

2022 Year in Review

Going Full Circle



National
FarmMedicine Center

Table of Contents

Message From The Director, Casper Bendixsen, Ph.D.	3
Mission Statement.....	
Physical limitations prevent children from safely operating ATVs	4
Surveillance data guide injury-prevention efforts	
Six Emerging Issues projects funded	5
Farm Medicine part of UMASH center grant • Directory will help identify rural health disparities	
New projects feature Agricultural Youth Work Guidelines	6
ASHCA Summit: Where industry, safety meet • Remembering Dr. Gunderson	
CASN Leadership Team takes lead in finding safety solutions	7
National Children's Center director testifies before Congress.....	
Celebrating 25 years of the National Children's Center	8-9
Sharing peer-reviewed research with the world	10
Dr. Comi joins Farm Medicine	
Story project collaboration expands	11
Dr. Comi joins Farm Medicine • Children's Center studies farm adolescent mental health	
The Golden Auction	12-13
Gwen D. Sebold Fellowship.....	
Safety demonstrations popular at Farm Technology Days	14
Ag Rescue Training attracts new departments.....	
Funded Projects	15

National Farm Medicine Center Staff

Casper Bendixsen, Ph.D.
Director - National Farm Medicine Center
Research Scientist

Barbara Lee, R.N., Ph.D.
Director - National Children's Center
Senior Research Scientist

Kathrine Barnes, M.S., M.P.H.
Project Manager

Florence Becot, Ph.D.
Associate Research Scientist

Christopher Benny
Research Coordinator

Rick Burke, M.P.H.
Research Specialist

Matt Comi, Ph.D.
Postdoctoral Fellow-Research

Marie Fleisner
Editorial Specialist

Scott Heiberger, M.S.
Communications Manager

Kyle Koshalek
Project Manager

Amy Marg
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

Dixie Schroeder, M.B.A.
Institute Research Administrator

Kathie Smith
Research Assistant Manager

Andrea Swenson, Ph.D.
Project Scientist – Evaluator

Christopher Wanat
Research Coordinator

Bryan Weichelt, Ph.D., M.B.A.
Associate Research Scientist

Mission Statement

“With the ultimate goal of improving human health, well-being and safety of rural and agricultural communities, the National Farm Medicine Center acts as a national resource by conducting high quality research, developing and delivering health and safety information, exploring innovative intervention models, and leading initiatives and networks.”

Message From The Director, Casper Bendixsen, Ph.D.



Going Full Circle

We use many models to visualize the work of research, interventions, and education. Networks, spectrums, grids, diagrams, taxonomies, and charts are just to name a few. We've chosen circles as a theme for this year's Farm Medicine Center Year-in-Review as they reoccur through many of the models we use and represent a number of important relationships within the Farm Medicine Center's work. We often think of going full circle, that is, starting with the needs of the community – farmers and ranchers, workers, families, and rural communities – asking testable questions through rigorous methods, proposing solutions based on those findings and their supporting evidence, and proceeding with the community in implementation and evaluation. And so it goes until we have improved the lives of those communities and others like them. I hope that all of you who read this Year-in-Review can see yourself throughout the pages. Whether it's in the circle of the research, the circle of giving, or the circle of friends and colleagues, we appreciate you!

With your support, we will continue to put our best work out there into the communities we serve and know it will come around again and again as we take on new challenges.

Publications

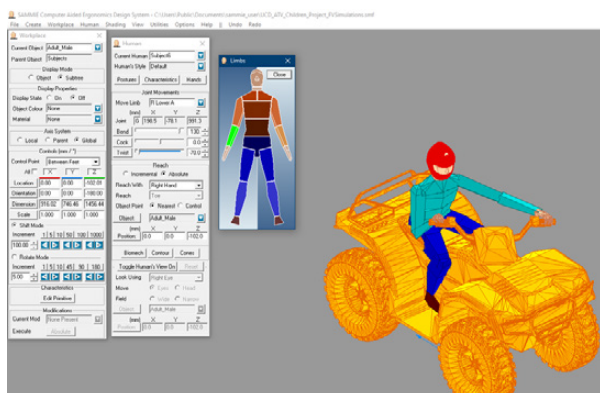
Peer review is the foundation of scientific activities. The peer-review process subjects an author's work to the scrutiny of other experts in the field, thus encouraging authors to produce high-quality research that will advance the field. We are proud to share our 2022 publications here: www.marshfieldresearch.org/nfmc/publications.

Physical limitations prevent children from safely operating ATVs

Most children not strong enough to activate main controls, according to study

Adult-sized utility all-terrain vehicles (ATVs) are a major cause of injuries and deaths among farm children. ATV use is common in rural areas and has seen continued growth in agricultural operations. In fact, a recent survey showed that children under 16 are now more likely to have used an ATV than a tractor. Children on

farms are involved in ATV work at a young age, with some studies showing children as young as 8 operating those machines. However, the weight and speed of ATVs require complex maneuvering beyond children's skills.

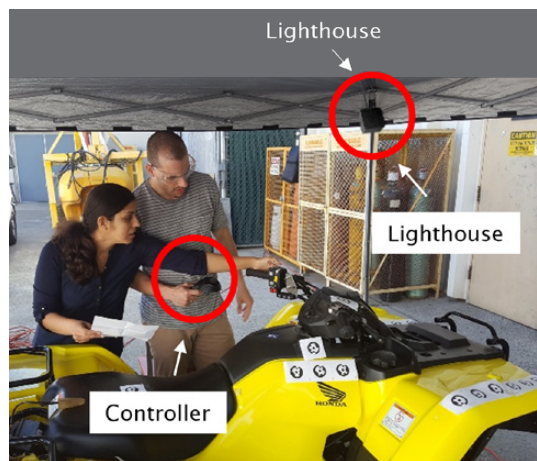


Simulated youth and ATV in a computer aided ergonomics design system.

The National Children's Center responded to the need outlined by several ATV advocacy agencies to scientifically measure physical and ergonomic factors required for the safe operation of ATVs. "We divided this study into two steps: (1) evaluating if children can reach all ATV controls; and (2) evaluating if children can activate all ATV controls," said Principal Investigator Farzaneh Khorsandi, Ph.D., Assistant Professor of Cooperative Extension in Agricultural Safety and Health in the Department of Biological and Agricultural Engineering, University of California, Davis. "To that end, we used computer simulations as well as data collected in the

field to evaluate if children can safely reach and activate the main ATV controls. In total, we evaluated 54 ATVs along with boys and girls of ages 8 – 16 and varying heights."

The results demonstrated that children cannot safely operate ATVs on farms and ranches, Khorsandi said. For one, most children are not strong enough to activate the main controls of the ATVs. "For example, we observed that children



Farzaneh Khorsandi, Ph.D. and Guilherme De Moura Araujo, Ph.D.

could not properly brake the ATVs when going downhill," Khorsandi said. "Also, most children failed at least one out of the 11 ATV-fit recommendations proposed by ATV safety advocacy agencies. In other words, children cannot properly reach some ATV controls while maintaining their balance and controlling the vehicle."

This is the first study to provide empirical strength and body measurement evidence that children are physically not capable of safe ATV operation, which could support efforts to modify or update current regulatory/advisory guidelines for ATV operations, as well as state and national policies. Further, youth health professionals could use the results to prevent ATV-related incidents on farms and ranches.

Surveillance data guide injury-prevention efforts

The National Farm Medicine Center regularly publishes injury surveillance data, enabling public health practitioners to do a better job of preventing agricultural-related injuries. Surveillance data can also guide development of new policies and strategies, or the improvement of existing ones.

Youth worker fatalities in agriculture exceed all other industries combined, according to the 2022 Childhood Agricultural Injuries Fact Sheet compiled by Bryan Weichelt, Ph.D., associate research scientist, and Rick Burke, M.P.H. Leading reported sources of fatalities involved transportation (47%), which includes tractors and all-terrain vehicles (ATVs), and contact with machinery (20 percent) such as being pinned between a skid steer's lift arms and frame. Youth under age 16 have 12 times the risk of ATV injuries (both fatal and non-fatal) compared to adults.

The Wisconsin Farm Related Fatalities report, based on data from 2019 and 2020, highlighted the persistent problems of deaths on public roadways, which accounted for 15 percent of the 68 total fatalities over those two years. The Wisconsin reports are made possible through a partnership between the National Farm Medicine Center, Marshfield Clinic Research Institute, the University of Wisconsin-Madison Division of Extension and UW's College of Agricultural and Life Sciences.

AgInjuryNews.org provides important data for Farm Medicine's surveillance work. The interactive online tool, built with publicly-available news reports, contains more than 4,000 cases. It is now being used by researchers across the country and has been featured in numerous peer-reviewed articles. Research coordinators Christopher Benny and Chris Wanat help keep AgInjuryNews updated with their data collection and coding.



Bryan Weichelt, Ph.D. and Kyle Koshalek



Rick Burk M.S.



Christopher Wanat

Six emerging issues projects funded

The Emerging Issues Program (EIP) of the National Children's Center supports emerging health and safety concerns related to children working on, living in or visiting agricultural environments. The program, led by Bryan Weichelt, Ph.D., strives for a rapid research response to new or unresolved problems.

One project has been funded for Fiscal Year 2023: "Assessing U.S. Media's Reaction to a Suggested Terminology Shift from 'Accident' to 'Incident' in News Reports of Childhood Agricultural Injury." Christopher Benny will survey journalists and then analyze their general response to the suggestion of changing the term "accident" to "incident" when describing agricultural injuries. Results will provide insight on the feasibility of a major initiative that influences a shift from "accident" to the preferred terminology of "incident" in U.S. news media reports on agricultural injury and fatality events.

In 2022, six projects were funded:

1. Investigating the work, education, and health experiences of hired Latinx child farmworkers in the era of COVID-19 by Taylor Arnold, M.A., (Ph.D. student)
2. Exploring the impact of public health emergencies and disasters on the children of agricultural workers in Puerto Rico by Marysel Pagan Santana, DrPH.
3. Together: A safer home on the farm by Katherine Brieger, M.A., R.D.
4. Environmental health issues among children living in Imperial County by Nicolas Lopez-Galvez, Ph.D., M.P.H., M.A.
5. Phenome-wide Association Study of Medical Comorbidities in Farm Children by Rick Burke
6. Assessing U.S. Media's Reaction to a Suggested Terminology Shift from "Accident" to "Incident" in News Reports of Childhood Agricultural Injury by Christopher Benny

To learn more about each of these projects and to see final reports as they are submitted, visit <https://marshfieldresearch.org/nccrahs/EIP/fundedprojects>.



Nicolas Lopez-Galvez, Ph.D.



Katherine Brieger, M.A., R.D.



Christopher Benny



Marysel Pagan Santana, DrPH



Taylor Arnold, M.A.



Rick Burke M.P.H.



Farm Medicine part of UMASH center grant

The Upper Midwest Agricultural Safety and Health Center (UMASH), a collaboration involving the National Farm Medicine Center, was one of 11 centers selected by the National Institute for Occupational Safety and Health (NIOSH) to receive funding for a five-year cycle beginning Oct. 1. The announcement marked the third consecutive cycle that UMASH has been successful in its competitive bid for funding. Included is Florence Becot's Ph.D. project, "Identifying individual and contextual determinants underpinning farmers' help-seeking behaviors and their role in shaping mental health outcomes," and Casper Bendixsen's Ph.D., "Rural firefighters delivering ag safety and health (RF-DASH)." In addition, Scott Heiberger and Melissa Ploeckelman will continue to support UMASH through their outreach initiatives and the Telling the Story Project.



Florence Becot, Ph.D.

Directory will help identify rural health disparities

In order to better understand the scope of rural health disparities research being conducted in Wisconsin, researchers at the National Farm Medicine Center, led by Kathrine Barnes, M.S., M.P.H., conducted a survey and collated projects into a state directory of rural research. The survey exposed potential shortfalls in rural research in Wisconsin, but the resulting directory will help connect those who are doing this important work. Farm Medicine's contribution is made possible through the Institute for Clinical and Translational Research (ICTR), which is a partnership between the University of Wisconsin and the Marshfield Clinic Health System. The mission of ICTR is to improve the health of all people in Wisconsin by increasing collaboration across the UW System and its partners to maximize resources available to discover, translate, and disseminate interventions.



Kathrine Barnes, M.S., M.P.H.

New projects feature Agricultural Youth Work Guidelines

The Agricultural Youth Work Guidelines, updated and debuted in 2017, are designed for parents and supervisors to determine the appropriateness of tasks for youth based on youth abilities. Matching youth with jobs based on their abilities can prevent injuries and fatalities. Two projects designed to encourage use of the guidelines, led by principal investigator Andrea Swenson, Ph.D., are in progress. The first project, supported by the National Children's Center for Rural and Agricultural Health and Safety, aims to understand common motivators and barriers for using the guidelines among farm owners and parents; Marsha Salzwedel, Ed.D. serves as a co-investigator for this project. The second project, supported



Cassandra Peltier at the Wisconsin 4-H Forum

through a private foundation, aims to understand the needs of Wisconsin educators and develop curriculum to support integrating guidelines into education activities.

Research Coordinator Christopher Benny interviewed key stakeholders from organizations who work with youth in rural environments across the United States. Interviews gathered perspectives and experiences related to youth agricultural work, feedback on guidelines, and recommendations for the future activities with the guidelines for farming populations. This information is being used to develop a survey instrument further investigate motivators and barriers.

To help inform the creation of curriculum, Cassandra Peltier, Health Educator Associate, consulted with agricultural instructors and 4-H leaders across Wisconsin to solicit specific feedback on needs and perceptions of integrating guidelines into instruction. "We have gotten such valuable feedback on the guidelines and curriculum needs that I think it is really going to propel us forward with making a successful curriculum that educators will want to use," Peltier said. "It's been great to see the general enthusiasm around making these curriculum resources available for ag health and safety."

These projects continue to work towards the common goal of increasing the accessibility and utility of the ag youth work guidelines in agricultural populations.



ASHCA Summit: Where industry, safety meet

The 2022 North American Agricultural Safety Summit, hosted by the Agricultural Safety and Health Council of America (ASHCA), was held March 28-30 in Las Vegas, Nev. Farm Medicine staff played major roles in planning and executing the Summit, and abstracts were published in the Journal of Agromedicine. In addition, ASHCA honored Jerry Minor, Pittsville Fire, with its Collaborating Leader Award. Chief Minor's commitment to injury prevention and risk mitigation has made him a stalwart Farm Medicine partner for four decades, and a key collaborator on numerous initiatives to improve working conditions in agriculture. Believing it is better to prevent an emergency than respond to one, Minor's efforts exemplify the ASHCA goals to develop "effective delivery systems for safety and health information to farmers/ranchers and their workers" and disseminate "effective national strategies to reduce disease, injuries and fatalities in agriculture." Congratulations, Jerry! The Summit received conference grant support from the National Institute for Occupational Safety and Health.

Remembering Dr. Gunderson

It was with heavy hearts that we learned of the passing of Paul Gunderson, Ph.D., former director of the National Farm Medicine Center (1992-96) and Marshfield Clinic Research Institute (1994-2000), died on Dec. 17 while clearing snow at his farm in Harvey, N.D. He was 82.

During his years in Marshfield, Paul led Farm Medicine to national prominence, beginning with its establishment as one of the first National Institute for Occupational Safety and Health (NIOSH) agricultural research centers. He helped broaden the scope of Farm Medicine's research to include not only farm-related injury and exposure, but also medical illnesses related to farm exposures, particularly in the area of cancer. "He was such an accomplished scientist and advocate for the health and safety of American farmers and the value of farm medicine research," said John Howard, director, NIOSH. "He will be greatly missed."



CASN Leadership Team takes lead in finding safety solutions

The creation of an online community and establishment of a leadership team – both intended to help members communicate and share information more effectively – highlighted activity of the Childhood Agricultural Safety Network (CASN), facilitated by the National Children's Center since 1999.

"I think the future of CASN is much brighter, thanks to this leadership team," said Marsha Salzwedel, Ed.D., National Children's Center project scientist and program manager for CASN. "Their diversity of ideas, skills and networking capabilities have already made an impact."

The six-person leadership team was drawn from a membership of nearly 200 organizations and individuals comprising the Childhood Agricultural Safety Network. They were introduced June 13 at the CASN annual in-person meeting in Fort Collins, Colo.

David Sullivan, director of programs, Ag Health and Safety Alliance, is excited about the team's potential to make a difference. "It's a skillful team, representing broad areas of agriculture from indigenous to research to boots-on-the-ground people," Sullivan said. "It's a great nucleus to help spread the word about childhood agricultural safety and health."

Other members of the leadership team include:

- Cheryl Beseler, associate professor, Central States Center for Agricultural Safety and Health, University of Nebraska Medical Center.
- Marsha Cheyney, evaluation and outreach coordinator, Great Plains Center for Agricultural Health, University of Iowa.
- Jana Davidson, program manager, Progressive Agriculture Foundation.
- Melanie Forti, Health and Safety Programs director and Children In the Fields Campaign director, Association of Farmworker Opportunity Programs.
- Whitney Pennington, outreach program coordinator, High Plains Intermountain Center for Agricultural Health and Safety, Colorado State University.

Team responsibilities include helping with the selection of topics and content for CASN campaigns, identifying potential collaborators, helping to lead strategic planning for the network and engaging members in the CASN Online Community. Anyone interested in child agricultural safety is welcome to create an account and join the online community at <https://www.childagsafety.org/feed>.



Members who attended the in-person CASN meeting in Fort Collins, CO, during the ISASH conference.



Barbara Lee, Ph.D.

National Children's Center director testifies before Congress

In perhaps the National Children's Center's deepest push into public policy, center director Barbara Lee, Ph.D., testified before Congress on Sept. 7 as one of three invited witnesses in support of the Children's Act for Responsible Employment and Farm Safety of 2022, or CARE Act. Key points of the act include raising the minimum hiring age from 12 years to 14 years (consistent with other industries) and pursuing updates to the Fair Labor Standards Act. The fully remote hearing, "Children at Risk: Examining Workplace Protections for Child Farmworkers," covered the current state of federal child labor laws and protections and policy proposals to improve them. It was conducted by the Workforce Protections Subcommittee of the House Committee on Education and Labor. The sub-committee invited Lee to provide perspective as an expert on health and safety issues facing child agricultural workers. Lee said changes in public policy can improve protections for youth working in agriculture, but that any changes should, "account for our nation's agricultural landscape because traditions, values and expectations differ from urban settings."

"Despite considerable progress in the past 30 years, far too many young people are still impacted by health conditions, injuries and death associated with agriculture," Lee said. A recording of the session is archived at <https://edlabor.house.gov/subcommittees/workforce-protections-subcommittee>.

Celebrating

In 2022, the National Children's Center celebrated 25 years since its establishment with NIOSH. The National Children's Center is the only NIOSH agricultural center that is...

2022: National Children's Center celebrates 25 years!

2020: National Children's Center funded by NIOSH for fifth consecutive cycle.



2017: Agricultural Youth Work Guidelines debuted – updated guidelines based on the North American Guidelines for Children's Agricultural Tasks.



2015: AgInjuryNews.org, an interactive online tool built with publicly-available child ag injury news reports, goes live.

2013: Cultivate Safety website launched to provide adults with evidence-based strategies on how to keep children safe while they work and play on farms. The website includes videos and easy-to-use information about child development and best-practice work guidelines.



2013: "Parent First, Farmer Second" media campaign wins National Agri-Marketing Association awards for radio, print ads.

2012: Published interactive Web guide, "Integrating Safety into Agritourism," based upon 2007 publication, "Agritourism Health and Safety Guidelines for Children."

2012: Published for Protection in Agriculture National A



g 25 Years

major funding from the National Institute for Occupational Safety and Health (NIOSH).
both national and focused solely on childhood agricultural safety and health.

1992: National Childhood Agricultural Injury Prevention Symposium convened by National Farm Medicine Center in Marshfield, WI. National Farm Medicine Center funded by Federal Maternal and Child Health Bureau as a Children's Safety Network Rural Center.



1997: National Children's Center for Rural and Agricultural Health and Safety formally established with five-year competitive grant from NIOSH.

1999: Released North American Guidelines for Children's Agricultural Tasks (NAGCAT) at national conference with radio celebrity, Orion Samuelson.



1999: Childhood Agricultural Safety Network (CASN) established by National Children's Center.

2001: Led the National Adolescent Farmworker Occupational Health and Safety Advisory Committee, which in 2001 published, "Migrant and Seasonal Hired Adolescent Farmworkers: A Plan to Improve Working Conditions."

2006: National public awareness campaign, "Keep Kids Away from Tractors" launched.



2008: "Safety Guidelines for Hired Adolescent Farm Workers (SaGHAF)" released.

"Blueprint
Protecting Children
Future: The 2012
Action Plan."

Sharing peer-reviewed research with the world

The safety and health resources made available by the National Farm Medicine Center and National Children's Center are built on research, which ensures their validity and quality. At the heart of research is the peer-review process.

Scientists and staff from both centers edited two special issues of peer-reviewed journals in 2022, and also authored many of the articles, providing scientific underpinning for better ways to protect people in agriculture.



The National Children's Center edited a special issue of Frontiers in Public Health, "Safeguarding Youth from Agricultural Injury and Illness: International Perspectives." "We anticipate 30 manuscripts, including commentaries or research from 11 different countries – all available online by the start of 2023," said Guest Editor Barbara Lee, Ph.D. Issue coordinator Christopher Benny, two international editors and several Children's Center scientists are assisting. Plans call for creation of an e-book featuring this unique collection of research findings, brief reports and international commentaries. For more information, visit: <https://www.frontiersin.org/research-topics/31701/safeguarding-youth-from-agricultural-injury-and-illness-international-experiences>.



The Journal of Agromedicine, edited by Farm Medicine since 2004, published, "The Future of Work in Agriculture," containing 19 articles to help agriculture prepare for the future of occupational safety and health across the workplace, workforce and the work itself.

Also in 2022, the Journal of Agromedicine posted its highest-ever Impact Factor, 1.992, making it the world's No. 1 source of peer-reviewed agricultural safety and health information. Only journals of high scholarly quality are scored with an Impact Factor, which reflects how frequently their articles are cited in other scientific publications. The journal receives philanthropic support from the Auction of Champions. The editorial core team consists of Editor-in-Chief Matt Keifer, M.D., M.P.H.; Senior Associate Editor Barbara Lee, Ph.D.; Editorial Specialist Marie Fleisner; and Managing Editor Scott Heiberger, M.S.



Most farm families worry about medical debt and threat to their farm business

A study by Farm Medicine Associate Scientist Florence Becot, Ph.D., and colleague Shoshanah Inwood, Ph.D., of Ohio State University, points to the importance of ensuring that farm families facing personal medical crises won't be left with long-term medical debt. Their analysis of more than 900 surveys of farm households from 10 states, published in the peer reviewed Agriculture and Human Values, found "a top worry for farm families is the impact a major illness or injury that leads to medical debt would have on the farm enterprise," Becot said.

Medical debt is an important example of micro, household-level worries. "While we don't often talk about these so-called 'little things' such as medical debts but also a barn fire, illness, divorce or a loss of an off-farm job, preferring instead to focus on major crises such as storms or economic crises, these little things can threaten the resilience of any farm at any time," Becot said.

While one in five (20%) surveyed farm households had a medical debt of at least \$1,000 in 2016, more than half (55%) were not confident that they could pay the cost of a major illness or injury without going into debt, despite more than 90 percent of farmers in this study having health insurance. Another important finding is connected to quality of health insurance. In addition to having health insurance coverage, what seems to matter as much is the level of deductibles and out-of-pocket expenses.

"We've had farmers tell us they wait until 65 and are on Medicare to go take care of long-standing problems," she said, which may affect their quality of life as well. We often hear that farmers are a "tough crowd" who don't want to go the doctor, Becot said, when really, health care is expensive and inaccessible for many people.

Said Inwood: "There has been a lot of discussions recently about the importance of agricultural programs and policies to support the resilience of farm families, yet this research indicates that one important way to bolster farm families and support their resilience is by ensuring access to affordable health insurance."

Story project collaboration expands

While statistics and numbers are important in identifying injury trends, personal stories are often more impactful when it comes to changing attitudes and improving safety/health behaviors.

The National Farm Medicine Center co-founded the Telling the Story Project in 2016 with three other Midwest-based agricultural safety and health centers, weaving injury-prevention messages into first-hand incident accounts. In 2022, the National Children's Center became a collaborator in the project by establishing its own Storytelling initiative. The Children's Center's first story, about Jaxon Boomsma, became one of the most-visited pages on its website.

"If you've never been to a 7-year-old's funeral ..." starts Jaxon's article.

Jaxon died in April 2017 in a tractor-related incident at a relative's farm in South Dakota.

What began as the Boomsma family's desire to tell their story to prevent other families from experiencing tragedy has become a full-blown farm safety movement built around, "Keeping his Smile Alive."

A key message in Jaxon's story is to keep kids off tractors and out of the worksite.



Jaxon Boomsma

"I know how hard it is to say no to a child, especially when it's something they love to do," said Troy Boomsma, Jaxon's father. "But we all have to learn to say 'no.'"

The addition of the National Children's Center to the Telling the Story Project is one of several highlights for the project heading into 2023. The project team is scheduled to conduct a workshop in June 2023 as part of the International Society for Agricultural Safety and Health (ISASH) annual conference after having conducted a similar workshop at ISASH 2022. In addition, a website makeover will make it easier to share stories and prevention tips with a wider audience.

Telling the Story Project collaborators include three centers funded by the National Institute for Occupational Safety and Health: the Upper Midwest Agricultural Safety and Health Center (University of Minnesota); the Central States Center for Agricultural Safety and Health (University of Nebraska Medical Center); and the National Children's Center for Rural and Agricultural Health and Safety (National Farm Medicine Center, Marshfield Clinic Research Institute).



Dr. Comi joins Farm Medicine

The National Farm Medicine Center welcomed Matt Comi, Ph.D., into a post-doctoral position funded by the Frank and Betty Koller Trusts. Comi completed his doctorate in rural sociology at the University of Kansas. His research examines the cultural content of foodways, especially as related to environment, technology, and now – human health. His project focuses on the impacts of the rapid mechanization/automation of the hops industry in Washington and Colorado. As a fellow with Farm Medicine, Comi is designing a project examining how automation and environmental change impact health outcomes for farm workers. His work is being supervised by Drs. Florence Becot and Casper Bendixsen.



Josie Rudolphi Ph.D.

Children's Center studies farm adolescent mental health

Farm families are the cornerstone to many rural communities. We value the life lessons and work ethic that are developed when adolescents are raised and work on farms. "We also recognize the farm can be a source of stress," said Josie Rudolphi, Ph.D., principal investigator on the National Children's Center's Farm Adolescent and Mental Health (FAAM) Study. "We are interested in learning how farm stress is experienced by adults and adolescents in the household and how individuals in the household respond to stress." If parents are feeling stress, does that stress impact the health, well-being and functioning of children? Early indications point to "yes." A total of 122 farm families completed an online survey. Data analysis is being conducted, and complete findings will be published in <https://doi.org/10.3389/fpubh.2023.1056487> *Frontiers in Public Health*. Rudolphi is an assistant professor and University Extension specialist for agricultural safety and health at the University of Illinois at Urbana-Champaign.

The Golden Auction

The Golden Auction presented by Miron Construction Co., Inc. raised funds for the National Farm Medicine Center at Marshfield Clinic Health System. On behalf of Marshfield Clinic Health System Foundation and Farm Medicine,

- The Golden Auction raised nearly \$250,000!!!
- In our 39th year of hosting AOC, we have now surpassed raising \$5 million for Farm Medicine!
- Market Animal Donations from local sales totaled \$94,649
- Fund-a-Need raised our largest total ever at \$58,900
- Silent Auction brought in \$23,618
- Live Auction brought in \$79,450
- Our Alaska raffle sold out totaling \$15,000

A huge thank you to Brad Guse, chairing his 7th Auction of Champions and never doubting us, always remaining positive and pouring his heart into all of it.

Thank you! Keep Life Golden.



Bonnie and Brad Guse

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@marshfieldclinic.org.

Auction of Champions Fund-a-Need: This year's Fund-a-Need will support an expanded Trauma Research initiative within Farm Center. Trauma research is a vital element in the growth of the health system to become a Level 1 Trauma Center. Farm Center aims to contribute to these efforts by paying particular attention to the rural nature of trauma in the health system patients, especially those injuries related to agricultural and rural environments. Trauma patients in agricultural and rural communities often have severe injuries and experience longer times in the field. Research towards improving these trauma patient outcomes is vital for healthier communities in rural Wisconsin.



Jerry Minor, Pittsville Fire Chief

Gwen D. Sebold Fellowship



Ben (Dad), Paula (Mom), Casper (award recipient), and Jill (wife) Bendixsen

Congratulations to National Farm Medicine Center Director Casper Bendixsen, Ph.D., who was selected as the 2022 Gwen D. Sebold Fellowship was selected for Outstanding Research recipient.

The Gwen D. Sebold Fellowship recognizes an outstanding medical researcher and supports their research in his or her chosen field. Since its beginning in 1988, the award has been presented by D. David "Dewey" Sebold in memory of his sister, Gwen. Gwen joined Marshfield Clinic as a medical stenographer in 1955 and passed in July 1974.



Casper Bendixsen Ph.D. and Dewey Sebold



Casper Bendixsen takes bids at The Golden Auction



Ben Lee bids on a package.



Barbara Lee, Casandra Peltier, Casper Bendixsen, Marsha Salzwedel, Scott Heiberger, Dixie Schroeder, Bryan Weichelt, Melissa Ploeckelman, Kyle Koshalek, Kathie Smith, Sarah Ruszkowski, Florence Becot

Safety demonstrations popular at Farm Technology Days

More than 45,000 people attended 2022 Wisconsin Farm Technology Days at Roehl Acres and Rustic Occasions in Clark County, July 12-14, with many visiting demonstration areas of the National Farm Medicine Center and the National Children's Center.

Farm Medicine partnered with Central Fire and EMS District, Pittsville Fire Department, Progressive Agriculture Safety Days, the Kentucky Department of Agriculture, local FFA chapters and others to highlight ways farmers can keep themselves and their families safer, said Outreach Specialist Melissa Ploeckelman, who served on the Wisconsin Farm Technology Days Executive Committee. The Farm Safety and Rescue Area featured live demonstrations of a tractor rollover and rescue, and a grain engulfment rescue. In addition, 49

farmers registered in the Wisconsin ROPS Rebate Program (www.ropsr4u.org), with one lucky farmer being awarded a free ROPS and installation. The ROPS program has received significant support from the Auction of Champions since its inception in 2013.

The National Children's Center collaborated with Play 'N Wisconsin within the Youth Area, where staff provided families with hands-on demonstrations of safe play ideas, agricultural youth work guidelines and general safety for rural homes. These demonstrations disseminated evidence-based practices developed in the past 25 years by the center. For more information on how to make your own Safe Play Area on the farm visit <https://cultivatesafety.org/play/>.



Scott Heiberger and Dale Dobson



Volunteers show how to save a victim from a tractor rollover



Marsha Salzwedel, Ed.D.



Farm Tech Day Grounds in Clark County

Ag Rescue Training attracts new departments

The sun shined, the smell of cows and silage filled the air, and everywhere you looked you saw firefighters, emergency medical technicians and first responders training to respond to low-frequency, high-risk incidents that could rattle this peaceful setting. The National Farm Medicine Center, Pittsville Fire Department and Life Link III collaborated to host the second Ag Rescue Training in a five-year series at Heiman's Holsteins and Heeg Farms, Inc., near Marshfield, Wis. Incidents happen every day across America, and local fire, EMS and first responder volunteers selflessly answer the call. However, when the incident occurs on a farm, the situation can be unlike



anything emergency responders have seen. The Ag Rescue Training shows volunteer responders what they might encounter and how they can best manage the situation for the victim and themselves.

Thirty-one departments and organizations participated in October. In addition, 18 individuals engaged in new "Train-the-Trainer" sessions enabling them to organize and conduct ag rescue trainings elsewhere. Planning is underway for the 2023 training. Visit www.agrescue.org to stay updated. If you volunteer with a rural rescue department, you cannot afford to miss this training.

Funded projects

National Farm Medicine Center:

- AgInjuryNews.org
- Agriculture Rescue Training (ART)
- Approaches to studying farmers' suicide
- Caregiving along the life course
- Dairy Microbiome (DOME)
- ~~Environmental influences on Child Health Outcomes (ECHO)~~
- Farmers' Mental Health and Intervention Models
- Geo-Mapping Antimicrobial Resistance in E. coli from Humans and Animals
- Health Insurance, Rural Economic Development and Agriculture
- Human Epidemiology and Response to SARS-COV-2 (HEROS)
- Journal of Agromedicine: Practice, Policy, and Research
- Novel determinants of farm worker's safety outcomes
- Pediatric All-terrain Vehicle Injuries in North Central Wisconsin, 2010 -2021
- Providers' Attitudes and Adoption of mHealth at Marshfield Clinic Health System
- Skin Cancer Screening
- Social Theories in the Agricultural Health and Safety Field
- 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)~~
- 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
- Emerging Issues Program
- Farm Adolescent and Mental Health
- Farm Kid Paradox: Anthropological Inquiry into the Benefits and Risks of Child-Livestock Interaction
- Incorporating Agricultural Youth Work Guideline into curriculum of Wisconsin agricultural educators
- Linking Childcare to Farm Children Safety
- ~~NCCRAHS~~ Evaluation Core
- ~~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 of Agricultural Safety

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. During 2022, Farm Medicine researchers published 23 peer-reviewed articles. <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 2022. National Institute for Occupational Safety and Health (CDC/NIOSH) provided NCCRAHS Award U540H009568; UMASH Award U540H010170; CS-CASH Award U540H010162. National Institute of Health provided WISC U19AI104317 and CREW UG3OD023282.

