

# The Safety Net

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Injury Control Research Center

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## New Work Group Targets Prescription Drug Abuse

With unintentional poisoning now the second leading cause of injury-related death overall and the leading cause among adults ages 35 to 54 years, prescription drug abuse has become one of today's most critical public health problems.

In 2006, West Virginia, along with Utah, New Mexico, Oklahoma, and Nevada, had the highest rate of fatal poisonings from prescription opioid analgesics, or pain killers, according to the National Center for Health Statistics. Compared with the overall U.S. rate of 4.6 deaths per 100 thousand, the death rate in these five states was a staggering 10.5 to 15.6 per 100 thousand.

In recognition of this escalating public health problem, the ICRC has established a new work group to focus on the issue of prescription drug abuse. With expertise in such areas as community medicine, clinical pharmacy, emergency medicine, statistics, pharmaceutical systems and policy, drug therapy, and health ethics and law, work group members form an interdisciplinary team.

Beginning with a first meeting last March, this team of experts is working toward identifying priority research areas, as well as facilitating interdisciplinary collaboration

for future proposals. Subsequent work group meetings were convened in April, May, and September, and these efforts are ongoing.

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### From the Director:

On behalf of the entire ICRC staff, I would like to take this opportunity to wish everyone a joyous and safe holiday season. We would like to thank all of our faculty affiliates, students, and other participants for their many contributions to the Center over the past year. We are eagerly looking forward to several exciting new initiatives and affiliations in 2010!



With best wishes for a happy & healthy new year,

Jeff Coben, M.D.

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## Adverse Medical Events in the Elderly

### Research Update on Mary Carter

A 70-year-old woman who underwent hip replacement surgery five years ago undergoes corrective surgery after repeated visits to her orthopedist for treatment of pain and discomfort in the affected joint. Although the second surgery is successful, she no longer is able to lead the independent life she led before the initial hip replacement.

While this possible scenario would be serious at any age, medical errors, or adverse medical events, can be devastating among older people, who already may be frail or taking multiple medications with the potential to interact.

To identify risk factors and long-term outcomes associated with adverse medical events among people 65 years and older, the ICRC is conducting a new study led by Mary W. Carter, Ph.D., associate professor in WVU's Center on Aging and the Department of Community Medicine. The study started last May and is funded until April 30, 2011, by the National Institute on Aging as part of the American Recovery and Reinvestment Act.

"We are interested in understanding more fully how the experience of an adverse medical event affects the long-term use of and costs associated with health-care services and outcomes," Dr. Carter said.

As many as 98,000 deaths may occur each year due to medical errors, according to a 1999 Institute of Medicine report called "To Err is Human." Among the lucky ones who survive, medical errors may have other less devastating consequences such as lengthier hospitalizations, more expensive medical bills, and lasting disability.

"We're talking about events that are primarily preventable and have severe consequences for older adults," Dr. Carter said.



Mary Carter

Dr. Carter and ICRC co-investigators Jeffrey Coben, M.D., and Motao Zhu, Ph.D., are analyzing data from the nationally representative Medicare Current Beneficiary Survey conducted by the Centers for Medicare and Medicaid Services. Since medical errors often do not occur in isolation, but rather are the culmination of a series of events, the investigators plan to analyze eight years of data, Dr. Carter explained, including billing records.

This study differs from previous ones in its focus on the patient's medical history, rather than on the incidence of adverse medical events associated with a particular provider.

*"I don't think we can ignore the potentially devastating consequences of something that progresses to an in-hospital stay and necessitates surgery."*

—Mary Carter

Dr. Carter became interested in this area for both professional and personal reasons, she said. Through her studies of the variation in health outcomes among older adults, she noted that the number of elderly people seeking emergency care for adverse medical events

was disproportionately high. Personally, she saw firsthand the toll an adverse medical event takes when an elderly relative had to be hospitalized due to a medical error.

"I don't think we can ignore the potentially devastating consequences of something that progresses to an in-hospital stay and necessitates surgery," Dr. Carter said. "Ten days in bed versus five days in bed can mean the difference between being independent or being dependent on other people in the long run."

## Injury Prevention by Grandparents Assessed

When today's grandparents were raising their own children, they rarely considered whether toys and furniture contained lead-based paint. Many also used infant walkers, which the American Academy of Pediatrics has since recommended be banned because of their inherent danger.

With increasing numbers of grandparents who may or may not be aware of these potential hazards providing care for their young grandchildren, a new ICRC study is investigating the incidence of unintentional injuries among grandparents and grandchildren, as well as grandparents' knowledge about injury prevention.

"When their children were young, the risks were different than the risks that children face now, so it's important to help these grandparents stay up to date," said Julie Hicks Patrick, Ph.D., associate professor in WVU's Department of Psychology and principal investigator on the study, which started last August.



*"It's particularly important from a public-health perspective that we look at what these caregivers know and what they do ..."*

*—Julie Hicks Patrick*

Three-thousand West Virginian women 40 years or older will receive invitations to participate in a random survey. Dr. Patrick hopes to obtain 800 completed surveys from grandparents ranging from primary caregivers to "weekend" babysitters, as well as from older mothers in their 40s and 50s.

"We'll be able to compare knowledge across different levels of involvement with children, as well as whether it's the grandparent relationship or the parent relationship," Dr. Patrick said.

As more parents today work outside the home than ever before, grandparents provide the majority of non-parental child care in the U.S. In 2000, the Census Bureau estimated that more than 5 million grandparents were living with their grandchildren and that a large number of them helped provide child care. In West Virginia, census data indicate that more than 52 percent of grandparents take primary responsibility for child care, while the national average is 42 percent.

"It's actually a good thing that the number of families in which a grandparent is raising a grandchild is higher in West Virginia than the national average," Dr. Patrick said of choosing the state for the study site. "With other forms of child care provided by grandparents, the estimates are somewhere between 60 and 80 percent of West Virginia grandparents provide significant child care."

The anonymous survey includes questions about the grandchildren's injury history, as well as the caretakers'. These self reports may reveal more injuries than hospital records, explained Dr. Patrick, since childhood injuries do not always result in emergency department visits. In addition, the comprehensive survey includes questions designed to measure knowledge about child safety and injury prevention.

"There's been very little research that has examined the effects on grandchildren who are raised or cared for by grandparents," Dr. Patrick said. "It's particularly important from a public-health perspective that we look at what these caregivers know and what they do, and possibly support them in their efforts or help educate them in ways to continue to keep children safe."

### Snapshot: Educating Policymakers on the Importance of Injury Control

The WVU ICRC is one of 18 collaborating programs working to educate members of Congress about the importance of including injury prevention in federal health-care reform. Organized by the Johns Hopkins Bloomberg School of Public Health, the educational campaign is designed to raise Congressional

awareness of the tremendous toll injury takes in terms of morbidity and mortality, as well as health-care spending. More information about this partnership is available on-line at: [www.jhsph.edu/InjuryCenter/HealthCareReform](http://www.jhsph.edu/InjuryCenter/HealthCareReform).

## Partnership Examines Medicaid Costs of Injury

The day after Pennsylvania repealed its mandatory motorcycle helmet law on September 5, 2003, a 21-year-old motorcycle passenger without health insurance suffered massive head trauma in a crash that threw him headfirst to the pavement.

The man, who was not wearing a helmet, was enrolled in Medicaid to help pay his medical fees, which totaled more than \$255,000 by the end of his initial treatment. Suffering severe cognitive impairment, he spent 40 days in the hospital and then was transferred to a rehabilitation center. Upon his discharge, Medicaid was responsible not only for the cost of his initial injury, but for all of his medical expenses.

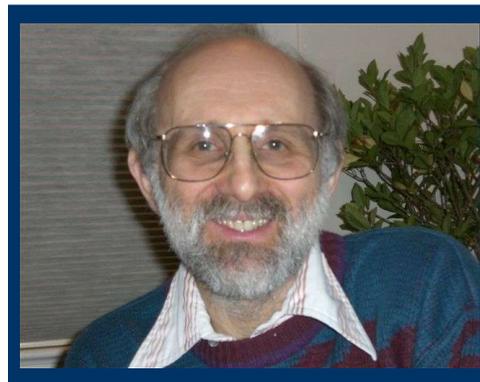
In this situation and countless others, the precise cost of Medicaid payments resulting from catastrophic injury—defined as one resulting in disability or a hospital stay of longer than five days—is unknown.

To quantify this expense, the ICRC is embarking on a new collaborative project with the Pacific Institute for Research and Evaluation (PIRE). Principal investigator Ted Miller,

Ph.D., and co-principal investigator Eduard Zaloshnja, Ph.D., both ICRC affiliates with PIRE, and co-investigator Michael Smith, Ph.D., ICRC affiliate at the University of Oklahoma College of Pharmacy, are analyzing data from 2003 Medicaid files for 15 states, including Arizona, Colorado, Florida, Kentucky, Maine, Michigan, Missouri, Nebraska, New Jersey, North Carolina, Oregon, Washington, Wisconsin, Virginia, and West Virginia. In addition, they are looking at longitudinal Medicaid files from West Virginia and hospital discharge data from the Health Care Utilization Project.

“We don’t know whether people with catastrophic injury stay on Medicaid for life or whether they stay on for six months,” Dr. Miller explained. “We do know that the government’s cost of medical care for these people is much larger than just the cost of the medical bill for the injury.”

In 2006, 3 million people in the US were hospitalized with injuries, according to discharge data from the National Center for Health Statistics. When a catastrophic



*Ted Miller*

injury occurs in the uninsured or underinsured, the patient often applies to Medicaid to pay mounting, long-term medical bills.

In the long run, data on Medicaid spending after catastrophic injury may help guide regulatory analysis by giving federal and local governments more information about how costly legislative changes may be.

“For example,” Dr. Miller said, “state governments that are considering repealing motorcycle helmet laws like Pennsylvania did would have a more precise idea of the ultimate monetary cost if such laws were repealed.”

## Prescription Drug Abuse Work Group

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Several analytic projects have already been completed and a number of new research investigations are under development. Ultimately, our goal is to translate public health research into practical and lasting solutions to the prescription drug abuse crisis.

Anyone interested in joining this work group should contact Dr. Coben at [jcoben@hsc.wvu.edu](mailto:jcoben@hsc.wvu.edu).

## ICRC Seeking New Faculty

The WVU ICRC seeks applicants for up to three full-time tenure-track faculty positions (open rank), to participate in the expansion of a multidisciplinary injury research program. The successful candidates will serve as Core Faculty of the WVU ICRC—one of 11 CDC-funded injury centers nationwide. The ICRC is located within the School of Medicine at the Robert C. Byrd Health Sciences Center, in Morgantown, West Virginia.

This recruitment is intended to expand the depth of the ICRC and also fit within the WVU Health Sciences Center's Strategic Research Plan, which provides guidance for biomedical, public health and translational clinical research consistent with the NIH Roadmap. ICRC faculty will also participate in a recently established Clinical and Translational Science Institute. While candidates from any background relevant to the science of injury control are encouraged to apply, we seek to align these recruitments with specific population health needs in West Virginia, with emphasis on injury among the elderly population, neurological trauma, and prescription drug abuse/poisonings.

Applicants should have a terminal degree and academic preparation/expertise in one or more of the following areas: epidemiology, biostatistics, social and behavioral sciences, population health, health services research, acute injury care, or translation/ dissemination research. Candidates should be able to collaborate with multidisciplinary research teams of basic, clinical, and applied researchers, and also develop their own program of funded research.

The ICRC has close ties with multiple departments and research

centers, including the CDC-funded Prevention Research Center, the Center on Aging, the HRSA-funded West Virginia Rural Health Research Center, and the Collaborative Health Outcomes Research of Therapies and Services Center. We are adjacent to, and a frequent research and educational collaborator with CDC's National Institute for Occupational Safety and Health (NIOSH). The Department of Community Medicine has national research programs, a thriving, CEPH-accredited M.P.H. program, and a new Ph.D. program in Public Health Sciences with multiple specialty tracks. The Department of Pharmaceutical Systems and Policy has a well-established Ph.D. program in Health Outcomes Research.

Candidates should have a record of, or significant promise for, excellence in research and teaching in relevant areas, as well as peer-reviewed publications. Experience and participation in NIH or other federally-funded research is an advantage. Primary responsibilities are to develop and maintain an independently funded research portfolio consistent with ICRC objectives. New hires are expected to achieve NIH or comparable competitive extramural funding within four years. A variety of support mechanisms are in place to help achieve this goal, including involvement in our current and future Center grant activities.

Graduate teaching and mentorship are expected, and excellent communication skills are important. Each new position comes with a competitive salary and start-up package. A faculty appointment in an appropriate department within the WVU Health Sciences Center will be provided, commensurate with background and experience.

West Virginia University is a comprehensive, land-grant, Carnegie-designated Doctoral Research/ Extensive public institution, with approximately 20,000 undergraduates plus more than 6,000 graduate and professional students. The Health Sciences Center includes the Schools of Medicine, Pharmacy, Dentistry and Nursing, each of which offers professional and graduate training programs. Patient care facilities include a 460-bed teaching hospital, a Level I trauma center, and a 70-bed psychiatric hospital.

Morgantown is consistently and broadly rated as one of the best small towns in the U.S., with affordable housing, excellent schools, a picturesque countryside, outdoor recreational activities, and close proximity to major cities, such as Pittsburgh and Washington, D.C. The WVU Health Sciences Center is participating in a major research facility and faculty expansion.

Interested candidates should submit a cover letter describing their research and teaching experience, listing of contact information for three references, and curriculum vitae to Jeffrey H. Coben, M.D., Director, WVU Injury Control Research Center, Robert C. Byrd Health Sciences Center, PO Box 9151, Morgantown, WV 26506-9151, or submit by email to [jcoben@hsc.wvu.edu](mailto:jcoben@hsc.wvu.edu) and cc: [dfulaytar@hsc.wvu.edu](mailto:dfulaytar@hsc.wvu.edu).

The search will remain active until the positions are filled.

WVU is an Affirmative Action/Equal Opportunity Employer.

Women and minorities are encouraged to apply.