



NATIONAL FARM  
MEDICINE CENTER

# YEAR IN REVIEW

2013



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# Traditions: preserve the best, rethink the rest

Learning to farm and ranch alongside your parents in the style of an apprenticeship is one of the great traditions of American agriculture. Work ethic and innovation are other worthy traditions.

But where do we draw the line between tradition and safety? Many of us were introduced to tractors while riding on the laps of parents and grandparents, yet headlines describe young children as extra riders falling off tractors to their deaths. Fatigue is another farm tradition, a badge of honor. But the safety stakes can be high when making an error with heavy machinery or powerful chemicals.

How do we fine-tune and preserve the good traditions while relegating unsafe traditions to history?

Research can help; it has identified many safety issues and has recommended solutions. Yet agriculture remains our nation's most hazardous industry. Adoption of evidence-based best safety practices has been slow compared to other industries.

The key, we believe, is to make the culture of safety work for the culture of agriculture; to get farmer buy-in by making the solutions easy and appealing.

"We continue to build on the success of our long-time programs, while at the same time investigating new safety solutions that fit today's agriculture, and we have increased our efforts toward engaging the farming community in developing and mobilizing safety and health solutions," said Matthew Keifer, M.D., M.P.H., director, National Farm Medicine Center.



*Matthew Keifer, M.D., M.P.H.,  
director, National Farm  
Medicine Center.*



# Agricultural Health & Safety

## Upper Midwest Agricultural Safety and Health Center

The National Farm Medicine Center is a prominent partner institute in the Upper Midwest Agricultural Safety and Health (UMASH) Center <http://www.umash.umn.edu/>. UMASH, based at the University of Minnesota, is one of 10 Centers of Excellence in Agricultural Disease and Injury Research, Education, and Prevention funded by the National Institute for Occupational Safety and Health (NIOSH). The UMASH center is a collaboration of the NFMCC, the University of Minnesota School of Public Health and College of Veterinary Medicine, and the Minnesota Department of Health.

The National Farm Medicine Center's projects focus on dairy.

**Dr. Matthew Keifer** is co-Principal Investigator of UMASH. Research Specialist **Iris Reyes, M.P.H.**, coordinates the Farm Center's projects. Also working on UMASH projects are **Amy K. Liebman, M.P.A., M.A.**, of Migrant Clinicians Network; **Scott Sandberg, M.P.H.**; and Stephen Waring, D.V.M., Ph.D., Essentia Institute of Rural Health.

### Seguridad en las Lecherías: Immigrant Dairy Worker Health and Safety

Investigators seek to bridge the gap in worker health and safety training in dairy production by testing a culturally appropriate, occupational safety and health intervention to reduce worksite hazards and improve knowledge and practices among immigrant dairy workers. The project developed a five-module, bilingual safety curriculum for Hispanic workers and is utilizing Promotores de Salud, or lay health workers, to employ a "train-the-trainer" approach to educate workers. Topics include Hazard Identification and Control on Farms, Animal Handling, Machinery and Equipment, Workers' Rights and Responsibilities, Chemical Safety and Confined Spaces. Each one-hour module is written with a step-by-step facilitator's guide and is designed to engage participants. Free trainings conducted in Spanish continue to be offered to a number of eligible dairy farms (e.g., having at least three Hispanic workers).

### Surveillance of Disease and Injury in Wisconsin Dairy Farmers and Workers

Unlike other hazardous industries, no practical, national surveillance mechanism exists that collects information on injuries and illnesses associated with agricultural activities. The main objective of this study is to establish and maintain a working surveillance system for dairy farms in Wisconsin in order to identify disease and injuries with a particular focus on production method changes and health. A survey will be mailed to persons on the publicly available Dairy Producer's License list published by the Wisconsin Department of Agriculture, Trade and Consumer Protection. Preliminary data are expected to come in throughout the summer. The project aims to collect information about all members of the dairy workforce, not just farmers/owners. In order to broaden the study to workers, the Farm Center has asked the Marshfield Clinic Research Foundation's Biomedical Informatics Research Center (BIRC) to employ the Clinic's electronic



medical record (EMR) to identify injuries (based on injury terms and other inputs) to non-owner farm workers. This knowledge would guide further research, improve care for workers and hopefully save money for farmer/owners.

## Facilitating Return to Work for Injured and Ill Animal Agriculture Workers

Primary care clinicians are often poorly equipped to manage and treat occupational injuries and illnesses and have few resources to facilitate workers' return to work. This project is developing an interactive computer application to help clinicians tailor a transitional plan that will safely and promptly return the worker to the workplace. This project will also facilitate clear and effective communication between the clinician, worker, employer and return-to-work specialist. Functional job analysis on dairy and pork operations is nearly complete and a database is being developed to consist of information on hazards, loads, exposure risks, photographs and descriptions of tasks, and necessary training or skills. Collection of feedback from stakeholders including clinicians, therapists, farmers and farm employees has started and will be done throughout the application development phase.

## Other NFMC Projects

### Agricultural Safety Consulting

Developed for dairy farmers, Agricultural Safety Consulting (ASC) offers assistance in safety program development, implementation and management. ASC has unique capabilities in addressing the Spanish-language training needs of Hispanic employees. Packages range from identifying hazards and making abatement recommendations to guidance on development of self-administered farm safety programs with options for on-site English and Spanish farm safety training. In addition, ASC in conjunction with the Seguridad project offers free, on-the-farm, safety and health training to qualified farms. This five-hour, interactive training is facilitated by bilingual trainers and will help farms comply with OSHA regulations. Contact **Iris Reyes at 715-387-5923** or **reyes.iris@marshfieldclinic.org** to schedule a training.

### Farm MAPPER

Firefighters, emergency medical technicians and others who respond to farm emergencies often face complex and unknown environments. Farm Mapping to Assist, Protect and Prepare Emergency Responders (Farm MAPPER) uses QR codes to provide emergency responders onsite information about hazards and physical layouts of agricultural operations. The project was successfully piloted by conducting mock responses to central Wisconsin farms. The information is accessible to responders through a unique QR code sticker generated for each farm and placed on a mailbox pole or other nearby location. These matrix bar codes are readable by a smartphone or other such device such as a tablet with a reader application. The specific farm information is protected by a secure logon known only to the emergency responders, and the database is visible only to the farmer and emergency responders. Marshfield Clinic's Biomedical Informatics Research Center



**Agricultural Safety Consulting (ASC) offers free, on-the-farm, safety and health training to qualified farms.**





**Marshfield Clinic's 27th Auction of Champions raised more than \$33,000 to continue the National Farm Medicine Center's Rollover Protective Structure (ROPS) Rebate Program.**



**Farms may hold the answers to preventing asthma.**

led the technical development of Farm MAPPER. Farmers can register an account with Farm MAPPER at [www.nfmcfarmmapper.com](http://www.nfmcfarmmapper.com) and create maps, although Farm MAPPER is not currently operational with any fire department. The pilot project was funded through a \$20,000 grant from the Midwest Center for Occupational Health and Safety-Continuing Education at the University of Minnesota, along with NFMC donor dollars and significant volunteer time from Pittsville Fire Department. Future projects might include QR codes with extrication instructions on equipment. Additionally, a farm map that includes locations of farming activities such as outlying fields could quickly guide rescue personnel to an injury victim. Dr. Matthew Keifer said the Farm Center is looking to spread the Farm MAPPER idea by working with fire departments and fire associations nationwide.

### **Wisconsin Rollover Protective Structure (ROPS) Rebate Program**

Tractor overturns remain the leading cause of deaths on farms. In an effort to make Wisconsin farmers safer, Marshfield Clinic's 27th Auction of Champions raised more than \$33,000 to continue the National Farm Medicine Center's Rollover Protective Structure (ROPS) Rebate Program. The goal of the program is to encourage farmers to have ROPS installed on their tractors by offering a rebate of 70 percent (up to \$865) on the total cost. A ROPS refers to operator compartment structures – usually cabs or roll bars – designed to protect farmers from injury or death in the event of a tractor rollover.

ROPS are the most effective known safety intervention, and are 99 percent effective when used with a seatbelt. **Barbara Marlenga, Ph.D.** and **Tammy Ellis** launched the program at the Marshfield Farm Show in February, and promoted the program at area dairy breakfasts and Farm Technology Days in Barron County. The goal is to retrofit 100 tractors with ROPS by October 2014. It's easy to enroll. Farmers can apply for a ROPS via the hotline, 1-877-767-7748 (1-877-ROPSR4U), or the Web site, [www.ropsr4u.com](http://www.ropsr4u.com).

### **Wisconsin Infant Study Cohort**

Asthma in children is a leading cause of emergency department visits, hospitalizations and missed school days. Great advancements have been made in the treatment of asthma, but there's been little progress in preventing the illness in the first place. Farms may hold the answer. It is believed that exposure to microbes, especially on farms with livestock, stimulate stronger immune systems and make children far less likely to develop allergic diseases. Researchers at the University of Wisconsin have teamed with the National Farm Medicine Center on the five-year Wisconsin Infant Study Cohort (WISC) project. It is being funded by the National Institutes of Health and National Institute of Allergy and Infectious Diseases, the University of Wisconsin Institute for Clinical and Translational Research, and the Upper Midwest Agricultural Safety and Health Center (UMASH) at the University of Minnesota. The pilot phase was conducted in 2013. It compared immune responses in the cord blood from healthy babies born into farming environments and cord blood from healthy infants born into non-farming environments. Results are expected in mid-2014. The second phase is enrolling 200 babies from the Marshfield area – half from farms, and the other half from rural non-farm homes. For two years, starting in the womb, researchers will track the children's



*The Pittsville Fire Department successfully pilot-tested Farm MAPPER on central Wisconsin farms.*



**The National Farm  
Medicine Center  
is celebrating 10 years  
of editing the Journal  
of Agromedicine.**



exposure to farm animals and farm-related microbes. They will measure the development of cells involved in immunity and resistance to viral respiratory illnesses, and also track respiratory infections and development of allergies. “If we can identify the key microbial exposures on farms responsible for this health advantage that farm kids enjoy, then we would want to offer it to non-farm kids,” said **Dr. Matthew Keifer**, director of the Farm Center.

### **Journal of Agromedicine**

The National Farm Medicine Center is celebrating 10 years of editing the Journal of Agromedicine, the most comprehensive peer-reviewed journal to examine human safety and health in agriculture -- and the only journal in this field with an Impact Factor. Beginning in 2004 and continuing with Volume 19 in 2014, the quarterly Journal has featured original research and scholarly papers of particular interest to researchers, clinical practitioners and health and safety professionals. Content is disseminated via the multiple platforms of publisher Taylor and Francis Group. This world reach has been instrumental in the Journal receiving papers from nearly 30 countries. Another positive indication of the Journal's health is its inclusion in Thomson Reuters' Science Citation Index. These reports offer a systematic means to evaluate the world's leading journals, with statistical information based on citation data. The reports provide journals with Impact Factors and rankings within the subject area they are included in. The Journal has received an impact factor, ranking it 137/158 in a select group of journals representing the best in Public, Environmental & Occupational Health. The Journal continued its tradition of recent years by publishing another theme issue, this one dedicated to the safety and health of the world dairy workforce. An issue dedicated to the 2013 North American Agricultural Safety Summit was to be printed in April 2014.

Editor-in-Chief **Matthew Keifer** was assisted by Managing Editor **Scott Heiberger** and Editorial Assistant **Kathie Smith**.

### **President's Malaria Initiative**

The President's Malaria Initiative (PMI), credited with dramatic reductions in child mortality in sub-Saharan Africa, has selected **Dr. Keifer** to design a program that monitors its pesticide applicators for overexposure to those chemicals. Dr. Keifer is advising the PMI on how to monitor, what tools to use, how to train the people running the program, and how to use the information gathered from the monitoring program. Dr. Keifer will be advising program staff how to do cholinesterase monitoring. More than 30 million Africans are protected from malaria year as the result of PMI-supported indoor spraying. “The PMI protects millions of people from one of the world's most deadly diseases,” Dr. Keifer said. “However, the people who do the day-to-day work of controlling the mosquito vectors which transmit malaria also need protection. The chemicals they use can make them sick, but if we monitor them closely, we can keep them healthy and on the job, saving lives.” Dr. Keifer has worked on, or designed, similar monitoring programs in Washington state and Nicaragua. Prior to joining the Farm Center in 2010, Dr. Keifer was co-director of the Pacific Northwest Agricultural Safety and Health Center, directing numerous community-based research projects focusing on farm worker health and pesticides.



## Microbiome

The human microbiome consists of the ecosystems of tiny organisms that live in and on us. It is believed that these microbes contribute in a variety of ways to our overall health. For example, children who grow up on farms have a lower prevalence in asthma later in life – the microbiome may play a key role in this process. **Scott Sandberg** and the Farm Center are currently working on a pilot project that will look at dairy workers and their microbiome. Researchers will swab the noses of dairy workers, and, through DNA analysis, determine which organisms are present. Those organisms will then be compared to established databases of known organisms and their prevalence in the general population. Differences between the groups may offer clues as to what roles those organisms play in human physiology.



*Barbara Marlenga, Ph.D., is leading the Wisconsin Rollover Protective Structure (ROPS) Rebate Program.*



## Cultural anthropologist joins Farm Center

**Casper “Cap” Bendixsen, Ph.D.**, has joined the National Farm Medicine Center/National Children’s Center as a project scientist. Bendixsen’s specialty is cultural anthropology. “My job is to get to know how farmers, their families and their laborers live day-to-day, and to see how the Farm Center can make a safety and health difference with research and technology.” Dr. Bendixsen successfully defended his dissertation January 29, 2014, at Rice University, where he taught for three years. He holds a master’s degree in anthropology from Rice, and earned bachelor’s degrees in anthropology and philosophy from the University of Idaho. Bendixsen’s dissertation is titled, “Pastoralist Ethic and a ‘Spirit’ of Traditionalism: US Cowboys’ Livestock, Land and Kin.” He is a former professional rodeo cowboy and firefighter/emergency medical technician. His topics and areas of study include: agrarian ethics, traditionalism, masculinity, rhetoric and poetics, ethnography, and working class imaginations/intellectualism.



National Children's Center  
for Rural and Agricultural Health and Safety



*Barbara Lee, Ph.D., director,  
National Children's Center for  
Rural and Agricultural Health  
and Safety.*

# Childhood Agricultural Health & Safety

## National Children's Center for Rural and Agricultural Health and Safety

To preserve the farming tradition it is clear we want to involve our youth in developmentally-appropriate farm tasks. The number of non-fatal injuries to children on family farms continues to decline steadily, according to preliminary data from the Childhood Agricultural Injury Survey (CAIS), which is part of the National Institute for Occupational Safety and Health (NIOSH) Childhood Agricultural Injury Prevention initiative.

"Now, with data from five points in time (1998 - 2012), there is solid evidence of decline," said **Barbara Lee, Ph.D.**, who has been director of the National Children's Center since its establishment in 1997. "These data also highlight areas of continued concern and have led to redirecting some of the Center's interventions."

One area of concern is a slight rise in the rate of injury for non-working children, which would include, for example, young children brought into the worksite by parents in order to "keep an eye on them."

The National Children's Center has been increasing its focus on non-working youth, who account for more than half of non-fatal injuries to children younger than 10. The Center is renewing its campaign to "Keep Kids Away from Tractors" in the wake of several high-profile runover deaths this summer in which children as young as 1 were riding on tractors as passengers.

"In addition we have launched a Web-based effort, 'Cultivate Safety,' to reach more parents of household farm youth with straightforward guidance on evidence-based safety strategies," Dr. Lee said.

Fatal injuries to youth on farms remains steady at about 100 per year according to the best available information.

### Agritourism

Agritourism involves any agriculturally-based activity that brings visitors to a farm or ranch, and is increasingly important to the economic viability of many operations. As agritourism grows, so does the demand for safety expertise and resources. Agritourism operators have often thought of safety as "something extra," said **Marsha Salzwedel, M.S.**, agritourism project manager with the National Children's Center. "They wondered, 'Do I really need to spend money for that ground cover under the playground equipment?' We stress that safety needs to be built into the business plan." Attitudes seem to be changing, driven by concerns of liability and simply doing right by their guests. The Children's Center interactive web tool, "Integrating Safety into Agritourism ([www.safeagritourism.com](http://www.safeagritourism.com))," was endorsed by the North American Farmers' Direct Marketing Association (NAFDMA), and the website is becoming the one-stop resource for agritourism operators. Besides offering virtual safety walkthroughs, it includes dozens of printable signs, checklists, and other resources in English and Spanish. NAFDMA invited Salzwedel to present at its 2013 conference in Portland, OR, as well as its 2014 meeting in Kansas City, MO In addition, Salzwedel wrote an article that

was published in the inaugural edition of “farmers inspired,” the trade magazine of NAFDMA. Salzwedel, whose family runs an agritourism operation, also presented at events hosted by the University of Tennessee Extension and the International Society of Agricultural Safety and Health. As word spread, Salzwedel was contacted by the Wisconsin Fresh Fruit and Vegetable Growers Conference, the National Association of Mutual Insurance Companies and the Wisconsin Agricultural Tourism Association.

### **NAGCAT Tractor Guidelines Updated**

It has been more than a decade since the North American Guidelines for Children’s Agricultural Tasks (NAGCAT) were released to assist parents in assigning developmentally appropriate and safe farm work to their children ages 7 – 16 years. Since NAGCAT were released, a growing body of scientific evidence has accumulated related to the tractor guidelines and children’s physical ability to safely operate them. A panel of childhood agricultural safety and health experts reviewed the scientific literature and provided recommendations for updating the tractor guidelines. In 2013, based on these recommendations, **Barbara Marlena, Ph.D.** and **Tammy Ellis**, updated the adult responsibilities, recommended supervision, age recommendations and personal protective equipment for 22 NAGCAT guidelines involving tractor operations. In addition, companion pieces for parents outlining five child development domains and their relationship to safe tractor operations were developed with the assistance of David Schwebel, Ph.D., from the University of Alabama at Birmingham and include physical, cognitive, perceptual, social, and sociocultural development. The newly updated tractor guidelines can be found at: [www.nagcat.org](http://www.nagcat.org).

### **Cultivate Safety**

Many recommendations for injury prevention have been developed, yet adoption of these best-practice strategies has not been widespread. The purpose of the Cultivate Safety pilot project was to create a media campaign to direct farm parents to a user-friendly website ([www.cultivatesafety.org](http://www.cultivatesafety.org)) containing childhood farm injury resources and guidelines that have been proven effective in reducing injury. The National Children’s Center partnered with an agricultural marketing firm to develop a multi-pronged media campaign. “Parent First, Farmer Second” was designed to motivate farmers to keep their children safe by acknowledging the many important roles that farmers have while reminding them that the most important role is being a responsible parent. Radio, print and Internet ads were launched in Wisconsin directing traffic to the new website. The site houses easy-to-use information on child development and best safety practices both for children at work and children at play. The campaign’s radio and print ads won awards from the National Association of Farm Broadcasting and the National Agri-Marketing Association. The project team included all National Children’s Center staff.

### **YouTube Safety Channel**

The National Children’s Center collaborated to launch a new YouTube channel, “U.S. Agricultural Safety and Health Centers,” [www.youtube.com/USagCenters](http://www.youtube.com/USagCenters). “The channel is an inexpensive way to reach millions of people with safety and health information,” said **Tammy Ellis**, education/outreach specialist. Ellis worked with representatives of the nine other



**The Children’s Center interactive web tool, “Integrating Safety into Agritourism ([www.safeagritourism.com](http://www.safeagritourism.com)),” was endorsed by the North American Farmers’ Direct Marketing Association (NAFDMA).**



**The Cultivate Safety campaign’s radio and print ads won awards from the National Association of Farm Broadcasting and the National Agri-Marketing Association.**



centers funded by the National Institute for Occupational Safety and Health (NIOSH). NIOSH established the Centers to protect the safety and health of more than 5.5 million full- and part-time contract and seasonal workers in agriculture, forestry, and fishing, as well as farm family members. “Many centers have created videos for this purpose, and we’re trying to enhance dissemination to people who can benefit most from them,” Ellis said. Extension agents/educators, agricultural science teachers, producers/owner/operators, first responders and agricultural families would all find value in the videos. Each video has been produced and reviewed by content experts. Viewers are encouraged to check the site regularly for new additions. Topics include: respiratory protection, livestock safety, tractor and machinery safety, child development, emergency response, grain safety, pesticide safety, heat illness prevention, ladder safety and hearing protection.

### **Childhood Agricultural Safety Network (CASN)**

Since 2000, the Childhood Agricultural Safety Network (CASN) has been advocating safety for farm children. The Network, facilitated by **Marsha Salzwedel, M.S. and Dr. Barbara Lee**, develops campaigns and safety messages on childhood agricultural disease and injury prevention. Thirty-one CASN organizations worked together to produce the 2014 CASN calendar with a different child agricultural safety message each month. Six thousand calendars were distributed. A survey is being done to evaluate the CASN calendars and to assess the costs and benefits of producing/distributing the calendars. Survey questions address the quality and reach of the calendars, and the impact and perceived value of the calendars. Answers will guide future decision about the project. The Network also assisted with activating the “Blueprint for Protecting Children in Agriculture,” and with dissemination of information in the aftermath of the proposed -- then withdrawn -- updates to federal child labor laws in agriculture. CASN also began sharing “news clips” of child agricultural injury incidents to help raise visibility and increase awareness of these injury events.

### **Grain Handling Safety Coalition**

The Children’s Center participates in the coalition through the Childhood Agricultural Safety Network. The coalition (<http://grainsafety.org/>) was established in 2010 following the deaths of two teenaged workers in a grain bin in Mt. Carroll, IL. The coalition is a diverse team of industry-related associations, agencies, and individuals with a shared dedication to preventing incidents, injuries and fatalities in grain handling operations on the farm and at the elevator. The Children’s Center and Childhood Agricultural Safety Network are represented on the coalition by **Marsha Salzwedel**.

### **Safe Play Research Project**

Most non-fatal injuries to children on farms occur when children are not engaged in work. Creating safe play areas offers an alternative to having young children in the farm worksite when off-site daycare is not available. In 2013, a five-year research study was concluded evaluating the effectiveness of a parent-based educational safety intervention to create or improve children’s safe play areas on farms. The study involved 450 farm families from six Midwest states. Overall, the provision of education materials led to a modest increase in safe play areas and improvements



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to existing safe play areas. Families that were offered a \$500 financial incentive, but did not accept it, were more motivated and made more improvements than the families that only received educational materials. Although this intervention led to modest impact, with approximately 9-17 percent more intervention families than controls creating new safe play areas, the impact could be very large if adopted by a national agribusiness company or national farm organization. The research team consisted of Eileen Fisher, Ph.D., and Marizen Ramirez, Ph.D., University of Iowa; Risto Rautiainen, Ph.D., University of Nebraska Medical Center; and **Tammy Ellis**, National Farm Medicine Center.

### **Mini-grants**

The National Children's Center federal award includes annual funding for mini-grants that support small-scale projects and pilot studies that address prevention of childhood agricultural disease and injury. Since 2002, 46 projects have been funded in amounts up to \$20,000. More than half of the projects have addressed vulnerable populations.

To measure outcome and impact, the National Children's Center is following up with past mini-grant recipients seeking information on presentations, publications, products, media coverage and additional funding resulting from the projects. Other project impact information being gathered includes organizational impact (e.g., new partnerships, increased focus on youth), personnel impact (increase in knowledge, change in behavior, expansion of career focus) and impact on project participants (eknowledge gain, change in behavior).

### **Mini-grant awardees for FY 2014:**

- **Melissa Bailey**, NC Field, "Working in the Fields: Access to Childcare for Farmworkers in Eastern North Carolina."

Goal: Seeks to explore the relationship between access to childcare and the presence of children working or accompanying their farmworker mothers to work. The project will provide baseline data for future projects related to the presence of children in farm work environments and interventions to ensure their health, safety, and care, by securing information from farmworkers and employers.

- **Serap Gorucu, Ph.D.**, Pennsylvania State University, "Analyses of Pennsylvania Youth Farm Fatality Data for 2000 through 2012."

Goal: To analyze previously collected farm fatality data involving youth (age 19 and under) for the years 2000-2012 to look for trends and relationships among variables such as age, time of year, day of week, time of day, and injury causes. A primary focus in on Anabaptist youth.

- **Chaya R. Spears Johnson, Ph.D.**, Wake Forest School of Medicine, "Assessing Children's Agricultural Safety and Health among Local Agricultural Market Producers (LAMPS) in Illinois and North Carolina."

Goal: Begin addressing the dearth of information regarding occupational safety and health experiences and needs among children working for local agricultural market producers (LAMPS). A secondary goal of this project is the establishment of collaborative relationships between professional researchers and representatives from the LAMP and sustainable farmer communities in Illinois.

## Model Policy on Youth Employment

Given new trends in agriculture to use certification systems, safety audits, and voluntary safety standards in addition to the regulatory process, there is value in having a voluntary “best practice” model policy that can be adopted in settings where safeguarding young farm workers is a priority. In collaboration with Mary Miller of Washington State Department of Labor and Industries, **Barbara Lee, Ph.D.**, is helping to develop a model policy that agricultural employers can adopt specific to youth employment, including age-appropriate assignments, training needs for adolescent workers, ideal supervision and mentoring by adult workers. The policy was developed through discussions at the National Council of Agricultural Employers annual conference in Washington D.C., a survey of employers and a task force of NCAE members. The process resulted in a template that can be customized and adapted for individual companies that employ young workers.

## Model Family Services for Migrant Workers

**Amy K. Liebman** and **Barbara Lee** launched a project to identify winning features of a model system in Florida that engages agricultural producers, parents and community leaders to offer migrating farm worker parents accessible and affordable options for childcare in a trusted environment. Redlands Christian Migrant Association (RCMA) of Immokalee, FL, is a community development organization that creates and fosters opportunities for the children of migrant and other low-income rural families. To better understand the RCMA system, an in-depth assessment and on-site interviews were undertaken. Results revealed many attributes contributing to RCMA’s success and, based upon RCMA’s 48-year track record, employers, agribusinesses, and communities are encouraged to adopt strategies to meet local and regional childcare needs where parents are working in agriculture. The RCMA Executive Director and Board members reviewed and endorsed the project results, then presented a panel at the 2013 North American Agricultural Safety Summit. Several “next steps” for this project are currently underway.

## Child Death Review Project

**Barbara Marlena, Ph.D.**, is partnering with the National Center for the Review and Prevention of Child Death to refine the review and case reporting system for childhood agricultural injury deaths. The goal is to support and improve the data collection and data quality in order to better address causation, gaps in knowledge, and the development of prevention strategies. Co-investigators include Will Pickett, Ph.D., Queen’s University and Richard Berg, M.S., Marshfield Clinic Research Foundation.



## Additional, ongoing research

### Saskatchewan Farm Injury Cohort Study

**Dr. Barbara Marlenga** is co-investigator on, “Saskatchewan Farm Injury Cohort Study: Phase II,” which is looking at the effects of physical, economic and cultural environments on injury rates in agricultural populations. A total of 1,216 farms, representing 2,629 people age 16 and older, completed a baseline health and operational survey between January and July 2013. The first follow-up with this adult cohort began in November 2013. The research team plans to recruit a large cohort of children and their parents from rural and farm settings beginning in January 2014 and follow them as well.

### Tractor Simulator

**Dr. Barbara Marlenga**, National Children’s Center, is lead investigator on a study looking at how children of different ages process information and make decisions while driving tractors. They’re using the National Advanced Driving Simulator at the University of Iowa, considered the world’s most advanced ground vehicle simulator. This two-year pilot study is funded by the National Institute for Occupational Safety and Health. A sample of 55 male youth ages 10-17 who lived or worked on farms and had experience driving tractors, tested the newly developed virtual tractor environment and simulation modules. A small comparison group of six adult male farmers was also recruited. Findings from the validation study generally support the use of simulation for assessing the cognitive abilities of youth operating tractors. A manuscript detailing the complete findings from the pilot study has been submitted for publication.



**The tractor simulator study looks at how children of different ages process information and make decisions while driving tractors**



*Marsha Salzwedel, agritourism project manager, was invited to present at numerous events, including this one hosted by University of Tennessee Extension.*



# Migrant & Immigrant Issues

Hispanic workers are vital to American agriculture, and they bring with them a reputation for strong work ethic and family values. But beyond the normal hazards of agriculture, they face challenges such as migration, language barriers and acculturation. With Hispanic workers representing some 40-60% of the Wisconsin dairy workforce (and about one-third of the agricultural workforce in the United States), the Farm Center continues building capacity to address the safety and health needs of these workers. Increasing numbers of immigrant employees with unaddressed language barriers and training needs add to the challenges of improving safety for the dairy workforce. Wisconsin dairy farmers have rated improved working conditions and improved safety within their top three “people-based” priorities motivating economic decisions. Yet, few alternatives are available to address the health and safety training needs of the changing workforce.

The Farm Center is continuing its long partnership with Migrant Clinicians Network (MCN) by producing culturally appropriate educational interventions for the dairy industry. **Amy K. Liebman, M.P.A., M.A.**, who directs MCN’s environmental and occupational programs, remains the key liaison overseeing MCN’s work with the Farm Center. MCN serves as an important partner in the Farm Center’s Upper Midwest Agricultural Safety and Health (UMASH) projects, co-directing a project that focuses on immigrant workers.

This project involves a diverse core team: Liebman, Patricia Juárez-Carrillo, Ph.D., M.P.H., Kerry Brennan and Michael Piorunski from MCN; and **Matthew Keifer, M.D., M.P.H., Iris Reyes, M.P.H.**, and an OSHA-trained safety specialist from the Farm Center.

The *Seguridad en las Lecherías* (Safety in Dairies) project bridges an important health and safety gap by providing a bilingual health and safety program for immigrant dairy workers in Wisconsin. This program includes a five-module training curriculum designed and tested to educate workers in reducing worksite hazards and improving health and safety knowledge and practices. It is delivered on the farm, and engages workers using culturally appropriate education techniques. It is designed to ensure understanding by workers with low levels of literacy and limited formal education. Picture-based resources underscore important safety messages reviewed during the training workshops. A ‘train-the-trainer’ approach and *promotores de salud* (community health workers) are employed as part of this project to help deliver training to hundreds of dairy workers and to reinforce health and safety messages on an ongoing basis. The curriculum has gained approval from the Occupational Safety and Health Administration (OSHA) and endorsement by dairy producers and the Mexican Consulate in St. Paul. Partner organizations, including the University of Wisconsin River Falls’ Center for Dairy Farm Safety, are using the curriculum to train dairy workers. By the end of 2013, this project had trained over 160 workers on 10 farms providing a total of 629 training hours with farms already scheduled for training in the next year. Workers participating in the trainings show a clear increase in safety knowledge.



**The Farm Center is continuing its long partnership with Migrant Clinicians Network (MCN) by producing culturally appropriate educational interventions for the dairy industry.**



**MCN distributed  
60,000 copies of  
*Aun Que Cerca...Sano.***

MCN also assists the National Children's Center in addressing the needs of migrant children and hired adolescent farmworkers. In 2013, Liebman worked closely with Dr. Lee in promoting the need to ensure the safety of migrant children. This topic was an important focus of the 2013 North American Agricultural Safety Summit where Liebman and Lee presented a poster and video and organized a plenary panel that included a grower, farmworker parent and director of the Redlands Migrant Christian Association. MCN continued to play a key role in the Childhood Agricultural Safety Network, educating members on migrant issues and contributing a pesticide safety message to the network's popular 2014 safety calendar.

MCN distributed *Aun Que Cerca...Sano* to more than 160 organizations in 2013. This colorful, educational, Spanish language comic book helps farmworker parents understand ways to protect their children from pesticide exposure. This resource was originally developed in partnership with Farm Safety 4 Just Kids with support from the National Children's Center. In collaboration with the National Association of State Departments of Agriculture Research Foundation, MCN distributed 60,000 copies of the comic book in 2013 and given the continued demand, hopes to distribute an additional 60,000 copies in 2014.

Health and safety professionals, farm families, and media can benefit from the Spanish-language resources on the National Children's Center Web site, [http://www.marshfieldclinic.org/nccrahs/?page=nccrahs\\_resources](http://www.marshfieldclinic.org/nccrahs/?page=nccrahs_resources). These resources include: strategies to prevent injury to children and adolescents, guidelines for designing and building an outdoor safe play area on a farm, and pesticide safety information.



***Amy K. Liebman, foreground, speaks on a panel addressing farm worker family needs.***



# 2013 North American Agricultural Safety Summit



2013  
NORTH  
AMERICAN  
AGRICULTURAL  
SAFETY  
SUMMIT

## Ag leaders embrace ‘culture of safety’

The 2013 North American Agricultural Safety Summit, hosted by the Agricultural Safety and Health Council of America (ASHCA), provided the backdrop for major safety funding announcements and stimulated collaboration for safer work environments for the men, women and children who produce our food.

The Summit also marked the end of formal National Farm Medicine Center involvement in the administration of ASHCA. As part of a planned transition, **Dr. Barbara Lee** took on duties as ASHCA executive director and is overseeing the association’s affairs from a home office. Dr. Lee continues as director of the National Children’s Center.

The Farm Center provided an incubator for ASHCA since its establishment in 2007. The Summit was ASHCA’s largest-ever undertaking. It drew more than 250 attendees from 10 nations, including farmers, ranchers, migrant worker advocates, safety experts, engineers, media, physicians and government representatives.

Summit sponsor CHS, a Fortune 100 farmer-owned agribusiness, was one of two key organizations that chose the Summit for major announcements.

CHS President and CEO Carl Casale committed \$3 million to a national agricultural safety initiative intended to keep the next generation safe as it feeds a growing world population.

Dr. Ann Bartuska, U.S. Department of Agriculture Under Secretary for Research, Education and Economics, announced USDA has earmarked \$600,000 to make safety training available for youth working in production agriculture.

ASHCA used the Summit to honor three individuals upon whose work it builds. U.S. Senator Tom Harkin, Iowa, accepted a Lifetime Achievement award with a videotaped message. In addition, ASHCA presented “distinguished service” awards to **Dean Emanuel, M.D.**, medical director emeritus of the National Farm Medicine Center, and Canadian agromedicine pioneer James Dosman, M.D., Canadian Centre for Health and Safety in Agriculture, University of Saskatchewan.

The Summit program is available at, [http://ashca.org/wp-content/uploads/2013/10/ASHCA\\_Summit\\_Finalweb.pdf](http://ashca.org/wp-content/uploads/2013/10/ASHCA_Summit_Finalweb.pdf). Plenary talks and panels can be viewed at <http://ashca.org/plenary-speeches/>.

*Dean Emanuel, M.D., was honored by the Agricultural Safety and Health Council of America for his pioneering research and ongoing commitment to agricultural safety and health.*



# Communications/Outreach

## Communications

The Farm Center conveys agricultural safety and health information among the farm community, safety and health professionals, educators, policy makers, agribusiness, health care organizations and other key agricultural stakeholders (e.g., lenders and insurers).

Communications Specialist **Scott Heiberger**, a former journalist, pays particular attention to media professionals. Newspapers and electronic media stories influence our perceptions. Stories about farm injuries and fatalities can contextualize traumatic events in ways that will influence behavior.

The center's top national story of 2013 was the Farm MAPPER pilot, which the Associated Press named its "Big Story" on May 24. The story featured farmers and firefighters in Pittsville, WI, successfully testing the Farm Center's online hazard mapping program. The story was carried by more than 200 media outlets nationwide including ABC News, Huffington Post, Yahoo News, Denver Post, Boston Herald, Seattle Post-Intelligencer, Bloomberg Businessweek, Brownfield Ag News and others.

Other top media stories included the Cultivate Safety "Parent First, Farmer Second" campaign; the Wisconsin ROPS Rebate Program; the international dairy worker issue of Journal of Agromedicine; the National Children's Center's release of updated national childhood agricultural injury statistics; and the 2013 North American Agricultural Safety Summit, which generated two live interviews on RURAL TV Morning News.



To better understand agricultural media gatekeepers, and to ultimately improve safety and health coverage, Heiberger is working on a pilot study with researchers at the University of Illinois' Agricultural Communications Documentation Center (ACDC). The pilot includes a survey of ag journalists' safety perceptions, and a content review of safety coverage in agricultural publications vs. publications covering other hazardous industries. The project is funded by the Upper Midwest Agricultural Safety and Health Center (UMASH). Results are expected mid-2014.

Heiberger continued representing the Farm Center at the annual Agricultural Media Summit and National Association of Farm Broadcasting meeting, exhibiting and giving interviews on Center activities.

## Outreach

Our work is half development and testing, and half dissemination. Education Outreach Specialist **Tammy Ellis** plans, develops, leads, coordinates and practices a number of outreach strategies to increase the Center's visibility and reach. Ellis works with scientists and staff to determine how best to educate target audiences and to amplify safety and health promotion throughout the farming community. She has laboratory- and office-based research experience, along with skills in digital dissemination, making her uniquely qualified to translate and communicate research results.

Among her key roles, Ellis:

- Chairs committees for social media, websites and stewardship.
- Evaluates messages and content on social media platforms and websites via analytics.
- Organizes, promotes and manages outreach activities, including the Wisconsin ROPS Rebate Program.
- Worked with the Clinic's Biomedical Informatics Research Center to build a technical assistance system that captures NFMC encounters and requests.
- Maintains responsibility for digital marketing for programs, projects and messages.



**In the past year, Ellis coordinated the following:**

• **Presentations and/or exhibitions**

North American Farm Direct Marketing Association Convention, Portland, OR; AgConnect Expo & Summit, Kansas City, MO; Heart of the Farm, Stanley, WI; Academy for Rural Medicine at the University of Wisconsin School of Medicine and Public Health, Madison, WI; International Society for Agricultural Safety and Health Conference, Sandusky, OH; Wisconsin Farm Technology Days, Barron County, WI; Wisconsin Agricultural Bankers Conference, Wisconsin Dells, WI; Professional Dairy Producers of Wisconsin annual Business Conference, Madison, WI; Agricultural Media Summit, Buffalo, NY; National Association of Farm Broadcasting, Kansas City, MO.

• **Sponsorships**

Wisconsin State Championship Holstein Show through the Wood County State Holstein Association

Pen of Champions and hand washing stations at the Central Wisconsin State Fair

Radio public service announcements in central Wisconsin for National FFA Week, June Dairy Month and the Central Wisconsin State Fair

AgrAbility of Wisconsin Summit, Marshfield, WI (hosted)

2013 North American Agricultural Safety Summit, Minneapolis, MN (hosted)

• **Trainings**

AgriSafe Webinar -- "Staying Safe around Manure Storage"



## Visitors

The Farm Center was pleased to host the December meeting of the Marshfield Area Chamber of Commerce and Industry (MACCI) Agribusiness Committee. The committee promotes the growth and vitality of central Wisconsin agriculture for the benefit of the entire community.



In September, a dozen FFA state officers updated Farm Center staff on what the school-based organization is up to. Wisconsin FFA President Logan Wells, a University of Wisconsin-Madison forestry and wildlife ecology student, said the state FFA is at a 29-year high for enrollment with 19,135 members. The students were accompanied by Sara Schoenborn, Wisconsin FFA Foundation executive director, and Cheryl Zimmerman, of Spencer, state FFA executive director.





Minnesota-based members of the Upper Midwest Agricultural Safety and Health Center (UMASH) came to Marshfield for a December meeting. Several National Farm Medicine Center staff are funded through UMASH to conduct research and outreach. UMASH is one of 10 ag centers funded by the National Institute for Occupational Safety and Health.



Dr. Christine Seroogy and Dr. James Gern, University of Wisconsin, touring Maple Ridge Dairy, Stratford, WI, with co-owner Brian Forrest. Drs. Gern and Seroogy are researchers on the Wisconsin Infant Study Cohort. They are trying to determine exactly why farm kids have lower rates of asthma and allergies than their non-farm counterparts. They made a site visit in October to meet with collaborators from the National Farm Medicine Center and Marshfield Clinic Research Foundation.



# PRESENTATIONS

## **Indiana Horticultural Conference**

January 21-22, Indianapolis, IN  
*"Keeping Your Farm Visitors Safe"*  
Marsha Salzwedel

## **Finding Common Ground Forum: Welfare and Impacts**

January 17, St. Paul, MN  
*"Common Ground from the Safety and Health Perspective"*  
Matthew Keifer

## **International Joint Commission Indicators Workshop**

January 30-February 1, Chicago, IL  
*"On human health indicators with potential as indicator of Great Lakes water quality"*  
Matthew Keifer

## **Mountain Area Health Education Center Resident Training**

January 31, Asheville, NC  
*"Environmental and occupational health for the frontline provider"*  
Amy K. Liebman, Andrew Morris

## **Blue Ridge Community Health Services Clinician Training**

February 1, Hendersonville, NC  
*"Pesticides Poisoning: Understanding Acute and Chronic Effects."*  
James Roberts, Amy K. Liebman

## **North American Farm Direct Marketing Association**

February 1-7, Portland, OR  
Presentation & Exhibit: *"Visitors on Farms and Ranches: Keeping them Safe"*  
Marsha Salzwedel

## **Heart of the Farm**

March 12, Stanley, WI  
*"Farm Safety for the Family"*  
Tammy Ellis

## **University of Wisconsin**

March 14, Madison, WI  
*"Occupational and Agricultural Worker Health"*  
Matthew Keifer

## **University of Wisconsin**

March 15, Madison, WI  
*"Occupational health for the rural clinician"*  
Matthew Keifer

## **Susan Harwood Trainer's Exchange - Occupational Safety and Health Administration**

March 14, Washington DC  
*"Popular Education and the Use of Images to Facilitate Workplace Health and Safety among Immigrant Workers"*  
Amy K. Liebman, Michael Piorunski

## **Pennsylvania Rural Migrant and Immigrant Health Conference**

March 19, Grantville, PA  
*"Health and Safety on the Farm: A Look at Immigrant Workers in Dairy"*  
Amy K. Liebman, Sherry Wyckoff, Anna Meyerhoff

## **NIOSH Ag Centers Evaluators Meeting**

April 15-16, Fort Collins, CO  
*"NCCRAHS Evaluation Overview"*  
Marsha Salzwedel

## **AgriAbility Summit**

May 16, Marshfield, WI  
*"National Farm Medicine Center projects"*  
Matthew Keifer

## **Safe Kids Worldwide Conference**

June 21, Washington, DC  
*"Rural Child Safety"*  
Marsha Salzwedel

## **International Society for Agricultural Safety and Health Conference**

June 23-27, Sandusky, OH  
*"Assisting the dairy industry to optimize worker health and safety"*  
Matthew Keifer, Amy K. Liebman

## **Agritourism Safety and Emergency Management Workshops**

July 24-25, Lenoir City & Portland, TN  
*"Agritourism Safety and Emergency Management"*  
Marsha Salzwedel

## **AgriSafe**

August 26, Webinar  
*"Childhood Agricultural Injury Prevention: Update from the National Children's Center"*  
Barbara Lee

## **North American Agricultural Safety Summit**

September 25-27, Minneapolis, MN  
*"The use of QR codes to assist emergency medical services in farm emergencies"*  
Iris Reyes

*"Characterizing and promoting 'model' services for children of seasonal farmworkers"*  
Amy K. Liebman, Barbara Mainster, Barbara Lee

*"Finding Common Ground: Working Together to Address Farm Worker Family Needs"*  
Barbara Mainster, Lourdes Villanueva, Medora Krome, Amy K. Liebman

*"Evaluation of the Development of an Interactive Website"*  
Marsha Salzwedel

*"Lessons Learned from the Child Agricultural Labor Law Debate - Ag Media Perspective"*  
Scott Heiberger

*"Model play areas on farms"*  
Tammy Ellis

## **George Washington University School of Public Health and Health Services, Invited Speaker Seminar Series**

October 11, Washington DC  
*"Global health in America's heartland: Immigrant workers in dairy"*  
Amy K. Liebman

### **East Coast Migrant Stream Forum**

October 18, San Juan, PR

*“Workers and health: Successful stories from the field”*

José Rodríguez, Amy K. Liebman

*“Migrant health 101: An introduction to migrant health”*

Amy K. Liebman, Colleen Reinert

### **141st American Public Health Association Annual Meeting and Exposition**

November 4, Boston, MA

*“Sustaining a risk reduction and safe practices intervention model: A randomized controlled study examining the community health worker model in an occupational setting”*

Patricia Juarez-Carrillo

*“An earthquake in the Midwest: OSHA enforcement reveals faults in the world of agricultural safety”*  
Matthew Keifer

*“A local perspective on a global challenge: Health and safety perceptions and practices of immigrant workers in Wisconsin’s*

*dairy industry”*

Amy K. Liebman

*“Farm mapping to assist, protect and prepare emergency responders: the Farm MAPPER project”*

Iris Reyes

### **12<sup>th</sup> Annual Midwest Rural Agricultural Safety and Health Conference**

November 20, Ames, IA

*“Designing a safe practices intervention for immigrant dairy workers using a needs assessment and the community health worker model”*

Amy K. Liebman

*“Farm mapping to assist, protect and prepare emergency responders: the Farm MAPPER project”*

Matthew Keifer

### **Dairy Worker Roundtable IV**

December 17, Webinar

*“Educational and Farm Services”*

Matthew Keifer



*Iris Reyes, M.P.H., discusses Farm MAPPER at the 2013 North American Agricultural Safety Summit.*

## **PUBLICATIONS**

Wright S, Marlenga B, Lee BC. Childhood agricultural injuries: an update for clinicians.

*Curr Probl Pediatr Adolesc Health Care. 2013 Feb;43(2):20-44.*

Baron S, Beard S, Davis LK, Delp L, Frost L, Kidd-Taylor A, Liebman AK, Linnan L, Punnett L, Welch LS. Promoting integrated approaches to reducing health inequities among low-income workers: Applying a social ecological framework. *Am J Ind Med.* 2013 Mar 26.

Siqueira CE, Gaydos M, Monforton C, Fagen K, Slatin C, Borkowski L, Dooley P, Liebman A, Pana-Cryan R, Rosenberg E,

Shor G, Keifer M. Effects of social, economic, and labor policies on occupational health disparities. *Am J Ind Med.* 2013 Apr 18.

Liebman AK, Wiggins MF, Fraser C, Levin J, Sidebottom J, Arcury TA. Occupational health policy and immigrant workers in the agriculture, forestry, and fishing sector. *Am J Ind Med.* 2013 Aug;56(8):975-84.

Frank AL, Liebman AK, Ryder B, Weir M, Arcury TA. Health care access and health care workforce for immigrant workers in the agriculture, forestry, and fisheries sector in the southeastern US. *Am J Ind Med.* 2013 Aug;56(8):960-74.

Schwartz R, Powell L, Keifer M. Family-based risk reduction of obesity and metabolic syndrome: an overview and outcomes of the Idaho Partnership for Hispanic Health. *J Health Care Poor Underserved.* 2013; 24(2 Suppl): 129-44

Keifer M, Reyes I, Liebman AK, Juarez P. The use of audience response system technology with limited-English-proficiency, low-literacy, and vulnerable populations. *J Agromedicine.* 2014;19(1):44-52.



Childhood Agricultural Safety Network



# Childhood Agricultural Safety Network Members - 2013

## **AgriSafe Network**

Spencer, IA  
Contact: Natalie Roy

## **American Farm Bureau Federation**

Washington, DC  
Contact: Marty Tatman

## **Association of Farmworker Opportunity Programs**

Washington DC  
Contact: Norma Flores Lopez

## **Canadian Agricultural Safety Association**

Winnipeg, Canada  
Contact: Glen Blahey

## **Central States Center for Ag Safety and Health**

Omaha, NE  
Contact: Risto Rautiainen

## **Child Injury Prevention Alliance**

Columbus, OH  
Contact: Tracy Mehan

## **CHS Foundation**

Inver Grove Heights, MN  
Contact: William Nelson

## **Farm Safety for Just Kids**

Urbandale, IA  
Contact: Shari Burgus

## **High Plains Intermountain Center for Agricultural Health and Safety**

Fort Collins, CO  
Contact: Allison De Vries

## **Iowa's Center for Agricultural Safety and Health**

Iowa City, IA  
Contact: Diane Rohlman

## **Migrant Clinicians Network**

Salisbury, MD  
Contact: Amy K. Liebman

## **Michigan State University - College of Nursing**

East Lansing, MI  
Contact: Jill Kilanowski

## **Mississippi Rural Health Association**

Madison, MS  
Contact: Ryan Kelly

## **National Center for Farmworker Health**

Buda, TX  
Contact: Sylvia Partida

## **National Children's Center for Rural and Agricultural Health and Safety**

Marshfield, WI  
Contact: Barbara Lee

## **National Consumers League**

Washington DC  
Contact: Reid Maki

## **National Education Center for Agricultural Safety**

Peosta, IA  
Contact: Dan Neenan

## **National FFA**

Indianapolis, IN  
Contact: Jim Armbruster

## **New York Center for Agricultural Medicine and Health**

Cooperstown, NY  
Contact: Jim Carrabba

## **North Carolina Agromedicine Institute**

Greenville, NC  
Contact: Robin Tutor

## **Norwegian Farmer's Association for Health, Safety and Environmental Services**

Kongsberg, Norway  
Contact: Anne Marie Heiberg

## **Ohio State University**

Columbus, OH  
Contact: Dee Jepsen

## **Pacific Northwest Agricultural Safety and Health (PNASH)**

Seattle, WA  
Contact: Catherine Karr

## **Parachute**

Toronto, Canada  
Contact: Pam Fuselli

## **Pennsylvania State University**

University Park, PA  
Contact: Dennis Murphy

## **Progressive Agriculture Foundation**

Birmingham, AL  
Contact: Bernard Geschke

## **Safe Kids Worldwide**

Washington, DC  
Contact: Emily Samuel

## **Swedish University of Ag Science**

Alnarp Sweden  
Contact: Peter Lundqvist

## **Tufts School of Medicine**

Boston, MA  
Contact: Susan Gallagher

## **University of Alabama**

Tuscaloosa, AL  
Contact: Debra McCallum

## **University of Kentucky College of Nursing**

Lexington, KY  
Contact: Deborah Reed

## **University of Vermont Extension**

Burlington, VT  
Contact: Martha Manning

## **Upper Midwest Agricultural Safety and Health**

Minneapolis, MN  
Contact: Tammy Ellis

## **Utah State University**

Logan, UT  
Contact: Michael Pate

## **Washington State Dept of Labor & Industries**

Olympia WA  
Contact: Mary E. Miller

## **Western Center for Ag Safety and Health**

Davis, CA  
Contact: Sandra L. Freeland

## **Western Kentucky University**

Bowling Green, KY  
Contact: Susan Jones

## **Workplace Safety & Prevention Services**

Guelph, ON  
Contact: Dean Anderson

## Administration

The Farm Center's administrative team welcomed **Teresa Schnetzer**. Schnetzer completed her bachelor's degree in agricultural business from South Dakota State University, and initially joined the Farm Center's staff as an agricultural safety intern. Schnetzer assists staff with projects including the Rollover Protective Structure (ROPS) Rebate Program, Wisconsin Infant Study Cohort and the UMASH center grant. Schnetzer has a strong farming background, as her family cash crops corn and soybeans and has a cow/calf operation in eastern South Dakota.

The Farm Center congratulates **Kathie Smith**, the National Children's Center administrative secretary, for successfully completing her International Association of Administrative Professionals (IAAP) certifications this past year. This accomplishment, coupled with more than 25 years' experience, allowed Smith to successfully assist in the coordination of the 2013 North American Agricultural Safety Summit in Minneapolis. She also is the editorial assistant for the peer-reviewed Journal of Agromedicine, which is edited by the Farm Center.

**Kathy Heintz-Dzikowich**, center research administrator, manages grants and contracts of the Children's Center and the National Farm Medicine Center. She helps to ensure regulatory compliance, ethics and human subject's protections requirements, and manages the administrative staff, to support the overall research missions of the Children's Center and the National Farm Medicine Center.

## Making a gift

Every day, the team at the National Farm Medicine Center is working hard on behalf of farmers and rural residents through their research and outreach efforts. They address important issues like agromedicine, occupational health and childhood agricultural injury prevention through programs such as the Rollover Protective Structure Rebate Program, Agricultural Safety Consulting Program, FARM (Farm, Agricultural and Rural Medicine) Clinic and the Wisconsin Dairy Workers Safety and Health Initiative.

However, these important programs would not be possible without the philanthropic support of the generous individuals, foundations and businesses who share NFMC's vision for a safer and more effective agricultural workplace.

To join NFMC in their mission to save lives, prevent injury, and improve health within the agriculture industry, please consider a gift to support their work or attend Auction of Champions on September 18, 2014. To learn more, visit [www.marshfieldclinic.org/giving](http://www.marshfieldclinic.org/giving) or contact Marshfield Clinic Development Department:

**By mail:** Marshfield Clinic Development  
1000 N. Oak Avenue, 1R1  
Marshfield, WI 54449

**By phone:** 715-387-9249 or 1-800-858-5220

**By email:** [giving@marshfieldclinic.org](mailto:giving@marshfieldclinic.org)

# Dr. Thomas Fritsche Named Holder of New Endowment

## Study will focus on antibiotic resistance in animals, humans

Marshfield Clinic pathologist **Thomas Fritsche, M.D., Ph.D.**, has been named as the inaugural holder of the Steve J. Miller Distinguished Physician/Scientist Endowment in Rural and Agricultural Health and Safety Research.

Dr. Fritsche, Division of Laboratory Medicine, is an expert in human and animal antibiotic resistance, and this will be the area of focus for the study tied to the Miller Endowment. He wants to detect and study resistant strains of bacteria that colonize the intestinal tract of humans and animals before they cause infections. Then, as those resistant bacteria are isolated, Dr. Fritsche and his team will compare those bacteria to bacteria recovered routinely in human infections, such as those from the urinary tract, bloodstream and lungs.

“The beauty of this study is in integrating human and animal health questions occurring in the same geographic region,” Dr. Fritsche said. “We have the patient population, veterinary lab services, and new lab tools that allow us to screen for resistance and identify bacteria cost effectively. We also have the capability to molecularly dissect the genes that produce resistance in human and animal bacteria, and to track their movement between hosts. The Miller Endowment will play a pivotal role in getting this all started.”

Dr. Fritsche’s study grapples with a serious issue. Centers for Disease Control and Prevention (CDC) published its first report on the antibiotic-resistance threat to the U.S., and estimates that each year, at least 2 million people become infected with bacteria resistant to antibiotics, and at least 23,000 people die.

“It’s a big problem, and one that’s getting worse,” said Tom Frieden, director, CDC. “But we published this report because it’s not too late – there’s a lot we can do to slow down, and even reverse, antibiotic resistance.”

The Miller endowment was named through a gift from Marbeth Spreyer, a Marshfield native, to Marshfield Clinic and the Marshfield Clinic Research Foundation (MCRF). The endowment is in honor of Spreyer’s father, Steve J. Miller, who was a cheese wholesaler in Marshfield. The Steve J. Miller Recreation Area on Oak Avenue in Marshfield is named for him.

“My father was in the cheese business, which meant he was in the dairy business, which ultimately was the farm business,” Spreyer said. “I also have a special feeling for Marshfield. It was my hometown and it was a wonderful place to grow up.” Spreyer, 83, now lives in Virginia.



*Thomas Fritsche, M.D., Ph.D.*

## Acknowledgments

The National Farm Medicine Center expresses its thanks to the organizations and individuals that enable the NFMC to keep pace with evolving health and safety concerns in agriculture.

Marshfield Clinic provides one-third of NFMC funding, and subcontracts and federal grants account for most of the rest. In 2013 the grants included:

National Institute for Occupational Safety and Health (NIOSH) Award 5U54OH009568-06, Award 5R21OH010032-02, Award OH010170 UMASH Award 5U54OH010170-03.

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