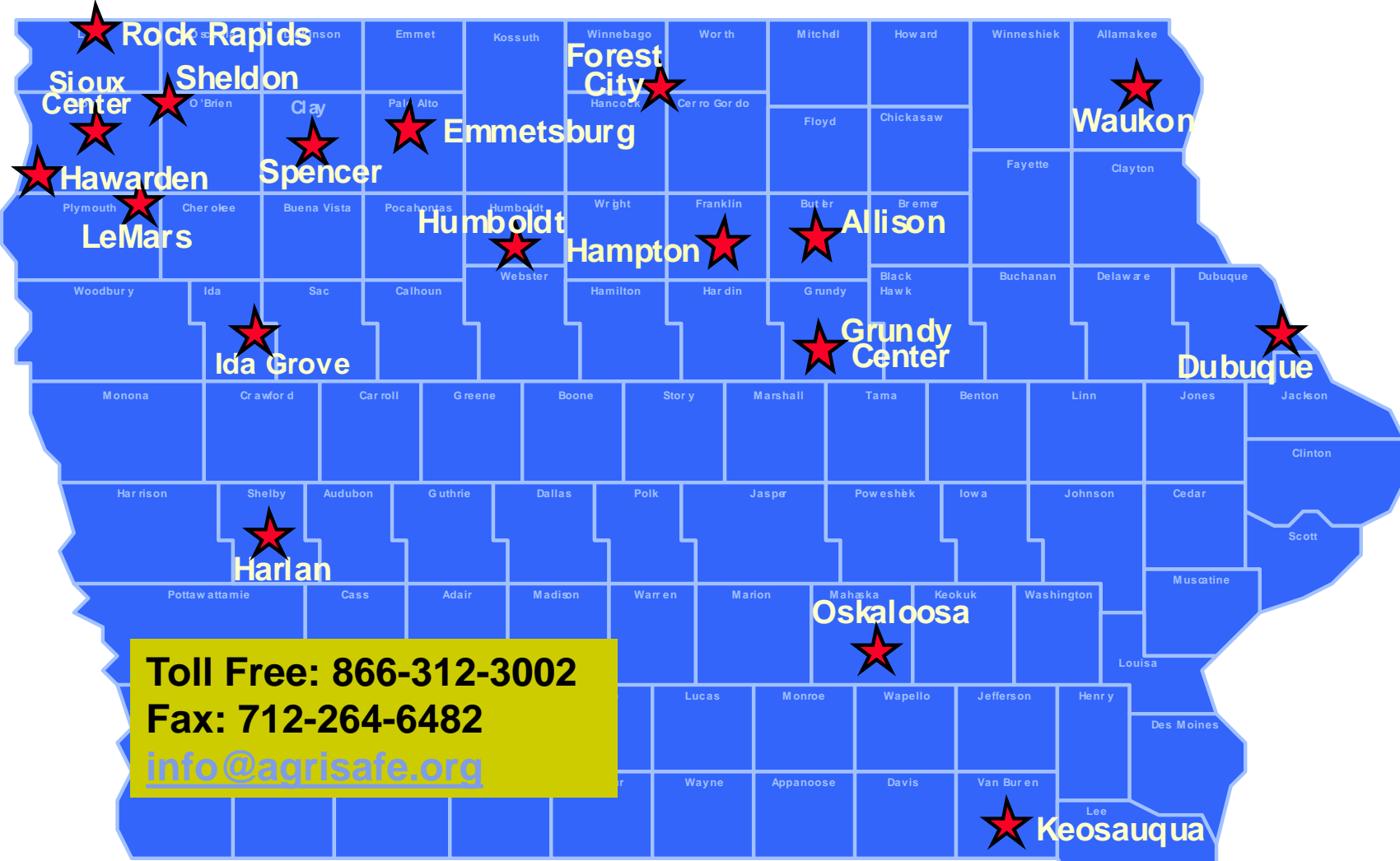
**Education/behavior  
Change**

**Clinical Occupational Health  
and Wellness screening**

**Incentives**



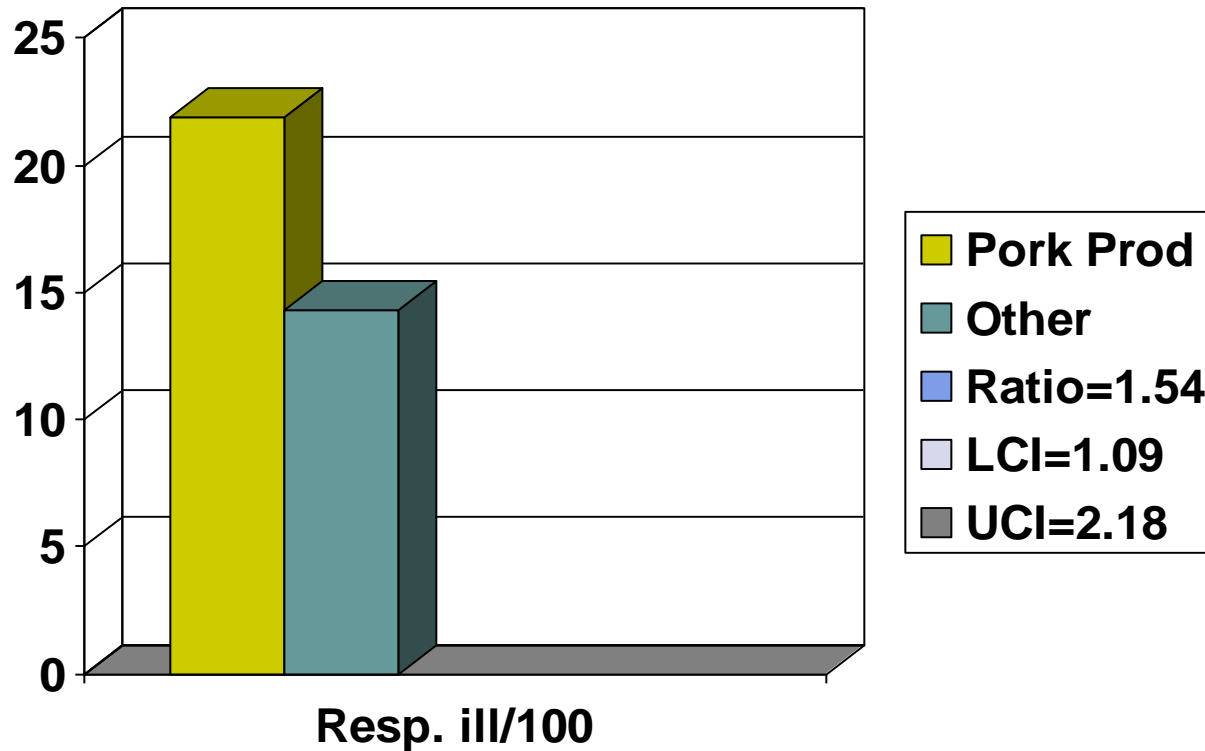
# AgriSafe Network



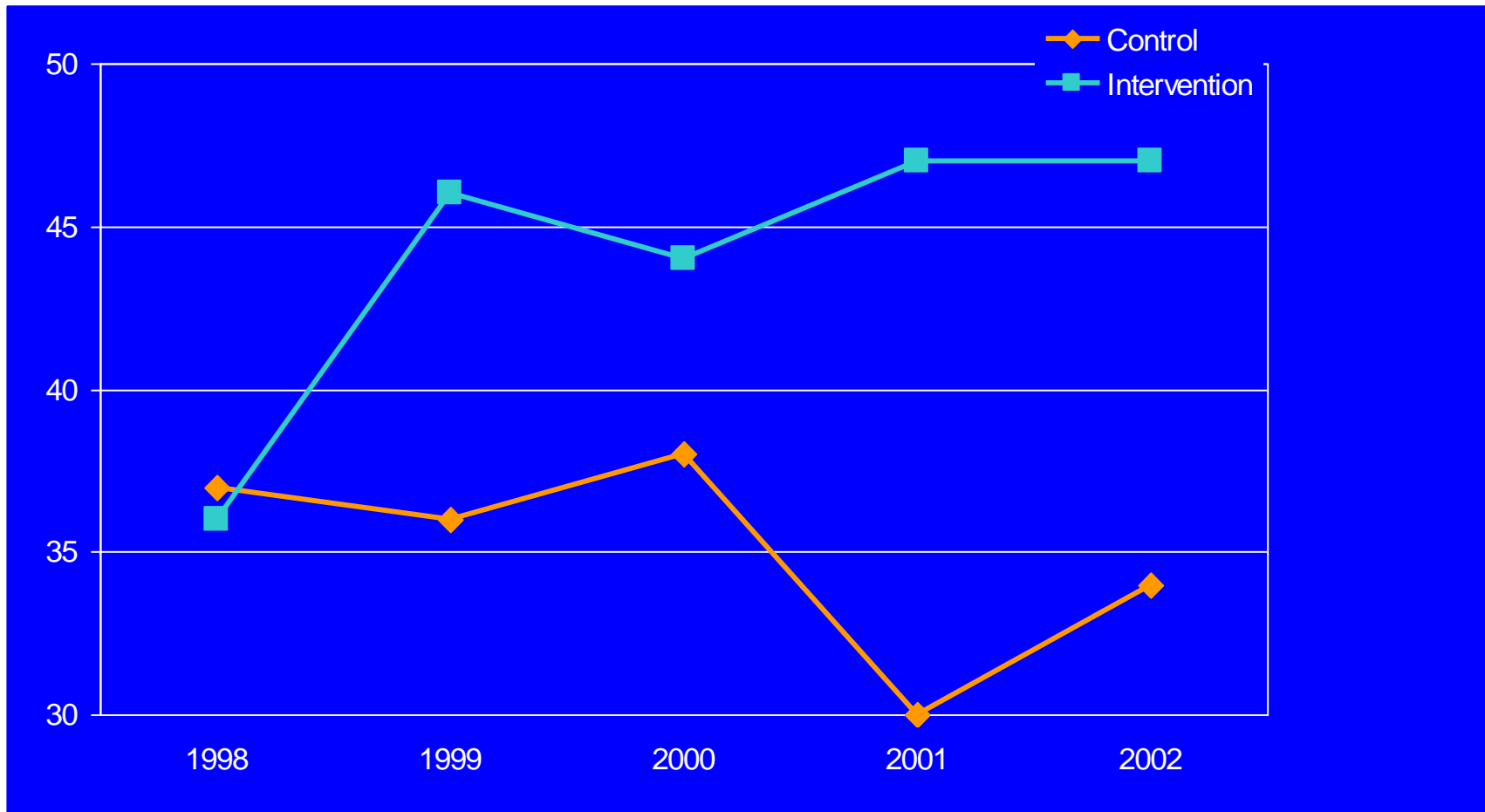
**Toll Free: 866-312-3002**  
**Fax: 712-264-6482**  
[info@agrisafe.org](mailto:info@agrisafe.org)

**★ AgriSafe Network Clinic Site**

# Respiratory Illnesses in Pork Producers vs. Other Farmers



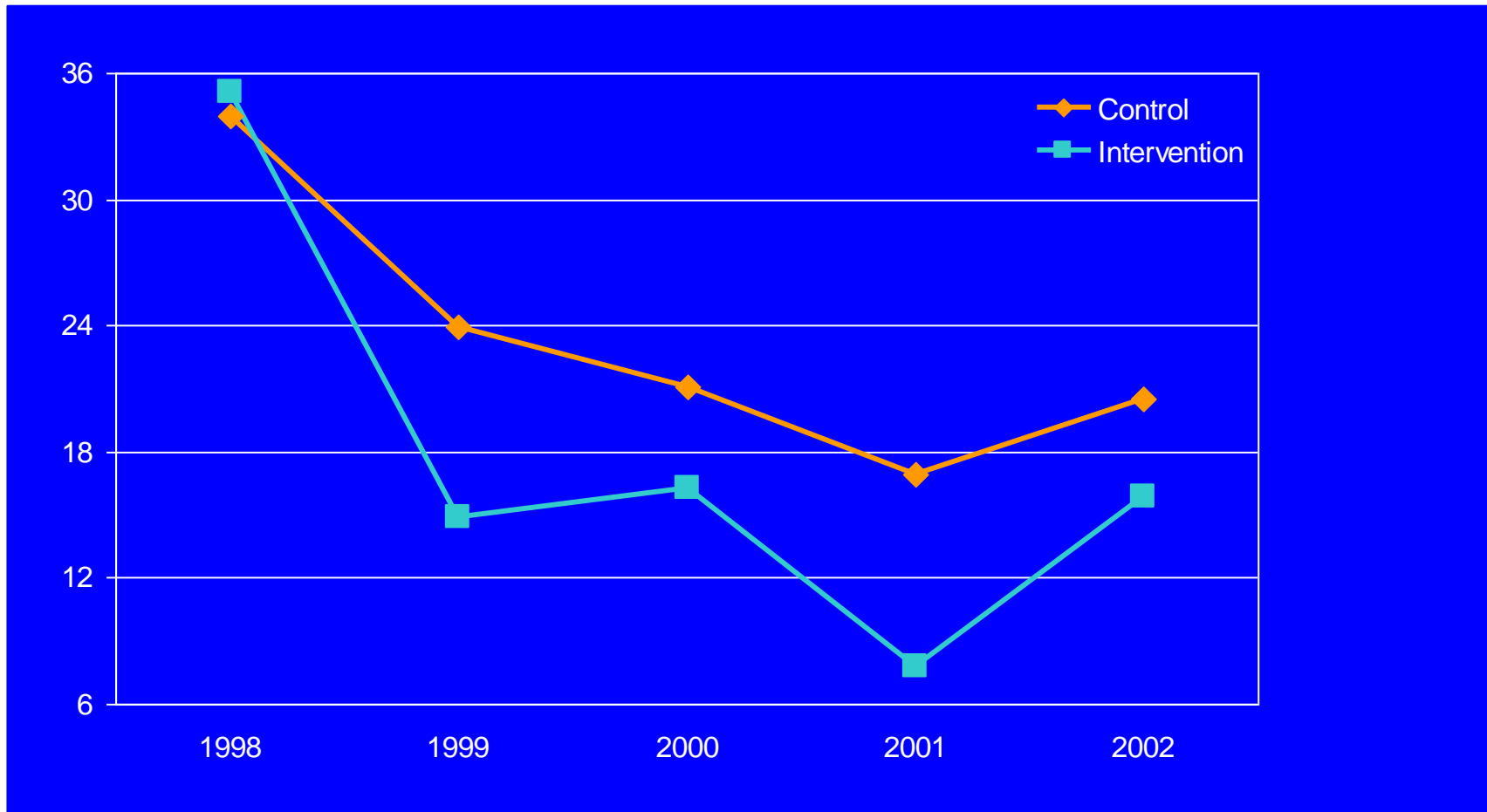
# Percent of Farmers Who Wear PPE



Overall difference in use of respiratory protection is greater in intervention farmers  $P < 0.003$



# Organic Dust Toxic Syndrome



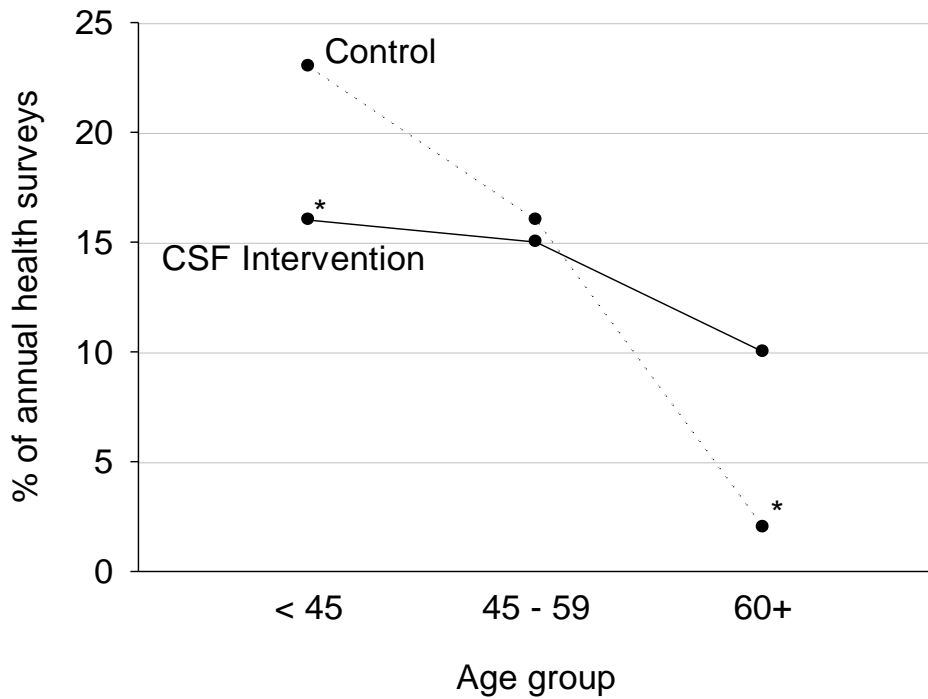


# Acute Bronchitis

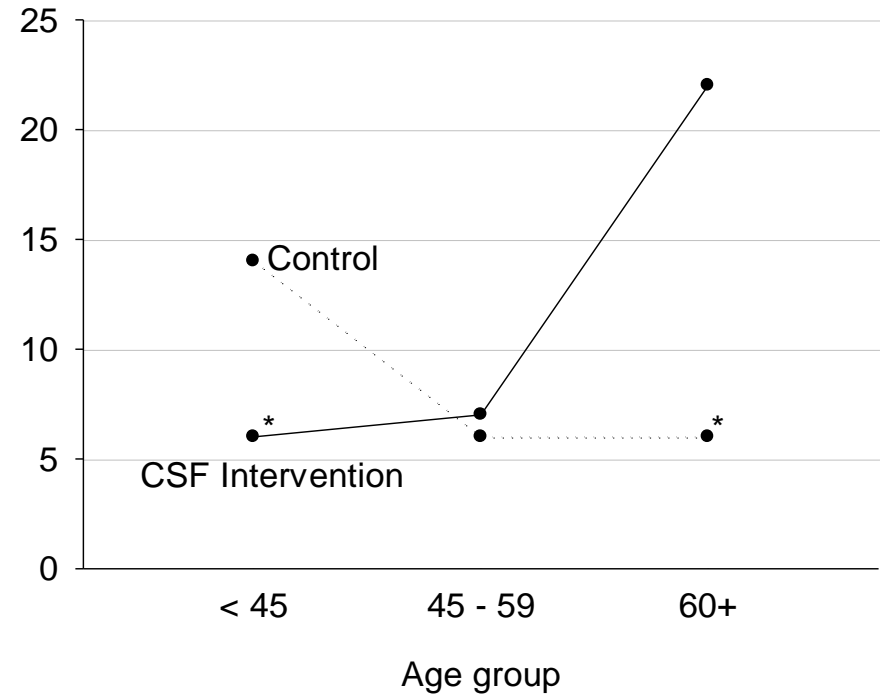
(Annual Health Survey)



**Farms with swine confinement**



**Farms without swine confinement**



# Pulmonary Function in CSF Farmers



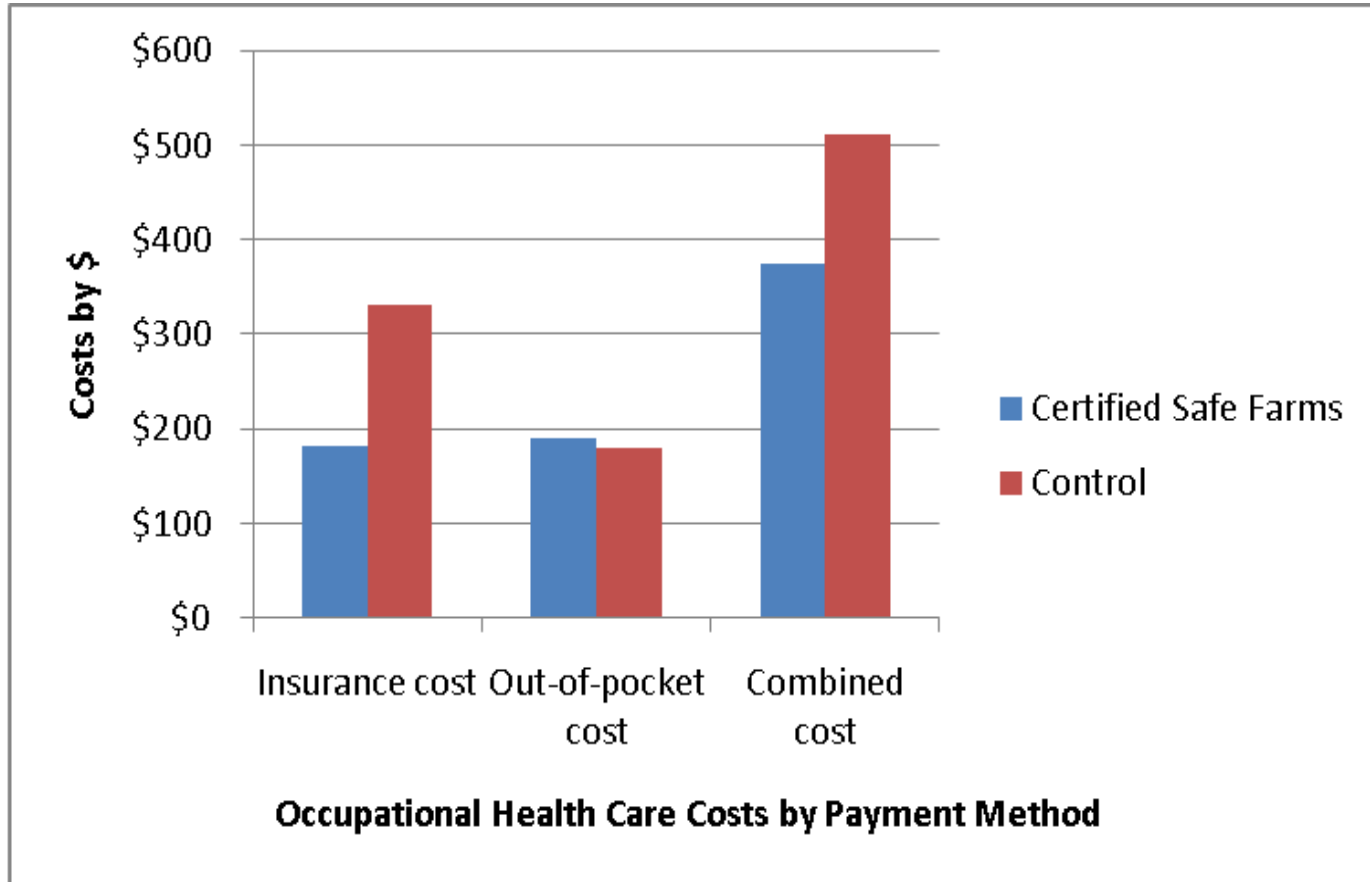
## Baseline Tests

- **19.4%** of CSF had FEV1 deficits **> 20%** of predicted

## After 4 Years

- **70% improved**





• **47%** (\$183/yr vs. \$332/yr) reduction in costs  
Overall cost savings (insurance and out of pocket) =  
**27%** (\$374/yr vs. \$512/yr).



*Health care costs are related to on-farm safety review scores:*  
**Safer farms = lower health care costs**

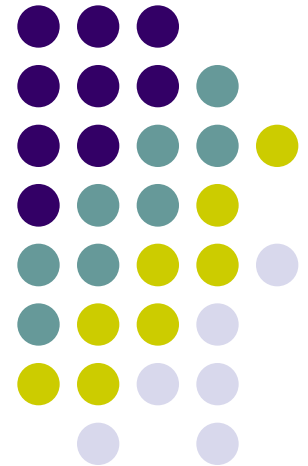
# Worker Safety Web Training, 2008

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- Kelley Donham, DVM
- Risto Rautiainen, PhD
  - Lamar Grafft, MS
  - Aaron Kline, BS

**University of Iowa**

Funding: NPPC training grant



# Goals



- Enhance safety and health training in the pork industry to:
  - Reduce injuries, illnesses and related costs
  - Improve regulatory compliance
  - Build safety culture





# Methods

- Blends in Pork Board - Pork Production Safety System (Bilingual)
- Seminars: Pork Congress, Pork Expo
- Online course: 10 short sessions
- English and Spanish
- Two “rounds”, starting spring 2008



# Format

- Round 1
  - 1/23/2008 - Seminar at Iowa Pork Congress
  - 10 ½ hour web training sessions
- Round 2
  - 6/5/2008 - Seminar at World Pork Expo
  - 10 ½ hour web training sessions



# Working group

Representing:

- Large producers
- Smaller family producers
- The Pork Board
- University of Iowa
- A land grant university
- OSHA consultation

# Demonstration of Elluminate Live Web Conferencing System

