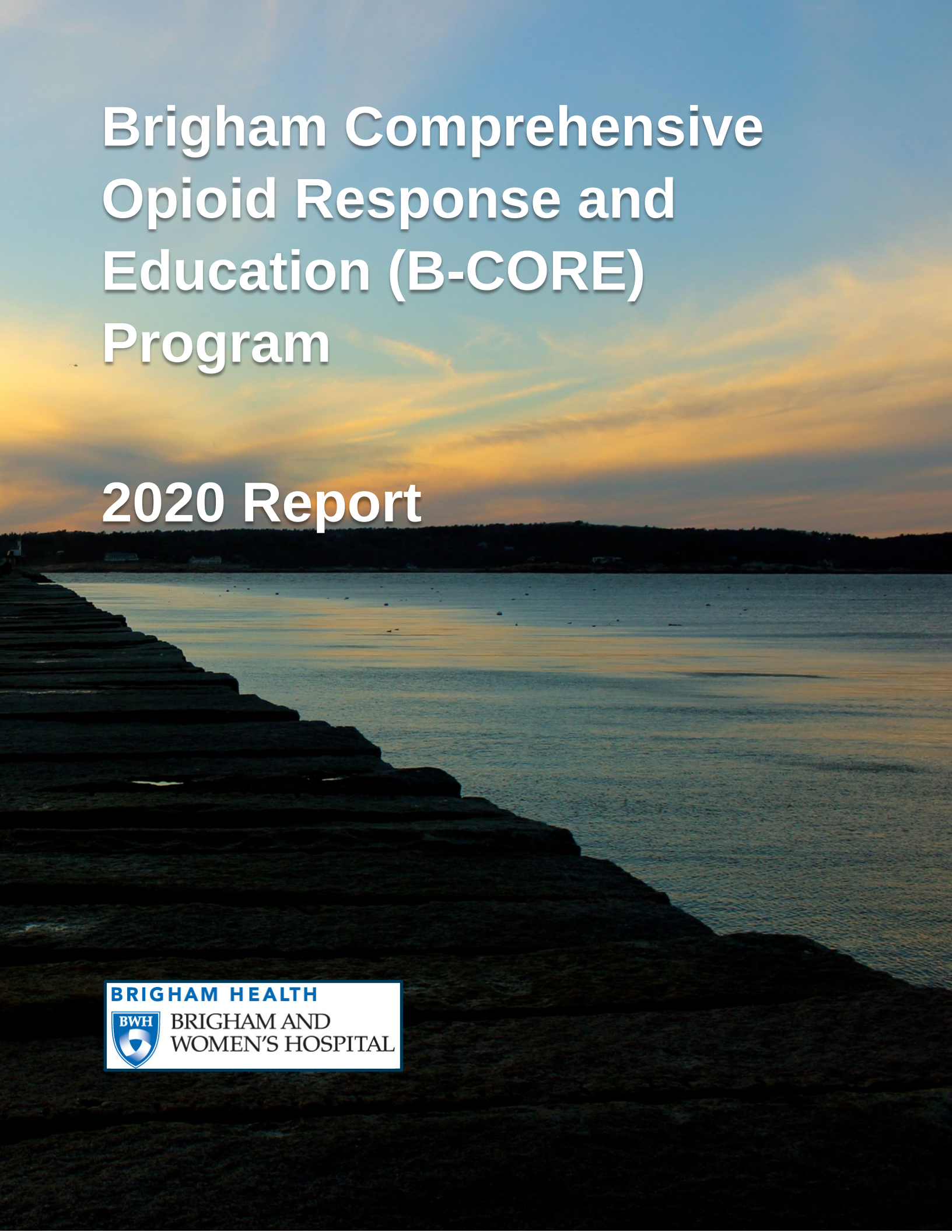

# Brigham Comprehensive Opioid Response and Education (B-CORE) Program

## 2020 Report

BRIGHAM HEALTH
BWH BRIGHAM AND WOMEN'S HOSPITAL

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# The Brigham Comprehensive Opioid Response and Education (B-CORE) Program

Mission Statement: Develop a comprehensive program that measurably demonstrates implementation of Brigham-wide guidelines for opioid prevention, opioid prescribing, managing chronic pain, and managing opioid addiction through technology, data, outreach, clinical support, and training.

Leadership:

**Executive Committee**

Scott Weiner, Director
Shelly Anderson, BH Chief Strategy Officer
Craig Bunnell, DFCI CMO
John Co, Partners GME
Peggy Duggan, BWFH CMO
Sunny Eappen, BWH CMO
John Fanikos, BWH Pharmacy
Chris Gilligan, BWH Pain Medicine
Richard Gitomer, Director, BWH Primary Care
Michael Healey, BWPO eCare Ambulatory CMIO
Jessica Logsdon, BWH PA Director
Wanda McClain, BWH VP Community Health
Maddy Pearson, BWH CNO
James Rathmell, Chair BWH Anesthesia
Andrew Resnick, BWH CQO
David Silbersweig, Chair BWH Psychiatry
Joji Suzuki, Director, BWH Addiction Psychiatry

## Key Stakeholders

Salah Alrakawi, BWH Primary Care
Gloria Brand, Program Director, Program in Opioid and Pain Innovation
Kathryn Britton, BWH Associate CMO
James Bryant, BWH Compliance
Darin Correll, BWH Anesthesiology
Sonali Desai, BWH Medical Director of Ambulatory Patient Safety
Matthew Fishman, Partners VP Community Health
Michael Hession, Harbor Medical Associates CMO
Henrietta Menco, Partners Employee Assistance Program
Lisa Morrissey, BWH Associate CNO
Christine Murphy, BWH Psychiatric Nurse Resource Service
Rajesh Patel, BWH CMIO
Claudia Rodriguez, BWFH Addiction + Faulkner B-CORE Director
Andrew Seger, BWH Pharmacy
Rushdia Yusuf, DFCI

Goals 2018-2019:

Established Substance Use Disorder Bridge Clinic

Continued decline in overall opioid prescriptions

Met internal performance framework (IPF) metric for opioid education

Released opioid toolkit for providers and opioid education sheet for patients

Completed PDMP integration with Epic and implemented comprehensive opioid-related clinical decision support released

Goals 2019-2020:

Focus on high morphine milligram equivalent opioid prescriptions, with a goal of reducing prescriptions for >90 morphine milligram equivalents by 20% (7/18-6/19 compared with 7/19-6/20)

Establish resources for clinicians managing patients with high dose opioids

Increase documented naloxone co-prescriptions for primary care patients on >90 MME from 1% to 5%

Conduct quarterly case conference “pain board”

Launch Program in Opioid and Pain Innovation (POPI) initiative

Sponsor awards, such as the Pain and Opioid Shark Tank, in collaboration with the Brigham Research Institute

Launch cardiac surgery/IV drug use-related infection clinical pathway

Launch Partners-wide opioid metrics dashboard

Meet Boston/Cambridge Consortium commitments

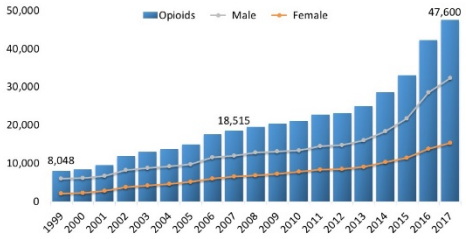
# Director's Message

Scott G. Weiner, MD, MPH

As I write this, we're in the midst of the COVID pandemic. It is an all-hands-on-deck moment in which we are working together towards a common goal of helping each other be safe. The scariest part about the COVID epidemic is its rapidity – but that is also what sparked society to ask so quickly.

The opioid epidemic, which has claimed hundreds of thousands of lives in our country over the past decade, is more like the fable of the frog in hot water: a frog put suddenly into boiling water will jump out, but a frog put in tepid water which is then slowly brought to a boil will not perceive the danger and will be cooked to death. What would the opioid epidemic have looked like if we had a parallel response ten years ago, when the opioid epidemic was first recognized?

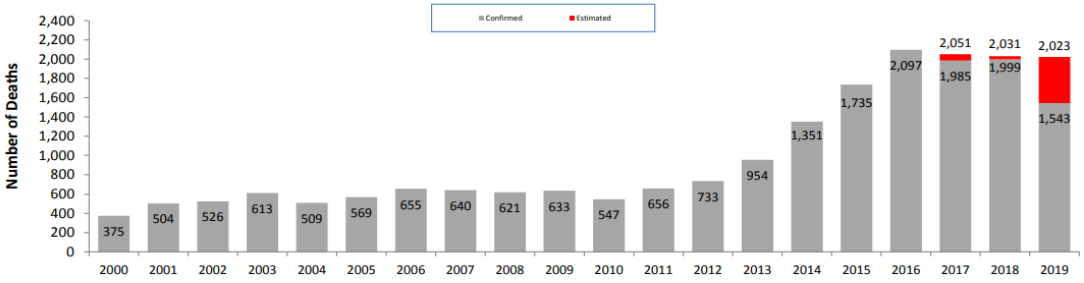
Figure 3. **National Drug Overdose Deaths Involving Any Opioid,** Number Among All Ages, by Gender, 1999-2017




Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

It's a battle, and one that Governor Charlie Baker said necessitates us to be "relentless." I am proud that we have stepped up at Brigham Health. In fact, it's taken years, but we have finally appeared to "flatten the curve" of the opioid epidemic in Massachusetts.

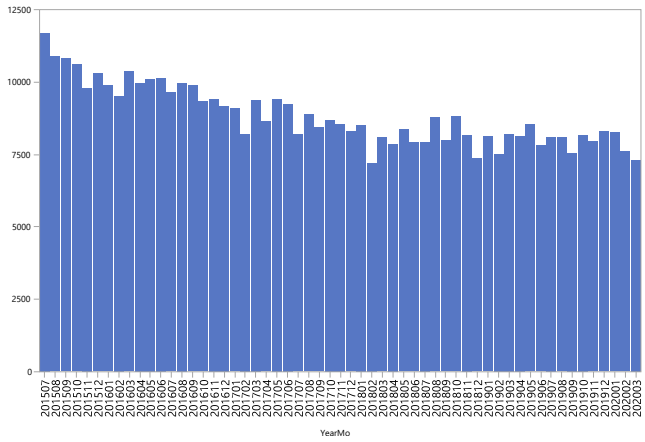
**Figure 2. Opioid-Related Overdose Deaths, All Intents**
**Massachusetts Residents: 2000 - 2019**

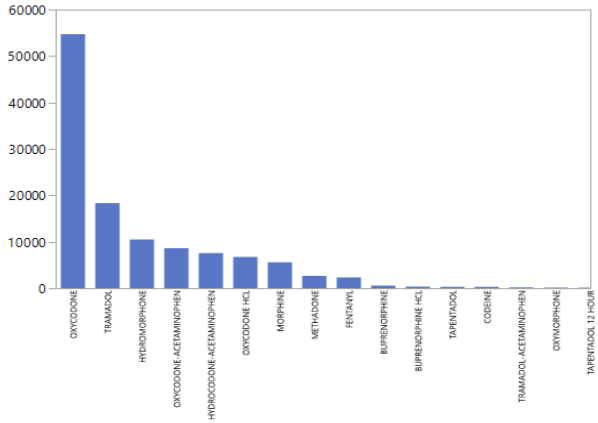



Herein you will learn about incredible progress made over the past four years as we strive to deliver the best care possible to our patients in pain or struggling with addiction.

# Opioid Prescribing at Brigham Health

After an initial decline upon the start of B-CORE, opioid prescribing at Brigham Health has stabilized. We prescribe around 8,000 opioid prescriptions per month to our patients, which is down significantly from the start of our program in 2016. Some opioid prescribing, such as after acute surgery or trauma, is a part of standard practice.



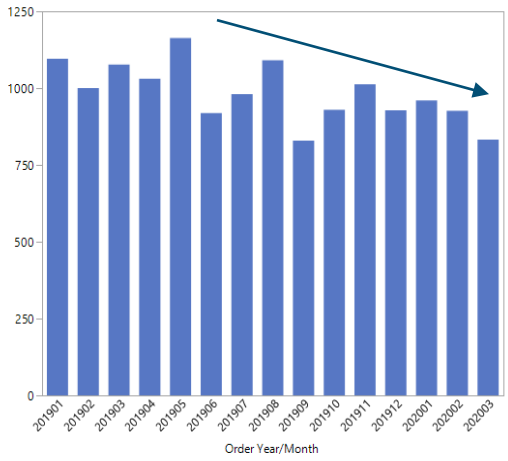




The most common opioids prescribed at Brigham Health (Jan, 2019 to Mar, 2020) are oxycodone, tramadol and hydromorphone.

We are, however, cognizant of significantly increased risks associated with chronic opioid use for noncancer pain. As medical knowledge advances, our practice at Brigham Health constantly evolves. For over a decade, opioid pain medications were considered to be a primary treatment modality for patients with chronic, non-cancer pain. With advancing knowledge, we now know that chronic opioid therapy is associated with minimal benefits to function, and markedly increases a person's risk of overdose and death.

The 2016 Centers for Disease Control and Prevention Guideline for Prescribing Opioids for Chronic Pain states that providers "should avoid increasing dosage to 90 morphine milligram equivalents (MMEs) or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day." Understanding that this guideline was released after many patients with chronic pain were already on doses greater than 90

MME/day, we aim to transition those patients currently taking >90 MME/day to safer doses in a compassionate and careful way. Our recommendation is to decrease doses greater than 90 MME/day by 10% per month until the patient is below the 90 MEE/day dose or lower if the patient continues to tolerate the wean. This advice is based on the data confirming the limited efficacy of doses greater than 90 MME/day along with the 10-fold increase of diversion or overdose in patients with non-cancer pain.




Historically, there have been around 1,100 high-dose opioid prescriptions per month, but that number is now decreasing. We have committed to work with prescribers who frequently prescribe high-dose opioids to achieve this goal. A multidisciplinary and multispecialty group reviews cases for high-frequency prescribers and provides tapering guidance. We recognize that there may be patients who are unable to taper below 90 MME, but we expect this to be an infrequent exception.

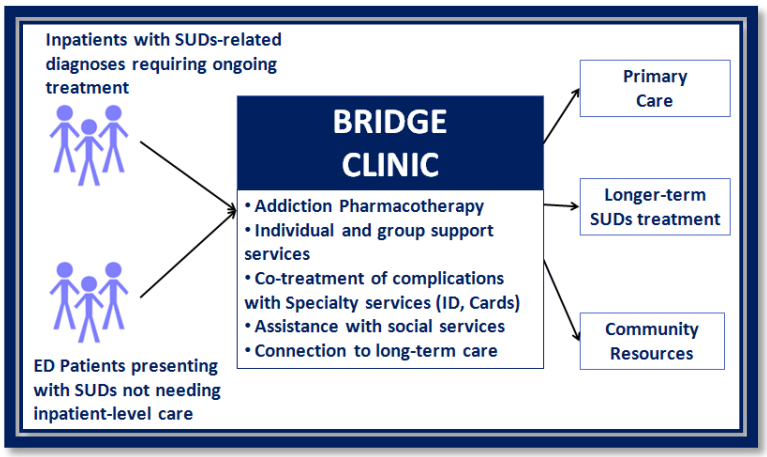
For all patients on chronic opioids, we encourage all of our prescribers to commit to ensuring safe practices including a) review of MassPAT prior to every prescription, b) avoidance of opioids and benzodiazepines in combination, c) an active medication management agreement, d) random toxicology screening at least once per year and e) co-prescription of naloxone.

# Bridge to Recovery Clinic

The Brigham Health Bridge to Recovery clinic is a centerpiece of our response to the substance use disorder epidemic. This low barrier to access program has served over 500 patients since its inception in April, 2018. The clinic is designed to provide rapid access to inpatients, emergency department patients and outpatients in the crucial stage of care between actively using drugs or alcohol and a connection to a long-term care program, such as Faulkner's Addiction Recovery Program.

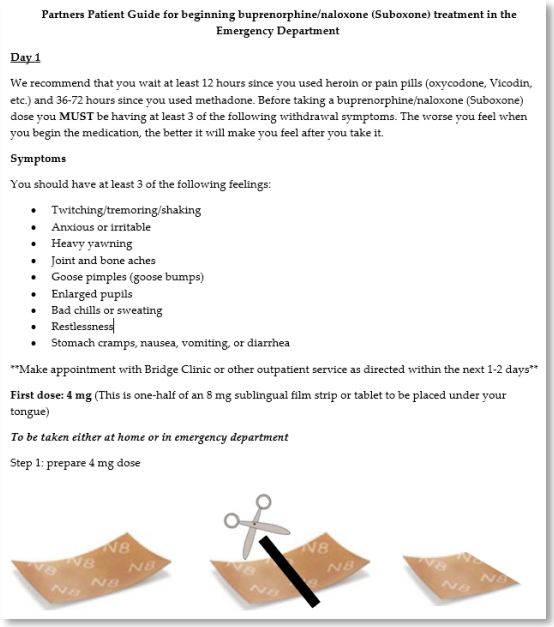

The clinic is staffed by addiction medicine/psychiatry physicians, primary care physicians, infectious disease specialist, nurse practitioner, clinical resource specialist, and peer recovery coaches, all working towards embracing patients, "meeting them where they are at", and stewarding them towards their recovery. The clinic now offers evening hours, peer-led recovery groups, as well as the ability to provide all injectable medications such as Sublocade and Vivitrol.

During the past year, the Bridge Clinic worked closely with the inpatient medical/nursing teams to pilot a program to offer outpatient parenteral antimicrobial therapy (OPAT) to patients who require long-term antibiotic treatment for serious bacterial infections. All pilot patients successfully completed their antibiotic treatment, and as a result avoiding hundreds of inpatient/rehab days.



# Interaction with Partners (Mass General Brigham)

Interaction with the overall health system is essential as we can learn from our colleagues at our affiliated hospitals and work together to create clinical guidance, clinical decision support tools and system-wide metrics. The B-CORE director is the co-chair of the Partners Substance Use Disorder Steering Committee.



**Partners Patient Guide for beginning buprenorphine/naloxone (Suboxone) treatment in the Emergency Department**

**Day 1**

We recommend that you wait at least 12 hours since you used heroin or pain pills (oxycodone, Vicodin, etc.) and 36-72 hours since you used methadone. Before taking a buprenorphine/naloxone (Suboxone) dose you **MUST** be having at least 3 of the following withdrawal symptoms. The worse you feel when you begin the medication, the better it will make you feel after you take it.

**Symptoms**

You should have at least 3 of the following feelings:

- Twitching/tremoring/shaking
- Anxious or irritable
- Heavy yawning
- Joint and bone aches
- Goose pimples (goose bumps)
- Enlarged pupils
- Bad chills or sweating
- Restlessness
- Stomach cramps, nausea, vomiting, or diarrhea

**Make appointment with Bridge Clinic or other outpatient service as directed within the next 1-2 days**

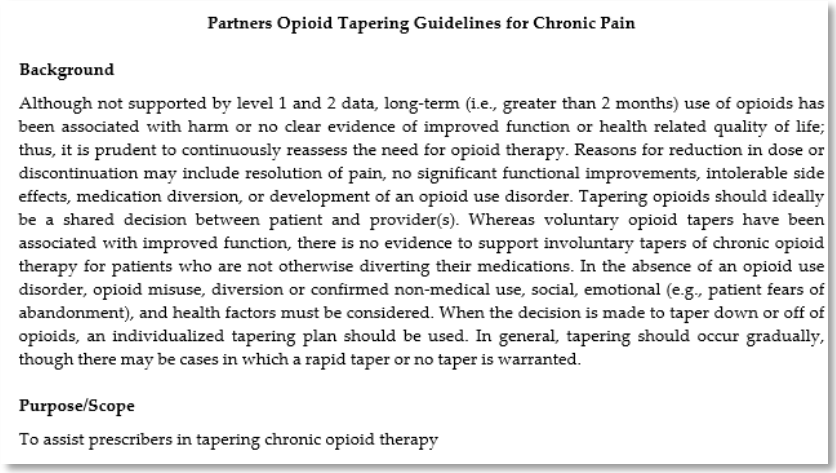
**First dose: 4 mg** (This is one-half of an 8 mg sublingual film strip or tablet to be placed under your tongue)

***To be taken either at home or in emergency department***

Step 1: prepare 4 mg dose

As an example of clinical guidance, we have created a buprenorphine start guide for patients presenting to any of the hospital emergency departments in the system. Research has demonstrated that starting buprenorphine (also called Suboxone) to patients who present to the emergency department with opioid withdrawal are much more likely to be retained in treatment if the medication is started immediately. This involves not only a protocol, but also special training. Nearly all of the emergency physicians at Brigham Health have completed this training.

We have created a guidance for providers who are attempting to taper patients with chronic non-cancer pain to safer opioid doses. The guideline is specific about how to do this safely and compassionately.



**Partners Opioid Tapering Guidelines for Chronic Pain**

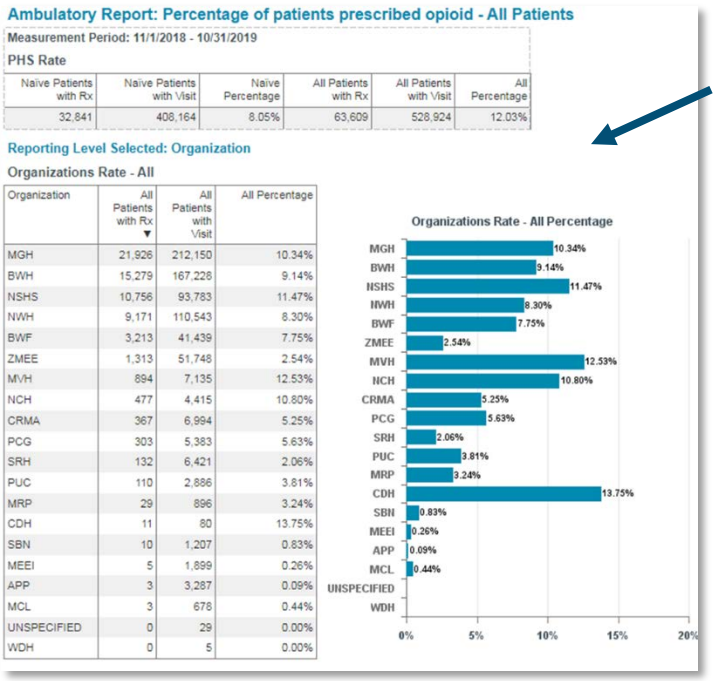
**Background**

Although not supported by level 1 and 2 data, long-term (i.e., greater than 2 months) use of opioids has been associated with harm or no clear evidence of improved function or health related quality of life; thus, it is prudent to continuously reassess the need for opioid therapy. Reasons for reduction in dose or discontinuation may include resolution of pain, no significant functional improvements, intolerable side effects, medication diversion, or development of an opioid use disorder. Tapering opioids should ideally be a shared decision between patient and provider(s). Whereas voluntary opioid tapers have been associated with improved function, there is no evidence to support involuntary tapers of chronic opioid therapy for patients who are not otherwise diverting their medications. In the absence of an opioid use disorder, opioid misuse, diversion or confirmed non-medical use, social, emotional (e.g., patient fears of abandonment), and health factors must be considered. When the decision is made to taper down or off of opioids, an individualized tapering plan should be used. In general, tapering should occur gradually, though there may be cases in which a rapid taper or no taper is warranted.

**Purpose/Scope**

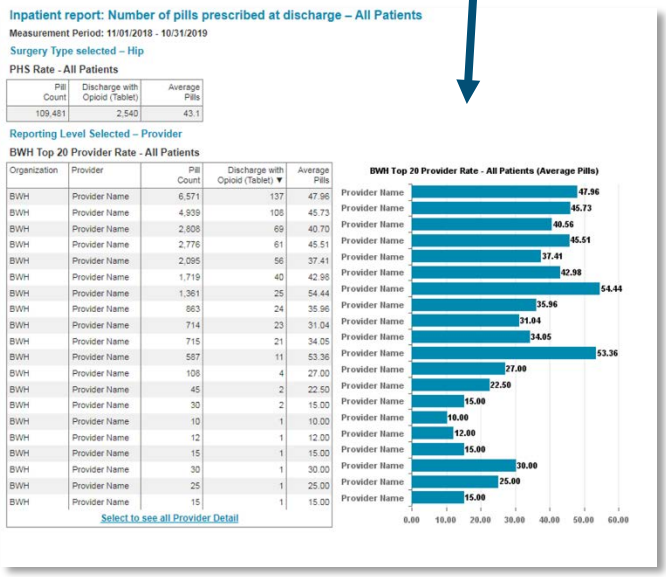
To assist prescribers in tapering chronic opioid therapy

A significant project is being undertaken to create a system-wide opioid metrics platform. The first iteration was recently released and allows quality directors the ability to easily analyze and compare the opioid prescriptions of their providers. The first modules are for ambulatory care clinics, the emergency department, and after surgery.

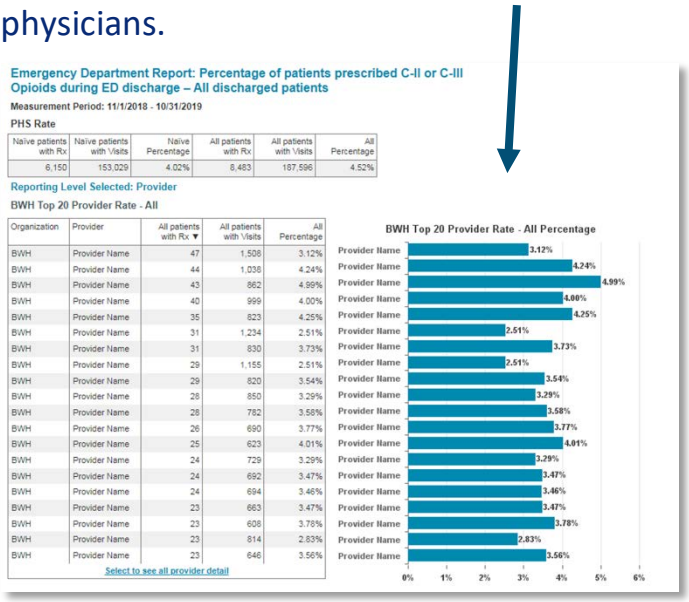



This report allows us to compare the percentage of patients prescribed opioids at the hospital, clinic and individual provider level.

This report allows us to determine the number of pills prescribed to patients after the same surgical procedure. If there are outlier prescribers, we work with their department leadership to ensure they are concordant with guidelines and their peers.

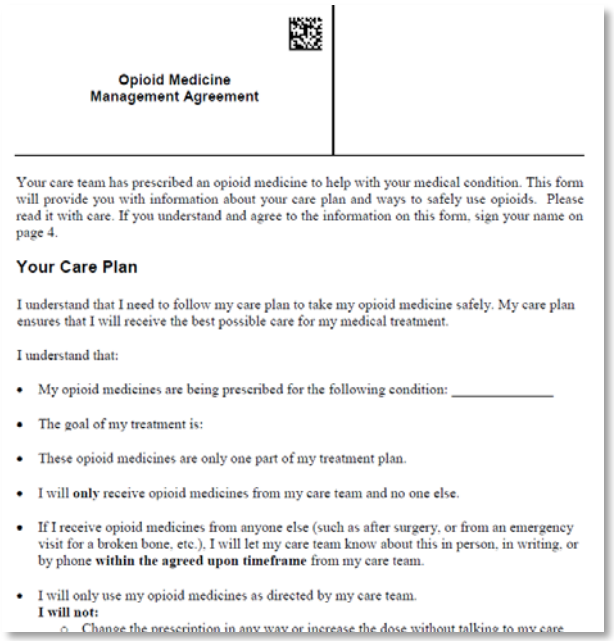



This report allows us to compare opioid prescribing patterns by emergency physicians.



Since the system uses one single Electronic Health Record, working with Partners has allowed us to introduce innovative clinical decision support tools for our providers.

We have created a standardized menu of "pain treatment agreements" for patients taking chronic opioids. The agreements have a special symbol at the top, so when scanned into the computer, the system knows if it exists. If not present, it will remind the provider to have the patient sign a document. This improves our compliance with a state law mandating these agreements.



**Opioid Medicine Management Agreement**

Your care team has prescribed an opioid medicine to help with your medical condition. This form will provide you with information about your care plan and ways to safely use opioids. Please read it with care. If you understand and agree to the information on this form, sign your name on page 4.

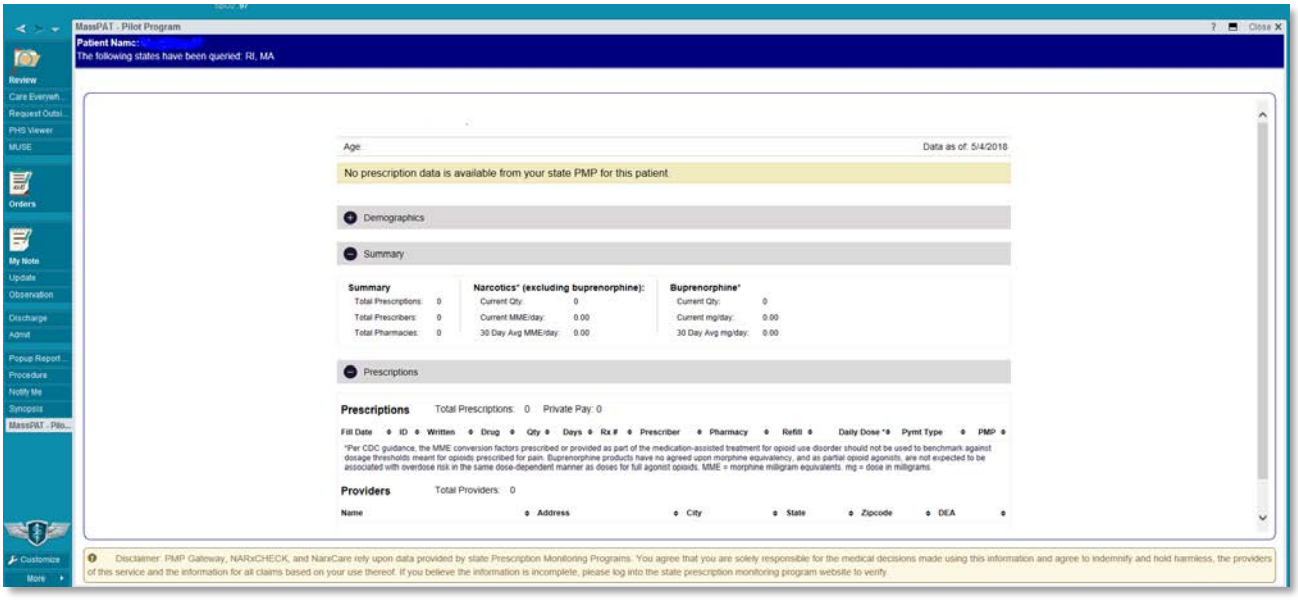
**Your Care Plan**

I understand that I need to follow my care plan to take my opioid medicine safely. My care plan ensures that I will receive the best possible care for my medical treatment.

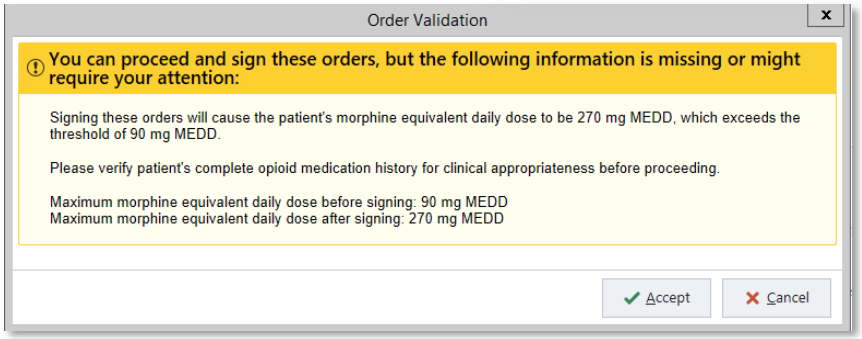
I understand that:

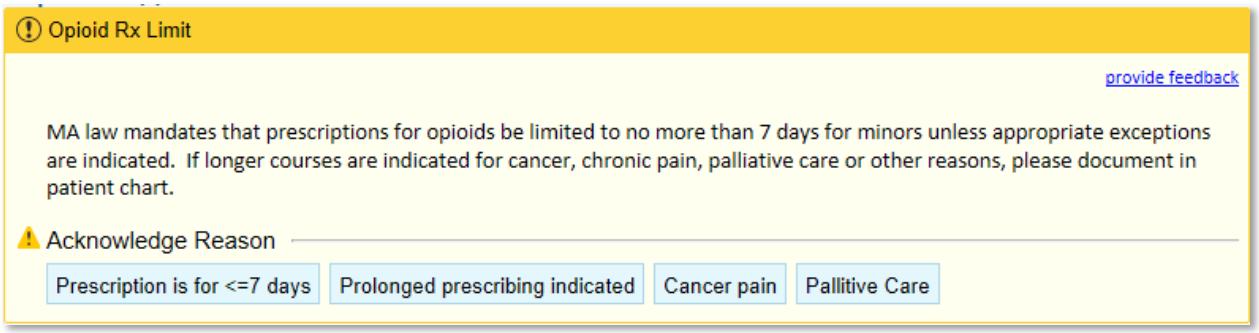
- My opioid medicines are being prescribed for the following condition: _____
- The goal of my treatment is:
- These opioid medicines are only one part of my treatment plan.
- I will **only** receive opioid medicines from my care team and no one else.
- If I receive opioid medicines from anyone else (such as after surgery, or from an emergency visit for a broken bone, etc.), I will let my care team know about this in person, in writing, or by phone **within the agreed upon timeframe** from my care team.
- I will only use my opioid medicines as directed by my care team.
  **I will not:**
  - Change the prescription in any way or increase the dose without talking to my care

We were the first system in Massachusetts to integrate our state's prescription drug monitoring program (MassPAT) into our electronic health record. This integration allows providers to do a single mouse click to access the data, which used to be a cumbersome process.



Other tools remind clinicians about safe prescribing practices, such as to check MassPAT before writing a prescription, to perform a toxicology test at least once a year, to have a clinic visit at least every four months, and to avoid prescribing more than 7 days of opioids to an opioid-naïve patient. Other tools remind providers to co-prescribe naloxone to patients on high dose opioids, for emergency department providers to refer patients to our Bridge Clinic, and for obstetricians to remind women who delivered to dispose of any prescribed opioids at the time of their follow-up visit.

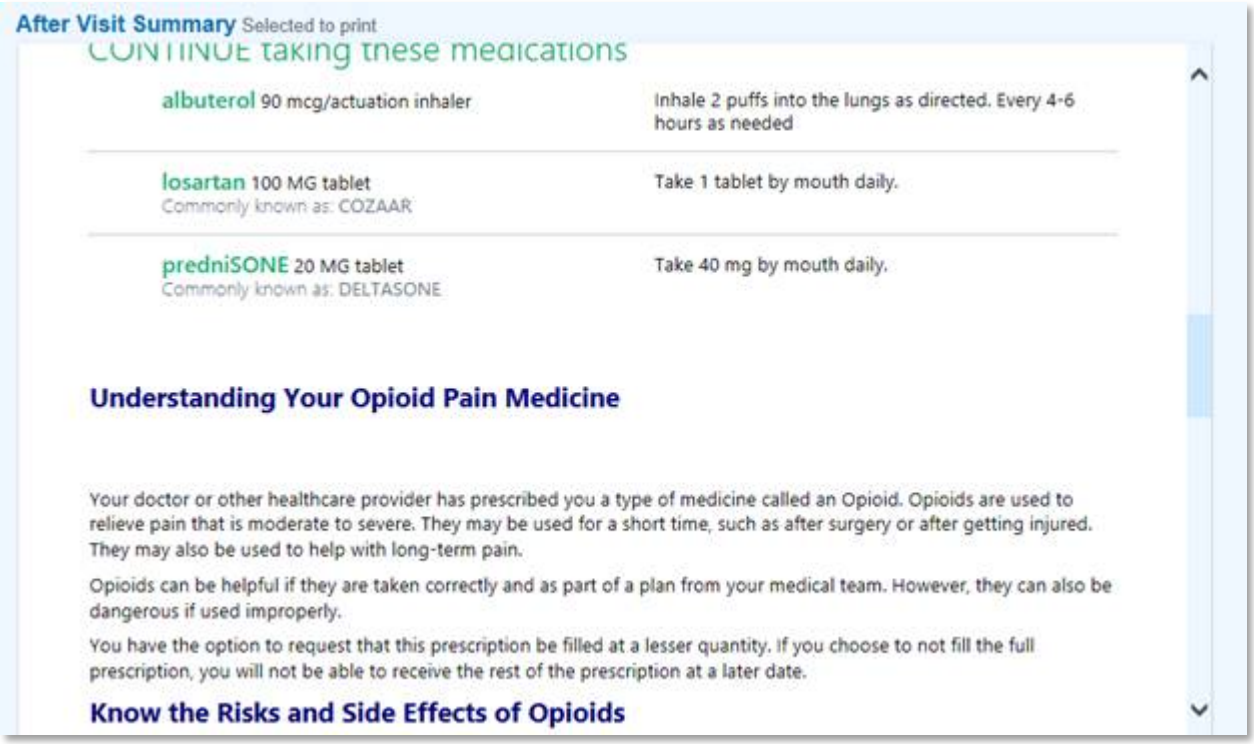




Also, we adopted electronic prescribing of controlled substances. Now, all prescribers can send opioid prescriptions electronically to a patient's pharmacy of choice instead of relying on paper prescriptions. This action allows refills to be sent without a patient needing to come to the clinic and may also reduce falsified prescriptions and diversion.

We have introduced several “dot phrases” which help clinicians accurately document opioid related care.

We have also created several guides for patients ranging from safe use of opioids (automatically provided if an opioid is provided) to harm reduction techniques for people who inject drugs.


After Visit Summary Selected to print

CONTINUE taking these medications

albuterol 90 mcg/actuation inhaler — Inhale 2 puffs into the lungs as directed. Every 4-6 hours as needed

losartan 100 MG tablet (Commonly known as: COZAAR) — Take 1 tablet by mouth daily.

predniSONE 20 MG tablet (Commonly known as: DELTASONE) — Take 40 mg by mouth daily.

**Understanding Your Opioid Pain Medicine**

Your doctor or other healthcare provider has prescribed you a type of medicine called an Opioid. Opioids are used to relieve pain that is moderate to severe. They may be used for a short time, such as after surgery or after getting injured. They may also be used to help with long-term pain.

Opioids can be helpful if they are taken correctly and as part of a plan from your medical team. However, they can also be dangerous if used improperly.

You have the option to request that this prescription be filled at a lesser quantity. If you choose to not fill the full prescription, you will not be able to receive the rest of the prescription at a later date.

**Know the Risks and Side Effects of Opioids**

# POPI: Program in Opioid and Pain Innovation

Even with all of the work done clinically, we know that at Brigham Health we are uniquely positioned to take a strategic systems approach to the opioid and pain problem and drive change in how we treat acute pain and chronic pain, use opioids, and treat addiction. We wish to apply Brigham's brainpower, clinical expertise, technology resources and research capabilities to create transformative solutions to the opioid epidemic.

| Fostering innovative interdisciplinary research | Enabling/promoting career development and education | Outreach – communicating and fundraising |
|---|---|---|
| • Create opportunities for collaboration<br>  ○ Functional working group<br>  ○ Events (workshops, poster sessions, retreats)<br>• Develop scientific projects<br>  ○ Support efforts for pilot grants/projects, collective projects, funding young investigators, seed grants - obtaining and administering, etc.<br>• Develop infrastructure/resources | ▪ Recognize excellence<br>  ○ Poster awards<br>  ○ Best paper awards<br>  ○ Travel awards<br>▪ Train/mentor<br>  ○ Mentoring programs<br>  ○ Training grants<br>  ○ Provide platforms for junior investigators to present research<br>▪ Seed grants | ▪ Communication<br>  ○ BWH website<br>  ○ Find a Researcher profiles<br>  ○ Symposium for external community<br>  ○ Reach out to clinicians and researchers<br>• Funding and fundraising<br>  ○ Work with development on funding activities<br>  ○ Seek other sources of external funding (ex interactions with industry) |

To this end, we have created the Brigham Program in Opioid and Pain Innovation (POPI) Program. The goal is to break down the silos traditionally found in research and encourage cross-departmental collaboration and innovation in the pain and opioid space. We are delighted that Gloria Brand, senior program manager, has joined us to organize this nascent initiative.

# Recovery Month

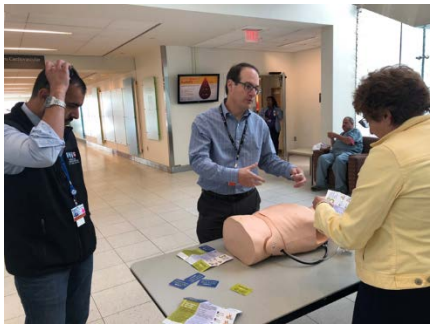

We are honored to celebrate National Recovery Month each September. This event, sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), increases awareness and understanding of mental and substance use disorders and celebrates those in recovery.

In 2019, we held a grand rounds panel discussing innovative solutions to the opioid epidemic, including Safe Injection Facilities and discharging patients who need long-term antibiotics with IV lines once they are stable on medication to also treat their opioid use disorder.



We host the project Resilient: Narratives of Hope from Boston's Opioid Crisis, a photojournalism project spearheaded by Harvard Medical School students to increase knowledge around stigma and recovery.

We host informational booths to inform patients and providers about recovery resources available to them, and to teach use of naloxone, the opioid overdose antidote.



We have hosted movie nights, bringing patients who shared stories of their own recovery and then screened the films relating to recovery.


Most importantly, we recognize that stigma is the frequently the largest barrier patients have to getting help for their addiction. We have created an anti-stigma pledge for all hospital staff to sign and keep.

**HOSPITAL** *without* STIGMA

***The words we use matter.***
***Together we can reduce stigma through language.***

As a member of the Brigham Health community, I believe the words I use in regards to **ALL** patients are of paramount importance. The language we use when referring to people, whether in the presence of patients and family members or privately among colleagues, speaks volumes. When we use the right language, we decrease the stigma that prevents individuals from receiving quality medical care. I pledge, beginning today, to recognize the power of words and raise awareness around language used. This is especially important for patients suffering from substance use disorders.

I pledge to treat all people with a substance use disorder with respect and integrity. I pledge to recognize a substance use disorder as a chronic medical condition, not as a weakness or moral failing. I pledge to be an advocate for treatment and recovery from this disease.

| Instead of using this stigmatizing language ... | Say this ... |
|---|---|
| ✕ Substance abuser or drug abuser<br>✕ Alcoholic<br>✕ Addict<br>✕ User<br>✕ Abuser<br>✕ Drunk<br>✕ Junkie | ✓ Person with a substance use disorder |
| ✕ Drug habit<br>✕ Abuse<br>✕ Problem | ✓ Substance use disorder or addiction<br>✓ Use, misuse<br>✓ Risky, unhealthy, or heavy use |
| ✕ Clean | ✓ Person in recovery<br>✓ Abstinent<br>✓ Not drinking or taking drugs |
| ✕ Substitution or replacement therapy<br>✕ Medication-Assisted Treatment<br>✕ Clean, dirty | ✓ Treatment or medication for addiction<br>✓ Medication for Addiction Treatment<br>✓ Positive, negative (toxicology screen results) |

# Discover Brigham

In the annual Discover Brigham program, in which community members are invited to learn about innovations in the hospital, B-CORE has been delighted to present the multiple times. In 2018, we highlighted our “No Wrong Door” approach, which means that anywhere a patient presents to the Brigham, we will find a way to help address their opioid use disorder. In 2019, we highlighted interventions in infectious disease for patients with opioid use disorder and work being done in our nursery for babies with neonatal opioid withdrawal syndrome.

NO WRONG DOOR

CUTTING EDGE OPIOID USE DISORDER TREATMENT AT BRIGHAM HEALTH

**4:20 – 4:50 PM | BORNSTEIN AMPHITHEATER**

The misuse of opioids is one of the most prevalent and serious public health problems in the United States right now [1]. Considering the damaging health trends associated with this epidemic, there is a critical need to have a conversation about how opioid addiction is currently treated and what type treatment options are available to patients.

**About The Panel**



Earlier this year, experts in the Department of Psychiatry at Brigham and Women's Hospital opened the Brigham Health Bridge Clinic, connecting patients who have substance abuse disorders with the long-term care they will need following discharge[2].

According to Scott Weiner, MD, MPH, there is *no wrong door;* anywhere you go at the Brigham there will be an option for finding treatment. There will be no question left unanswered or person turned away; someone will always be there to point you in the right direction. Please join our panel of experts who will discuss the treatment programs and specialized approaches they take in confronting opioid addiction.

1. https://www.samhsa.gov/data/
2. https://brighamhealthvitallines.org/2018/01/03/new-bridge-clinic-to-facilitate-continuity-of-care-for-substance-abuse-patients/

CHAIR

Scott Weiner, MD, MPH
Director, Brigham Comprehensive Opioid Response and Education (B-CORE) Program
Brigham and Women's Hospital
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PANELISTS

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MODERATOR

Maggie Penman

OPIOID AND PAIN INNOVATIONS AT BRIGHAM HEALTH

4:00 - 5:00 PM

SESSION ROOM -
MARSHALL A. WOLF CONFERENCE ROOM

OVERFLOW ROOM -
HALE VTC 020068 CONFERENCE ROOM

Extensive work is being done around the Brigham to address the opioid epidemic and safely treat patients experiencing pain. Learn about novel hospital-wide interventions, improving care of hospitalized patients with opioid use disorder, better ways to treat pain, and our impressive program to treat newborns born to mothers who use opioids in this dynamic and multi-disciplinary panel discussion.

CHAIR / PANELIST

SCOTT WEINER, MD, MPH
Director, Brigham Comprehensive Opioid Response and Education (B-CORE) Program, Department of Emergency Medicine, Brigham and Women's Hospital

MODERATOR

FELICE J. FREYER, BA
Healthcare Reporter, The Boston Globe

PANELISTS

BARBARA B. STABILE, BWN MSN
Obstetric Professional Development Manager, Center for Nursing Excellence (CNE), Brigham and Women's Hospital

KRISTIN SCHREIBER, MD, PHD
Attending Anesthesiologist, Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital
Assistant Professor, Harvard Medical School

JOJI SUZUKI, MD
Director, Division of Addiction Psychiatry, Department of Psychiatry, Division of Addiction Psychiatry, Brigham and Women's Hospital

# Boston/Cambridge Opioid Consortium

In 2019, Brigham Health joined a consortium of hospitals in Boston and Cambridge with the goal of resolving the opioid epidemic on a city-wide scale. The initiative, spearheaded by Dr. Betsy Nabel and Kate Walsh (from Boston Medical Center, has committed to several specific steps:

**All undersigned hospitals in Boston and Cambridge have agreed to:**

| | |
|---|---|
| **1. Care Provider Training** | |
| Hospitals see many people in need of substance use disorder care at critical times. Unfortunately, there are often too few addiction medicine experts available and many internal medicine providers and other specialists have limited knowledge of how to treat addiction. Most have not taken the training required to prescribe buprenorphine, a key medication, or any continuing education courses on treating addiction. These courses offer a key entry point for broader knowledge and understanding of the disease of addiction. To address this issue, we propose that all hospitals: | a. Commit to mandatory training for all hospital-based emergency physicians, hospitalists, obstetricians, psychiatrists, adolescent pediatricians, infectious disease specialists, primary care providers, and internal medicine residents who are not waiver trained. These trainings should last at least 1 hour and emphasize a) fundamentals of addiction; b) effective treatment of opioid use disorder, including utilization of medications, and c) addressing stigma. In order to facilitate participation, the trainings can take place as part of regularly scheduled Grand Rounds or other educational series or departmental meetings. Enduring web-based recordings will also be an option for training. |
| | b. Strongly encourage training for all non-hospital-based primary care providers, psychiatrists, as well as hospital and non-hospital-based OBs, pediatricians and infectious disease specialists, as well as NPs and PAs working in these areas. |
| | c. Commit to increase the number of the above listed providers who obtain their buprenorphine waiver by a) demonstrating strong institutional support through a communications campaign, hospital statement, or other method; and b) providing in-person waiver trainings sessions. |
| **2. Employee Support** | |
| In addition to being healthcare providers for the general public, Boston and Cambridge hospitals employ thousands of people, many of whom may need their own support with substance use. We propose that all hospitals commit to doing at least three of the following activities onsite, to encourage campus-wide discussion around substance use and increased uptake of needed health care support. Providing this support will impact thousands of employees, as well as their families and the broader community. | a. Free onsite naloxone training + subsidized access to naloxone, where possible. (Naloxone costs are plan-dependent.) |
| | b. Survey the organization about employee & family need for substance use disorder support |
| | c. Review existing SUD benefits |
| | d. Send a specific SUD benefits guide to all employees |
| | e. Create an SUD Employee Support Policy |
| | f. Develop a training for all managers regarding how to identify and support employees with substance use disorder needs |
| | g. Set up a family support group on site |
| | h. Hold a public event or town hall where people can tell their stories |
| | i. Send a letter from the CEO committing to SUD support and promoting a stigma-free workplace |
| | j. Share a pledge to encourage employees to use stigma-free language – i.e. "person with SUD" rather than "addict" |

Brigham Health is well-represented in this consortium, and we contributed to both the content of this commitment and the steps to meet it.

We also conducted an opioid grand rounds session, led by Dr. Claudia Rodriguez, covering the mandatory training. We are making this training available online to all providers on the HealthStream platform.

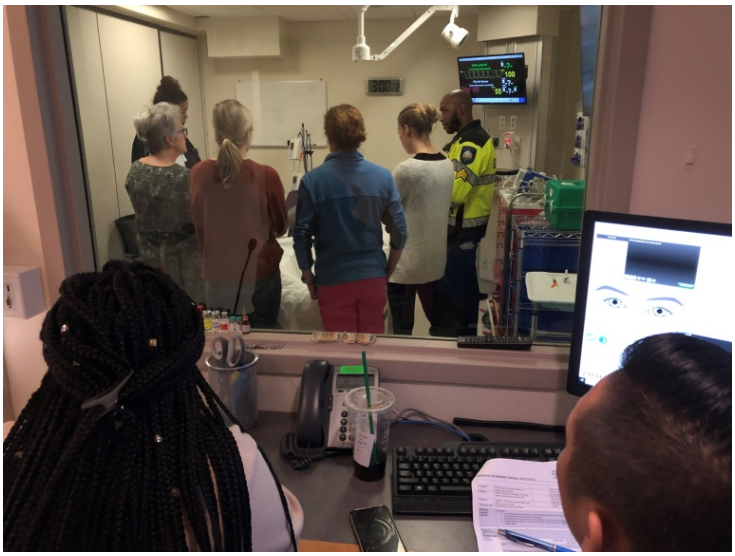
# The HRT Pathway: Improving Care for Cardiac Surgery Patients with Opioid Use Disorder

Historically, one of our most challenging patient populations have been those who are suffering from cardiac complications of injection drug use and require cardiac surgery, such as heart valve replacement. Imagine the scenario: a patient who is actively using drugs comes into the hospital, has an acutely painful procedure and then must be on IV antibiotics, sometimes for 6 weeks or longer. Without addressing the underlying addiction, relapse is an expected outcome.


At Brigham Health, we wish to change this paradigm. Treating an infected heart valve without addressing the underlying substance use disorder that led to the infection is akin to treating complications of diabetes but not actually providing insulin.

Several key stakeholders, including those in the Division of Cardiac Surgery, Nursing, the BWH Psychiatric Resource Nurse Service and many others have joined forces to create a new pathway – The Heart Recovery Treatment (HRT) pathway – to improve care by standardizing the approach we take to patients with opioid use disorder, and working to decrease stigma amongst our staff.

A key component of the initiative is the intensive training of all staff who care for these patients on the cardiac unit. The BWH Psychiatric Resource Nurse Service has organized a simulation training program at our STRATUS simulation center to allow role-playing and practice new techniques.



The program builds on successes we have had with starting patients with injection drug use-related infections on medication for opioid use disorder (like buprenorphine) in the hospital and allowing them to go home with a long-term IV line for their antibiotics. In the past, providers would not trust patients to go home with these lines for fear that they would inject drugs in them. However, we have discovered that patients who engage in treatment in our clinic and take a medication for their addiction (like buprenorphine) do very well. For our first 20 patients, we estimate saving over 500 days of inpatient or rehab stays by starting this program, which has been featured in national media.

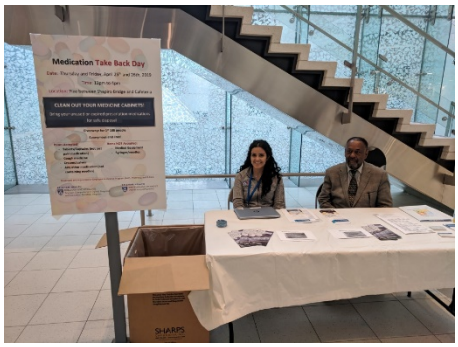
The Case For Sending Drug Users Home From The Hospital With Open IV Lines

January 09, 2020 By Martha Bebinger

Partners visiting nurse Brenda Mastricola tends to Arthur Jackson's foot during a visit at his home in Roxbury. His large toe has been amputated due to an infection. (Jesse Costa/WBUR)

# Pharmacy Interventions

The Brigham and Women's Pharmacy is deeply committed to improving opioid-related care. As part of national drug take-back day, we routinely host tables where staff and patients can discard unused or expired medications.





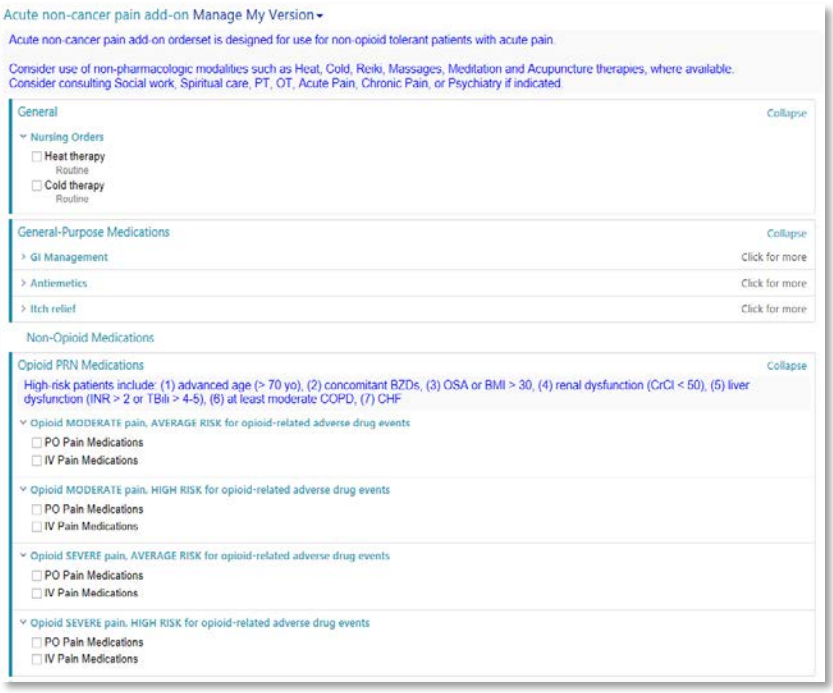
Patients and staff can also drop off these medications at any time at a bin in our pharmacies at Brigham and Women's Hospital and at the 850 Boylston Street location.

Pharmacists and pharmacy fellows are working closely with clinics that provide high-dose opioid prescriptions in order to ensure that safe practices are being followed and to assist in tapering down patients to safer doses when appropriate.


The pharmacy also stocks Narcan (naloxone), the opioid overdose antidote. This can be purchased by any individual without a prescription. For hospital employees who use their insurance, there is no co-pay. The pharmacies at Brigham and Women's Hospital and Brigham and Women's Faulkner Hospital also distribute this life-saving medication to individuals at high risk in both of our emergency departments. Of note, our police and security force also carry Narcan so that they can quickly reverse overdose victims discovered on the hospital campus before other help arrives.

Our pharmacists are also assisting with virtual case conferences held periodically to discuss and educate providers about safe opioid prescribing.

# The Brigham Inpatient Opioid Stewardship Initiative (BIOSI)




Although most efforts at opioid stewardship focus on outpatient prescriptions, at Brigham Health we also recognize that opioids used while a patient is hospitalized can then start a pathway to chronic use. As a first step, we created an inpatient acute non-cancer pain order set to standardize pain treatment and ensure that opioids are used only after non-opioid modalities are started, and to use opioids at safer doses depending on pain severity and patient factors.

As a next step, B-CORE proudly supports the Brigham Inpatient Stewardship Initiative (BIOSI), led by Dr. Agustina Saenz, Dr. Laura Smith and Patricia Aylward. The project acknowledges that about 50% of patients receiving opioids on the general medical service were opioid naïve prior to hospitalization. However, we know that hospitalized patients on opioid have longer lengths of stay and also have increased risk of complications and readmissions.

CRISP
INNOVATION TRANSFORMING CARE

The program's aggressive goal is to reduce inpatient opioid use by 25% on the general medicine service and to decrease average length of stay by 0.5 days for previously opioid-naïve patients receiving opioids as inpatients. The project is funded by a prestigious hospital B-CRISP award. An additional aim looking at the impact of the program on inequities (race, ethnicity and language) was funded by a Health Equity Innovation (HEI) Pilot Grant through the Department of Medicine Health Equity Committee.

# Philanthropy

Simply put, our work could not proceed without the help of our altruistic donors. The generosity of these individuals allows us to continue to be transformative in our care of patients with opioid use disorder. These are just two examples of work supported by donations.

## $1.25 Million Gift Aids Addiction Recovery

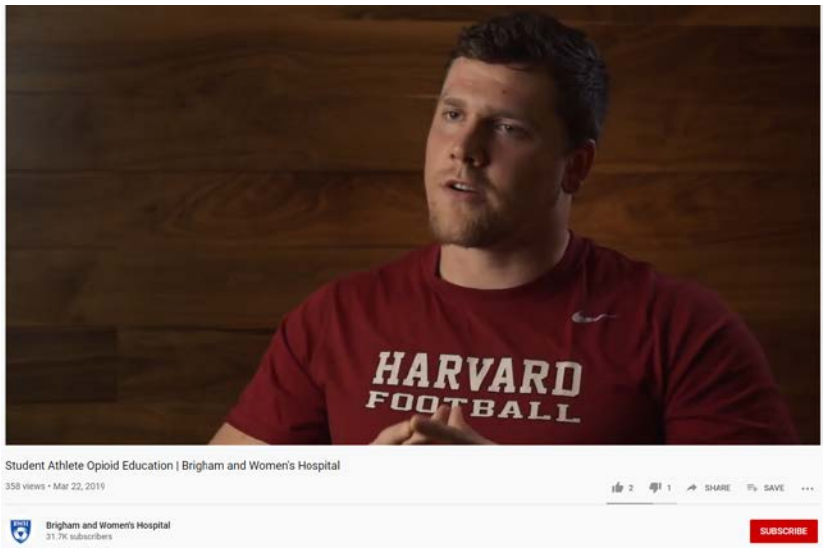
*Peter Palandjian and Eliza Dushku's gift is helping the Brigham Health Bridge Clinic develop best practices in substance abuse treatment, research, and training.*

A gift by Peter Palandjian and Eliza Dushku supports the operation of the Bridge Clinic and is helping with the creation of our new fellowship in Addiction, aimed to train the next generation of providers.

A $500,000 gift by the McGraw Family allowed the creation of our annual Opioid Innovator Awards competition. The grant, which is run as a "Shark Tank" encourages proposals from around the institution, who then must face a panel of "sharks" who critique the proposals and vote on their favorites.

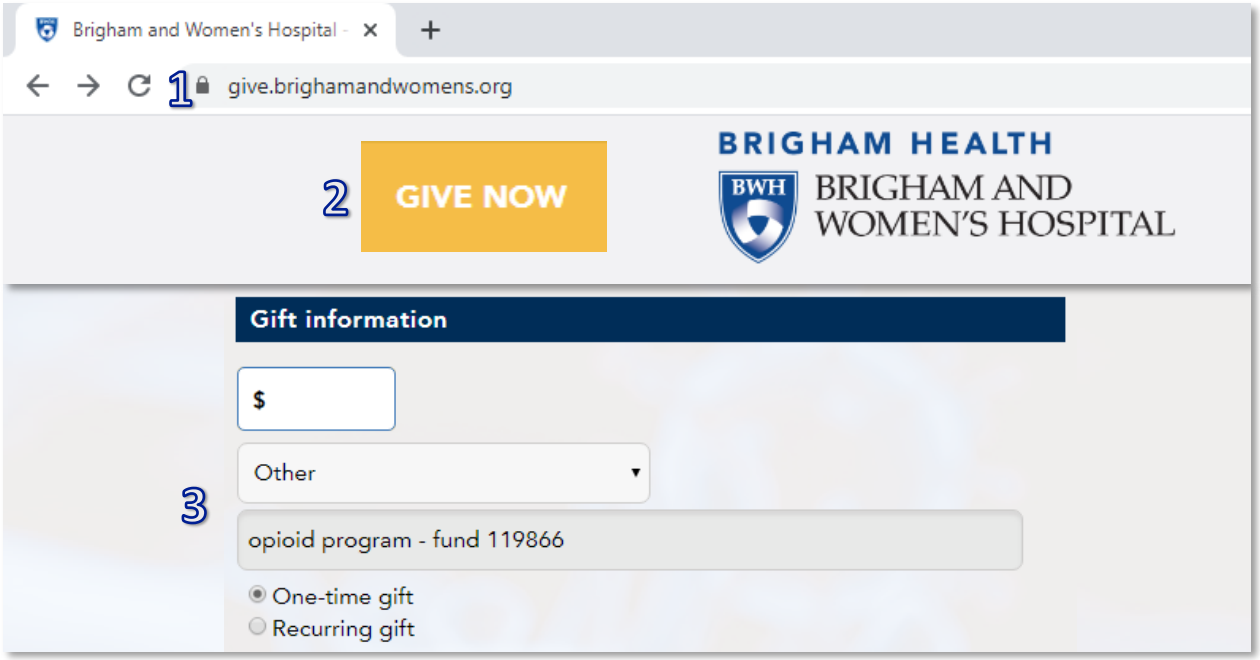
The inaugural grants were awarded to Dr. Athena Petrides for her project entitled: "DigiToxRx: Treating Pain is No Longer Painful" and to Dr. Joji Suzuki for his project entitled: "Pilot Study of Cannabidiol (CBD) for the Treatment of Opioid Use Disorder." We are particularly appreciative of Captain Robert "Robin" McGraw for his passionate support of the program.

We are also grateful for donations from the ADK Charities/Hanging with Ted Foundation. With these funds, we created an educational video for athletes who are at increased risk for exposure to opioids because of injuries. Support from these organizations has also supported our research endeavors, including an innovative study being conducted now at MGH seeing if a forehead brain wave monitor can diagnose opioid intoxication.




The video is available at: https://www.youtube.com/watch?v=pshDbEjKPBU

To donate:



# Research Excellence

Our clinicians remain on the cutting edge of investigating pain and opioids. These are just a few examples of the multiple recent publications coming out of Brigham Health.

**A Health System–Wide Initiative to Decrease Opioid-Related Morbidity and Mortality**

*Scott G. Weiner, MD, MPH; Christin N. Price, MD; Alev J. Atalay, MD; Elizabeth M. Harry, MD; Erika A. Pabo, MD, MBA; Rajesh Patel, MD, MPH; Joji Suzuki, MD; Shelly Anderson, MPM; Stanley W. Ashley, MD; Allen Kachalia, MD, JD*

**Emergency Department Clinicians' Attitudes Toward Opioid Use Disorder and Emergency Department-initiated Buprenorphine Treatment: A Mixed-Methods Study**

Dana D. Im, MD, MPP*† · Anita Chary, MD, PhD*† · Anna L. Condella, MD*† · Hernan Vongsachang, MD, MPH‡ · Lucas C. Carlson, MD, MPH*† · Lara Vogel, MD, MBA*† · Alister Martin, MD, MPP*† · Nathan Kunzler, MD*† · Scott G. Weiner, MD, MPH* · Margaret Samuels-Kalow, MD, MSHP*

*Massachusetts General Hospital, Department of Emergency Medicine, Boston, Massachusetts
†Brigham and Women's Hospital, Department of Emergency Medicine, Boston, Massachusetts
‡University of Southern California, Keck School of Medicine, Department of Emergency Medicine, Los Angeles, California

**The opioid epidemic and how anesthesiologists can help**

Shafik Boyaji, MD[a], Erin W. Pukenas, MD[b], Richard D. Urman, MD, MBA[a,c]

**Get Waivered: A Resident-Driven Campaign to Address the Opioid Overdose Crisis**

Alister Martin, MD, MPP; Nathan Kunzler, MD; Jun Nakagawa, MPH; Benjamin Lee, MPP; Sarah Wakeman, MD; Scott Weiner, MD, MPH; Ali S. Raja, MD, MPH*

**Motivational Interviewing on an Addiction Consult Service: Pearls, Perils, and Educational Opportunities**

David E. Marcovitz[1] · S. Alex Sidelnik[2] · Mariah P Smith[1] · Joji Suzuki[3]

**One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose**

Scott G. Weiner, MD, MPH*; Olesya Baker, PhD; Dana Bernson, MPH; Jeremiah D. Schuur, MD, MHS

**Long-term Outcomes of Injection Drug-related Infective Endocarditis Among People Who Inject Drugs**

*Joji Suzuki, MD, Jennifer A. Johnson, MD, Mary W. Montgomery, MD, Margaret C. Hayden, MPhil, Christin N. Price, MD, Daniel A. Solomon, MD, Jane M. Liebschutz, MD, MPH, Jeffrey L. Schnipper, MD, MPH, and Roger D. Weiss, MD*

**Impact of Medications for Opioid Use Disorder on Discharge Against Medical Advice Among People Who Inject Drugs Hospitalized for Infective Endocarditis**

Joji Suzuki, MD[1,2] Diana Robinson, MD,[1,2] Matthew Mosquera, MD,[1,2] Daniel A. Solomon, MD,[2,3] Mary W. Montgomery, MD,[2,3] Christin D. Price, MD,[2,4] Jennifer A. Johnson, MD,[2,3] Bianca Martin, BA,[1] Jane W. Liebschutz, MD, MPH,[5] Jeffrey L. Schnipper, MD, MPH,[2,6] Roger D. Weiss, MD[2,7]

**Techniques to Shorten a Screening Tool for Emergency Department Patients**

Scott G. Weiner, MD, MPH* · Jason A. Hoppe, DO* · Matthew D. Finkelman, PhD‡

*Brigham and Women's Hospital, Department of Emergency Medicine, Boston, Massachusetts
†University of Colorado Denver School of Medicine, Department of Emergency Medicine, Aurora, Colorado
‡Tufts University School of Dental Medicine, Boston, Massachusetts

**The Burden of Opioid-Related Adverse Drug Events on Hospitalized Previously Opioid-Free Surgical Patients**

*Richard D. Urman, MD, MBA,*†‡ Diane L. Seger, RPH,§|| Julie M. Fiskio, BS,§|| Bridget A. Neville, MPH,§ Elizabeth M. Harry, MD,‡§ Scott G. Weiner, MD, MPH,‡¶ Belinda Lovelace, PharmD,MS,** Randi Fain, MD,†† Jessica Cirillo, MHS,** and Jeffrey L. Schnipper, MD, MPH‡§*

**Advanced visualizations to interpret prescription drug monitoring program information**

Scott G. Weiner[a,*], Karen M. Sherritt[b], Zoe Tseng[c], Jaya Tripathi[d]

**Implementation of liposomal bupivacaine transversus abdominis plane blocks into the colorectal enhanced recovery after surgery protocol: a natural experiment**

Adam C. Fields[1,2] · Scott G. Weiner[3] · Luisa J Maldonado[1] · Paul M. Cavallaro[4] · Nelya Melnitchouk[1] · Joel Goldberg[1] · Matthias F. Stopfkuchen-Evans[5] · Olesya Baker[3] · Liliana G. Bordeianou[4] · Ronald Bleday[1]

**Effects of Rescheduling Hydrocodone on Opioid Prescribing in Ohio**

Yingna Liu, MBA,* Olesya Baker, PhD,† Jeremiah D. Schuur, MD, MHS,‡ and Scott G. Weiner, MD, MPH†

**Association between fentanyl vial size and dose given: an interrupted time series analysis of intraoperative opioid administration**

Alexander Stone*, Kara Fields, James Rathmell, Scott Weiner, Michael Cotugno and Marc Pimentel

**The Burden of Opioid-Related Adverse Drug Events on Hospitalized Previously Opioid-Free Surgical Patients**

*Richard D. Urman, MD, MBA,*†‡ Diane L. Seger, RPH,§|| Julie M. Fiskio, BS,§|| Bridget A. Neville, MPH,§ Elizabeth M. Harry, MD,‡§ Scott G. Weiner, MD, MPH,‡¶ Belinda Lovelace, PharmD,MS,** Randi Fain, MD,†† Jessica Cirillo, MHS,** and Jeffrey L. Schnipper, MD, MPH‡§*



BRIGHAM AND WOMEN'S
Brigham Comprehensive Opioid Response and Education (B-CORE) Program

# Looking to the Future

Much work has been done, but there is still so much more to do.

Upcoming initiatives:


1) Joining forces with the Gillian Reny Stepping Strong Center for Trauma Innovation Injury Prevention Program to create a hospital-wide injury prevention initiative that has the opioid interventions as one of its key arms.

2) A system-wide roll-out of universal screening for substance use disorder by nurses at the time of patient admission to the hospital. This task entails training thousands of clinicians about stigma, screening and treatment of withdrawal, and the work is underway.

3) Addition of new metrics to the Partners opioid measurement tool, focusing on patients with chronic pain and patients with opioid use disorder.

4) Enhanced feedback to providers who care for patients on chronic opioids, including more guidance, assistance with tapers when appropriate, and improvements in our opioid registry tool that allows providers to quickly determine if they are meeting best practices.

# For More Information:

Visit our website at **bcore.brighamandwomens.org**

or

Email: **sweiner@bwh.harvard.edu**