Canary in the Coal Mine: 
The Role of the Emergency Department in the Opioid Epidemic

Scott G. Weiner, MD, MPH
Assistant Professor, Harvard Medical School
Department of EM, Brigham and Women's Hospital

Disclosures

• Treasurer, Massachusetts College of Emergency Physicians
• No financial COI
Tragedy of the Commons
Tragedy of the Commons
The Year was 2005

- 6 years before the PDMP was available
- 9 years before Gov. Patrick declares a public health emergency
- 10 years before MHA and MMS create prescribing guidelines
- 10 years before Gov. Baker convenes opioid task force

Canary in the Coal Mine
Objectives

- Define how the ED is on the leading edge to both detect opioid-related problems and create its solutions
- But first:
  - Describe the epidemic
  - Discuss prescribing and “burden vs. cause”
- And then: Guidelines, SBIRT, Suboxone and Naloxone

Accidental Death in the US
Drug Overdose Deaths by Major Drug Type, United States, 1999–2010

Rates of opioid overdose deaths, sales and treatment admissions increased in parallel (US, 1999-2010)


CDC/National Vital Statistics System, DEA ARCOS System, SAMHSA’s TEDS System
Enough for a 5 mg dose of Vicodin to each American adult every 6 hours for 1 month...
International Narcotics Control Board 2013

Figure 13. Morphine: distribution of consumption, 2012

- United States: 55.3%
- United States and Japan: 9.7%
- Europe and New Zealand: 8.2%
- Other countries: 81.1%

Note: Percentages in parentheses refer to share of the world population (i.e., total population of all reporting countries).

Opioid-Related Deaths, Unintentional/Undetermined Massachusetts: 2000-2014

Number of deaths

<table>
<thead>
<tr>
<th>Year</th>
<th>Opioid</th>
<th>Heroin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>338</td>
<td>197</td>
</tr>
<tr>
<td>2001</td>
<td>355</td>
<td>203</td>
</tr>
<tr>
<td>2002</td>
<td>387</td>
<td>247</td>
</tr>
<tr>
<td>2003</td>
<td>289</td>
<td>304</td>
</tr>
<tr>
<td>2004</td>
<td>253</td>
<td>324</td>
</tr>
<tr>
<td>2005</td>
<td>237</td>
<td>312</td>
</tr>
<tr>
<td>2006</td>
<td>221</td>
<td>309</td>
</tr>
<tr>
<td>2007</td>
<td>220</td>
<td>300</td>
</tr>
<tr>
<td>2008</td>
<td>209</td>
<td>289</td>
</tr>
<tr>
<td>2009</td>
<td>229</td>
<td>299</td>
</tr>
<tr>
<td>2010</td>
<td>282</td>
<td>329</td>
</tr>
<tr>
<td>2011</td>
<td>312</td>
<td>350</td>
</tr>
<tr>
<td>2012</td>
<td>388</td>
<td>423</td>
</tr>
<tr>
<td>2013</td>
<td>467</td>
<td>508</td>
</tr>
<tr>
<td>2014</td>
<td>500</td>
<td>538</td>
</tr>
</tbody>
</table>

Recommendations of the Opioid Working Group
For every 1 opioid overdose death in 2010 there were...

- 15 abuse treatment admissions
- 26 emergency room visits
- 115 who abuse/are dependent
- 733 nonmedical users

$4,350,000 in healthcare-related costs

www.CDC.gov

What is the Role of the ED?
We conclude that ED pain intensity is high, analgesics are underutilized, and delays to treatment are common.

Despite efforts to improve pain management practice, oligoanalgesia remains a problem for emergency medicine.
Mazer-Amirshahi – Academic Emergency Medicine 2014; 21:236-243

- NHAMCS - Between 2001-2010:
  - Non-opioids 26.2% to 27.3%
  - Painful conditions 47.1% to 51.1%
  - Opioid use increased from 20.8% to 31.0% of all visits
  - Use of schedule II 7.6% to 14.5%

Menchine, et al

- ACEP Research Forum 2014
- Medical Expenditure Panel Survey
- Compared with office settings, EDs had 17% less MMEs
- Only 0.3% ED Rx were for >100 MME per day vs. 2.6% in office setting
Menchine, et al

• “Given the very low rate of high-dose prescribing from the ED, policy efforts to reduce risky opioid prescribing should not focus on ED settings.”

POSED Study

• 19 Hospitals, national sample
• 12% of all adult patient visits result in an opioid prescription
• Vast majority were oxycodone and hydrocodone, immediate release, 5 mg
• Mean number of pills was 17/prescription
Some Math

- 136 million ED visits per year
- 12% discharged with 17 pills for oxy/hydrocodone 5
- 1,387,200 grams of oxy/hydrocodone from ED at discharge
- In 2010, US consumed 38,000,000 grams of hydrocodone and 92,500,000 grams of oxycodone
- ED discharge = 1.5% of all US opioids

Attack of the Guidelines!
An Act relative to 72 hour emergency prescribing.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

Chapter 94C of the General Laws is hereby amended by adding the following section:

Section 50. A physician practicing in an emergency room shall not be permitted to provide to a patient seeking emergency care more than 72 hours worth of a controlled substance as defined by this chapter.
Burden of Unintentional Opioid-Related Overdoses
Massachusetts, 2013

In addition to 978 opioid overdose deaths, there were more than 2,000 hospital stays and more than 4,500 emergency department visits for non-fatal overdoses in 2013.

Yokell MA. Presentation of Prescription and Nonprescription Opioid Overdoses to US Emergency Departments. JAMA Intern Med. 2014 Dec 1;174(12):2034-7

Table 2. Charges for Admitted and Nonadmitted Patients by Opioid Type*

<table>
<thead>
<tr>
<th></th>
<th>All Overdoses</th>
<th>Prescription Drug</th>
<th>Methadone</th>
<th>Heroin</th>
<th>Unspecified Opioid or Multiple Types of Opioid</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of ED visits</td>
<td>130,972</td>
<td>80,095</td>
<td>27,114</td>
<td>21,965</td>
<td>21,965</td>
</tr>
<tr>
<td>No. of ED visits resulting in hospitalization*</td>
<td>68,744</td>
<td>42,622</td>
<td>8,187</td>
<td>5,263</td>
<td>12,637</td>
</tr>
<tr>
<td>Mean charges for ED visit for nonadmitted patients, $</td>
<td>310</td>
<td>3640</td>
<td>3652</td>
<td>2421</td>
<td>4121</td>
</tr>
<tr>
<td>Total ED charges for nonadmitted patients, $</td>
<td>234,542,314</td>
<td>137,843,391</td>
<td>44,700,201</td>
<td>42,898,617</td>
<td>39,700,115</td>
</tr>
<tr>
<td>Mean length of inpatient stay, d</td>
<td>3.8</td>
<td>3.8</td>
<td>4.0</td>
<td>3.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Total No. of hospital days</td>
<td>262,074</td>
<td>161,670</td>
<td>33,177</td>
<td>18,352</td>
<td>48,927</td>
</tr>
<tr>
<td>Mean charges of inpatient stay, $</td>
<td>29,807</td>
<td>29,497</td>
<td>32,647</td>
<td>28,255</td>
<td>29,660</td>
</tr>
<tr>
<td>Total inpatient charges (includes ED charges of admitted patients), $</td>
<td>2,048,368,264</td>
<td>1,255,625,508</td>
<td>266,551,887</td>
<td>150,758,788</td>
<td>175,432,081</td>
</tr>
</tbody>
</table>
However…
“Whenever I wonder whether I should or shouldn’t be giving a dose of pain medication, I always remember this: I’ve never created an addict by giving one shot of pain meds, and I’ve never cured an addict by withholding it. These are complex issues and I can’t always sort them out in the emergency department.”
Objective: Emergency departments (EDs) routinely provide care for patients seeking treatment for painful conditions; however, they are also targeted by people seeking opioid analgesics for non-medical use. This study determined the prevalence of potential ED opioid misuse and inappropriate prescribing by ED providers in a large, community health system.

Research Design and Methods: This was a cross-sectional study of ED enrollees aged 18 and older who had at least one opioid prescription. We identified potentially inappropriate use if the first opioid prescription was overlapping by one week or more; opioid-refractory conditions; high daily doses (≥20 mg morphine equivalents); long-acting extended-release (ER) opioids for acute pain; and overlapping LA/ER opioids. Analyses were stratified by sex.

Results: We identified 400,288 enrollees who received at least one ED opioid prescription. At least one indicator applied to 10.3% of enrollees: 7.7% had high daily doses; 2.0% had opioid overlap; 1.0% had opioid-benzodiazepine overlap. Among LA/ER opioid prescriptions, 21.7% were for acute pain, and 14.6% were overlapping. Females were more likely to have at least one indicator.

Conclusion: ED prescribing of opioids is suboptimal. The percentage of potentially inappropriate opioid prescriptions may be lower than expected; however, a substantial proportion of patients presenting to EDs were prescribed opioids inappropriately.

Key Words: Opioid analgesics, ED prescribing, opioid misuse, benzodiazepines, analgesic adverse events, EDs, pain management

In some instances, the prescribing of opioid analgesics in EDs might not be optimal in terms of minimizing the risk of drug misuse, while reducing the risk of opioid prescribing in EDs to treat patients with pain while reducing the risk of nonmedical use.

Opioid Prescribing in Emergency Departments: The Prevalence of Potentially Inappropriate Prescribing and Misuse
Joseph Logan, PhD, MHS, Ying Liu, PhD, Leonard Paulozzi, MD, MPH, Kun Zhang, MS, and Christopher Jones, PharmD, MPH

Canary in the Coal Mine:  
The Role of the Emergency Department in the Opioid Epidemic
Own It

• Be the experts at opioid prescribing
• Use screening tools
• Counsel on risks of opioids
• Use guidelines
• Set the example for other specialities
• Be the safety net
MHA Guidelines

- Hospitals, in conjunction with ED personnel, should develop a process to screen for substance misuse.
- When possible, consult the PMP before writing an opioid prescription.
- Hospitals should develop a process to share the ED visit history of patients with other providers and hospitals that are treating the patients in the Emergency Department by using a health information exchange system.
MHA Guidelines

• Hospitals should develop a process to coordinate the care of patients who frequently visit EDs.
• For acute exacerbations of chronic pain, the ED provider should notify the patient’s primary opioid prescriber or PCP of the visit and the medication prescribed.

MHA Guidelines

• ED providers should not provide prescriptions for controlled substances that were lost, destroyed, or stolen (and no methadone unless confirmed)
• Unless otherwise clinically indicated, ED providers should not prescribe long-acting or controlled-release opioids.
MHA Guidelines

• When opioid medications are prescribed, counsel:
  – to store the medications securely, not share them with others, and dispose of them properly when their pain has resolved
  – to avoid using the medications for non-medical purposes
  – to avoid using opioids and concomitant sedating substances due to the risk of overdose.

• No more than a short course and minimal amount of opioid analgesics for serious acute pain, lasting no more than five days.

Scott’s Guidelines

• Just say no (unless really, really, really needed)
• Acetaminophen 1 gram q6
• Ibuprofen 400-600 mg q6
• The only pain level of 0 is death
• If you do give, 3 days and flush (or properly dispose)

Adapted from Reuben Strayer, SMACCUS 2015
Alternatives to Opioids

- Local/regional anesthesia
- Non-opioids:
  - Acetaminophen + ibuprofen
  - Droperidol, ketamine, dexmedetomidine, propofol
  - Anticonvulsants, gabapentin
- RICE, heat, weight loss, yoga, acupuncture, TENS

Adapted from Reuben Strayer, SMACCUS 2015
ED Screening

- SOAPP-R on an Android Tablet...
ED Screening

- 93 patients approached, 82 patients consented (88%)
- Total SOAPP-R score: Mean 16.0 (95% CI 13.2-18.8), median 12.5
- 33% scored 18 or higher

![Graphs showing scatter plots]

ED Screening

- Time to completion of SOAPP-R:
  - 164.0 (95% CI 147.7-180.4) seconds = 2 min 44 sec
- How difficult:
  - 93% “very easy”
  - 1% “somewhat easy”
  - 5% “neutral”
  - 1% “somewhat difficult”
ED SBIRT

By Steven L. Bernstein and Gail D’Onofrio

A Promising Approach For Emergency Departments To Care For Patients With Substance Use And Behavioral Disorders

ABSTRACT Millions of patients visit US emergency departments (EDs) each year because of substance use and behavioral disorders. Caring for these people is daunting, given the high patient volumes and increasing acuity of illness that EDs are experiencing. The nation’s primary care system has limited capacity to treat these individuals, who are often uninsured, poor, and sick. A growing body of evidence suggests that screening, providing a brief intervention, and referring these patients to treatment—an approach known as SBIRT—can be effective in the ED. Typically requiring just five to ten minutes, SBIRT incorporates principles of motivational interviewing, an evidence-based counseling technique that uses empathy, positive framing, reflective listening, and gentle education to encourage people to change risky behavior. This article describes what is known about the clinical and cost-effectiveness of SBIRT when applied to ED patients with substance use and behavioral disorders. The article recommends adopting SBIRT broadly to help EDs become a coordinated part of the health care system, offering opportunities to improve the health of millions of Americans.

Project ASSERT: SBIRT in Emergency Care

Project ASSERT (Assessment, Brief Intervention, And Referral to Treatment) is a national effort designed to improve the care of patients with substance use disorders and behavioral health problems. The project is aimed at emergency departments, where patients are typically seen in a high-stress environment. Project ASSERT aims to improve the identification and treatment of these patients by providing education, training, and resources to emergency department staff.

Project ASSERT workshops are typically held on weekends and last from 8:00 AM to 4:30 PM. Participants learn about the principles of SBIRT and how to implement it in their own institutions. The workshops are offered free of charge, and all interested partners are welcome to attend.

Project ASSERT can be contacted by phone at 012-454-3345 or by email at projectsASSERT@bu.edu.
Opioid Education and Nasal Naloxone Rescue Kits in the Emergency Department

Katherine Elms, MD
Alexander V. Wolley, MD, MS
Evan T. K. Langlois, MPH
Patrick W. Whiteley, MD
Kavita P. Subramanian, MD
Julie Grennell
Edward Benedetto, MD

Introduction: Emergency departments (EDs) may be high yield venues to address opioid deaths. With education on both overdose prevention and appropriate actions in a witnessed overdose. In addition, EDs have the potential to engage patients with naloxone rescue kits in part of their effort. We evaluated the feasibility of an ED-based overdose prevention program and described the overdose risk knowledge, opioid use, overdoses, and overdose recovery among participants who received overdose education and naloxone rescue kits (DEN) and participants who received overdose education only (OE).

Methods: Program participants were surveyed by telephone after their ED visit about their substance use, overdose risk knowledge, history of witnessed and personal overdoses, and actions in a witnessed overdose including use of naloxone.

Results: A total of 112 patients received CE or OEs between January 1, 2011 and February 28, 2013. Among those, 51 (46%) completed the survey; 37 (73%) of those received a naloxone kit, and 14 (27%) received CE only. Over 30-day period after being served a kit was reported by 52% (CI 37% to 66%) and 35% of participants who received an overdose education and naloxone kit had a positive test result for naloxone, which led to the participant being treated for overdose. The study did not detect statistically significant differences between OEs and CE groups in the primary outcome. Additionally, a trend toward a lower rate of positive test result for naloxone was observed among participants who received a kit.

Conclusion: This is the first study to demonstrate the feasibility of ED-based opioid overdose prevention education and naloxone rescue kit distribution to trained clinicians, patients, and their social network. The program reached a high-risk population that commonly witnessed overdoses and that could benefit from naloxone, when available, to rescue others. While the study was retrospective with a low response rate, it provided preliminary data for target, perspectives studies of ED-based overdose prevention programs.

Original Investigation

Emergency Department-Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence
A Randomized Clinical Trial

Gail O'Donohoe, MD, MS; Patrick G. O'Connor, MD, MPH; Michael Y. Patalan, PhD; Mark C. Chawarski, PhD; Susan W. Buish, PhD; Patricia H. Driscoll, MD; Steven L. Bernstein, MD; David A. Follin, MD

Importance: Opioid-dependent patients often use the emergency department (ED) for medical care.

Objective: To test the efficacy of 3 interventions for opioid dependence: (1) screening and referral to treatment (referral); (2) screening, brief intervention, and facilitated referral to community-based treatment services (brief intervention); and (3) screening, brief intervention, ED-initiated treatment with buprenorphine/naloxone, and referral to primary care for 10-week follow-up (buprenorphine). Design, Setting, and Participants: A randomized clinical trial involving 329 opioid-dependent patients who were treated at an teaching hospital ED from April 7, 2009, through June 26, 2011.

Interventions: After screening, 104 patients were randomized to the referral group, 111 to the brief intervention group, and 114 to the buprenorphine treatment group.

Main Outcomes and Measures: Enrollment in and receiving addiction treatment 30 days after randomization was the primary outcome. Self-reported days of illicit opioid use, urine testing for illicit opioids, human immune deficiency virus (HIV) risk, and use of addiction treatment services were the secondary outcomes.
ED Suboxone

- Mini-International Neuropsychiatric Interview (3 or higher) + Positive Utox
- Referral Group
  - Handout
- Brief Intervention Group
  - 10-15 min brief negotiation interview
  - Active help getting into a program
- Buprenorphine Group
  - The above + buprenorphine (up to 72 hrs)

ED Suboxone

- At 30 days:
  - 78% buprenorphine patients vs.
  - 37% referral patients vs.
  - 45% BNI patients
- Engaged in addiction treatment
- Reduced self-reported illicit opioid use
- Reduction of use of inpatient treatment services
Own It

MA Online PMP: Highest Quartile Physicians by Specialties

<table>
<thead>
<tr>
<th>Specialties of MDs</th>
<th>2011 N (%) total n=146</th>
<th>2012 N (%) total n=349</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medicine</td>
<td>86 (59.7)</td>
<td>168 (48.3)</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>28 (19.4)</td>
<td>75 (21.6)</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>13 (9.0)</td>
<td>38 (10.9)</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>8 (5.6)</td>
<td>26 (7.5)</td>
</tr>
<tr>
<td>Others</td>
<td>9 (6.2)</td>
<td>41 (11.7)</td>
</tr>
<tr>
<td>Missing</td>
<td>2 (1.4)</td>
<td>1 (0.2)</td>
</tr>
</tbody>
</table>
Finding 4: Opioid medications must be safely managed by prescribers, pharmacists, and patients.

Recommendations of the Opioid Working Group

Massachusetts Doctors Discuss the Risks of Prescription Painkillers with Patients Less Than Doctors in Other Parts of the Country

In a 2015 survey, individuals who, in the past 2 years, had taken a strong prescription painkiller such as Percocet, OxyContin, or Vicodin that was prescribed by a doctor for more than a few days, were asked the following question:

"Before or while you were taking these strong prescription painkillers, did you and your doctor talk about the risk of prescription painkiller addiction, or haven’t you talked about that?"

Only 36% of Massachusetts residents said "yes", compared to 61% nationally.

Finding 4: Opioid medications must be safely managed by prescribers, pharmacists, and patients.

Recommendations of the Opioid Working Group
On the (f)utility of pain

• Scott Stonington, BWH
• Lancet 4/11/2015

• I no longer ask “Is this patient in pain?” Instead, I ask “How do I relieve this person’s suffering?”

Questions and Discussion

• sweiner@bwh.harvard.edu
OPIOID ADDICTION: Daily overdoses. Weekly deaths.

Ludi Jagminas, MD, FACEP
Chief of Emergency Medicine
Beth Israel Deaconess Hospital-Plymouth
Harvard Medical School Faculty Physician

OPIOIDS AND THEIR ORIGIN

• Origins date back to ancient Egypt with opium used to treat internal diseases

• Opium was used widely in Asia as a narcotic

• In the 1800s Morphine and Codeine were developed from Opium

• In 1874, Heroin was created from morphine and produced by Bayer Pharmaceuticals

• 19th Century medicine used opioids to relieve pain
WHY THE EPIDEMIC TODAY?

• Heroin is glamorized in Hollywood and is seen a “chic”.

• Celebrities continue to use and continue to die

• It’s cheap, widely-available, and highly-addictive.

Heroin use in the U.S.

Heroin use is growing as the addictive drug becomes cheaper and easier to buy all over the country. A look at the trend in use among those ages 12-49, in thousands:

- Number of people who in the past year had:
  - 620,000
  - 369,000
  - 178,000

At risk of starting to use:
- Study of 155,000 people ages 12-49
  - 37% ages 12-25
  - 63% White*
  - 34% Income $20,000-49,000
  - 85% Live in metro areas
  - 36% Live in the South

*Non-Hispanic

Source: Substance Abuse and Mental Health Services Administration
Graphic: Judy Treble
© 2014 MCT
Prescriptions

Global Perspective

- United States uses 99% of the world’s supply of hydrocodone and 83% of the world’s oxycodone.
- Gram for gram, U.S. consume more narcotic medication than any other nation worldwide.
- The International Narcotics Board reports that U.S. demand for hydrocodone is about 27.4 million grams annually compared to 3,237 grams for Britain, France, Germany, and Italy combined.
- 316 million vs. 280 million populations
EARLY ADDICTION

Prescription Painkillers

Prescription painkiller abuse is one of the most difficult addictions to treat.

40 U.S. DEATHS per day due to prescription painkiller abuse according to the CDC.

1 in 20 people in U.S. (12 and over) admit to non-medical use of prescription painkillers in the past year.

For every 1 death there are...

- 10 treatment admissions for abuse
- 32 emergency dept visits for misuse or abuse
- 130 people who abuse or are dependent
- 825 nonmedical users

Beth Israel Deaconess Hospital
Plymouth
FACTS & FIGURES: Plymouth

- **45% Heroin/Opioids** vs. 40% Alcohol for those admitted to substance abuse treatment in Plymouth

- At the state level, it’s **48% for heroin/opioids** v. 35% for alcohol.

- 10 years ago **77% reported alcohol** as their drug of choice v. 40% for heroin/opioids.

- More are using heroin today than 10 years ago.

- More children, teenagers, and adults are dying.

*Massachusetts Department of Public Health, Bureau of Substance Abuse Services (June 2013)*

BID-PLYMOUTH

- Steady stream of patients coming to the ED with some form of drug overdose

- 2014: 18 overdose deaths; 13 from heroin

- Plymouth County: 72 Overdose deaths in 2014*
  - More than double the number of Overdose deaths in 2009.
  - 2015 average one overdose a day

*Plymouth County District Attorney Tim Cruz’s Office*
**BID-Plymouth**

- Judge Minehan reviewed Drug Court experience
- Performed audit of narcotic Rx and # pills
- ED MD feedback & PMP use
- Endorsed MHA Opioid Guidelines
- Prescription opioid talking points handout & d/c instructions

---

**BID-PLYMOUTH**

- Removed all Rx pads from ED
- All discharge Rx via CPOE and secure printing
- Move to e-prescribing over next 6-8 weeks
- Provide ongoing monitoring & feedback
Thank you

• Questions
I have no conflicts to disclose. I provide medicolegal review for CRICO and Traveler’s Insurance.

In this talk, we will discuss the pharmacology of extended-release and long-acting opioids, with representative cases from Emergency Medicine.
<table>
<thead>
<tr>
<th>Generic</th>
<th>Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buprenorphine</td>
<td>Suboxone, Butrans</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>Duragesic</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>Zohydro</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>Exalgo, Palladone</td>
</tr>
<tr>
<td>Methadone</td>
<td>Dolophine, Methadose</td>
</tr>
<tr>
<td>Morphine</td>
<td>Avinza, Embeda, Kadian, MSContin</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>OxyContin</td>
</tr>
<tr>
<td>Oxymorphine</td>
<td>Opana</td>
</tr>
<tr>
<td>Tapentadol</td>
<td>Nucynta</td>
</tr>
</tbody>
</table>

In 2012, the FDA disseminated a Risk Evaluation and Mitigation Strategy (REMS) for Extended Release (ER) and Long Acting (LA) opioids.
REMS developed due to risks of addiction, abuse and misuse, as well as the greater risks of overdose and death.

Why Choose An ER/LA Opioid?
Why Avoid ER/LA Opioids from the ED?

1. Patient selection is essential.
2. Patient counseling is critical.

3. It is difficult to find a role for starting ER/LA opioids in our practice.
Illustrative Cases*

* Details changed for privacy

A 20 yo woman presents to the ED for a non-displaced tibial plateau fracture. Outpatient orthopedics follow-up arranged. Percocet fails control her pain. MS-Contin 100mg prescribed at second visit.
She is found dead in bed the following day. What happened?

Rapid Dose Escalation
Inappropriate Choice of Formulation
Discharge Instructions
A 40-year-old woman remains in the ED awaiting an inpatient psychiatric bed. She reports that her current methadone maintenance is 80 mg per day. This dose is administered.

She is found apneic in bed. She has a complete return to baseline with naloxone administration, and is admitted to the intensive care unit for recurrent respiratory depression.
No corroboration obtained
Loss of tolerance

A 65 yo woman with spinal stenosis presents to the ED where she complains of worsening back pain. She is prescribed a 50 mcg/hour fentanyl transdermal patch.
She is found dead in bed, wearing two patches. A heating pad is found in bed with her.

Inadequate counseling
Inappropriate dose
In summary, there is **essentially no place** for the prescribing of ER/LA opioids from the Emergency Department.
Nasal Naloxone as an ED Based Opioid Harm Reduction Intervention

Massachusetts Hospital Association Opioid Panel
July 2015

Kristin H Dwyer, MD
Brigham and Women’s Hospital

Agenda

- The Opioid Epidemic and the Role of the ED
- Experience with Nasal Naloxone To Date
- ED Options for Opioid Harm Reduction Interventions
The Opioid Epidemic

Why did the Governor Declare A Public Health Emergency?

Actions Suggested
- Access to naloxone
- Safe prescribing
- Improve access to treatment

The Opioid Epidemic

Deaths from opioid Rx in the US increased 3X between 2001 and 2013.

Number of Deaths from Rx Opioid Pain Relievers

Source: National Center for Health Statistics, CDC Wonder
The Opioid Epidemic

Since 2005, opioid related deaths in Massachusetts have exceeded deaths from MVC.

![Graph showing the rate of unintentional opioid overdose deaths in Massachusetts residents from 2000 to 2014.](graph1.png)

The Opioid Epidemic

Prescriptions dispensed for opioids climbed from 138MM to 207MM during that same time.

![Graph showing the number of opioid prescriptions dispensed from 1991 to 2013.](graph2.png)
The Opioid Epidemic

Emergency medicine physicians are not the driver of deaths from opioid prescriptions.

Table 1  Opioid prescribing and incidence of fatalities by medical specialty of prescribers, Utah, 2002–2010

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Opioid Prescribing</th>
<th>Fatality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Prescriptions</td>
<td>% of All Opioid Prescriptions</td>
</tr>
<tr>
<td>Pain medicine</td>
<td>232,246</td>
<td>1.0</td>
</tr>
<tr>
<td>Physical medicine and rehabilitation</td>
<td>607,584</td>
<td>2.6</td>
</tr>
<tr>
<td>Psychiatry and neurology</td>
<td>221,384</td>
<td>1.0</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>245,629</td>
<td>1.0</td>
</tr>
<tr>
<td>Family medicine</td>
<td>5,636,869</td>
<td>24.1</td>
</tr>
<tr>
<td>Missing specialty</td>
<td>1,527,060</td>
<td>9.8</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>1,029,069</td>
<td>6.4</td>
</tr>
<tr>
<td>Podiatry</td>
<td>278,571</td>
<td>1.2</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>2,508,085</td>
<td>10.8</td>
</tr>
<tr>
<td>Orthopedic surgery</td>
<td>1,502,771</td>
<td>6.4</td>
</tr>
<tr>
<td>Dentist</td>
<td>2,038,377</td>
<td>8.7</td>
</tr>
<tr>
<td>Obstetrics and gynecology</td>
<td>644,763</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Common CC in ED

- In 2011 420K prescription opioid and 258K heroin related ED visits in the US

Increasing in Frequency

- ED visits for pharmaceutical misuse increased 98.4 percent between 2004 and 2009.
- Boston EMS transported 1,518 opioid overdose patients to local hospitals in 2013
  - Increased to 2,037 in 2014

The Opioid Epidemic

EMS Transports to Boston Hospitals for Opioid Overdose

<table>
<thead>
<tr>
<th>EMS Patients Transports</th>
<th>2013</th>
<th>2014</th>
<th>Increase 2013-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td>527 (35%)</td>
<td>640 (31%)</td>
<td>113</td>
</tr>
<tr>
<td>MGH</td>
<td>244</td>
<td>388</td>
<td>144</td>
</tr>
<tr>
<td>NEMC</td>
<td>224</td>
<td>323</td>
<td>99</td>
</tr>
<tr>
<td>Carney</td>
<td>181</td>
<td>219</td>
<td>38</td>
</tr>
<tr>
<td>Faulkner</td>
<td>115</td>
<td>150</td>
<td>35</td>
</tr>
<tr>
<td>BIDMC</td>
<td>63</td>
<td>73</td>
<td>-10</td>
</tr>
<tr>
<td>BWH</td>
<td>52</td>
<td>97</td>
<td>45</td>
</tr>
<tr>
<td>St Elizabeth</td>
<td>34</td>
<td>69</td>
<td>35</td>
</tr>
<tr>
<td>City of Boston</td>
<td>1518</td>
<td>2037</td>
<td>519 (34%)</td>
</tr>
</tbody>
</table>

Agenda

- The Opioid Epidemic and the Role of the ED

- Experience with Nasal Naloxone To Date

- ED Options for Opioid Harm Reduction Interventions
Naloxone as a Harm Reduction Intervention

Intranasal Naloxone

- Opioid antagonist, reverses potentially life threatening respiratory depression
- Mass Health covers kit 100%
- Walgreens and CVS carry kits, also have a standing order

Naloxone Timeline

2012 UN Commission on Narcotics
- OD is global public health issue
- Use of naloxone for overdose prevention

1996
- First community based naloxone programs

2007
- MDPH pilot program authorizes OEND distribution

2010
- 188 community based naloxone programs

2014
- 644 community sites had dispensed 152K kits with 26K OD reversals

ACEP 2014 Resolutions
- Equip first responders with naloxone
- Expand pharmacy access to naloxone

40 years of experiences with naloxone
Naloxone as a Harm Reduction Intervention

Naloxone Feasibility Studies

- 2008 Piper et al: Injection drug users (IDUs) in NYC were trained in naloxone administration and SKOOP. 82/122 kits were used to reverse an OD
- 2009 Doe-Simkins et al: Boston based program trained and distributed naloxone kits to 385 participants with 74 OD reversals in 15 mos
- 2010 Enteen et al: Of 1,900 IDUs in San Francisco who received OEND, 24% returned to request a refill and 11% used naloxone to reverse an OD.
- Bennett et al: 2011 OEND to 426 in Pittsburgh, 89 individuals used the naloxone to reverse an overdose.

Naloxone as a Harm Reduction Intervention

Overdose Education Retention

- 2008 Strang et al: IDUs trained in knowledge of risk, recognition and appropriate behavior in a witnessed overdose. Good retention of knowledge at 3 months
- 2008 Green et al: Naloxone training programs improve participants' ability to recognize and respond to opioid overdoses.
- 2009 Tobin et al: Baltimore Staying Alive Program showed an increase in overdose knowledge retention, use of resuscitation skills and successful naloxone administration.
- 2010 Wagner et al: OD prevention and response training programs may be associated with improved OD response behavior such as staying with the victim, administering naloxone, administering rescue breathing and calling 911.
Naloxone as a Harm Reduction Intervention

Naloxone Mortality Data

- 2006 Maxwell et al: Large scale implementation of OEND (3,500) in Chicago resulted in 20% decrease in heroin overdose deaths the following year (and 10% continued dec the subsequent two years)

- 2013 Walley et al: A decrease in opioid related death rates in communities in Massachusetts who received OEND compared to similar communities who did not receive OEND in the same time frame

Agenda

- The Opioid Epidemic and the Role of the ED

- Experience with Nasal Naloxone To Date

- ED Options for Opioid Harm Reduction Interventions
Implementing Change

**Opioid Harm Reduction Interventions**

- Prescription Drug Monitoring
- Referral to detoxification and rehabilitation centers
- Safe Prescribing Guidelines
- Education and Naloxone Distribution
- Others: Safe injection facility, methadone and suboxone

---

**BMC Program Description**

- OEND program began in September 2009 as a partnership between Project ASSERT and the BPHC, MA DPH and the South End Healthy Boston Coalition
- 480 naloxone kits distributed in the ED in the past two years
- Placed 1200 patients in detox this past year
- BMC is the first hospital to pioneer a policy and program to ensure that patients at risk for opioid overdose are offered education and naloxone free of charge in the ED
- Dedicated LADC in the ED, Project Assert
- Contact: Ed Bernstein, MD or Alex Walley, MD
Brown Program Description

- Lifespan Opioid Overdose Program started in 2014 in response to surge in OD deaths: 238 Deaths in 2014
- Partnership between EDs, Anchor Community Recovery Center, and the Department of Health
- Three components:
  - Intranasal naloxone
  - Anchor recovery coach consultation: naloxone teaching, referral to tx, and outpt f/u, available on the weekends. (are PAID folks in long term recovery)
  - Educational video on naloxone use when recovery coach not available
- Liz Samuels, MD

Implementing Change

ED Naloxone Options

Distribute Nasal Naloxone Rescue Kit in the Emergency Department

Provide a Prescription for a Nasal Naloxone Rescue Kit

Stock Nasal Naloxone Rescue Kits in your Hospital Outpatient Pharmacy
Implementing Change

Prescribetoprevent.org

Naloxone for Overdose Prevention

How to Avoid Overdose:
- Only take medicines prescribed for you.
- Don’t take more than prescribed.
- Avoid sleeping pills when taking pain medication.

Rescue Breathing
- Use your hands to open the airway.
- Blow into the patient’s mouth.
- Check if the chest moves.

Evaluate and Support
- For more information, call 911.
- Call 800-222-1222.
- Prevent future overdose.

Position Statements
American Medical Association (AMA)
American Pharmacists Association (APhA)
American Society of Addiction Medicine (ASAM)
American College of Medical Toxicology & AACT and AAPCC
Office of the National Drug Control Policy (ONDCP)
National Commission on Correctional Health Care

Auto-injector prescription instructions
Emergency Department Guidance

BMC Emergency Department sample policy
Rhode Island Emergency Department Naloxone Distribution Toolkit
Summary

- Deaths from opioid overdose are high and are on the rise
- EM providers have the privilege to take care of these patients at a vulnerable time and the unique opportunity to intervene with opioid harm reduction interventions
  - Motivational interviewing
  - Refer to detox
  - Naloxone kit
- Naloxone has been used in the hospital setting for a long time, and in the community since the mid 1990s - we have a lot of experience with it.
- Consider prescribing a naloxone kit, or setting up a program in your ED
- Prescribetoprevent.org
- Kristind98@gmail.com
“How do we decrease the pill count on the street?”

- Prescription drug monitoring program
- State-wide prescribing guidelines
- Care management information exchange

“Screening for substance misuse that includes services for brief intervention and referral to treatment programs for patients who are at risk for developing, or who actively have, substance use disorders.”
**SBIRT**

- Alcohol use disorders – significant but fairly modest effects on drinking (12 months follow-up)
- Decrease in drinking and driving while intoxicated
- Data on drug use disorders is very limited

---

**SMART-ED study**

*Comparison of 3 groups*

1. Minimal screening
2. Screening, assessment & referral to treatment
3. Brief intervention with phone follow-up

- self-reported days of using primary drug
- days using any drug
- rate of hair samples positive for primary drug

- Bogenschutz MP. JAMA Intern Med 2014
Buprenorphine/naloxone
3 interventions tested with 30 day follow-up

1. Screening and referral
2. Screening, brief intervention and referral
3. Screening, brief intervention, ED initiated buprenorphine/naloxone and referral
   * Increased engagement in addiction treatment & reduced self-reported illicit opioid use
     * D’Onofrio. JAMA 2015;313:1636-44
     * Governor’s Opioid Working Group

What are we doing at Baystate?

* Raising awareness!
* Screening using network-wide electronic health record
* Prescription drug monitoring program
* Multi-disciplinary “High Frequency User” Committee
* Care plan electronic alerts
Results

- Prescribed opioids in morphine mg equivalents reduced to Care Plan (-85.7 mg) vs. Usual Care (-47.1 mg) patients (P=0.04)
- Opioids administered and total costs were not statistically significantly reduced

- Rathlev NK. Presented at SAEM 2015
One-way plots

ED Information Exchange (EDIE)

Registration to the cloud

EDIE Alert with Care Plan during MSE

Case Management
How is WA state doing?
Prescriptions for opioids decreased by 25% in 2012

Summary

- Screening, brief intervention & referral to treatment
- Promise for ED initiated buprenorphine/naloxone
- Electronic care plans
- Share information via Health Information Exchange