

# Nurture

Quarterly Newsletter of the National Children's Center for Rural and Agricultural Health and Safety

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

**"The National Children's Center for Rural and Agricultural Health and Safety strives to enhance the health and safety of all children exposed to hazards associated with agricultural work and rural environments."**



## NAGCAT spoken here *Guidelines' safety messages reach new audiences through translation, modification*

No matter the language, "North American Guidelines for Children's Agricultural Tasks" speaks to the safety of young people on farms.

Since their release in 1999, the guidelines have been disseminated and studied worldwide. Portions of NAGCAT have been translated into Swedish and French. Spanish-language resources were part of NAGCAT from the beginning.

"The guidelines have been mainstreamed now as a primary approach for preventing childhood agricultural injuries," said Barbara Lee, Ph.D., director of the National Children's Center and co-author of NAGCAT.

NAGCAT has been very visible in Canada. Manitoba Labour formatted the guidelines into a tabloid style. This facilitated an initial printing and distribution of more than 100,000 NAGCAT modules in western Canada, said Glen Blahey, Manitoba Labour agricultural safety and health coordinator.

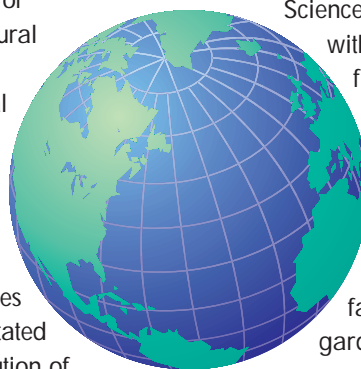
Safe Kids Canada, the national injury prevention program of Toronto's Hospital for Sick Children, began a coordinated

distribution to all provinces in collaboration with provincial agencies in 2001, and has since formatted NAGCAT to be accessed via its Web site (in both English and French) as well as developed a bilingual fact sheet on children's farm injuries and prevention strategies.

A Swedish version of the guidelines is about to undergo a short testing period with farm families, reports Peter Lundqvist, Ph.D., Swedish University of Agricultural Sciences. "We are now working with sponsors from industry to find ways of spreading the guidelines out to the public," Dr. Lundqvist said.

The Swedish guidelines are built around several themes: horse farm; hog farm; dairy farm; and working in the garden (on farms). In addition, ergonomics for children has been added to each set of guidelines.

"The guidelines released in 1999 serve as a basic model," Dr. Lee said. "We expect future iterations of NAGCAT to be customized for the unique characteristics of various stakeholder groups."



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### Midwest forum focuses on 'bridge building'

The National Children's Center was a contributing partner for the Midwest Rural Agricultural Safety and Health Forum, 'Bridge Building: Research to Practice,' hosted by four Iowa-based centers, Oct. 27-28, 2005, in Johnston, IA. While in Johnston, staff from the



**From left, standing: Barbara Lee, Dr. John Howard, Shari Burgus, Marilyn Adams, Michael Humann. Kneeling: Regina Fisher.**

National Children's Center and Farm Safety 4 Just Kids met with National Institute for Occupational Safety and Health (NIOSH) Director John Howard, M.D., to discuss childhood agricultural injury priorities. The forum was jointly sponsored by the Iowa Center for Agricultural Safety and

Health, Heartland Center for Occupational Health and Safety, Great Plains Center for Agricultural Health and the University of Iowa Roy J. and Lucille A. Carver College of Medicine.

### Emergency responder directory now online

A state-by-state farm safety rescue directory is now online. Go to <http://www.marshfieldclinic.org/nfmc/pages/default.aspx?page=MCRF-farmrescue> to find contacts in your state who can help with training and education. The directory was put together by the Children's Safety Network site at Marshfield, headed up by Chris Hanna, M.P.H. The directory is a first attempt to gather in one place the vast amount of resources available to states and communities in order to better prepare emergency first responders in agricultural settings. Additional comments and suggestions are welcome. Contact the National Farm Medicine Center, (800) 662-6900. This project is in cooperation with the Rural Emergency Medical Systems Training and Technical Assistance Center (REMSTTAC). For additional information regarding rural EMS call REMSTTAC at (866) 587-6370.

### NORA Town Hall meeting: agriculture

As the National Occupational Research Agenda (NORA) approaches a 10-year milestone, the National Institute for Occupational Safety and Health (NIOSH) is requesting assistance in planning for future occupational safety and health research. During the next several months, NIOSH and its partners will conduct more than a dozen public meetings throughout the country to gather input on regional and sector-specific needs in occupational safety and health research. The Seattle town hall

meeting, to be held Jan. 17, 2006, from 9 a.m. to 5 p.m. in the Museum of History and Industry, will focus on the agricultural sector. It will be tri-hosted by the Pacific Northwest Agricultural Safety and Health Center, the Northwest Center for Occupational Health and Safety and the National Children's Center for Rural and Agricultural Health and Safety. For registration and event details, visit, <http://www.cdc.gov/niosh/nora>. If you cannot attend the Town Hall – share your ideas on the top occupational safety and health issues at <http://www.cdc.gov/niosh/nora>.

### State tractor laws and children

A National Children's Center review of state tractor laws, funded by NIOSH, found that 17 states have legislation addressing youth who operate farm tractors on highways. The content of these statutes varies, but includes driver's license or educational requirements as well as regulations concerning the ages, locations, and/or times of day when youth may drive farm machinery on highways. To access your state law regulating tractor operations on highways, click on the name of your state at [http://www.marshfieldclinic.org/nfmc/pages/default.aspx?page=nccrahs\\_tractorklaws](http://www.marshfieldclinic.org/nfmc/pages/default.aspx?page=nccrahs_tractorklaws).



Barbara Marlenga, Ph.D., got the idea for the project while writing the proposal for a two-year pilot study, "Youth Tractor Crashes on Public Roads: Impact of Wisconsin Act 455." She found in writing the proposal that she could not find information on whether states other than Wisconsin had laws regulating youth tractor operations on public roads. A manuscript on the pilot study has been accepted and the paper presented at the National Institute for Farm Safety conference.

### Save the date: NIFS 2006

The National Institute for Farm Safety (NIFS) will hold its 2006 meeting June 25-30 in Sheboygan, WI, at the Blue Harbor Resort on Lake Michigan. The theme is, "Meeting Challenges Together." The meeting will be hosted by the National Farm Medicine Center of Marshfield Clinic Research Foundation, Marshfield, WI. For details as they develop, go to [www.ag.ohio-state.edu/~agsafety/NIFS/nifs.htm](http://www.ag.ohio-state.edu/~agsafety/NIFS/nifs.htm). Questions and suggestions regarding pre-conference topics can be directed to Barbara Lee, Ph.D., at the National Farm Medicine Center, (800) 662-6900.

## Partnerships

### Continued from cover

Although the guidelines have been praised by safety experts and used increasingly by farm parents, NAGCAT authors Lee and Barbara Marlenga, Ph.D., acknowledge that “variations in agricultural practices ... across cultures ... can be appreciated but not always documented in the printed results of this project.”

Hmong farmers are a case in point. Michele Schermann, R.N., M.S., and a research team from the University of Minnesota originally translated select NAGCAT information into a Hmong-language poster. But the poster was poorly received by its Hmong audience. So the researchers developed a new delivery system through interviews, observations and literature review. The system includes three folktales in keeping with the Hmong storytelling tradition, a bi-lingual book (“Orphan Boy the Farmer”) written and illustrated by Hmong, and readings of the stories to Hmong audiences. The stories illustrate hazards, behaviors, consequences and control strategies related to farm work assigned to Hmong children and depict safe work practices of three tasks: rototilling, knife use, and marketplace skills.



As the guidelines are translated and adapted to specific cultures, their efficacy is the subject of research and scientific review. “A Systematic Review of Prevention Strategies for Childhood Farm Injuries,” commissioned by Safe Kids Canada and carried out by a team from Queen’s University, Kingston, Ontario, and the Alberta Research Centre for Child Health Evidence, University of Alberta, reviewed literature surrounding the NAGCAT and similar prevention initiatives aimed at farm children.

The reviewers wrote: “Evidence surrounding the efficacy of the NAGCAT guidelines is weak but positive ...”

More recently, the efficacy of NAGCAT was reported in the American Journal of Public Health (January 2006). Lead author Anne Gadomski, M.D., M.P.H., led a study of children on 845 farms in central New York. Half of the farms were randomly assigned to the intervention – a copy of NAGCAT and a visit from an educator to review the guidelines. The control group completed a baseline survey only. Giving parents the guidelines helped reduce childhood injuries by nearly one-half, the study found.

## Take-home pathway exposure and pesticide health risks for children

Children are at the heart of two current projects at the University of Washington’s Pacific Northwest Agricultural Safety and Health Center (PNASH). Since 2002, the center has worked with Washington state agricultural employers and workers to better understand how workplace chemicals are inadvertently brought into workers’ homes and to reduce the pesticide exposure of workers and their families, especially children.



**Household dust was collected from farm worker homes and analyzed by PNASH.**

Children are magnets to chemicals in our environment and the most vulnerable population to take-home exposure. Studies show that even minute amounts of toxic chemicals can have a profound effect on a child’s development. Toddlers especially spend a lot of time on floors and

often wear little clothing during summer spraying season, raising their risk of exposure.

PNASH investigators began by sampling vehicle and household dust to determine the extent that the take-home pathway contributes to home pesticide residue levels. Subsequent interviews and work site evaluations contributed to the design of several interventions that were then tested. PNASH studies found a strong association between home and vehicle dust for a number of pesticides, providing further support for the take-home exposure pathway.

One of the most recently funded PNASH projects will translate current scientific information regarding neurodevelopmental health risks to children exposed to organophosphorus (OP) pesticides. It will focus on health care providers who serve agricultural producers, workers, and their families. New findings on the effects of OP pesticides are published regularly, and there is substantial uncertainty regarding health risk and the relevance of this information to health care providers. PNASH will conduct a systematic and comprehensive review of the issue, synthesizing research results and translating them into public health messages that serve the targeted health care providers. For more information, contact PNASH outreach director Helen Murphy, Ph.D., [hmurf@u.washington.edu](mailto:hmurf@u.washington.edu).

## Schedule of upcoming events

January 8 – 9, 2006

American Farm Bureau Federation annual meeting  
Nashville, Tennessee

January 17, 2006

Northwest Regional and Agricultural Sector Meeting  
Museum of History and Industry, 9AM – 5PM  
Seattle, Washington

January 27 – 29, 2006

15th annual Western Migrant Stream Forum  
Portland, Oregon

May 13 – 18, 2006

American Industrial Hygiene Association  
Chicago, Illinois

June 11 – 14, 2006

American Society of Safety Engineers  
Seattle, Washington

June 25 – 30, 2006

National Institute for Farm Safety annual meeting  
Sheboygan, Wisconsin

July 9 – 12, 2006

American Society of Agricultural and Biological Engineers  
Portland, Oregon

Nurture is a publication of the National Children's Center for Rural and Agricultural Health and Safety (a program of Marshfield Clinic, Marshfield, Wisconsin and a site of the Children's Safety Network).

It is published four times each year to disseminate children's rural health and safety information to professionals in the fields of health and safety, agribusiness, policy-making and the media.

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## Spanish-language resources available through NASD

Spanish-language resources for preventing agricultural injuries and environmental exposure in children of migrant and seasonal farmworkers are available on the National Children's Center Web site,

[http://www.marshfieldclinic.org/nfmc/pages/default.aspx?page=nc\\_crahs\\_nasd](http://www.marshfieldclinic.org/nfmc/pages/default.aspx?page=nc_crahs_nasd). The resources have been compiled as part of a National

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Children's Center project to enhance the children's section in the National Agricultural Safety Database (NASD). Taking the lead on the material was Amy Liebman, M.P.A., a National Children's Center formal consultant through the Migrant Clinicians Network.

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