The Aging Farm Community:

Using ***Current Health***

and ***Safety Status***

to ***Map Future Action***

March 6-8, 2007

Holiday Inn Select
Indianapolis Airport
Indianapolis, IN

Project Ad-Hoc Advisory Committee

The project proposal has been developed by Dr. Petrea with advice of a project Ad-Hoc Advisory Conference Planning Committee that includes:

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Deb Reed, PhD, College of Nursing, University of Kentucky
Michelle Umbarger, PhD-C, University of Iowa, College of Nursing

Conference Sponsors

Agricultural Safety and Health – Network
Centers for Disease Control (Pending)
UI-Chicago, Great Lakes Centers for Occupational and Environmental Safety and Health
University of Illinois Extension
Great Plains Center for Agricultural Health
Farm Foundation
The New York Center for Agricultural Medicine and Health
The Southeast Center for Agricultural Health and Injury Prevention
The Southern Coastal Carolina Agromedicine Center
The Southwest Center for Agricultural Health, Injury Prevention and Education
The Western Center for Agricultural Health and Safety

A Conference on The Aging Farm Community: Using Current Health and Safety Status to Map Future Action

March 6-8, 2007

Holiday Inn Select-Indianapolis Airport
Indianapolis, IN

GOAL: To publish a document that summarizes the health and safety status of aging farmers in the United States and makes specific targeted recommendations for future action in research, health related practices, prevention education and outreach, and public policy.

Purpose of the Conference and Workgroups

To present information, data and perceptions that will serve as a current status report on the occupational health and safety issues facing the aging farm population. These research and practice presentations, and attendant discussion, will provide the basis for a consensus building process to publish a document that describes the current status of this population and makes specific targeted recommendations for future action in research, health related practices, prevention education and outreach, and public policy.

Conference Agenda

Tuesday, March 6

****Unless otherwise noted, all sessions are in Room Heathrow A and B**

7:00 AM - 8:00 AM

Continental Breakfast

8:00 AM

Chip Petrea: Introduction and Logistics for Conference

Karen Peters, UI-Chicago, Institute for Health Research and Policy
General overview of issues related to physiological aging and its affects on both physical and mental capacities

10:00 AM Break

Jim Mitchell, University of North Carolina
Rural Aging and the Effect of Migration on the Rural Landscape

Marc Schenker, UC Davis
Older Farmers in the Western US

Discussion of Action

12:00 - 1:00 PM Lunch in Atrium

1:00 PM

John Myers, NIOSH
National Injury and Fatality Data for Aging Farmers

James Gregory, Texas Tech University
Impact on Sleep Deprivation on Agricultural Injury Incidents

Discussion of Action

Break: 3:00 PM

Glen Blahey, Manotoba Ag, Rural and Food Initiative
Age-Related Physiological Changes: Considerations for Older Farmers' Performance of Agricultural Tasks

Bill Field Purdue University
Agrability/Breaking New Ground Safely Cultivating Independence for Farmers with Disabilities– Young and Old

6:00 PM

Dinner in Ballroom A

Wednesday, March 7

****Unless otherwise noted, all sessions are in Room Heathrow A and B**

7:00 AM - 8:00 AM

Continental Breakfast

8:00 AM

Don Voaklander, University of Alberta
Medication Use, Co-morbidity and Injury in Older Farmers

Michelle Umbarger-Mackey, University of Iowa
Injury/Illness Data from Certified SafeFarm Clinics in Iowa

Discussion of Action

10:00 AM Break

Mike Rosmann, Agriwellness, Iowa
Behavioral Health Issues of the Aging Agricultural Population

Deb Reed, University of Kentucky
Overview of techniques and strategies used for screening and treating aging farmers

Discussion of Action

12:00 - 1:00 PM Lunch in Atrium

1:00 PM

Shannon Lizer, University of Illinois School of Nursing, Rockford
Overview of Agricultural Medicine and Health in Education of Primary Care Providers

Discussion of Action

3:00 PM Break

Chike Anyaegbunam, University of Kentucky
Safety and Health Education to Aging Farmers and Scarce Resources, What are the Implications?

Henry Cole, University of Kentucky I
Impacts of Social Marketing Techniques on Agricultural Safety and Health Initiatives

Discussion of Action

6:00 PM

Dinner in Ballroom C

Thursday, March 8, AM

****Unless otherwise noted, all sessions are in Room Heathrow A and B**

7:00 AM - 8:00 AM

Continental Breakfast

8:00 AM

Kevin Rund, Illinois Farm Bureau
Current status of aging populations, particularly farmers, within state policy

Discussion of Action

10:00 AM Break

Chip Petrea, Summary of Conference

12:00 PM

Box Lunch in Atrium

Abstracts

Implications of the Aging Process: Opportunities for Prevention

Karen Peters, DrPH, UI-Chicago, Institute for Health Research and Policy

Objective: To provide an overview on the process of aging and its implications on physical and mental health, with special reference to farmers

From this talk, I hope you will be better able to understand the intricacies of how and why we age, and appreciate the inevitable physiological and physical impact of aging on the various body systems. The presentation is aimed to enlighten you on the significant connection between aging and our mental capacities, and the normal and abnormal manifestations on our senses and cognitive makeup. The implications of these physical and mental changes in the older farmer community are highlighted, along with the preventive measures they can adopt to progress to a healthy and ripe old age.

Learning Objectives:
1. The learner can acquire insights into how and why aging occurs.
2. The learner will be able to understand the normal and abnormal physical and mental health changes associated with aging.
3. The farmer community can acquire knowledge about maintenance of workplace safety, preservation of good health, and prevention of chronic diseases that compromise healthy aging.

Rural Aging Research and Change in Rural Counties: An Emerging Research Agenda

Jim Mitchell, Ph.D., University of North Carolina

This presentation and paper offers, first, a description of research on rural aging, beginning with description of convergence among definitions of rural across federal agencies, secondary data analysis, and the body of knowledge about rural aging. Next, the impact of inconsistent and inadequate definitions of rural included in studies featuring primary data on the body of knowledge on rural aging will be discussed. Following description of a methodological approach that considers diversity across rural counties and the contribution of retirement migration in Eastern North Carolina to the diversity of coastal areas, the paper concludes with discussion of convergence among aging research and rural transition, including changing agricultural economy.

Aging Farmers: Findings from the UC Davis Farmer CoHort 1993-2004

Marc Schenker, University of California, Davis

National Injury and Fatality Data for Aging Farmers

John R. Myers, Larry A. Layne, and Suzanne M. Marsh, NIOSH

Farmers and farm workers over the age of 54 years have been identified as a high risk group for farm fatalities since the 1980's. In addition, the severity of non-fatal injuries has been shown to be higher for these older farm workers. Data from two national data systems are presented to better define both fatal and non-fatal injuries occurring to these older workers: the Census of Fatal Occupational Injuries (CFOI), maintained by the Bureau of Labor Statistics, and the Occupational Injury Surveillance of Production Agriculture (OISPA) survey, conducted for the National Institute for Occupational Safety and Health by the U.S. Department of Agriculture. CFOI data show that farm workers over the age of 54 accounted for over half of all farming deaths between 1992 and 1994 (3,671 of 7,064 deaths), and had a fatality rate of 45.8 deaths per 100,000 workers compared to the overall farming fatality rate of 25.5 deaths per 100,000 workers. Leading causes of death were "tractors" (46%), "trucks" (7%), and "animals" (6%). OISPA estimates that farmers and farm workers over the age of 54 accounted for 26,600 lost-time injuries annually between 2001 and 2004, with an annual injury rate of 4.5 lost-time injuries per 100 workers. "Contact with objects" (35%) and "falls" (30%) were the most common type of injury event; "structures and surfaces" (29%) and "animals" (22%) were the most common source of injury.

Impact of Sleep Deprivation on Agricultural Injury Incidents

James M. Gregory, PhD, Texas Tech University

Injury accidents are a problem in rural communities. Agricultural operations often involve machines that have massive moving components that can cause severe injury or death. Work is often done on wet, slippery, and uneven work surfaces. Operations normally must be completed in a timely manner to maximize production and minimize risk from weather, insects, and weeds. During planting and harvesting, workers cheat sleep and increase heir risk for poor judgment, mistakes, and injury accidents.

While the type of machine or environment may affect the severity of an accident, the human is almost always the cause of injury incidents. A few, but very few, accidents occur because of machine failure. The human factor is the major factor that can increase or decrease incidents of injuries. Sleep loss and the build up of sleep debt, like alcohol consumption, reduces human performance and can lead to an accident.

Most people are unaware of the magnitude of sleep related accidents. Because of the nature of sleep, it is nearly impossible to measure impairment caused by loss of sleep without using a sleep laboratory. Responses to sleep loss are numerous and usually non-linear. The system is complex! A sleep simulation model, SLEEP Model, calibrated from numerous laboratory studies was used to deal with the complexities of sleep and to generate odds ratios for the human component of accidents for sleep management typical for a middle-aged farmer operating on five hours of sleep for two and four weeks of planting or harvesting. Caffeine was considered as a counter measure. These results indicate that poor sleep management can increase risk for accidents by more than an order of magnitude. Caffeine use is usually an effective counter measure except when a night of no sleep is encountered after a build up of sleep debt. Even with the use of caffeine, the odds ratio may increase more than 100 percent as a result of poor sleep management.

It is concluded from these simulations that poor sleep management can contribute to a major increase in the odds of having an accident. Also, it is concluded that a major effort is needed in the rural communities to teach the value of good sleep management. Finally, it is concluded that accident investigations should include the use of a sleep model to consider the many interactions associated with sleep management and counter measures when investigating the cause of accidents.

Age-Related Physiological Changes: Considerations for Older Farmers' Performance of Agricultural Tasks

Glen Blahey, Manotoba Ag, Rural and Food Initiative

Agrability/Breaking New Ground Safely Cultivating Independence for Farmers with Disabilities– Young and Old

Bill Field Purdue University

Medication Use, Co-morbidity and Injury in Older Farmers

Don Voaklander, PhD, University of Alberta

Farming is one of the most dangerous occupations in the world and research has determined that the older farmer is at particularly high risk for serious injury. Farmers' work and lifestyle are highly integrated and few farmers ever fully retire, working many years beyond what would be considered a customary retirement age. In Canada, the average of farmer owner/operators is about 55 years of age, thus we may soon be faced with an epidemic of farm related injury as this group cycles into their 60s, 70s and 80s.

This paper examines the co-morbidity and medication use that is related to injury in older persons and how these issues relate to older farmers. The literature suggests that several medication classes such as narcotic pain killers and benzodiazepines are related to injury in older persons as well as farmers. New information also indicates that prostate disease is predictive of injury in older male farmers and confirms that arthritis is also related to injury.

Older farmers should be monitored closely by their family physicians to ensure that the tasks they engage in are safe when consideration is made for there health status and medication use. Physicians and pharmacists in rural areas could be essential in educating patients on health related injury risk.

Older Farmers: What's New With Certified Safe Farm

Michelle Umbarger-Mackey, RN, MSN, PhD-C, University of Iowa

The purpose of this paper is to discuss two current innovations of the Certified Safe Farm (CSF) program. The CSF is a research program designed to improve the health and safety of farmers and their families. First, the most recent development from the CSF research team is the translation of the CSF into a research program to specifically address the at-risk population of older farmers; *Certified Safe Farm: Improving the Health and Safety of Older Iowa Farmers*. Within this translation project, the CSF program has been refined so that the special needs of aging farmers may be addressed. Second, another research project on the CSF horizon is a retrospective cohort study to explore the association between medication use and agricultural injury among older farmers; *Older Farmers: Medication Use and Risk for Agricultural Injury*. This study will analyze existing data from the original CSF study that was prospectively collected from September of 1999 through August of 2003 and address the following specific aims: 1) describe and compare agricultural injuries that are prevalent for older vs. younger CSF farmers; 2) describe and compare medication use of older vs. younger CSF farmers; 3) identify and describe potential confounders, and include them in the multivariate models evaluating the association between medication usage and agricultural injury; and 4) examine the association/relationship between medication usage and agricultural injury. Progress on this project will be discussed.

Behavioral Health Issues of the Aging Agricultural Population

Michael R. Rosmann, Ph.D., Agriwellness, Iowa

There are only a few studies that examine the incidence of behavioral health conditions of the agricultural population in general and fewer that focus on aging agricultural people. However, useful epidemiological information can be extrapolated from recent comprehensive studies that report the incidence of behavioral health conditions across gradients of population density varying from most metropolitan to least metropolitan. Mojtabai (2006) reviewed risk data for all 50 states collected by the Centers for Disease Control and Prevention (i.e., National Center for Health Statistics, 2006) and found a higher prevalence rate of psychological distress in rural areas where the agricultural population resides than metropolitan areas but reduced access to behavioral health treatments in rural areas, as compared to metropolitan areas. Singh and Siahpush (2002) examined the suicide data for every county in the United States for the time period 1970 – 1997 and found that the suicide rate of male residents in the most highly rural counties was twice that of male residents in the most highly metropolitan counties. Using health risk data, the National Center for Health Statistics (2006) determined that there is an increasing death rate due to suicide as age increases, suggesting that the aging agricultural population has higher jeopardy for suicide than the younger agricultural population. Factors that contribute to worsening behavioral health issues of the aging agricultural population include physical and mental decline, isolation, loss of family, uncertainty about the future, unresolved farm succession and economic decline. Of these factors, economic stress and loss of loved ones are particularly troubling for aging farm residents. Protective factors include support from remaining family, friends and neighbors with decision-making and farming obligations when necessary and access to affordable, accessible and culturally acceptable behavioral health services. This chapter discusses these matters in detail.

Providing Health Services to Aging Farmers: A Practitioner's Perspective

Deborah Reed, PhD, University of Kentucky

Farm families present particular challenges to health care providers. Both historical and recent study reports illustrate that farmers do not seek health care unless it is urgent, and that care is delayed until farm work is finished. In addition, farm families are less likely than their counterparts to have adequate health insurance. The farm work environment, coupled with the aging process, creates a complex framework that health practitioners sometimes find frustrating. The purpose of this presentation is to enable the practitioner to create an environment that will maximize clinic efficiency and patient health outcomes when seeing aging farmers. An integrated systems approach to health care for aging farmers will be presented and illustrated with case examples. Physical and behavioral screenings to conduct, resources for health education, and referral sources will be included.

Healthcare Provider Education: Older Farmers

Shannon Lizer, University of Illinois School of Nursing, Rockford

Social Marketing of Agricultural Safety and Health to Aging Farmers: What are the Implications?

Chike Anyaegbunam, Ph.D., University of Kentucky

Understanding the demographics and psychographics, including beliefs, perceptions, values, norms, lifestyles and concerns of an agricultural population is one of the first and most important steps in assessing its health and safety needs. It is also a fundamental precursor to planning effective programs to prevent occupational injury and improve health among the population. This paper focuses on aging American farmers as a special population with unique health and safety needs that warrant communication approaches different from those used for the general population of farmers. The paper sketches the characteristics of aging farmers using extant data and information gleaned from various sources. It reviews various educational and communication approaches for promoting agricultural safety and injury prevention in the general farmer population. The paper also presents a discussion of the implications of engaging aging farmers in community-based participatory research and social marketing programs to improve their health and prevent serious agricultural injuries and death in the special population.

Misconceptions about Older Farmers' Roles and Value: Implications for Rural Community Public Health and Safety

Henry P. Cole University of Kentucky
with assistance from Dennis Murphy, PSU and Fred Danner, UK

Older farmers often are perceived as being relatively unimportant because they won't live much longer, will soon leave farming, are not worth investment of resources that could be put to better use, don't have much farm production economic value, are set in their ways, resistant to learning, and are unable to continue farm work safely because of age related infirmities. Contrary to these perceptions older farmers have large economic, social, and cultural capital and contribute directly to the wellbeing of their communities and the nation. For nearly 50 years a mass exodus of older operators from farming has been predicted as imminent, but has never occurred. From 1959 to 1997 the number of principal farm operators < age 65 years declined steadily from 3.1 million to 1.4 million. During the same period principal operators ≥ age 65 years declined from 550,000 in 1959 to a low of about 350,000 in 1978 and thereafter, rose steadily to about 450,000 in 1997. During the 1959 to 1978 period farmers ≥ age 65 years comprised about 18% of U.S. farm operators. By 1997 the proportion of older farm operators grew to 25%. The 2002 Census of Agriculture reported that farm operators ≥ age 65 years comprise 25% of all U.S. farmers, own 18.8 percent of all U.S. farms, 21.3% of all farm land, and account for 14.5% of total U.S farm income. Many older farmers have key social roles that contribute directly to the social capital of their communities. The core idea of social capital is that social networks have value. Communities with high social capital are healthier, safer, and more productive. Older farmers also have large stocks of cultural capital. Unlike economic capital, cultural capital cannot be inherited. Rather is it is acquired through learning and enculturation. It consists of an individual's accumulated aspirations, knowledge, memories, skills, strategies, and expertise. Older farmers, like all persons who age, lose perceptual and motor capabilities that do indeed place them at greater risk for injury from hazards encountered in farm work. However, like older adults in general, older farmers' strategic knowledge and expertise provides them with compensatory strategies allowing them to work safely and productively. This pattern is documented in studies of older versus younger typists, automobile drivers, airline pilots, and the frequency with which younger and older farmers overturn tractors. Persons who perform most proficiently, and often most safely, the complex tasks related to their real-world experience and expertise are typically older, *not* younger people. The roles and value of older farmers in rural communities are described. Methods for enlisting their help in promoting safety for the benefit of younger folks and themselves are discussed.

Public Policy and Aging Farmers

Kevin Rund, Illinois Farm Bureau

A look at the impact of government policies on an aging farmer population. More so than national policies, those nearer home at the state and local levels often are more direct and immediate.

Aging Farmer Conference Speaker Bio

Chike Anyaegbunam is an Associate Professor in the Integrated Strategic Communication program of the UK School of Journalism and Telecommunications. He teaches undergraduate and graduate courses including public relations and participatory communication. He also specializes in designing participatory communication strategies and media for rural community outreach projects related to civic engagement, agricultural safety and health, and economic wellbeing.

Chike earned his Ph.D. in Journalism and Mass Communication from the University of Iowa, 1994 and has served as a rural communication adviser for a variety of national and international development projects funded by the Pfizer and Robert Wood Johnson Foundations, the National Cancer Institute (NCI) through the Appalachian Cancer Network, the World Bank, the United Nations, and the United States Agency for International Development (USAID). He is currently the director of a national social marketing program to promote tractor safety funded by NIOSH/CDC through the UK Southeast Center for Agricultural Health and Injury Prevention.

He is the lead author of a book on participatory rural communication research. He has also co-authored articles published in several academic journals and book chapters on participatory rural communication research.

Karen Brents-Funkenbusch is an Extension Associate, Director, Missouri AgrAbility Program, and Rural Safety and Health Extension Specialist with the Food Systems and Bioengineering Unit at the University of Missouri-Columbia. Job responsibilities have evolved with the changing of times. For the past eleven years, she has coordinated statewide rural agricultural safety disability, health, and wellness educational programs; taught occupational, ergonomic, and safety courses; developed low literacy disability, health, and ergonomic educational materials; and evaluated extension rural safety and health outreach programs. More recently, she has taken on the responsibilities of developing agricultural safety, ergonomic, and online courses for students, adults, and health related professional. Her education includes B.S.E., Truman State University, 1983, Education: M.A., Truman State University, 1985: Guidance and Counseling and is currently working on a Ph.D., University of Missouri-Columbia, Educational Leadership and Policy Analysis, 2000 - Present. Her specializations are Primary: Rural agricultural disability, health, wellness, prevention, and program evaluation and Secondary: Guidance and Counseling.

Dr. Henry Cole is an Emeritus Professor of Educational Psychology and a Professor of Preventive Medicine and Environmental Health at the University of Kentucky. For 26 years his research has targeted occupational injury prevention in mining, construction, hazardous waste work, agriculture, and health care professions. He has been a part-time family farmer for 63, years, a teacher for 45 years, 5 years in public schools, and 40 years at the university level.

William E. Field is a Professor in Agricultural and Biological Engineering at Purdue University. Bill received his B.S. from the State University College at Buffalo, New York, and his M.A. and Ed.D from the University of Minnesota. He began as extension safety specialist and assistant professor in Agricultural Engineering at Purdue in 1977. Bill provides leadership for both the department and Purdue University's agricultural health and safety program which includes teaching, research and extension education components. He also supervises the Breaking New Ground Outreach Program which provides assistance to farmers with physical handicaps.

James (Jim) M. Gregory PhD, PE was reared on a family farm in Missouri. He now owns the farm and has an interest in farming. He completed his BS and MS degrees in Agricultural Engineering at the University of Missouri-Columbia. He served as the Repair Division Officer on the USS Intrepid then completed his PhD in Agricultural Engineering and Soil Physics at Iowa State University.

He worked in the Agricultural Engineering Department at the University of Missouri for eight years then moved to Texas Tech University where he has worked for the last 21 years. He served as Associated Dean for Undergraduate Studies for 10 years until 2004. He now serves as a Professor of Civil Engineering and is planning to retire in May from Texas Tech University and move to Shreveport, Louisiana to be close to grandchildren and maybe to start a second career.

Judith R. Guernsey, Ph.D. is Associate Professor in the Department of Community Health and Epidemiology in the Faculty of Medicine at Dalhousie University in Halifax, Nova Scotia, Canada. Her research focuses on the epidemiology and health policy implications of rural workplace and community environments with particular emphasis on agriculture. Her recent activities have been devoted to understanding contextual and compositional dimensions of health in rural, resource-reliant communities, and geospatial modeling of physical environmental health hazards. She is Director of the Canadian Institutes for Health Research *Atlantic RURAL Centre* on Physical and Social Environments and Health.

She currently serves as Past Chair of the Canadian Agricultural Safety Association, as an Advisory Council Member for the National Coordinating Centre on Environmental Health, Public Health Agency of Canada, and is a member of the Canadian Population Health Initiative Council. She also has contributed as a member of the Canadian Rural Health Research Society Executive Committee and the US Institute of Medicine Committee on Damp Indoor Spaces and Health. She chairs the Atlantic Provinces Agricultural Safety and Health Advisory Council and sits as a member of the Nova Scotia Farm Health and Safety Committee. Recognized in the American Industrial Hygiene Association's Who's Who in Industrial Hygiene, she was involved with setting up the Atlantic Provinces Section of the American Industrial Hygiene Association and was acknowledged by that organization for her outstanding leadership and commitment as Chair of the Occupational Epidemiology Committee in 1999.

Shannon K. Lizer PhD, APN has had a variety of experiences in nursing since her graduation with an Associate in Applied Science in Nursing (ADN) from Rock Valley College in 1977. Her clinical work has involved critical care nursing of adults and children, emergency services, and nursing leadership. After receiving her ADN, Dr. Lizer earned her BS in Nursing at Northern Illinois University, a Master's degree from UIC in nursing administrative studies, post-Master's work at Rush University in Chicago in the family nurse practitioner (FNP) program, and a PhD from Rush University. Her academic experience includes teaching at the University of Illinois College of Medicine in Rockford and at the University of Illinois at Chicago (UIC) as the former Director of the Occupational Health Nursing (OHN) Program and as an assistant clinical professor in the UIC College of Nursing, where she now continues as an adjunct faculty. Currently, Dr. Lizer is the Director of Nursing at Highland Community College in northwest Illinois. She continues her clinical practice as an FNP at the Freeport Veterans Affairs (VA) clinic. She is certified through the American Nurses Credentialing Center (ANCC) as an FNP, through the American Board of Occupational Health Nurses (ABOHN) as a certified occupational health nurse specialist (COHN-S), and is a licensed paramedic. She is active in many state and national organizations including the Illinois Society of Advanced Practice Nurses (ISAPN), the American Association of Occupation Health Nurses (AAOHN), and Sigma Theta Tau International.

Jim Mitchell: Originally from International Falls, MN, bordering NW Ontario, Canada, Jim Mitchell completed his undergraduate education in sociology at Bemidji State University in Minnesota. He completed graduate degrees in sociology at the University of Wyoming and Oklahoma State University prior to joining the sociology faculty at East Carolina University (ECU) in 1980. He formed an applied research Center on Aging in 1989, moved subsequently to the ECU Brody School of Medicine. The corpus of his work supported by the Kate B. Reynolds Health Care Trust, the American Cancer Society, the National Institute for Nursing Research, the National Cancer Institute, and the Agency for Health Care Research and Quality targets psycho-social factors affecting the use of health and other supporting services among older rural African-American adults. He is Associate Director of the Institute on Aging of the University of North Carolina system, Fellow of the Gerontological Society of America, Founding Fellow of the Association for Gerontology in Higher Education and UNC Institute on Aging, and he is completing a 4-year term as Editor of the Journal of Applied Gerontology.

John Myers is a Health Statistician within the NIOSH Division of Safety Research (DSR). He joined NIOSH, DSR in April of 1987. During his nearly 20 years with DSR, he has worked primarily in the area of occupational injury surveillance for the agriculture and logging industries. He currently directs the DSR surveillance program on childhood farm injuries and adult occupational farm injuries. Mr. Myers is a member of the NIOSH Agricultural Sector Steering Committee, as well as the Council of State and Territorial Epidemiologists (CSTE)/ NIOSH Occupational Health Working Group, which is promoting occupational public health surveillance at the state level. He holds a Masters of Science degree in Forestry from West Virginia University.

Karen Peters, DrPH is an Assistant Professor of Health Policy and Administration at the UIC School of Public Health and she holds joint appointments in the UIC Graduate College and in the Department of Family and Community Medicine at the College of Medicine in Rockford where she has served as Director of the Project EXPORT Health Disparities Education Core. Dr. Peters has more than 10 years of experience conducting applied public health prevention research and program evaluation on chronic disease interventions and has worked in the area of research translation to community practice with African American and Latino populations. Current and recently completed studies that she has is currently involved in include Co-Investigator on the CDC funded Illinois Prevention Research Center focusing on cardiovascular disease prevention and statewide evaluator for the IL Department of Public Health's Division of Oral Health, looking at the impact of the state's second State Oral Health Action Plan.

Deborah Reed obtained her PhD in nursing and a graduate certificate in gerontology from the University of Kentucky in 1996. She has conducted agricultural health and safety research since 1991. In addition to her research, Dr. Reed possesses a lifelong knowledge of farming, having been part of a family operated beef cattle farm since birth. She earned her undergraduate college funding by breeding and training Appaloosa horses. Her doctoral research, "Occupational Rehabilitation of Farmers with Upper-extremity Amputations" was funded by a predoctoral fellowship through NIH. Dr. Reed served as PI for two other NIOSH funded agricultural health studies, "Agricultural Disability Awareness and Risk Education," a curriculum for high school agricultural students, and the "Evaluation of Farm Safety 4 Just Kids Farm Safety Day Camps," in addition to her current study, "Sustained Work Indicators of Farmers Over Age 50." Dr. Reed is an associate professor in the College of Nursing, University of Kentucky where she teaches in the graduate and PhD programs. Two sisters aged 74 and 72, and a brother, age 62, and their spouses, still farm everyday so Dr. Reed is intimately aware of the health and safety challenges of farming for older adults.

Michael R. Rosmann, Ph.D., is a clinical psychologist and the Executive Director of AgriWellness, Inc., a nonprofit organization that provides behavioral health supports to the agricultural population. He manages his family farm, serves as an Adjunct Associate Professor in the College of Public Health at the University of Iowa and provides professional consulting services in several arenas: i.e., clinical psychology, expert witness, training of professionals and paraprofessionals in agricultural behavioral health and disaster behavioral health responses in rural areas.

Kevin Rund has worked with Illinois Farm Bureau since 1980. He is responsible for administering the staff and programs of local government including local issues and a number of state and federal issues that impact at the local level. He also covers land use planning and transportation issues for the organization. Prior to assuming his present position, Rund served as manager of the Warren County Farm Bureau. He also worked as executive assistant with the McLean County Farm Bureau and farmed prior to that. He and his wife Judy reside at Lexington, Illinois.

Dr. Marc Schenker received his M.D. degree from the University of California at San Francisco and his M.P.H. from the Harvard School of Public Health. He is currently Professor and Chair of the Department of Public Health Sciences at the University of California at Davis. Following training in internal medicine and pulmonary disease, Dr. Schenker directed his efforts at occupational health, epidemiology and preventive medicine. He has worked for over 20 years in these fields, addressing a wide range of public health issues. His recent research has focused on health of agricultural workers and health impacts of immigration. He is Director of the Western Center for Agricultural Health and Safety at Davis and Director of the Davis component of the Center for Occupational and Environmental Health. Dr. Schenker has published over 150 scientific manuscripts.

Michelle Umbarger-Mackey MSN, RN is a doctoral candidate studying Adult & Gerontological nursing at the University Of Iowa College Of Nursing. In 2003, she received her Master's of Science in Nursing specializing in Occupational Health Nursing. During her master's studies she also completed the agricultural health nurse training, a preceptorship at the National Educational Center for Agricultural Safety, and received a certificate in Agricultural Safety and Health from the University of Iowa. Her quest is to keep older farmers healthy and safe as they continue to work hard to feed our nation. Currently, she is beginning work on her dissertation exploring the association between medication use and risk for injury in a population of older farmers in Iowa. She is a 2005-2007 John A. Hartford Building Academic Gerontological Nursing Capacity Predoctoral Scholar and a 2006-2007 Occupational Injury Prevention Fellow within the Heartland Center for Occupational Health and Safety to assist her dissertation work with older farmers and injuries.

Dr. Don Voaklander received his BPE (with distinction) from the University of Alberta, Canada, his MSc from Queen's University, Canada and his PhD from the University of Alberta, Canada. Prior to his appointment as an Associate Professor, Dr. Voaklander worked with the Workers' Compensation Board of Alberta, Capital Health in Edmonton, Melbourne University in Australia and the University of Northern British Columbia in Prince George. He is also an Associated Research Scientist with the Alberta Centre for Injury Control and Research. His research interests include: injury epidemiology, surveillance, health outcomes, data linkage and health services research.

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