

The Safety Net

A publication of the West Virginia University
Injury Control Research Center

Spring 2010

Advisory Committee Praises Center's Productivity

From the Director:

Praise for the ICRC's achievements, both recent and past, highlighted this spring's well attended and productive advisory committee meeting.

Among the achievements cited were new faculty recruitment and our affiliated faculty expansion to include numerous disciplines. The committee lauded our manuscript productivity and new research initiatives both within and outside of WVU. It also highlighted the ICRC's largest active study, the Nurse Family Partnership domestic violence intervention, as one of our strongest endeavors.

The committee recognized the ICRC's role as a graduate student training hub, noting that the Center has established a strong curriculum for injury control and has succeeded in attracting and mentoring a number of public health graduate students. The committee also recognized the Center's basic training curriculum specifically for medical students. Possible strategies recommended for expanding our training activities include opening courses and/or seminars to undergraduate students and graduate students from other disciplines across the university, and establishing mini-grant competitions for students.

As always, committee members provided valuable suggestions for the Center's future research activities.

They agreed that our emphasis on rural health and safety, and prescription drug abuse should continue, but also felt that it would be useful to foster research into traumatic brain injury and injury disparities among different populations.



Jeffrey Coben

An emerging area that the committee agreed needs further development is our work in knowledge translation. In the past, we have provided information about our activities via our website. As we continue to grow, however, our outreach activities also must evolve and the committee concurred that the Center should become more proactive in this critical area. As a first step, it is important to identify our target audience and then work with that audience to define what information would be most useful and how best to disseminate it.

I would like to thank our esteemed committee members for their continued insight and support in our ongoing mission to study, understand, and, ultimately, prevent injuries.

Inside:

<i>Drug hospitalizations on rise</i>	<i>Page 2</i>
<i>Kimberly Rauscher joins ICRC</i>	<i>Page 3</i>
<i>M.P.H. graduate Christen Seaman</i>	<i>Page 4</i>
<i>ICRC international collaboration</i>	<i>Page 5</i>
<i>Faculty attending Safety 2010</i>	<i>Page 5</i>
<i>Affiliated faculty publications</i>	<i>Pages 6-7</i>
<i>ICRC seeking new faculty</i>	<i>Page 8</i>

Injury Control Research Center
West Virginia University
White Birch Towers, Suite 4
1299 Pineview Drive
Morgantown, WV 26505
Telephone: (304) 293-6682
Fax: (304) 293-0265

Hospitalizations from Prescription Drug Use at Record High

Study Garners National Attention

Poisoning-related hospitalizations increased by nearly two-thirds over seven years, according to research led by ICRC Director Jeffrey Coben, M.D., that is attracting national media attention.

From 1999 to 2006, hospitalizations from opioid, sedative, and tranquilizer poisonings increased by 65 percent, Coben and his co-investigators found in the study, which appeared in the May issue of the *American Journal of Preventive Medicine*. The study's findings were reported by numerous national media outlets, including *CNN*, *Scientific American*, *Reuters*, *US News and World Report*, and *KCRW*, an affiliate of national public radio that broadcasts to stations nationwide.

This drastic increase in prescription drug-related hospitalizations was double that associated with other drugs. Over the seven years studied, the class of tranquilizers known as benzodiazepines was associated with the largest increase in hospitalizations. At 400 percent, the synthetic narcotic methadone had the largest percentage increase in hospitalizations.

Demographically, the patients hospitalized for prescription drug poisonings were more likely than those receiving treatment for other poisonings to be women and older than 34 years of age.

For this study, Coben and his team analyzed data from the Nationwide Inpatient Sample, which contains the diagnosis upon hospital discharge for a representative eight million patients each year. From this data, the investigators compared clinical and demographic characteristics of patients who had been poisoned, as well as whether the poisoning was intentional or unintentional.

“It is essential that healthcare providers, pharmacists, insurance providers, state and federal agencies, and the general public all work together to address this crisis.”

Jeffrey Coben

While the recent prescription drug-related deaths of high profile celebrities like Michael Jackson and Heath Ledger made the news, people of all ages, professions, and socioeconomic groups are affected by abuse of these drugs.

In the U.S., the death rate from unintentional poisoning has climbed steadily since 1990 to become the second leading cause of death from unintentional injury, according to the Centers for Disease Control and Prevention. In 2005, 23,618 people died from unintentional poisoning, and

95 percent of those deaths were attributed to drug overdoses.

Despite this increase in deaths, little information was available about hospitalizations associated with prescription drug poisoning. The goal of this study was to clarify the link between this kind of drug abuse and hospitalization and, ultimately, to help develop interventions for at-risk individuals before drug abuse results in hospitalization and/or death.

“It is essential that healthcare providers, pharmacists, insurance providers, state and federal agencies, and the general public all work together to address this crisis,” Coben said. “Prescription medications are just as powerful and dangerous as other notorious street drugs, and we need to ensure people are aware of these dangers and that treatment services are available for those with substance abuse problems.”

Co-investigators on the study, called “Hospitalizations for Poisoning by Prescription Opioids, Sedatives, and Tranquilizers,” include Stephen M. Davis, M.P.A. M.S.W.; Paul M. Furbee, M.A.; Rosanna D. Sikora, M.D.; Roger D. Tillotson, M.D.; and Robert M. Bossarte, Ph.D.

Kimberly Rauscher Focuses on Adolescent Occupational Injury

As the newest faculty member in the Department of Community Medicine and the ICRC, Kimberly Rauscher brings expertise in occupational-injury prevention among adolescents. She comes to the WVU from the University of North Carolina's (UNC) Injury Prevention Research Center.

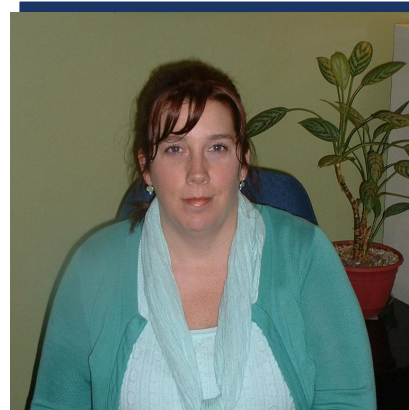
"It seemed like a really good fit for me because there's a lot of occupational injury work happening here at the university," Rauscher said when asked about her decision to join the ICRC. "I'm very happy with the decision to come here."

Currently, Rauscher is leading two main investigations that she brought with her when she came to WVU last February. One nearing completion is examining possible violations of child-labor laws and occupational-safety standards in cases of teenagers killed while working in North Carolina between 1990 and 2008. Her initial findings describing the types of fatalities that occurred are being published in the *American Journal of Industrial Medicine*. She is now analyzing the data further to determine whether violations occurred, and, if so, what kinds, and will present these findings at the American Public Health Association's annual meeting in Denver, CO this fall.

Another of Rauscher's projects in transit from UNC is a study of adolescent "occupational-health literacy," a term she coined to describe access to health and safety information, and the knowledge and skills needed to stay safe at work. In this study, Rauscher is examining occupational-health literacy among adolescents of different socioeconomic levels. The study developed from previous research, conducted with her colleague husband, Dr. Douglas Myers, of Duke University, which found that low socioeconomic status among adolescents was linked to a greater risk of injury in the workplace.

When asked about her professional collaboration with her husband, Rauscher replied: "He is an occupational epidemiologist and has the data skills. My expertise is really in policy. I think we manage to make a pretty good team."

One of Rauscher's newer projects is an application to the National Institute for Occupational Safety and Health (NIOSH) to study



Kimberly Rauscher

a work-place health and safety curriculum that the institute helped develop for high schools. Called "Youth at Work: Talking Safety," the curriculum is available for free on the NIOSH web-site in 50 state-specific formats that encompass the different child labor laws within the states. Despite its easy availability, Rauscher explained, little information is available regarding its use in classrooms.

"We want to go talk to those teachers who have been trained in the curriculum and find out if they're using it," she explained. "We really want to take a look at who's using it, why, why not, and get an understanding of what the barriers and facilitators are to using it."

Originally from Boston, Rauscher was at UNC for four years before coming to WVU. Her first position at UNC was as Senior Research Scientist in the Injury Prevention Research Center, and she later became Adjunct Faculty in the Gillings School of Global Public Health.

She obtained a doctor of science, concentrating in policy, from the Work Environment Department, and her master of arts from the Department of Regional Economic and Social Development, both at the University of Massachusetts, Lowell. Her bachelor of arts is in political science from the University of Massachusetts, Amherst.

Rauscher's experience is an asset to the ICRC, according to Director Jeff Coben, M.D.

"We're delighted to have Kimberly join us and are already benefiting from her considerable talents as a researcher and strategic planner," he noted.

M.P.H. Graduate Gets a Kick Out of Injury Prevention

On a recent warm June morning, Christen Seaman sat in her office at the ICRC dressed casually in sports pants and a sweat shirt. With her hair pulled back in a ponytail, she looked like she was ready for a game of soccer, which she has played since the age of five.

In fact, Seaman owes her graduate assistantship at the ICRC, at least in part, to soccer. Three years ago, as she was completing her master's in biochemistry at WVU, she also was coaching a children's soccer team when she met Robert Bossarte, Ph.D., formerly of the ICRC, whose daughter was on her team. He suggested that Seaman call him if she had any interest in public health. They met to discuss the public health master's degree program at WVU, she decided to enroll, and this spring she completed her degree.

For the past year, Seaman has worked in the ICRC as a graduate research assistant. Working with Jeffrey Coben, M.D., she is studying pain management and patient satisfaction in the Emergency Department setting. Before Bossarte left WVU for joint appointments with the Veteran's Administration Medical Center at Canandaigua and the University of Rochester, she also collaborated with him on a study of suicide rates in rural areas.

Describing her experience with the ICRC, Seaman said: "[It's] filled with great people and is just an amazing atmosphere in which to further your education. Not only in my classes, but the faculty here have always been very receptive to me; I think to anybody coming in. They're very open to helping you obtain your long-term goals in your life."

Her immediate plan is to begin a one-year research fellowship at the National Institute for Occupational Safety and Health in Morgantown. She will be working on work-related asthma and silicosis, which are new research areas for her. Seaman received the fellowship offer after an intense 12-week selection process, and is excited not only for the professional opportunity, but for the chance to stay in the city that she fell in love

with when she moved here as an undergraduate soccer player from St. Louis, MO.

"I just came here to play soccer pretty much and wound up loving the community and staying in the community coaching, as well as taking classes," she explained.

After spending a few minutes with her, it becomes clear that Seaman is known by another name to many, if not most, people. Her father gave her the childhood

nickname "Suggie," for "Sugar," and the name has followed her ever since. For a while, only fellow athletes on the soccer field called her Suggie, but now her ICRC colleagues do, as well, she said.

"It's almost like two different worlds," she explained when asked about her nickname. "In the soccer world I am Suggie. In the academic world, I'm Christen. Now finally it has crossed over."

And that's exactly what she hopes to do in her career: combine sports with medicine by becoming a pediatric orthopedist. She now is studying for her MCATs and plans to begin applying to medical school. Where would she like to go?

"I'd love to go to WVU," she said, adding: "but I'm not limiting my options."



Christen Seaman

Center Work leads to International Study of Family Violence and Mental Health

Several ICRC-affiliated faculty are collaborating on a new \$2 million international project that developed from ongoing ICRC-supported work in the area of family violence and mental health. Funded by the Canadian Institutes of Health Research (CIHR), the project is called “The Centre for Research Development in Gender, Mental Health and Violence Across the Lifespan: Preventing Gender Violence.”

The investigators plan to study the connection between mental health problems and family violence and will work closely with the community to develop strategies to prevent child abuse, intimate partner violence, and subsequent mental health problems.

"With family violence affecting at least 30 percent of Canadians, there is a pressing need for a coherent and integrated approach to the problem of family violence and its mental health outcomes, and to look at this for both males and females," said lead investigator Harriet MacMillan, M.D., pediatrician

and psychiatrist at the Offord Centre for Child Studies at McMaster University, Ontario, Canada.

Child abuse and intimate partner violence are global public health problems that can permanently affect mental health. Despite this known link, little research has identified effective strategies to prevent family violence or to understand the concept of resiliency and how it may protect some from the adverse mental health consequences of violence.

The new center is one of three selected by the CIHR's Institute of Gender and Health to study family violence. In addition to Drs. MacMillan and Coben, other co-investigators include Dr. Helen Herrman, University of Melbourne; Dr. Donna Stewart, University of Toronto; and Dr. Nadine Wathen, University of Western Ontario.

This article was reprinted in part from the Canadian Institutes of Health Research.

Faculty to Present at Safety 2010 World Conference

Department of Community Medicine Assistant Professors Motao Zhu, Ph.D., and Kimberly Rauscher, M.A., Sc.D., will present their research at the Safety 2010 World Conference in London, U.K., September 21st-24th.

Zhu's presentation is called "Trend analysis of drug-related motor vehicle crashes in the United States." His co-investigators are Songzhu Zhao, Thomas M. Rice, and ICRC Director Jeffrey H. Coben.

Rauscher is presenting her study called "Exploring social contexts at work and how they affect the safety of young construction workers," and her co-investigators include Douglas J. Myers, Carol W. Runyan, and Michael Schulman.

Co-sponsors of Safety 2010 are the World Health Organization (WHO), the WHO Collaborating Centre for Violence Prevention at the Centre for Public Health, Liverpool John Moores University, and England's Department of Health, Health Protection Agency, and Department of Children, Schools and Families. Safety 2010 is the 10th annual international conference on injury prevention and safety promotion, and this year's theme is "Safe and Equitable Communities."

Publications from Affiliated Faculty 2009 - 2010

- Bowman S, Aitken ME, Helmkamp J, Maham S, Graham C. Impact of helmets on injuries to riders of all-terrain vehicles. *Injury Prevention* 2009; 15:3-7.
- Coben J, Tiesman H, Bossarte R, Furbee P. Rural-urban differences in injury hospitalizations in the United States, 2004. *American Journal of Preventive Medicine* 2009; 36(1):49-55.
- Mujuru P, Helmkamp JC, Mutambudzi M, Hu W, Bell J. Evaluating the impact of an intervention to reduce injuries among loggers in West Virginia, 1999-2007. *Journal of Agricultural Safety and Health* 2009; 15(1):75-88.
- Carpenter C, Scheatzle M, D'Antonio J, Ricci P, Coben JH. Identification of fall risk factors in older adult emergency department patients. *Academic Emergency Medicine* 2009; 16:211-219.
- Bossarte R, Swahn M, Breiding M. Racial, ethnic, and sex differences in the associations between violence and self-reported health among US high school students. *Journal of School Health* 2009; 79(2):74-81.
- Nasrullah M, Haqqi S, Cummings K. The epidemiological patterns of honour killing of women in Pakistan. *European Journal of Public Health* 2009;19(2):193-197.
- Helmkamp JC, Carter MW. All-terrain vehicle deaths among older adults in West Virginia: Evidence suggesting that '60 is the new 40.' *Southern Medical Journal* 2009;102(5):465-469.
- Helmkamp JC, Aitken M, Lawrence BA. ATV and bicycle deaths and associated costs in the United States, 2000-2005. *Public Health Reports* 2009;124:409-418.
- Hall AJ, Bixler D, Helmkamp JC, Kraner JC, Kaplan JA. Fatal all-terrain vehicle crashes: Injury types and alcohol use. *American Journal of Preventive Medicine* 2009;36(4):311-316.
- Leontieva L, Horn K, Helmkamp J, Manley W, Furbee P. Counselors' reflections on the administration of screening and brief intervention (SBI) for alcohol problems in the emergency department and 3-month follow-up outcome. *Journal of Critical Care* 2009;24(2):273-279.
- Zhu M. Effects of graduated driver licensing on licensure and traffic injury rates in Upstate New York. *Accident Analysis and Prevention* 2009;41(3):531-535.
- Rockett IRH, Lian Y, Stack S, et al. Discrepant comorbidity between minority and white suicides: A national multiple cause-of-death analysis. *BMC Psychiatry* 9; 2009;10doi:10.1186/1471-244X-9-10.
- MacMillan HL, Wathen CN, Jamieson E, Boyle MH, Shannon HS, Ford-Gilboe M, Worster A, Lent B, Coben JH, Campbell JC, McNutt L, for the McMaster Violence Against Women Research Group. Screening for Intimate Partner Violence in Health Care Settings – A Randomized Trial. *JAMA* 2009;302(5):493-501.
- Banks D, Hazen AL, Coben JH, Wang K, Griffith JD. Collaboration between child welfare agencies and domestic violence service providers: Relationship with child welfare policies and practices for addressing domestic violence. *Child Youth Serv Rev* 2009;31(5):497-505.
- Razzak JA, Ahmed A, Saleem AF, Nasrullah M. Perceived need for emergency medicine training in Pakistan: a survey of medical education leadership. *Emergency Medicine Australasia* 2009;21:143-146.
- Jenkins MD, Jones DL, Billings AA, Ackerman ES, France JC, Jones ET. Early weight bearing after complete tibial shaft fractures in children. *Journal of Pediatric Orthopaedics B*. 2009;18(6):341-346.

continued on next page

Affiliated Faculty Publications 2009 - 2010

continued from previous page

- Minardi J, Crocco TJ. Management of Traumatic Brain Injury: First Link in Chain of Survival. *Mt. Sinai J Med.* 2009;76:138-144.
- Kelley, G.A., Kelley, K.S. (2009). Exercise and unintentional injuries: A meta-analysis of randomized controlled trials. *Journal of Exercise Physiology online.* 12:8-22.
- Zhu M, Li L, Liu X, Zhao D, Lin J. Injury-related hospitalizations in a rural county of Southern China, 1994-2005. *Inj Prev* 2009;15:421-424.
- Kelley GA, Kelley KS, Hootman JM, Jones DL. Exercise and health-related quality of life in older community-dwelling adults. *J Appl Gerontol* 2009;28(3):369-394).
- Yang T, Rockett IRH, Yang X, Xu X. Patterns and correlates of stress in Chinese rural males: A four-region study. *Public Health* 2009;123:694-698.22)
- Blosnich JR, Bossarte RM. Comparisons of intimate partner violence among partners in same-sex and opposite-sex relationships in the United States. *Am J Public Health* 2009;99(12):2182-2184).
- Nasrullah M, Muazzam S. Newspaper reports: a source of surveillance for burns among women in Pakistan. *J Public Health Med* 2009;doi:10.1093/pubmed/fdp102 (advance access, November 2009)
- Nasrullah M, Razzak JA. Firearm injuries presenting to a tertiary care hospital of Karachi, Pakistan. *J Inj Violence Res* 2009;1(1):27-31.
- Choudhary E, Coben J, Bossarte RM. Adverse health outcomes, perpetrator characteristics, and sexual violence victimization among U.S. adult males. *J Interpers Violence* 2009;DOI:10.1177/0886260509346063 (<http://jiv.sagepub.com>).
- Coben JH, Davis SM, Furbree PM, Sikora RD, Tillotson RD, Bossarte RM. Hospitalizations for poisoning by prescription opioids, sedatives, and tranquilizers. *Am J Prev Med* 2010;38(5)517-524.
- Cain L, Helmkamp J. Geographic and temporal comparisons of ATV deaths in West Virginia, 2000-2008. *W VA Med J* 2010;106:26-29.
- Awan S, Nasrullah M, Cummings KJ. Health Hazards, Injury Problems, and Workplace Conditions of Carpet-Weaving Children in Three Districts of Punjab, Pakistan. *Int J Occup Environ Health* 2010;16:115-121.
- Rauscher, K. J., C. W. Runyan, et al. (In Press). "Awareness and Knowledge of the US Child Labor Laws Among a National Sample of Working Teens and their Parents." *J Adolesc Health.*
- Rauscher, K. J., C. W. Runyan, et al. (In Press). "Work-related Fatalities Among Youth Ages 11-17 in North Carolina, 1990 - 2008." *Am J Ind Med.*
- Vladutiu CJ, Rauscher KJ, Runyan CW, Schulman M, Villaveces A. Hazardous task recognition among U.S. adolescents working in the retail or service industry. *Am J Ind Med.* In Press.
- Zullig KJ, Young M, Hussain M. Distinguishing between positive and negative social bonding in problem drinking among college students. *American Journal of Health Education* (In press).
- Nimbarte, A. D., Aghazadeh, F., Ikuma, L.H. Harvey, C. Neck disorders: understanding the physical loads on the cervical spine during static lifting. *Industrial Health* (In press).
- Behanam M, Tillotson RD, Davis SM, Hobbs GR. Violence in the 21st century emergency department: a national perspective. *J Emerg Med.* In press.

ICRC Seeking New Faculty

West Virginia University (WVU) seeks applicants for a full-time tenure-track faculty position at the Associate Professor or Professor rank, to participate in the continued expansion of a multidisciplinary injury research program. The successful candidate will serve as Core Faculty of the WVU Injury Control Research Center (ICRC) – one of eleven 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.

Applicants for this position should possess a terminal degree and have academic preparation/expertise in a field relevant to the science of injury control. Candidates should have a record of excellence in research and teaching, as well as an active research program with transferable funding. Candidates should be able to demonstrate how their research portfolio addresses topics and priorities included within the CDC's Injury Research Agenda. Primary responsibilities will be to maintain an independently funded research program that is consistent with the objectives of the ICRC. Graduate teaching and mentorship is expected, and excellent communication skills are important. Candidates should be able to collaborate with multidisciplinary research teams of basic, clinical, and applied researchers, and also maintain 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 several national research programs, a thriving, CEPH-accredited M.P.H. program, and a new PhD 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.

The 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 the individual's background and experience. West Virginia University is a comprehensive, land-grant, Carnegie-designated Doctoral Research/Extensive public institution, with approximately 22,000 undergraduates plus 5,500 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, many outdoor recreational activities, and close proximity to major cities, such as Pittsburgh and Washington, DC. 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 and cc: dfulaytar@hsc.wvu.edu. The search will remain active until the position is filled.

WVU is an Affirmative Action/Equal Opportunity Employer.
Women and minorities are encouraged to apply.



Injury Control Research Center