Opioid Free ED:
ED's Response to the Opioid Crisis

Matt McAllister, PharmD, BCCCP
Clinical Pharmacist, Emergency Medicine
Piedmont Columbus Regional Midtown
Matthew.McAllister@Piedmont.org

Disclosure Statement

I have nothing to disclose concerning possible financial or personal relationships with commercial entities (or their competitors) that may be referenced in this presentation:

Piedmont HEALTHCARE

Objectives

- Understand the impact of opioid analgesic prescribing on the current opioid crisis
- Recognize opioid reduction strategies that can be implemented in the emergency department
- Identify opportunities to assist those suffering with opioid use disorder in the emergency department

Piedmont HEALTHCARE

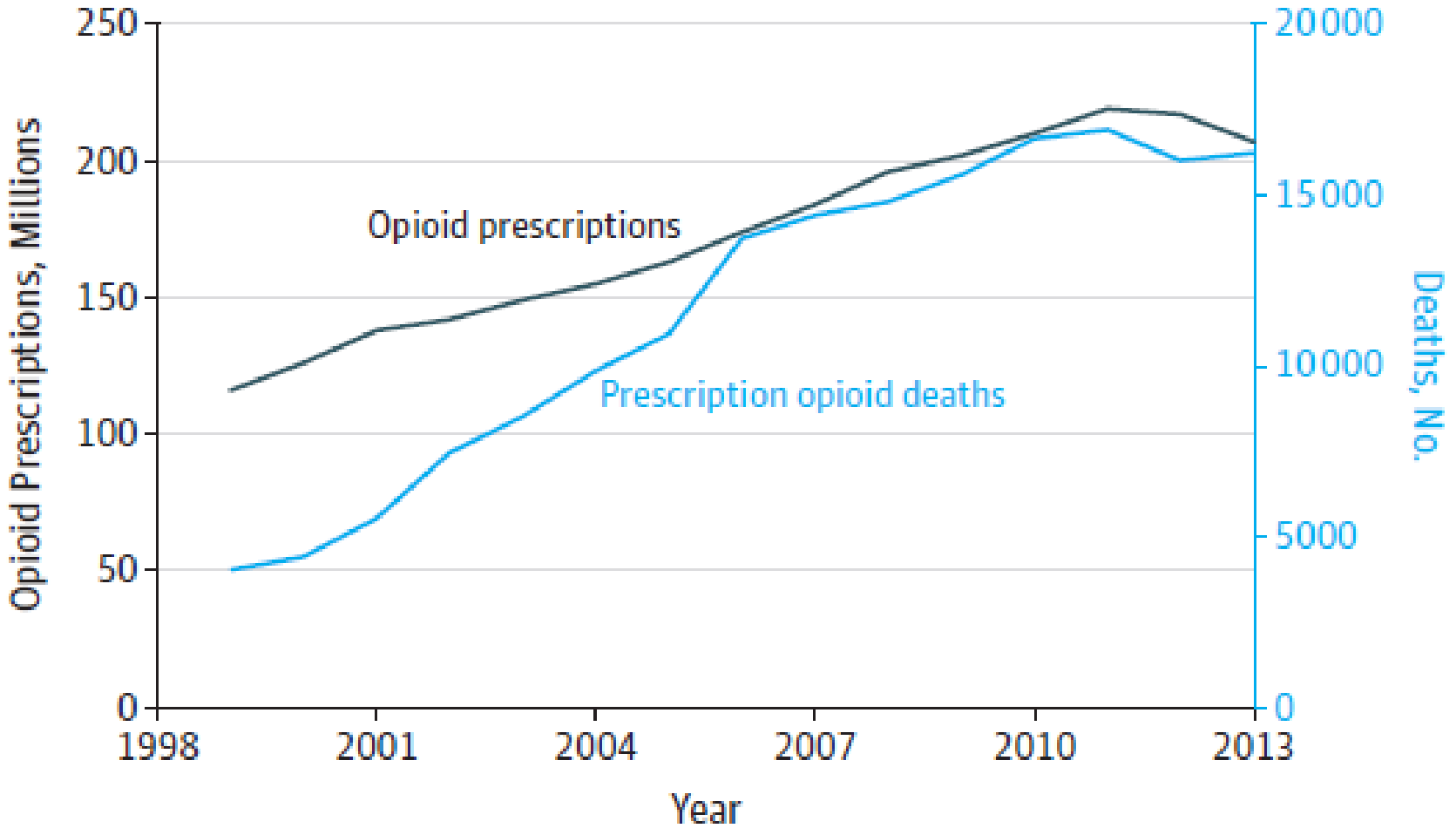
Pain is Inevitable, Suffering is Optional

- Pain is a leading cause of patients seeking care
- It is complex and heterogeneous
- Decreases quality of life
- Costs US $Billions per year in lost productivity
- Opioid have been a major workhorse

Piedmont HEALTHCARE

JAMA Neurology 2016;73(5)513-4

Figure. Opioid Prescriptions and Opioid-Related Deaths From 1999-2013



Data compiled from National Institute on Drug Abuse, 2014,[3] and National Prescription Audit, 1997-2013.[4]

THE OPIOID EPIDEMIC BY THE NUMBERS

130+
People died every day from opioid-related drug overdoses[3]
(estimated)

11.4 m
People misused prescription opioids[1]

47,600
People died from overdosing on opioids[2]

2.1 million
People had an opioid use disorder[1]

886,000
People used heroin[1]

81,000
People used heroin for the first time[1]

2 million
People misused prescription opioids for the first time[1]

15,482
Deaths attributed to overdosing on heroin[2]

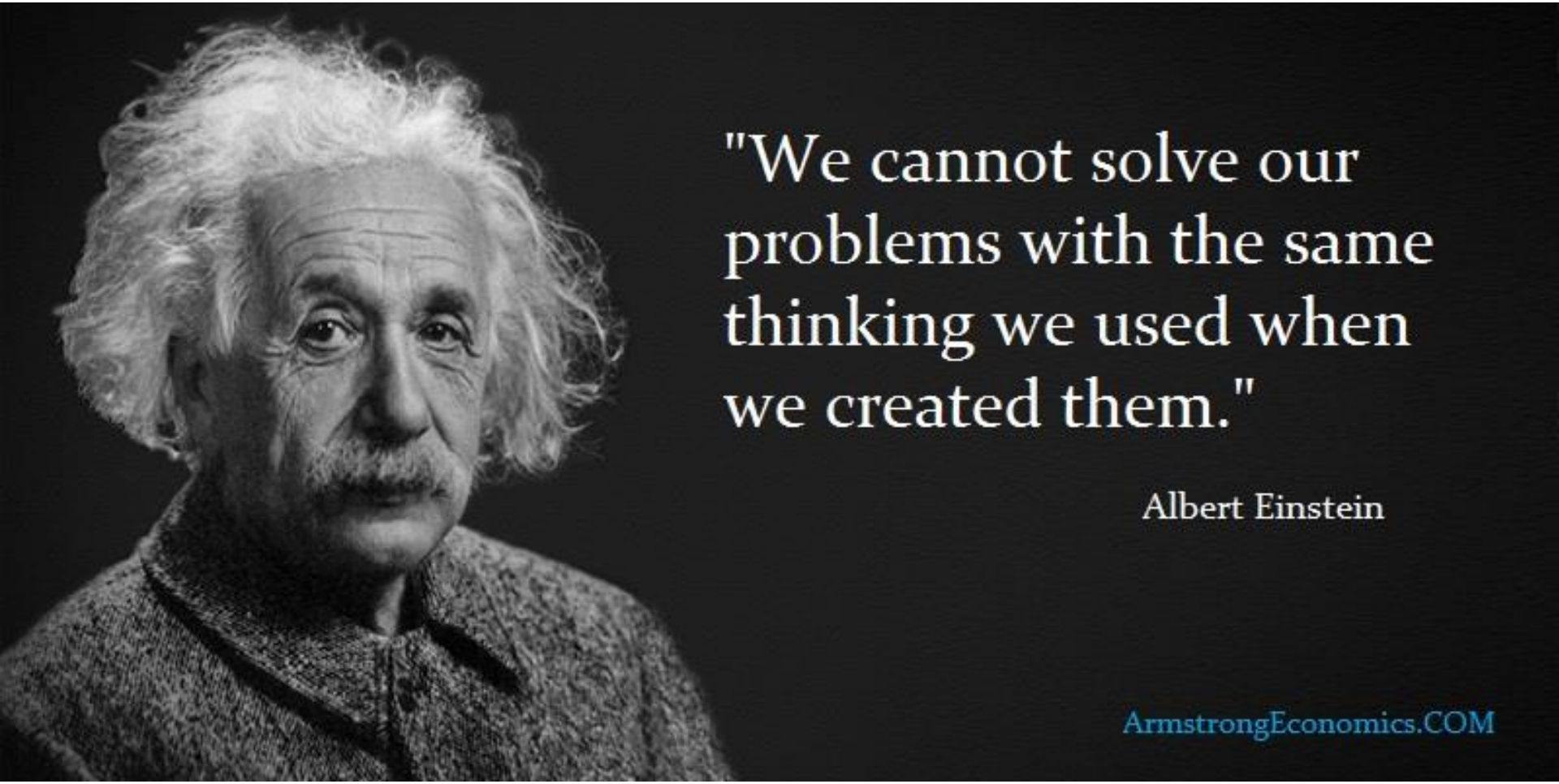
28,466
Deaths attributed to overdosing on synthetic opioids other than methadone[2]

SOURCES

1. 2017 National Survey on Drug Use and Health, Mortality in the United States, 2016
2. NCHS Data Brief No. 293, December 2017
3. NCHS, National Vital Statistics System. Estimates for 2017 and 2018 are based on provisional data.

HHS.GOV/OPIOIDS

Piedmont HEALTHCARE


"We cannot solve our problems with the same thinking we used when we created them."
Albert Einstein
ArmstrongEconomics.COM

Opioid Minimization Strategies

- Opioid Free Shift
- ALTO®
- Colorado ACEP
- Piedmont Columbus Regional

Piedmont HEALTHCARE

Opioid Free Shift

Piedmont HEALTHCARE

Am J Health Syst Pharm 2015;72(23):2080-6

Opioid Free Shift

Neuropathic Pain

1. PO Ibuprofen-400-800 mg
2. PO Gabapentin-100-300 mg
3. PO Prednisone-25-50 mg
4. PO Clonidine 0.1-0.2 mg
5. IV Ketamine-0.3 mg/kg over 10 min, + IV drip at 0.15 mg/kg /hr
6. IV Lidocaine -1.5.-2.5 mg/kg /hr drip x2-4 h (2% cardiac Lidocaine)
7. IV Dexemedetomidine-0.2-0.3 mcg/kg/hr drip
8. IV Clonidine-0.3-2 mcg/kg/hr drip

Post-Operative Pain

1. IV Acetaminophen-1g over 10-15 min
2. IV Ketamine-0.3 mg/kg over 10 min, + IV drip at 0.15 mg/kg /hr
3. IV Dexemedetomidine-0.2-0.7 mcg/kg/hr drip

Dental Pain

1. Dental Blocks
2. PO Ibuprofen -400-800 mg
3. PO Acetaminophen-500-1000mg

Burns

1. PO Ibuprofen-400-800 mg
2. PO Acetaminophen-500-1000mg
3. PO Naproxen-375 mg
4. IV Acetaminophen-1g over 15 min
5. IV Ketamine-0.3 mg/kg over 10 min, + IV drip at 0.15 mg/kg /hr
6. IV Lidocaine -1.5.-2.5 mg/kg /hr drip x2-4 h (2% cardiac Lidocaine)
7. IV Dexemedetomidine-0.2-0.7 mcg/kg/hr drip
8. IV Clonidine-0.3-2 mcg/kg/hr drip

Sickle Cell Painful Crisis

1. PO Ibuprofen-800mg
2. PO Hydroxyurea-100mg
3. **IN** Ketamine 1mg/kg (no more than 1ml per nostril)
4. IV Ketamine-0.3 mg/kg over 10 min, + IV drip at 0.15 mg/kg /hr
5. IV Lidocaine -1.5.-2.5 mg/kg /hr drip x2-4 h (2% Cardiac Lidocaine)
6. IV Dexemedetomidine-0.2-0.3 mcg/kg/hr drip

Piedmont HEALTHCARE

Am J Health Syst Pharm 2015;72(23):2080-6

Opioid Free Shift

41% had significant decrease in pain by 30 min

>80% of patients were satisfied with the non-opioid based protocol

Only 1 patient required rescue opioid therapy

Piedmont HEALTHCARE

Am J Health Syst Pharm 2015;72(23):2080-6

Alternatives to Opiates (ALTO®)

New Jersey's busiest ER has successfully implemented an Alternatives to Opiates (ALTO) program.

Alternatives to Opiates (ALTO®)

Table 1. Non-Opioid Suggestions for Pain Management in Select Conditions

Condition	Analgesia
Acute Headache	Ibuprofen/Ketorolac, Acetaminophen, Reglan, Trigger point injection, Magnesium, Valproic Acid, Dexamethasone, Haldol
Renal Colic	Ketorolac, Acetaminophen, Cardiac lidocaine
Musculoskeletal Pain (sprains, strains or opiate naive low back pain)	Ibuprofen/Ketorolac, Acetaminophen, Cyclobenzaprine, Lidocaine patch, Gabapentin, Trigger point injection
Acute on Chronic Radicular Low Back Pain (opiate tolerant)	Ibuprofen/Ketorolac, Acetaminophen, Cyclobenzaprine, Lidocaine patch, Gabapentin, Trigger point injection, Dexamethasone, Ketamine
Extremity Fracture or Joint Dislocation	Acetaminophen, Ketamine Intranasal, Nitrous Oxide, Ultrasound guided regional anesthesia

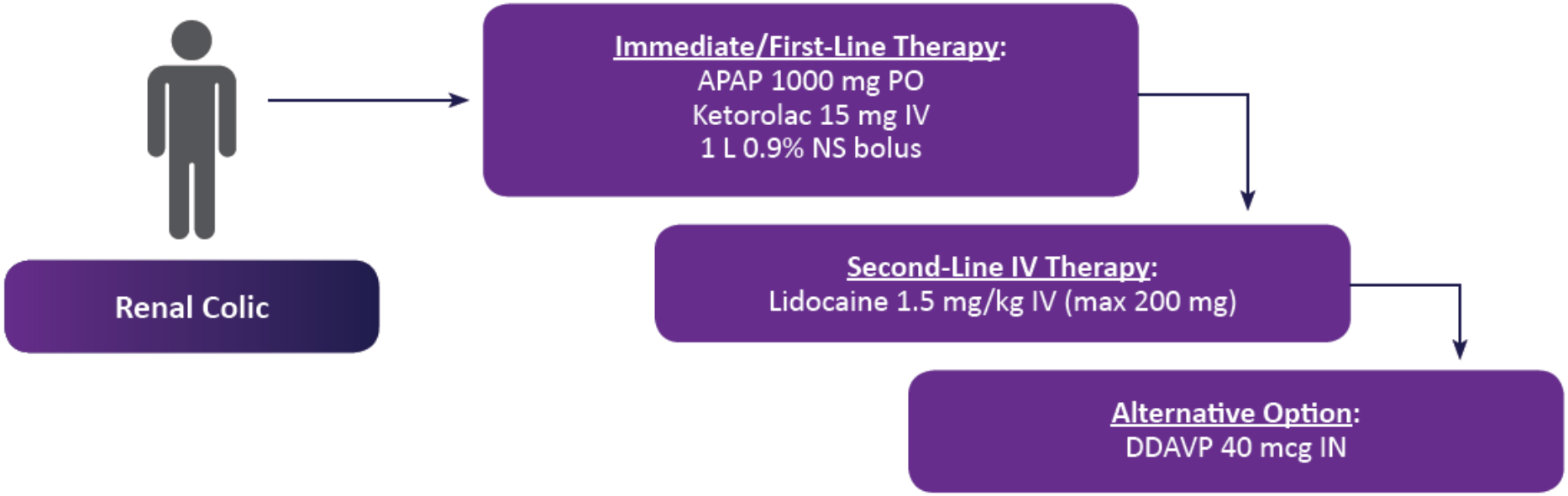
Piedmont HEALTHCARE

Alternatives to Opiates (ALTO®)

75% of patients achieved adequate pain relief with ALTO® regimen

38% decrease in opioid use

Piedmont HEALTHCARE



These treatment pathways are not intended to and should not replace clinician judgement or clinical expertise. They are a guide to possible treatment options that maybe considered, in the context of a patient's clinical condition and comorbidities, for the treatment of patients in pain.

c|h|a
Colorado Hospital Association

Overall Results

36% ↓

in opioid administration

Measured in MEUs/1,000 ED visits across all 10 EDs

2017 vs. 2016

31% ↑

in ALTO administration

35,000

fewer projected opioid administrations during the pilot than during the baseline period

No Significant change in HCAHPS score related to pain

c|h|a
Colorado Hospital Association

Piedmont Columbus Regional's Order-Set

Piedmont
HEALTHCARE

ABDOMINAL PAIN (RENAL COLIC)

Mild Pain Management Pain Scale 1-3

- ❑ Ibuprofen (Motrin®) 600 mg orally once; Caution in renal impairment.
- ❑ Acetaminophen (Tylenol®) 975 mg orally once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.

Moderate Pain Management Pain Scale 4-6

- ❑ Ketorolac (Toradol®) 15 mg IV once
  Maximum duration of 5 days, recommended dose for patients greater than 65 years old or less than 50 kg. Avoid use in Kidney Disease.
- ❑ Acetaminophen (Ofirmev®) 1000 mg IV over 15 minutes once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.

Severe Pain Management Pain Scale 7-10

- ❑ Lidocaine (Xylocaine MPF)(cardiac) 50 mg IV over 15 minutes once for weight less than 50 kg; cardiac monitor required
- ❑ Lidocaine (Xylocaine MPF)(cardiac) 75 mg IV over 15 minutes once for weight between 50 and 75 kg; cardiac monitor required
- ❑ Lidocaine (Xylocaine MPF)(cardiac) 100 mg IV over 15 minutes once for weight greater than 75 kg; cardiac monitor required

ABDOMINAL PAIN (NON-TRAUMATIC)

Mild Pain Management Pain Scale 1-3

- ❑ Ibuprofen (Motrin®) 600 mg orally once; Caution in renal impairment.
- ❑ Acetaminophen (Tylenol®) 975 mg orally once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.

Moderate Pain Management Pain Scale 4-6

- ❑ Ketorolac (Toradol®) 15 mg IV once
  Maximum duration of 5 days, recommended dose for patients greater than 65 years old or less than 50 kg. Avoid use in Kidney Disease.
- ❑ Acetaminophen (Ofirmev®) 1000 mg IV over 15 minutes once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.

Severe Pain Management Pain Scale 7-10

- ❑ Ketamine 10 mg IV once. Slow push.

ABDOMINAL PAIN (TRAUMATIC)

- ❑ Acetaminophen (Ofirmev®) 1000 mg IV over 15 minutes once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.
- ❑ Ketamine 10 mg IV once. Slow push.

BACK PAIN

Mild Pain Management Pain Scale 1-3

- ❑ Ibuprofen (Motrin®) 600 mg orally once; Caution in renal impairment.
- ❑ Acetaminophen (Tylenol®) 975 mg orally once
  Caution in use with other acetaminophen products. Maximum of 3 gm/24 hours. Caution in hepatic impairment.
- ❑ Cyclobenzaprine (Flexeril®) 10 mg orally once
- ❑ Methocarbamol (Robaxin®) 750 mg orally once
- ❑ Baclofen (Lioresal®) 10mg orally once
- ❑ Diazepam (Valium®) 5 mg orally once
- ❑ Lidocaine patch (Lidoderm®) 5% Place 1 patch on painful area of skin once. Remove after 12 hours.
- ❑ Prednisone 20 mg orally once

Results | 2016-2017 – Overall Prescribing

	2016 (n=250)	2017 (n=250)	p-value[a]
Patients with an Opioid Order Within the ED	112 (44.8%)	86 (34.4%)	0.0173
	ARR = 10.4%		
Opioid Prescriptions Upon Discharge from the ED	101 (40.4%)	73 (29.2%)	0.0086
	ARR = 11.2%		

ARR = Absolute Risk Reduction
[a]Chi-square
Kappa = 0.85

Piedmont HEALTHCARE

Results | 2016-2017 – Amount of Opioids

	2016 (n=250)	2017 (n=250)	p-value[a]
Average MME per Patient who Received an Opioid Within the ED	16 MME	12.5 MME	0.0141
Average Total MME per Patient who Received an Opioid Prescription Upon Discharge	139 MME	101 MME	0.0022

[a]t-test

Piedmont HEALTHCARE

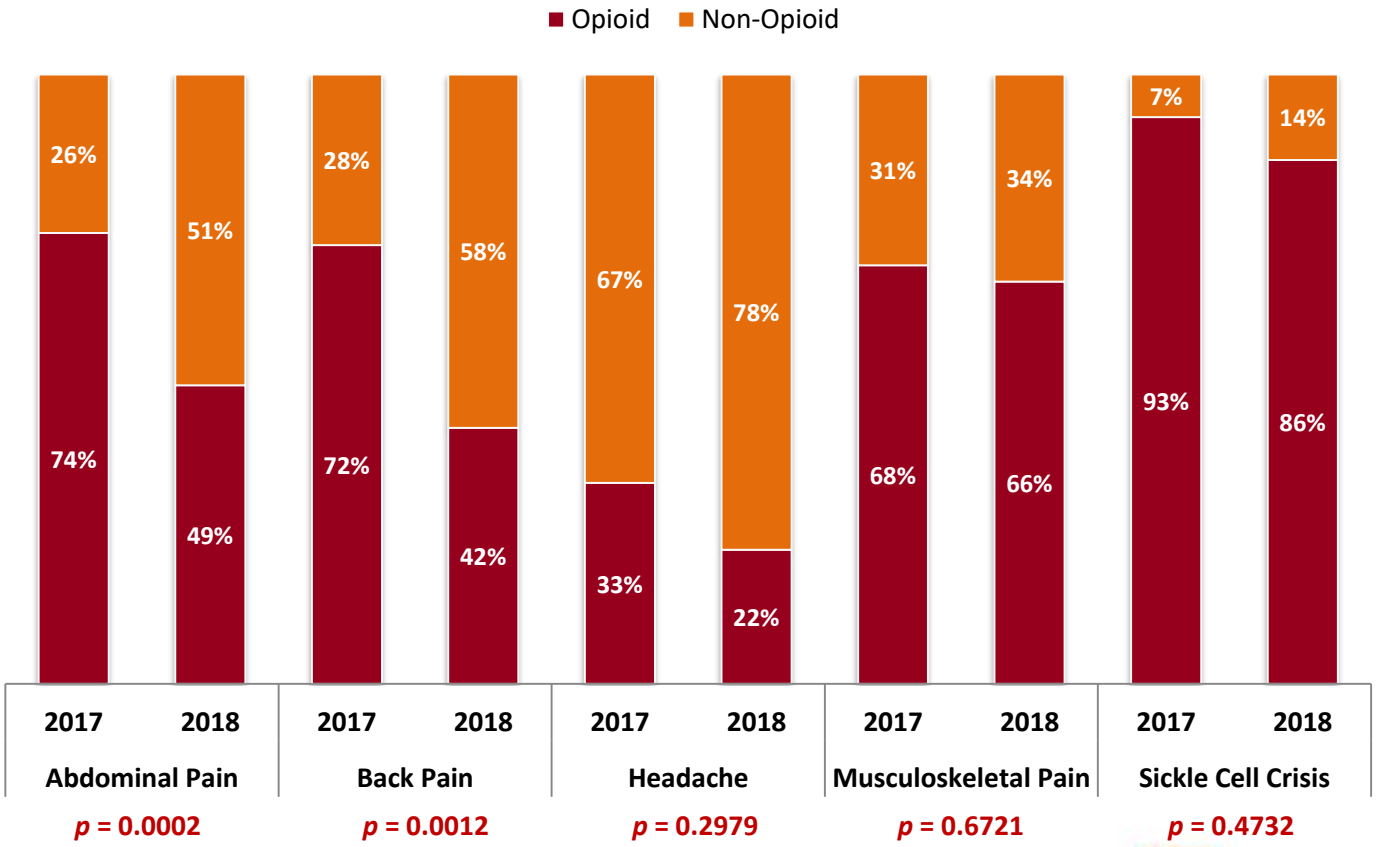
Results | 2017-2018 – First Line Analgesic

26.4%
in opioid administration

59.8%
in non-opioid administration

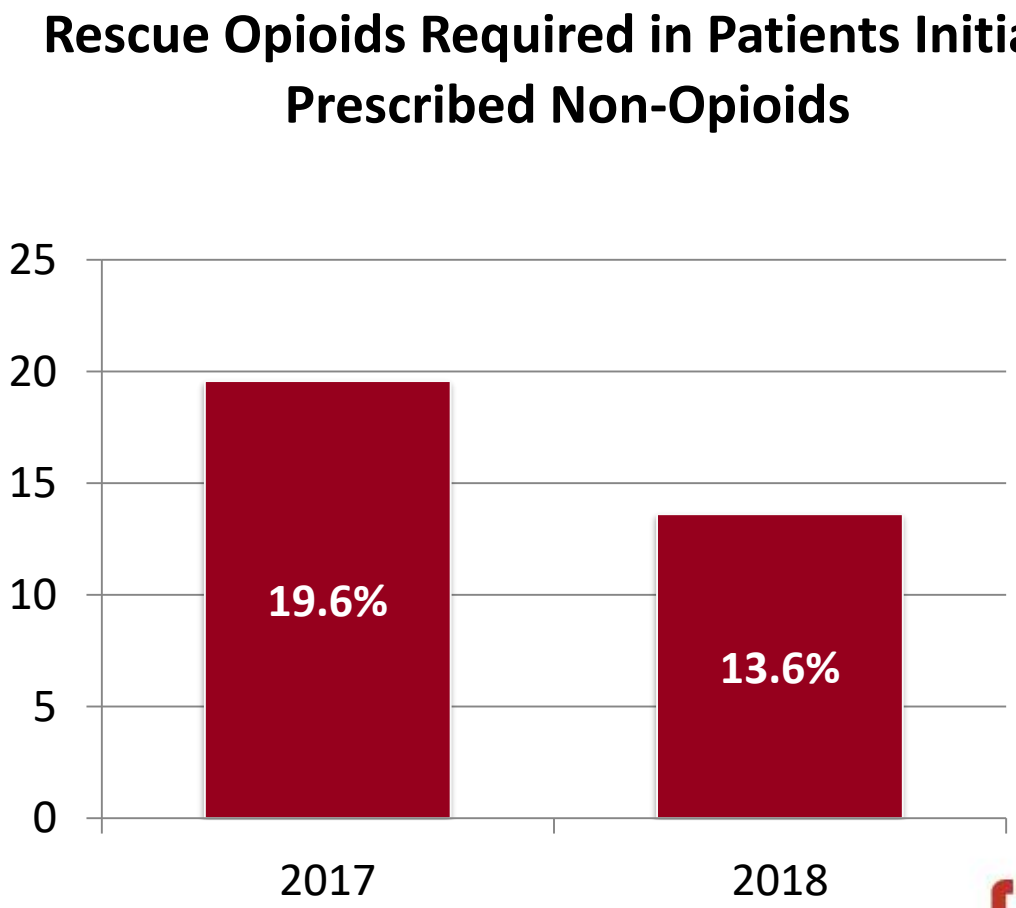
Results | 2017-2018 – First Line Analgesic

Initial Analgesic Administered: Opioid vs Non-opioid



Piedmont HEALTHCARE

Results | 2017-2018 – Rescue Opioids



c|h|a
Colorado Hospital Association

The Colorado ALTO Project

Produced in collaboration by the Colorado Hospital Association and the Colorado Chapter of the American College of Emergency Physicians

Using Alternatives to Opioids (ALTOs) in Hospital Emergency Departments

PRE-LAUNCH CHECKLIST

Based on the Colorado Chapter of the American College of Emergency Physicians
2017 Opioid Prescribing & Treatment Guidelines

https://cha.com/quality-patient-safety/opioid-safety-updates/colorado-alto-project/

THE OPIOID EPIDEMIC BY THE NUMBERS

130+
People died every day from opioid-related drug overdoses[3]
(estimated)

11.4 m
People misused prescription opioids[1]

47,600
People died from overdosing on opioids[2]

2.1 million
People had an opioid use disorder[1]

886,000
People used heroin[1]

81,000
People used heroin for the first time[1]

2 million
People misused prescription opioids for the first time[1]

15,482
Deaths attributed to overdosing on heroin[2]

28,466
Deaths attributed to overdosing on synthetic opioids other than methadone[2]

SOURCES

1. 2017 National Survey on Drug Use and Health, Mortality in the United States, 2016
2. NCHS Data Brief No. 293, December 2017
3. NCHS, National Vital Statistics System. Estimates for 2017 and 2018 are based on provisional data.

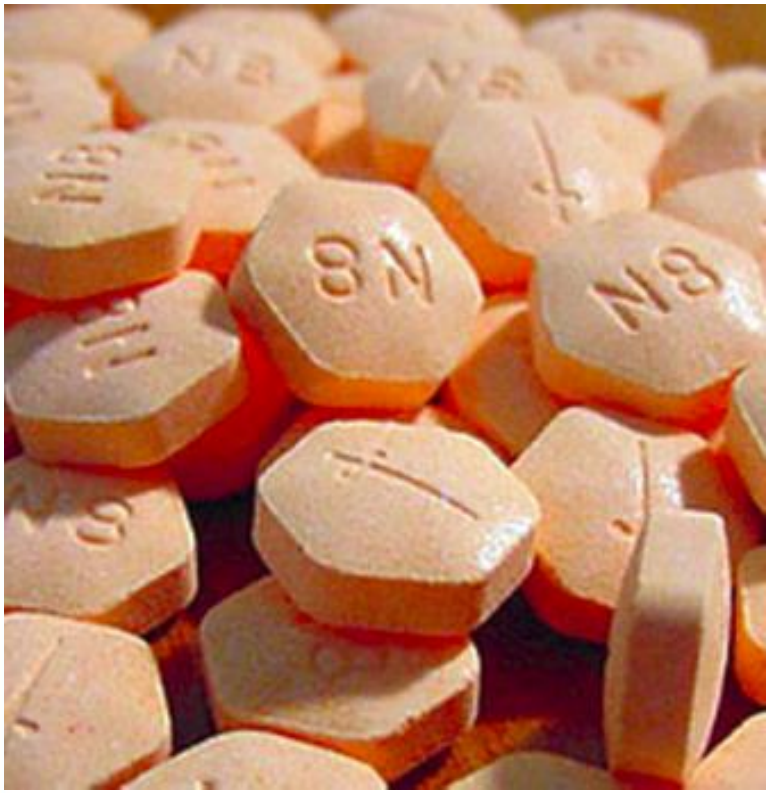
HHS.GOV/OPIOIDS

Piedmont HEALTHCARE

ED Bridge Programs

Piedmont HEALTHCARE

ED Initiated Buprenorphine?



- That's where the patients are!
- Better symptom control
- Ceiling effect = improved safety profile
- Effects on throughput?

Piedmont HEALTHCARE

Ann Emerg Med 2018;72(1):26-8, Ann Emerg Med 2004;43(5):580-4, www.medicine.yale.edu/edbup

ED-Initiated Buprenorphine

Diagnosis of Moderate to Severe Opioid Use Disorder

Assess for opioid type and last use

Patients taking methadone may have withdrawal reactions to buprenorphine up to 72 hours after last use

Consider consultation before starting buprenorphine in these patients

COWS

(0-7) none - mild withdrawl

Dosing: None in ED

Waivered provider able to prescribe buprenorphine?

YES

Unobserved buprenorphine induction and referral for ongoing treatment

NO

Referral for ongoing treatment

(≥8) mild - severe withdrawl

Dosing: 4-8mg SL*

Observe for 45-60 min
No adverse reaction

If initial dose 4mg SL repeat 4mg SL for total 8mg

Observe **

Waivered provider able to prescribe buprenorphine?

YES

Prescription
16mg dosing for each day until appointment for ongoing treatment

NO

Consider return to the ED for 2 days of 16mg dosing (72-hour rule)
Referral for ongoing treatment

All Patients Receive:
-Brief Intervention
-Overdose Education
-Naloxone Distribution

Notes:

***Clinical Opioid Withdrawal Scale (COWS) ≥ 13** (Moderate-Severe) consider starting with 8 mg buprenorphine or buprenorphine/naloxone SL

** Patient remains in moderate withdrawal may consider adding additional 4mg and observation for 60 minutes

Warm hand-offs with specific time & date to opioid treatment providers/ programs within 24-72 hours whenever possible

All patients should be educated regarding dangers of benzodiazepine and alcohol co-use

Ancillary medication treatments with buprenorphine induction are not needed

Title 21 Code of Federal Regulations

PART 1306 — PRESCRIPTIONS

(b) Nothing in this section shall prohibit a physician who is not specifically registered to conduct a narcotic treatment program from administering (but not prescribing) narcotic drugs to a person for the purpose of relieving acute withdrawal symptoms when necessary while arrangements are being made for referral for treatment. Not more than one day's medication may be administered to the person or for the person's use at one time. Such emergency treatment may be carried out for not more than three days and may not be renewed or extended.

from administering (but not prescribing) narcotic drugs to a person for the purpose of relieving acute withdrawal symptoms when necessary while arrangements are being made for referral for treatment. Not more than one day's medication may be administered to the person or for the person's use at one time. Such emergency treatment may be carried out for not more than three days and may not be renewed or extended.

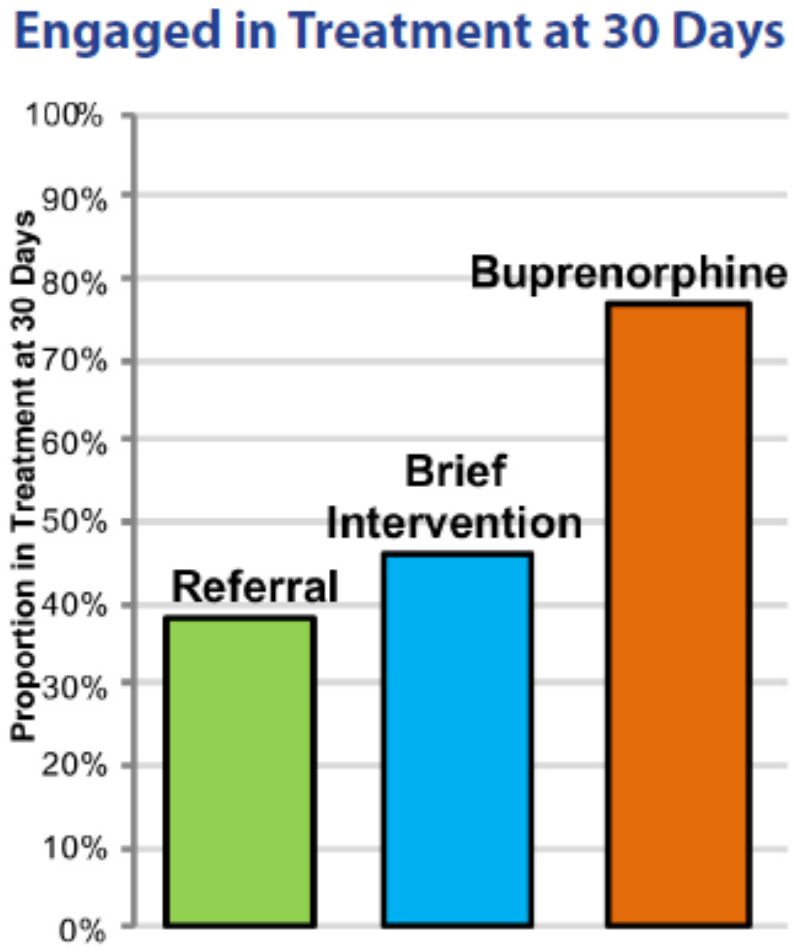
(c) This section is not intended to impose any limitations on a physician or authorized hospital staff to administer or dispense narcotic drugs in a hospital to maintain or detoxify a person as an incidental adjunct to medical or surgical treatment of conditions other than addiction, or to administer or dispense narcotic drugs to persons with intractable pain in which no relief or cure is possible or none has been found after reasonable efforts.

(d) A practitioner may administer or dispense (including prescribe) any Schedule III, IV, or V narcotic drug approved by the Food and Drug Administration specifically for use in maintenance or detoxification treatment to a narcotic dependent person if the practitioner complies with the requirements of §1301.28 of this chapter.

[39 FR 37986, Oct. 25, 1974, as amended at 70 FR 36344, June 23, 2005]

Cases Against Doctors
Chemical Control Program
Federal Register Notices
National Prescription Drug Take Back Day
NFLIS
Publications & Manuals
Questions & Answers
Significant Guidance Documents
Synthetic Drugs
Title 21 Code of Federal Regulations
Title 21 USC Codified CSA

Yale's Experience



- ED represented first point of contact for 27%
- Only 33% presented to ED seeking OUD treatment
- 9% presented with overdose
- 53% identified by staff and were willing to accept treatment!!

Piedmont HEALTHCARE

JAMA 2015;313(16):1636-44, J Gen Intern Med 2017;32(6):660-6, www.medicine.yale.edu/edbup

ED BRIDGE
Emergency Buprenorphine Treatment

HOW TO START A BUPRENORPHINE PROGRAM IN THE ED

1. Talk with your pharmacy director to be sure that buprenorphine is on the hospital formulary.
2. Develop a connection and with an outpatient facility who can receive patients referred from the ED.
3. Train nurses and doctors how to assess opioid withdrawal severity and how to dose buprenorphine.
4. Create or adapt a simple guide for providers for use in the clinical areas for real-time consultation.
5. If possible, bring in a patient care navigator to help patients transition to outpatient care.
6. Obtain patient education materials from outpatient partners that describe how to access their buprenorphine treatment services.

Piedmont HEALTHCARE

CE Question 1

Implementation of opioid minimization programs utilizing evidence based, non-opioid analgesics as first line agents for pain can

A – Decrease prescribing of opioids

B – Provide acceptable pain control

C – Maintain patient satisfaction

D – All of the above

Piedmont HEALTHCARE

CE Question 2

Buprenorphine can be started in all patients with OUD regardless of the severity of withdrawal

A – True

B – False

Piedmont HEALTHCARE

CE Question 2

Buprenorphine can be started in all patients with OUD regardless of the severity of withdrawal

A – True

B – False

Because of buprenorphine's strong affinity for the mu receptor and partial antagonistic effects it can precipitate fairly aggressive withdrawal in those patients who are currently on opioids

Piedmont HEALTHCARE

CE Question 3

Providers must obtain a waiver before they are allowed to prescribe buprenorphine

A – True

B – False

Piedmont HEALTHCARE

CE Question 3

Providers must obtain a waiver before they are allowed to prescribe buprenorphine

A – True

Though providers may ADMINISTER buprenorphine to patients in acute withdrawal for no longer than 3 day while arrangements are being made for referral for treatment

B – False

Piedmont HEALTHCARE

Opioid Free ED:
ED's Response to the Opioid Crisis

Matt McAllister, PharmD, BCCCP
Clinical Pharmacist, Emergency Medicine
Piedmont Columbus Regional Midtown
Matthew.McAllister@Piedmont.org

References

1. Renthal W. Seeking Balance Between Pain Relief and Safety: CDC Issues New Opioid-Prescribing Guidelines. JAMA Neurol. 2016 May 1;73(5):513-4
2. Tummans TA, Burton MC, Dawson NL. How Good Intentions Contributed to Bad Outcomes: The Opioid Crisis. May Clin Proc. 2018 Mar;93(3):344-50
3. U.S. Department of Health and Human Services. What is the U.S. Opioid Epidemic? Available at https://www.hhs.gov/opioids/about-the-epidemic/index.html. Access on 3/20/19
4. Motov S, Strayer R, Hayes BD, et al. The Treatment of Acute Pain in the Emergency Department: A White Paper Position Statement Prepared for the American Academy of Emergency Medicine. J Emerg Med. 2018 May;54(5):731-6
5. Manworren RC. Multimodal pain management and the future of a personalized medicine approach to pain. AORN J. 2015 Mar;101(3):308-14
6. Cohen V, Motov S, Rockoff B, et al. Development of an opioid reduction protocol in an emergency department. Am J Health Syst Pharm. 2015 Dec 1;72(12):2080-6
7. Hoffman J. An E.R. Kicks the Habit of Opioids for Pain. Available at https://www.nytimes.com/2016/06/14/health/pain-treatment-er-alternative-opioids.html. Accessed 3/20/19
8. D'Amore K, Traficante D, LaPietra A. Introducing the ALTO Alternatives to Opioids Program. Available at https://www.emra.org/emresident/article/introducing-the-alto-alternatives-to-opioids-program/. Accessed 3/20/19
9. St. Joseph's Health. St. Joseph's ALTO – Alternatives To Opiates. Available at https://www.stjosephshealth.org/home-page-articles/item/1908-alto-alternatives-to-opioids. Accessed 3/20/19
10. Colorado Hospital Association. Colorado ALTO Project. Available at https://cha.com/quality-patient-safety/opioid-safety-updates/colorado-alto-project/. Accessed 3/20/19

Piedmont HEALTHCARE

References

11. Colorado ACEP. 2017 Opioid Prescribing & Treatment Guidelines. Available at https://www.coacep.org/docs/COACEP_Opioid_Guidelines_Final.pdf. Accessed 3/20/19
12. Love JS, Perrone J, Nelson LS. Should Buprenorphine Be Administered to Patients With Opioid Withdrawal in the Emergency Department? Ann Emerg Med. 2018 Jul;72(1):26-8
13. Sporer KA. Buprenorphine: a primer for emergency physicians. Ann Emerg Med. 2004 May;43(5):580-4
14. D'Onofrio G, O'Connor PG, Pantalon MV, et al. Emergency Department-Initiated Buprenorphine/Naloxone Treatment for Opioids Dependence: A Randomized Clinical Trial. JAMA 2015 April 28;313(16):1636-44
15. D'Onofrio G, Chawarski MC, O'Connor P, et al. Emergency Department-Initiated Buprenrphine for Opioid Dependence with Continuation in Primary Care: Outcomes During and After Intervention. J Gen Intern Med 2017;32(6):660-6
16. Yale School of Medicine. ED-Initiated Buprenorphine. Available at https://medicine.yale.edu/edbup. Accessed 4/5/19
17. U.S. Department of Justice Diversion Control Division. Administering or dispensing or narcotic drugs. Available at https://www.deadiversion.usdoj.gov/21cfr/cfr/1306/1306_07.htm. Accessed 3/20/19
18. California Department of Health Care Services. ED-BRIDGE: Emergency Buprenorphine Treatment. Available at https://ed-bridge.org/. Accessed 3/20/19

Piedmont HEALTHCARE