



2023 Year In Review

Table of Contents

National Farm Medicine Center Staff

3 Message from the Director

4 Research

5 Fellowship Awardees

6 & 7 Policy

8 & 9 Meet the Team

10 & 11 Outreach/Education

12 & 13 Auction of Champions

14 Fund-A-Need

15 Visitors

16, 17 & 18 Project Updates

19 Funded Projects

Casper Bendixsen, Ph.D.

Director - National Farm Medicine Center
Research Scientist

Barbara Lee, Ph.D.

Director - National Children's Center
Senior Research Scientist

Florence Becot, Ph.D.

Associate Research Scientist

Christopher Benny

Research Coordinator

Rick Burke, M.P.H.

Research Specialist

Marie Fleisner

Editorial Specialist

Jakob Hanschu, M.A.

Research Specialist

Scott Heiberger, M.S.

Communications Manager

Kyle Koshalek

Project Manager

Stephanie Lull

Administrative Assistant

Cassandra Peltier

Health Educator Associate

Matt Pilz

Senior Software Engineer

Melissa Ploeckelman

Outreach Specialist

Sarah Ruszkowski, M.A.

Research Specialist

Marsha Salzwedel, Ed.D.

Project Scientist

Juan Saucedo, M.D.

Research Coordinator

Dixie Schroeder, M.B.A.

Institute Research Administrator

Kathie Smith

Research Assistant Manager

Andrea Swenson, Ph.D.

Associate Research Scientist

Christopher Wanat

Research Coordinator

Bryan Weichelt, Ph.D.

Associate Research Scientist

Mission Statement

“Established in 1981 with the ultimate goal of improving human health, well-being, and safety of rural and agricultural communities, the National Farm Medicine Center is a national resource conducting high-quality research, developing and disseminating health and safety information, exploring innovative intervention models, and leading initiatives that bring about broad, positive change.”

Message from the director, Cap Bendixsen, Ph.D.



It is always somewhat intimidating to introduce a National Farm Medicine Center Year in Review, though not nearly equal to the task of building yet another beautiful edition as the team has done here. For me, the introduction often starts with a long, deliberate pause, a glance through the NFMC stained glass in my office window, and then focused thinking on what matters most. This year, we are highlighting important themes: research, policy and outreach/education. Projects in our center often touch all three of these themes, primarily because we want to be the home of research with high degrees of impact and application. We want our findings to matter and be useful in agricultural and rural communities. This is what our colleagues, funders and generous donors rightfully expect. More than the accomplishments yielded from individual projects, however, we have also highlighted something that matters more and may get less attention: our people — featured in our premium center spread space. I hope you find the vignettes about our people, projects and stories of impact a delight to read. I know I do.

Publications

Peer review is the foundation of scientific activities. The peer-review process subjects an author's work to the scrutiny of other experts in the field, thus encouraging authors to produce high-quality research that will advance the field. View all publications here: www.marshfieldresearch.org/nfmc/publications.

Research

Albert Einstein said, “I have little patience with scientists who

take a board of wood, look for its thinnest part and drill a great number of holes where drilling is easy.” The National Farm Medicine Center does not drill in the thin part. Here at Farm Medicine, our scientists and staff ask questions and search for hard-to-find answers to create a theory for how and why things work, then translate that research to create a service. At the end of each day, every person hopes our research creates a safer and healthier environment for farmers, ranchers, laborers, fishers, forestry personnel, families and children.

Research methods are broadly classified as qualitative and quantitative. Quantitative research can be explained as counting the quantity of things, such as how many injuries happen in agriculture each year in Wisconsin, like the [Wisconsin Farm Fatality Report](#) and the [Wisconsin Infant Study Cohort \(WISC\)](#) projects. Qualitative is

more open-ended and largely non-numerical that helps researchers understand participants’ lived realities, much like the [Telling the Story Project](#).

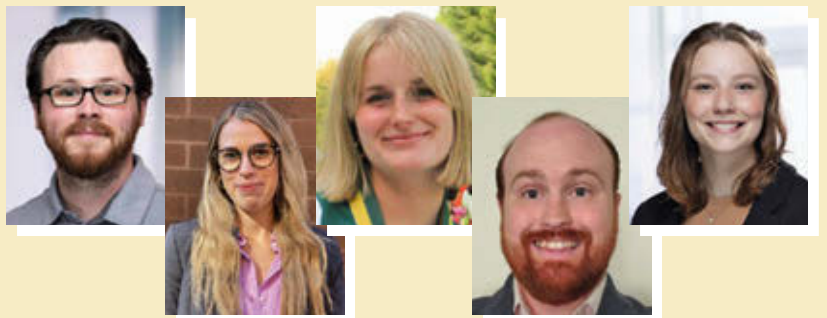
However, research can’t be put into two neat boxes and almost always has a combination of the two methods, like the [Linking Childcare to Farm Children Safety](#), the [Ag Youth Work Guidelines \(AYWG\) Curriculum](#), [AYW Motivators and Barriers](#) and the [Farm Kid Paradox](#) projects.

At the National Farm Medicine Center, located within the Marshfield Clinic Research Institute, our staff engaged in more than three dozen research projects (found on page 19 of this booklet). Each project has a different objective, method and conclusion, but each links back to the mission statement with “the ultimate goal of improving human health, well-being and safety of rural and agricultural communities.”

Intern Symposium

Farm Medicine scientists mentored three university students as part of the annual Marshfield Clinic Research Institute Summer Research Internship Program. The program provided real-world experience for five undergraduate and graduate students considering a career involving research. The program enables students to put their education into practice as they work side-by-side with scientists and clinician-researchers.

- “An assessment of farm families’ lived realities raising children on farms.” Scotia Dettweiler (law student from Vermont Law and Graduate School), mentored by Florence Becot, Ph.D.
- “Keeping children safe on the farm: What kinds of solutions do farm parents want?” Katherine Morrissey (graduate student from the University of Vermont), mentored by Florence Becot, Ph.D.
- “Diseases of Despair in rural and farm families in Wisconsin.” Matthew Wieckhorst (graduate student from Grand Valley State University, Michigan), mentored by Bryan Weichelt, Ph.D. and Jeff VanWormer, Ph.D.



Fellowship awardees

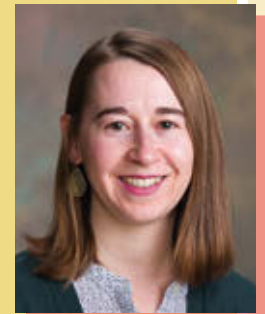
Fellowships are funded, short-term opportunities that can be focused on professional, academic and/or personal development. Fellowships are sponsored by a specific association, organization, institution or government entity

which sets the eligibility requirements. These opportunities encompass nationally competitive grants, scholarships and other funding opportunities. Congratulations to all our fellowship awardees this year.



The Gwen D. Sebold Fellowship recognizes an outstanding medical researcher and supports research in their chosen field. Since 1988 and continuing each year thereafter, a monetary award and a memorial plaque have been presented by D. David “Dewey” Sebold in memory of his sister, Gwen. This year’s award was presented to Jeff VanWormer, Ph.D.

Florence Becot, Ph.D., was selected as recipient of the Steve J. Miller Distinguished Physician/Scientist Endowment. The endowment was established for the purpose of conducting rural and agricultural health and safety research. Becot’s area of expertise is in rural sociology, focusing on factors that shape farm populations, including health, safety, quality of life and economic opportunities.



The North Central Regional Center for Rural Development (NCRCRD) introduced its newest Fellow, Shoshana Inwood, Ph.D., The Ohio State University, and its first Faculty Collaborator, Florence Becot, Ph.D. Their project involved the development, implementation and analysis of the 2023 NCRCRD Caregiving Survey. The center is one of four Regional Rural Development Centers in the United States. Its work links the research and educational outreach capacity of 34 land-grant universities with communities, local decision-makers, entrepreneurs, families, farmers and ranchers to help address a wide range of development issues unique to the 12-state region.

Bryan Weichelt, Ph.D., has been selected for the National Rural Health Association’s (NRHA) Rural Health Fellows Program of 2024. He will focus on rural veterans health issues. Each year, NRHA selects 10 to 15 highly motivated individuals who have proven their dedication to improving the health of rural Americans through their educational or professional experience. The goal of the Fellows program is to educate and develop a network of diverse rural leaders who will step forward to serve in key positions in the association, affiliated advocacy groups, and local and state legislative bodies with health equity as a main focus.



Policy

When we think of safety and health, the word “policy” often means a law, regulation, procedure, administrative action, incentive or voluntary practice of governments and other institutions. Because of that, policy is a word often associated with fear and enforcement. But policy can also mean protection, explanation and service. Farms can have their own policies. So can parents and other supervisors of youth working in agriculture. At the National Farm Medicine Center, we strive for policy that facilitates a culture of security and well-being for farmers and all rural America.

Farm Medicine, The Ohio State University and other collaborators have paid close attention to policies that are

being considered for inclusion in the next Farm Bill. Another Farm Medicine policy focus area includes funding to support safety engineering for farmers such as retrofitting older tractors with Rollover Protective Structures (ROPS).

Policy can be a tool. Similar to the connection between a tractor and implement, Farm Medicine acts as the hitching pin between farmers and policymakers in government and elsewhere, listening to farmers through research, interviews and focus groups, then helping to carry their messages to those who can affect policy. For instance, the center was privileged to host Wisconsin Gov. Tony Evers to discuss agricultural mental health. And each year, Farm Medicine scientists visit Washington, D.C., to meet with legislative staff.



Farm families seek child care: The research of Florence Becot, Ph.D., and co-investigator Shoshanah Inwood, Ph.D., The Ohio State University, is being used to develop solutions to support the health, safety and economic viability of the farm population. Becot and Inwood shared their findings from a national survey of farm families. More than 860 families in 47 states responded. Their answers highlighted the child care struggles that farm families face. Nationally, three-quarters (77%) of farm families with children under 18 report difficulties securing child care because of lack of affordability, availability or quality.

Legal response analyzed: A team led by Dr. Barbara Lee analyzed legal cases and news reports involving an adult charged with a criminal offense following the serious injury or death of a child younger than 18 years, whether working or not working, in a family farm setting. Published results and recommendations (<https://doi.org/10.3389/fpubh.2022.1015600>) have the potential to inform child safety practices and influence risk-taking practices in agricultural communities. By highlighting the importance of parent/adult accountability for child farm safety and the legal and social welfare consequences of unsafe and/or reckless behaviors, the ultimate goal is for fewer children to suffer serious agriculture-related injuries or deaths.

‘Incident’ vs. ‘Accident’: A project led by Dr. Bryan Weichelt and Christopher Benny studied media professionals’ receptiveness to using the term “incident” rather than “accident” when reporting on injuries and fatalities in the agricultural workplace. Injury prevention experts avoid the term “accident” because it suggests that the injury event was unpredictable and therefore not preventable. The project identified 31 U.S. news media injury reports on AgInjuryNews.org during an eight-month period that referred to childhood agricultural injuries as “accidents.” In follow-ups with authors of the reports, the majority responded positively to the terminology shift.

Beyond the immediate findings, this project has laid the foundation for future actions and research directions. Notably, it highlights the potential for a shift in terminology within various professional groups. An additional outcome was that the investigative news organization ProPublica adopted an editorial policy to use the term “incident” instead of “accident” following an interview with Dr. Barbara Lee.



As we focus on policy and partnering with legislative personnel we were honored to welcome Wisconsin Gov. Tony Evers to our offices in Marshfield.

Gov. Tony Evers met with National Farm Medicine Center scientists and staff during a visit to Marshfield Medical Center in Marshfield. The discussion focused on the Evers Administration's investments in farmer and rural mental health, and the research Farm Medicine is conducting around mental health.

Evers declared 2023 the Year of Mental Health during his State of the State address. Participating in the discussion were Casper "Cap" Bendixsen, Ph.D., director, National Farm Medicine Center; Florence Becot, Ph.D., rural sociologist at Farm Medicine; and Julie Kaprelian, Ph.D., child psychologist, Marshfield Children's Hospital.



Meet the Team



Casper Bendixsen, Ph.D.

Director - Farm Medicine Center
Research Scientist

The best part of my day is when I hear from colleagues and community members about how they have been positively impacted by our work. Second to that, when I explain our work to those unfamiliar and they immediately relate to how important the work is and thank me for our efforts.



Scott Heiberger, M.S.

Communications Manager

Seeing the work of our scientists and staff featured in the media is very rewarding to me. That means our safety messages are being communicated to those who will benefit most.



Sarah Ruskowski, M.A.

Research Specialist

My role is important in supporting and improving the health, well-being and safety of farm families. It is also important to push forward the academic body of literature in both theory and application.



Barbara Lee, Ph.D.

Director - National Children's Center
Senior Research Scientist

We've come a long way since I first got involved in childhood agricultural injury prevention 35 years ago. It is so rewarding to know that many of our initiatives have contributed to improved safety and health of children on farms. And my favorite part of the work day has always been casual conversations with co-workers, even if it's virtual.



Kyle Koshalek

Project Manager

The selflessness and unwavering commitment of rural volunteer firefighters, intertwined with the resilience and dedication of the agricultural community, inspire me to support and champion their shared mission of safeguarding lives, property and livelihoods.



Marsha Salzwedel, Ed.D.

Project Scientist

I loved growing up on a farm but was very naïve to how truly dangerous the farm worksite was. I truly appreciate the opportunity to share safety and health information and resources with other farmers, potentially preventing injuries/illnesses and even saving lives.



Florence Becot, Ph.D.

Associate Research Scientist

As much as I love to do research, it is of no use if it sits on a library shelf. This means that I also spend time sharing the findings of my research with farm organizations, farm services providers, journalists and policy makers.



Stephanie Lull

Administrative Assistant

As the parent of an active 8-year-old boy who is extremely interested in "working" on Grandpa's farm, staying up to date on the latest ag health and safety research trends is incredibly important to me because it allows me to continue to keep him safe and educated as he grows up and becomes more involved on the farm.



Dixie Schroeder, M.B.A.

Institute Research Administrator

I grew up on a small farm and have several family members who continue to own and operate large farms in southern Wisconsin today. Thus, like Farm Medicine, it is my personal goal to play a role in improving the health, well-being and safety of our rural and agricultural communities.



Rick Burke, M.P.H.
Research Specialist

I work primarily with surveillance data. If we don't know what's going on in the world of ag health and safety, we can't identify areas of concern, determine the best course of action, and then implement best practices to keep farmers and farm families safe and healthy.



Marie Fleisner
Editorial Specialist

I enjoy my behind-the-scenes interactions with authors, reviewers and editors, knowing that I am contributing in a small way to the global agricultural health and safety community.



Jakob Hanschu, M.A.
Research Specialist

As a research specialist, I am responsible for keeping several projects moving forward. A central part of my role is to gather and analyze data that will contribute to better agricultural health and safety interventions.



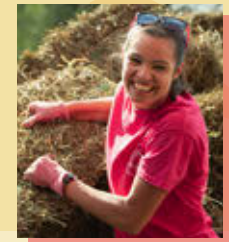
Cassandra Peltier
Health Educator Associate

The best part of my work day is when I get to collaborate with others who work in ag health and safety. I really enjoy when we are able to bring our ideas and expertise together.



Matt Pilz
Senior Software Engineer

I love puzzle-solving and coming up with new and innovative ways to embrace modern technologies as part of our mission. The greatest reward comes from seeing the fruits of these efforts by way of traffic analysis and public feedback; knowing my contributions have meaningful impact around the world.



Melissa Ploeckelman
Outreach Specialist

As an outreach specialist I really enjoy organizing and managing service programs that promote health and wellness within the agricultural community. Knowing that farm parents can tuck their children into bed at night, safe and sound, makes me feel great joy.



Kathie Smith
Assistant Manager

The research we do is important to the farming community. I am proud to be part of the research that saves lives and protects children.



Andrea Swenson, Ph.D.
Associate Research Scientist

Designing and implementing agricultural health and safety research and evaluation projects is important for understanding how we can best serve agricultural and rural communities to promote health and safety.



Christopher Wanat
Research Coordinator

I previously worked in patient care, and while helping one patient at a time is very important, I feel that with ag health I can work on preventing the injuries that would result in trips to the hospital.



Bryan Weichelt, Ph.D.
Associate Research Scientist

Having the opportunity to pursue new and innovative research and service projects benefiting rural veterans and farm families is what drives me forward, and the best parts of my day are the interactions with the passionate people and teams working in this field.

Outreach/ Education

help move culture in a safer direction by providing a population access to resources designed just for them.

Outreach is about translating research into practice. Scientists and staff at Farm Medicine and the National Children's Center share research findings in many ways. Examples include the [Ag Rescue Training](#) done with rural firefighters and attending conferences to present research results and recommendations to get research into the hands of the community. Our [Slow-Moving Vehicle Emblem campaign](#) provides free SMV emblems

Culture includes ideas that continuously evolve, like the culture of safety in rural and agricultural industries. Outreach can

to farmers and shares the rules and regulations for proper lighting on farm machinery on roadways. Social media posts containing prevention messages are shared, often in follow-up to news reports describing agricultural incidents gathered by [aginjurynews.org](#). Another way of reaching rural areas with safety education resources is the [Tools of the Trade \(TOTs\)](#) initiative, which features hands-on activities that volunteer firefighters and other safety advocates can take back to their communities.

As agriculture evolves, so do its safety challenges. Such changes call for greater diversity of safety information and new ways to deliver it. Our staff are passionate about reaching those who may not otherwise get the protective information they need, and in doing so choose from a variety of communication strategies.

National conversation on mental health in agriculture: The U.S. Department of Agriculture Center for Faith-Based and Neighborhood Partnerships organized a meeting around farm stress and suicide prevention. With an active research agenda on the topic, Farm Medicine Associate Research Scientist Florence Becot received an invitation. The convening was intended to support current and future collaborations. Becot made several new connections and reconnected with several friends of Farm Medicine.



Farm Medicine plays lead role at world conference: Multiple staff participated on the 2023 International Society for Agricultural Safety and Health (ISASH) Summer Conference planning committee. The National Farm Medicine Center was well-represented by researchers and staff during the conference, held in Tampa, Fla. The conference is the world's largest annual gathering of professionals whose work is focused on agricultural safety and the health of rural communities. Congratulations to Melissa Ploeckelman, who was elected to the ISASH Board of Directors and begins a three-year term. Congratulations to Dr. Bryan Weichelt, who received the "President's Award" for securing conference sponsorships totaling \$25,000 from industry, agricultural safety centers, universities and other ag safety organizations. Dr. Weichelt is chairman of the planning committee for the 2024 conference to be located in Portland, Ore., in June. In addition, Dr. Marsha Salzwedel planned and hosted the annual Childhood Agricultural Safety Network (CASN) dinner meeting, co-located with the 2023 conference. The Journal of Agromedicine, edited by Farm Medicine, published selected conference papers. The International Society for Agricultural Safety and Health was incorporated in 1962. It is a network of more than 200 engineers, educators, insurers, physicians, nurses, veterinarians, statisticians, communicators, social scientists, business leaders and others who play influential roles in agricultural safety and health.



Farm Medicine staff work hard to translate the research findings into resources and services made available to families in the agricultural community.

Farm Medicine partners with USDA, Farm Foundation:

Dr. Florence Becot was both an organizer and a presenter for a virtual conference on U.S. Farm Households' Social and Economic Needs and the Future of Agriculture, Sept. 13. The conference was a collaboration between the National Farm Medicine Center, U.S. Department of Agriculture, Farm Foundation, The Ohio State University and Colorado State University. The conference was designed to bring awareness to the social and economic challenges experienced by farm families, as well as their consequences. U.S. Deputy Secretary of Agriculture Xochitl Torres Small delivered the opening remarks. More than 300 people representing academia, government agencies, policy makers and the private sector participated.



Emergency responders embrace 'Tools of the Trade':

A collection of hands-on agricultural safety resources, known as "Tools of the Trade," occupied attendees at the Wisconsin Emergency Medical Services Association (WEMSA) conference. Rather than a "keynote" session, WEMSA offered a multi-hour "key-NOT" event, allowing participants to visit 19 interactive stations related to agricultural and rural safety and health during the Feb. 2-3 conference in Green Bay.

Connecting nationally, Farm Medicine meets stakeholders where they are:

Scientists and staff promoted research and resources of the Centers at multiple meetings during 2023, including but not limited to: Wisconsin EMS Association Annual Conference; RF-DASH training in La Crosse Wis.; Oklahoma Cattlewoman Ag Health and Safety Day, Watonga, Okla.; Agriculture, Food, and Human Values Society Annual Conference, Boston, Mass.; Rural Sociological Society Meeting, Burlington, Vt.; Ag Rescue Training and Train the Trainer, Marshfield, Wis.; Agricultural Media Summit, Palm Springs, Calif.; American Public Health Association Annual Meeting and Expo, Atlanta, Ga.; American Society of Agricultural and Biological Engineers, Omaha, Neb.; BeSAFE International Farm Safety & Farmer Health Conference, Dublin, Ireland; International Society for Agricultural Safety and Health, Tampa, Fla.; Midwest Rural Agricultural Safety and Health Conference, Dubuque, Iowa; Marshfield Area Chamber of Commerce, Agribusiness Council Student Day, Marshfield, Wis.; National Association of County Agricultural Agents, Des Moines, Iowa; National Association of Extension 4-H Youth Development Professionals 2023 Annual Conference, Pittsburgh, Pa.; National Association of Farm Broadcasters annual meeting, Kansas City, Mo.; National Association of Mutual Insurance Companies Ag Risk Inspection School, Indianapolis, Ind.; National Council on Family Relations, Orlando, Fla.; National FFA Convention and Expo, Indianapolis, Ind.; Wisconsin Association of Agricultural Educators annual conference, Oshkosh, Wis.; Wisconsin Farm Bureau Federation Annual Conference, Wisconsin Dells, Wis.



Auction of Champions

The Marshfield Clinic Health System Foundation is proud to announce that the 2023 Auction of Champions, “Fire and Ice,”

raised \$266,000 for the National Farm Medicine Center and its agricultural initiatives dedicated to keeping farmers happy, healthy and safe! Special thanks to Miron Construction Co., Inc., Champion Sponsor, for their ongoing commitment to Auction of Champions.

Tiffany Halan of MCHS Foundation served as master of ceremonies, and introduced the evening’s speakers: Teri Wilczek (chief development officer, MCHS Foundation); Dr. Brian Hoerneman (interim CEO, Marshfield Clinic Health System); Dr. Casper Bendixsen (director, National Farm Medicine Center); and Brad Guse (chairman, Auction of Champions).

Auction of Champions, “Fire and Ice,” featured sparkling raffles, illuminating auction packages and a fiery Fund-A-Need dedicated to bolstering roadway safety and injury prevention by supporting the dissemination of Slow-Moving Vehicle (SMV) emblems to enhance the visibility of agricultural vehicles on public roads. Tim Carey, Stratford Area Fire Department fire chief, spoke about the importance of these SMV emblems to keep all drivers safe in rural communities.

For information regarding how to support the important work of the National Farm Medicine Center, please contact Tiffany Halan, Marshfield Clinic Health System Foundation, at 715-387-9189 or halan.tiffany@marshfieldresearch.org.





Slow Moving Vehicle sign campaign highlights partnerships: To enhance safety awareness and potentially save lives, the Auction of Champions' Fund-A-Need was dedicated to raising money for the distribution of Slow-Moving Vehicle (SMV) signs. These signs are being distributed to Wisconsin farmers free of charge through a partnership involving the National Farm Medicine Center, Rural Mutual Insurance Co., H&S Manufacturing and Nasonville Dairy.

According to the Wisconsin Department of Transportation, there were 136 crashes involving motorists and farm vehicles in Wisconsin last year. This resulted in 50 injuries and two deaths. The most recent Wisconsin Farm Related

Fatalities reports show roadway deaths accounted for 15 percent of all farm-related fatalities (6 out of 40) in 2019 while in 2020 they accounted for 18 percent of fatalities (5 out of 28). The Wisconsin Farm Related Fatalities reports compile statistics about agriculture-related deaths in the state. They are sourced primarily from death certificates and supplemented by AgInjuryNews.org, a database of agriculture-based injuries and fatalities compiled mainly from news articles.

An SMV sign is a reflective orange triangle bordered with red that warns other road users that the vehicle displaying the sign is traveling slower than the normal speed of traffic.



Farm Medicine welcomed many distinguished guests in 2023. It is an honor to work with others who have passion for agricultural safety and health.



Safety and Health Summit: The National Farm Medicine Center celebrated National Farm Safety and Health Week by hosting a three-day National Ag Centers Safety and Health Summit, culminating in the Auction of Champions, the annual gala benefiting multiple Farm Medicine programs. Jennifer Lincoln, Ph.D., associate director for the National Institute for Occupational Safety and Health (NIOSH) Office of Agriculture Safety and Health and co-chair of the NORA Agriculture, Forestry, and Fishing Sector Council, and K.C. Elliott, program coordinator for the NIOSH Office of Agricultural Safety and Health, were joined by representatives from eight of the 12 NIOSH ag centers (based in California, Illinois, Minnesota, Nebraska, New York, Texas, Washington and Wisconsin). Scientists from Farm Medicine and its largest program, the NIOSH-funded National

Children's Center for Rural and Agricultural Health and Safety, facilitated meetings related to children and youth, technology and engineering, injury surveillance, policy, farm workers, and interdisciplinary and cross-institutional work. The agenda included field trips to Norm-E-Lane Farms and H&S Manufacturing Co. Dr. Lincoln told the assembled NIOSH ag center representatives that she appreciated the chance to meet with them face-to-face. "To be able to hear you talk and to start creating these lines (of collaboration) has helped me and K.C. feel even more confident in the NIOSH Ag, Forestry and Fishing program and where it is headed," Lincoln said.



Dr. Matt Comi, faculty member at Utah Valley University and former Koller Postdoctoral Fellow, gave a presentation as part of Marshfield Clinic Research Institute's Scientific Seminar series. Comi's research is motivated by a goal to support more sustainable, healthy and equitable food producing systems on a warming planet. His post-doctoral work was co-mentored by Drs. Florence Becot and Casper Bendixsen.



Dr. Hannah Budge recently completed her Ph.D. in rural sociology at Newcastle University, England, co-mentored by Dr. Florence Becot and Dr. Shoshanah Inwood. **Dr. David Rose**, Royal Agricultural University, England, visited and presented "Landscapes of support for mental well-being in farming: Identifying research priorities in the UK."



Stakeholder Advisory Board: Our staff was excited to host the National Children's Center Stakeholder Advisory Board meeting in Minneapolis with our principal investigators. Board members are Dee Jepsen, Ph.D., The Ohio State University; Athena Ramos, Ph.D., University of Nebraska Medical Center; Suzanne Wright, M.D., Marshfield Clinic Pediatrics; David Schwebel, Ph.D., University of Alabama at Birmingham; Brian Kuhl, Progressive Agriculture Foundation; Matthew Keifer, M.D., University of Washington; Joseph Grzywacz, Ph.D., San Jose State University; and Jennifer Leonardo, Ph.D., Children's Safety Network.



Linking child care to farm safety:

Farm safety experts strive to promote child care use through educational programming. This is an issue rooted deep in our farming history, with evidence back in the 1980s noting that child care is a significant challenge for farming parents. Yet, surprisingly, contemporary farm safety research doesn't often delve into how child care choices intersect with farm safety. The project, led by Dr. Florence Becot, "Linking Child care to Farm Children Safety," is working to change this. The team has initiated a comprehensive exploration into the lived realities of farming parents.

This project is working to unearth how cultural, social, economic and political aspects impact their child care choices and how these decisions intertwine with farm safety by conducting an environmental scan of farm programs, conducting interviews with key informants, hosting focus groups, carrying out photovoice activities and administering surveys.



Photo by USDA Flickr

Project uses medical records to estimate injury trends:

Research has demonstrated that there is no deadlier work for children and adolescents in the United States than farming. Yet, the study of agricultural risks is often neglected due to the absence of a comprehensive surveillance system for agricultural injuries. The Surveillance of Medically Attended Injuries project is establishing an injury surveillance system focused on children and adolescents residing on farms in the heartland of north-central Wisconsin. This project, led by Dr. Jeff VanWormer, will enable us to study multi-year epidemiologic trends in medically attended agricultural injuries and determine which population subgroups are at the most risk. The Children's Center team has already

assembled a study cohort, linking farm residence with hospital patient records. Medical records have been diligently extracted to chart-validate agricultural injuries. We've even expanded the cohort to include non-farm children and adolescents for comparative analysis.



Dr. Florence Becot and colleagues Shoshanah Inwood, Ph.D., The Ohio State University, and Andrea Rissing, Ph.D., Arizona State University, received the Excellence in Scholarship award from the Agriculture, Food and Human Values Society for their integrated research and Extension work during the society's annual conference at Boston University.

Projects to address rural health inequities:

Bryan Weichelt, Ph.D., and Marsha Salzwedel, Ed.D., successfully competed for internally funded research awards from Marshfield Clinic Research Institute's Koller Awards. Dr. Weichelt's project will assess veterans' knowledge and utilization of earned benefits,



programs and services, and Dr. Salzwedel has been funded to conduct an injury assessment and develop an injury prevention intervention for the Anabaptist community.

Children’s Center guest edits *Frontiers in Public Health*: A special edition titled “Safeguarding Youth from Agricultural Injury and Illness: International Perspectives,” was published in 2023 in the renowned *Frontiers in Public Health* journal. This compilation of peer-reviewed publications was edited by the National Children’s Center for Rural and Agricultural Health and Safety and includes 29 manuscripts from around the world including Argentina, Australia, Burkina Faso, Canada, Ireland, Israel, Lithuania, Nigeria, Sweden, United Kingdom and United States. This issue promises to create awareness and lay groundwork for a safer global agricultural community for our youth.

A webinar leveraging this special issue took place in November. The webinar, titled, “Safeguarding the health and safety of children in agriculture,” was organized jointly by the International Association of Work in Agriculture and the National Children’s Center. The webinar shed light on the health and safety of children in agriculture in Northern and Southern countries, with an emphasis on family farm systems. After a discussion of recent research, attendees engaged in a moderated discussion of opportunities for future research and interventions, as well as collaborations. This recorded webinar can be watched here: <https://www.youtube.com/watch?v=uEtbD4N63h8&t=1717s>.



Congratulations Dr. Swenson:

Andrea Swenson, Ph.D., accepted the position of associate research scientist in Farm Medicine and assumed the role of associate director for the National Children’s Center. Swenson, who grew up on a dairy farm in central Wisconsin, joined Farm Medicine in 2019 as a project scientist/program evaluator.



Projects study adoption of work guidelines:

Ongoing studies led by Dr. Andrea Swenson aim to understand motivators and barriers for adopting Agricultural Youth Work Guidelines (AYWG), a safety resource designed to guide parents and youth supervisors when assigning tasks to youth on the farm. One study focuses on identifying motivators and barriers for AYWG among parents and supervisors, while a second study focuses on identifying motivators and barriers among youth educators. Based on findings from the second study, additional funding was awarded to support the development and distribution of tool kits for educators to use in conjunction with AYWG (<https://cultivatesafety.org/aywg>).



Hired Agricultural Youth Work Guidelines: Training adolescents can be difficult as youth often take risks, are inexperienced and/or inattentive, and may be reluctant to ask questions. We recently updated the Hired Agricultural Youth Work Guidelines (HAYWG), which are designed to help educate farm employers and supervisors on topics pertinent to hired youth to help reduce the risk of injury. This includes guidance for training and supervising young workers, information on federal child labor regulations and accessing state child labor laws, and guidance on supervising common tasks. Check out the guidelines at <https://cultivatesafety.org/hired-youth/>.

Adding occupation to patient health record a ‘game changer’ for ag safety: 90,000 hours. That is how much most Americans will spend at work over their lifetime. What people do for work matters for many reasons. Work is a means of income, a source for benefits and, hopefully, is something that gives a person a sense of fulfillment and accomplishment.

In order to better diagnose and treat patients, staff and physicians at the Marshfield Clinic Health System are now asking patients about the industries and jobs in which they work.

Work impacts lives and families in profound ways, especially when it comes to health. Occupational illnesses, injuries and exposures are not always simple one-time slips on a wet floor. More often, these injuries and illnesses develop over longer periods of time and compound, increasing the possible negative impact on a person’s health. The annual cost of time lost to work-related injury and illness in the U.S. was \$167 billion in 2021, according to the National Safety Council.

“This innovation gives our research team at a tremendous advantage and will change the game of agricultural health and safety,” said Dr. Casper Bendixsen, director of the National Farm Medicine Center. “We will be one of the few health systems in the country equipped to examine health data in light of someone’s work. In agricultural communities, this will impact how and to whom we deliver valuable safety and wellness knowledge, but also shed light on health trends, such as the types and rates of cancers, respiratory diseases and Parkinson’s disease in the farming population.”



WISC study extended: Support for the Wisconsin Infant Study Cohort (WISC) has been renewed through both a National Institutes of Health cooperative agreement and now the NIH Environmental Influences on Child Health Outcomes (ECHO) program. This support will allow Farm Medicine and a multi-departmental Marshfield Clinic Research Institute research team to follow the health outcomes of farm and non-farm youth in central Wisconsin from in utero until some youths’ 16th birthdays.

Agriculture Rescue Training (ART): In October, the Farm Center in partnership with the Pittsville Fire Company, Life Link III, Heiman Holsteins and Heeg Farms Inc., hosted Agriculture Rescue Training (ART). The ART program emerged out of the Farm Accident Rescue Program, started by the center in 1982. That program lasted 20 years. The reintroduced ART training took place in 2020 and aimed to carry forward our strong legacy of preparing firefighters for agricultural emergencies. While numerous sponsors and donors help to make the ART program possible each year, it would be nothing without the enthusiastic support of the many fire departments in central Wisconsin.



Funded Projects

National Farm Medicine Center:

- AgInjuryNews.org
- Agriculture Rescue Training (ART)
- Approaches to Studying Farmers' Suicide
- Assess Veterans' Knowledge and Utilization of Earned Benefits
- Caregiving along the Life Course
- Dairy Microbiome (DOMÉ)
- Farmers' Mental Health and Intervention Models
- Geo-Mapping Antimicrobial Resistance in E. coli from Humans and Animals
- Human Epidemiology and Response to SARS-COV-2 (HEROS)
- Injury Assessment and Development of an Injury Prevention Intervention for the Anabaptist Community
- Journal of Agromedicine: Practice, Policy, and Research
- National Rural Health Association's (NRHA) Rural Health Fellows Program of 2024
- Novel Determinants of Farm Workers' Safety Outcomes
- Providers' Attitudes and Adoption of mHealth at Marshfield Clinic Health System
- Skin Cancer Screening
- South Dakota Farmer Mental Health Assessment
- Steve J. Miller endowment: Shedding light on underappreciated determinants of agricultural health and safety outcomes
- Understanding and Addressing the Disparity in Vaccination Coverage Among U.S. Adolescents Living in Rural Versus Urban Areas
- Wisconsin Farm Fatalities Report
- Wisconsin Infant Study Cohort (WISC)/Children's Respiratory and Environmental Workgroup (CREW)/ Environmental Influences on Child Health Outcomes (ECHO)
- Wisconsin Rollover Protection Structure (ROPS) Rebate Program

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

- Adoption of Agricultural Youth Work Guidelines: Identifying Motivators and Barriers for Use
- Assessing the Impact of Traumatic Injury News Articles on Farm Mothers and Educators
- Capabilities and Limitations of Youth Operating Agriculture All-Terrain Vehicles
- Farm Adolescent and Mental Health
- Farm Kid Paradox: Anthropological Inquiry into the Benefits and Risks of Child-Livestock Interaction
- Incorporating Agricultural Youth Work Guidelines into Curriculum of Wisconsin Agricultural Educators
- Linking Childcare to Farm Children Safety
- NCCRAHS Evaluation Core
- NCCRAHS Emerging Issues Program
- NCCRAHS Outreach Core
- Surveillance of Medically Attended Agricultural Injuries in Farm Children

Upper Midwest Agricultural Safety and Health Center:

- Identifying Individual and Contextual Determinants Underpinning Farmers' Help-Seeking Behaviors and their Role in Shaping Mental Health Outcomes
- Rural Firefighters Delivering Agricultural Safety and Health (RF-DASH)
- Telling the Story Project

Central States Center for Agricultural Safety and Health:

- Emerging Issues Program, AgInjuryNews
- Health and Safety Risks among Immigrant Cattle Feedlot Workers in Nebraska and Kansas
- Improving Safety and Health in the Cattle Feed Yard Industry

PUBLICATIONS

Peer review is the foundation of scientific activities. The peer-review process subjects an author's work to the scrutiny of other experts in the field, thus encouraging authors to produce high-quality research that will advance the field. View all publications here: <https://marshfieldresearch.org/nfmc/publications>

NATIONAL FARM MEDICINE CENTER

1000 N OAK AVE
MARSHFIELD WI 54449-5777

ADDRESS SERVICE REQUESTED

NONPROFIT
ORGANIZATION
U.S. POSTAGE
PAID
WAUSAU, WI
PERMIT NO. 417



Phone: 1-800-662-6900

Fax: 715-389-3535

E-mail: nfmcsh@marshfieldresearch.org

Website: www.marshfieldresearch.org/nfmc

ACKNOWLEDGEMENTS

The National Farm Medicine Center expresses its appreciation to the organizations and individuals that enable NFMC to stay ahead of evolving health and safety concerns in agriculture. The following federal grants provided programmatic support in 2023. National Institute for Occupational Safety and Health (CDC/NIOSH) provided NCCRAHS Award U54OH009568; UMASH Award U54OH010170; CS-CASH Award U54OH010162. National Institute of Health provided WISC U19AI104317 and CREW UG3OD023282.

The center is also the fortunate recipient of generous donor support. These philanthropic dollars allow the staff to engage in important outreach and education as well as pilot research ideas that are in their early stages.

