

In Pursuit of a 2020 Vision

Evaluation Findings of the National Initiative for Childhood Agricultural Injury Prevention

December 21st, 2018

Prepared for:

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

By:

Andrea D. Raygor & Sara M. Lindberg



University of Wisconsin
Population Health Institute
SCHOOL OF MEDICINE AND PUBLIC HEALTH

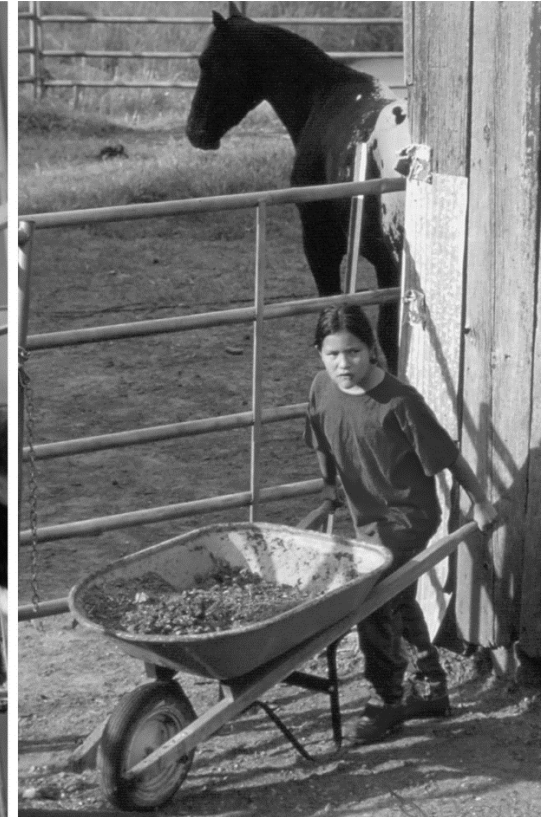


Table of Contents

Table of Contents	i
Acknowledgements	ii
Suggested Citation	ii
Executive Summary.....	iii
National Perspectives on the Field of Childhood Agricultural Injury Prevention.....	1
Project Goal & Objectives	1
Historical Context and Evolution in Childhood Agricultural Injury Prevention.....	2
Methodology	3
Sampling, Recruitment, and Data Collection	3
Interview Protocol.....	3
Data Analysis	3
Findings from External Key Informants: Organizational Participation in Childhood Agricultural Injury Prevention.....	6
Findings from External Key Informants: Organizational Expertise and Capacity for Childhood Agricultural Injury Prevention.....	8

Findings from External Key Informants: Barriers and Motivators Affecting Childhood Agricultural Injury Prevention	8
Findings from External Key Informants: Future Partnerships to Consider	13
NCCRAHS Staff Perspectives on the Field of Childhood Agricultural Injury Prevention	14
Background	14
Project Objective	14
Methodology	15
Sampling, Recruitment, and Data Collection	15
Interview Protocol.....	15
Data Analysis.....	15
Findings from NCCRAHS Staff: Current and Future Partnerships	18
Findings from NCCRAHS Staff: Barriers and Opportunities in Childhood Agricultural Injury Prevention	20
Recommendations	23
References	26

List of Acronyms

AHEC: Area Health Education Centers
ASHCA: Agricultural Safety and Health Council of America
CAIP: Child agricultural injury prevention
CASN: Childhood Agricultural Safety Network
DOL: Department of Labor
EMS: Emergency Medical Services
FFA: National FFA Organization
FS4JK: Farm Safety 4 Just Kids
IOM: Institute of Medicine
ISASH: International Society for Agricultural Health and Safety
MCHB: Maternal and Child Health Bureau
MCOHS: Midwest Center for Occupational Health and Safety
NAGCAT: North American Guidelines for Children's Ag Tasks
NCAE: National Council of Agricultural Employers
NCCRAHS: National Children's Center for Rural and Agricultural Health and Safety (Also referred to as the "National Children's Center" and "Marshfield")
NGO: Non-governmental Organization
NEC: Northeast Center (New York Center for Agricultural Medicine and Health)
NIH: National Institute for Health
NIOSH: National Institute for Occupational Safety and Health
PAF: Progressive Agriculture Foundation

SAY: Safety in Agriculture for Youth
SEM: Socio-ecological Model
UW: University of Wisconsin-Madison

Acknowledgements

We thank members of the NCCRAHS scientific advisory board for their input in refining priority evaluation questions and methodology for this project. We thank NCCRAHS leadership and staff for nominating and then supporting recruitment of key informants. We thank the interviewees for volunteering their time and expertise to support this work. Finally, the project was supported with funding from grant U54-OH009568 from the National Institute of Occupational Safety and Health (NIOSH). The findings do not necessarily represent the official views of the funder.

Suggested Citation

Raygor AD, Lindberg SM. *In Pursuit of a 2020 Vision: Evaluation Findings of the National Initiative for Childhood Agricultural Injury Prevention*. Madison, WI: University of Wisconsin Population Health Institute; 2018.

Executive Summary

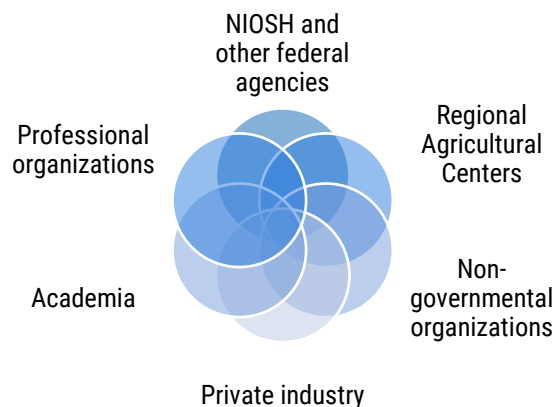
Purpose

This evaluation was conducted to assess the status of the National Initiative for Childhood Agricultural Injury Prevention with the goal of generating and disseminating recommendations for future leadership of this initiative.

Method

The UW Evaluation Core for the National Children’s Center for Rural and Agricultural Health and Safety (NCCRAHS) conducted 31 interviews with nationally known external key informants with valued knowledge and expertise in agricultural health and safety.

External key informants represent:



Because external key informants commonly identified the National Children’s Center as a leader in childhood agricultural injury prevention, an additional ten interviews were conducted with NCCRAHS staff to incorporate their past, present, and future perspectives on NCCRAHS activities, capacity, and leadership.

Key Findings from External Key Informants



On a national level, the National Children’s Center for Rural and Agricultural Health and Safety is recognized as the leader in childhood agricultural injury prevention.

Public policy is seen as important to childhood agricultural injury prevention but is difficult to navigate given opposition from some within the agricultural community. Moving forward requires rigorous, policy-relevant research.



Many national agricultural health and safety organizations have expertise in childhood agricultural injury prevention but can only function in a supportive capacity due to limited funding, time, and human resources.

Strategic partnerships are seen as the primary driver that will facilitate future work on childhood agricultural injury prevention initiatives.



Key Findings from Internal NCCRAHS Staff Members

Internal NCCRAHS staff identified the National Children’s Center (and the Progressive Agriculture Foundation) as leaders in the field of childhood agricultural injury prevention.

Staff identified five specific areas that strengthen NCCRAHS leadership capacity: 1. **Dissemination and knowledge mobilization**; 2. **Outreach and communication**; 3. **Collaboration and partnerships**; 4. **Research**; and 5. **Passion, commitment, and support**.

Staff also identified two areas in which capacity is limited or hindered: 1. **Succession Planning and staffing**; and 2. **Tracking disseminated materials**.

NCCRAHS staff identified six main challenges for childhood agricultural injury prevention initiatives now and in the future:



Limited funding



Limited new and timely surveillance data



Succession planning and limited staff diversity



Traditional farming culture and attitudes



Feasibility of policy-relevant solutions



Reaching end-users

Partnerships are vital to the continuation of childhood agricultural injury prevention initiatives. Partners that help disseminate NCCRAHS research and resources and partners who care about the overall wellbeing of children in agricultural settings are crucial. Partners/sectors recognized as valuable to NCCRAHS: **NGO’s** specializing in agriculture and /or public health; **Advisory panels and steering committees**; **Agribusiness**; **Media**; and **10 Regional Agriculture Centers**.

Recommendations

In response to information gathered about the current state of childhood agricultural injury prevention, we recommend three areas of focus for future childhood agricultural injury prevention initiatives: **Strengthening research**; **Focusing on impact**; and **Strengthening partnerships**.

Specific strategies within each focus area are provided for three sequential time periods, to establish benchmarks for success and ensure feasibility of initial, continual, and long-term progress.

Next year: Initial recommendations for continual improvement of the Children’s Center.

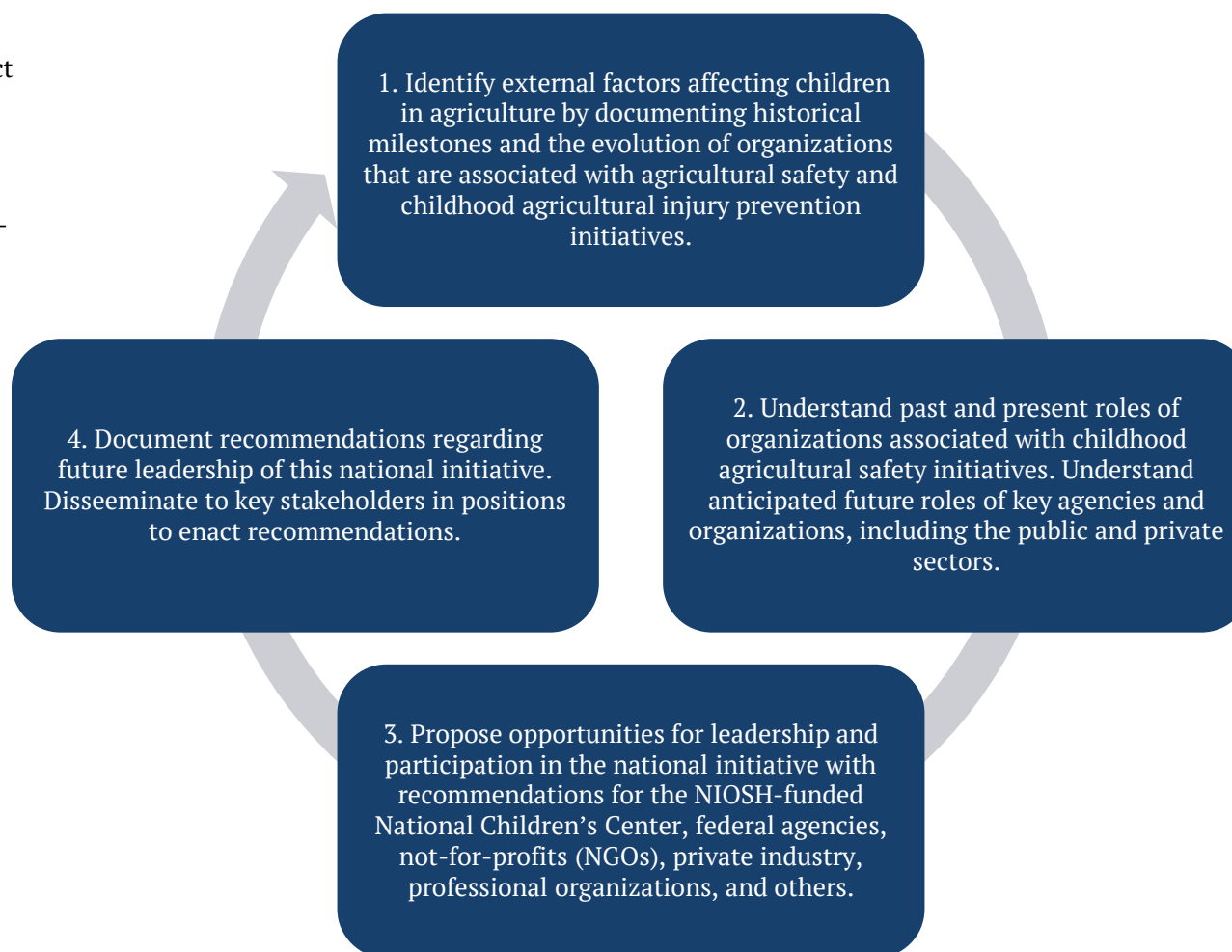
Next five years: Recommendations to align and strengthen 5-year goals for the Children’s Center and other key partners in the field of child agricultural injury prevention.

Beyond 2020: Long-term vision for the field of childhood agricultural injury prevention, such as policy reform and systems change that will take significant time to produce.

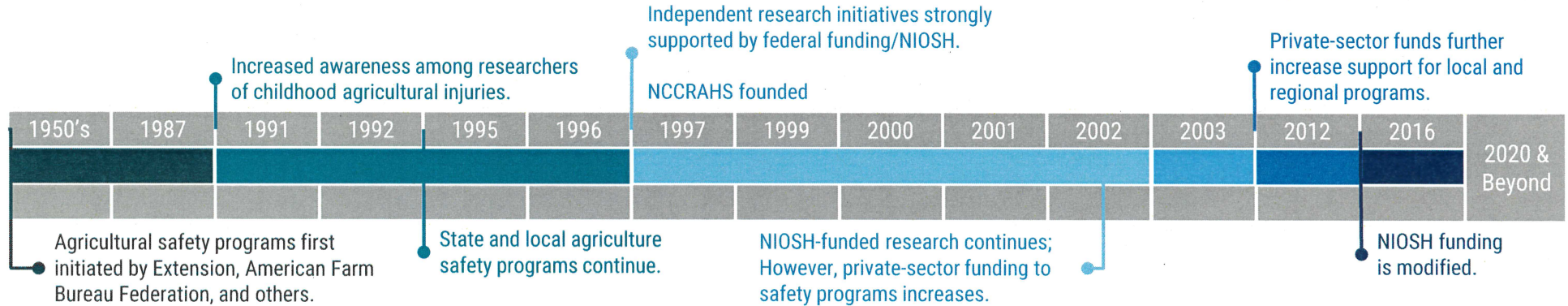
National Perspectives on the Field of Childhood Agricultural Injury Prevention

Project Goal & Objectives

The overarching goals of this project were to assess the status of the National Initiative for Childhood Agricultural Injury Prevention, including but not limited to NIOSH-funded efforts, then generate and disseminate recommendations for future leadership of this initiative. This project was guided by four specific evaluation objectives:



Historical Context and Evolution in Childhood Agricultural Injury Prevention



1987
Farm Safety 4 Just Kids (FS4JK) founded.

We Kill Too Many Farm Kids report published.¹

1991
Surgeon General's conference on agricultural safety and health raises researchers' awareness of childhood agricultural injuries.

1992
Childhood Agricultural Injury Prevention Symposium leads to the publication of *Childhood Agricultural Injury Prevention: Issues and Interventions from Multiple Perspectives*.²

1995
Progressive Agriculture Foundation (PAF) founded.

FS4JK expands into nationwide chapters.

Child and Adolescent Rural Injury Control National Conference.

1996
National Committee for Childhood Agricultural Injury Prevention releases first *National Action Plan*, with support from 80 national organizations and businesses.³

1997
NIOSH-led National Initiative on Childhood Agricultural Injury Prevention begins:

- Child Ag Injury Surveillance (CAIS) launched.
- Federal Agency Task Force established.

1999
North American Guidelines for Children's Agricultural Tasks (NAGCAT) released.⁴

CAIS finds that more than 50% of child agricultural injuries are non-work related.

Safe Play on Farms Guidelines is released.⁵

Childhood Agricultural Safety Network (CASN) is established.

2000
NIOSH funds committee on migrant farmworker youth which leads to the publication of *Migrant and Seasonal Hired Adolescent Farmworkers: A Plan to Improve Working Conditions*.⁶

2001
*Childhood Agricultural Injury Prevention: Progress Report and Updated National Action Plan from the 2001 Summit*⁷ is published.

2002
Some USDA funded programs continue.

Private sector increases funding to FS4JK, PAF, and numerous local and regional programs.

2003
USDA-funded committee releases *National Agenda for Action: National Land Grant Research and Extension Agenda for Agricultural Safety and Health*.⁸

2012
*Blueprint for Protecting Children in Agriculture: The 2012 National Action Plan*⁹ is published.

White House withdraws proposed update to Child Labor in Ag Rules.

- USDA (NIFA) funds Safety in Agriculture for Youth (SAY) in response to withdrawn rules.

2016
NIOSH modifies funding for initiatives:

- Continues to fund NCCRAHS.
- Ceases childhood agricultural injury surveillance.
- Limited funding for independent research.

Few state Cooperative Extension programs remain.

2020 & Beyond
2020 Vision Project launched fall 2017. The NCCRAHS Evaluation Core proposes recommendations for future childhood agricultural injury prevention initiatives.

Methodology

Sampling, Recruitment, and Data Collection

NCCRAHS leadership nominated 48 potential key informants with varied knowledge, experience, and expertise related to the field of childhood agricultural health and safety. Interviewees were asked to nominate additional key informants; all but two nominations converged with the existing pool of potential key informants.

Twenty-nine of the 48 nominated key informants agreed to participate.

Participants represent NIOSH and other federal agencies, regional agricultural centers, NGOs, private industry, academia, and professional organizations.

Several participants suggested other key informants to interview, garnering an additional two interviews, for a total of 31 (65% response rate).

Interviews were conducted between November 2017 and January 2018.

Interviews lasted an average of 30 minutes with a range of 10-45 minutes.

NCCRAHS leadership sent an introductory email request to each potential key informant to explain the goal of the project, request their participation, and introduce the evaluators who would be conducting interviews. The UW Evaluation Core then contacted each potential key informant to confirm their willingness to participate. A list of interview topics was provided in advance, so that interviewees could prepare if desired.

Interview Protocol

The UW Evaluation Core collaborated with NCCRAHS leadership to develop a semi-structured interview protocol. The topics below provide examples of the types of questions asked.

Who do you recognize as leaders in childhood agricultural injury prevention in the US?

From your perspective, what role does policy play in protecting children in agricultural settings?

What are your/your organization's main activities related to child agricultural injury prevention?

Do you/your organization focus on any specific populations?

Does anyone in your organization have expertise in childhood agricultural injury prevention?

What do you think your organization's role will be in the next 5 years related to child agricultural injury prevention?

Data Analysis

Audio recordings of each interview were transcribed verbatim; then quality checks were conducted to detect and correct errors.

Evaluators used a conventional qualitative approach to content analysis (codes derived during analysis). Transcripts were analyzed iteratively to ensure completeness and resolve any discrepancies in coding due to emergent themes.

Findings from External Key Informants: National Perspectives on Responsibility, Policy, and Leadership



Parents, guardians, farm owners, and agricultural operators are primarily responsible for preventing injuries among children in agricultural settings.

External key informants also suggested that childhood agricultural injury prevention should be a collective responsibility of individual, interpersonal, organizational, community-level, and policy-relevant solutions like the social-ecological model (SEM) adapted for agriculture¹⁰.

The Socio-Ecological Model for Agriculture

First introduced in the 1970's, SEM depicts multiple dimensions and complex human interactions that influence behavior. SEM is used by many organizations, such as the Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), and the National Children's Center.

Policy: Federal/state law, workers compensation

Institution: Agribusiness, organizations

Community: Schools, churches, media, FFA

Interpersonal: Relatives, peers, health care providers

Adult: Parents, guardians, employers

Child: 0-18 years old on farm



External key informants suggested additional organizations in the agricultural community that share responsibility in preventing childhood agricultural injuries:

1. ASHCA
2. American Farm Bureau Federation
3. Agribusiness and for-profit industries
4. Equipment manufacturers
5. Extension services
6. Government and policy makers
7. Healthcare providers
8. National Farmers Union
9. Supervisors and employers of youth



Public policy-relevant solutions are important but are difficult to navigate and often face opposition from the agricultural community.

Most external key informants explained that policy is twofold: difficult to regulate and gets pushback from the agricultural community, especially on small and/or family agricultural operations. While several external key informants feel that policy-relevant solutions are a high priority, they also recognize this effort has major challenges.

Alternatively, several external key informants said that regulation is not effective, has minimal impact, or does not play a large enough role in protecting children.

Unfortunately, [policy] plays less [of a role] than I believe it should... I'm not advocating that children never work in agriculture, but they must be monitored very closely and must be given jobs where their safety is assured.

-External Key informant from a non-profit organization



Internal policy depends on how organizations receive and distribute dollars.

Eleven external key informants discussed the role of organizational policies in protecting children in agricultural settings. Most said the role of organizational policy comes down to how institutions receive and allocate dollars towards programs for child safety, which is dependent on their specific organizational purpose and focus, as well as priorities of funding entities (e.g. Congress).



External key informants recognize the National Children's Center as the leader in childhood agricultural injury prevention.

The Children's Center was overwhelmingly identified as the leader in childhood agricultural injury prevention. External key informants also identified collegiate academic institutions, primarily Penn State University and others specifically tied to the Safety in Agriculture for Youth (SAY) project. Both the Progressive Agriculture Foundation and Farm Safety 4 Just Kids (FS4JK) (now dissolved) were also commonly recognized as leaders.

Findings from External Key Informants: Organizational Participation in Childhood Agricultural Injury Prevention



Overall, national and regional agricultural organizations and groups are participating in a wide variety of activities in support of childhood agricultural injury prevention.

External key informants were asked to describe the main activities of their organization as it specifically relates to childhood agricultural injury prevention. Their activities varied widely, including developing agricultural programs; trainings and interventions; conducting research and data collection and analysis; sitting on, or working with, committees and advisory boards; working on policy-relevant initiatives; and engaging with special populations.

Developing programs and training opportunities.

Progressive Agricultural Foundation Safety Days.

Engagement with 4-H, FFA, and schools.

Grant programs that offer funding for agricultural safety training.

Vehicle, machinery, and farm equipment training and certification.

Development of training tools, curriculum, and injury prevention resources for Extension educators, high school teachers, parents, agricultural teachers, and agribusinesses.

Public health resources, including access to medical care, mental health resources, obesity and diabetes prevention, respiratory health, and infectious diseases.

We do tractor safety training [certification] for 14 and 15-year-olds through Extension... That certification goes back around to policy because there are regulations in the Department of Labor that [say] any student that wants to operate a tractor (for someone other than their parents) needs to have this certification.

-Key informant from one of 10 Regional Agricultural Centers

Providing support and advice.

Contributing funds and content for projects like the SAY project, PAF Safety Days, and AgrAbility.

Offering input on the guidelines for funding of the Children's Safety Network.

Providing safety information to decision-makers about production farming within individual enterprises.

Working with special populations.

Disabled farmers through AgrAbility.
Migrant and/or Latino workers.
Production farmers (crops and/or livestock).
4-H, FFA, and schools.
Amish and Anabaptist farmers.
Beginning farmers and ranchers.
Women farmers.
Employers or supervisors of young workers.

Participating in public speaking events

Poster presentations.
Conference presentations.
Guest lectures about agricultural health and safety.

Conducting research and using child agricultural injury data.

Injury surveillance research with original data collection.
Research-to-practice to make recommendations and inform decision makers.
Working with established child injury data.

We have done a lot of surveys of injury. We collect injury statistics [...] and then we separate out children from that, and so we have published studies and have done the research to analyze injuries to children in our state.
-Key informant from Extension



Limited Capacity for Activities

Five key informants discussed their organization's limited capacity with childhood agricultural injury prevention activities. Reasons include:

Focusing on adults in the agricultural community. Theoretically, some initiatives currently in practice could be applicable to children, such as pesticide safety, tool and equipment safety, and others.

Attributing childhood agricultural injury prevention efforts as the sole responsibility and area of expertise of the National Children's Center.

Limited funds or funding opportunities to participate in childhood agricultural injury prevention initiatives.

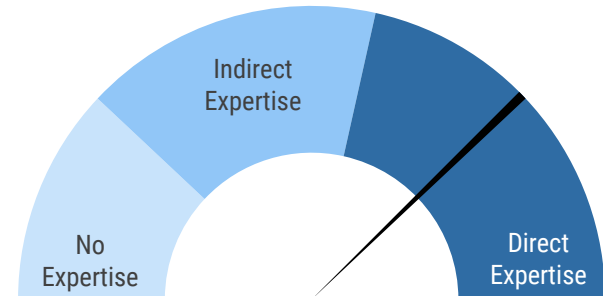
Findings from External Key Informants: Organizational Expertise and Capacity for Childhood Agricultural Injury Prevention



Most external key informants said their organization has expertise in childhood agricultural injury prevention.

Interestingly, representation of external key informants with expertise varied widely, with no clear pattern concerning types of organizations or backgrounds having more skill or proficiency in childhood agricultural injury prevention over others.

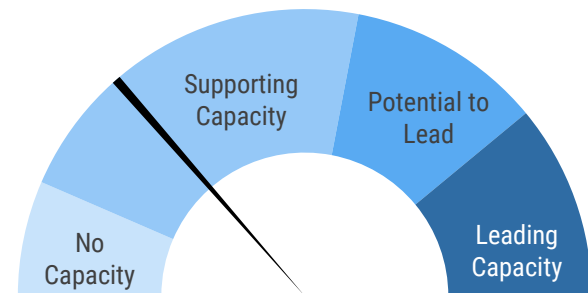
Several external key informants also mentioned that their organization had *indirect* expertise, typically stemming from general agricultural health and safety recommendations for adults that can be transferrable or applicable to children. Similarly, five external key informants mentioned that their organization has no expertise *specifically* with childhood agricultural injury prevention.



Most external key informants described their organization's work on childhood agricultural injury prevention in a supportive capacity.

Several external key informants also noted that their organization could have *potential* capacity to work on childhood agricultural injury prevention initiatives under certain parameters, like needing additional staff with interest in childhood agricultural injuries, geographical location, or enough funding and resources.

Three external key informants specifically said that their organization does not have the capacity to lead this initiative.



Findings from External Key Informants: Barriers and Motivators Affecting Childhood Agricultural Injury Prevention



Time and money are the primary **barriers** that will affect future organizational involvement in childhood agricultural injury prevention.

For example, limited funds affect the prioritization and allocation of federal government dollars that contribute to the struggle for money to be dispersed among all NIOSH-funded National Centers for Agricultural Safety and Health.

On the other hand, many agricultural health and safety professionals wear “dual hats”, such as representing their organizations on multiple national, regional, or state-level stakeholder groups, or work on multiple projects. Prioritizing time to work on certain initiatives, within the parameters of funding, narrows the focus on child-specific agricultural injury prevention.

Other barriers that will affect their organizations future involvement in childhood agricultural injury prevention

Several external key informants also noted other barriers that affect their organization’s current *and* future involvement with childhood agricultural injury prevention. Other barriers include:

Traditional farming culture: There is uncertainty on how to disseminate surveillance data in a way that both targets and is well-received by parents. Overconfident parents, to the point of contention, in their own abilities to protect their children from agricultural injuries continues to be a challenge.

I think we have data, so that's no longer a barrier. It's framing that data. The barrier is the data is not framed so that it will be targeted or better targeted and better received by parents.
-Key informant from academia

Government regulation and policy: It is exceedingly difficult to enforce health and safety rules on small-scale/family agricultural operations vs. larger operations that have more government oversight. Further, attitudes towards regulation stem from long-standing farm tradition and parents not wanting government to regulate how to raise their children. Rather than rely on government regulation, several external key informants suggested creating strategic partnerships, particularly with insurance companies, agribusinesses, and commodity groups, to help implement health and safety practices sensitive to farm parents’ mistrust of regulations.

Limited next generation professionals: One external key informant observed a lack of young professionals entering the field of occupational health and safety, noting that there are not enough people working in public policy, improving agricultural education, or who believe agricultural health and safety as a viable career option. Similarly, several participants talked about the need for strategic succession planning as leaders in agricultural health and safety retire.



Strategic partnerships are the primary **motivator** that will affect future organizational involvement in childhood agricultural injury prevention initiatives.

Most external key informants noted the importance of strategic partnerships to increase awareness of childhood agriculture injury prevention efforts. Suggestions encompass traditional and non-traditional collaborations, partnering with schools, agribusinesses/groups connected with individual producers, health and safety professionals, all 10 Regional Agricultural Centers, and the media.

Other motivators influencing future organizational involvement:

Past successes: Initiatives that have been piloted and evaluated are more likely to be renewed and are easier to implement. Past successes of programs and commitment to work being done in agricultural health and safety encourages organizations to continue, and build upon, existing programs.

Beginning farmers: Several key informants talked about observations of a renewed interest in rural America. More specifically, younger generations viewing the field of agriculture as a viable occupation more so than generations past and an increased interest in “living off the land”, sustainable farming, urbanized agriculture, and land stewardship.

Motivators are all the comments and success stories that we and our sponsors hear from the children as far as what they've learned and what they liked.

-Key informant from a non-profit organization

Findings from External Key Informants: Outlook of Childhood Agricultural Injury Prevention – 2020 and Beyond



External key informants representing larger and/or national-level organizations indicated a continuation of the same type of organizational activity throughout the next five years.

Seven external key informants expressed potential for their organization to do more for childhood agricultural injury prevention if supported by more funding, time, and desire. Suggested areas in which there should be more focus and partnerships include:

Working closer with schools to teach students about agricultural safety and engage more with teacher training.

Using the Internet and social media to disseminate agricultural health and safety resources/curricula.

Engaging more with policy-relevant solutions around child labor.

Increasing awareness of mental health, stress resilience, and wellbeing of parents and children.

Increasing private sector engagement in childhood agricultural injury prevention initiatives.

Increasing the public's overall awareness of childhood agricultural injury prevention.



The National Children's Center is recognized as a leader but will need to be proactive to remain sustainable for future initiatives.

Many external key informants identified NCCRAHS as the ongoing leader critical to moving the agricultural safety agenda forward for children that work in agriculture. However, to retain viability in a changing research landscape, external key informants suggested ways in which the Children's Center could take a proactive stance:

For successful transition in succession planning, focus on mentoring and nurturing the next generation of researchers in childhood agricultural injury prevention. Proactive succession planning can also be used as an opportunity to create partnerships outside of NCCRAHS.

While the National Children's Center is likely to continue to receive NIOSH funding, also look towards other funding opportunities too.



Going forward, the National Children's Center needs to strengthen research rigor.

Several external key informants suggested that some NCCRAHS researchers are not fully trained in research to practice. For instance, external key informant noted, “I think that writing pieces that are not data driven is different than writing data driven pieces”, suggesting that strong, rigorous data collection and analysis are more viable in a research landscape.

In another instance, an external key informant noted a significance of “time and place” in qualitative research. Furthermore, rather than dismissing its importance, cautioning that sample sizes can be small with limited generalizability and to not solely rely on one type of method of data collection. Going forward, programs of research should be, “designed thoughtfully, completely, and carefully so you know what kind of variables you’re getting” and how to use the data to conduct statistical analysis and disseminate data-driven recommendations.

To strengthen rigor, external key informants suggest being open to questions and challenges raised by advisors and other experts. Cultivating partnerships around program research design also allows NCCRAHS to “bounce ideas like design and methodology” and have “other go-to people” to gain new perspectives and enhance rigor.

Findings from External Key Informants: Future Partnerships to Consider



There is potential for other key players to be involved in leading the continuation of the national initiative for childhood agricultural injury prevention.

In addition to the National Children's Center, external key informants suggested groups that are connected to the agricultural community, public health and safety, and organizations that work directly with youth as potential key players in continuing the national initiative on childhood agricultural injury prevention.

Potential key players for the future of childhood agricultural injury prevention initiatives:

Agricultural Community Members	Health & Safety Groups	Youth-Serving Groups	Others
<input type="checkbox"/> Agricultural Safety and Health Council of America (ASHCA) <input type="checkbox"/> Machinery producers <input type="checkbox"/> John Deere <input type="checkbox"/> AGCO Manufacturing <input type="checkbox"/> Massey Ferguson Institution <input type="checkbox"/> American Farm Bureau Federation <input type="checkbox"/> Farm Credit <input type="checkbox"/> National Farmers Union <input type="checkbox"/> National Council of Agricultural Employers	<input type="checkbox"/> Emergency Medical Services (EMS) <input type="checkbox"/> National Institutes of Health (NIH) <input type="checkbox"/> National Association of Pediatric Nurse Practitioners <input type="checkbox"/> National Academies of Medicine <input type="checkbox"/> Network of Community and Migrant Health Centers <input type="checkbox"/> Area Health Education Centers (AHEC)	<input type="checkbox"/> National FFA <input type="checkbox"/> Safety in Agriculture for Youth (SAY) Project <input type="checkbox"/> National 4-H <input type="checkbox"/> National Association of Agricultural Educators <input type="checkbox"/> National Council for Agricultural Education <input type="checkbox"/> Public schools	<input type="checkbox"/> 10 Regional Agricultural Centers <input type="checkbox"/> AgriSafe Network <input type="checkbox"/> Media <input type="checkbox"/> Universities/academia <input type="checkbox"/> Progressive Agriculture Foundation <input type="checkbox"/> Parents <input type="checkbox"/> Cooperative Extension Services

NCCRAHS Staff Perspectives on the Field of Childhood Agricultural Injury Prevention

Background

The overarching goals of the 2020 Vision project were to assess the status of the National Initiative for Childhood Agricultural Injury Prevention, including but not limited to NIOSH-funded efforts, then generate and disseminate recommendations for future leadership of this initiative.

As part of this effort, the UW Evaluation Core conducted interviews external key informants known for their knowledge and expertise in the field of agricultural health and safety.

On a national level, external key informants identified the National Children's Center as the strongest leader in childhood agricultural injury prevention. Considering this key finding, the UW Evaluation Core and NCCRAHS Leadership decided to incorporate the voices of NCCRAHS Staff as part of the 2020 Vision project.



Project Objective

To incorporate NCCRAHS insider perspectives on childhood agricultural health and safety for a more complete picture of past and future initiatives happening in this field.

Methodology

Sampling, Recruitment, and Data Collection

NCCRAHS leadership used criterion sampling to select participants for staff interviews, limiting the pool to internal staff and/or staff knowledgeable with exclusive past, present, and future perspectives on NCCRAHS activities, capacity, and leadership.

The UW Evaluation Core sent an email request to 10 nominated staff members to explain the goal of the project and request their participation. A list of interview topics was provided in advance, so that interviewees could prepare if desired.

All 10 nominated staff members agreed to participate.

Interviews were conducted in June 2018.

Interviews averaged 30 minutes with a range from 20-37 minutes.

Interview Protocol

The UW Evaluation Core and NCCRAHS leadership collaborated to develop an 8-item protocol for staff member interviews. These items provide an overview of the questions asked:

Who besides the National Children's Center do you recognize as leaders in childhood agricultural injury prevention in the U.S.?

How would you describe the Children's Center's current capacity in child agricultural injury prevention efforts?

As NCCRAHS starts to plan for its next grant renewal, we're interested in your perspective about which of the Center's activities are more or less impactful.

Who are the Children Center's most valuable partners? Who might be the most valuable partners in the future?

What do you see as the key barriers and motivators that will affect the future of child ag injury prevention in the US – as a field?

What barriers and motivators will affect the future of NCCRAHS specifically?

If you could set the Vision for a national strategy on childhood agricultural injury prevention beyond 2020, what would you propose?

Data Analysis

Audio recordings of each interview were transcribed verbatim; then quality checks were conducted to detect and correct errors. The UW Evaluation Core used a conventional qualitative approach to content analysis (codes derived during analysis). Transcripts were analyzed iteratively to ensure completeness and resolve any discrepancies in coding due to emergent themes.

Findings from NCCRAHS Staff: Leadership Perspectives



On a national level, staff recognize the National Children's Center and the Progressive Agriculture Foundation as leaders in childhood agricultural injury prevention.

When asked who besides the National Children's Center is a leader in childhood agricultural injury prevention, staff most commonly identified the Progressive Agriculture Foundation, noting that PAF, including the consolidation of Farm Safety 4 Just Kids, has vast reach to children around the nation and are among the most active groups in promoting safety through the Safety Days program. The Safety in Agriculture for Youth ([SAY](#)) project, USDA Extension, and university Extension programs were also mentioned as leading voices in the field. The Childhood Agricultural Safety Network ([CASN](#)), which is coordinated by NCCRAHS, was also mentioned.



Overall, staff feel that the National Children's Center has a strong capacity to lead in childhood agricultural injury prevention efforts.

Staff identified five key areas in which capacity to lead is strong: 1. Dissemination and knowledge mobilization; 2. Outreach and communication; 3. Collaborations and partnerships; 4. Research; and 5. Passion, commitment, and support.

Staff also identified limited or hindered capacity in the areas of: 1. Succession planning and staffing; and 2. Tracking disseminated materials.

Factors that strengthen and limit NCCRAHS capacity are discussed in detail on the next page.

Other notable organizations mentioned as leaders in agricultural safety, though not necessarily childhood agricultural injury prevention efforts, include:

1. NIOSH
2. 10 National Centers for Agricultural Safety and Health
3. Migrant Clinicians Network
4. AgriSafe Network

1. Dissemination & Knowledge Mobilization

- The creation of "best practices", safety information, and content for industry.
- A dedicated interest in developing childhood agricultural injury prevention resources/materials like public service campaigns, posters, presentations, handouts, and guidelines.

2. Outreach & Communication

- The presence of a strong communications team.
- The ability to assess and meet the needs of the agricultural community.
- The opportunity to leverage each other's work.

3. Collaboration & Partnerships

- The opportunity to work with key stakeholders nationally and abroad.
- The opportunity to develop relationships with intermediaries (i.e. insurance) and "influencing the influencers".
- The ability to create and maintain partnerships.

4. Research

- Having experienced senior scientists on staff.
- Having strong applied research skills.
- Disseminating quality research.

5. Passion, Commitment, & Support

- NCCRAHS is already seen as a leader and strengthens agricultural community support through the goal of keeping kids safe.
- Staff are committed to preventing injuries to children who live, work, and play on farms through innovative, evidence-based programs and projects.

1. Succession Planning & Staffing

- Having a relatively small team with limited budget.
- Replacing senior researchers while maintaining research quality and rigor.
- Not having enough staff versed in public health, occupational health & safety, and other backgrounds.

2. Tracking Disseminated Materials

- Limited work on internal evaluation creates difficulties in knowing who uses materials and whether materials are worth the time and effort.
- Not having enough people know about or use materials (i.e. parents).

Findings from NCCRAHS Staff: Current and Future Partnerships



The National Children's Center recognizes and values many current partners locally and nationally who care about the wellbeing of children.

Overall, NCCRAHS staff recognize and value partners, groups, and individuals that help disseminate their safety materials and research and who are committed to childhood agricultural injury preventing efforts.



Staff have strategic ideas about forming future partnerships and collaborations.

When asked about future partnerships, NCCRAHS staff discussed strategies on how to establish new partners and collaborators with different perspectives on childhood agricultural injury prevention:

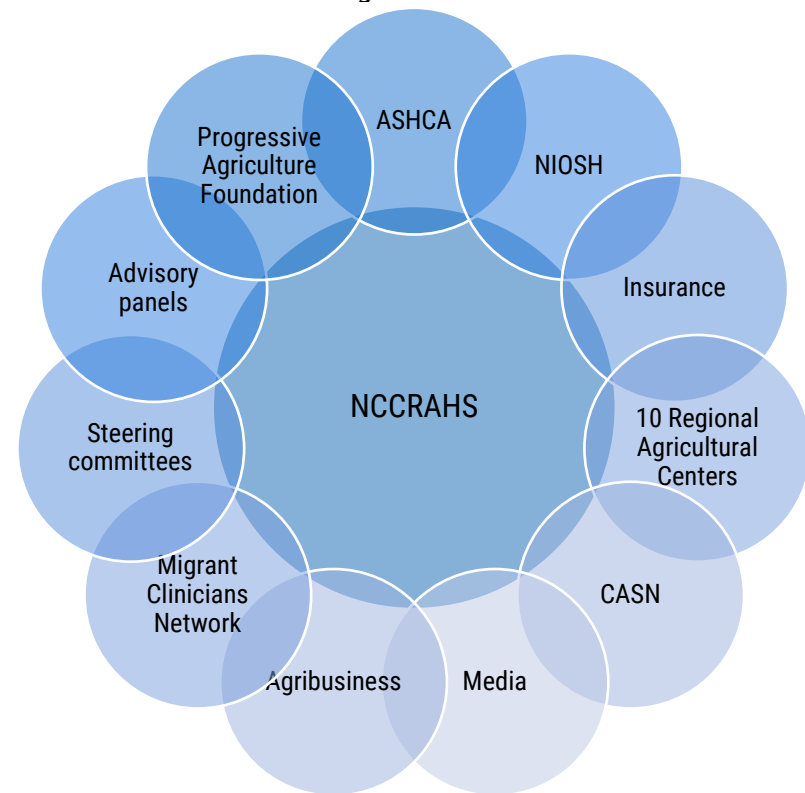
Establish new connections within public health, medicine (i.e. pediatricians) and childhood behavior, development, and mental health.

Strengthen connections with the other 10 Regional Agricultural Centers to improve consistency in childhood agricultural injury prevention efforts and to promote better coverage of child safety in varying types of agriculture (like forestry and fishing).

Collaborate more with Cooperative Extension, especially since Nebraska, Ohio, and Pennsylvania Extension are already present in NIOSH-funded initiatives like the SAY project.

Maintain established connections but also make new connections within the agricultural industry who can widely share “best practices” concerning childhood safety including manufacturers, insurance companies, and agribusiness.

Partners/sectors recognized as valuable to NCCRAHS:



Be mindful of small and/or community level groups that the National Children's Center already partners with and safeguard these relationships as it transitions through the grant renewal process. Continue to build capacity with these groups to help expand their expertise in childhood agricultural injury prevention.



Staff also recognize challenges that come with cultivating new relationships around the goal of childhood agricultural injury prevention.

NCCRAHS staff also discussed a variety of challenges that could limit or hinder the ability to establish new partnerships and collaborations:

Scheduling conflicts are common when trying to collaborate with agricultural educators/schools and youth-serving organizations like 4-H and FFA. Educators are often very busy both during the school year and summer months.

Keeping track of timely progress of NIOSH-funded projects operating outside of NCCRAHS. One staff member proposed assigning an NCCRAHS scientist to the regional project PI(s), helping ensure fulfillment of timeline objectives.

Regulation is difficult but there still needs to be focus dedicated to connecting with liaisons and organizations on a national level whom can help promote child safety policies within agriculture.

Findings from NCCRAHS Staff: Barriers and Opportunities in Childhood Agricultural Injury Prevention

Staff were asked to discuss barriers and opportunities they felt would affect the future of childhood agricultural injury prevention. A variety of barriers were mentioned as well as opportunities in which NCCRAHS is addressing, or could address, current barriers.



Policy-relevant solutions are needed but are not always feasible.

Currently, there is limited enforcement and regulation concerning the safety of children working on or visiting agricultural settings. Further, NIOSH does not fund regulation and/or legislation work. Yet, if there is NIOSH funding available to address childhood agricultural injury prevention initiatives (and limited federal policy-relevant solutions being proposed) NCCRAHS will have a place in the field. However, if regulations get approved, the presence/scope of work of a National Children's Center may be affected.



The Children's Center recognizes that funding is limited.

Staff noted that there is an increasing need to look outside the traditional research structure and funding from NIOSH. This echoes similar perceptions from external key informants' interviews. Yet, federal funding for public science needs to still be available. If not, NCCRAHS could face difficulties gathering enough private sector funds. Subsequently, staying competitive for funding from NIOSH requires qualified scientists with good research plans, high quality products, and outreach.

Staff also noted that there is a struggle in balancing coverage for research vs outreach and program implementation vs evaluation, even within NIOSH-funded work.

Finally, there are more prominent issues in the U.S. that can take financial precedent, limiting funds dedicated towards childhood agricultural injury prevention. Examples include farmer suicide rates, farmer motor vehicle crashes, the opioid epidemic, immigration policy, and farm economy.



There is uncertainty around succession planning and the “next generation” of leaders.

Staff note a limited number of “up and coming” experts into the field of agricultural injury prevention on a national level and an uncertainty around the “next generation” of leaders as prominent agricultural safety figures begin to retire. Further, the National Children’s Center is not based at a university, so there is no systematic succession with graduate students being prepped for this type of work.

There is a need to strategize succession planning in more creative ways to build and sustain the field by asking questions like: “What are the processes that we need to be doing to nurture from within?” and “What needs to be happening at the national level that we can do to build future leaders that care about childhood agricultural injury prevention?”



There is limited surveillance data to measure burden and progress.

Staff note that there is limited national surveillance data to measure burden and progress of childhood agricultural injuries and that it is difficult to frame the extent of injuries to funders when the burden of injuries on the population is clouded by limited, and sometimes conflicting, data. However, staff also note that AgInjuryNews.org is a good start. It stands out as an initiative that highlights injuries not being reported anywhere else. Yet, there is a need to go beyond injury clippings and to specifically include non-fatal injuries in surveillance data collection.



Attitudes and traditional culture can interfere with safe work and play.

Traditional farming culture and parental attitudes about raising children in agricultural settings continues to be a chasm for agricultural safety expertise and advice. Staff (as well as external key informants) note a continuing perception among agriculturalists that agriculture and farming is not dangerous or that injuries happen to everyone as per the nature of the work.

Further, advocating for the safety and wellbeing of children in agricultural settings can sometimes be challenging if it is perceived to contradict the desire to respect individual parenting styles. Staff note the necessity in needing to counteract parents’ and employers’ perception of being the “child safety police.”



Reaching the end-user is not always easy.

Staff note several issues when trying to reach the end-user of their work. First, it is difficult to produce agricultural safety guidelines that are universal. The agricultural community is vast and unique, and guidelines are not a “one size fits all.” Rather, guidelines are limited to the most general activities which, in turn, can make adoption of “best practices” more difficult.

Second, there is a lack of initiatives capturing the environmental and/or occupational situation of children in agricultural settings. This barrier is largely tied to limited funding and other resources.

Finally, and more specifically to NCCRAHS, there are limited evaluation strategies to measure the effectiveness of content (handouts, posters, presentations, and others) ensuring they are reaching targeted audience/users (i.e. parents).



NCCRAHS staff is small and has limited diversity.

Going forward, staff note that there is a need for more diversified backgrounds; particularly training in public health as it relates to agricultural injury prevention. Farming backgrounds can help with community acceptance but will not help with intervention research that requires training in theory, design, and methodology. NCCRAHS has project managers and coordinators with deep knowledge and understanding of childhood agricultural injuries, but doubt surrounding whether the label of “expert” carries weight beyond the scope of agricultural health and safety can be problematic. Further, limited cultural, linguistic, and disciplinary diversity among staff could be a liability.

Recommendations



Qualitative interview findings highlight three areas of focus for the future of childhood agricultural injury prevention initiatives: **Strengthening research**, **Focusing on impact**, and **Strengthening partnerships**.

Further, each area of focus is categorized into three time-gated groups to streamline success and feasibility progress:

1. Reflect and refine within the next year for immediate improvement.
2. Continual progress over the next five years to align and strengthen goals of the next iteration of the Children's Center.
3. Policy and systems change beyond the year 2020 for a long-term vision for the field of childhood agricultural injury prevention.

Next Year – Reflect and Refine

Initial recommendations for continual improvement of the Children's Center

Strengthen Research	Strengthen research rigor with careful, thoughtful, and complete research design.
	Be open to constructive feedback from scientific advisors and other research experts.
Focus on Impact	Be systematic ahead of grant renewal: Work proactively and incorporate evaluation to measure and track impact of disseminated knowledge.
	Follow the research process of development and structure even if not technically a research project.
	Start dialogue around succession planning: Define roles and responsibilities and strengthen mentorship opportunities.
Strengthen Partnerships	Document reach of the Children's Center and know who current partners are.
	Follow-up and work with mini-grant recipients in the long-term.

Next Five Years – Continual Progress

Align and strengthen 5-year goals for the Children’s Center and other key players in the field of childhood agricultural injury prevention.

Strengthen Research	Reframe research-oriented projects to have clear, direct links to policy-relevant decisions or interventions.
	Connect and collaborate with other institutions and individuals (like Marshfield Clinic epidemiologists) with strong research skills.
Focus on Impact	Emphasize connections to family and child health: Areas include mental health, nutrition, housing, rural health and overall wellbeing of children.
	Facilitate childhood agricultural injury prevention efforts (outreach and general awareness) with the other 10 Regional Agricultural Centers.
Strengthen Partnerships	Look to other sources of funding to help sponsor research projects and programs. Must ensure integrity and transparency.
	Solidify and expand the private sector, commodity groups, and industry buy-in on injury prevention efforts.
	Seek a variety of backgrounds and expertise to work on or partner with, like: Ag health and safety, childhood development, and medical professionals.

Beyond 2020 – Policy and Systems Change

Long-term vision for the field like policy reform and systems change that will take significant time to produce.

Strengthen Research	Develop policy-relevant solutions that are driven by rigorous, sound research.
	Strong, reliable surveillance is key to credibility of the Children’s Center and to make the case that children are indeed dying on farms.
Focus on Impact	Combination of new, mid-level, and experienced professionals to keep field at the forefront.
	Have the Children’s Center as the “leader” but also seen as an integral part of 10 Ag Centers that parents can trust on a national and community level.
	Endorse and promote the benefit of farming for children yet for parents to adopt safety “best practices” and guidelines.
Strengthen Partnerships	Promote collaborative leadership by nurturing other leaders or key players in childhood agricultural injury prevention.
	Strengthen ties with youth serving organizations like FFA, 4-H, agriculture students; News/media to keep children and agricultural safety at the forefront; Cooperative Extension; Federal agencies like USDA and MCHB connected by same agenda.

References

- ¹ Kinck, C., & Tevis, C. (1980). We Kill Too Many Farm Kids. *Successful Farming*, 87(3).
- ² Lee, B. C., & Gunderson, P. D. (1992). Childhood Agricultural Injury Prevention: Issues and Interventions from Multiple Perspectives. In *Proceedings from the Childhood Agricultural Injury Prevention Symposium*. Marshfield, WI: Marshfield Clinic.
- ³ Lee, B. C. (1996). *Children and Agriculture: Opportunities for Safety and Health. A National Action Plan*. (pp. 1-22). Marshfield, WI: Marshfield Clinic. A Report from the National Committee for Childhood Agricultural Injury Prevention.
- ⁴ Lee, B. C., & Marlenga, B. (1999). *Professional Resource Material: North American Guidelines for Children's Agricultural Tasks*. Marshfield, WI: Marshfield Clinic.
- ⁵ Esser, N., Heiberger, S., Ellis, T., Salzwedel, M., and Lee, B. (Eds.) (2012). *Creating Safe Play Areas on Farms*. Fourth edition. Marshfield, WI: Marshfield Clinic.
- ⁶ Acosta, V., & Lee, B. C. (2001). *Migrant and Seasonal Hired Adolescent Farmworkers: A Plan to Improve Working Conditions* (pp. 1-26). Marshfield, WI: Marshfield Clinic. Recommendations from the National Adolescent Farmworker Occupational Health and Safety Advisory Committee.
- ⁷ Lee, B. C., Gallagher, S., Marlenga, B., & Hard, D. (2002). *Childhood Agricultural Injury Prevention: Progress Report and Updated National Action Plan from the 2001 Summit* (pp. 1-37). Marshfield, WI: Marshfield Clinic.
- ⁸ National Land-Grant Research and Extension Agenda for Agricultural Safety and Health: National Agenda for Action (2012). Farm and Ranch eXtension in Safety and Health (FRSH) Community of Practice. Retrieved from <https://articles.extension.org/pages/63380/national-land-grant-research-and-extension-agenda-for-agricultural-safety-and-health-national-agend>
- ⁹ Lee, B. C., Gallagher, S. S., Liebman, A. D., Miller, M. E., & Marlenga, B. (2012). *Blueprint for Protecting Children in Agriculture: The 2012 National Action Plan* (pp. 1-34). Marshfield, WI: Marshfield Clinic.
- ¹⁰ Lee, B. C., Bendixsen, C., Liebman, A. K., & Gallagher, S. S. (2017). Using the Socio-Ecological Model to Frame Agricultural Safety and Health Interventions. *Journal of Agromedicine*. doi:10.1080/1059924x.2017.1356780