



National Children's Center

for Rural and Agricultural Health and Safety

2022 Annual Report

October 2021 – September 2022

CDC/NIOSH Cooperative Agreement U54 OH009568-12



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

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2022 Highlights from the Director



This year marked the 25th Anniversary of the National Children's Center for Rural and Agricultural Health and Safety (NCCRAHS). Before NCCRAHS was established, there were relatively few resources and virtually no guidance on strategies to safeguard working and non-working children on farms. With continued funding from NIOSH, NCCRAHS has been able to provide continued national-level leadership, research, and outreach activities to enhance the health and safety of all children exposed to hazards associated with agricultural work and rural environments. This year we celebrated key accomplishments

and looked towards the future to meet the changing health and safety needs of youth in rural environments.

Highlights of this year include:

- Oral and written testimony on youth agricultural health and safety was provided to the U.S. House Education and Labor Workforce Protections Subcommittee. Testimony on rural childcare was also provided to the U.S. Committee on Agriculture, Nutrition, and Forestry. Written testimony was provided to Wisconsin Governor Evers requesting veto of WI Senate Bill 332.
- Our Center coordinated a special issue in *Frontiers in Public Health* on "Safeguarding Youth in Agriculture: International Experiences" with 30 peer-reviewed manuscripts. The editorial board included five NCCRAHS scientists joined by two international colleagues.
- Center personnel participated in collaborative initiatives with NIOSH leadership and across all 11 NIOSH Agricultural Centers of Excellence. Among these were the National Occupational Research Agenda (NORA) working group, and teleconferences with the Evaluation and Center Outreach (ECO) group.
- Four scientists served on NIOSH grant review committees.
- A symposium on agricultural youth injuries was presented at the NOIRS conference.
- A planning process for updating the 2012 National Action Plan for Childhood Agricultural Injury Prevention is underway.
- Scientists and staff have disseminated research findings and safety recommendations via publications, presentations, abstracts, posters, webinars, media interviews, and press releases.

The following report provides details on our fiscal year 2022 activities. We hope you enjoy reading about our accomplishments along with plans for the future. Your feedback is always welcome and your ongoing support of improving the well-being of children living and working in agricultural environments is absolutely appreciated.

Best regards,

A handwritten signature in blue ink that reads "Barbara Lee". The signature is written in a cursive, flowing style.

National Children's Center for Rural and Agricultural Health and Safety
2022 Annual Report

Section 1: Planning and Evaluation Core

Barbara Lee, PhD, Marshfield Clinic Research Institute

Overview

The goal of the National Children’s Center for Rural and Agricultural Health and Safety’s (NCCRAHS) Planning and Evaluation Core is to strategically guide overall activities of the Center as we address the mission to enhance the health and safety of all children exposed to hazards associated with agricultural work and rural environments. The Planning and Evaluation Core, including the Director, Associate Director, Evaluation Lead, Outreach Core Leader, Research Core Leader, and Senior Advisor, meets twice monthly to ensure the Center-wide and individual projects are effectively and efficiently planned, implemented, and evaluated. Focus during this year of the grant cycle included reviewing the 25 years of activities and progress the Center has achieved, reviewing current processes, establishing priorities for growth and development, promoting manuscript preparations, ensuring adequate budgeting and staffing of projects, and providing support for projects to achieve their goals.

Evaluation

Andrea Swenson, PhD, Marshfield Clinic Research Institute



The Evaluation team provides infrastructure, personnel, and support to effectively monitor and evaluate NCCRAHS to continually improve the quality of the Center. Individual project meetings were held at the beginning of year two to review logic models and evaluation metrics for each of projects as well as address any questions or concerns with reporting processes. Quarterly reports based on the metrics were

revised and submitted by project teams. A summary report was created for each quarter and shared with all staff. A dashboard of key evaluation metrics continues to be updated and shared during meetings to visualize progress towards key objectives. The Center-wide logic model was reviewed and refined during year two. The evaluation core continued monitoring and gathering evidence for the contribution analysis.

A series of meetings with the Planning and Evaluation Core to discuss current operations, processes, and gaps were held at the beginning of the year. Initial findings were presented to the Stakeholder Advisory Board in May 2022. Using feedback from the Stakeholder Advisory Board and Principal Investigators, five priorities to address during the next fiscal year were identified. Strategies to accomplish the five priorities, outputs, and evaluation metrics were also documented.



The five priorities NCCRAHS will be addressing in the next year include:

1. Add internal expertise in science and theory related to childhood agricultural safety and health research, interventions, and communications.
2. Formalize succession planning and leadership mentoring.
3. Expand and highlight diversity, equity, and inclusion within current projects, with an eye on future endeavors.
4. Establish and adhere to a process for updating the 2012 National Action Plan for Childhood Agricultural Injury Prevention.
5. Improve NCCRAHS' publication record.

Stakeholder Advisory Board (SAB)

The SAB is composed of eight advisors knowledgeable about agricultural health and safety, influential within agricultural communities, and with a vested interest in promoting childhood safety and well-being as well as mitigating childhood injuries and disease. The SAB provides input to NCCRAHS leadership regarding the Center-wide goals and objectives, especially the primary objectives to: 1) increase the number of individuals and organizations engaged in agricultural childhood injury prevention as well as increase their knowledge of the field and 2) ensure research is being translated effectively and disseminated to the wider field of professionals and to agricultural communities.



SAB Members: Front left to right: Jennifer Leonardo, Dee Jepsen, Athena Ramos, Suzanne Wright. Back Left to Right: David Schwebel, Brian Kuhl, Matthew Keifer, Joseph Grzywacz

The SAB convened virtually with Center leadership, PIs, and project staff twice during this fiscal year. A virtual meeting was held November 23, 2021. The Planning and

Evaluation Core and Principal Investigators (PIs) provided updates and solicited feedback from SAB members. A hybrid in-person/virtual meeting was held May 3-4, 2022. The agenda addressed progress on Center goals and individual research objectives, review of evaluation findings, planning process for the National Action Plan, and increasing impact. Advisors held an executive session, then reported back on their perspectives of Center progress and recommendations for addressing areas of weakness. The Evaluation Core conducted evaluations of the two SAB meetings. The evaluations included an assessment of meeting objectives, meeting engagement, and planning for future meetings.

SAB members include:

| Name | Affiliation |
|-----------------------------|---------------------------------------|
| Dee Jepsen, PhD, Chair | Ohio State University |
| Joseph Grzywacz, PhD | Florida State University |
| Matthew Keifer, MD, MPH | Emeritus NFMDC Director |
| Brian Kuhl | Progressive Agriculture Foundation |
| Jennifer Leonardo, PhD, MSW | Children’s Safety Network |
| Athena Ramos, PhD | University of Nebraska Medical Center |
| David Schwebel, PhD | University of Alabama at Birmingham |
| Suzanne Wright, MD | Marshfield Clinic Health System |

Diversity, Equity, and Inclusion Efforts

Based on internal and external feedback, the Center will be focusing attention on diversity, equity, and inclusion to ensure promotion of health equity for all children exposed to hazards associated with agricultural work and rural environments. Amy Liebman, MPA, MA, Chief Program Officer: Workers, Environment and Climate with the Migrant Clinicians Network, joined the Planning and Evaluation Core Team as an advisor to ensure the representation of migrant and seasonal worker families. Additional efforts to address health equity include leveraging the Emerging Issues Program to focus on underserved populations and emergent issues and inviting presentations focused on diversity, equity, and inclusion principles. As a priority for the next year, the Center will continue to assess current diversity, equity, and inclusion efforts, identifying gaps in knowledge areas, and engaging experts.

Emerging Issues Program

The emerging issues program (EIP), led by Bryan Weichelt and Amy Liebman, addresses new and unresolved environmental, policy, technology, and agricultural production issues affecting the well-being of children. An external call for emerging issue proposals received 24 letters of intent (LOIs). A committee of seven research scientists reviewed the LOIs and invited 11 to submit full applications. Ten full applications were critiqued. Based on committee and SAB member feedback, four proposals were funded during year two. The EIP administrative team also developed an internal process for reviewing expedited project plans, allowing for a more agile review

and response for low-budget proposals that could be completed within the fiscal year. Following is a description of the Year 2 EIP funded projects.

Investigating the Work, Education, and Health Experiences of Hired Latinx Child Farmworkers in the Era of COVID-19



Taylor J Arnold, MA, Project Manager, Wake Forest School of Medicine; Winston-Salem, NC & PhD Student at University of North Carolina Greensboro

Latinx individuals and families comprise a large proportion of the US farmworker population and have been disproportionately affected by the COVID-19 pandemic. Little is known about the specific ways in which the pandemic has impacted Latinx children who do farm work. The goal of this project is to delineate the emerging issues related to the work, education, and health experiences of the vulnerable hired Latinx child farmworker population in the era of COVID-19. By using a novel model based on the precarity and structural vulnerability of Latinx farmworkers during COVID-19, this project describes ways in which the pandemic has influenced the working characteristics and hours of Latinx child farmworkers, and the impact of these experiences and disruptions on their education and; delineates the ongoing changes to farm workplace organization, protocols, and work safety culture during the pandemic, specifically investigating how these shifting work and life changes are affecting the health and safety of Latinx child farmworkers. These goals were accomplished through semi-structured, in-depth interviews with key stakeholders and Latinx child farmworkers in North Carolina. Findings from this study will identify and describe challenges posed by the COVID-19 pandemic on Latinx child farmworkers, yield novel evidence for educators and policymakers, aid public health professionals in addressing current disparities and prepare for future disasters, and continue a long-term community based participatory research partnership.

Exploring the Impact of Public Health Emergencies and Disasters on the Children of Agricultural Workers in Puerto Rico



Marysel Pagen Santana, DrPH, Migrant Clinicians Network; San Juan, Puerto Rico

Agricultural workers are subject to various physical, environmental, and mental stressors throughout their work and have been disproportionately affected by the COVID-19 pandemic. The current climate crisis has significantly impacted agricultural workers in Puerto Rico (PR) by creating more hostile weather patterns and a greater frequency of natural disasters, which in-turn lead to health, food, and education disparities for the children of farm worker families. This project explores the health effects of public health emergencies on the children of agricultural workers and identify strategies, programs, and policies to address health impact of public health

emergencies on the health of agricultural workers' children. Based on the socio-ecological model, this project conducted interviews with multiple stakeholders through the Migrant Clinicians Network, including medical personnel, educators, parents, and other known influencers to assess the needs and experiences of farm families, their children, and their communities. The results from this pilot study will allow the researchers to prioritize the needs of the community and identify the appropriate funding to develop and adapt programs that will address the needs and improve the health outcomes of children of agricultural workers in PR.

Together: A Safer Home on the Farm



Katherine Brieger, MA, RD, CCE, Warwick Area Farmworker Organization; Goshen, NY

Warwick Area Farmworker Organization (WAFO) formerly (Warwick Area Migrant Committee) has been serving farmworkers and their families since 1959. WAFO developed and delivered a unique program, focused on community strengths, on Child Safety in Agricultural Settings for parents working on farms who live in Orange and Ulster County, New York State. The goal of this project was to develop an educational module focused on child safety in agricultural settings. The module focused on general safety in agricultural home settings; climate change safety for children and safety at home. The module was used to train Community Health Workers (CHWs), which allowed them to use it to train farmworker families in informal settings. The materials developed for this program consisted of low literacy materials in English and Spanish, with pictures of farmworkers. Materials were used in sessions with farmworker families and in agencies which serve farmworker families - reaching 1,000 individuals with this information. The program will increase knowledge of and preventative steps farmworker families can take to improve child safety in their homes.



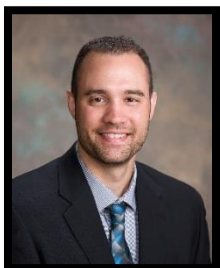
Environmental Health Issues among Children Living in Imperial County



Nicolas Lopez-Galvez, PhD, MPH, MA, San Diego State University; San Diego, CA

Imperial County has the highest concentration of Hispanic/Latino populations of all California and ranks last among all California counties for injury deaths, income inequality, unemployment, and children living in poverty. Children in Imperial go to the emergency room for asthma related conditions at a rate three times higher than the states' average rate and have higher overweight and obese rates than California overall. The goal of this pilot project was to determine the levels of pesticides that children living in this region might be exposed to and investigate any potential neurodevelopmental issue associated with this exposure. A mixed methods exploratory assessment study was used to characterize and quantify pesticide exposure levels using passive samplers (silicone wristbands) and the neurobehavioral and cognitive functioning of children cohabitating with farmworkers in Imperial County. The results from this study will serve to understand the patterns of child development in this population, and it could raise important questions regarding the human health impact of the pesticides usage in Imperial County. This study will develop grassroots understanding for further studies in the area.

Assessing U.S. Media's Reaction to a Suggested Terminology Shift from "Accident" to "Incident" in News Reports of Childhood Agricultural Injury



Christopher Benny, Marshfield Clinic Research Institute & Bryan Weichelt, PhD, Marshfield Clinic Research Institute

News reports draw attention to fatal and non-fatal injury events and have the potential to be useful educational tools. News reports may refer to injury events as "accidents" rather than "incidents", undercutting their preventability. To understand the use of "accident" and "incident" in journalists' reporting of childhood agricultural injuries and fatalities, this study: assesses the prevalence of the use of the word "accident" to describe childhood agricultural injuries in the news reports captured by AgInjuryNews.org, and how does that prevalence compare with reporting of adult (≥ 18 years old) injuries in news reports and; analyzes responses of media journalists to the suggestion of changing the term "accident" to "incident" when describing agricultural injuries. Findings from this study 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.

Section 2: Outreach Core



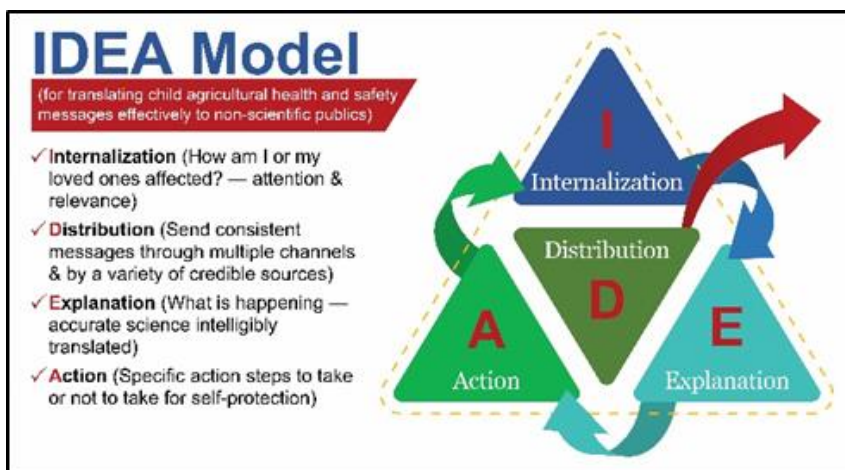
Marsha Salzwedel, EdD, Marshfield Clinic Research Institute

The aim of the NCCRAHS Outreach Core (NOC) is to mobilize child agricultural health and safety knowledge to affected populations and the organizations that work with them so that these stakeholders benefit through reduced child injuries and fatalities. NOC works to translate NCCRAHS child agricultural health and safety research findings into practice through development and dissemination of communication messages, educational resources,

guidelines, recommendations, and other tools, which can be used to enhance child safety in agriculture. NOC also engages with stakeholders to aid them in building and sustaining capacity in child agricultural safety and health.

Communications

NOC has fully implemented the IDEA Model in the development and dissemination of all messages, resources and materials, including culturally relevant resources developed for special populations with the guidance of cultural advisors. The team continues to meet with the NCCRAHS PIs each quarter to review progress, increasing the visibility of their projects (e.g., social media posts), keeping project websites and information current, and assisting with project needs such as recruitment efforts and development of recommendations. Outreach staff also facilitate communication and collaboration between projects.



Featured this year in NOC communications was the NCCRAHS 25th Anniversary. NOC worked with a marketing agency to create a 25th Anniversary logo commemorating the National Children’s Center’s 25 years (1997-2022). A timeline was developed (<https://www.marshfieldresearch.org/nccrahs/25years>), along with a conference poster template, PowerPoint templates, and giveaways such as pens, screen wipes, and magnetic note pads that featured the anniversary logo. The anniversary was highlighted in two media releases and featured at the ASHCA Summit, the ISASH Conference, and other events. NCCRAHS also hosted an online panel discussion in May featuring highlights and stories from the past 25 years.

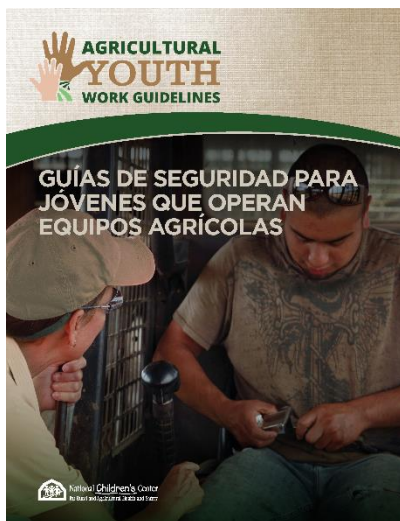
NOC increased their media list to 605 contacts and conducted or facilitated more than 50 interviews with influential agricultural media as well as NBC News, WGN Radio Chicago, and Pro-Publica, the first online news source to win a Pulitzer prize. The

interviews, along with a dozen press releases and two Nurture newsletters, resulted in hundreds of media mentions. NOC members conducted 16 interviews at the November, 2021 National Association of Farm Broadcasters conference and exhibited at the Agricultural Media Summit. Pilot feedback for the Legal Response Project, which examined media members' attitudes and practices regarding children and agriculture-related injuries and deaths, was collected at the Summit. Media monitoring identified mentions resulting from press releases and outreach efforts and child agricultural injury and fatality incidents, which were posted to the CASN online community.

NOC continues to post resources, campaigns, and updates on Facebook, Twitter, Instagram, and LinkedIn, eliciting strong engagement. The team posted more than 2600 times across the platforms, which have a combined 6,267 followers. The NCCRAHS YouTube channel gained an additional 216 subscribers. The largest draw continues to be the *Lifting Safety* video, which received an additional 56,460 views. Approximately 900 hours of content were watched throughout NCCRAHS channels in this period across 61,200 accrued views. The most significant addition to the channel was the Tools of the Trade series, linked to the companion website on Cultivate Safety.



Communications were also enhanced through website updates. The NCCRAHS website (marshfieldresearch.org/nccrahs) added new webpages for the Outreach Core, AYWG Curriculum project, and AYWG Motivators and Barriers projects, as well as adding videos, press releases, and other updates. New resources and a new Tools of the Trade webpage were added to the Cultivate Safety website (cultivatesafety.org). Design enhancements were made to the Integrating Safety into Agritourism website (safeagritourism.org) and collaboration with national and state agritourism associations on future updates for the website is ongoing.



NOC continues to develop and update NCCRAHS resources. French and Spanish versions of the AYWG booklets were finalized and are now available. Content updates to the hired youth work guidelines have been compiled and sent to the designer. The Creating Safe Play Areas booklet is also being updated and will be translated into Spanish. The 2022 Child Ag Injury Fact Sheet was developed and released, as was the NFMCC/NCCRAHS Year in Review.

NOC continues to participate in various events, with in-person participation (post-COVID) resuming for some activities. Highlights from some of these events include the National FFA Expo where staff interacted with about 1300 students and FFA advisors. At the Great Lakes Fruit

and Vegetable Expo, staff facilitated an interactive workshop for 35 participants. Staff represented NCCRAHS at the NAFDMA Agritourism Convention & Expo, which featured the Integrating Safety into Agritourism website in five different sessions (all facilitated by external presenters). Outcomes from a Child Farm Safety webinar hosted by Marshfield Clinic Health System Trauma group included an invitation to collaborate from the director of the Wisconsin EMS Association, requests for ATV/UTV safety materials from physicians, and a request for a child farm safety presentation for medical residents. Staff also facilitated a workshop at the International Workshop on Agritourism.

Staff continue to collaborate through a variety of board positions and memberships in external organizations, such as the International Society for Agricultural Health and Safety (ISASH), AgriSafe Board, SAY National Steering Committee, Child Safety Now Alliance, North Central Extension Regional Agenda (NCERA-197), Wisconsin Agricultural Tourism Association and others.



CASN Online Community. A six-person Leadership Team was formed to help identify, define and guide CASN activities, including engaging members in the online community. The CASN online community has grown to nearly 200 members and continues to add new members. Designed to enhance correspondence and collaboration, there has been a 43% increase in membership activity, and post frequency is up 160%

compared to the same time span in 2021, with 346 posts made in FY 2022. To further enhance communication, CASN conducted two meetings this year. A virtual meeting was held in December 2021 to review progress on the CASN online community and discuss future activities and meetings. The annual CASN in-person dinner meeting was held in conjunction with the ISASH conference in Fort Collins Colorado in June, with the new six-person Leadership Team facilitating.



“Whether you are riding to work or riding to play, ride to live by being safe” is the message of the new ATV/UTV safety campaign by CASN. ATV/UTV injury statistics, safety strategies, resources and stories are included in the trifold brochure. The ATV/UTV Campaign page has been refreshed and expanded to navigate users to

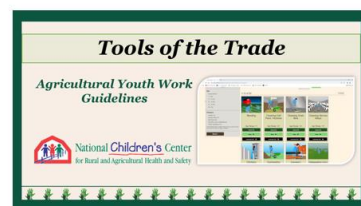
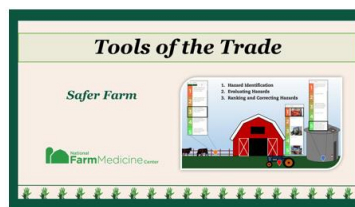
ATV/UTV safety resources, including the trifold brochure, poster, a six-part mini course on safe riding, videos, infographics, manuscripts, and more. A submission process and form was developed and disseminated to enable CASN members to submit materials for future additions to the campaign page.

Dissemination Activities

Storytelling: Jaxon Boomsma, a 7-year-old boy, died in a tractor runover on the family farm on Good Friday in 2017, near Yankton, S.D. NOC began working with the Boomsma family of Yankton, S.D., in early 2021 to tell this story of grief, the family’s decision to become safety advocates and the importance of saying “no” to extra riders. The first article in this new project went online in May, and the Storytelling web pages tallied more than 2,500 page views from July-September.

NOC created a Storytelling social media toolkit disseminated as part of Ag Literacy Week in March. NCCRAHS also partnered with Corteva Agriscience (Pioneer Seeds; the father’s employer) to print 500 stickers with a QR code pointing to the Storytelling web page. Corteva affixed the stickers to the Boomsma Family’s “Staying safe on the farm with Jaxon” books that Corteva distributes to its customers and assists with promotion of the project. NOC is also identifying additional incidents for future stories. The Storytelling process was included as part of a workshop at the ISASH conference in June 2022.

Learning Labs: Hands-on activities are at the heart of the learning labs to promote learning. Each learning lab features a safety tool that participants can engage with to learn more about safety. These “Tools of the Trade” or TOTs, were presented virtually at the 2021 ASHCA Summit using a collection of agricultural safety videos and related resources covering key topics. A webpage was created on Cultivate Safety to house these TOTs, and in lieu of live learning labs this year, a promotional campaign was developed. The TOTs were promoted via social media and at conferences and events, with additional promotion planned for next year. Planning has started on a live learning lab keynote session at the 2023 WI EMS Association Conference.



Child Agricultural Safety and Health (CASH) Workshop: A survey was conducted with participants from the virtual CASH workshop held in September 2021 to evaluate the content and utility of the workshop. Preliminary results indicate that workshop was well received, and participants felt the workshop materials would be useful in their work. In September 2022, a virtual workshop on Enhancing the Safety and Health of Youth Working in Ag was conducted. Co-hosted by AgriSafe and the Great Plains Center for Agricultural Health, 40 participants and staff attended the virtual workshop.

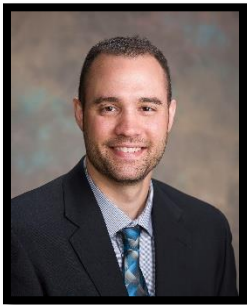
National Ag Safety Database (NASD)/Wikipedia: Work continued on the NASD website content related to NCCRAHS. Content updates were finalized, outdated resources were identified for deletion, and several new or missing resources are tagged to be added to the website. The Outreach staff are working with NASD to finalize a new submission process for NIOSH AFF Center resources. Submissions will continue once needs (e.g., key words, descriptions) are translated into the appropriate language. Work started on the Wikipedia project, and the first topic (tractors) was selected. NOC spent the final quarter of 2022 building up its Wiki account's history and experience by making minor revisions to assorted topics to establish account history on the site. An initial update to safety information was added to a tractor article, but was tagged as needing revision, which the team is currently addressing. NOC is also creating a "standard operating procedure" to guide future updates and anticipates sharing their experiences at future events and in the CASN online community.

AgInjuryNews.org: Data collection and dissemination projects continued throughout this project period. Launched in 2015 within the NCCRAHS, AgInjuryNews.org has a role in supporting or supplying data to several of the Center's research projects and emerging issues projects. Evolving into an international collaborative hub, the dataset has now yielded many reports and presentations, including more than 20 peer-reviewed manuscripts since 2018, published in 10 different journals, with 30 co-authors from 18 different organizations. These outputs are well-documented and described on the "Learn More" page of the website. Some of the program's accomplishments in 2022, include: the tracking of 4,560 unique visitors spanning 35,300 page views; a 28% increase in user traffic compared to same timeframe of 2021; 299 new user registrations (1,573 total registrations, 1,287 confirmed accounts, 1,047 with demographics entered); and 633 total new cases added in 2022, including backlogged or missed entries from prior years (24% more than 2021). The team continues to see a steady usage from external stakeholders, including a large group from the U.S. state-level Bureau of Labor Statistics offices. The AgInjuryNews team also produces and disseminates a quarterly e-newsletter, delivered through Constant Contact, to the ~1,500 registered users.



Section 3: Research Core

Assessing Impact of Traumatic Injury News



Bryan Weichelt, PhD, Marshfield Clinic Research Institute

Overview

This project assesses change in farm parents' and farm educators' knowledge, attitudes, and behavioral intentions (KAB) towards agricultural safety after exposing parents and educators to news reports of childhood agricultural injury. Following recruitment, respondents complete a pre-test survey to determine baseline levels of KAB towards agricultural injury. Following the survey, half will read childhood agricultural injury news reports, and half will read control articles on overall child health. Participants will then complete an assignment regarding the content of these reports once per week for 4 weeks. Following the intervention, participants will complete a post-test survey to measure changes in KAB. Additional follow-ups 6 and 12 months post participation will identify any lasting effects of the intervention.

Accomplishments to Date

Recruitment of the farm parent group was completed this year. Using paid Facebook advertisements, the post received 14,254 link clicks. Of the link clicks, 817 screener questionnaires were completed (a conversion rate of 5.7%). Invitations to the full study went out to 271 eligible participants, 265 of whom consented to the pre-test questionnaire. Of these, 164 completed the full study. This work was presented at the ISASH conference in Colorado, and staff were also invited to present this topic at UW-ICTR clinical research community of practice group in January 2023. Intervention and initial data collection from this group is also completed.

Planning for initial rounds of recruitment of agricultural educators was completed, including several discussions with an adviser with past high school agricultural education experience. The recruiting process for educators will begin at the national FFA convention in November.

Future Activities

Next steps for the project include the recruitment of 200 agricultural educators and beginning analyses of initial educator responses. Data collection for the farm parents' 1-year follow-up will also be completed in the coming year. Analyses and writing of parental response data is underway.



Capabilities of Youth Operating ATVs



Farzaneh Khorsandi, PhD, University of California, Davis

Overview

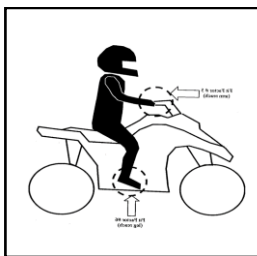
All-terrain vehicle (ATV) crashes are one of the leading causes of injury and death among youth in the agriculture industry. The long-term goal of this project is to provide empirical evidence of physical and ergonomic factors that may put youth at risk of injury or death while operating utility ATVs on farms. This study will provide critical evidence to encourage, facilitate, and guide recommendations and public policies regarding youth operating ATVs for agricultural work. These goals will be achieved through a) identifying potential strengths and anthropometric discrepancies between the requirements for operating utility ATVs and the physical characteristics and strength of youths of varying ages and height percentiles; b) updating existing guidelines and future resources regarding the required physical capabilities of youth to safely operate utility ATVs; and c) encourage, facilitate, and guide industry and organizational recommendations and public policies regarding youth operating ATVs for agricultural work by developing an "Action Plan for Guidelines on Youth Operating ATVs".

Accomplishments to Date

Dr. Khorsandi hosted the "Ag ATV Safety Symposium" June 28, 2022, during which 210 participants from 17 countries participated in the symposium. The symposium included four presentations regarding youth and ATV safety.

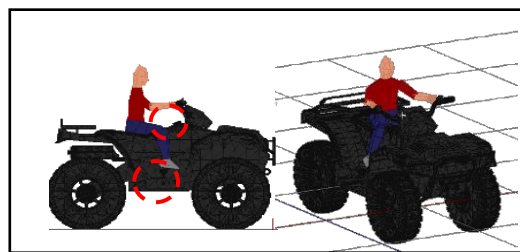


Results based on a literature review, analyses of forces required to operate controls, and ability to reach controls were accepted into publication (see output list).



(a)

The arm and foot reach evaluation for 6 years, old 50th percentile boy. (a) the guideline and



(b)

(b) the simulation in SAMMI CAD

Future Activities

The research team will focus on completing the simulations and data analysis for the "field of vision" section. This part of the research involves developing mock-ups of youths and ATVs

and four scenarios for riding ATVs. The simulations will be conducted for youths aged from 6-18 years old and three percentiles (5th, 50th, and 95th). The research team will develop practical recommendations and practical evaluation methods for ATV and youth fitting. The practical evaluation method includes developing a mobile application and webpage.

Farm Adolescent Mental Health



Josie Rudolphi, PhD, University of Illinois Urbana-Champaign

Overview

There is converging evidence agricultural work contributes to poor mental health; however, the mental health experience of youth on farms is unknown. The results from this study will inform targeted programming and policies that improve the mental health of farm youth. This project uses a multi-modality, innovative series of studies to examine the mental health of youth on farms, including identifying the prevalence of common mental health conditions and stressors among farm adolescents and their parents and consider the association between family members. This study will test a novel method to surveil farm youth mental health and provide insight into the shared experiences of farm families to identify vulnerable members to provide new knowledge about the mental health status of farm youth and inform the needs for continued surveillance and future intervention.

Accomplishments to Date

The objective of this study is to examine the shared stress and mental health experience of farm families by surveying at least one parent and adolescent in a farm family. In June – August 2022 (project year 1), 122 farm families completed the online surveys. Data analysis of these surveys occurred in year 2 after a rather arduous data cleaning process. A series of recommended checks were employed to identify and exclude bot-generated responses from analysis. A total of 2,463 potential farm-family survey submissions were recorded. After flagging fraudulent responses, the final sample consisted of 122 family participants.

The mean age of parents was 41.4 (SD = 4.4), and just over half of parents identified as men. The mean age of farm adolescents was 15.4 (SD=1.2), and 70.5% were male. Over half of the adolescents (53.8%) indicated they participate in farm/ranch work and work 14.0 (SD=10.3) hours a week during the school year and 19.7 (SD=16.2) hours during the non-school year. A majority work on a farm/ranch that is operated by their parents. Among farm adolescents, 93.3% self-rated their physical health as excellent or good, whereas 82.6% self-rated their mental health as excellent or good. The most common chronic health condition diagnoses were anxiety (18.9%), depression (6.6%), and asthma (4.1%). Results have been disseminated via various outlets. A manuscript was written at the end of year 2, and the research team hosted a webinar with AgriSafe during National Farm Safety and Health Week. The webinar was attended by over 70 participants, and a recording is available online.

Future Activities

In year 3, the project team is looking forward to adding a non-farm control group to compare levels of stress and prevalence of mental health conditions.

Adoption of Agricultural Youth Work Guidelines: Identifying Motivators and Barriers for Use

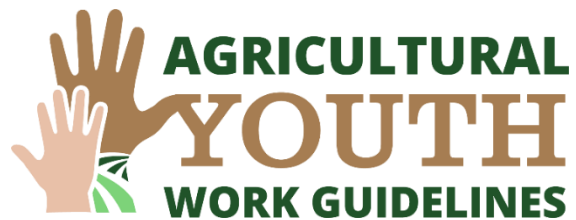


Andrea Swenson, PhD, Marshfield Clinic Research Institute

Overview

A prominent risk factor for youth injuries and fatalities is performing work that does not match their developmental capabilities. Agricultural Youth Work Guidelines (AYWG) are a set of voluntary, evidence-based decision-making tools for supervisors and parents to use to reduce the mismatch between youth developmental capabilities and

agricultural task requirements. Guided by principles of The Reasoned Action Approach, this study aims to understand how different motivators and barriers relate to the uptake of AYWG in agricultural populations to increase adoption of safety practices by supervisors and parents, thereby reducing agricultural-related injuries and fatalities in youth. This 4-year project began in fiscal year 2022.



Accomplishments to Date

The project started with establishing protocols, translating materials into Spanish, and completing IRB review. A meeting with project advisors was held virtually December 16, 2021 to solicit recommendations and feedback on protocols. Recruitment for organizations who have a vested interest in the environment surrounding adults who supervise youth at work and would be able to provide feedback on guidelines started in January 2022. A stratified sampling strategy, recruiting for new relationships, and dedicated Latinx-serving organizations, guides recruitment. The history and update of AYWG was shared during a presentation at the National Occupational Injury Research Symposium in May 2022. Over 30 interviews have been completed. Initial analysis has yielded valuable recommendations and feedback for the guidelines and next steps of the project.

Future Activities

Recruitment and interviews for feedback on AYWG continue. Analysis of interviews has started and will be completed to inform a survey for farm parents and supervisors. Results from the interviews will also be used to develop recommendations and be shared through manuscripts.

¿Pueden los jóvenes realizar esta tarea de manera segura?

- Los jóvenes deben ser capaces de hacer lo siguiente:
 - Agacharse para hacer una tarea de manera segura.
 - Estar de pie cuando el trabajo se termine.
 - Usar zapatos de sujeción.
 - Usar ropa adecuada para el clima.
 - Agacharse de manera segura, usando la técnica adecuada.
 - Agacharse de manera segura, usando la técnica adecuada.
 - Mantener una vía de comunicación constante.

Responsabilidades de los adultos

| Edad | Supervisión |
|---------------|---|
| 7-9 años | Supervisión constante (antes o después a 12 minutos) |
| 10-11 años | Supervisión intermitente (antes o después a 20 minutos) |
| 12 años o más | Supervisión periódica |

Peligros

- Lesiones por caídas
- Lesiones por golpes
- Lesiones por aplastamiento
- Lesiones por cortes
- Lesiones por quemaduras
- Lesiones por exposición a pesticidas
- Lesiones por exposición a maquinaria

Estrategias de protección

- Usar zapatos de sujeción
- Usar ropa adecuada para el clima
- Usar ropa adecuada para el clima
- Usar ropa adecuada para el clima
- Usar ropa adecuada para el clima

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Can youth do this job safely?

- Youth must be able to do all of the following to perform this job safely:
 - Read and understand the instructions.
 - Wear long pants and long sleeve shirt or t-shirt.
 - Use proper technique to remove the silk.
 - Move enough to consistently do what is expected.
 - Think through actions and consequences before acting.
 - Recognize a hazard, problem, solve, and respond appropriately.
 - Respond quickly to hazards.
 - Physical stamina to perform the job for 50 minutes.
 - Tall enough to reach tassels from a balanced standing position without overreaching.
 - Strong enough to repeatedly remove tassels without overreaching.
 - If using, follow safety recommendations for personal protectors.
 - Safety demonstrate the job at least 3 times.
 - Maintain safe work communication link.

Adult Responsibilities

| Edad | Supervisión |
|-----------|--|
| 10-13 yrs | Constant supervision progressing to intermittent |
| 14-15 yrs | Intermittent supervision progressing to periodic |
| 16+ yrs | Periodic supervision |

Hazards

- Tripping
- Repetitive motion
- Chemical
- Sharp objects & tools
- Noise
- Heat
- Sunburn

Protective Strategies

- Nonslip shoes
- Gloves
- Eye protection
- Hearing protection (if needed)
- Sunscreen
- Hydration

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Farm Kid Paradox



Casper Bendixsen, PhD, Marshfield Clinic Research Institute

Overview

Though raising children on farms can improve work ethic, enhance problem-solving skills, and strengthen immune systems, farming is one of the most hazardous industries in the United States, with about 33 children seriously injured on farms and ranches daily. Referred to as the “Farm Kid Paradox,” researchers have explored these risks and benefits separately, creating a gap between farm parents and safety training/information. In this project, researchers at Marshfield and Kansas State University are working with farm parents and safety professionals to bridge this gap and develop messaging that includes benefits of farm life. The team will inquire into the three communities (dairy, beef, and safety professionals) regarding risks and benefits around common livestock activities children perform.

Accomplishments to Date

The Farm Kid Paradox study has recruited the majority of beef and dairy parents and safety professionals. A manuscript on *Child-Livestock Interactions and Safety* was submitted based on initial findings from in-depth interviews and free listing activities with beef parents. Unique themes emerged from the interviews based on the questions of what it is like to raise kids and livestock at the same time, as well as what do parents have to say about how to perform an activity safely. One finding that emerged is that few safety professionals consider themselves expert in child-livestock interactions. As a result, the research team is now working with a spectrum of “safety professionals”: experts/researchers with little to no experience with livestock, professional safety experts/researchers with experience with livestock, and local animal-handling instructors (4-H, FFA, and youth beef/dairy quality assurance instructors.) An additional finding is that beef and dairy parents have similar motivations to involve children with livestock. There is a desire to cultivate learning opportunities, raising kids to become certain kinds of people. For many parents, benefits of having children involved with livestock outweigh the risks, with having some exposure to risk viewed as a benefit.



Future Activities

A pile sort and ranking tool is currently in development. Data analysis on dairy interviews/free-listing activities is nearly ready to begin, along with subsequent manuscript development.

Linking Childcare to Farm Safety



Florence Becot, PhD, Marshfield Clinic Research Institute
Shoshanah Inwood, PhD, The Ohio State University

Overview

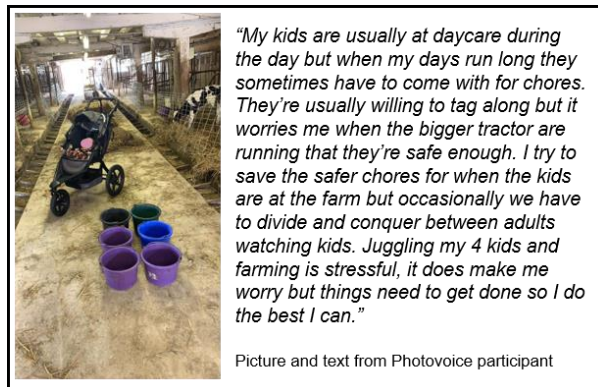
One of the most effective strategies to prevent incidents among non-working farm children is through the use of childcare. Yet while evidence dating back to the 1980s identifies childcare as a challenge, current farm safety research and outreach seldom consider how farm parents' lived-realities with childcare may intersect with their ability to use it and how their decisions intersect with farm safety. Through an environmental scan of farm programs and resources, interviews with key informants, focus groups and photovoice activities, and a representative survey of farm parents, this project will lead to an understanding of the factors shaping farm parents' childcare decisions.

Accomplishments to Date

The assessment of the coverage of children and childcare topics in farm programs and resources through the analysis of 92 documents and 36 key informant interviews was completed. A key finding was the tension between an awareness of challenges associated with navigating the children, farm work, and keeping them safe, but little integration of children/childcare topics in programming. Findings, potential explanations, and implications were disseminated through a research brief through the [Perdue Institute for Family Business](#) and a journal article in [Frontiers in Public Health](#).

To understand lived realities with childcare arrangements and safety strategies, focus groups with 67 women raising children on farms and two rounds of photovoice with 33 women participating in at least one round were completed. Preliminary findings indicate that childcare bricolage is a common strategy to ensure adequate care of children.

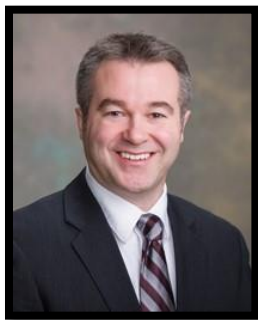
Participants talked about their strategies to “make it” all work (the children, farm business, and off-farm job), whereas the organization of their day is largely driven by children's needs, childcare options, and goals for the family over those of the business. Keeping the children safe permeates decisions around where the children are, with whom, and the farm work that can be done.



Future Activities

Analysis of the focus groups and photovoice activity data will continue. A survey to compare and contrast childcare arrangements and farm safety strategies across farm families will also be deployed.

Surveillance of Medically Attended Injuries



Jeff VanWormer, PhD, Marshfield Clinic Research Institute

Overview

There is no deadlier work for children and adolescents in the United States than farming, yet little is known about recent trends in agricultural risks because there is no comprehensive surveillance system of agricultural injuries. The purpose of this project is to establish a surveillance system of medically attended agricultural injuries among children and adolescents who reside on farms in north-central Wisconsin. Multi-year epidemiologic trends in medically attended agricultural injuries, as well as population subgroups at highest risk for agricultural injury, will be estimated.

Accomplishments to Date

The study cohort has been assembled, including linkages between farm residence and Marshfield Clinic Health System patient records. Medical records have been extracted to identify (and chart validate) agricultural injuries. The study cohort has also been expanded to include non-farm children and adolescents. Preliminary analyses of 2020 injuries were presented at the 2022 NOIRS conference. In addition, the most recent 5-year injury trends analyses are completed, including comparisons to the non-farm group as outlined in Figure 1. Finally, the study cohort was used in a separate summer internship project comparing COVID-19 vaccination coverage between farm vs. non-farm children and adolescents. This resulted in another manuscript currently under review at *Vaccine*.

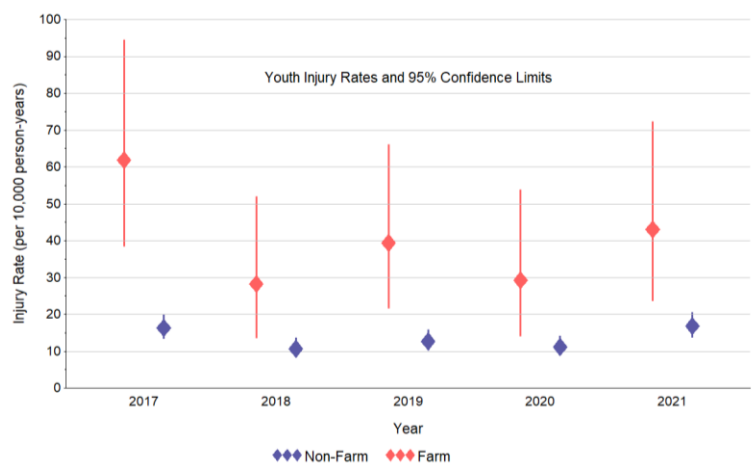


Figure 1. Estimated annual incidence rate of medically-attended agricultural injuries in north-central Wisconsin children and adolescents who did and did not live on a farm in 2017-2021.

Future Activities

The project team just gained approval from the State's data governance board to link the Wisconsin Trauma Care Registry and Wisconsin Ambulance Runs Data to our study cohort. A data use agreement is under legal review and, once approved, linkage, validation and analyses of 2022 injury data will begin. This will include the expanded injury data sources from the State's trauma registry and ambulance runs. As cohort data continue to accrue, the team plans to compare injury trends between key subgroups (e.g., gender, age, insurance status).

Legal Response to Childhood Agricultural Injuries and Fatalities

Barbara Lee, PhD, National Children’s Center, Director

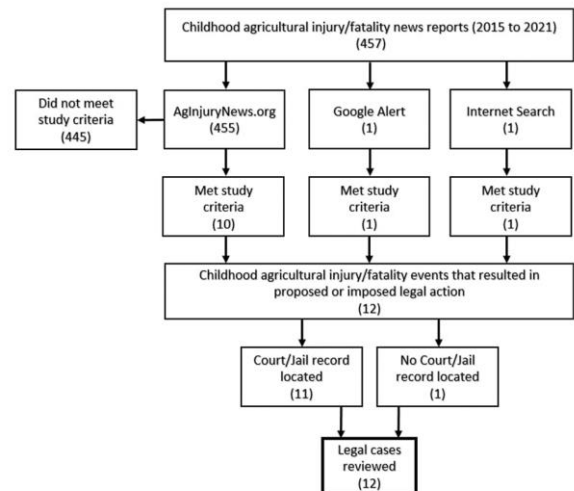


Overview

The objective of this study is to map legal cases where a parent/adult was subjected to legal consequences related to the death or serious injury of a child (under 18 years), whether working or not, in a farm setting. Data were collected and analyzed by the project team (Barbara Lee, Dorianne Beyer, Christopher Benny, and Madeline Krolczyk). The project’s primary audience includes law enforcement agents, child protective service personnel, district attorneys, child advocacy groups, and others. The project’s ultimate goal is to enhance the culture of safety for children by increasing awareness in agricultural communities about the criminal implications of child endangerment on farms.

Accomplishments to Date

This novel project used an explanatory sequential mixed methods study design. Quantitative data collection from public sources yielded 12 legal (criminal) cases that met study criteria from 2015 to 2021 in the U.S. Qualitative data from key informant interviews yielded perspectives on the legal response to child endangerment on farms from district attorneys, law professors, department of labor representatives, child welfare personnel, and child death review experts. The difficulty in locating cases that met study criteria suggests that legal actions imposed on culpable adults are relatively rare in contrast to the significant number of preventable childhood agricultural injuries and deaths reported in news articles. The team met via zoom every 2 weeks and convened a 2-day in-person meeting to review all cases and interview notes. Based on findings, the team drafted recommendations for action. The study methodology was published in the *Frontiers in Public Health* special issue on ‘Safeguarding Youth from Agricultural Injury and Illness: International Experiences’. Several off-shoot projects have been proposed, including efforts to change reporters’ terminology from “accident” to “incident.”



Future Activities

In the coming months, the team will prepare and publish a manuscript on overall findings and recommendations as well as a law review article. An unexpected, fruitful outcome is a new relationship with the National Center for Fatality Review and Prevention (NCFRP). The project team will work with NCFRP to create training materials related to childhood agricultural injuries and fatalities for use by Child Death Review teams and fatality investigators.

Selected Outputs (Oct 2020 – September 2022)

Publications

1. Khorsandi F, De Moura Araujo G, Fathallah F. A systematic review of youth and all-terrain vehicles safety in agriculture [published online ahead of print, 2022 Dec 20]. *Journal of Agromedicine*. 2022;1-23. doi:10.1080/1059924X.2022.2155747
2. De Moura Araujo G, Khorsandi Kouhanestani F, Fathallah F. Forces required to operate controls on agricultural all-terrain vehicles: Implications for youth [published online ahead of print, 2022 Dec 15]. *Ergonomics*. 2022;1-15. doi:10.1080/00140139.2022.2144953
3. Salzwedel M. Labor shortage poses safety challenges for growing agritourism industry. *Journal of Agromedicine*. 2022. doi:10.1080/1059924X.2022.2148035
4. Benny DP, Beyer D, Krolczyk M, Lee BC. Legal responses to child endangerment on farms: Research methods. *Frontiers in Public Health*. 2022. doi:10.3389/fpubh.2022.1015600
5. VanWormer JJ, Berg RL, Burke RR, Barnes KL, Weichelt BP. Regional surveillance of medically-attended farm-related injuries in children and adolescents. *Frontiers in Public Health*. 2022. doi:10.3389/fpubh.2022.1031618
6. Becot F, Inwood S, Rissing A. Childcare for farm families: A key strategy to keep children safe yet largely absent from farm programming. *Frontiers in Public Health*. 2022. doi:10.3389/fpubh.2022.1043774
7. Weichelt BP, Gorucu S, Burke RR, Salzwedel MA, Murphy DJ, Lee BC. Agricultural youth injuries: An updated review of cases from U.S. news media reports, 2016-2021. *Frontiers in Public Health*. 2022. doi:10.3389/fpubh.2022.1045858
8. Pagán-Santana M, Liebman AK, López-Correa AY. Looking at the gaps and program needs to address the impact on children of agricultural workers in Puerto Rico during and after public health emergencies. *Frontiers in Public Health*. 2022. doi:10.3389/fpubh.2022.1046701
9. Schofield K, Ramos A, Weichelt B, Bent B. Realities of workers' compensation coverage for agricultural workers: Before, during, and into the future of the COVID-19 Pandemic. *Journal of Agromedicine*. 2022. doi:10.1080/1059924X.2022.2147624
10. Scott E, Weichelt B, Lincoln J. The future of U.S. agricultural injury surveillance needs collaboration. *Journal of Agromedicine*. 2022. doi:10.1080/1059924X.2022.2148032
11. Schwebel DC, Hasan R, Weichelt, BP. Could wearables protect youth and children on farms? *Journal of Agromedicine*. 2022. doi:10.1080/1059924X.2022.2140735
12. Gorucu S, Weichelt B, Burke RR. Injuries and fatalities related to skid steers: 2015-2020. *Safety*. 2022;8:56. doi:10.3390/safety8030056
13. De Moura Araujo G, Khorsandi Kouhanestani F, Fathallah FA. Ability of youth operators to reach agricultural all-terrain vehicles controls. *Journal of Safety Research*. 2022. doi:10.1016/j.jsr.2022.11.010
14. Becot F. Children, work, and safety on the farm during COVID-19. A harder juggling act. *Journal of Agromedicine*. 2022;27(3), 315-238. doi:10.1080/1059924X.2022.2068716
15. Rohlman DS, Campo S, TePoel M. Protecting young agricultural workers: The development of an online supervisor training. *Journal of Agromedicine*. 2022. 27:4, 359-367. doi:10.1080/1059924X.2021.1979155
16. Weichelt B, Scott E, Burke R, Shutske J, Gorucu S, Sanderson W, Madsen M, Redmond E, Murphy DJ, Rautiainen R. What about the rest of them? Fatal injuries related to production agriculture not captured by the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI). *Journal of Agromedicine*. 2021:1-6. doi:10.1080/1059924X.2021.1956663

17. Burke R, Pilz M, Redmond E, Gorucu S, Weichelt B. Stakeholders' consumption of agricultural injury reports from news media: A six-year analysis of website usage and visitor analytics. *Safety*. 2021;7(2):48. doi:10.3390/safety7020048
18. Becot F, Bendixsen C, Barnes J, Rudolphi J. Broadening our understanding of farm children's risk exposure by considering their parents' farming background. *International Journal of Environmental Research and Public Health*. 2021;18(10):5218. doi:10.3390/ijerph18105218
19. Becot F. Pushing beyond boundaries as a pre-tenure rural sociologist who is not from around here. *Agriculture and Human Values*. 2021;38(3):615. doi:10.1007/s10460-021-10209-x.
20. Nour MM, Field WE, Ni J-Q, Cheng Y. Farm-related injuries and fatalities involving children, youth, and young workers during manure storage, handling, and transport. *Journal of Agromedicine*. 2021;26(3):323. doi:10.1080/1059924X.2020.1795034
21. Weichelt B, Burke R, Redmond E, Shutske J. Farm suicides in Wisconsin, 2017–2018: Preliminary findings and a call for future research. *Safety*. 2021;7(3):51. doi:10.3390/safety7030051
22. Gorucu S, Weichelt B, Diehl D, Galindo S. An overview of agricultural injuries in Florida from 2015 to 2019. *Journal of Agricultural Safety and Health*. 2021;27(3):135. doi:10.13031/jash.14533
23. Gorucu S, Weichelt B. Injuries involving skid steers: What can we learn? *2021 ASABE Annual International Virtual Meeting 2100657*. 2021. doi:10.13031/aim202100657
24. Burke RR, Weichelt BP, Namkoong K. Facebook ads manager as a recruitment tool for a health and safety survey of farm mothers: A pilot study. *JMIR Formative Research*. 2021;5(4):e19022. doi:10.2196/19022

Workshops

1. Salzwedel M. Risk management in agritourism: Working together to keep visitors safe. International Workshop on Agrotourism. Aug 29–Sept 1 2022. Burlington, VT.
2. Ploeckelman M, Heiberger S, Yoder A, Duysen E, Rautianinen R, Schossow M, Charlier D, Leonard S. Telling a story to save a life. International Society for Agricultural Safety and Health Conference. June 11–15 2022. Fort Collins, CO.
3. Becot F. Navigating children and work on and off-the farm: A discussion about what could make things easier. Midwest Organic & Sustainable Education Service Annual Conference. February 25 2022. La Crosse, WI.
4. Child Agricultural Safety and Health Workshop. Sept 14, 21, 28 2021. Online.

Policy Testimony

1. Lee B. Examining Workplace Protections for Child Farmworkers. Testimony provided to US Congress subcommittee on Workforce Protections. Sept 7 2022. Online.
2. Inwood S. Rural Quality of Life: Challenges and Opportunities for the Rural Care Economy. Testimony provided to the US Committee on Agriculture, Nutrition, and Forestry. March 22 2022. Washington, DC.
3. Lee B. Written testimony to Wisconsin Governor Evers requesting a veto of Wisconsin Senate Bill 332, which would weaken child labor protections for workers ages 14- and 15- years old in Wisconsin.
4. Inwood, S. and Becot, F. Essential workers & essential services: The role childcare and health insurance play in building prosperous and vibrant agricultural and rural communities. Research briefing for Kelliann Blazek (Special Assistant to the President

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- for Agricultural and Rural Policy), Tricia Kovacs (Senior Policy Advisor for Agriculture at The White House), Alexander Cox (Associate Director for Economic Mobility, Domestic Policy Council at The White House), Grace Landrieu (Domestic Policy Council, Director of Labor and Workers at The White House), Catherine Oakar (Special Assistant to the President for Community, Public Health, and Disparities), and Will McIntee (Special Assistant to the President for Community, Public Health, and Disparities). Dec 14 2021.
5. Inwood, S. and Becot, F. Essential workers & essential services: The role childcare and health insurance play in building prosperous and vibrant agricultural and rural communities. Research briefing for Mikayla Bodey, Professional Staff for the U.S. Senate Committee on Agriculture, Nutrition, and Forestry. Dec 12 2021.
 6. Inwood, S. and Becot, F. Essential workers & essential services: The role childcare and health insurance play in building prosperous and vibrant agricultural and rural communities. Research briefing for the office of U.S. Senator Tina Smith (Minnesota). Oct 26 2021.

Presentations

1. Alicea G. Disparities in COVID-19 vaccine coverage in Wisconsin farm children and adolescents. Summer Research Internship Program Research Symposium. August 10 2022. Online.
2. Inwood S. Food systems, food security, food supply chain. Invited panelist for the 2022 North Central Region Mini Land Grant conference. July 11 2022.
3. Becot F, Inwood S. Improving supports to agriculture by integrating the social and economic needs of farm households. 2022 European Rural Sociological Society Conference Satellite Event. June 20-24 2022. Bern, Switzerland.
4. Burke R, Weichert B, Namkoong K, Ploeckelman M, and Heiberger S. Utilizing and monitoring Facebook.com advertisements to recruit a farming population for an online research study: Lessons learned. International Society for Agricultural Safety and Health Conference. June 11–15 2022. Fort Collins, CO.
5. Lee B, Salzwedel M. Preventing child ag injuries – A 30 year-perspective. International Society for Agricultural Safety and Health Conference. June 11–15 2022. Fort Collins, CO.
6. Ploeckelman M, Charlier D, Edlund C, Irvine K, Heiberger S, Wickman A. Get your science shared by building a media toolkit. International Society for Agricultural Safety and Health Conference. June 11–15 2022. Fort Collins, CO.
7. Salzwedel M, Pilz M, Wanat C, Ploeckelman M, Heiberger S. Tools from the trade sessions: From in-person to online. International Society for Agricultural Safety and Health Conference. June 11–15 2022. Fort Collins, CO.
8. Salzwedel M. Child/youth farm safety. MCHS Residents' Noon Luncheon Talk. May 23 2022. Marshfield, WI.
9. Becot F. Emergent needs and next steps. Invited panelist for the virtual convening Sustainable Livelihoods and Behavioral Health: Strategies and Partnerships to Address Farm Stress and Suicide. US Department of Agriculture. May 18 2022. Online.
10. Becot F, Inwood S, Rissing A. Children and childcare: Ubiquitous on family farms yet largely absent from farm programming. Association for the Study of Food and Society and Agriculture, Food, and Human Values Society Joint Conference. May 18-21 2022. Athens, GA.

11. Lee B. 25 Years of progress and persistent challenges in childhood agricultural safety. 2022 National Occupational Injury Research Symposium. May 10-12 2022. Online.
12. Swenson A, Salzwedel M, Peltier C, Lee B. Agricultural youth work guidelines. 2022 National Occupational Injury Research Symposium. May 10-12 2022. Online.
13. VanWormer J. Surveillance of medically attended agricultural injuries in farm children. 2022 National Occupational Injury Research Symposium. May 10-12 2022. Online.
14. Inwood S, Becot F. Essential Workers & Essential Services: The role childcare and health insurance play in building prosperous and vibrant agricultural and rural communities. Ohio Rural Health Association Young Professional Group. May 2 2022. Online.
15. Lee B. 25 years of child ag injury prevention. Agricultural Safety & Health Council of America Safety Summit. March 28 2022. Las Vegas, NV.
16. Becot F. Parenting and farming: Wellness to policy. Invited panelist. Women, Food and Agriculture Network. March 22 2022. Online.
17. Ploeckleman M. Welcome to Jeopardy: Rural and agricultural edition. 2022 FFA Farm Forum. Feb 18 2022. Wisconsin Rapids, WI.
18. Becot F. Linking childcare to farm safety research project: A multi-pronged approach to participatory engagement. Invited panelist: Partnerships to Strengthen Rural Health Equity Research in Wisconsin. University of Wisconsin Institute for Clinical and Translational Research. Dec 1 2021. Online.
19. Rissing A, Becot F, Inwood S. Reproducing our food system: Expert perspectives, gendered labor, and the makings of on-farm childhood. Invited by the Margaret Sloss Center for Women and Gender Equity. Iowa State University. Nov 12 2021. Online.
20. Bendixsen CG. "Farm Kid Paradox: Anthropological Inquiry into Benefits and Risks of Child-Livestock Interaction," as a part of the keynote session regarding vulnerable population in agriculture for the Midwest Rural Agricultural Safety and Health Conference (MRSAH) Conference. 2021. Nov 9 2021. Online.
21. De Moura Araujo G, Khorsandi F, Kabakibo S, Kreylos O. Can youth reach agricultural all-terrain vehicle controls? American Society of Agricultural and Biological Engineers Annual International Virtual Meeting. July 12-16 2021. Online.
22. Becot F, Bendixsen C, Barnes K, Rudolphi J. Broadening our understanding of farm children's risk exposure by considering their parents' farming background. International Society for Agricultural Safety and Health Conference. June 21–24 2021. Online.
23. Charlier D, Schossow M, Ploeckelman M. Collaborative campaigns: Understanding impact. International Society for Agricultural Safety and Health Conference. June 21–24 2021. Online.
24. Becot F, Inwood S, Contzen S, Shortall S, Tanaka K. International perspectives on the integration of the farm household and operation in agricultural programming. Roundtable organized for the Annual Joint Conference of the Association for the Study of Food and Society; Agriculture, Food, and Human Values Society; Canadian Association for Food Studies; the Society for the Anthropology of Food and Nutrition. June 9-15 2021. Online.
25. Salzwedel M. What went wrong and how do we stop it from happening again? 2021 North Central Regional Trauma Advisory Council (NCRATC) Trauma Conference. Apr 22 2021. Online.
26. Kilanowski J, Salzwedel M, Jepsen D. Workshop in agricultural safety resources – keeping children safe. National Conference on Pediatric Health Care. March 24 2021. Online.

27. Becot F. Taking care of children while working on the farm: Lessons learned from COVID-19. Agricultural Safety & Health Council of America Safety Summit. March 22–24 2021. Online.
28. De Moura Araujo G, Khorsandi F. Are youths capable of riding agricultural all-terrain vehicles safely? Agricultural Safety & Health Council of America Safety Summit. March 22–24 2021. Online.
29. Ploeckelman M, Heiberger S, Salzwedel M. Marking safety the norm in a digital world. Agricultural Safety & Health Council of America Safety Summit. March 22–23 2021. Online.
30. Salzwedel M, Sauer M. Development and use of topic-based agricultural youth work guideline booklets. Agricultural Safety & Health Council of America Safety Summit. March 22–24 2021. Online.
31. Salzwedel M, Goldberg S. Safe portrayal of the ag industry & how to spot harmful messaging. Canadian Agricultural Safety Association (CASA) 2020 Annual Conference. Nov 19 2020. Online.
32. Becot F. Taking care of farm children during COVID-19 and implications on children's exposure to farm risk. Midwest Rural Agricultural Safety and Health Conference. Nov 17 2020. Online.
33. Salzwedel M. Farm safety and ag communications. Farmsafe Conference. Nov 13 2020. Online.
34. Salzwedel M. Working in agriculture: Ensuring workers are equipped to work safely. Farmsafe Conference. Nov 13 2020. Online.

Webinars

1. Salzwedel M, Rose-Davison K, Rohlman D. Enhancing the Safety and Health of Youth Working in Ag. Sept 28 2022.
2. Salzwedel M, Everhart S, et al. Promoting, Educating and Advocating for the Agricultural Tourism Association. NAFDMA Webinar series. Webinar. August 24 2022.
3. Salzwedel M. Understanding Act 269 WI Limited Liability Law. WI Agritourism Association Webinar. June 1 2022.
4. Lee B, Salzwedel M, Adams M, Murphy D, Davidson J. Celebrating 25 Years with the National Children's Center for Rural and Agricultural Health and Safety. May 19 2022.
5. Mazur J, Jepsen D, Schwebel D, Pate M, Salzwedel M. High Plains Intermountain Center for Agricultural Health and Safety Webinar and Panel Discussion. May 6 2021.
6. Rademaker A, Salzwedel M. Farm safety for children and youth: Risks and rewards. Children's Safety Network. March 4 2021.
7. Salzwedel M, Davidson J, Rohlman D. Youth farm safety. University of Minnesota Extension and North Dakota State University Extension Farm Safety Webinars. Feb 8 2021.

Research Posters

1. Benny C, Swenson A, Salzwedel M, Saucedo J, Lee B. Adoption of AYWG: Identifying motivators and barriers for use. International Society for Agricultural Safety and Health Conference. June 12-16 2022. Fort Collins, CO.
2. Lee B. 25 years of child ag injury prevention. Agricultural Safety & Health Council of America Safety Summit. March 28 2022. Las Vegas, NV.
3. Salzwedel M. Digital networking roundtable. Agricultural Safety & Health Council of America Safety Summit. March 28 2022. Las Vegas, NV.

4. Salzwedel M, Heiberger S, Ploeckelman M, Pilz M, Swenson R. Using the IDEA Model to enhance communication. Agricultural Safety & Health Council of America Safety Summit. March 28 2022. Las Vegas, NV.
5. De Moura Araujo F, Khorsandi F. Are youths' physical capabilities enough to operate utility all-terrain vehicles? International Society for Agricultural Safety and Health Conference. June 21–24 2021. Online.
6. Pilz M, Salzwedel M. Amplifying community member engagement in a virtually connected world. International Society for Agricultural Safety and Health Conference. June 21–24 2021. Online.
7. Sauer M, Salzwedel M. Tools of the trade sessions: Lessons learned. International Society for Agricultural Safety and Health Conference. June 21–24 2021. Online.
8. Ramos A, Greer A, Salzwedel M, Grzywacz JG. Recommendations for efficient rollout of COVID-19 vaccine in the agricultural sector. Agricultural Safety & Health Council of America Safety Summit. March 22–24 2021. Online.
9. Sauer M, Salzwedel M. Interactive learning labs: Lessons learned. Agricultural Safety & Health Council of America Safety Summit. March 22–24 2021. Online.

Press Releases

1. 2022 US Childhood Agricultural Injuries Fact Sheet released. June 29 2022
2. Family tells their story to prevent future farm tragedies. May 25 2022
3. Childhood agricultural safety in America, through the eyes of a national center: webinar May 19. May 11 2022
4. National Child Agricultural Safety Center turns 25. April 6 2022
5. New online community links child farm safety advocates. Sept 23 2021
6. Grants up to \$25,000 available to address emerging issues in childhood agricultural health. Sept 9 2021
7. Women new to farming may falsely believe their farms safer—study. Sept 2 2021
8. National datasets fall short in capturing agricultural production deaths. Sept 1 2021
9. Child injury prevention workshop set for Tuesdays in September. Aug 4 2021
10. Assigning farm work to youth: Dos and don'ts. May 14 2021
11. New resources help youth work more safely in agriculture. Apr 30 2021
12. New resources help youth work more safely in agriculture. Jan 26 2021
13. NIOSH pledges \$6 million for child agricultural injury prevention. Oct 27 2020
14. Harvest time on the highways. Oct 13 2020
15. Free training for supervisors aims to keep young agricultural workers safe. Sept 30 2020



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

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