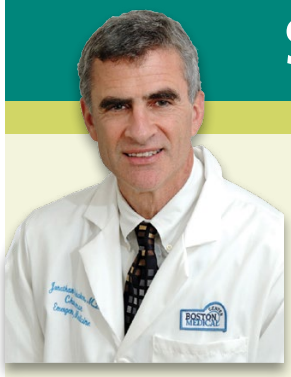
BOSTON MEDICAL CENTER

BU Boston University School of Medicine

Fall 2016

PUBLIC & GLOBAL HEALTH

SOCIAL DETERMINANTS OF HEALTH



Jonathan Olshaker, MD

Chief, Department of Emergency Medicine, Boston Medical Center

Professor and Chairman, Emergency Medicine, Boston University School of Medicine

The Department of Emergency Medicine at Boston Medical Center and our Section of Public and Global Health was highly productive throughout 2016. This year demonstrated the importance of emergency department care, advocacy, and research in helping to combat the opioid epidemic, youth violence, and other major public health challenges we face — not only in Massachusetts but across the nation. In this newsletter, we address the social determinants of health and highlight our many public health initiatives as we promote better health to positively impact our patients, their communities, and society.

We are extremely pleased to feature Monica Bharel, MD, MPH, Commissioner of the Massachusetts Department of Public Health (DPH) as a guest contributor. Bharel examines the widespread opioid epidemic and DPH efforts to promote education, intervention, and prevention. A strong supporter of our programs at BMC, she has championed work to stem the opioid epidemic and its associated stigma. Her editorial is followed by updates on Project ASSERT, which has been a part of the department for over 20 years, connecting patients with substance abuse treatment programs, opioid overdose prevention, primary care, and social support services. Edward Bernstein, MD, Project ASSERT founder, describes our exciting new *Faster Paths to Treatment* Opioid Urgent Care Center, generated by a major collaborative award from the DPH.

Thea James, MD, and Elizabeth Dugan, LICSW, highlight the effective programs of the Violence Intervention Advocacy Program (VIAP) and their critical impact in promoting healthy and safe communities. Celebrating ten years of service, VIAP is nationally recognized for its innovative approach, beginning with immediate bedside intervention for victims of violence followed by intensive follow up and partnerships with patients. Areas of support include life skills training, mentoring, education, job training, and family support services. In 2016, the U.S. Department of Justice, Office for Victims of Crimes awarded VIAP nearly $1 million grant to promote its mission.

This issue also details our many exciting Global Health Programs and resident elective rotations under the leadership of Gabrielle Jacquet, MD, MPH, Director of Global Health, Department of Emergency Medicine, and Associate Director of Global Health Programs for Boston University School of Medicine. Jacquet recently created the widely-used open-access interactive series, "The Practitioner's Guide to Global Health," consisting of three multidisciplinary timeline-based, evaluative courses to train students to participate in safe, effective and sustainable global health learning experiences.

Finally, the newsletter highlights many other faculty and resident activities, public health initiatives, and grants for the Emergency Department including Dr. James Feldman's collaborative, ambulance diversion grant, Dr. Kalpana Narayan's grant on high emergency department utilizers, and Dr. Elissa Perkins' grant on emergency department hepatitis screening.

We are proud to present the 2016 Public and Global Health Newsletter on behalf of the Department of Emergency Medicine at Boston Medical Center.

Jonathan Olshaker

Contents

Our Mission: By utilizing the principles of epidemiology and public health, the Department of Emergency Medicine — Section of Public & Global Health — strives to promote and improve the health of the populations we serve. We are dedicated to excellence in emergency care through Research, Education, Advocacy, Clinical Competency and Humanitarianism (REACH).

Commissioner Monica Bharel, MD, MPH, Massachusetts Department of Public Health, Executive Office of Health and Human Services

Monica Bharel, MD, MPH, Commissioner of the Massachusetts Department of Public Health since February 2015, is responsible for spearheading the state's response to the opioid crisis, as well as leading the Department's implementation of health care cost containment legislation, Chapter 224, reducing health disparities, finding public health solutions for health care reform, finding innovative solutions using data and evidence-based practices, and other health care quality improvements initiatives.

Widely recognized for her dedication to health care for underserved and vulnerable populations, Bharel received her Master of Public Health degree through the Commonwealth Fund/Harvard University Fellowship in Minority Health Policy, with a concentration in health care policy and management. She received her medical degree from Boston University School of Medicine and completed a residency and chief residency in internal medicine at Boston City Hospital/Boston Medical Center. Dr. Bharel has served on the faculty of Harvard Medical School, Boston University School of Medicine, and Harvard School of Public Health. She has practiced general internal medicine for 20 years in neighborhood health centers, city hospitals, the Veterans Administration, university hospitals, and nonprofit organizations. She previously served as the Chief Medical Officer of Boston Health Care for the Homeless Program.

In addition she oversees dozens of programs focused on the state's response to the opioid crisis. Here Bharel provides an in-depth look at the opioid epidemic facing not only Massachusetts but the country as a whole.

Guest Editorial

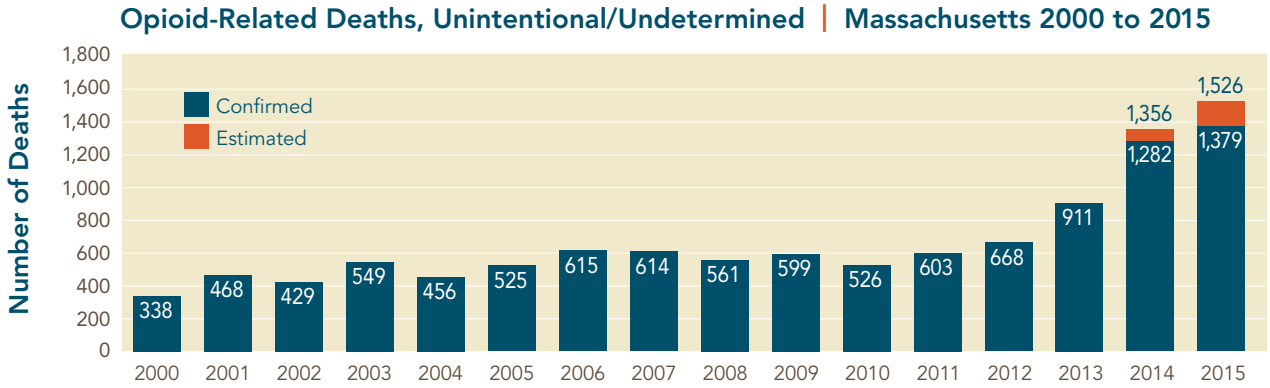
Addressing the Current Opioid Epidemic through a Public Health Lens:

THE CRITICAL ROLE OF THE EMERGENCY DEPARTMENT

by Commissioner Monica Bharel, MD, MPH, Massachusetts Department of Public Health

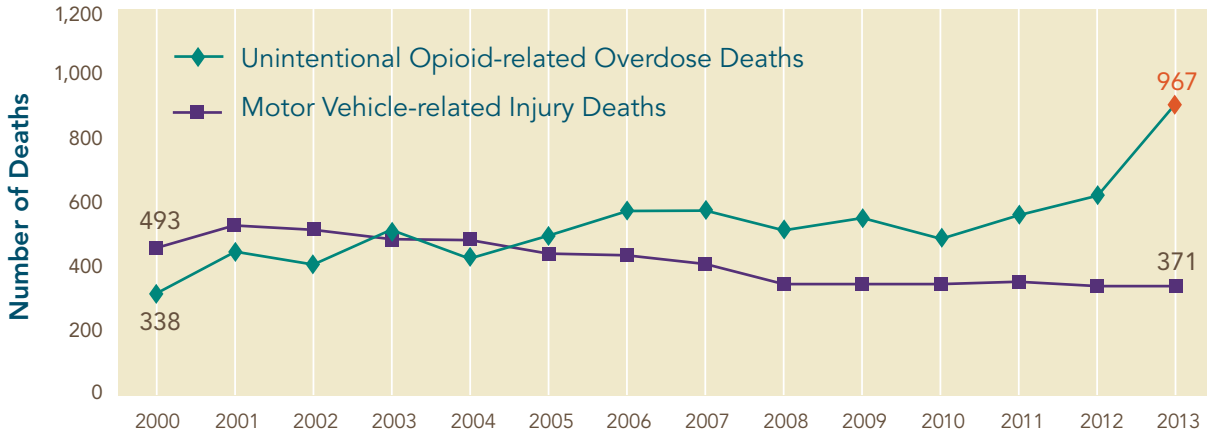
I ran out onto the street with several of my colleagues to direct our patient "Joe" out of traffic. As we walked him across the street, I sighed with relief that he had not been hit by a vehicle at the busy intersection. He had spent the day going between the emergency department and our clinic, getting revived with intranasal naloxone, and finding his way outside again. I had gotten to know him over the past few months and knew that when he was sober, he had a deep desire to find a place to live and reconnect with his family.

The number of opioid-related hospital visits has increased dramatically in the last several years. Anyone in the medical community who has spent time seeing patients in the last few years has noticed more individuals coming in with opioid overdoses and the medical complications of substance use disorders (SUD). Also, the individuals coming in through emergency departments are now often younger and often have co-occurring diseases.



Note: Counts for 2000 – 2013 are complete as of the date that the state's statistical files was closed. Each year, a small number of cases receive a cause of death after the file is closed. We are currently reviewing these cases. The 2014 and 2015 numbers are higher than previously reported following a review of toxicology data and cause of death for previously "undetermined" cases. These cases were excluded in the last report but included in this report as confirmed opioid-related cases.

Unintentional Opioid-related Overdose Deaths vs. Motor Vehicle-related Injury Deaths | Massachusetts 2000 to 2013



It is clear: the current opioid epidemic is overwhelming our communities across Massachusetts and the country. Data that we release from the Massachusetts Department of Public Health illustrate that the numbers are staggering. In 2015, there were at least 1379 unintentional/unintended opioid overdose deaths in Massachusetts, expected to reach over 1500 once final analysis is complete. This number is more than double the number of deaths in 2012 and almost three times as high as the rate of motor vehicle accident deaths.

At the Department of Public Health, and across the Baker administration, we have made addressing this epidemic our top public health priority. Through the Governor's Opioid Working Group, we have established 55 core recommendations and 19 action steps to address this epidemic with a focus on interventions across the spectrum of prevention, intervention, treatment, and recovery.

In the area of prevention, we are focused on two important areas: general public prevention education and prescriber education. General prevention includes educating the general public on the risks of opioid misuse and stigma through campaigns such as the #StateWithoutStigMA campaign.

In order to insure that our prescribers feel well equipped with the knowledge they need to balance appropriate pain management with potential for opioid misuse, the four medical schools in Massachusetts have committed to a set of ten core competencies that will be taught to all medical students:

MEDICAL CORE COMPETENCIES

Preventing Prescription Drug Misuse

- **I.** Evaluate pain using evidence based tool
- **II.** Evaluate risk for opioid misuse using evidence based tool
- **III.** Know opioid and non-opioid options for treatment

Treating a Patient at Risk for Substance Use Disorder

- **IV.** Know options for treatment and referral resources
- **V.** Develop treatment plans for pain and SUD
- **VI.** Demonstrate fundamental skills in patient centered treatment

Managing Substance Use Disorder as a Chronic Disease

- **VII.** Be able to respond to an opioid overdose
- **VIII.** Treat SUD as a chronic disease
- **IX.** Recognize own and societal bias and stigma against SUD
- **X.** Address the associated social determinants of health

In the area of intervention, we have focused on insuring that intranasal naloxone is as readily available as possible in communities across the state through bystander programs, first responders, and pharmacy or prescriber distribution. This lifesaving tool can be an important intervention while appropriate medical care arrives.

In the area of treatment and recovery, we know there is a need for more beds and access to medication assisted treatment. While we have increased the number of beds available in the system and enhanced the availability of medication assisted therapy, we continue to work to make sure that treatment and recovery options are available for everyone at the right time and at the right place. As we work towards implementing this statewide approach, we know that it will take a collective effort across all sectors of society to fight this epidemic like the disease it is. So what can be done in the emergency department (ED)?

As a primary connection between community members and health care, many individuals first seek care in the ED. It is vital that clinical staff in these settings understand how to screen for and treat SUDs. The core competencies being used in medical schools provide a framework for these skills for all practicing professionals. Additionally, being able to educate patients on safe opioid storage and the risks and benefits of these medications is a critical role for health care providers. Second, all patients at risk for overdose should be given opioid overdose education, including an intranasal naloxone kit. Third, as patients are ready to accept treatment, staff in the ED should know and be able to direct patients to local resources for treatment and recovery services. Finally, as SUDs can exacerbate the impact of the social determinants of health, assistance with access to safe housing and other core services is paramount.

For patients like Joe, as we work together across sectors of public health, health care, housing, education, law enforcement, families, and communities, we will be able to finally bend this curve of rapidly increasing opioid overdose deaths and begin to integrate the care of patients suffering from substance use disorders into standard medical care.

"I have heard how the stigma associated with substance use disorder can drive a sufferer to find that one more hit, that one more pill, allowing them the brief relief and escape from the reality that is fraught with societal scorn … we need to talk about this disease. This is a disease. And as a community and a nation, we will treat it and we will find pathways to recovery."

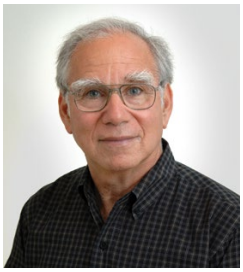
— *Dr. Bharel testifying before a congressional committee in Washington, DC (May, 2015) click here to read the entire testimony. Also for more information go to Stop Addiction in its tracks: www.mass.gov/eohhs/gov/departments/dph/stop-addiction/current-statistics.html*

State and Local Public Health **Faster Paths to Treatment**

Massachusetts Department Of Public Health Bureau Of Substance Abuse Services:

BOSTON MEDICAL CENTER AWARDED OPIOID URGENT CENTER GRANT

By Edward Bernstein, MD, Professor of Emergency Medicine, BUSM, Professor of Community Health Sciences, BUSPH, Medical Director, Project ASSERT, BMC, Director, BNI-ART Institute, BUSPH



Edward Bernstein, MD, Professor, Vice Chair Academic Affairs, Boston University School of Medicine, Director, Section of Public Health, Director, School of Public Health BNI-ART Institute, Medical Director, BMC Project ASSERT, Boston Medical Center, Department of Emergency Medicine

The first time you reverse an opioid or heroin overdose with the antidote naloxone, you feel elated about saving a life, and when you learn from patients that they used the intranasal naloxone rescue kit to save a buddy's life, you congratulate them. Not to say that after treating multiple overdoses in one day or several hundred in a year, we don't feel discouraged. However, President Obama at the 2016 National Prescription Drug Abuse and Heroin Summit, in his remarks in support of increasing access to naloxone reminds us that:

"It doesn't do us much good to talk about recovery after folks are dead. And if we can save a life when they are in medical crisis, then we now are in a position to make sure that they can also recover so long as the treatment programs are available."

— President Barack Obama

In 2015, a total of 2,601 narcotic-related incidents (NRI) were transported by Boston EMS, among them the highest percentage, 32.6 percent (848 patients) came to BMC.

Top Three Hospitals	2015 Narcotic Related Incidents
Boston Medical Center	848
Mass General Hospital	488
New England Medical Center	397

We have been doing many of the right things in response to the opioid overdose crisis. In 2015, Project ASSERT's health promotion advocates distributed 227 intranasal naloxone rescue kits (NNRK) in the BMC ED, and our residents distributed 57 (our best year ever since 2009 when the program started), but we were able to place only 56 percent of the 1,723 patients who requested detox (see figures 1 and 2 on page 6). We have to ask what is missing, especially in light of the Massachusetts opioid overdose deaths increasing from 1,356 in 2014 to 1,526 in 2015?

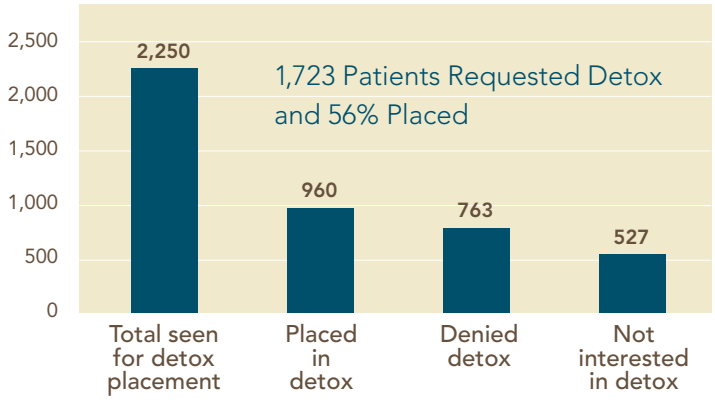
For cardiac care, we have a chain of survival that includes public education, bystander CPR, AED, EMS transport, EDs, cath labs, and rehabilitation centers — in short, an advanced, coordinated system. For addiction, we have quality services that are difficult to access, and segmented across specialties and across city, state, and private entities. What is missing for our patients in this current opioid overdose epidemic is the integrated, comprehensive, and augmented system of care delivery that we need to address the many barriers to access and quality of care.

A big step in this direction came on March 1, 2016 when Boston Medical Center was notified by the Massachusetts Department of Public Health (MDPH) Bureau of Substance Abuse Services (BSAS), that we had received a four-year renewable grant to establish an opioid urgent care center (OUCC). DPH recognized both our past performance and commitment, and our innovative, collaborative proposal for improving continuity of care. This grant requires "medical evaluations needed for patients to safely access acute treatment services (ATS), access to a full continuum of care for the treatment of individuals with opioid addiction as well as other substance use disorders and the ability to assess and place individuals in the appropriate level of care, including, but not limited to medication assisted treatment (MAT)."

Our OUCC, called *Faster Paths to Treatment*, integrates and enhances existing BMC addiction services: Project ASSERT, our five Office-Based Addiction Treatment Clinics (OBAT) and the Addiction Consult Service, and a partnership with community based PAATHS program of the Boston Public Health Commission with their transportation service, community support providers, and network of outpatient and inpatient treatment services. We will add a much-needed *Faster Paths*' MAT Clinic, staffed by an addiction nurse and physician and a masters' level addiction counselor (LADC1) who will provide buprenorphine induction and stabilization, and Vivitrol treatment for appropriate patients. After the stabilization period, patients will be placed in OBAT maintenance programs within and external to BMC. All patients enrolled in *Faster Paths to Treatment*

will receive referrals to primary care, opioid overdose education, naloxone rescue kits, and follow-up services with peer counselors or coaches to assure that they receive adequate support and access to necessary mental health and addiction services. Project ASSERT staff are available from 8 a.m. to midnight and in the Emergency Department after hours to provide around the clock safety net contact for enrollees.

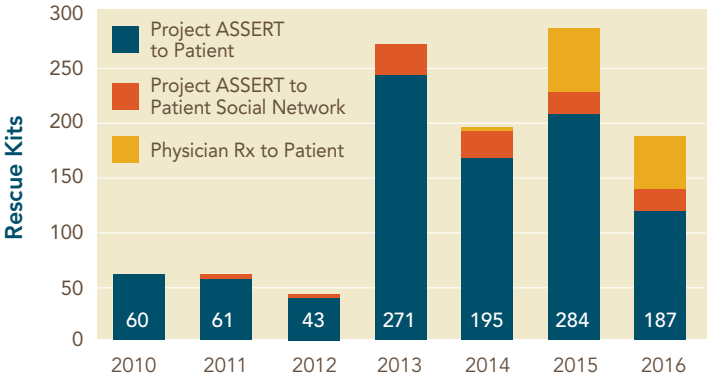
Figure 1
Project ASSERT Detox Data: January – December 2015



The grant application was developed with the support of BMC's Development Office. The OUCC grant represents a collaboration between the Boston Public Health Commission and BMC's addiction leaders from the departments of Emergency Medicine, General Internal Medicine, Psychiatry, OBGyn, Adolescent and Family Medicine, Social Work, Project ASSERT, and BMC's Information Technology and Urgent Care Clinic administration. The partnership and collaboration with the state BSAS and the two other awardee sites, SSTAR in Fall River and Community Health Link in Worcester, will provide data-driven opportunities to continually improve services and test public policies and programs. This grant provides funding for an addiction fellowship and the possibility of an elective for emergency medicine residents. We expect this greatly increased capacity to be a real game changer in our efforts to prevent overdose deaths and help people with addiction reclaim their lives.

Click here to read Boston Magazine's article "Boston Medical Center Launches Opioid Urgent Care Center."

Figure 2
BMC ED Naloxone Distribution by Provider Type 2010 to 2016
(Pilot Program Before Hospital Policy)



Massachusetts Governor Baker enacts new law mandating substance-abuse evaluation in cases of apparent opioid overdose in the Emergency Room

NEWS UPDATE, MARCH, 2016: Massachusetts will mandate hospitals to administer a substance-abuse evaluation to anyone who shows up in an emergency room (ER) believed to be suffering from an opioid overdose.

Governor Charlie Baker signed landmark legislation into law to address the deadly opioid and heroin epidemic plaguing the Commonwealth. The bill, titled "An act relative to substance use, treatment, education and prevention," passed with unanimous votes in both legislative chambers and includes numerous recommendations from the Governor's opioid working group, including prevention education for students and doctors, and the first law in the nation to establish a seven-day limit on first-time opioid prescriptions, with exceptions for treating cancer and chronic pain. The goal is to limit the amount of excess drugs lying in medicine cabinets.

The law establishes a process for schools to verbally screen students to identify those at risk of drug addiction. It requires that a mental health professional provide a substance abuse evaluation to anyone who enters the ER suffering from an opioid overdose within 24 hours. It allows patients to fill a lesser amount of an opioid prescription and requires doctors to check a prescription monitoring program whenever they prescribe opioids.

BNI ART Institute — Improving Ways to Treat Substance Abuse with Early Intervention:

ADDRESSING UNHEALTHY ALCOHOL USE, DRUG USE, AND THE OPIOID EPIDEMIC

By Deric Topp, MPH Assistant Director and Jennifer Masdea, Manager of Education Programs

Crosstown Center at Boston University Medical Campus.

In the context of the state of Massachusetts' focus on addressing the opioid epidemic and increased attention to addiction as less a criminal issue and more a public health one, the Boston University School of Public Health's Brief Negotiated Interview and Active Referral to Treatment (BNI ART) Institute spent the last year working to improve ways in which we address consequences of substance use across a number of arenas — emergency departments, community health centers, prisons, and schools.

The Institute provided training and technical assistant to a UMASS Memorial Medical Center's Emergency Department's NIAAA funded Remote Brief Intervention and Referral to Treatment (RBIRT) study led by Edwin Boudreaux, MD. RBIRT is a software that guides assessment, brief intervention and referral to treatment for patients with a continuum of unhealthy alcohol and drug use. The BNI ART Institute helped develop the intervention using its brief negotiated interview algorithm and trained providers on how to use it. The RBIRT product was ultimately deployed at call in centers to assist providers and settings without specialized staff to assess and refer patients to appropriate levels of care.

The Northshore Community Health System implemented a screening, brief intervention, and referral to treatment (SBIRT) program across its three community health centers in Gloucester, Salem, and Peabody. The BNI ART Institute trained teams of doctors, nurses, medical assistants, social workers, and front desk staff in SBIRT. Implementation of the programs has gone well, and each community health center now has a fully functioning, well received SBIRT program for its patients.

Three years ago, the BNI ART Institute developed a curriculum for recovery support navigators (RSNs), an addiction workforce employed by treatment systems that helps patients address the barriers they face in accessing medical, behavioral health, and addiction treatment and aid them in their recovery. One of the treatment systems, Spectrum Health Systems, began a new project that sends RSNs into prisons to work with people about to be released who have a substance use disorder, linking them to medication-assisted treatment and other critical wraparound services. The Institute provided training and ongoing support for the RSNs and this innovative project.

As part of the state's opioid legislation, "An act relative to substance use, treatment, education and prevention," Massachusetts middle schools and high schools are required to provide screening, brief intervention, and referral to treatment (SBIRT) in two grade levels. Under the leadership of the Department of Public Health and MASBIRT TTA, a Boston Medical Center SBIRT training organization and Institute partner, the BNI ART Institute helped train almost 1,000 school nurses, counselors, and teachers in 105 districts in preparation of implementation for the 2016-2017 school year. The goal is to address and educate on substance use early in a student's life in an open and engaging way rather than start once the student has developed an unhealthy relationship with alcohol and drugs. This year we also collaborated with MASBIRT TTA, to provide SBIRT training to RNPs at Massachusetts School Based Health Centers.

More recently, the BNI ART Institute and its Director Edward Bernstein, MD, began a collaboration with Annemieke Atema, MD, and Jolion McGreevy, MD, of the education section of emergency medicine (EM) to participate in a SAMHSA grant, the Boston University Evidence-Based Student SBIRT Training (BESST) Project. The goal of our participation is to improve the care of patients by facilitating the integration of behavioral health, patient communication, and substance use into general healthcare by improving the SBIRT knowledge, skills, and attitudes of third and fourth year medical students rotating through the Emergency Department.

Project ASSERT was founded in 1994 to improve alcohol, substance abuse services, education, and referral to treatment and to facilitate access to primary care, preventive services, and substance abuse treatment. First established through a federal grant, it later became a BMC-funded program.

For over 22 years, Project ASSERT licensed alcohol and drug counselors (LADC) have consulted with the ED's Urgent Care staff to provide our patients access to preventive services and substance abuse treatment. More recently, Project ASSERT staff also began consulting with inpatient teams OBOT, and Addiction Consult Services on behalf of patients with substance abuse and opioid addiction disorders to create a plan for services and referrals to care. With the August 2016 launch of the *Faster Paths to Treatment* Program, Project ASSERT staff now plays a more critical role, conducting intake and comprehensive assessments of patients with addiction, substance abuse and opioid disorders, helping navigate the path to future treatment. LADCs determine the level of appropriate service referrals as well as follow-up case management visits while educating patients on medication-assisted therapy and making referrals to the *Faster Paths* Medication Assessment Unit. Below, please read the reflections and personal thoughts shared by Project ASSERT staff.

— Edward Bernstein, MD, Medical Director, Project ASSERT

In Their Own Words:

CONVERSATIONS WITH THE DEDICATED HEALTH PROMOTION ADVOCATES OF PROJECT ASSERT…

including the first-hand impressions of new interns

By Jennifer Masdea, MPH, and Deric Topp, MPH, BNI ART Institute

Founded in 1994 by Edward Bernstein, MD, and Judith Bernstein, MD, in the Boston Medical Center Emergency Department, Project ASSERT (**A**lcohol & **S**ubstance Abuse **S**ervices, **E**ducation, and **R**eferral to **T**reatment) connects patients with substance abuse treatment programs, opioid overdose prevention, primary care, and social support services.

Project ASSERT health promotion advocates (HPAs) perform "in-reach" at the emergency department, affirming the dignity of patients and their diverse cultural backgrounds, beliefs, and values, and establishing a non-directive and non-judgmental relationship based on shared experience. HPAs are experienced licensed alcohol and drug counselors (LADC) and represent the surrounding communities served by the hospital. Project ASSERT is staffed by: Supervisor Ludy Young M.Ed. LADC I, and HPAs: Brent Stevenson LADC II, John Cromwell LADC II, Moses Williams LADC II, Deborah Ortiz LADC I, CADC, Daniel Heenan MS LADC I, and Isaac Rutledge M.Ed. LADC CTS. We invite you to read about their experiences:

On What Project ASSERT Does for Patients

"Suffering has no currency or language. Need is translatable across all ethnic and economic sectors. Suffering is translatable. Once we tap into that, we're able to provide hope and resources to help patients and their families survive another day."

— Ludy Young, Project ASSERT Supervisor

"Project ASSERT strives to meet patients where they're at and use a harm reduction model. I always tell folks that I work for them. We help connect patients to resources and help them move toward a safer direction concerning their substance use – physically, relationally, vocationally, or emotionally. Whenever I meet a new patient, my goal is to do at least one thing that will provide immediate assistance. For example, if a person is hungry, I'll find them a sandwich. If a person is going through withdrawal, then I prioritize a detox placement."

— John Cromwell, Health Promotion Advocate

"At Project ASSERT, I get to guide the patient and share the full range of what we have to offer. Let's talk (with the patient) about other forms of treatment beyond detox. Our brief discussions facilitate long-term relationships with patients beyond the initial encounter. I get to give the patient options and educate them about what's available."

— Deborah Ortiz, Health Promotion Advocate

"Project ASSERT is about helping people and giving people hope one small step at a time. We provide a safe place for patients."

— Brent Stevenson, Health Promotion Advocate and longest-serving member of Project ASSERT

"We're in the life-saving business."

— Moses Williams, Health Promotion Advocate

"One long-term [Project ASSERT] staff member, who himself has suffered from addiction, really brought home to me just how important and powerful the services provided are. It was truly inspiring to see first-hand what people can do when they are given the support and compassion to overcome their addiction. It is an honor to be able to train and learn here at Boston Medical Center."

— Dave Druga, PGY 1

On What It's Like to be Part of Project ASSERT

"I get to see the shining moments among patients who are really struggling or in the midst of their suffering. Patients allow me to get to know their world for short period of time. They provide different glimpses into their life before their current circumstances. They're just lovely, fragile, and sensitive people. They tell you who they are right away and whatever they present with is what we work on."

— Ludy Young, Project ASSERT Supervisor

"We're helping people get out of their addiction. This has given me a platform to help with an issue that has devastated our communities — to be a part of the solution and not the problem."

— Moses Williams, Health Promotion Advocate

"This job requires you to also be a social worker and educator. We often treat the whole individual and help patients navigate several intersecting healthcare and social systems."

— Isaac Rutledge, Health Promotion Advocate

"We provide stability in a chaotic situation to best serve the patient."

— Deborah Ortiz, Health Promotion Advocate

"It was wonderful to meet and spend time with the dedicated and hard-working individuals who provide so much support in the Emergency Department. I know these relationships will continue to grow over the course of residency, and I look forward to continue to learn from them."

— Erin Oakley, PGY 1

On What Project ASSERT Has Meant for the Care of Patients at Boston Medical Center

"Our patients are extremely resilient and frequently misjudged. Project ASSERT has played a significant role in changing the culture of addiction here at BMC. Our team treats all patients with dignity, compassion, and respect. And in turn, we model positive interactions with patients who are struggling with addiction for our colleagues in multiple departments throughout the hospital."

— John Cromwell, Health Promotion Advocate

"Many of our patients frequently return, but we never turn anyone away. We try to help patients get to the next phase without judging or shaming. Some of our patients are hurting or damaged and browbeating them won't help. Recovery is about trying to find a way out. Stigma keeps people sick and the issue hidden. As a result, they often won't ask for help because they're afraid that they won't be treated right."

– Brent Stevenson, Health Promotion Advocate and longest serving member of Project ASSERT

"People often say "They're just using our resources." Patients were looked upon as burdens… 'Here they come again. We were able to change the culture … stigma is a big barrier to patient delivery. We must break down barriers between patients and hospital staff … get to know where your patients are coming from. We can't be good public health providers without first understanding who it is we are serving"

— Ludy Young, Project ASSERT Supervisor

"Project ASSERT is a truly special program that we are extremely fortunate to have at BMC. Many of our patients present with health problems that are associated with addiction. We can treat the problem they present with, but we know they will be back in the ED if they continue to use. Project ASSERT allows us to break this cycle, and empower our patients with options for treatment."

— Erin Oakley, PGY 1

Faster Paths Team: (l to r) Devin Larkin, Lia Beltrame, Brent Stevenson, Commissioner Monica Bharel, Ludy Young, John Cromwell, Issac Rutledge, Edward Bernstein, Jonathan Olshaker, Patricia Mitchell, Moses Williams (not pictured: Jessica Kehoe and Gina Kelleher).

Advocacy:

BMC VIOLENCE INTERVENTION ADVOCACY PROGRAM TURNS TEN

Boston Medical Center's Violence Intervention Program (VIAP) is an innovative, patient-centered program helping victims of violence and their families. Approaching its tenth anniversary, VIAP continues to grow and evolve as recovery services expand.

Thea James, MD, Director, VIAP; Associate Professor of Emergency Medicine at BUSM

Elizabeth Dugan, LICSW, Associate Director, VIAP

Founded in September 2006, the **Violence Intervention Advocacy Program (VIAP)** is an innovative approach to providing services to victims of violence — usually a gunshot or stabbing — who present to the Boston Medical Center's Level 1 Trauma Emergency Department.

What makes VIAP so innovative is that intervention is conducted by a trained VIAP staff member at the patient's bedside immediately after the traumatic injury. VIAP uses an evidence-based model of care emphasizing holistic healing of the body, mind, and spirit. Clients experience multiple stressors such as poverty, lack of affordable housing, and multiple exposures to community violence, along with chronic trauma that often results in significant mental health issues.

VIAP staff are trained in a variety of evidence-based violence prevention and intervention strategies, including substance abuse screening, brief negotiated interviews (BNIs), motivational interviewing (MI), psychological first aid (PFA), referral to treatment, and case management skills. Through these evidence-based and practical strategies, VIAP staff obtain enough information regarding each client's social determinants of health to engage collaboratively with the client in order to formulate a strategy for change. Protective factors employed to assist clients include, but are not limited to, life skills training, mentoring, education, job training, family support services, and most importantly, the presence of a caring, reliable adult in the patient's life, a member of the VIAP staff.

VIAP staff also access community resources and services through their large city-wide network of partners and stakeholders. These partners include the Boston Public Health Commission, The Boston Center for Youth and Families, the Boston Public School System, Youth Connect (Boys and Girls Club of Boston), the Department of Youth Services, the Boston Police Department, The Safe and Successful Youth Initiative (SSYI), Youth Opportunities Unlimited, the Department of Public Health, The District Attorney's Office, as well as dozens of other local community-based organizations. VIAP is integrated throughout the community and

The VIAP Team: (l to r) Rusti Pendleton, Ariana Perry, Thea James,MD, Dave Wiley, Chris Rosales, Kendall Bruce, Elizabeth Dugan, Alina Gardner, and Donald Osgood

is a recognized leader in violence programming. VIAP's prevention and intervention services program is a service delivery model that follows patients across the care continuum and back out to their home communities, providing services to families as well as the patient for a positive impact throughout the community.

The intent of VIAP is to prevent retaliation, reduce morbidity and mortality, and decrease the likelihood of re-injury. The VIAP program facilitates access to continuing health care and local community resources while promoting positive role models and positive alternatives to violence. VIAP's goal is to assist with and provide access to a seamless continuum of evidence-based services and support that allow victims to begin physical, emotional, and financial recovery. VIAP recognizes there are serious challenges to achieving this goal including improving the field's understanding of violence and trauma and severe aftereffects on victims and survivors.

The trauma created by experiencing or witnessing violence can significantly affect a person's physical and mental health and impair their ability to heal and feel whole again. The provision of holistic, trauma-informed services is an important step in every victim's healing process. In response to improving the outcomes for victims and survivors, VIAP has focused over the last year on capacity building and addressing gaps in services and opportunities for victims and their families. By building both internal VIAP capacity and strong community relationships and partners, VIAP has accessed funding for innovative, creative programming that will begin to address these gaps in service.

Fund Awards VIAP Nearly One Million Dollars

VIAP has received a $997,966 grant award from the Office for Victims of Crime (OVC) Crime Victims Fund. Part of the US Department of Justice, OVC is committed to enhancing the nation's capacity to assist crime victims and provide leadership in changing attitudes, policies, and practices to promote justice and healing for all victims of crime. OVC is responsible for implementing several important pieces of legislation intended to advance victim rights and services. The fund seeks to improve responses to male survivors of violence, particularly boys and young men of color, and their families. This grant award will support VIAP partnerships with community-based programs, allow VIAP to identify gaps and barriers to care and support, and develop an action plan to meet the needs of male survivors, their families, and significant others.

Gaps already identified include lack of resources to help male victims find employment and housing and a lack of trauma-informed care (TIC), which is commonly used in behavioral health settings but not often found in community-based settings. TIC is a treatment model that involves understanding, recognizing, and responding to the effects of all types of trauma.

VIAP has conducted a gap analysis, utilizing focus groups that included VIAP clients, family members, and collaborative partners. As a result of data collected in these groups, VIAP will focus on the three new initiatives described below:

The VIAP Employment Program will assist victims of violence with employment and education opportunities that can prove challenging to access on their own. VIAP will assist clients with looking strategically at work and education as a path to self-sufficiency and breaking their cycle of violence. This will be done by providing one-on-one career advising sessions that focus on educational needs, résumé development, interviewing skills, job search strategies, and workplace behavior for job retention. The goal is to assist clients in identifying employability skills that will match the hiring needs of employers. VIAP will work to connect qualified clients with an opportunity to participate in internships and job placement within the BMC community. VIAP clients will be paid during their internships and at the same time work toward their high school equivalency exam if necessary. During the internship, VIAP clients will receive weekly coaching and guidance based on specific workplace competencies to assist with continued learning and personal development.

Alina Gardner, Workforce Development Coordinator, brings a wealth of experience and knowledge to the VIAP team.

The VIAP Housing Program will identify a number of VIAP clients to pilot a housing first model. Housing rental units have already been identified by partnering with a local property management company. Clients will receive rental support for a one-year period and with intensive VIAP guidance, will work to develop their employment, budgeting, and other life skills. The goal is that the VIAP client will be able to sustain the apartment independently and continue to thrive after the one-year period ends. VIAP hopes to demonstrate that housing *IS* healthcare, and that with employment opportunities and a place to live, many obstacles can be overcome, enabling VIAP clients to live productive, stable lives in the community.

Curtis Santos, Violence Intervention Advocate, will oversee housing stabilization for VIAP clients.

Trauma Informed Care is an approach to engaging people with histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role that trauma has played in their lives. When a program takes the step to become trauma-informed, it models a basic understanding of how trauma affects the life of an individual seeking services. Trauma-informed organizations, programs, and services are based on an understanding of the vulnerabilities or triggers of trauma survivors

that traditional service delivery approaches may exacerbate, so that these services and programs can be more supportive and avoid re-traumatization. No one is immune to the impact of trauma. Trauma affects the individual, families, and communities by disrupting healthy development, adversely affecting relationships, and contributing to mental health issues including substance abuse, domestic and community violence, and child abuse. Becoming "trauma informed" means recognizing that people often have many different types of trauma in their lives, and that people who have been traumatized need support and understanding from those around them. Often, trauma survivors can be re-traumatized by well-meaning service providers. Through the Department of Justice OVC Grant, VIAP will provide education and training, and share trauma informed care resources with partners at BMC and in the community. Understanding the impact of trauma is important in promoting a healthy, compassionate community.

Grant provides for a Family Support Advocate

The funds required to launch the VIAP Family Support Department will come from a Senator Charles E. Shannon Jr. Community Safety Initiative Grant (Shannon CSI) through its partnership with the Boston Police Department (BPD). The Shannon CSI grant supports the City of Boston's comprehensive strategy aimed at reducing gun, gang, and youth violence by targeting services and interventions to at-risk and gang-affiliated youth within hotspot locations. The grant provides financial support for the continuation of several of the City of Boston's signature and nationally recognized programs including key community, nonprofit, faith-based partnerships, and programs such as VIAP that are instrumental in community outreach, community organizing and youth programming. VIAP continues to partner with BPD to address city-wide efforts at providing seamless services across many disciplines to victims and their families.

Disseminated through the BPD, money from the Shannon CSI grant will fund one staff position to which VIAP is proud to welcome Christopher Rosales, family support advocate. Christopher is working towards his degree in Human Services at Springfield College in Springfield Massachusetts.

Christopher Rosales, VIAP Family Support Advocate

Light of Dawnn Awards

VIAP staff member receives **Light of Dawnn Award**

The Light of Dawnn Award was created in honor of the work and memory of beloved youth worker Dawnn Jaffier who was the innocent victim of senseless gun violence in 2014. The Light of Dawnn Awards recognize frontline, nonprofit workers whose tireless dedication to serve their community mirrors that of Dawnn's. Those who knew Dawnn felt her energy, commitment to community, and love of teaching would be best represented as recognition to inspire others to continue her work building stronger communities.

With VIAP staff in attendance, Kendall Bruce, VIAP Community Outreach and Training Supervisor, was presented with a 2016 Light of Dawnn award at a February 25 ceremony held at the West End House Boys and Girls Club in Allston.

Kendall Bruce, recipient of a 2016 Light of Dawnn award

Pediatric Screening at BMC:

PEDIATRIC EMERGENCY DEPARTMENT MARKS FIRST ANNIVERSARY OF HEALTH PROMOTION ADVOCACY PROGRAM

Kathryn Green, RN, (MPH Fellow), Megan McInnis (MPH Fellow) Ellen Kreida, LICSW, MPH

2016 marks the first anniversary of the Pediatric Emergency Department Health Promotion Advocacy Program (HPAP) at BMC, developed from a trajectory path of research to action as a result of strong advocacy on the part of Pearl Cunningham, RN, ACNO, Dave Dorfman, MD, Pediatric ED Director, and Edward Bernstein, MD, Emergency Medicine.

With the 2015 recruitment of health promotion advocate Ellen Kreida, LICSW, MPH, HPAP is now fully instituted in the hospital nursing budget. It partners with BU School of Public Health (BUSPH) to offer a fellowship supported by the federal MCH Bureau. This year the project added two interns from BUSPH, Megan McInnis and Kathryn Green.

The aim of the HPAP is to screen for health and safety needs of adolescents (age 13 to 21) in the Pediatric ED. The health promotion advocates (HPAs) and interns build rapport and use the brief negotiated interview (BNI) to engage and partner with adolescents to identify needs and align them with resources. Risk taking is a normal part of adolescent development, so the HPAs have adapted the BNI to help adolescents explore the pros and cons of potentially harmful behavior and to find ways to navigate social and behavioral choices. The BNI, a version of brief motivational interviewing, has been proven effective for changing alcohol and drug behavior, but is also useful when discussing other behaviors contributing to overall health — particularly mental health, employment, education, sexual health, and engagement with primary care for continuity.

The HPAP uses an online database, REDCap, to record and track the demographics, behaviors, and referrals of screened patients. From the start of the hospital-funded program in April 2015 through April 2016, HPAP has screened 403 adolescents. The average patient age was 19 years old, and the gender distribution was 33 percent male and 67 percent female. The majority of referrals (43.8 percent) were to primary care appointments, followed by HIV/STI testing (18 percent), patient financial services (18 percent), and 11 percent to behavioral health counseling. Health promotion advocates scheduled primary care appointments within BMC in an effort to decrease administrative barriers and provide coordinated care.

Unhealthy alcohol and other drug (AOD) use is an important focus of screening and brief negotiated interviewing. Of the 403 patients screened, 237 (58.8 percent) had high risk AOD use. High risk AOD use is defined as four or more alcoholic drinks on one occasion for females, or five or more alcoholic drinks on one occasion for males, and/or marijuana use at least once during the last month. AOD use was prevalent; 30 percent reported drinking monthly and 6.6 percent drank daily, 39.3 percent smoked marijuana within the past year, and 19.5 percent of these patients smoked daily. Finally, 15.2 percent of patients screened reported using other drugs to get high (e.g. cocaine, crack, heroin, prescription painkillers, and prescription stimulants such as Adderall). HPAs provided education on AOD use to 43.5 percent of the high risk patients. In addition, 26 patients were actively referred to a specialized alcohol or drug treatment facility, and 14 patients of the 32 who used heroin, pain killers or overdosed in the past were educated on the risks of opioid overdose and response measures to an overdose, and were trained in naloxone rescue and received a rescue kit.

The goal is to increase the percentage of education given to high-risk adolescents. As the program moves forward, definitions of "high-risk" should be more fully considered while acknowledging efforts of harm reduction. It was encouraging to note however, that educational materials were also provided to adolescents who were not considered "high-risk," highlighting the efforts in prevention. BNI is useful to help adolescents learn about the harmful health effects of unhealthy or risky behavior and consider changes that could be made in their life to reduce harm.

The new BMC initiative, "**C**enter for **A**ddiction **T**reatment for **A**do**L**escents/**Y**oung adults who use **S**ubs**T**ances," (CATALYST) is an additional resource for this population. This service is aimed at providing developmentally appropriate substance use treatment in an outpatient setting, including the ability to prescribe medication assisted treatment. The ability to refer adolescents and young adults for more comprehensive and long-term treatment will fill a current gap in services for individuals who do not meet the level of care for inpatient treatment. The collaboration with the CATALYST team will be essential in helping patients in the Emergency Department connect to these much-needed services.

As the HPAP moves toward the future, the HPA interns hope to continue to revise the health and safety questionnaire and expand the program according to the needs of the adolescent population. Recently, the screening tool was revised to include questions regarding why an adolescent engages in risky behaviors. For example, it asks about barriers to condom use and decisions to smoke marijuana. These questions are typically answered in the dialogue that occurs while discussing the pros and cons of behavior and throughout motivational interviewing. However, compiling data on rationales for risky behavior might help paint a better picture of where education needs to be improved and reveal gaps in existing resources.

For the background of this program, a more detailed description of the intervention, and data from the 2009 –2013 pilot study, see a recently published article in Pediatric Emergency Care, "Reaching Adolescents for Prevention." Moving forward, the HPAP hopes to measure progress made with each patient by collecting follow-up data. There is potential for the Program to improve the continuity and cohesiveness of care in the adolescent population seen at BMC.

Merging Clinical & Population-Based Perspectives:

A LEARNING EXPERIENCE WITH BMC EMERGENCY MEDICINE AND PUBLIC HEALTH FACULTY

By Colbey Ricklefs, MPH

At a superficial glance, it would seem that public health and clinical systems are at odds. Public health focuses on the population while clinical medicine focuses on individuals. Public health systems adopt an "upstream" preventive approach, while clinical medicine systems exist "downstream" as curative systems. However, as Edward Bernstein, MD, would argue, health is dependent upon these two systems collaborating to promote a continuum of exceptional care both at the individual and population level.

During the summer 2015, Bernstein taught a course through the School of Public Health entitled SB808 – Merging Clinical & Population-Based Perspectives in Public Health Practice: Tension & Resolution. With his role as a professor at both Boston University School of Public Health and School of Medicine, in addition to serving as an attending physician at the BMC Emergency Department (ED), no one better than Dr. Bernstein knows how to accomplish this harmonious marriage between the two disciplines.

Meeting twice per week from May to June, the course is equally intensive and informative. Looking for ways to translate the public health advocacy into clinical medicine, I signed up for the course as pre-medical student who had already obtained a Master's degree in Public Health. With some phenomenal guest speakers from BMC ED and beyond, we delved into contentious topics that have drastic real-world consequences.

In one of our first sessions, we learned how to interview patients through brief motivational interviewing, a practice that has proven effective during BMC ED visits. From a training video featuring Dr. Bernstein himself, the class engaged in collaborative strategies to address intrinsic motivation for destructive behaviors, ensuring that we maintain the patient's autonomy. With this new skill in our toolbox, we individually shadowed Bernstein in the BMC ED and tested the strategy ourselves.

Brief Negotiated Interview between an ED doctor and a patient actively using heroin.

And it worked wonderfully. I interacted with an individual that had several concurrent addictions, but had presented to the ED while high on heroin. We asked him what he liked about the drug, and he responded with the expected response that it takes his pain away. We then asked him what he did not like about the drug, and in a moment of clarity, he shared that his addiction had distanced him from his family and made him feel more isolated. In that particular moment in his life, he was not ready to seek treatment to address his addiction, and initially refused a referral to Project ASSERT. However, we had planted the seed in his mind in an effort to resolve his ambivalence. I realized immediately that this conversation would have ended differently had we approached him with a patronizing tone, stating that "drugs are bad and you shouldn't do them!"

This experienced resonated with what we had learned in class. To discuss the opioid epidemic in the state and at BMC, we had guest lectures from Colleen Le Belle RN, CARN, Program Director BMC Office Based Opioid Treatment Program and Hilary Jacobs, from the Massachusetts Department of Public Health. We learned about the necessary collaboration between public health and clinical medicine to respond to the opioid emergency: prevention, intervention, treatment, and recovery support. Each step involves both public health professionals and medical clinicians to ensure a healthy community.

In the next class, Joan Whitney, M.ED., LICSW, Director of the Healthy Gloucester Collaborative, supported these notions and argued that compassionate care is good business for health systems. Echoing the Brief Motivational Interviewing strategy, she asserted, "You don't give people motivation. You tap into it."

Perhaps framing these conversations and perspectives is the most important theme from the course. During a guest lecture from Hanni Stoklosa from HEAL Trafficking, we addressed the need for trauma-informed, compassionate care at each stage of the healthcare interaction. Shifting the traditional paradigm can remarkably alter the dynamics of the interaction between the patient and the healthcare infrastructure. "Why did you do this to yourself?" should become "help me to understand why," and "what's wrong?" should become "what's happening to you today?" While seemingly subtle linguistic changes, the effects are profound at the individual-level that help to address population-level public health concerns.

It was quite the whirlwind of a semester, but encouraging to witness the successes of current public health/clinical medicine mergers at the community-, city-, and state-level. I speak for many of my classmates in stating that this course was invigorating, and we left with a call to action to seek collaboration between the disciplines. I would like to personally thank Bernstein for his fearless leadership in pioneering this field.

I would also like to take the opportunity to formally recognize our other fantastic guest lecturers including EM/PGH faculty Drs. Jon Olshaker, Gabrielle Jacquet, Thea James, Ricky Kue, Ryan Sullivan, Judith Linden, and Elissa Perkins; Project ASSERT (Ludy Young and Maria Champigny of the After Midnight and John Cromwell of the Overdose Education and Naloxone Distribution Program); the VIAP team (Kendall Bruce, Donald Osgood, Rustin Pendleton, and Elizabeth Dugan; Jennifer Masdea (BU SPH BNI ART); Georgia Simpson-May, director of Health Equity, MA DPH; the BMC Interpreter Service (Elida Acuna Martinez and Carlos Fuentes), Maureen McMahon (BMC director of emergency preparedness), Rita Nieves (BPHC), Joan Whitney; Lisa Capoccia (Suicide Prevention Resource Center), and Maryann Frangules (Massachusetts Organization for Addiction Recovery). Thank you all for participating in an unforgettable semester and for illustrating a balanced merger between public health and clinical medicine.

Boston Medical Center Emergency Medicine Residency Class of 2019:

A UNITY TOUR TO MEET THE NEIGHBORS

By Jonathan Santiago, MD, PGY 2

On June 19, 2015, the Emergency Medicine intern class of 2019 set out to discover the neighborhoods they would serve for the next four years. For many interns – several coming from as far as Hawaii and Ireland – it was their first time visiting the streets of Roxbury and Dorchester. Led by Edward Bernstein, MD, and Project ASSERT staff, the community tour was first organized three years ago with two purposes: to visit and to learn about the community's resources, and to expose BMC's newest doctors to the social determinants of health that manifest in ED visits. "We wanted to welcome the interns not only to BMC but to the community-at-large ... to encourage them to be stakeholders in the community's health. We want them to get involved and to not be afraid to enter these neighborhoods because of rumors they hear … they are now a part of us," said Ludy Young, a Project ASSERT supervisor of twenty-one years and a Dorchester resident. With this notion of service and unity, twelve interns started off on a day full of inspiration, reflection, and initiation into the greater BMC family.

The morning began with a presentation on the Screening, Brief Intervention and Referral to Treatment (SBIRT) program at BMC, a public health intervention that has become a national model in addressing substance abuse disorders. The knowledge gained during these morning exercises proved helpful in understanding the role of Hope House, a residential treatment center for those recovering from addiction, and the first visit of the day.

"Visiting Hope House was a nice way to be exposed to some of the follow-up and transition options available to patients suffering with substance abuse issues. Although there's clearly a shortage of these kinds of facilities and not enough high-quality rehabilitation programs out there, it's great to know that there are passionate people working to improve the lives of folks trying to get clean and make a change in their lives," said Haley Thun, an intern from Atlanta, Georgia. The visit included the touching testimony from an individual who used to suffer from addiction, now clean for many years and expressing his gratitude for Hope House. "I can't imagine how hard it would be to do the right thing for patients with substance abuse disorders in our ED if it weren't for programs like this one," continued Haley.

After thanking Hope House staff and residents for their generosity and time, the bus headed into the heart of Dorchester to visit the Louis D. Brown Institute. Founded in 1994 after the murder of fifteen-year-old Louis D. Brown, this non-profit organization is dedicated to educating young people about the value of peace and assisting victims with crisis management services and ongoing support. Louis' mother, Ms. Tina Chery, is the founder and current president of the organization. Listening to her recount her personal tragedy and subsequent efforts to prevent similar violent acts left an indelible impression on everyone.

The Louis D. Brown Peace Institute provided an opportunity for us to think about not only our own identities but also the identities of those in the communities we serve and how violence and trauma are affecting peoples' lives. Before leaving, all those present were asked to participate in a self-reflection exercise involving a commemorative wall filled with the faces of victims of gun violence. "The one particular thing that stood out to me was the wall that they had … It showed all the faces of all the young people my age who had been affected by gun violence. It was reality staring back at you," said Konrad Karasek, an intern from Chicago, Illinois.

As we made our way to Merengue — a well-known Dorchester restaurant serving the best Dominican food north of the island — Joyce Stanley of Dudley Main Streets gave the interns a tour of Roxbury. After experiencing waves of immigrants, the now largely African-American neighborhood "serves as the heart of Black culture in Boston." Despite a wave of violence in the 1980s, many parts of the neighborhood are now flourishing as a result of investment and numerous urban initiatives. By the time we arrived at Merengue, bellies were starving for arroz blanco con habichuelas. While we ate, various representatives from the community spoke about the efforts of their respective organizations – from tackling health disparities to LGBT healthcare issues. Representatives from BMC's Nursing and Social Work departments also spoke of their roles and growing collaboration with the ED residents.

With food comas pending and motivated by the day's events, the interns made their way back to BMC. Many felt more connected to and aware of the city's challenges after the tour. "I think that it was an extremely useful experience to participate in that trip. After going to (medical) school in Boston, it was nice to see the world beyond our bubble in the South End. I rarely explored the neighborhoods south of BMC, but it is impressive to see how vibrant and diverse the communities are," said Konrad. Others were able to place their new job responsibilities and the challenges faced by patients in a public health context. Daniel Resnick-Ault, an intern from Brookline, Massachusetts said, "Its one thing to care for patients in the hospital environment … but it's another thing to see where they come from and to understand the context of their social situation. You gain perspective."

The community tour gave the intern class of 2019 a new-found sense of purpose and service. As they embark on their careers, it's hearing the stories of patients that will provide perspective as they carry on with the daily grind of residency. Walking through the streets of Boston and meeting advocates across the city was an inspiring first step in the journey that awaits.

Emergency Medicine Residency Intern Orientation 2016:

INCOMING CLASS OF 2020 REFLECTS UPON THE COMMUNITY TOUR

"The entire experience made me even more excited to be a part of the South End community … this part of town is a uniquely diverse place to live and work … [We serve] a special patient population and the community tour unveiled the incredible services and infrastructure in place that I walked past every day, but never knew were doing such important work."

— *Adam Weightman, PGY 1*

"We met men and women who were passionate about substance abuse treatment, clean and affordable housing, providing a safe space for the homeless, and advocacy through community organizing … As a provider, I now feel more confident in discussing social determinants of health with patients in the context of services that exist outside of the hospital and areas where services are lacking."

— *Emily Zametkin, PGY 1*

Boston Housing Authority Ruth Barkley Apartments

"Touring the Barkley Apartments was a wonderful way to learn about community organizing in the South End. It helped us understand affordable housing offering in Boston, and the home context for many patients we'll care for during residency. Excitingly, that was also a launching point for future collaboration, such as the naloxone administration training for Barkley Apartments residents coming this fall!"

— *Thiago Oliveira, PGY 1*

Boston Public Health Commission Woods-Mullen Shelter

"It was great to have an opportunity to actually see some of the shelters in our area. These are the places that many of our patients stay, and where we sometimes send them upon discharge, so it's valuable to have an idea of what these shelters are like, and meet the people who run them. For me, it really put into perspective that as EM physicians, we only see patients for a fraction of their lives. Truly caring for people involves thinking about more than what happens to them during their hospital visit, and we are just one part of a much larger community."

— *Lauri Cashman, PGY 1*

Hope House

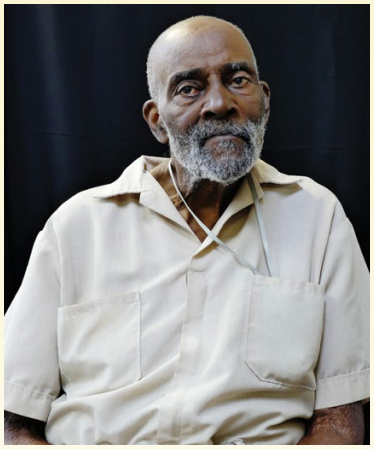
"The conversations we had at Hope House are essential to training an Emergency Medicine physician. We heard from one of their clients going through recovery. We saw him at his best, working as hard as possible to be healthy and productive. That man — roughly the same age as most of us — spoke openly about his relapses and overdoses. When we see patients at their worst, we need to be able to think of them at their best."

— *Thiago Oliveira, PGY 1*

Mel King, Guest Speaker

"It was a true honor to hear Mr. King speak. His work to protect and empower the disenfranchised populations living in Boston continues to serve as an example of how one person can make a monumental difference in the lives of others. I think this is an essential message for us to carry with us through residency, and the rest of our careers, as we face situations that make us feel powerless."

— *Erin Oakley, PGY 1*



MEL KING is one of the fiercest and certainly most experienced crusaders in the fight for affordable housing in Boston. Just three years ago, at the age of 85, he was arrested at an eviction protest. In addition to his decades-long career of activism, King boasts stints as a state representative, an MIT adjunct professor and, most recently, the founder of a community technology center and the first black finalist in the mayor's race.

These days, Boston faces the worst economic inequality in the country, compounded by skyrocketing rental rates and property values.

"The need still exists and appears more critical," he said about the modern housing scene, which he believes has led to various dilemmas.

These dilemmas can be divided into three types, according to King. First, there are people who can't afford rent at all due to the high rates. Second, there are those who can pay rent but who don't earn enough to actually sustain themselves. "These are people who are working and who are having difficulty trying to hold on," he said.

Third, there are people who are not paid enough attention to, according to King, who own property in the city but can't keep up with rising values in their neighborhood, which increases their property taxes.

Elective Perspective:

ONE MONTH WITH THE VIAP TEAM

By Benjamin Grimmnitz, MD, PGY 4

Our city is hurting. Whether you live in Hyde Park, the South End, Roxbury or Back Bay, working in the Emergency Department you know our community is suffering. During the first weekend of my August elective, four people were shot in Boston. By the end of the week, thirteen people had been shot, three of whom died. The other ten were "non-fatal shootings," but we have all seen the variety of injuries encompassed by that term. Graze wounds fall into that category, yes, but so do amputations, trachs, and PEGs. In 2015, thirty-three people were killed by gun violence in Boston, and another 211 were shot and survived.

After the marathon bombings, our city rallied behind "Boston Strong." A country watched as victims attended rehab and cheered as they took first steps, returned to run Heartbreak Hill and took the stage to dance again. We were strong then, and yet, our city continues to hurt. Young men and women sit in our hospitals today, just as others did then, looking down the long path towards their own first steps. Where is the rage now?

Massacres make headlines. Assault rifles, casualty counts and explosions draw national attention and cries for change. But working in the Emergency Department, we come face to face with violence on a daily basis, violence as it truly is, no filter, no headline news ticker running below. One, two and three at a time, young men are being gunned down in our streets. Stabbings and shootings, men and women, boys and girls roll into the trauma room. In the ER, we witness deeply private moments, movements charged with emotion. We see these moments, and yet we often see them without fully understanding. From our vantage point in the trauma bay, we lack context.

Emergency medicine residents across the country flock to departments in areas that are "stabby but livable." We seek out places where we can develop our skills and learn the art of healing. We seek hospitals where we are likely to place chest tubes, gain first-hand knowledge of difficult airways, and place our hands on a human heart in the midst of an emergent thoracotomy. We all frame it in different ways, but in the end, what we're seeking are communities that are disproportionately affected by violence. We are privileged in our relationships with these communities, and with this privilege comes responsibility to consider the social context of this violence. Every shooting occurs for its own unique reason, but the bigger problem of violence in our city has dimensions of geography, gender, race and income. It isn't random. If violence is not random, it can be prophylaxed against. It can be prevented.

The time I spent with Dave Wiley and Kendall Bruce at VIAP was transformative. It opened my eyes to the complex social interactions leading up to a shooting and the maze families find themselves in afterwards. Between trips to the SICU, probate court, Mattapan, and the ED we discussed the roles of housing, education and legislation in the violence plaguing our city. Every time I walk from Trauma 2 to the family room, I silently thank Dave and Kendall, Rusti and Donald, Feliciano and Ariana, and Elizabeth and Thea for all they taught me and all they do. I know that after the bad news has time to settle this family won't be alone. The work that VIAP does is admirable. It funnels that energy — and that outrage — into action.

Our department, hospital and city are all the better for it.

Health Policy:

AMBULANCE DIVERSION GRANT

By James Feldman, MD, MPH, Professor of Emergency Medicine, BUSM, Vice Chair, Research, Department of Emergency Medicine, BMC

On January 1, 2009, Massachusetts became the first state in the country that banned ambulance diversion (AD). This health policy initiative represented the culmination of more than a decade of collaboration between organized emergency medicine (Massachusetts College of Emergency Physicians), the Massachusetts Department of Public Health, the Massachusetts Hospital Association, and other organizations. Although in 2007, the Institute of Medicine (IOM) characterized AD, the practice by which emergency departments (EDs) are temporarily closed, as "antithetical to quality medical care" and called for its "elimination[1]," only Massachusetts has achieved a formal ban on this practice.

This unique policy initiative provided the context for a research partnership that included researchers from the Department of Emergency Medicine, Boston EMS, and the Department of Medicine Health Disparities Research Unit (Nancy Kressin, PhD, Director) to develop a proposal to study the effects of ambulance diversion and to test the hypothesis that this practice worsens health care disparities. In January the NHLBI awarded $1,978,661 (1R01HL127212-01A1) to co-PIs Amresh Hanchate, PhD, of the Department of General Internal Medicine and assistant professor of general internal medicine at BUSM, and James Feldman, MD MPH, of the Department of Emergency Medicine and professor of emergency medicine at Boston BUSM for their study "Racial and Ethnic Health Disparities Due to Ambulance Diversion." Co-investigators include William Baker, MD, (Emergency Medicine), K. Sophia Dyer, MD, (Emergency Medicine and Chief, Boston Police, Fire and EMS) and Michael Paasche-Orlowe, MD, (Medicine).

Using the ban in Massachusetts as a natural experiment, the study aims to examine the impact on timeliness and quality of care for ED patients transported and not transported by ambulance. The study will use several unique data sets to study the effects of ambulance diversion and the ban in Boston, and the state of Massachusetts using an approach of "differences in differences" to examine the effects of the ban. We will use Medicare administrative data to identity a national cohort of random Medicare beneficiaries age 66 or older with a chronic cardiovascular or pulmonary condition, with an oversample from Massachusetts, and will obtain data on all healthcare utilization, including ambulance and non-ambulance ED visits from 2006-2012. We will also use the Boston EMS data pre- and post-ban (2006-2012) as well as the Massachusetts All Payers Claims data set (2010-4) to examine the effects of socioeconomic and other demographic factors on ambulance use.

Despite the concern that AD is harmful, it persists,[2-10] with 45 percent of EDs and 70 percent of urban EDs reporting AD in the last published survey in 2003.[11] In our recent analysis of the 2010 NHAMCS AD survey, we noted that AD remains prevalent in all regions of the U.S. (NE 41 percent, Midwest 39 percent, South 37 percent, West 58 percent). AD has been associated with higher mortality, delayed treatment, and other adverse outcomes.[12-15] It is also possible that AD has the potential to exacerbate disparities by race/ethnicity and income.[16] AD may also increase healthcare costs.[10, 17]

AD is associated with increased risk of patient mortality, longer inpatient stay, and costs. [10, 14, 18] A range of pathway factors have been examined.[10, 14, 15, 18] A direct effect of AD is increased risk of longer transport distance and time.[14] Another potentially important factor, not previously examined, is the type of destination ED. Using the proposed data we can identify if the destination ED is the patient's usual care provider ("medical home"), with the advantage of personal physicians and medical records.[17] Or does AD increase the risk of transfer to a safety-net ED and worse outcomes?[19, 20] There is considerable evidence, including from Massachusetts, that minority patients are more likely to be admitted to a safety-net ED, compared to whites living in the same vicinity.[19, 20] Among Medicare-covered older adults, 38 percent of ED visits are through ambulance transports, and the rate of ED visits was 65 percent higher among blacks compared to whites. Accordingly, we will examine a range of ambulance transport outcomes: those related to access (transfer to a usual care provider, safety-net ED, or nearest ED, and travel time and distance), outcome (30-day mortality, ED length of stay, and inpatient length of stay), and cost (index visit cost and 30-day costs).

The impact of overcrowding and AD may not be uniform across the population. Although this relationship has not been examined previously, this hypothesis rests on the well-documented evidence that racial/ethnic minority and low-income populations are over-represented among the uninsured and underinsured, are therefore are more likely to also be over-represented among those with limited access to outpatient care and use ED as the only recourse.[1] Among older adults in 2010, the number of ED visits were 65 percent higher among blacks (690/1,000) compared to whites (444/1,000). Consequently, AD has the potential to divert minority and low income patients at higher rates. As noted earlier, there is considerable evidence that use of acute inpatient care among blacks and Hispanics is concentrated within a small proportion of hospitals nationally, and that these hospitals are associated with relatively lower quality of care. [19-21]

The extent of AD use may also vary systematically across hospitals within a city.[12] As profitability from elective surgical care is generally higher than for ED care, hospitals with higher proportion of privately and comprehensively insured patients may have stronger incentives to allocate use of resources, including beds, accordingly, thereby increasing the likelihood of AD.[14, 22, 23]

Consequently, safety-net hospitals are likely to evolve as residual destinations of diverted patients, further contributing to the clustering of minority and low income patients.[21] To our knowledge, these potential relationships have not been examined previously.

To focus on medical conditions that underlie a large proportion of ambulance and ED use, we will examine older persons with acute myocardial infarction, chronic obstructive pulmonary disease (COPD), diabetes, heart failure, hyperlipidemia, hypertension, and ischemic heart disease.

The specific aims and hypotheses of this study are to:

AIM 1: Estimate the incidence of ambulance and ED use by medical condition, race/ethnicity, and income.

Hypothesis1.1: Minority and low income patients have higher incidence and reliance on ambulance transport.

Hypothesis1.2: Longitudinally, ambulance and ED use increased more among older minority and poor patients.

Hypothesis1.3: Massachusetts AD ban did not affect use of ED or reliance on ambulance transport.

AIM 2: Examine national differences by race/ethnicity and income in ambulance transport outcome measures.

Hypothesis 2.1: Adjusting for residential location, minority and poor patients experience longer ambulance transport and time, higher transfer rates of safety-net ED, higher 30-day mortality, and higher index and 30-day costs.

AIM 3: Examine the impact of Massachusetts AD ban on ambulance transport outcome measures.

Hypothesis 3.1: Massachusetts AD ban was associated with favorable improvement in ambulance transport outcome measures, with larger improvement among minorities, poor patients, and areas with greater previous AD. [12]

This important research collaboration will provide data that can help frame the national debate about the use of AD and its associated harms. Already other cities, including Cleveland and Milwaukee, have either implemented or plan on implementing AD bans modeled on the Boston and Massachusetts experiment.

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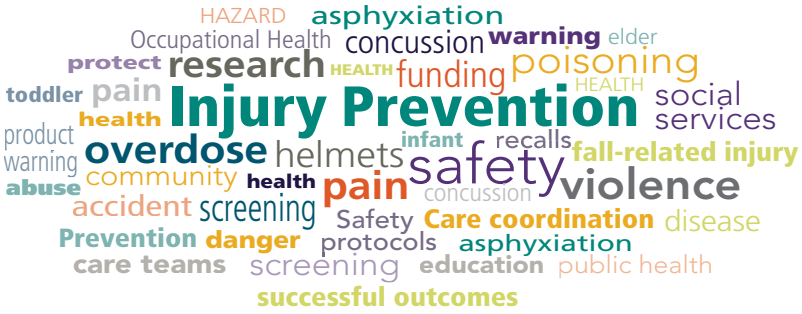

Boston Medical Center Injury Prevention Center:

LEADERSHIP COMMITTED TO IMPROVING LIVES

BMC Injury Prevention Center (IPC) brings together a wealth of experience to create a world-class center for research and training in the field of injury prevention and education. IPC staff are listed below along with some news of recent initiatives.

Jonathan Howland, PhD, MPH, MPA
Professor of Emergency Medicine,
Boston University School of Medicine
Executive Director, Injury Prevention Center,
Boston Medical Center

Traci C. Green, PhD, MSc
Associate Professor, Emergency Medicine
and Community Health Sciences,
Boston University School of Medicine
Deputy Director & Senior Scientist,
Injury Prevention Center,
Boston Medical Center

Green has been named to the Center for Disease Control's (CDC) Board of Scientific Counselors for the National Center for Injury Prevention and Control and appointed to a special workgroup which will advise the CDC on developing new guidelines for prescribing opioids for chronic pain.

IPC WELCOMES

Holly Hackman, MD, MPH
Assistant Professor, Emergency Medicine
Boston University School of Medicine
Epidemiologist/Evaluator,
Injury Prevention Center,
Boston Medical Center

Hackman brings fifteen years of public health practice experience with the Massachusetts Department of Public Health, working with the Department's Injury Surveillance Program and the Division of Violence and Injury Prevention as an injury epidemiologist. Her work has focused on expanding the development and utility of state data systems for injury surveillance, developing operational methods and indicators for conducting surveillance, evaluating surveillance systems, and translating data findings into public health practice. Hackman has been an appointed participant on national surveillance workgroups to develop consensus recommendations on poisoning surveillance and to develop methods for injury surveillance using ICD-10-CM. She has participated in numerous state advisory groups and task forces on a range of injury prevention and surveillance topics. Her opioid overdose prevention research highlighted the rise in opioid overdoses in Massachusetts in the early 2000s, showed lower opioid overdose death rates in Massachusetts communities where naloxone distribution rates were highest, examined changes in drug use rates among recipients of naloxone, and compared naloxone administration and overdose prevention practices among trained and untrained individuals. She has also participated in research examining the accuracy of external cause of injury codes and the utility of emergency department administrative data for occupational health surveillance. At the Department of Public Health she led the development of the Massachusetts Violent Death Reporting System and developed a surveillance tool for the standardized collection of data on sudden unexpected infant deaths. Her data has been used to support the passage of injury prevention legislation in Massachusetts involving youth sports concussion safety protocols, bicycle helmets, all-terrain vehicle use in children, and child passenger restraints among others.

IPC Receives Evaluation Contract Awards through the CDC

The Injury Prevention Center has been awarded evaluation contracts from the Mass. Department of Public Health and the Rhode Island Department of Health as part of their CDC Prevention for States funded to reduce prescription drug overdoses. Hackman is evaluating several Massachusetts and Rhode Island policies and laws, including Good Samaritan legislation, prescribing mandates, overdose reporting requirements, and requirements involving prescription drug monitoring system registration and use. She will also be leading a pilot project to conduct multidisciplinary reviews of drug overdose deaths in Rhode Island.

Kalpana Narayan Shankar, MD, MSc
Assistant Professor, Emergency Medicine, Boston University School of Medicine
Research Scientist for Health Services, Injury Prevention Center, Boston Medical Center

Care Coordination for Emergency Department Patients with Medical Complexities

Boston Medical Center's Emergency Department (ED) will be initiating a healthcare innovation project called, **High Touch, High Trust: Caring for Medically Disenfranchised Populations**, funded through the Massachusetts Health Policy Commission. Kalpana Narayan Shankar, MD, MSc, has been named investment director for this initiative.

The program will enroll 300 of the ED's highest utilizing patients and engage them with ED-based community health advocates (CHAs) to increase their use of non-emergent ambulatory care services, mitigate social determinants of health and support the patients' overall well-being by using the CHA to actively engage patients across their care settings. We will be measuring this through total medical expenses and the patient's experience with the healthcare services.

This project will partner with Medical-Legal Partnership MLP | Boston, an organization that facilitates the provision of free legal services to eligible patients living in Greater Boston.

Though an ADT interface, ACT.md, a web application connects care teams, facilitates communication and collaboration, and drives coordinated action in one secure and shared space. BMC CHAs will be notified when a patient identified as "high cost" is admitted to the ED. Prior to discharge, they will work with the patient to identify needs and elicit goals of care. Through ACT.md, they will set up a cloud-based care-coordination record, create a care plan, outline action items, and facilitate the necessary referrals. Using team-based care, Boston Medical Center will utilize this platform to:

- Develop and execute individualized, holistic care plans reflecting patient's goals and priorities
- Manage and track activities associated with a patient's care
- Communicate among team members securely and efficiently
- Engage and utilize community resources and other non-traditional care team members
- Facilitate social service referrals
- Provide access and a meaningful experience for patients, families and caregivers
- Track new and unique data to measure model and team success

Falls Research

This spring, the Emergency Department in conjunction with the Geriatrics Department, Rehab Services, and the Sargent School of Rehab Medicine will be initiating a falls clinic for older adults who are discharged from the ED after a fall or fall-related injury. Based on data from our prospective study looking at discharged patients who suffered a fall-related event, many discuss their fall with someone but few initiate any falls-prevention activities. As is well documented in the literature, a fall can lead to further physical decline or further inactivity if the older adult is afraid of doing any activities out of fear of falling again.

Older adults will now be able to follow-up within two weeks of their ED visit with a geriatrician and a rehab therapist who will assess cognition, depression, functional capacity, mobility, vision, and medications to help determine what can be done to decrease their falls risk. In addition, they will receive recommendations for home safety and continued outpatient rehab therapy if needed. We will also be following patients who are seen in this clinic prospectively to assess a series of outcomes and functionality to learn if this clinic makes a difference in their morbidity and propensity for repeat injury. The hope is to tie this referral process into a community program to further encourage exercise and community falls-prevention activities such as Tai Chi and Matter of Balance.

Elissa Perkins, MD, MPH
Assistant Professor, Emergency Medicine, Boston University School of Medicine

Associate Director, Emergency Medicine Research, Boston Medical Center

Hepatitis C: Screening in the ED

Hepatitis C virus (HCV) is the most common chronic blood-borne infection in the United States. It affects 3.2 million people and is responsible for an estimated 15,000 liver disease-related deaths annually.[1,2] The burden of disease at Boston Medical Center in currently unknown, but our recent data shows a 10 percent seropositivity rate among patients tested.

The ED offers an opportunity to test patients who might not otherwise have access to HCV testing. Although there are few models of hepatitis C screening programs nationwide to date, this may be an effective patient group with which to implement a screening program. EDs nationwide have documented prevalence rates of HCV from 7 percent (in trauma patients)[3] to as high as 18 percent (of a screened age cohort).[4]

The BMC Emergency Department, in collaboration with the section of Infectious Disease and Department of Laboratory Medicine, with support from the Massachusetts Department of Public Health, has negotiated a partnership with Gilead Sciences to become a new site in their FOCUS program. Through this partnership, Gilead will support BMC in implementing a program through which HCV testing becomes, for patients having their blood drawn for clinical purposes, a routine part of their ED visit. It is estimated that almost 20,000 patients per year can undergo HCV screening in the adult and pediatric ED in this fashion.

The key elements to the successful implementation of this program include modification of the electronic medical record to support automatic ordering of the laboratory test, reflex PCR testing of patients who have positive HCV antibody, and the presence — both in the ED and the medical center at large — of public health navigators. The navigators will deliver HCV results to patients, conduct patient education, and work with patients to ensure linkage to outpatient HCV medical care after the initial ED diagnosis.

Participation in the FOCUS program will enable BMC to be at the forefront in the development of best practices related to the diagnosis and subsequent management of the growing hepatitis C epidemic.

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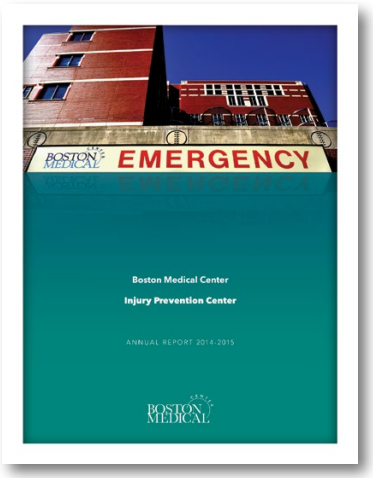

For more information about the Boston Medical Center Injury Prevention Center, download the Center's Annual Report.

Guest Editorial

Technology, Education and Global Health:

THE CHANGING PARADIGM OF HOW WE LEARN

by Janis P. Tupesis, MD, FACEP, FAAEM, University of Wisconsin School of Medicine and Public Health
BerbeeWalsh Department of Emergency Medicine
Graduate Medical Education Liaison, UW-Madison Global Health Institute

An ancient Chinese proverb states: "Tell me and I will forget, show me and I may not remember, involve me and I will understand." It outlines the relationship between teacher and learner, and for thousands of years has underpinned the fundamental theory of how we learn. Suffice it to say that we attain knowledge in many different ways and that there are a great number of theories on how we do so. One can appreciate that we learn the following things differently: memorizing the biochemical pathways that define DKA, recognizing the clinical syndrome of DKA in the Emergency Department and "knowing" how to get the same patient admitted to the Intensive Care Unit. The acquired didactic and practical learning combine to allow the individual to optimally take care of the patient.

TELL ME. Most of us have been educated in the classic educational paradigm. Sit in class, listen to lecture, read, and memorize … repeat. After our formal education ends, we transition to an adult learning model in which we shift from a passive, teacher-centered model, to one that is learner-centered. Learning tends to become voluntary, individualized, and conducted with the understanding that a premium will be placed on flexibility. As our learners transition from those in Generation X to those in the Millennial generation, we need to be attentive to the changing paradigm of how they learn.

SHOW ME. The aforementioned Millennial learners have witnessed how the internet has created a world that is interconnected by technology where any piece of information is a mere keystroke away. In a recent lecture, I posed a question to the audience: "How many of you have opened a book and read a chapter in any Emergency Medicine textbooks in the last year?" One person raised their hand. I posed a different question: "How many people have used your mobile phone or computer to access either a social media site or their email in the last hour?" All but one person raised their hands. As a new generation of learners enter the disciplines of medicine, public health, and global health, we will need to continue to articulate how to effectively harness these technologies to optimize the dissemination of information worldwide.

INVOLVE ME. Recent literature suggests that many undergraduate, graduate, and postgraduate learners believe experiences in global health to be a valuable aspect of their education.[1,2] These rotations have the potential to place trainees in high-risk situations and environments with regard to ethics, cultural sensitivity, and personal safety.[3] For many years, academic institutions have struggled with how best to provide proper guidance and education to prepare trainees for safe and effective global health rotations. Historically, educators have spent an inordinate amount of time developing these type of curricula and other educational materials, but very little time in thinking of how to get the materials to the learners. Similar to other post graduate medical educational materials — they have typically been in written format, individualized to a particular academic institution and infrequently studied and shared.

I WILL UNDERSTAND. Twitter. Facebook. Blogs. #FOAM. Education in the global setting is undergoing a paradigm change in how learners acquire information. One of the leaders of this new global health "education revolution" is right here at Boston University. With a group of multi-disciplinary, multi-institutional collaborators, Gabrielle Jacquet, MD, is changing the way those planning global health educational experiences prepare themselves. Over the last year, her group developed a unique online course, The Practitioner's Guide to Global Health. This free, open-access course provides a unique resource

for optimizing learning opportunities and identifying and troubleshooting common issues that arise during global health learning experiences. In its first six months, the course was viewed by six thousand students from over 150 countries. It is unique in that it enables learners to complete modules online and to have an interactive connection with one another and with course faculty.

Similarly, it will give these faculty the ability to study demographics including learner age, education, and geographic location. It is in this fusion of technology, education, and global health that the paradigm of how we learn is fundamentally changing.

Tell me. Show me. Involve me. *I will understand.*

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by Gabrielle A. Jacquet MD, MPH, Director, Global Health, Department of Emergency Medicine; Assistant Director, Emergency Medicine Residency, Boston Medical Center; Assistant Professor, Emergency Medicine, Assistant Director, Global Health Programs, Boston University School of Medicine; Affiliate Faculty, Center for Global Health and Development, Boston University School of Public Health

The Practitioner's Guide to Global Health: an online, open-access, interactive, evaluative, timeline-based courses to prepare students and trainees to participate in safe, effective, and sustainable global health learning experiences

The Practitioner's Guide to Global Health is a series of three multidisciplinary timeline-based, interactive, evaluative, open-access courses to prepare students and trainees to safely and effectively participate in global health learning experiences. What's even better? They are free-of-charge and generate a PDF certificate (upon successful completion) that can be shared with program directors to help facilitate a standardized preparation for trainees across the world. The three courses are as follows:

Course 1: "The Big Picture" (to be completed six to12 months in advance of the rotation) covers several important "big picture" questions: Why do you want to have a global health learning experience? What kind of experience is right for you and your current level of training? When would be a good time? Where should you do it? How will you fund it?

Course 2: "Preparation & On the Ground" (to be completed one to three months in advance) covers logistics of safety, planning, security, transportation, personal health including vaccinations and prophylaxis, cultural awareness and sensitivity and dealing with unexpected situations on the ground.

Course 3: "Reflection" (to be completed toward the end of your rotation or on your way home) helps you prepare to return, contains important information about dealing with unexpected feelings and health issues, and helps you plan for future work and sustainability.

These courses have been made possible thanks to the hard work of over 50 global health experts from around the world, the ACEP International Section, and the Boston University Digital Learning Initiative.

LEARN MORE (click on the social media icons below):

United Nations-recognized non-profit **Child Family Health International** (CFHI) named Gabrielle Jacquet, MD, Global Health Pre-Departure Leader as Medical Director in April, 2016 (CFHI is a non-profit organization providing over 30 global health education programs in 10 countries).

Global Health Electives

Masaka, Uganda: GLOBAL EMERGENCY CARE COLLABORATIVE

by Megan Rybarczyk, MD, Chief Resident

In December 2015, I completed a teaching elective with an organization called the Global Emergency Care Collaborative (GECC) in Masaka, Uganda. The program is working to train mid-level emergency care providers (ECPs) in Uganda, where currently no other formal training for emergency care at any level (including physicians) exists. GECC was started in 2008 by US emergency physicians in Nyakibale, Uganda, who trained several classes of nurses who are now serving as trainers themselves for new students. GECC is now actively collaborating with the national Ministry of Health and a regional university (Mbarara University) to expand into a formal national level training center for a two year diploma level ECP midlevel program. The new site, at the Masaka Regional Government Referral Hospital, currently has three of GECC's veteran ECPs instructing six trainees in a three-month preparatory course before the formal diploma program begins. It was in this that I participated during my elective.

My month at the Masaka site was very busy. The majority of my time (eight to twelve hours a day, six days a week) was spent teaching at the bedside in the Emergency Department – teaching both ECP trainers (on everything from clinical topics and the logistics of running an emergency department to how to teach) and trainees (mostly clinical topics). One topic of particular interest to both the ECP trainers and their trainees was ultrasound. Given the lack of other forms of radiology (some ultrasound and radiography only during the day; no CT or MRI), the ECP trainers and trainees were eager to learn this skill. Other areas of emphasis included efficient history/physical exam skills, documentation, the assessment of trauma patients, pain management, and antibiotic stewardship.

In addition to bedside teaching, I condensed three lectures on respiratory emergencies in adults and children from the GECC curriculum into two and assisted the ECPs with giving these lectures to the trainees. I ran three simulation cases; two of which I authored myself. I assisted with the creation and delivery of a hospital-wide CME on shock. Finally, I created three new lectures: one on a few techniques for regional anesthesia, which I instructed to the trainees, and two CME lectures (interpreting laboratory tests and anti-hypertensive medications), which were instructed to the ECP trainers. Finally, I worked with the program director to help make improvements to the department as a whole (e.g. posting reference materials in the department, obtaining/fixing necessary equipment/supplies, working on department/patient/chart organization, and flow).

Again, it was a very busy and challenging month, but it was also an incredible educational experience not only regarding the unique and sometimes difficult pathology in the patient population, the relatively high volume of patients to be managed by the limited staffing of the hospital, and the need to adapt to a very low resource setting (despite being the regional government referral hospital) but also in having the time and the opportunity work to adapt, to expand, and to improve my teaching abilities.

I would highly recommend this elective to anyone with interests not only in education and in global health/working in resource-limited settings but also in department administration. As the program becomes more established in Masaka and as the volume of the emergency department continues to grow, this will be a much needed area of expertise among volunteers.

Overall, an excellent elective – not only due to the exceptional educational experience, but also due to the great program staff with which to work and the ease of organizing the elective within the confines of a busy resident's schedule. I will definitely look into volunteering with the organization again, and do not hesitate to contact myself (Megan.Rybarczyk@bmc.org) or the volunteer coordinator (volunteer@globalemergencycare.org) if you have an interest in organizing a similar experience.

Cape Town, South Africa: KHAYELITSHA HOSPITAL

by Megan Rybarczyk, MD, Chief Resident

I had the privilege of completing a (short!) rotation at Khayelitsha Hospital in Cape Town, South Africa during the spring of my PGY 2 year this year. It was quite a challenge to arrange this elective, as no one from my program had ever been to this site (one resident had been in South Africa as a medical student and could give me some information and two attendings had some experience/contacts in South Africa, but no one had navigated the logistics of an elective experience at this particular hospital). The preparation started eight to nine months prior with paperwork through the University of Stellenbosch International Office and the Educational Commission for Foreign Medical Graduates (ECFMG) – which was an ongoing challenge right up until I left for the elective. This elective was even more labor-intensive than others as I also submitted research and was accepted to give an oral presentation at the 2015 World Congress on Disaster & Emergency Medicine (WCDEM). I was preparing for a clinical elective as well as my first talk at an international conference!

I found housing through AirBnB. My transportation included flights on British Airways and a car through Avis (I took their minimum insurance and arranged for additional). A US driver's license is sufficient in South Africa and I purchased South Africa maps for my GPS. I also signed up for InternationalSOS evacuation/medical insurance, as BMC does not yet provide this for residents. Since I planned to work less than 20 shifts, I decided not to buy malpractice insurance. Finally, if you can provide proof that you will be there for less than 90 days, a VISA is not required.

I felt that I needed to learn more about the country and local area because I had never been to South Africa. Although English is the predominant language, I attempted to learn some Afrikaans and isiXhosa. I visited the travel clinic to update my vaccines and consider taking Cipro and PEP with me (Khayelitsha has a high prevalence of HIV). Finally, BMC does not allow for long-term parking in the garages during electives so I chose to park at Braintree Logan Express – approximately $200 for the month – and cancelled my BMC parking for the month. To top all of this off, I was working in the SICU the month prior to leaving (luckily – I had a 24-hour call two days prior, was post-call, and then off the day prior to leaving – thank you SICU team!).

I departed for Cape Town via London early on the morning of April 8 and arrived on April 9. Driving on the left side of the road for the first time was interesting, but not as difficult as one would think. I drove to my host family's house at the edge of the wine country between Khayelitsha and Stellenbosch. They were amazing – they helped me settle in, had me follow them to the nearest grocery store, and even invited me for dinner!

The following day, I was supposed to be at the hospital in the Emergency Centre (EC) at 7:30 a.m. for orientation. Unfortunately, I was slightly late after blocked roads (due to construction) made it difficult to get to the hospital. On arrival, I met my supervisor – Sa'ad Lahri, MD – who gave me a very brief introduction and then paired me with one of the residents in minors/triage/"the front" to learn the paperwork/documentation system. After only an hour or two, I was in headfirst in "resus," working with the resident placed there to see the most critical medical and trauma patients. By the next day, I was picking up my own patients (with supervision from the senior residents) and basically functioning as a junior resident – seeing patients, writing notes and orders, starting my own "drips" (IVs) and obtaining labs (done only by residents – none by nursing; and often with patients sitting or lying on the floor), doing procedures, signing patients out, and so on.

The residents there are grouped into teams of four or five and you always work with your team. It makes scheduling a bit difficult and the already short-staffed team can be even shorter staffed (if someone needs off for a wedding or other personal event, or if someone is sick, etc.), but it fosters camaraderie within the team, and you learn to work with everyone's strengths and weaknesses well to improve and to provide better care – especially during critical cases. Attendings are there only for rounds in the morning (excellent times for teaching!) and occasionally later into the day, but are available by phone overnight.

The residents there are incredibly strong. They work under extremely stressful conditions – they run a department that consists of minors (green), pediatrics (green, yellow, orange), trolleys (mainly admissions to medicine and surgery, but also a mix of potentially very sick new EC patients triaged yellow and orange), asthma (yellow and orange and definitely not just asthma!), psych, and resus (red adults and children). There is usually a pediatrics resident, medicine resident, and surgery resident for their admissions, but this team of (maximum!) 7-8 residents (with usually a few other foreign residents mixed in) is potentially caring for a department of new and boarding/admitted patients that probably numbered close to 150 patients or more on average! To name a few more challenges: they have a limited formulary, they frequently run out of consumables (gauze, tape, culture bottles to name a few while I was there), there are never enough beds (most patients are in chairs or on the floor), and they only have x-ray and an ultrasound (that does not always work well).

The pathology there is incredible – unfortunately, a lot of very advanced TB and HIV/AIDS. I remember performing a thoracentesis on a 23-year-old woman with a pleural effusion from pTB (pulmonary TB) who also had disseminated TB and various complications from HIV/AIDS. We wore masks and isolated people as much as possible in the open rooms. However, masks were often in short supply and the true isolation rooms were often already occupied with others with MDR and even XDR TB. Other common infections were PCP, CAP, and diarrheal illnesses. We even saw a couple of cases of varicella pneumonia.

There was also quite a bit of complications from chronic disease, especially diabetes — DKA/HHS was incredibly common, as was CAD/ACS, COPD, asthma, and CHF. It was rare to see someone above 60 or 70 years of age.

And then the trauma, which Khayelitsha is known for, unfortunately. Weekends near holidays and/or the end of the month are the worst as people have the time/money (payday) for alcohol (a huge problem there along with certain other drugs, like "tik," which is a nickname for crystal meth, and more socializing. Stabbing with pangas (large knives) and community assault (beating with bricks and other objects) are common, along with MVAs and PVAs (pedestrian struck). The register book on Friday and Saturday nights is often full of the following entries: "stab neck," "stab chest," "stab head." You often meet patients at the door of the resus room with a suture in your hand (usually a 2-0 nylon with a needle large enough to place the suture by hand without instruments) to temporize any arterial bleeding before moving them to a bed (if there is one). It was not uncommon to have patients who had been stabbed sitting in chairs in the hallway, or young men walking the halls with their ICDs (chest tubes) in place.

Those who are stabbed are usually young men involved in the gangs in Khayelitsha, but family members, bystanders, and others also suffer. My last day there, we had a young woman who had been mugged on her way to work in the morning. In addition to having her belongings stolen, she had been stabbed in the face with a panga.

Intimate partner violence (IPV)/sexual assault is also a huge issue – so big that there is a special area of the hospital that patients go to (we did not see them in the EC).

The staff at Khayelitsha can take care of the most advanced pathology in the EC. However, there is no ICU to admit to, no CT or MRI, and limited higher level surgery beyond trauma. Anyone who was intubated and needing ICU or specialist care was transferred to Tygerberg or another surrounding hospital. Unfortunately, we also did a lot of "aggressive palliation" for those whose condition would not allow for a good outcome, or even survival on the at least 20 minute transport to Tygerberg (if one could get ambulance transport quickly, which was often a challenge).

Some additional challenges: given the under-staffing, patients would go for hours, and occasionally a day or more without being seen – sometimes with significant pathology (even CVAs, MIs). "Stable" patients would occasionally pass away quietly in trolleys (waiting for admission) or asthma as it was difficult to round back through every patient on a busy night. As I mentioned, consumables were often in short supply, and it was often difficult to obtain beds for resus.

Overall, it was an amazing clinical experience. I worked twelve shifts (mainly 12-hour overnight shifts) and saw quite a bit of advanced pathology. I spent a good amount of time in pediatrics (where we all could use more training!). I learned new procedures and ways to use limited resources to approach procedures I already knew. I learned a new and different health system, working with and learning from some of the most amazing attendings, residents, and nursing/support staff I will probably ever meet.

I also had a great experience at WCDEM – attending several amazing talks, meeting leaders in the field of international disaster medicine and emergency medicine, catching up with old friends, and having my own personal experience of giving a talk at an international conference!

Finally, I had a couple of days to explore Cape Town and the surrounding areas, visiting Cape Point/the Cape of Good Hope, Robben Island, and the District 6 Museum. On my return journey, I also had an eleven-hour layover in London and was able to explore that city for the first time for a few hours as well!

Overall, it was an amazing and incredibly worthwhile experience – I am still trying to mentally process it all! If anyone has any questions about my particular experience or is interested in setting up one of their own, please do not hesitate to email me at Megan.Rybarczyk@bmc.org.

Enkosi/Dankie!

Quetzaltenango, Guatemala: POP WUJ CLINIC

By Elizabeth Wallace, MD, PGY 3

This year I traveled to Guatemala to complete an elective with a charity called Pop Wuj. This program instructs students in the Spanish language and about the Mayan culture through immersion and community service projects. Through this intensive language instruction and community development, participants are able to gain a better understanding of the social, political and cultural differences of Guatemala, to participate in community improvement, and to provide better care for patients in a local clinic. Among the programs projects include a family support center, which provides support for employed single mothers and their children who have been affected by violence, substance abuse, and family disintegration in a small rural community; a safe stove project, which helps local communities build stoves in safe locations with proper venting so the people of the village are not exposed to smoke while cooking; and a primary care clinic, as well as multiple mobile clinics and malnutrition clinics in the surrounding rural communities.

I spent most of my time in the clinic while working in Guatemala. I was able to speak with patients with the assistance of translators and on my own as my language skills progressed, and to work with local Guatemalan doctors to provide care. Most of the conditions that we saw in the clinic were very similar to those seen in the United States, and included diabetes, hypertension, gastritis, and arthritis. They were profoundly different, however, because of the social, cultural, and geographic differences in Guatemala. Patients in these communities had virtually no other access to health care other than this clinic, and often traveled five to ten hours to make it to their appointments every few months. It changed our treatment plans because we were not able to give return precautions or make arrangements to follow up with a patient in a few days to reassess the success or failure of the treatment. We relied on patient education and local support networks from their families, and had to be very conservative in our management, with the assumption that the patient would not be able to return to clinic or to visit a hospital easily.

Elizabeth Wallace, MD providing assistance to a family in need.

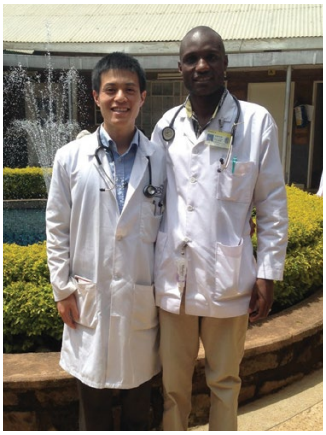
What I gained from this experience was a stronger ability to diagnose conditions without extensive diagnostic testing and, as a result, I developed a greater reliance on my history and physical exam. I also learned to practice more independently without significant ancillary support. Finally, the greatest lesson that I gained from my time in Guatemala was an appreciation for human resiliency and a great admiration for my patients. For my patients, every day was a struggle to find adequate food and shelter. I was impressed and humbled that they were willing to travel great lengths for their medical care, in a community in which their greatest challenge was survival. I hope to be able to return one day with my much-improved Spanish language skills and to contribute more to this population that has so much need, but also so much resiliency.

Tenwek, Kenya: TENWEK MISSION HOSPITAL

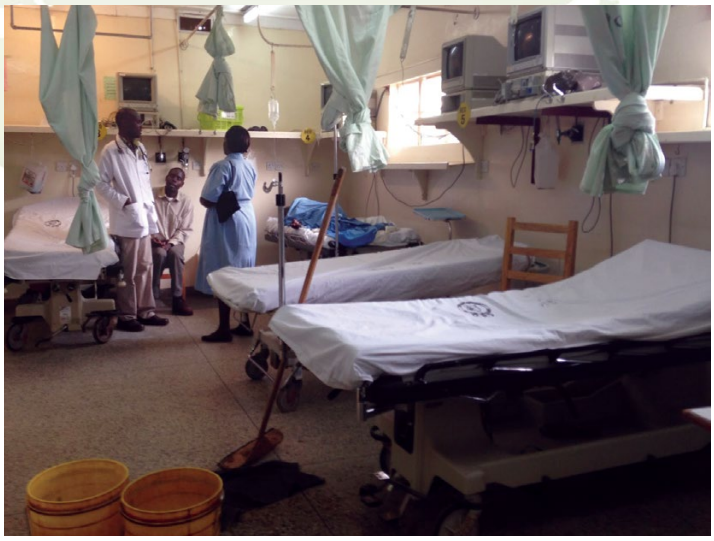
By Wilbur Hu, MD, PGY 4

I spent my month-long elective at Tenwek Hospital. Tenwek is a hospital founded by Christian missionaries located in Bomet, Kenya. To give a little background, Kenya is a relatively well-developed country in East Africa and its capital, Nairobi, has all the trappings of a large, high-income city. Bomet is located approximately 200 kilometers northwest of Nairobi, and takes approximately four to five hours to get to by car, depending on traffic. Once you get outside of Nairobi, the scenery turns into vast acres of farmland and pastures interspersed by tiny towns with dirt roads and tin-roofed stores. Bomet is one of these small towns, and Tenwek Hospital is relatively isolated at a distance of about five kilometers away from the town.

Despite its isolation, Tenwek Hospital is a fairly large referral center. There are anywhere between 50 to 150 inpatients at any given time and there is a well-established outpatient clinic system. Specialty care is fairly well established as well, and includes general surgery, orthopedic surgery, obstetrics/gynecology, and ophthalmology (all available on call 24/7 and all with their own robust outpatient clinics). There are approximately 15 ICU-level beds shared between the medical, surgical, and pediatrics services, and there is usually anywhere between two to six patients on a ventilator at any given time. There is also a dentistry clinic available. The emergency department (known as Casualty) is a seven-bed area that includes one resuscitation room, and has most of the equipment that is needed for emergency care, including IV equipment/fluids, cardiac monitors (that sometimes do not work), an EKG machine (that never has paper, but has a screen where you can read the EKG in real time), a defibrillator, airway equipment, and chest tubes. Labs and radiology (x-ray) are also available 24/7. There is even the potential for CT scans, but these are often difficult to obtain due to availability and cost.



Dr. Hu pictured with Moses, one of the clinical officers working in Casualty (equivalent to a US mid-level provider).



Morning in the Casualty — there are a total of 7 beds, but as with any ED, there would sometimes be up to 20 patients in this small area.

My primary role during my month in Tenwek was to supervise the medical care being provided in Casualty which is usually staffed by midlevel providers (called clinical officers) who are fairly independent, but lack the training of full providers. For instance, most do not understand Advanced Cardiovascular Life Support (ACLS). I would work in Casualty from around 8 a.m. to 6 p.m. Monday through Friday, and during the evenings and weekends when the clinical officers were on their own. In addition, I also took call for the medical service. This meant that I was supervising the medical intern with any patient who was admitted to the medical service (including medical ICU patients) from Casualty. I would also often be called to help deal with crashing floor or ICU patients.

Sunset in the Rift Valley

The patients there were incredibly sick – many with end-stage HIV, tuberculosis (including significant numbers of patients with extra-pulmonary tuberculosis), and bacterial meningitis. There were also plenty of things we see in the US – CHF exacerbations, strokes, asthma, DKA, myocardial infarctions, and bad trauma. Some of the more unique cases I remember were organophosphate poisonings (the most common way of committing suicide here) and a suspected case of tetanus. There were many, many codes, many intubations, and no shortage of trauma-room-level of patients.

All in all, it was an incredible experience. I had a lot of independence, but I also felt like I had great support from the Casualty staff, and I left feeling like my clinical training had really come a long way. I had the opportunity to care for many very sick patients and to teach a lot. There were many times when I really felt the challenges of working in a low-resource setting – for example, when I wanted to intubate a crashing patient and then was told that there were no more ventilators left. But overall, I was proud of the medical care that was provided at Tenwek, and I felt that I both had a lot to offer and learned a lot from the patients and the staff there.

Lima, Peru: SANNA COMMUNITY HOSPITAL

By Alexandra Alvarez Calderon, MD, PGY 4

I had the opportunity to do a rotation in a community hospital called SANNA in the heart of Lima, Peru. It was a great opportunity to experience a different way of practicing medicine. At this hospital, there are very limited resources to access evidence-based medicine so most of the time medicine is based on the situation and prior therapies. The Emergency Medicine Department there is newly remodeled and has12 beds. The team consists of two emergency medicine attendings and one traumatologist who is in charge of suturing, joint reduction, fracture reduction, and splinting. We had 24-hour access to CT scan and ultrasound but limited MRI availability.

During my time in Lima I was able to do a couple of shifts in the city hospital as well and this was a completely different experience. The Emergency Department there is set up to receive approximately 100 patients but they constantly hold about 220 patients due to limited hospital bed availability. In this hospital, resources are very limited and many of the patients board in the department for more than one week. The staff consist of five emergency medicine residents, five attendings, an internist who resides in the emergency department to treat the patients who are boarding, and an attending who is in charge of the discharges for the day. I was shadowing the attending physician on call who would accept or decline patient transfers and troubleshoot bed availability. The main issue is that once patients are admitted into the main hospital, they wait for months for surgery because of the limited amount of surgeons and the constant protests from physicians over better pay, leaving the hospital without physicians for long periods of time. Again, in this setting evidence-based medicine is not the standard, but patients are cared for as well as they can be with the available resources. During my time in the city hospital I was able to observe bedside paricardiocentesis, central lines, intubations, and cricothyroidotomies using landmarks without the technology that we use here. I was also able to give lectures on the approach to trauma patients and on alcohol withdrawal (this is rarely seen in these hospitals so it was very interesting to provide them with this knowledge).

Finally, during my time off from the hospital I was also able to spend some time around the city – my hometown – as well as on the beaches, where I was called upon to perform a shoulder reduction in the field as well as to do the initial evaluation on someone suffering a direct blow to the neck.

Overall, I loved this elective because it not only allowed me to experience a very different way of practicing medicine in community and city environments, but it also allowed me to do so in my own hometown.

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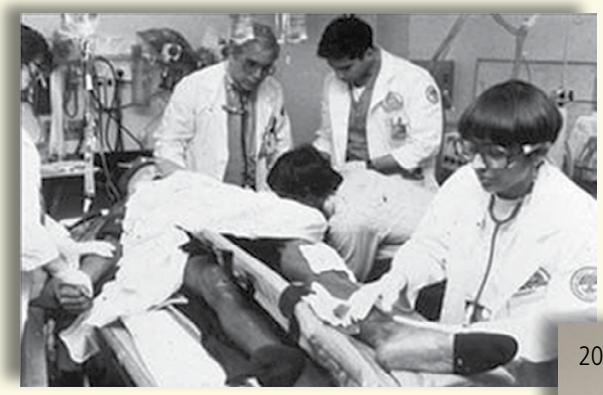
A SPECIAL RECOGNITION

Thank you Dr. Edward Bernstein for 28 years as a dedicated emergency attending physician in the Emergency Department of Boston Medical Center.



1988

Edward Bernstein, MD, FACEP
Professor, Emergency Medicine, Boston University School of Medicine
Professor, Community Health Sciences
Director, BNI-ART Institute, Boston University School of Public Health
Medical Director, Project ASSERT, Boston Medical Center
Director, Opioid Urgent Care Center (Faster Paths to Treatment), Boston Medical Center (MDPH & BSAS Sponsored)
Improving Continuity of Care

2016

Throughout many years of service, Ed has worn many hats including the one pictured at left that he wears with great pride. He has wrapped up his role as an emergency attending physician and is now concentrating on leading the new *Faster Paths* Program and treating patients in the program's medication assessment clinic (see page 5). He will continue his research to improve the care of BMC patients and address conditions that affect health in their communities.

In his own words…

"During 28 years of service as an academic physician at Boston Medical Center, the administration and my colleagues have provided me with leadership, vision and a supportive environment rich in opportunities to develop clinical programs, teach, mentor, and pursue research ideas. The future success of our institution will depend to a large degree on appropriate administrative attention to the interplay of staff and patient satisfaction. My experience on the FPF Women's Leadership Task Force demonstrated the need to address gender and racial inequities among faculty, and brought home the critical role that BMC leadership can play to create a diverse, equitable, and collaborative work-force. Collaboration with community partners is just as important for supporting efforts of faculty, residents, and staff to meet the needs of our patients with clinically and socially complex health problems."

PUBLIC AND GLOBAL HEALTH SECTION AWARDS

Ben Nicholson, MD, PGY 2
was awarded the EMRA 2016 International Emergency Medicine Conference Scholarship. The award supports travel for attendance at an international emergency medicine conference.

Joseph Benedict, MD, PGY 3
was awarded a scholarship to volunteer at Bernard Mevs Hospital in Port-Au-Prince, Haiti through Project Medishare.

Emergency Medicine, Public & Global Health and Residency & Pre-Hospital Education:

FUTURE CONFERENCES

NATIONAL CONFERENCES

ORGANIZATION	DATE	LOCATION
NAEMSP	January 24 - 26, 2017	New Orleans, Louisiana
CORD	April 27 - 30, 2017	Fort Lauderdale, Florida
SAEM	May 16 - 19, 2017	Orlando, Florida
ACEP	October 30 - November 2, 2017	Washington, DC
APHA	November 4 - 8, 2017	Atlanta, Georgia

INTERNATIONAL CONFERENCES

ORGANIZATION	DATE	LOCATION
DEVELOPING EM	December 5 - 8, 2016	Colombo, Sri Lanka
CUGH	April 6 - 9, 2017	Washington, DC
EUSEM	September 24 - 27, 2017	Athens, Greece
ICEM	November 24 - 25, 2017	Dubai, UAE
INDUS EM	October 8 - 15, 2017	Colombo, Sri Lanka
AFCEM	TBD 2017	TBD
EMCON	TBD 2017	TBD

Boston Medical Center
Department of Emergency Medicine

PUBLIC & GLOBAL HEALTH SECTION NEWSLETTER

Jonathan Olshaker, MD, Chair, *Editor-in-Chief*

Edward Bernstein, MD, Director, *Public Health Section Editor*

Gabrielle A. Jacquet, MD, MPH, *Managing Editor, Global Heath Section Editor*

Megan M. Rybarczyk, MD, PGY 4, *Resident Managing Editor*

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