



**Boston Medical Center**  
**Injury Prevention Center**

ANNUAL REPORT 2014-2015



The background of the page is a faded, high-contrast medical X-ray image, likely of a human torso. Overlaid on the X-ray are various technical labels and numbers, such as 'KV 130', 'mA 120', 'F. 77Y', and '20-Jan-20'. A solid purple horizontal bar is positioned across the middle of the page, containing the section header 'OUR MISSION' in white, bold, uppercase letters.

## OUR MISSION

The Injury Prevention Center (IPC) conducts and facilitates research on the causes, treatment, and prevention of violence-related and unintentional injuries and promotes inter-disciplinary collaboration across academic and clinical disciplines, research and teaching institutions, and legislative, regulatory, and policy-making entities. Through education, research, and advocacy, the IPC fosters engagement in injury research among students, clinicians, and researchers.



Jonathan S. Olshaker, MD



Peter A. Burke, MD

We are pleased to present the 2014-2015 annual report of the Boston Medical Center (BMC) Injury Prevention Center. This year marks the fifth anniversary of the Center, which continues to grow under the leadership of Executive Director Jonathan Howland, PhD, MPH, MPA, and Deputy Director, Traci Green, PhD, MSc, whom we welcomed to the Center in 2015. The Center brings together the Department of Emergency Medicine, Department of Surgery, Division of Acute Care and Trauma Surgery, and many BMC, Boston University School of Medicine (BUSM), and Boston University School of Public Health (BUSPH) faculty and staff with the combined mission of injury prevention, research, education and advocacy. This report highlights our programs focusing on violence intervention, treatment for substance use disorder and harm reduction, fall prevention, and many others that are making significant contributions to local, national, and international injury prevention efforts.

Sincerely,

Jonathan S. Olshaker, MD  
Chief and Chair,  
Department of Emergency Medicine  
Boston Medical Center,  
Boston University School of Medicine

Peter A. Burke, MD, FACS  
Chief, Acute Care & Trauma Surgery,  
Boston Medical Center,  
Professor of Surgery,  
Boston University School of Medicine

## A UNITED VISION

The BMC Injury Prevention Center (IPC) was founded in July 2010 with support from the Department of Emergency Medicine and the Division of Trauma Surgery. This joint investment reflects a commitment to expand the missions of each to develop a viable, self-sustaining, long-term institution for injury prevention research and practice. The IPC was founded on the shared belief that:

- Many of the injuries treated at BMC are preventable
- Treatment should include intervention to prevent subsequent injury
- There is increasing evidence of the effectiveness of Emergency Department-based brief behavioral interventions
- BMC is positioned to become a nationwide leader in injury prevention research and intervention.



## LEADERSHIP COMMITTED TO IMPROVING LIVES

The IPC staff brings together a wealth of experience to create a world-class center for research and training in the field of injury prevention and education. The BMC Injury Prevention Center is staffed by the following individuals:

### IPC ADMINISTRATION

**Jonathan Olshaker, MD**, *Chief of the Department of Emergency Medicine, BMC, Professor and Chair of the Department of Emergency Medicine at BUSM.* Dr. Olshaker is the Senior Editor of Forensic Emergency Medicine, co-editor of the new textbook Geriatric Emergency Medicine, and a co-editor of five editions of the Emergency Medicine Clinics of North America. He serves on the editorial board of the American Journal of Emergency Medicine, the Western Journal of Emergency Medicine, and is Section Editor for Public Health and Emergency Medicine in the Journal of Emergency Medicine. He is a nationally recognized lecturer and expert on managing Emergency Department overcrowding. Dr. Olshaker is also a retired Captain in the United States Naval Reserve after a 26-year career.

**Peter Burke, MD, FACS**, *Chief, Acute Care & Trauma Surgery, BMC, Professor of Surgery at BUSM.* Dr. Burke's major areas of interest are critical care and trauma and he has a broad surgical practice in all areas of general surgery. He is actively involved in medical student and resident teaching in the areas of trauma, shock, and sepsis. His professional interests include clinical and lab research on topics including: liver trauma, patient nutritional support in hospital and at home, and molecular, metabolic and immunologic responses in sepsis and injury.

### IPC LEADERSHIP



**Jonathan Howland, PhD, MPH, MPA** – *IPC Executive Director and Professor of Emergency Medicine at BUSM.* Dr. Howland has 30 years of experience in injury research with emphasis on traffic safety, older adult falls, and alcohol's contribution to error in safety sensitive occupations. His research includes epidemiological studies of risk factors for burns, falls, traffic injuries, drowning and non-combat military injuries, and experimental trials of interventions for traffic safety. His work also includes randomized alcohol administration trials on the acute occupational and neurocognitive effects of low-dose alcohol consumption and next day effects of intoxication. Dr. Howland has published many peer-reviewed papers and book chapters, primarily focused on injury causation and control. For 20 years he taught program evaluation research methods at the Boston University School of Public Health.

**Traci Green, PhD, MSc** – *IPC Deputy Director, Senior Scientist, and Associate Professor of Emergency Medicine and Community Health Sciences at BUSM.* Dr. Green is a nationally recognized leader in opioid overdose prevention. Her research and advocacy have centered on prescription/opioid use, injection drug use, opioid overdose surveillance, public health strategies for community-wide naloxone distribution, and prescription monitoring programs to address the epidemic of opioid overdose. She is known nationally for her ability to translate research to public policy. She has developed innovative community-based programs for overdose prevention in Rhode Island and Connecticut and has worked extensively with addiction medicine clinicians and researchers at the BU schools of Public Health and Medicine. Her role as the Deputy Director of the IPC will greatly expand our ability to address the growing epidemic of opioid overdose in Massachusetts.







**Lisa Allee Barmak, MSW, LICSW –** *IPC Director of Programs and Education, Instructor of Surgery at BUSM, and Injury Prevention Coordinator at BMC.*

Ms. Allee Barmak develops, monitors, and maintains evidence-based injury prevention initiatives for the hospital. Her clinical background spans 10 years as BMC's

Pediatric and Pediatric Intensive Care Unit (ICU) Social Worker, where she specialized in the care of trauma patients and their families during their time in the ICU, as well as end-of-life care. Ms. Allee Barmak is also a faculty member of the BNI-ART Institute providing training on Screening, Brief Intervention, Referral and Treatment (SBIRT). Her clinical research interests involve life-long injury prevention. Current projects include research on older adult driving and safe sleep practices for infants and toddlers. Projects on post traumatic stress disorder (PTSD) and depression among trauma/acute care surgical patients and injury recidivism are in development.



**Thea James, MD –** *IPC Director for Community Outreach, Associate Chief Medical Officer, Vice President of Mission, and Director of the Violence Intervention Advocacy Program at BMC; Associate Professor of Emergency Medicine at BUSM.* Dr. James is a founding member of the National Network of Hospital-based

Violence Intervention Programs (NNHVIP), serves on the SAEM Women in Academic Emergency Medicine Task Force, and is the Chair of the Licensing Committee for the Massachusetts Board of Registration in Medicine. In 2008, she was awarded the Boston Public Health Commission's Mulligan Award for Leadership and Public Service. In October 2011, she was selected as one of 12 members of the Attorney General's National Task Force on Children Exposed to Violence, which is part of a broader Defending Childhood Initiative. In 2014, she was awarded the Schwartz Center Compassionate Caregiver Award recognizing her life-long commitment to reducing community violence and health care disparities among vulnerable populations. Her international humanitarian efforts include educational outreach and disaster relief efforts in Haiti, India and Ghana. Dr. James is a Supervising Medical Officer on the MA-DMAT Team 1.

**Ed Bernstein, MD –** *IPC Director of Research, Director of the Section of Public & Global Health at BMC, and Professor and Vice Chair for Academic Affairs in Emergency Medicine at BUSM.* Dr. Bernstein is Medical Director of Project ASSERT at BMC and Director of the BNI-ART Institute, which provides training and technical assistance to health care researchers and practitioners for implementing screening and brief intervention and behavioral change strategies. He is a founding member of the National Network of Hospital Violence Intervention Program (NNHVIP), the New England Violence and Injury Research Collaborative Network, and the BMC IPC. Dr. Bernstein is also a member of the Suicide Prevention Resource Center's Emergency Department Consensus Panel and has been a national leader in Emergency Department Overdose Education and Naloxone Distribution. He is currently serving a five year term as Member of the Massachusetts DPH Public Health Council.



**Kelly Ogilvie-McLean –** *Emergency Medicine Grants Administrator.* Ms. Ogilvie-McLean has worked for organizations on the Boston Medical Campus, as well as another Boston research facility, since 1994. She began her career as a research administrator in 2001 at Boston University School of Dental Medicine, and received her Clinical Research Certification in 2001 from Boston University Metropolitan College. Ms. McLean is a current member of the Society of Research Administrators International.





**Alyssa Taylor, MPH** – *IPC Research Coordinator.* Ms. Taylor received her MPH in Global Health from Boston University School of Public Health. To put her public health skills and knowledge into practice, she joined the IPC to help develop and implement research programs aimed at identifying and evaluating injury prevention policies and interventions.



**Victoriana Schwartz, BS** – *Study Coordinator.* Mrs. Schwartz has over six years of research experience in the fields of genetics and cancer prevention, patient reported outcomes, and drug discovery lab research from Dana-Farber Cancer Institute, industry, and academia. She has a B.S. in Business Management from Johnson & Wales University in Rhode Island and completed pre-med post-baccalaureate work at Harvard and Northeastern University. She was inspired to join the medical field after volunteering as a patient care assistant at Faulkner Hospital and aspires to become a physician for the underserved.



**Haley Fiske, MPH** – *Research Assistant.* Ms. Fiske has an MPH in Epidemiology and Health Policy and Management from Boston University School of Public Health. Before pursuing her MPH, she graduated from the University of Rhode Island with a B.S. in Biology. She joins the IPC to work on grant funded projects under the direction of Deputy Director, Traci Green.

## SENIOR SCIENTISTS

**Kerrie Nelson, PhD** – *IPC Biostatistician and Research Associate Professor in the Department of Biostatistics at BUSPH.* Dr. Nelson provides statistical support to investigators in BMC's Department of Emergency Medicine and also collaborates on many projects with medical and public health researchers at Boston University related to the Framingham Heart Study and diabetes. Originally from New Zealand, she received her PhD in Statistics from the University of Washington in Seattle.



**Emily Rothman, ScD, MSc** – *Senior Scientist for Interpersonal Violence and Associate Professor at BUSPH.* Dr. Rothman's primary research focus is the prevention of youth dating violence, with additional research projects on the topics of adult partner violence, sexual violence, and the impacts of adolescent exposures to alcohol, marijuana, or pornography. Dr. Rothman has a secondary appointment in the Department of Pediatrics at BUSM. She also is a visiting scientist at the Harvard Injury Control Research Center.



**Kalpana Narayan Shankar, MD** – *Research Scientist for Health Services and Assistant Professor of Emergency Medicine at BUSM.* Dr. Shankar has a long standing interest in health services research with particular focus on the quality of care provided to older adults. She has previously engaged in a variety of projects examining caregiver burden. Dr. Shankar's current research interests lie in the area of geriatric falls and associated morbidity and she looks to use this information to promote falls awareness among physicians and nurses. Her most recent endeavors include collaborations to establish a rapid follow-up process for older adults who are discharged from the emergency department after sustaining a fall, evaluate the rapid referral of hyperglycemic patients into a diabetes clinic, and assess the quality of interventions provided to sickle cell patients.





**Robert Stern, PhD** – *Professor of Neurology and Neurosurgery, and Co-Director, Alzheimer's Disease Clinical & Research Program at BUSM.* Dr. Stern oversees clinical research studies related to Alzheimer's disease (AD) at BUSM, including several clinical trials for the diagnosis, treatment, and prevention of AD.

In addition, a major focus of his research involves the long-term effects of repetitive head impacts in athletes, including the neurodegenerative disease chronic traumatic encephalopathy (CTE). He has worked on developing methods of detecting and diagnosing CTE during life, as well as examining potential genetic and other risk factors for this disease. Dr. Stern is the Chair of the Advisory Council to the Medical Scientific Committee of the Massachusetts and New Hampshire Chapter of the Alzheimer's Association. He is on the Medical Advisory Board of Sports Legacy Institute, and is also a member of the Mackey-White Traumatic Brain Injury Committee of the NFL Players Association.



**Alexander Walley, MD, MSc** – *Assistant Professor of Medicine at BUSM; Internist and Addiction Medicine Specialist at BMC; Director, Addiction Medicine Fellowship Program at BUSM; and Director, Inpatient Addiction Consult Services at BMC.*

Dr. Walley trains addiction medicine specialist physicians in the addiction medicine fellowship program. He does clinical and research-related work on the medical complications of substance use, specifically HIV and overdose. He provides primary care and office-based buprenorphine treatment for HIV patients at BMC and methadone maintenance treatment at Community Substance Abuse Centers. He is the medical director for the Massachusetts Department of Public Health's Opioid Overdose Prevention Pilot Program which has trained over 30,000 people since 2007. He is also the medical director for several police and fire department naloxone rescue programs in Massachusetts that have documented over 750 overdose rescues with program naloxone since 2010.

# WELCOME

**As we continue to grow and evolve, we are pleased to welcome the following individuals to the IPC leadership team:**

**Haley Fiske, MPH**

**Traci Green, PhD, MSc**

**Victoriana Schwartz, BS**

**Kalpana Narayan Shankar, MD, MSc**

**Robert Stern, PhD**

**Alyssa Taylor, MPH**

**Alexander Walley, MD, MSc**



## IPC FACULTY

### EXPERTISE AT THE CORE

The IPC core faculty represents a wide range of disciplines and medical specialties. Their combined skills form a foundation for the advancement of the Center's mission. The IPC faculty includes the following individuals:

**Evan Berg, MD**, Medical Director Emergency Department; Assistant Professor at BUSM.

**Hudson Breaud, MPH**, Research Associate, Department of Emergency Medicine, BMC.

**Tamara Calise, PhD**, Senior Research Scientist, John Snow, Inc. (JSI).

**Tracey Dechert, MD**, Attending Physician, Division of Trauma Surgery, BMC; Assistant Professor of Surgery, BUSM.

**William DeJong, PhD**, Professor, Department of Community Health Services, BUSPH.

**Mari-Lynn Drainoni, PhD**, Associate Professor, Health Policy and Management, BUSPH; Associate Professor, Section of Infectious Diseases, BUSM; and Research Health Scientist, Center for Healthcare Organization and Implementation Research, Edith Norse Rogers Memorial Veterans Hospital.

**Elizabeth Dugan, MSW, LICSW**, Associate Director, Violence Intervention Advocacy Program (VIAP), BMC.

**K. Sophia Dyer, MD, FACEP**, Attending Physician, Department of Emergency Medicine, BMC; Associate Professor of Emergency Medicine, BUSM; Clinical Instructor; Medical Director, Boston EMS, Boston Police Department, Boston Fire Department; Liaison to Boston MedFlight, Medical Control Physician, and Associate Medical Director.

**James Feldman, MD, MPH**, Attending Physician and Vice Chair, Research, Department of Emergency Medicine, BMC; Professor of Emergency Medicine and Chair, IRB, BUSM.

**Holly Hackman, MD, MPH**, Senior Scientist, Injury Prevention Center, Department of Emergency Medicine; Assistant Professor at BUSM.

**George Kasotakis, MD, MPH**, Attending Physician, Department of General Surgery and Trauma Surgery, BMC; Assistant Professor of Surgery, BUSM.

**Colleen Labelle, BSN, RN, CARN**, Program Director, State Technical Assistance Treatment Expansion Office Based Opioid Treatment with Buprenorphine (STATE OBOT B).

**Angela Laramie, MPH**, Epidemiologist at Massachusetts Department of Public Health.

**Judith Linden, MD**, Attending Physician, Department of Emergency Medicine, BMC; Associate Professor of Emergency Medicine, BUSM.

**Tom Mangione, PhD**, Project Director of Survey Research Facility and Senior Research Scientist, John Snow Inc; Adjunct Associate Professor, BUSPH.

**Patricia Mitchell, RN**, Assistant Research Director, BMC; Assistant Research Professor, Department of Emergency Medicine, BUSM.

**Ward Myers, MD**, Instructor, Adult & Pediatric Emergency Department, BMC.

**Timothy Naimi, MD, MPH**, Associate Professor of Medicine, General Internal Medicine, BUSM; Clinical Addiction Research and Education Unit, BUSM & BUSPH.

**Lauren Nentwich, MD**, Director of Quality and Patient Safety; Emergency Department Assistant Residency Program Director; Assistant Professor at BUSM.

**Ariana Perry, BA**, Data and Research Manager, Violence Intervention Advocacy Program, BMC.

**Bedabrata Sarkar, MD, PhD**, Attending Physician, Division of Trauma Surgery, BMC; Laszlo N. Tauber Assistant Professor of Surgery, BUSM.

**Robert Schulze, MD, FACS, FCCM**, Chief of Surgical Critical Care; Associate Professor of Surgery, Boston University School of Medicine.

**Morsal R. Tahouni, MD**, Attending Physician, Department of Emergency Medicine, BMC; Clinical Instructor, Department of Emergency Medicine, BUSM.

**Joanne Brewer Timmons, MPH**, BMC Domestic Violence Program Coordinator; Member, Governor's Council to Address Sexual and Domestic Violence; Co-Chair of the Conference of Boston Teaching Hospitals' Domestic Violence Council.

**Robert J. Vinci, MD**, Chief, Department of Pediatrics, BMC; Joel and Barbara Alpert Professor and Chairman, Department of Pediatrics, BUSM.

**Ziming Xuan, ScD, SM, MA**, Assistant Professor, Community Health Science, BUSPH.





# INTEGRATING FALLS PREVENTION IN THE ED AND PRIMARY CARE

By Jonathan Howland, PhD, MPH, MPA

The incidence of falls among older adults can be substantially reduced through inexpensive, low-tech, community-based programs. However, more needs to be done to integrate these programs into the health care system.



Falls among older adults are a common and serious public health problem that can cause debilitating, sometimes fatal injuries and affect subsequent psychosocial status and quality of life. They are the leading cause of injury-related deaths and non-fatal injuries among older adults, and can be a strong predictor of future falls. It is estimated that around 18% of older adults presenting at EDs with fall-related injuries will experience a subsequent fall requiring medical attention within a year. In 2010, fall-related injuries caused 434 deaths among Massachusetts older adults, 21,375 hospital stays, and 40,091 emergency department visits. Of the Massachusetts older adults treated in acute care hospitals for fall injuries in 2010, 20% had traumatic brain injury and 10% had hip or other femur fractures. The 2010 Massachusetts Behavioral Risk Factor Survey indicated that 35% of older adults who experienced a fall in the prior three months sought medical attention for their related injuries and/or restricted activity for at least one day. In the same year, Massachusetts' fall-attributable costs were \$512 million for inpatient care, \$100 million for emergency room visits and \$19 million for observation hospital stays, for a total of \$631 million in direct medical care expenditures.

In 2013, 2.5 million older adults were treated in U.S. emergency departments (EDs) for non-fatal fall-related injuries and more than 734,000 of these patients were hospitalized. In that year, the direct medical cost for older adult falls was \$34 billion, adjusted for inflation.

Several decades of research have yielded relatively low cost, low-tech community-based interventions that are evidence-based for falls prevention. In randomized trials, these programs typically result in 25-50% reductions in one-year post-program falls. They are increasingly deployed throughout the nation and tend to be offered by public and private organizations that serve older adults. Program recruitment usually occurs through direct marketing to the target population, rather than through referrals from health care providers. Thus, older adults who may be at highest risk for falls are generally not being referred by their health care providers to low-cost programs of known effectiveness. Falls prevention programs, however, may eventually be integrated with the health care system as physicians become more engaged in falls risk assessment for their older patients, older adults become more aware that falls risk can be reduced, and when public and private health care insurers expand reimbursement for community-based falls prevention programming.

Research indicates that specific evidence-based falls prevention programs are cost-effective. A recent study estimated the net benefit and return on investment (ROI) of three falls prevention programs. Otago, a program targeting frail older adults and delivered in the home by a physical therapist or other health care provider, had a one-year net benefit of \$121.85 and a ROI of 36% for each dollar invested. Tai Chi: Moving for Better Balance, a group program targeting community-dwelling older adults, had a one-year net benefit of \$529.86 and a ROI of 509% for each dollar invested. Stepping On, which combines community-based group sessions with follow-up home visits by a health care provider, had a 14-month net benefit of \$134.37 and a ROI of 64%





for each dollar invested. The Centers for Medicare and Medicaid Services conducted a retrospective cohort study evaluating A Matter of Balance (MOB), a program developed to reduce fear of falling and associated activity avoidance in older adults. Compared to matched controls, older adults who had participated in the MOB program had, during the post-participation year, significantly lower health care costs for all health Medicare reimbursements combined as well as reduced mortality.

### IN THE ED

A cost analysis, conducted by the IPC, examined the potential reduction in one-year medical care costs if all older adults presenting with a fall-related injury at Massachusetts EDs were referred to MOB. Assuming that 50% of patients referred enrolled and completed the program, a savings of \$5.6 million per year in ED

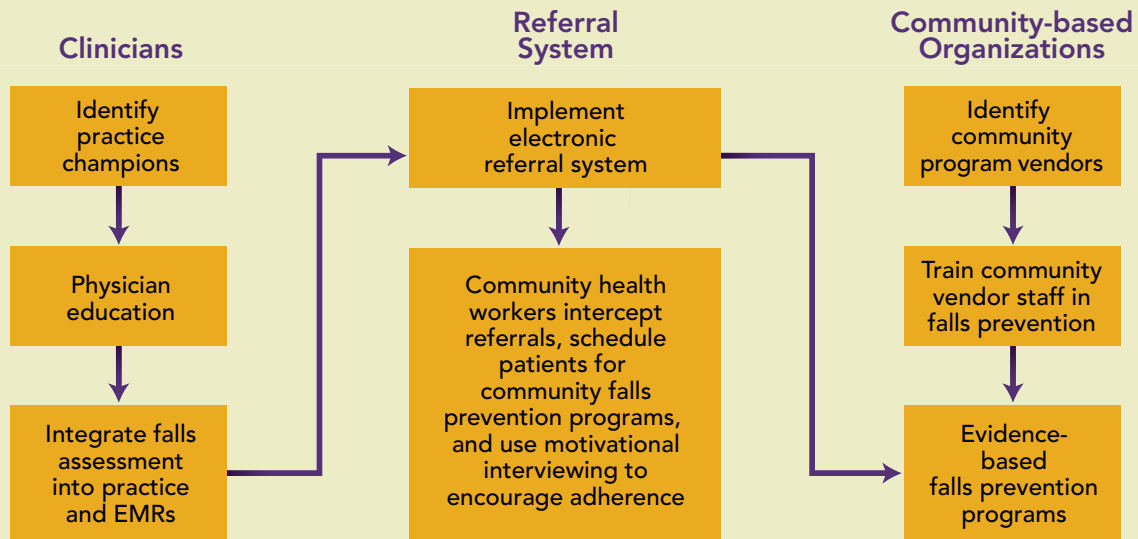
and inpatient costs could be achieved statewide, not including associated post-discharge costs such as nursing home rehabilitation, home care, medications, and assistive devices. Depending on the duration of program, this amount would be multiplied in subsequent years.

In an on going study conducted by the BMC IPC, older adults who presented with a fall injury and were discharged home were contacted 60 days post-discharge to determine whether they had engaged in fall prevention activities, including participation in evidence-based falls prevention programs. Preliminary findings reveal that of 75 participants followed to date, 71% (53) had spoken to their primary care provider about their fall, but only 34% (25) had spoken to this provider about falls prevention, and only 20% (15) had reviewed their medications for falls risk, while none had been referred to, or participated in, a falls prevention program.

Given the high incidence of older adult falls and the efficacy and cost effectiveness of evidence-based falls prevention programs, what can ED providers do to reduce the likelihood that their older fall-injured patients will return with a subsequent fall-related injury? Options are obviously limited by time, staff resources, the need to address the presenting injury, and the episodic nature of ED care. Despite these constraints, however, there are opportunities for prevention. First, ED staff can encourage their older adult falls patients to talk to their primary care physicians and families specifically about the presenting fall event and in general about falls risk assessment and prevention. Second, ED staff can become familiar with local evidence-based falls prevention programs and recommend them to community-dwelling patients who appear fit for participation. Information on such programs might be included in discharge paperwork. Third, in the absence of local fall prevention programs, ED staff can advocate for their hospitals to initiate falls prevention programs to which patients could be referred. These interventions could be initiated at minimal cost and even if uptake by patients were small, fall reduction among a small percentage of the 2.5 million older adult fall-related ED patients could have significant public health impact.



## Community Falls Prevention Strategy



### IN PRIMARY CARE

To accelerate the integration of chronic disease self-management programs into the health care system, the Massachusetts Department of Public Health (MDPH) has established the Prevention and Wellness Trust Fund (PWTF) which funds nine community demonstration programs to increase referrals from local clinicians to community agencies that offer evidence-based prevention services. The BMC IPC provides technical assistance to the falls prevention components of two PWTF communities, New Bedford and Boston.

In New Bedford, the PWTF falls prevention strategy involves several components. First, on the clinical side, the strategy involves training physicians in the use of falls risk assessment instruments, integrating falls risk assessment into electronic medical records, and providing clinical staff education on the epidemiology of older adults fall and the research evidence supporting falls prevention programs. Second, on the community side, local agencies are identified as falls prevention providers and staff are trained in evidence-based programs. Third, clinicians and community programs are linked via an electronic referral system developed by MDPH for the PWTF.

Community Health Workers intercept referrals, contact patients to schedule them for falls prevention programs, and work with patients to overcome barriers to participation. At present, this strategy has been successfully piloted with the community health center as the clinical group and a local visiting nurse association providing the programs. Falls prevention programs are offered on an on-going basis, in English, Portuguese and Spanish.

In Boston, the PWTF grant involves seven community health centers that serve the Roxbury and Dorchester catchment areas. The falls prevention program



includes clinical assessments and referral to senior services providers as well as home risk assessments conducted by community health workers. The community-based falls prevention programs include MOB and Tai Chi.



## POLITICAL AND HEALTH CARE LEADERS FIGHTING OPIOID ABUSE GATHER AT BMC

On April 28, 2015 Boston Medical Center hosted a roundtable discussion featuring leaders in the prevention, treatment, and education of opioid abuse. Attendees includes U.S. Secretary of Human of Human Services Sylvia Burwell, Massachusetts Governor Charlie Baker, Massachusetts Secretary of Health and Human Services Marylou Sudders, representatives from other state government agencies, leaders of treatment and education programs, and providers from Boston hospitals, including Colleen Labelle, BSN, RN, CARN, and Alex Walley, MD, from BMC.

Kate Walsh, President and CEO, opened the discussion by noting that addiction affects all members of the community and highlighting the fact that BMC has been working hard over the years to help those in need. Some of BMC's programs, including the Office-Based Opioid Treatment program (OBOT) and narkan distribution, were singled out by other roundtable attendees as best practices that are being emulated across the state and country. Much of the roundtable focused on how providers can help lessen the epidemic, including using Massachusetts' prescription drug monitoring system, utilizing alternative therapies such as acupuncture and only prescribing necessary painkillers, and educating both themselves and patients about the risks associated with opioids.

*Originally appeared in the May 15, 2015 issue of the BMC Brief.*



*Opioid abuse roundtable*



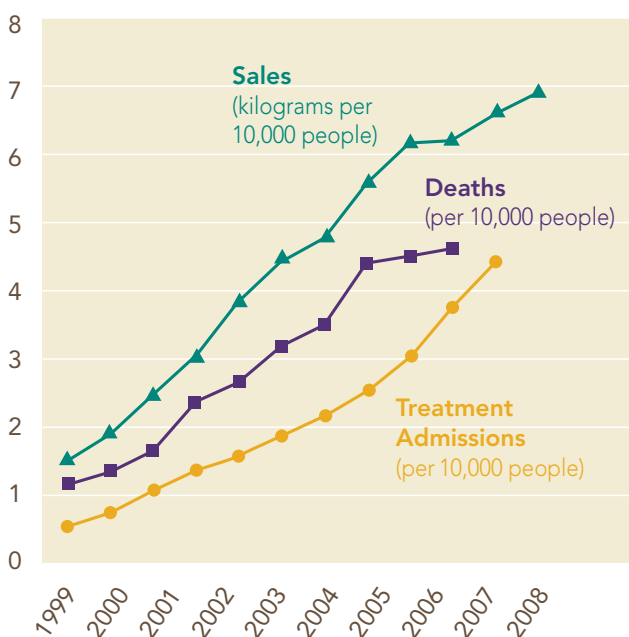


## BMC IPC TAKES ON THE LEADING CAUSE OF INJURY-RELATED DEATHS

### Addressing the Opioid Overdose Epidemic with Research, Advocacy and Service

By Traci Green, PhD, MSc

Drug overdose deaths from prescription opioid medications and heroin, both unintentional and intentional, have been increasing for several decades. Based on the most recently available data, in 2013, over 100 people died each day of overdose — one person every 14 minutes — making drug overdose the leading cause of injury deaths in the United States. A driving force of drug overdose deaths is the prescribing of opioid pain medication products, the availability, accessibility, and potency of which are unprecedented in medical history. Figures like the one below clearly convey the correlation between supply of opioid pain medications, rising treatment need, and drug overdose mortality, as they each increased over time during the course of the last decade and a half.



#### Effects of Increased Opiate Supplies over Ten Years

In response to these trends, national and state-level initiatives have focused on safer prescribing of opioid pain medications, expanded use of prescription monitoring programs (PMPs, electronic databases that contain information on controlled medications dispensed in the state), enactment of “pill mill” laws, and medical professional prescribing practice changes through encouraging guideline development and attendance at continuing medical education courses. Every state has undertaken some aspects of these interventions with prescription opioid pain medication; fewer have embraced comprehensive strategies that draw from an injury prevention approach. For instance, consideration of the Haddon matrix would conceptualize the event of overdose as preventable, modifiable, and potentially reversible. The Haddon matrix applies the epidemiological triad of the “agent-host-environment” to the time dimensions of the event: pre-, during-, and post-injury. In the case of overdose prevention, communities and injury prevention specialists may explore ways to reduce initial exposure to the “agent” of opioids, for instance, through alternative and complementary medicine or by encouraging the preferential use of non-opioid analgesia such as non-steroidal anti-inflammatory medications. When opioid exposure occurs or is medically indicated, to mitigate the risk of the “agent” during the opioid exposure, there are several optimal interventions. These include discussing overdose risk factors with the person using the opioids and/or their family; providing take-home doses of the opioid rescue medication, naloxone; and promoting faster administration of the lifesaving drug in suspected



overdose scenarios. Finally, post-event interventions to prevent overdose death include promotion of calling 9-1-1 post-overdose and the passage of 9-1-1 Good Samaritan laws in 32 states to provide immunity from drug-related charges and encourage help-seeking.

My team and I began several new research projects in 2015 that add to the numerous scientific and service activities already underway at the BMC IPC. These projects focus on opioid-related injury and include public-private partnerships, state-based prescription opioid overdose prevention program evaluation, a demonstration project, continuing medical education program development and effectiveness testing, text-message based technology for patient safety education, and implementation science research studies.

Overdose has affected too many in New England, yet the stigma of addiction and overdose has brought many to label this a “silent epidemic.” For this reason, policy and advocacy efforts undertaken by the BMC IPC community are critical. In July 2015, the Food and Drug Administration held a two-day public meeting on expanding access to naloxone, featuring as expert panelist speakers myself, Ms. Sarah Ruiz of the Massachusetts Bureau of Substance Abuse Services, and Alexander Walley, MD, MSc, an internal medicine physician at BMC, the medical director of the Massachusetts Naloxone Program, and IPC Senior Scientist. Testimonies addressed current burdens, training needs, and naloxone program evaluation considerations to broaden the national discussion around naloxone access and safety. Also, during the fall of 2015, I advised Rhode Island Governor Gina Raimondo and her Overdose Task Force as an expert advisor, co-authoring a statewide plan for overdose and addiction. The aggressive, evidence-based plan puts forth four major strategic initiatives to change the course of the overdose epidemic: [strategicplanri.org](http://strategicplanri.org).

Service initiatives to improve opioid safety and reduce opioid-related injury are well-established at BMC, such as the 20-year strong Project ASSERT, which provides screening, brief intervention, and referral to treatment for people with substance use disorders referred from the emergency department. Project ASSERT sees patients at a critical time of need, and can disrupt an unsafe trajectory. In 2009, BMC was also the first hospital in the city to provide naloxone to patients in the Emergency Department, through Project ASSERT. Since January 2015, the hospital has been providing naloxone rescue kits to anyone who asks under a standing order from Dr. Walley.

New initiatives at BMC abound: Dr. Walley convened an Addiction Consult Service in July 2015, offering a team of expert on-call services to improve the care of patients with substance use disorder within and across BMC departments. Lauren Nentwich, MD, an attending physician in the Emergency Department, embraced the opportunity to educate future health care professionals in overdose prevention. Dr. Nentwich worked with the BU Graduate Medical Education staff to set up a booth at orientation to train 107 of 120 incoming residents, fellows, and interns on how to administer naloxone, learn more about where to get it, and what the drug is used for. Successful new initiatives like these improve patient care, reduce opioid-induced injury, and embody the commitment of the BMC Injury Prevention Center to research, advocacy, and service.



## BOSTON MEDICAL CENTER RESPONDS TO OPIOID OVERDOSE EPIDEMIC AND PUBLIC HEALTH EMERGENCY

The Boston Opioid Overdose Education and Naloxone Distribution (OEND) programs began in 2006 when the Boston Public Health Commission (BPHC) passed a regulation that authorized intranasal naloxone distribution by trained, nonmedical public health workers and EMS personnel under a standing order from Dr. Peter Moyer, the EMS Medical Director. In 2007, Massachusetts' Department of Public Health adopted a similar program, and now provides free nasal naloxone rescue kits (NNRK) and training to community based programs. OEND includes identification of risk behaviors and training in such measures as rescue breathing, calling 911, using naloxone, and remaining with the victim until emergency responders arrive.

BMC patients have been the beneficiary of these city and state policies and programs. The BMC-ED OEND program began in September 2009 in partnership with the BPHC, Massachusetts Department of Public Health and the South End Healthy Boston Coalition. From January, 2013 through July, 2015, Project ASSERT, an ED-based team of peer licensed alcohol and drug counselors (LADCs) /Health Promotion Advocates distributed 594 nasal naloxone rescue kits to patients identified through bedside screening and physician and nursing referrals — twice the number of kits distributed during the first two and one half years of the OEND program. This increase in distribution was sparked by a meeting between the BMC President Kate Walsh and the Boston Public Health Commission Director that resulted in the enactment of a hospital policy to assure that patients at risk for opioid overdose are offered education and naloxone free of charge in the ED. The policy was intended to enable other clinical providers to distribute NNRK after Project ASSERT ceased hours of operation (9 am -11 pm daily). Under a standing order protocol, rescue kits were tubed down from the inpatient pharmacy to the ED for patients to take home at discharge. Dr. Alexander Walley, Medical Director of the MA DPH OEND pilot program, provides his license so that naloxone can be distributed as a standing order

throughout the state, including in the BMC ED and from the outpatient pharmacy.

Support and funding from state, city, and hospital policies are necessary as system-wide and contextual factors, but not sufficient for widespread NNRK distribution and sustainability, which depend on local adoption and implementation. We did not collect data on how many patients were eligible or the number that were approached. Over a two year period, 2013-2014, Boston EMS transported 1,167 patients to BMC for narcotic related illnesses and 3,435 ED patient were discharged with ICD 9 diagnoses of opioid poisoning and or opioid use disorder. The latter included patients with injection opioid related infections, symptoms of mental status change and withdrawal and those seeking treatment placement/detox, which was not always available. If we use this contextual data as denominator for the number of patients who received NNRK (n=594), we can estimate that only about 15% of ED patients "at risk for overdose" were documented to have received NNRK. The results of this program to date reflect an ongoing struggle to motivate patients to receive naloxone kits and education and for providers and system leaders to engage with patients in a new way and overcome barriers to distribution.

We are working on learning what we need to know to improve our performance. Last summer a team from the Department of Health Policy and Management at the BUSPH under the leadership of Dr. Mari-Lynn Drainoni and the EM Research Section partnered to conduct a qualitative study of the facilitators and barriers to implementation. Preliminary results from the interviews with nurses, physicians, pharmacists, and Project ASSERT staff revealed general support for policy goals but multiple barriers to distribution. Patient barriers included lack of receptivity to NNRK, patients not accompanied to the ED by a supportive other who might be present at a future event to administer naloxone, and many individuals who were not open to learning



about overdose prevention but just wanted to leave and address their withdrawal symptoms after an overdose reversal in the ED or the field. Many patients were initially hesitant to accept rescue kits because they feared that they would be at risk for arrest or police harassment for possession of naloxone if they called 911, and remained at the scene. Additionally a significant number of patients had received NNRK. Staff barriers included unfamiliarity with policy, lack of clarity regarding responsibility for education and distribution, and lack of consensus about which patients are appropriate for NNRKs. Process barriers included: unclear method to obtain the kit, confusion around the legality of a standing verbal order, lack of integration of NNRK into the EMR, and difficulty tracking data about distribution. Staff suggestions to improve uptake included uniform and targeted training, role clarification, integration into EMR, and restructuring implementation.

In response to these findings, we implemented a change in the EPIC EMR's common order panel that enabled the physicians to electronically order NNRK. This order goes directly to our night ED pharmacist who distributes the kits, and together with nursing and evening social workers, provides patient training and education. The EMR fix simplified the process and eliminated the need for the standing orders paper forms as specified in the original policy. In addition the night social worker was cross-trained in OEND, and now works collaboratively with staff and pharmacy to reach more patients. During house staff orientation, Dr. Lauren Nentwich together with Project ASSERT staff provided NNRK training for over one hundred new interns. Just in October 2015 Project ASSERT distributed 31 Naloxone Rescue kits and the physicians after hours distributed 8 NNRK for a record month of 39.

Just as BMC ED needs a hospital-wide collaboration and continuous quality monitoring and improvement to extend the reach of NNRK, Massachusetts and the nation needs all its EDs and hospitals to implement OEND programs. In 2014, Massachusetts reported 1,246 deaths, over twice the deaths reported in 2012, and the trend continues in the first quarter of 2015 with 312 deaths. Despite great strides, we face the reality that opioid addiction is a challenging, highly stigmatized complex biopsychosocial problem that we are only beginning to address in the medical setting. Opioid overdose education and naloxone distribution and referral to quality modalities of treatment constitute strategies on the demand side of the equation. However, as a society and professionals we will be less than effective if we neglect the supply side — the market place of narcotic prescriptions and diversion and the highly organized industry of street sales of opioid and heroin. Prescriber education, the use of the Prescription Monitoring Program, and pharmacy drug take back programs are additional strategies. We need to bring together science, medicine, public health, and law enforcement to comprehensively address this epidemic. We have made important strides, yet there's still much work to be done and our nation's emergency departments have an important role to play.

*Article originally appeared on Change Talk: SBIRT in the real world blog on August 25, 2015*





## BREAKING THE CYCLE OF VIOLENCE

### INNOVATIVE PROGRAMS AT BMC

In 2014, BMC's Emergency Department and Trauma Services treated 498 cases of penetrating trauma caused by gun shots or stabbings. Innovative programs aim to break the cycle of violence by addressing patients social and mental health needs, as well as their presenting injuries.



#### VIOLENCE INTERVENTION ADVOCACY PROGRAM (VIAP)

The mission of VIAP is to help victims of violence recover from physical and emotional trauma by empowering them with skills, services, and opportunities. Empowerment enables victims to return to their communities, make positive changes in their lives, strengthen others who were affected by violence, and contribute to building safer and healthier communities.

**VIAP Qualitative Evaluation Project** (*James, Dugan, Bibi, Mitchell*): VIAP is a BMC program that provides victims of intentional violence with assessment, counseling, case management, and referral for clinical and social services. This qualitative study was designed to contextualize the experience of VIAP clients and to better understand their perceptions of the program's impact on their lives. Results of this study were published in *Academic Emergency Medicine*.

**Supporting Male Survivors of Violence** (*James, Dugan*): BMC's Violence Intervention Advocacy Program (VIAP) received a grant from the U.S. Department of Justice for a study designed to develop and support programs for male survivors of violence. The main goal of the project is to identify gaps and barriers to care and support, and develop an action plan to meet the needs of survivors and their families. Research personnel will work collaboratively to review VIAP services through action

planning processes, focus groups, resource mapping, and interviews with key informants. With this study, VIAP hopes to benefit young men of color by providing basic needs, including an employment program sponsored by BMC, and a unique housing program that will subsidize client's rent for a stabilization period.

#### VIAP FUNDING

In addition to the U.S. Department of Justice grant, other grants and funding include:

Liberty Mutual Foundation	\$100,000
Department of Public Health	\$50,000
Boston Public Health Commission	\$40,000
Roy Hunt Foundation	\$35,000
Priscilla Endicott Foundation	\$26,000
Josephine and Louise Crane Foundation	\$15,000
Eastern Bank Charitable Foundation	\$10,000
Partners Health Care System	\$5,000
Individual Donors	\$22,764



## VIAP HEADS CITY-WIDE HOSPITAL PROJECT

### **Boston Mayor Walsh's Office on Public Safety**

**Initiatives:** This initiative has requested that VIAP spearhead an initiative to connect all Boston hospitals when community violence occurs, specifically gunshot and/or stabbing victims, and to have support and resources in the immediate aftermath of violence to support families. VIAP, in partnership with the Boston Center for Youth and Families, employs full time street worker staff that respond to victims and their families on an on-call, 24-hour basis. These VIAP street workers provide immediate response to incidents, and provide crisis intervention, safety planning, and resources for victims and their families. This has proven to be a valuable asset for VIAP and BMC to stabilize situations, and the Boston City Wide Network of Hospital Violence Programs now includes Mass General, Brigham and Women's, Carney, and Beth Israel Deaconess Medical Center. VIAP staff members focus on safety planning and work to decrease recidivism and retaliation. VIAP currently boasts a 7% recidivism rate, compared to national averages of more than 30%.

## COMMUNITY VIOLENCE RESPONSE TEAM

Recently the World Health Organization recommended that all medically treated victims of violence be offered mental health services to reduce the psychological effects of trauma. Boston Medical Center leads the way in providing mental health counseling for victims of violence, their friends and family.

In Massachusetts, homicide is the second leading cause of death of young people age 15 to 24. BMC treats approximately 50% of Boston's homicides and approximately 70% of gunshot and stab wound victims. Research has shown that violent injury is often accompanied by mental health consequences, including PTSD.

To reduce psychological impact for victims of violent injury and their families, the BMC Community Violence Response Team (CVRT) offers mental health counseling to trauma victims. CVRT Masters-level counselors provide crisis intervention, advocacy, case management, and trauma-focused therapy to adults, adolescents and children.



Rusti Pendleton and Donald Osgood, VIAP Streetworkers

Services include:

- Emergency bereavement or crisis support in the ED or ICU, including death notification to family members;
- On-site assessment of patient or family psychological status;
- Bed-side and clinic-based trauma-informed counseling;
- Consultation with other agencies that provide support for the patient and/or the patient's family; and,
- Linkage/referral to other BMC or community services for follow-up mental health counseling.

The program was initiated by Lisa Allee Barmak, MSW, LICSW, the Injury Center's Director of Programs and Education, with funding from the Victims of Crime Act (VOCA), a federal program administered by the Department of Justice.



## "REAL TALK"

# MOTIVATING ADOLESCENTS TO USE NON-VIOLENCE IN DATING RELATIONSHIPS

By Emily F. Rothman, ScD, MS

Dating violence is a prevalent and consequential public health problem. As many as 20% of high school-attending girls in the U.S., and 10% of boys, report experiencing either physical or sexual abuse by a dating partner in the past year. In the Boston area, 20% of high school youth report perpetrating dating or sexual abuse in the past 30 days. The serious potential consequences of dating abuse victimization — injuries, unintended pregnancy, STIs, and mental health problems — can also include more extreme sequelae such as commercial sexual exploitation (i.e., sex trafficking victimization) and death. Adolescent perpetrators of dating violence can also become adult perpetrators of domestic and family violence, including child abuse. For these reasons, there is now substantial interest in identifying and intervening with youthful perpetrators of dating violence.

Some may think that the only ways society can prevent dating violence are to encourage parents to monitor their children's relationships, or to provide healthy relationship education in schools. While both of these strategies can be important components of a comprehensive prevention approach, evidence suggests that there is more that can be done. Staff of community-based youth centers such as Boys and Girls clubs can be taught to recognize signs of dating violence and keep adolescents focused on being respectful in the context of sex and dating. This can be a counter-balance to violent and/or sexist messages that youth may otherwise receive from media or older peers. [The Boston Public Health Commission's Start Strong](#) program currently provides this type of education to youth workers and youth through a

multi-session program that is being evaluated by an IPC-affiliated research team. In addition, state-level policies designed to reduce cyber forms of dating abuse, such as the non-consensual dissemination of sexually explicit images or texts (sometimes called "revenge porn") can be implemented. Myself, along with other members of the Massachusetts Governor's Council on Sexual and Domestic Violence, are now collaborating with the legislature to draft state laws to address this issue. There are many more prevention possibilities, such as neighborhood-based projects that enhance collective efficacy, trauma-counseling for children who witness inter-parental violence, and social media campaigns that promote healthy relationships.

At BMC, I lead an IPC research team evaluating a program to reduce dating violence. The intervention is called "Real Talk," a 30-45 minute brief motivational



interview delivered by a trained interventionist. The intervention follows a formula that has been found to be effective at reducing youth alcohol use and alcohol-related risk behavior, and is similar to the intervention used by the BMC Project ASSERT team. The “Real Talk” intervention is now being tested by a three-year randomized controlled trial funded by the National Institute of Justice and based in the BMC pediatric emergency department. Members of the intervention team approach adolescent patients between the ages of 15-19 years old who are awaiting treatment. These patients are invited to complete a one-page eligibility screening form, including questions about physically or sexually abusive acts that they may have done to a partner in the past three months. Those who screen eligible and are randomized to receive the intervention participate in a guided discussion about recent incidents of physical violence, and strategies that people can use other than hitting or harming a partner when they feel angry, upset, or insecure. Special care is taken to make sure youth that used violence only in self-defense are not led through the intervention and are instead offered the opportunity to connect with a social worker or other support resources.

As of November 2015, approximately 130 youth have been enrolled in the intervention. Results from this trial are not yet available, but findings from a pilot study of the program indicate that “Real Talk” had an impact on the likelihood that youth would talk to their doctor to get help for their problems and to ask their friends to help them to stay calm around their partner. In addition, using the “Stages of Change” theory, the “Real Talk” intervention appears to have moved people from the “pre-contemplation” stage to the “action stage.” Approximately 86% of “Real Talk” participants felt that the intervention helped them, and 93% said that they would recommend it to a friend.

Importantly, the success of the “Real Talk” intervention depends upon the involvement and support of emergency department and other hospital staff, including nurses, physicians, social workers, and receptionists. The development, delivery and testing of the “Real Talk” intervention is an exciting collaborative effort between emergency medicine providers and staff and the IPC researchers working on dating violence prevention.





# EVALUATING IMPLEMENTATION OF THE MASSACHUSETTS SPORTS CONCUSSION LAW

By Jonathan Howland, PhD, MPH

**Massachusetts was one of the first states to develop regulations for the identification of sports concussion occurring during school sports and policies for return to school and return to play.** As a consequence, many Massachusetts school children with suspected or diagnosed concussion are benefiting from this legislation, regardless of whether they were injured at school.

In 2010, Massachusetts passed legislation that provided standardized policies and procedures for the prevention, management, and return to activity protocols for students who incur head injuries while involved in extracurricular athletic activities at public middle and high schools, and any school that is a member of the Massachusetts of the Interscholastic Athletic Association. The regulations, implemented by the Massachusetts Department of Public Health (MDPH) in 2011, bring together all those in the school community responsible for student safety to recognize, prevent, and manage concussion. School nurses and licensed athletic trainers play pivotal roles interacting with school staff, student athletes, their parents, and physicians in responding to students sustaining a head injury or suspected concussion and monitoring their recovery. In 2015 the MDPH conducted a series of focus groups with school nurses and athletic trainers to assess implementation of the law and identify potential problem areas.

Discussion topics were developed by MDPH staff, with input from school nurses, athletic trainers, and evaluation consultants. Four focus groups, each with 10-12 participants, were conducted in total, two for school nurses and two for athletic trainers, led by experienced facilitators. Each group was tape-recorded. Two evaluation consultants independently took notes of the focus groups while listening to recordings to identify themes. Their lists of themes were then reconciled for each focus group and a report of findings was prepared. Institutional Review Boards at the MDPH and Boston Medical Center reviewed this project.

There was a high degree of consistency within and across the school nurses and athletic trainer focus groups. Several findings stand out. For example, it was clear that participants from both professions supported the sports concussion legislation and felt that overall



implementation had gone well. Participants across the professions indicated that the law empowered them in managing return-to-school and return-to-play protocols for students who had experienced possible or confirmed brain injuries. Participants from both professions expressed satisfaction with the support they had received from their school administrations regarding development of head injury policies and management protocols. There appeared to be consensus that physicians, parents, school teachers, and counselors could benefit from additional training/education with respect to sports concussion in general and the Massachusetts law in particular. Perhaps the most significant finding was the extent to which school nurses had generalized the legislation and associated regulations to all students with head injuries. Thus, one very positive, and perhaps unanticipated, consequence of the [Massachusetts Sports Concussion Law](#) is that many Massachusetts middle and high school students are benefiting from the concussion management protocols originally intended only for sports-related head injuries.



The IPC works with the Boston University Schools of Medicine and Public Health to provide injury prevention education to students.

### GMS INTERNSHIP/MPH PRACTICUM

Students at BU's School of Public Health have the opportunity to participate in research practicum experiences on various injury prevention topics. They receive mentorship in conducting pilot studies and intervention evaluations. IPC core faculty members teach courses on intimate partner violence and sexual violence intervention and prevention. In addition, students in the Graduate Medical Science program are offered year-long internships to develop injury prevention research projects as part of their thesis requirement.

### INJURY PREVENTION CENTER GRAND ROUNDS

Starting in the fall of 2013, the IPC initiated a series of monthly lectures on injury epidemiology and prevention for emergency medicine faculty, residents, and the community of interest. Lectures are presented by clinicians, researchers, epidemiologists, and public health program directors. The aim is to introduce physicians to injury surveillance data, intervention strategies — particularly those based in clinical settings — risk assessments and policy changes in areas including domestic violence, older adult falls, infant sleep death, opioid overdose, motor vehicle trauma, and concussion, among others. The series is embedded in the Emergency Medicine Department's resident training program but is open to the BMC campus and public health practitioners throughout the greater Boston area.

### MEDICAL STUDENT TRAINING

The Injury Prevention Coordinator provides training to medical students during their orientation to their surgical rotation on injury prevention topics including falls, distracted driving, bicycle safety, overdose and substance use disorder, safe sleep, child passenger safety and violence prevention. Medical students learn injury trends at BMC and how to incorporate the discussion of injury prevention into their work with surgical patients. They also learn ways to prevent injuries in their own lives. Many medical students participate in injury prevention research with the trauma service during their time at BUSM and are provided mentorship by our IPC.

### PHYSICIANS IN TRAINING

The IPC-BMC faculty provides lectures and trainings to emergency medicine, surgical, and pediatric residents on injury prevention topics including brief intervention for overdose and substance use disorder, violence intervention, and childhood injury. These training activities are continuous throughout the year and are conducted at seminars, classes, and weekly conferences.



## PROGRAM EVALUATION

**Evaluation of Massachusetts Core Injury**

**Prevention Grant** (Howland, Taylor): The IPC was selected by the Massachusetts Department of Public Health (MDPH) as the external evaluator for the state's CDC-funded Core Injury Prevention Grant. The Department's five-year injury prevention strategic plan, which began in August 2011, targets opioid overdose, older adult falls, sports concussion among young people, infant safe sleep, and vehicular injuries. View the 2012-2016 [Massachusetts Department of Public Health's Injury Prevention Strategic Plan](#).

## OLDER ADULT FALLS

**Cost Effectiveness of Falls Prevention Program for Reducing Emergency Department and Inpatient Costs for Older Adult Repeat Falls**

(Howland, Shankar, Peterson, Taylor): In this study, we estimate the one-year medical care cost savings if older adults treated at Massachusetts hospitals for fall-related injuries were referred by health care providers to participate in MOB, a program designed to reduce fear of falling and increase self-efficacy as it relates to falls prevention (See *Focus on Falls* on page six). The results of this study were recently published in the *Injury Epidemiology* (citation on page 36).

**Falls Follow-up Study** (Shankar, Howland, Treadway, Taylor): The BMC ED treats approximately 15-20 older adult fall patients per week. Although there is abundant evidence that clinical and community-based fall reduction interventions are effective, there is little information on the uptake of falls prevention behaviors among community dwelling older adults who have experienced a fall requiring medical attention. This study aims to address this gap in the literature and characterize fall prevention behaviors (especially engagement with primary care physicians) and covariates of these behaviors. Findings could inform discharge protocols for older adults who have been treated for falls at EDs or other outpatient services.

**Factors that Impact Transport by EMS Providers Following Falls Among Older Adults**

(Allee Barmak, Burke): Emergency Medical Services (EMS) are often called to help older adults who have fallen, with some proportion requiring hospital transport. There are few estimates on the proportion of people who are not transported by EMS. This study provides insight into how fall circumstances and locations are associated with the likelihood that a patient will be transported to a hospital. For the approximate 17.5% of fallers that are not transported, EMS personnel are in a prime position to provide information aimed at preventing future falls.

**Frequency of ED Revisits and Death Among Older Adults After a Fall**

(Shankar): This study examined the characteristics and prevalence of older adult ED fallers as well as the recurrent ED visit and mortality rate. This was a retrospective analysis of a cohort of elderly fall patients who presented to the ED between 2005 and 2011 of two urban, level 1 trauma, teaching hospitals with approximately 80,000 to 95,000 annual visits. We examined the frequency of ED revisits and death at three days, seven days, 30 days, and one year controlling for certain covariates. Our cohort included 21,340 patients. The average age was 78.6 years. An increasing proportion of patients revisited the ED over the course of one year, ranging from 2% of patients at three days to 25% at one year. Death rates increased from 1.2% at three days to 15% at one year. A total of 10,728 patients (50.2%) returned to the ED at some point during our seven-year study period, and 36% of patients had an ED revisit or death within one year. In multivariate logistic regression, male sex and comorbidities were associated with ED revisits and death. More than one-third of older adult ED fall patients had an ED revisit or died within one year.



**Massachusetts Prevention and Wellness Trust Fund**

(Howland, Shankar, Taylor): The IPC is working with the cities of New Bedford and Boston to provide technical assistance for the development of local fall prevention programs. Drs. Howland and Shankar serve as falls prevention consultants to Prevention and Wellness programs in New Bedford and Boston, respectively. (See *Integrating Falls Prevention in the ED and Primary Care* on page 7.)

**Older Adults Falls Risk Assessment and Prevention Practices by Massachusetts Primary Care Physicians**

(Howland, Taylor): MDPH and the Massachusetts Commission on Falls Prevention (MCFP) have engaged the IPC to develop and conduct a survey of falls prevention practices by the state's primary care physicians for their older adult patients. The survey will document the falls risk assessment strategies used by primary care physicians, clinical

interventions to reduce falls risk, and patterns of referrals to community-based falls prevention programs.

**Statewide Community Falls Prevention Program Inventory**

(Howland, Treadway, Taylor): In collaboration with MDPH and the MCFP, the IPC conducted a statewide survey of organizations and agencies that serve older adults. The goal was to develop an inventory of evidence-based, community falls prevention programs that characterized programs by geographic distribution, facilitator training and qualifications, cost to participants, and number of older adults served. Results were recently published in *Injury Epidemiology* (citation on page 36).

**Statewide Tai Chi Training Program for Falls Prevention**

(Howland, Treadway, Taylor): As part of a strategy to enhance infrastructure for community-based falls prevention programs, MDPH sponsored a series of trainings in a CDC-approved Tai Chi program designed to reduce older adult falls by enhancing strength and balance. Three regional trainings were sponsored across the state, with a total of 40 trainees. The IPC evaluated the program with regard to program participation, characteristics and relevant expertise of trainees, trainee satisfaction with the program, and number of Tai Chi classes and attending older adults during the post-training year.

# STATE & LOCAL WORK

*During 2015, BMC IPC members were noted for the following in the New England region:*

**Alexander Walley, MD, presented to the Massachusetts's Governor's Taskforce.**

**Traci Green, PhD, MSc, co-led an expert group to develop a strategic plan for the state of Rhode Island (RI) on the RI Governor's Taskforce for opioid overdose and addiction.**

**K. Sophia Dyer, MD, led an October workshop for the Massachusetts Women in Law Enforcement, addressing the opioid epidemic in the justice and recovery community.**

**Traci Green, PhD, MSc, presented to the Massachusetts Attorney General.**





## INTERPERSONAL VIOLENCE

**A Brief Intervention to Prevent Adolescent Dating Aggression Perpetration** (Rothman): The aim of this study is to test the efficacy of a brief motivational interview-style intervention to prevent the perpetration of dating aggression by youth. This study will use a randomized controlled trial design, enroll 334 youth age 16-18 years old, and take place in an urban emergency department setting.

**An Evaluation of a Service Provision Program for Victims of Commercial Sexual Exploitation of Children** (Rothman): The aim of this study is to test the efficacy of two services provided by the My Life My Choice agency. The first is mentorship services to survivors of sex trafficking who are younger than 18 years old. The second is a 10-session prevention group for youth who appear to be at risk for being sex trafficked. The study uses a one-group pre- and post-test design.

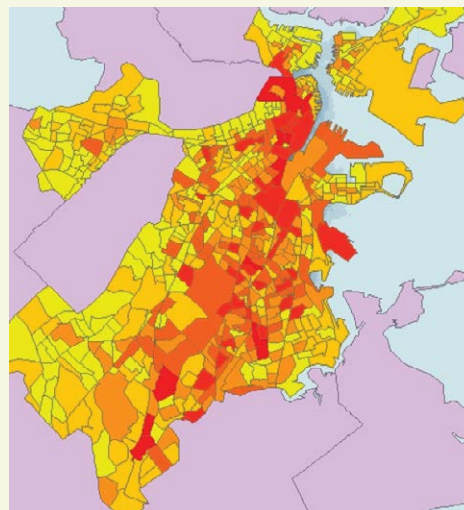
**Evaluation of Health Care Protocols for the Identification and Treatment of Victims of Human Trafficking** (Rothman, Stoklosa): The aim of this project is to analyze hospital protocols for the identification, treatment and referral of suspected victims of human trafficking from more than 30 hospitals in the United States. A secondary aim is to provide qualitative information about the experience of staff at one hospital with their protocol, which they have been using for more than two years. Two peer-reviewed papers are in preparation.

## Interpersonal Injury: Risk Factors and Recidivism

(Burke, Allee Barmak, Howland): There is limited research on the recidivism rates of lower level interpersonal violence injuries (e.g., assaults) with victims that are seen, treated, and released from the ED. This study will use a retrospective analysis of a cohort of 1,500 patients who presented at the BMC ED for intentional injuries to determine risk factors and recidivism rates for violent injury and to examine whether there are trends in injury severity escalation five years post discharge.

## Safe Zones and Danger Zones: A Geographic Study of Violence and Associated Resilience Factors in the Urban Environment

(Myers): Violence is one of the leading causes of preventable death of young adults living in urban areas. However, this violence is not distributed uniformly. This study aimed to better understand how resilience factors associated with less violence can influence city planning outreach programs combating violence. Results indicated strong associations between violence/security and family structure, non-vacant housing, education, and access to public transit.



Heat map depicts violence levels in various Boston neighborhoods

A world-class center for research and training in the field of injury prevention and education requires skilled team members such as these two research assistants working with Dr. Emily Rothman:



Sara DeCosta



Gabby Velasquez



## CHILDHOOD INJURY

**Birth Hospital Infant Safe Sleep Policies**

*(Howland, Taylor):* In 2013, MDPH conducted a survey to assess the frequency and content of infant safe sleep policies at all Massachusetts hospitals with maternity services. The IPC conducted a follow-up survey in 2015 of the same hospitals to determine changes in policies and procedures that have occurred since the initial baseline survey.

**Evaluation of Staff Training on Infant Safe Sleep Practices**

*(Howland, Treadway, Taylor):* Unsafe sleep practices (bed-sharing, sleeping with toys or crib bumpers) can put infants at risk for sudden unexplained infant death (SUID). To address the safe sleep practice disparity between WIC (Women and Infants Program) and non-WIC mothers, MDPH conducted a series of WIC staff trainings on the recent American Academy of Pediatrics' safe sleep guidelines. The aim is to train

WIC staff to promote safe sleep among their clients. The IPC evaluated this effort using pre/post-test measures of WIC staff knowledge, attitudes and behaviors, and statewide surveys to assess changes in WIC and non-WIC mothers' infant sleep practices. An evaluation is also being conducted by IPC staff of a MDPH training of staff providing services under the Bureau of Family Health and Nutrition. Results of the WIC study were recently published in Injury Epidemiology.

**Safe Sleep Intervention** *(Allee Barmak, Sege):* Every year, more than 2,000 infants, age one month to 12 months, die suddenly due to SUID. This study aimed to determine if an innovative multi-modal education plan for parents of infants would increase safe sleep practices, thereby reducing the prevalence of deaths related to unsafe sleep environments. The study's results suggest that providing parents with comprehensive access to educational information regarding safe sleep and having one-on-one discussions have positive effects on safe sleep practices.

**Safe Sleep Study** *(Allee Barmak, Douglass):* This surveillance study examines the sleep practices of caretakers of children age two and under. The aim is to determine how to best target intervention strategies to increase safe sleep practices and thereby reduce preventable infant/toddler deaths.

# NATIONAL WORK

2014:

Traci Green, PhD, MSc presented at the Office of National Drug Control Policy Heroin Summit in Washington, D.C.

2015:

Traci Green, PhD, MSc, presented to the National Association of Attorney Generals in October (Northeastern region Heroin Summit) and December (national meeting).

K. Sophia Dyer, MD, led a workshop for EMS Medical Directors in Boston.





## TRAFFIC SAFETY

### **Brief Motivational Interview for Older Adult Drivers**

(Allee Barmak, Burke, Howland, Uribe-Leitz): With funding from the Eastern Association for the Surgery of Trauma (EAST), the IPC conducted a randomized trial of a brief motivational interview to encourage older adult BMC patients to reduce risky driving behaviors. Telephone follow-up calls over three months assessed the effectiveness of the intervention in terms of actions taken to reduce driving risks. Results of the study were recently published in the *Journal of Trauma and Acute Care Surgery* (citation on page 40).

### **Pedestrian and Bicycle Safety Program Evaluation**

(Howland, Taylor): The Massachusetts Department of Transportation is funding a number of communities to develop educational, environmental, and enforcement programs designed to enhance pedestrian and cyclist safety. The IPC has been engaged to conduct qualitative evaluation of implementation of this program at the community level. More information about the [Highway Safety Improvement Project](#) can be found on the MassDot website.



**Reporting Impaired Drivers** (Allee Barmak): In response to recent changes in Massachusetts state law regarding impaired drivers, the Division of Trauma and Acute Care Surgery at BMC has developed a protocol for reporting impaired drivers. Patients who evidence driving impairment due to substance use or compromised neurocognitive function are reported to the Massachusetts Registry of Motor Vehicles (RMV) for consideration of administrative license suspension/revocation. The purpose of the current study is to assess the effectiveness of the reporting program in terms of the number of cases reported, the proportion of physicians engaged in the programs, and the disposition of reported cases by the RMV.

## SUBSTANCE USE DISORDER

### **Addressing Alcohol/HIV Consequences in Substance Dependence - Boston ARCH Cohort**

(Saitz, Walley): This is part of the URBAN ARCH Consortium, where the central goal is to examine the consequences of alcohol in HIV-infected people affected by multiple substances and to assess the impact of alcohol and HIV-related factors on bone health over time.

### **Advancing Patient Safety Implementation through Pharmacy-Based Opioid Medication Use Research: the MOON Study**

(Green, Walley, Drainoni, Baird, Schwartz, Fiske): The Maximizing Opioid safety with Naloxone (MOON) Study is a three-year grant from the Agency for Healthcare Research and Quality under the U.S. Department of Health & Human Services. The multi-faceted demonstration project seeks to systematically expand, evaluate the implementation of, and document a pharmacy-based naloxone program through its partnered pharmacies (including CVS/Pharmacy) in the states of Massachusetts and Rhode Island with prospects of becoming a pilot program for the nation. Overall, the study aims to address the growing public health problem of opioid overdose and improve pain medication safety by increasing awareness and availability in the pharmacy of the lifesaving drug naloxone (also known as Narcan).



**Clinical Addiction Research and Education (CARE Program)** (Samet, Walley): This study seeks to expose a spectrum of physicians-in-training to addiction clinical research and to immerse chief residents and infectious disease fellows in addiction medicine to facilitate their teaching and inclusion of drug abuse issues into HIV research.

**Emergency Department Opioid Harm Reduction: Assessing Physician Willingness** (Samuels, Dwyer, Baird, Mello, Kellog, Bernstein): The theory of Planned Behavior was used to develop a survey tool to assess



emergency department physician attitudes, clinical practice, and willingness to perform opiate harm reduction (OHR) interventions. OHR interventions include opioid overdose education, naloxone

prescribing, and referral to treatment programs. The goal was to identify barriers and facilitators in translating willingness to action. Results found that although respondents were willing to perform OHR interventions they did not often incorporate OHR interventions into practice. Barriers to practice included lack of confidence, knowledge, time training, and support while facilitators included evidence, professional recommendations, and opinions of leaders.

**Exploring Transitions to Injecting among Young Adult Non-Medical Opioid Users** (Green): The objective of this project is to examine the context and epidemiology of injection drug use as well as HIV- and Hepatitis C-related risk behaviors among young adult non-medical prescription opioid users.

**Impact of Overdose Prevention Education and Intranasal Naloxone on Fatal and Non-fatal Overdose in Massachusetts** (Walley): Naloxone is a drug that reverses the effects of opioid overdose. One novel approach to opioid overdose prevention is overdose education, with naloxone distribution (OEND). The proposed study, Intranasal Naloxone and Prevention ED Education's Effect on Overdose, will extend previous work and will determine the longitudinal impact of OEND programs in 18 Massachusetts communities with high numbers of opioid overdoses.

**IMPROVHISE: Implementation to Motivate Physician's Response to Opioid Dependence in HIV Setting** (Walley, Green): This implementation study aims to test the effectiveness of academic detailing on overdose prevention and response to HIV care providing physicians. The goal of the detailing is to increase prescribing of naloxone, prescribing of medication assisted therapies, and uptake of medication assisted therapy training. The project will use a stepped-wedge design to test for change in 11 study sites across the country. A supplement to this study will develop and validate a methodology to measure the effectiveness of naloxone distribution and use through existing reporting mechanisms in the state prescription monitoring program.

**Improving Physician Opioid Prescribing for Chronic Pain in HIV-infected Persons** (Samet, del Rio, Walley): A multisite randomized controlled trial to test whether a collaborative care intervention for physicians can improve the delivery of chronic opioid therapy (COT) for HIV-infected person by increasing physician adherence to opioid prescribing guidelines, improving patient level outcomes and, increasing physician and patient satisfaction with care. The study also seeks to create and follow an observational cohort of HIV-infected patients on COT.





### Linking Russian Narcology and HIV Care to Enhance Treatment, Retention and Outcomes (Samet, Walley):

The goal of this study is to improve upon current seek, test, treat, and retain efforts for HIV-infected Russian and Eastern European intravenous drug users in narcology. The study is a behavioral and structural intervention designed to support and motivate HIV-infected narcology heroin dependent patients to engage in HIV medical care and ultimately improve their HIV outcomes.

### Opioid Education and Nasal Naloxone Rescue Kit Distribution in the Emergency Department

(Bernstein, Dwyer, Walley, Langlois, Mitchell): Emergency departments (EDs) are venues to address opioid deaths with education on overdose prevention and appropriate actions in witnessed overdose. They also have the potential to equip patients with nasal naloxone kits. This study aimed to describe OE and OEND dissemination in the ED setting, as well as to determine whether OEND resulted in higher rates of opioid use or overdose, or lower rates of calling 911 during a witnessed overdose. Results indicated that delivery of OE and OEND in the ED setting is feasible and that participants demonstrated retention of overdose risk knowledge. In this exploratory study, however, patients who received OEND did not have higher rates of opioid use or overdose, or lower rates of calling 911 during a witnessed overdose. This was the first study to demonstrate the feasibility of ED-based opioid overdose prevention education and naloxone distribution and provides preliminary data for larger prospective studies of ED-based overdose prevention programs. The results of the study were recently published in the *Western Journal of Emergency Medicine* (citation on page 35).



### Optimizing Patient Engagement in a Novel Pain Management Initiative (Green, Baird, Donovan):

This study is a randomized controlled trial to develop and determine the effectiveness of an intervention using complementary and alternative medicine resources and offering support and appointment reminders through an interactive text messaging system to help newly enrolled Medicaid patients manage chronic pain. The aim of the study is to decrease patient use of emergency department services for pain management. Intervention effectiveness is assessed through comparison of outcomes with standard peer navigation that occurs for all new Medicaid enrollees.

### Physician Attitudes and Perceived Barriers to Prescribing Nasal Naloxone Rescue Kits in the Emergency Department

(Bernstein, Dwyer, Langlois, Mitchell): Fatal opioid overdose (OD) in the U.S. reached 16,000 in 2010 and deaths from prescription opioids were 5.4 times higher than deaths from heroin in 2007. In 2009, 415,000 emergency department (ED) visits were prescription opioid related, indicating that EDs may be important venues for harm reduction. Nasal naloxone rescue kits (NNRK) are distributed to opioid users in the community with the goal of preventing mortality without increasing substance use. The purpose of this study was:

- To assess ED provider knowledge, attitudes, and perceptions of opioid harm reduction interventions in the ED setting.
- To examine the barriers and facilitators to prescribing NNRK in the ED and requirements to overcome these barriers.

The study found that while providers are not currently prescribing NNRK, those surveyed had positive attitudes towards working with those with opioid addiction, and would consider prescribing in the future. Results suggested that the largest barriers to adoption seem to be lack of knowledge and training.

**Pregnancy and Opioid Use: Using Prescription Monitoring Programs to Improve Care**

*(Green):* This study seeks to develop a Continuing Medical Education program for prescribers in identifying and responding to prescription opioid use, misuse, and addiction among pregnant women patients, “academic detailing” of prescribers treating pregnant women using opioids, and an evaluation of clinical outcomes associated with these interventions.

**Prescription Drug Overdose Prevention for States, Rhode Island**

*(Green):* This four-year grant provides support for the Rhode Island Department of Health to expand its capacity to conduct opioid overdose surveillance, prevention, intervention, and monitoring activities. Several initiatives will be put in place, and an evaluation by the IPC will be undertaken to measure their implementation and impact.

**Prescription Opioid Use, Misuse, Disorders and HIV Outcomes**

*(Green):* This project will employ innovative approaches to understand the types and impact of prescription opioid use among HIV+ patients with chronic pain, and to understand the complex patient and provider factors that influence health outcomes for this population.

**Safe Opioid Prescription Protocol**

*(Baird, Mello, Green, Howland, Taylor):* The precipitous increase in prescription opioid misuse and related mortality is a public health concern that requires effective prevention and intervention strategies. This study, funded by the Centers for Disease Control and Prevention, evaluates the feasibility and effectiveness of a protocol to promote safe prescription opioid practice with injured trauma patients. The objective of the study is to develop and evaluate a safe opioid prescription protocol (SOPP) to be used by providers as part of the discharge of patients from trauma services. To assess the effectiveness of SOPP, a quasi-experimental study is underway wherein the protocol will be implemented at Rhode Island Hospital and outcomes compared to trauma patients receiving standard care at BMC.

**Screening and Brief Intervention in the ED among Mexican-origin Young Adults**

*(Bernstein, Cherpitel):* A randomized controlled trial of brief intervention (BI), for drinking and related problems, using peer health promotion advocates, was conducted among at-risk and alcohol-dependent Mexican-origin young adult emergency department patients, aged 18-30. Six hundred and ninety-eight patients were randomized to: screened only ( $n = 78$ ), assessed ( $n = 310$ ) and intervention ( $n = 310$ ). Primary outcomes were at-risk drinking and Rapid Alcohol Problems Screen (RAPS4) scores. Secondary outcomes were drinking days per week, drinks per drinking day, maximum drinks in a day, and negative consequences of drinking. Using random effects modeling controlling for demographics and baseline values, the intervention condition showed significantly greater improvement in all consumption measures at 12 months, but not in the RAPS4 or negative consequences of drinking. Improvements in outcomes were significantly more evident for non-injured patients, those reporting drinking prior to the event, and those lower on risk taking disposition. Current article is in press in *Alcohol and Alcoholism* (citation on page 34).

# INTERNATIONAL WORK

*BMC IPC was represented worldwide in 2015:*

*June:* Jonathan Howland, PhD, MPH, MPA, and Traci Green, PhD, MSc, met with colleagues at the Orthopedics and Emergency Medicine departments, University of Copenhagen, to discuss potential collaborations on research related to the epidemiology of hip fracture and Danish policies on prescribing opioids for trauma patients.

*September:* Traci Green, PhD, MSc, and Alexander Walley, MD, MSc, presented at the First International Conference on Overdose in Bergen, Norway.



## CLINICAL PRACTICE

The IPC works closely with various departments to integrate injury prevention into the clinical care of patients.

### **Hand Held Power Tools: A Single Urban Level I Trauma Center's Retrospective Review of Injury Trends and Cost Analysis, 2004-2014**



(Allee Barmak): Hand held power tool injuries are among the most common in the construction industry. Despite evidence that the incidence of these injuries are increasing, there has been no consensus on safety regulations

at the local, state, or national level. This study will characterize hand held power tool injury trends from 2004 through 2014 at BMC and perform a cost analysis on these injuries.

**Domestic Violence Program** (Timmons): Boston Medical Center's Domestic Violence Program coordinates the institution's service to victims of domestic violence, whether patients or employees. Activities include:

- Training, education, and awareness initiatives
- Policy and protocol development
- Consultation and technical assistance
- Direct advocacy/support for survivors of abuse and violence
- Connection to community resources

Services are free, voluntary, and confidential.

**Emergency Department Concussion Study** (Stern): Traumatic brain injury (TBI) and concussion are increasingly recognized as public health problems. This study aims to understand how EDs across the country treat TBI and concussion. Online surveys have been sent to 6,500 EDs nationwide to document standard care for concussions and assess whether there are differences in care by region or by ED level. Information collected by this study could inform the development and dissemination of new protocols for screening and treatment of brain injuries by emergency departments.

**Pediatric Concussion Program** (Allee Barmak): BMC is committed to educating and treating patients with sports concussion. Patients admitted with a concussion receive a pediatric neurology consult as well as bedside education on treatment, recovery process, and prevention of subsequent injury. IPC has partnered with Pediatric Neurology and the Family Medicine and Sports Medicine Departments to ensure concussion follow up care. Our IPC is also actively involved in legislative advocacy around the Massachusetts Regulations on Head Injuries and Concussions in Extracurricular Athletic Activities.

### **Massachusetts Emergency Department (ED)**

**SBIRT Project** (Bernstein): This project, funded by the Massachusetts Bureau of Substance Abuse Services, enabled the Brief Negotiated Interview-Active Referral to Treatment (BNI-ART) Institute to disseminate the Project ASSERT/health promotion advocate model into emergency departments across Massachusetts. Over the six years of the grant, eleven emergency departments implemented ED Screening, Brief Intervention and Referral to Treatment (SBIRT) programs. The Institute trained more than 30 health promotion advocates over the course of the BSAS grant, many of whom continue to work in the addiction field.

**SBIRT Project for Trauma Patients** (Allee Barmak): Substance abuse in general and particularly alcohol has been clearly linked to injury and injury mortality. Alcohol intoxication has been associated with 35-56% of all traffic fatalities, 25-35% of all non-fatal motor vehicle crashes, 40% of all falls, and 32-54% of homicides. The clinical social workers in the Care Management Department screen all trauma patients for high risk substance use using the NIAAA guidelines and provide SBIRT to all those who screen positive. The social workers are also involved in trauma recovery of all trauma patients and their families and follow them throughout the hospitalization for a multitude of needs.



The IPC's mission includes not only research on the causes and prevention of injury, but also the development and implementation of evidence-based programs to serve the community. Working closely with several BMC departments, the IPC is conducting a number of injury prevention programs for Boston residents.

**Boston Public Schools Outreach** (*Allee Barmak, Abbensetts*): The IPC Director of Programs and Education pairs with one of the BMC Trauma Surgeons for monthly presentations at the Counseling and Guidance Center of Boston Public Schools. These



presentations offer a realistic picture of the physical and psychological challenges facing victims with gunshot and stabbing injuries. This presentation is provided to youth

identified by the Boston Public Schools as being at high risk for interpersonal violence.

**Child Passenger Safety Program** (*Allee Barmak*): Massachusetts state law requires that all children under age eight and less than 57 inches tall be properly fastened and secured in an approved car or booster seat. BMC complies with the CDC's Child Passenger Safety recommendations by requiring that all newborns have an appropriate car seat prior to discharge home. The IPC and Division of Trauma have partnered with the Department of Public Safety at Boston University Medical Campus to train nine officers as Certified Child Passenger Safety Technicians. Officers provide the following services:

- Child passenger safety inspections, conducted at open events held throughout the good weather months or by appointment
- Assistance with newborn car seat fit and installation
- Education for families – information on car seat safety and availability



**Cribs for Kids** (*Allee Barmak*): Sudden Unexpected Infant Death (SUID) is the leading cause of infant death after the first month of life. In Massachusetts in 2010, 45% of infant deaths age one month to 11 months were a result of SUID. Research has shown that the majority of these deaths are infants found in unsafe sleep locations and are likely preventable. BMC is dedicated to ensuring our families have a safe place for their infants to sleep. Through funding from the Boston Bruins Foundation, we are able to provide those in financial need with a pack n' play to ensure a safe sleep space for their infant. Families also receive verbal and written safe sleep education.



**Critical Incident Response to Schools** (*Allee Barmak*): IPC staff provides support to area high schools in communities affected by motor vehicle crashes. This program conducts parent/child forums that present information on impaired driving and provides opportunities for family members of victims to share their stories. The presentations stress the importance of healthy choices and seat belt use, the risks of distracted driving, and the realities of injuries that may be sustained during a car crash.

**Low Cost Bicycle Helmet Program** (*Allee Barmak*): The IPC works in collaboration with the Boston Public Health Commission and the Play Safe Campaign to provide low-cost bicycle helmets to Boston residents. Bicycle helmet safety was a focus of BMC's Trauma Service's injury prevention efforts at the WHDH/BMC Health and Fitness Expo in June of 2014. Thanks to







Boston Health Net and the Boston Public Health Commission's generous helmet donations, we were able to provide concussion education through an interactive simulation with concussion goggles and properly fit 350 people with new bicycle helmets!

Ride safely, everyone!

**Matter of Balance** (Allee Barmak): In 2010, 2.3 million non-fatal fall injuries among U.S. older adults were treated in emergency departments and more than 662,000 of these patients were hospitalized; 20,400 older adults died from unintentional fall injuries. The BMC Emergency Department treats approximately 15 fall-injured older adults each week. Many people who fall, even if they are not injured, develop a fear



of falling. This fear may cause them to limit their activities, resulting in reduced mobility and compromised muscle strength, which in turn, increases their risk of falling. The IPC received funding from the Tuft's Foundation to conduct *A Matter of Balance*, a program that has been shown to reduce fear of falling among older adults and increase their psychosocial status. The

IPC is collaborating with the Sargent School at Boston University so that physical and occupational therapy students can be trained as program facilitators. The program will serve older adults at BMC and the surrounding community.

## HAPPY 20TH ANNIVERSARY PROJECT ASSERT

Project ASSERT, an acronym for improving Alcohol and Substance Abuse Services, Education and Referral to Treatment, began in 1994 at Boston Medical Center as a U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration sponsored demonstration project and was the first Screening, Brief Intervention and Referral to Treatment (SBIRT) program in an emergency department. Members of the surrounding community who had experience in services and outreach for substance use disorder were brought into the Emergency Department to work as peer service providers called health promotion advocates (HPAs). By 1997, Project ASSERT was recognized as an integral and crucial emergency department service and became a line item in the hospital's budget. Over 80,000 patients have been served since the program's inception.



## HONORS AND RECOGNITIONS

The Center values our member's world-class talents and hard work in promoting our mission. It is especially rewarding when the medical world at large also pays tribute to their dedication and successes:

**Lisa Allee Barmak, MSW, LICSW**, was awarded the Excellence in Field Instruction Award from the Boston University School of Social Work.

**Peter Burke, MD, FACS**, was accepted into the Alpha Omega Alpha (AOA) National Honor Medical Society in 2015. He was also recognized as a 2014 and 2015 Boston Magazine "Top Doc."

**Tracey Dechert, MD**, received the Leonard Tow Humanism in Medicine Award from BU School of Medicine. She was also the Commencement Speaker at Bloomsburg University of Pennsylvania.

**K. Sophia Dyer, MD, FACEP**, was awarded the 2015 Boston University School of Medicine Distinguished Alumna Award for "her extraordinary career in Emergency Medicine."

**James Feldman, MD, MPH**, received the 2015 Massachusetts Medical Society Chair Service Award which recognizes exceptional leadership and service to the Massachusetts Medical Society.

**Traci Green, PhD, MSc** was appointed to the CDC's National Center for Injury Prevention and Control (NCIPC) Board of Scientific Counselors in 2015 and served on the Opioid Workgroup to review the draft CDC Guidelines for Chronic Pain.

**Thea James, MD**, was honored by the Greater Boston Chamber of Commerce with the 2015 Pinnacle Award recognizing her achievements in business and management. In 2015, she became the Associate Chief Medical Officer and Vice President of Missions at Boston Medical Center.

**George Kasotakis, MD, MPH**, was appointed as a Fellow of the American College of Surgeons (ACS). He was also appointed as a member of the Association of Academic Surgery (AAS) Publications Committee. He was the recipient of four state and regional research awards including the BU School of Medicine Serchuck Award in which he won first prize for clinical research on health care disparities.

**Bedabrata Sarkar, MD, PhD**, was awarded a Faculty Research Fellowship in 2015 by the American College of Surgeons (ACS) for his research project: Mitochondrial DNA Regulates Cytokine mRNA Stability in Sepsis. He was also appointed as a Fellow of the American College of Surgeons (ACS).

**Project ASSERT** was recognized by the Massachusetts Organization of Addiction Recovery in September 2014 at their Recovery Day Celebration.



## LOOKING FORWARD

### NEW PROJECTS FUNDED IN 2016

**Faster Paths to Treatment** (funded by MDPH): This grant under Edward Bernstein, MD, MPH, seeks to implement an Opioid Urgent Care Center (OUCC) to rapidly evaluate, motivate, and refer patients with substance use disorders to a comprehensive care network of inpatient and outpatient detoxification, treatment, and aftercare services integrated with mental health and medical care. It will build upon existing BMC and BPHC addiction services to complete the continuum of care through enhanced patient triage, examination, care level management, and medication reconciliation. The OUCC will have access to medication assisted treatment and the Faster Paths Outpatient Clinic which will serve patients as they wait for placement in an office-based addiction treatment or methadone maintenance program. It will serve the counties of Essex, Suffolk, Middlesex and Norfolk.

**Maximizing Opioid Safety with Naloxone** (MOON): As part of the MOON Study efforts, an annual nationwide poster contest was held to raise awareness about overdose and naloxone availability at pharmacies. The first contest year had over 100 submissions. The winning posters may be printed for pharmacies and communities in the study and across the country. For more information, visit [Emergency Medicine's MOON study page](#).

**Non-Standard Work and Injury** (funded by Liberty Mutual Research Institute for Safety): Over the last 5 decades there have been many changes in the nature of work, primarily driven by shifts in the economy, technological advances, and globalization. The late 1990's marked the initiation of work fragmentation. Additionally, the recent economic recession has resulted in people working more hours and/or more jobs in order to provide an income. Small-scale epidemiological studies have suggested an association between non-standard work schedules and risk for injury. This investigation, led by investigators at the Liberty Mutual Research Institute for Safety, uses a case control study design, with nested case crossover component, to test the hypothesis that alternative work structures and corresponding lifestyle factors, such as sleep time, work time, and commute time, are risks for injury. To

accomplish this, investigators at the Injury Prevention Center will recruit over a three year period 2,500 injured adult patients from the BMC ED to complete an interview on the structure of their work routine and the circumstances of their injury.

**Prescription Drug Overdose – Prevention for States, MA** (funded by the CDC): Opioid-related deaths in Massachusetts reached over 1,000 in 2014, up 35% from 2012, and the highest ever recorded in the state. Additionally, there was an increase of 102% in acute care hospital events such as emergency department visits and hospital stays from 2002 to 2013. The goal of this grant is to work with state police and link real-time suspected overdose death data to substance use disorder treatment data from the MDPH Bureau of Substance Abuse Services, and incorporate information on circumstance and toxicology to develop a clearer picture of the who is at risk, when the greatest risk is and how to tailor treatment and prevention. Ultimately this day will link with the PMP making it relevant for overdose prevention, in addition to prescription opioid abuse prevention. Traci Green, PhD, MSc, will be working on this project as an evaluator.

**Falls Clinic** (beginning spring 2016): The ED, in conjunction with the Geriatrics Department, Rehab Services and the Sargent School of Rehab Medicine, is initiating a Falls Clinic for older adults discharged from the ED after a fall or fall-related injury. Within two weeks of their ED visit, patients will be able to meet with a geriatrician and a rehab therapist for a multifactorial falls risk assessment. In addition, they will receive recommendations for further home safety and continued outpatient rehab therapy, if needed. Patients will be followed prospectively to assess whether this new clinic makes a difference in their morbidity and propensity for repeat injury. The hope is to tie the referral process into community programs (e.g. Tai Chi and Matter of Balance) to encourage exercise and falls prevention.



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