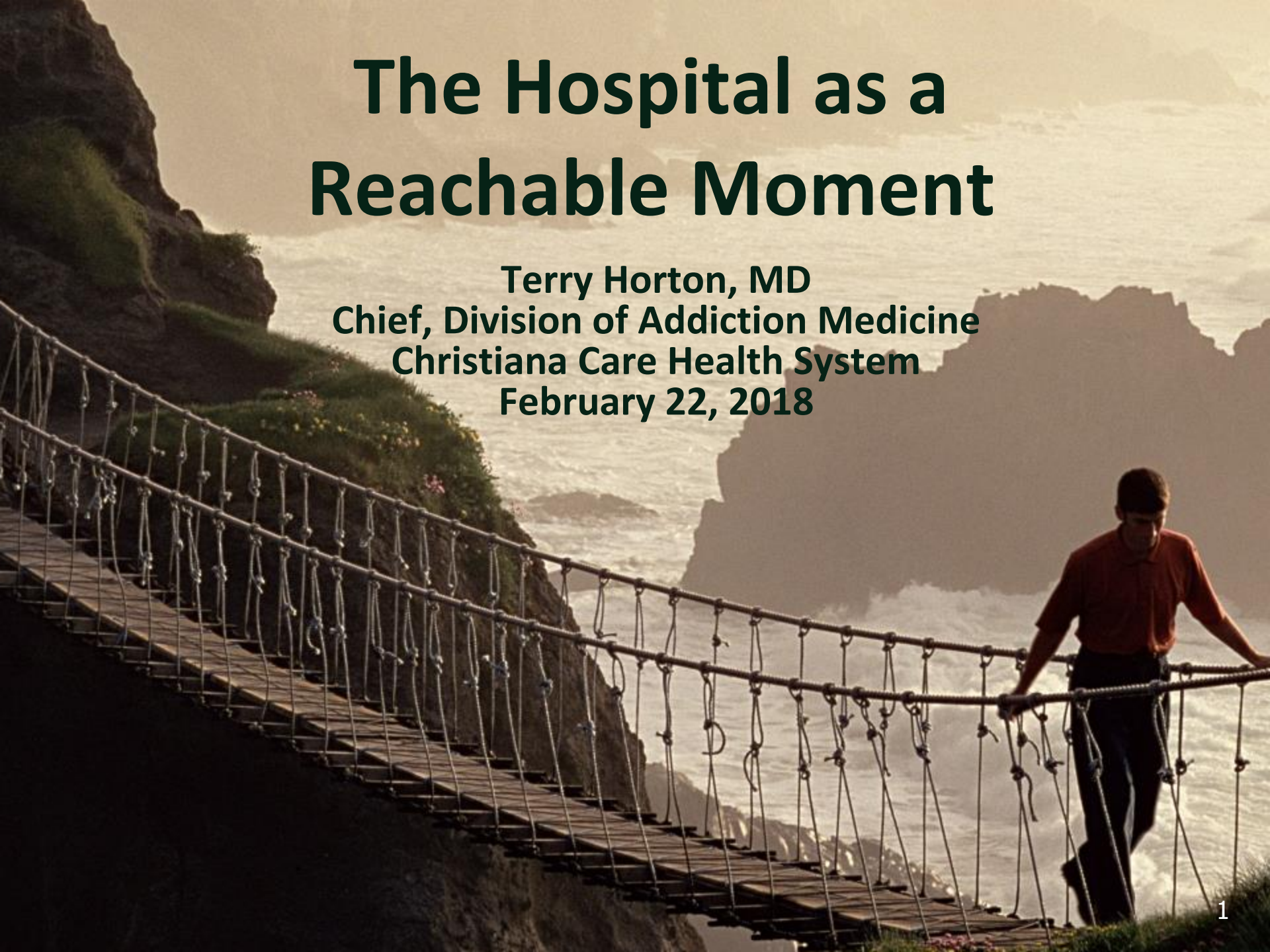


The Hospital as a Reachable Moment

Terry Horton, MD
Chief, Division of Addiction Medicine
Christiana Care Health System
February 22, 2018

Overview

1. Review concepts:
   - Hospitals aggregate disordered pts
   - Negative impact
   - Reachable Moment
2. Project Engage
3. Opioid Withdrawal Pathway

No Financial Disclosures

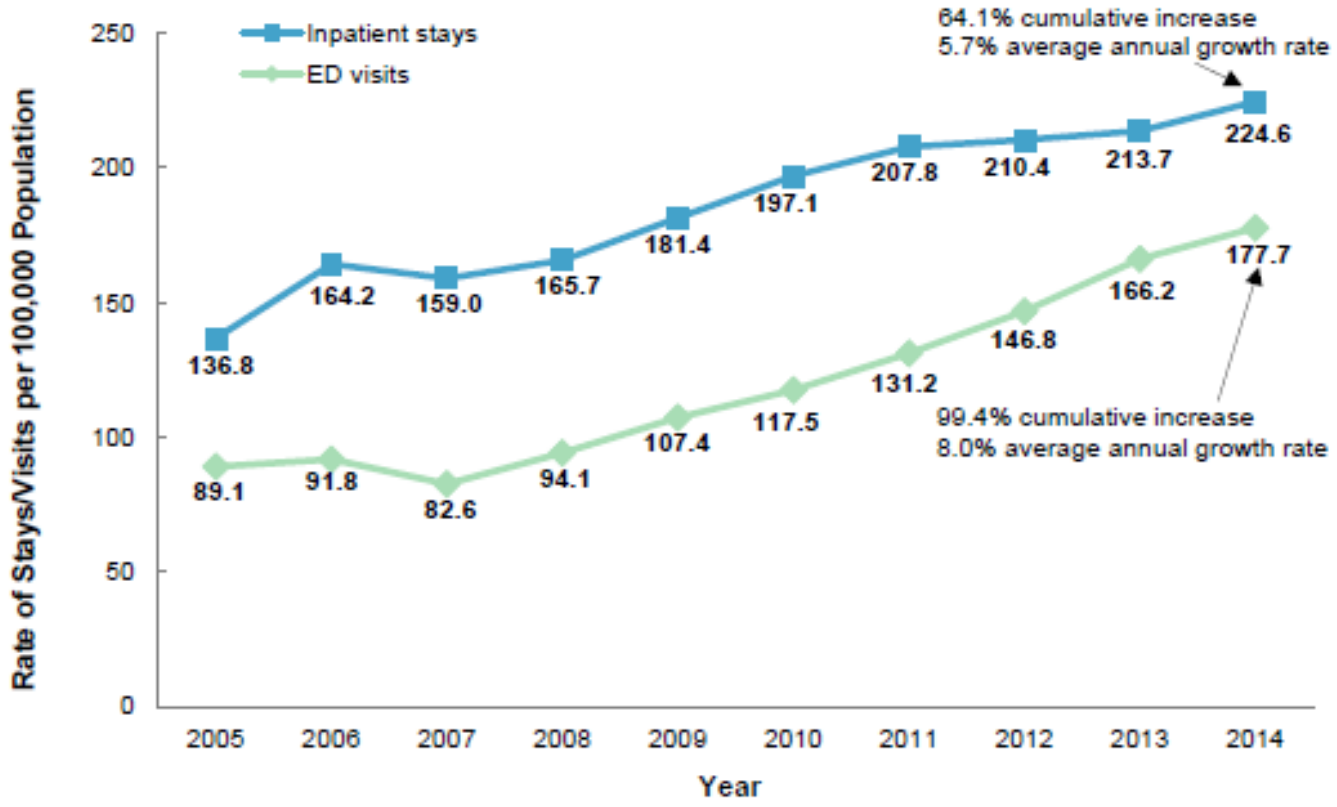
Hospitals Aggregate the Disordered

- Doors are always open
- Substance use disorders are common and severe*
- High dosages of heroin/fentanyl
- **IVDA** instead of inhaled
- Early medical sequelae
- Increasing OD rate

* Saitz, JGIM, 2006; Bertholet, JGIM, 2010

Rising Opioid-related Inpt and ED Visits

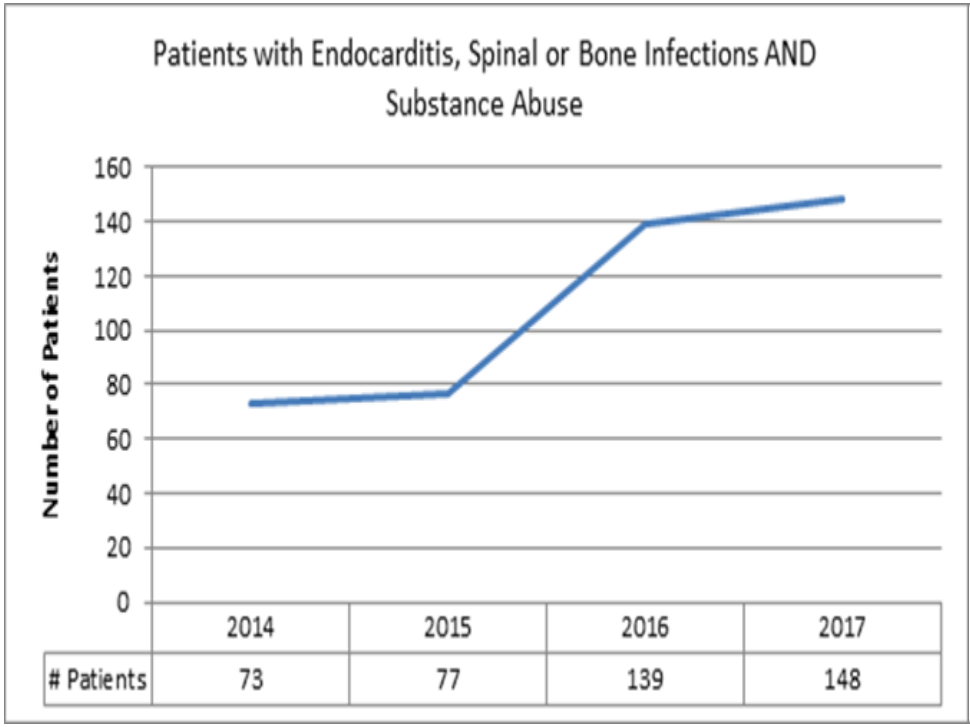
Figure 1. National rate of opioid-related inpatient stays and emergency department visits, 2005–2014

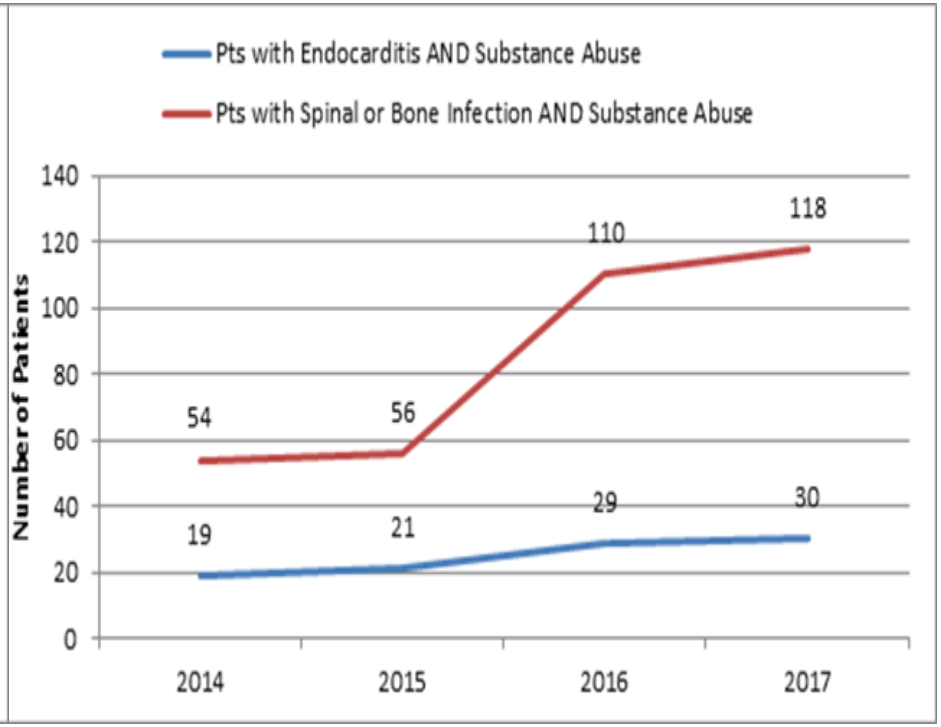


Abbreviation: ED, emergency department

Source: Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), HCUP Fast Stats, Opioid-Related Hospital Use (http://www.hcup-us.ahrq.gov/faststats/landing.jsp) based on the HCUP National (Nationwide) Inpatient Sample (NIS) and the HCUP Nationwide Emergency Department Sample (NEDS)

Impact on CCHS





- Rates of endocarditis, spinal and bone infections are increasing
- Each requires 6 week hospitalization for IV ABX via PICC line
- Anticipate 6216 bed days used in 2017

Hospital As "Reachable Moment"

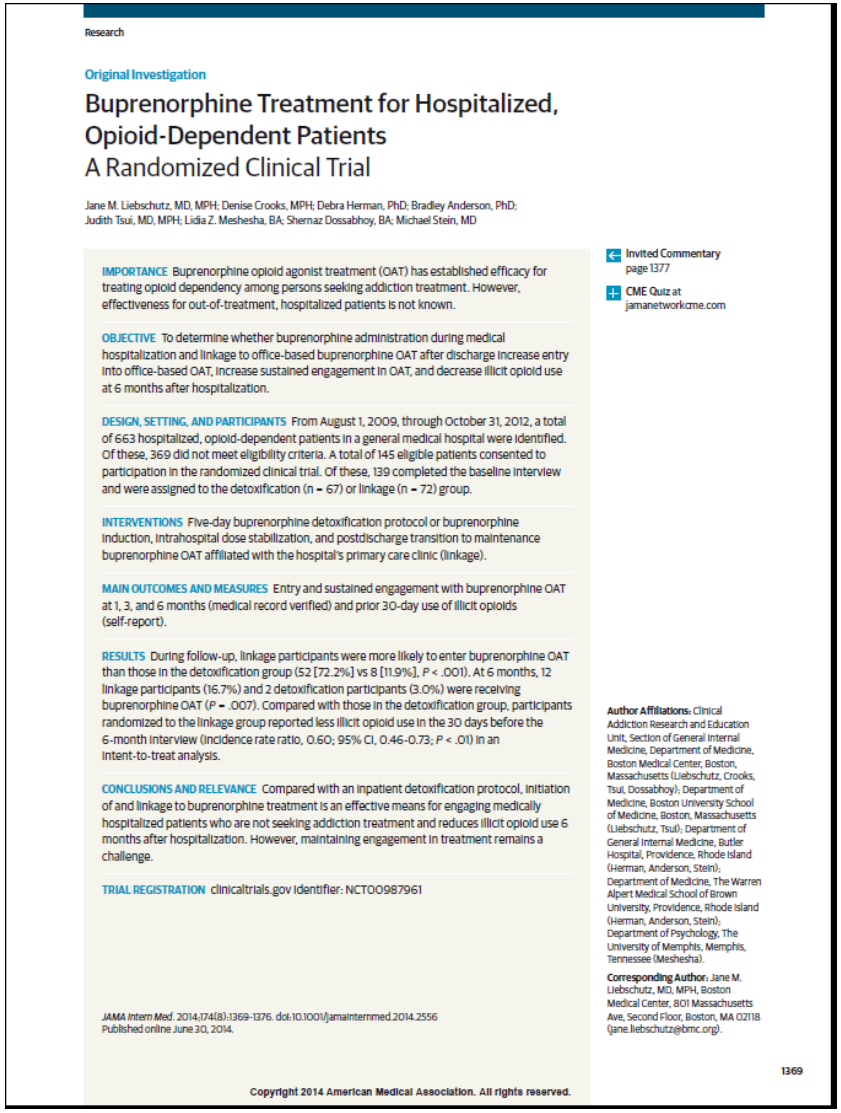
Christopher Shanahan, MD

Transitional Opioid Program (TOP)

- January 2002—January 2005, Boston Medical Center
- 288, out-of-treatment, opioid-dependent patients hospitalized offered methadone induction and facilitated admission to a transitional OTP
- **89%** of those eligible (255/288) reported interest in addiction treatment.
- Of 203 participants initially enrolled during hospitalization, TOP tx was provided to **59%** (119/203)
- **35%** (71/203) enrolled in a long-term OTP, 15% (31/203) completed methadone taper, **4%** (9/203) entered outpatient or residential substance abuse treatment, and 2% (5/203) entered an inpatient detoxification facility.

A Transitional Opioid Program to Engage Hospitalized Drug Users.
Christopher W. Shanahan, et.al. J Gen Intern Med. 2010 Aug; 25(8): 803–808.

Intervening on the Medical Ward



Research

Original Investigation

Buprenorphine Treatment for Hospitalized, Opioid-Dependent Patients
A Randomized Clinical Trial

Jane M. Liebschutz, MD, MPH; Denise Crooks, MPH; Debra Herman, PhD; Bradley Anderson, PhD; Judith Tsui, MD, MPH; Lidia Z. Meshesha, BA; Shernaz Dossabhoy, BA; Michael Stein, MD

IMPORTANCE Buprenorphine opioid agonist treatment (OAT) has established efficacy for treating opioid dependency among persons seeking addiction treatment. However, effectiveness for out-of-treatment, hospitalized patients is not known.

OBJECTIVE To determine whether buprenorphine administration during medical hospitalization and linkage to office-based buprenorphine OAT after discharge increase entry into office-based OAT, increase sustained engagement in OAT, and decrease illicit opioid use at 6 months after hospitalization.

DESIGN, SETTING, AND PARTICIPANTS From August 1, 2009, through October 31, 2012, a total of 663 hospitalized, opioid-dependent patients in a general medical hospital were identified. Of these, 369 did not meet eligibility criteria. A total of 145 eligible patients consented to participation in the randomized clinical trial. Of these, 139 completed the baseline interview and were assigned to the detoxification (n = 67) or linkage (n = 72) group.

INTERVENTIONS Five-day buprenorphine detoxification protocol or buprenorphine induction, intrahospital dose stabilization, and postdischarge transition to maintenance buprenorphine OAT affiliated with the hospital's primary care clinic (linkage).

MAIN OUTCOMES AND MEASURES Entry and sustained engagement with buprenorphine OAT at 1, 3, and 6 months (medical record verified) and prior 30-day use of illicit opioids (self-report).

RESULTS During follow-up, linkage participants were more likely to enter buprenorphine OAT than those in the detoxification group (52 [72.2%] vs 8 [11.9%], $P < .001$). At 6 months, 12 linkage participants (16.7%) and 2 detoxification participants (3.0%) were receiving buprenorphine OAT ($P = .007$). Compared with those in the detoxification group, participants randomized to the linkage group reported less illicit opioid use in the 30 days before the 6-month interview (incidence rate ratio, 0.60; 95% CI, 0.46-0.73; $P < .01$) in an intent-to-treat analysis.

CONCLUSIONS AND RELEVANCE Compared with an inpatient detoxification protocol, initiation of and linkage to buprenorphine treatment is an effective means for engaging medically hospitalized patients who are not seeking addiction treatment and reduces illicit opioid use 6 months after hospitalization. However, maintaining engagement in treatment remains a challenge.

TRIAL REGISTRATION clinicaltrials.gov Identifier: NCT00987961

Invited Commentary page 1377

CME Quiz at jamanetworkcme.com

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Corresponding Author: Jane M. Liebschutz, MD, MPH, Boston Medical Center, 801 Massachusetts Ave, Second Floor, Boston, MA 02118 (jane.liebschutz@bmc.org).

JAMA Intern Med. 2014;174(8):1369-1376. doi:10.1001/jamainternmed.2014.2556
Published online June 30, 2014.

JAMA Internal Medicine

N = 139 opioid-dependent patients admitted into a general medical hospital

- 5 day bup induction, stabilization and transition vs. detox
- **Improved linkage** **72.2% vs 11.9%,** (P < .001)
- **6 months retention** 16.7% vs 3.0% (*P* = .007)
- **less illicit opioid use** in the 30 days before the 6-month interview (incidence rate ratio, 0.60; 95%CI, 0.46-0.73; P < .01)

Project Engage

- Since 2008, 2000 patients/yr in the Inpt hospital, ED and outpt clinics
- Imbedded Peer counselor from local drug treatment program
- Bedside peer-to-peer intervention using Motivational Interviewing
- Partnering with a Social Worker for rapid discharge planning

CHRISTIANA CARE HEALTH SYSTEM

ADDICTION SCIENCE & CLINICAL PRACTICE

Early data from project engage: a program to identify and transition medically hospitalized patients into addictions treatment

Anna Pecoraro, Terry Horton, Edward Ewen, Julie Becher, Patricia A Wright, Basha Silverman, Patty McGraw, and George E Woody

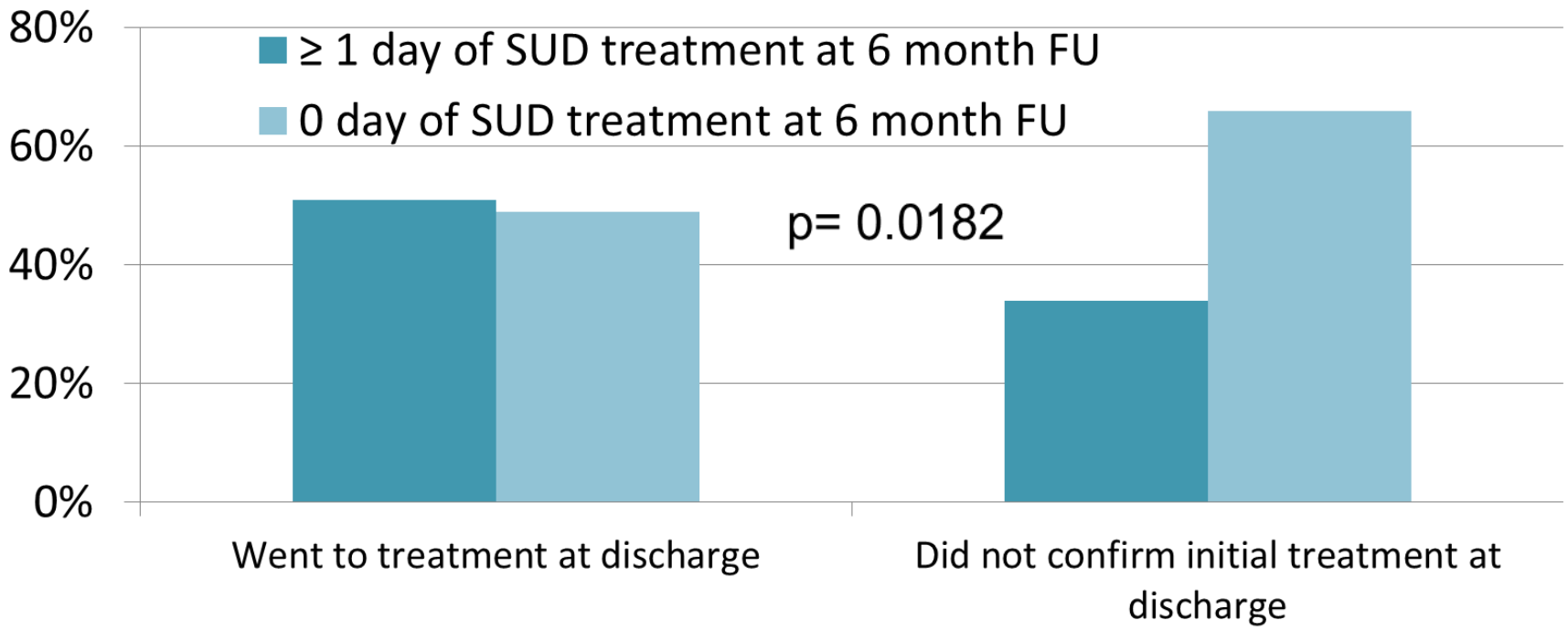
- N = 415 patients
- 180 (**43%**) were admitted for SUD treatment
- Significant reductions in inpt and Er utilization with concomitant savings (approx **$3000/pt seen**)

Addiction Science & Clinical Practice
2012, 7:20 doi:10.1186/1940-0640-7-20

CHRISTIANA CARE HEALTH SYSTEM

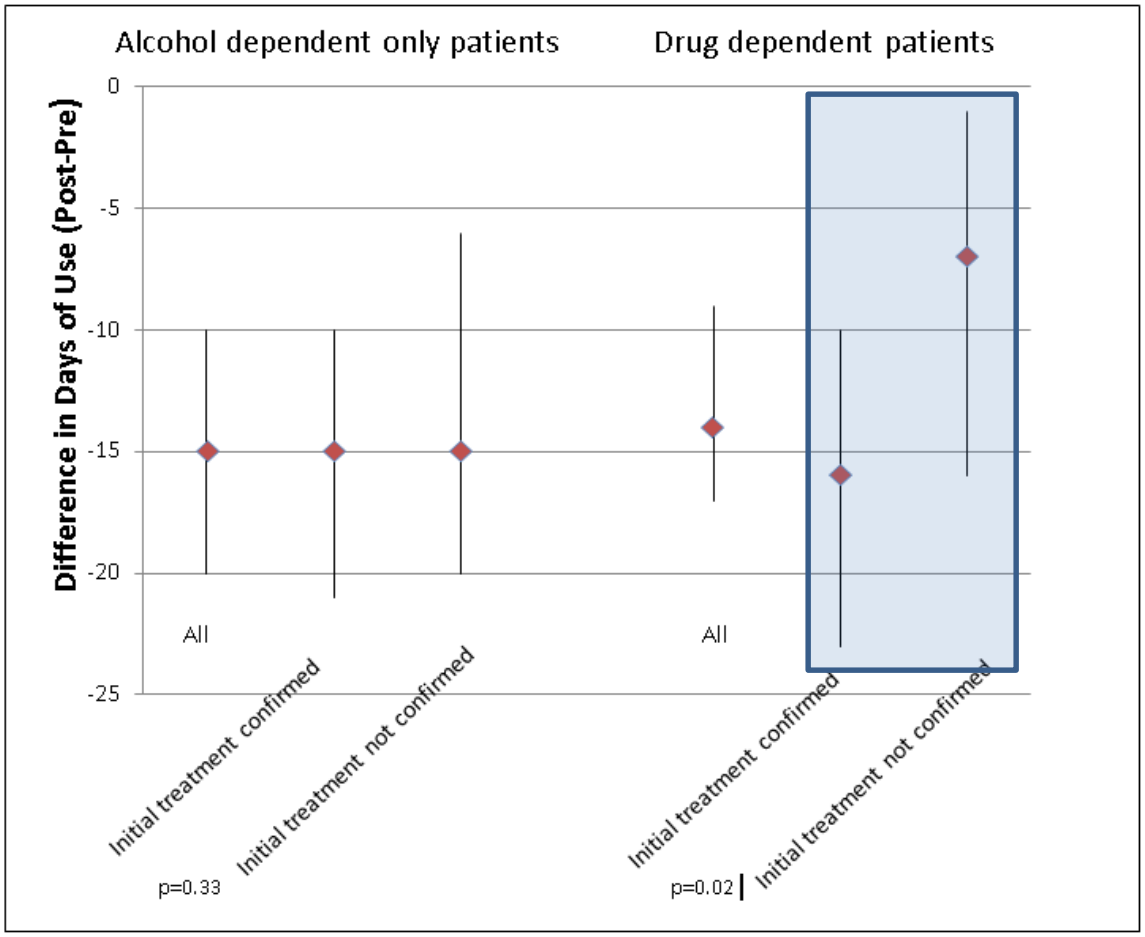
Program Evaluation

Figure 1. Patients who went to SUD treatment at discharge and are still in treatment at 6 months follow-up (n=192)



Horton, CPDD 2017

Days of use 6 months post and pre Tx

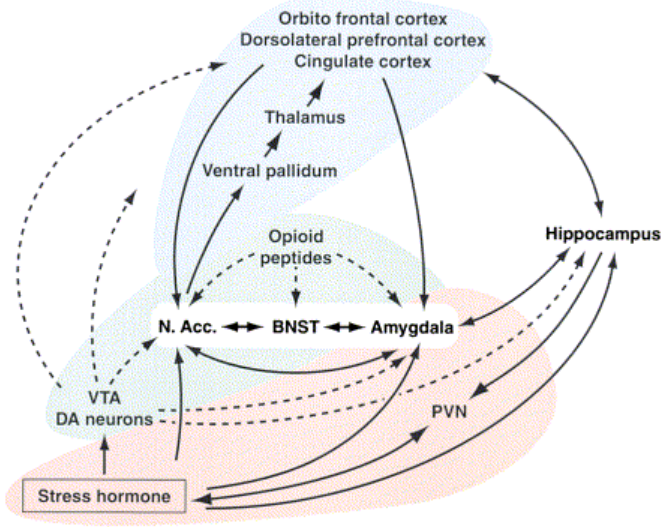


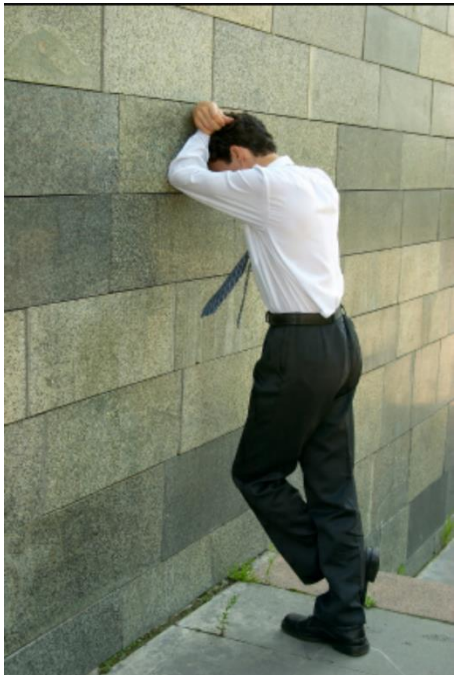
* The red triangles represent the median difference and the vertical bars, the non-parametric 95% confidence intervals

** The differences post minus pre were all statistically significant ($p<0.0001$, Wilcoxon-signed rank test)

Opioid Withdrawal

- With dependence, brain mal adapts
- Collection of reproducible symptoms when opioids are removed – PRIMAL MISERY
- Highly motivating





Opioid Withdrawal is a Safety Issue

Poorly addressed opioid withdrawal negatively impacts:

1. ability to address acute serious health consequences of addiction
2. ability to engage and transition into community-based drug treatment

Ti, Am J Public Health. 2015 Dec;105(12):e53-9. http://www.ncbi.nlm.nih.gov/pubmed/26509447
Ti, PLoS One. 2015 Oct 28; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4624845/

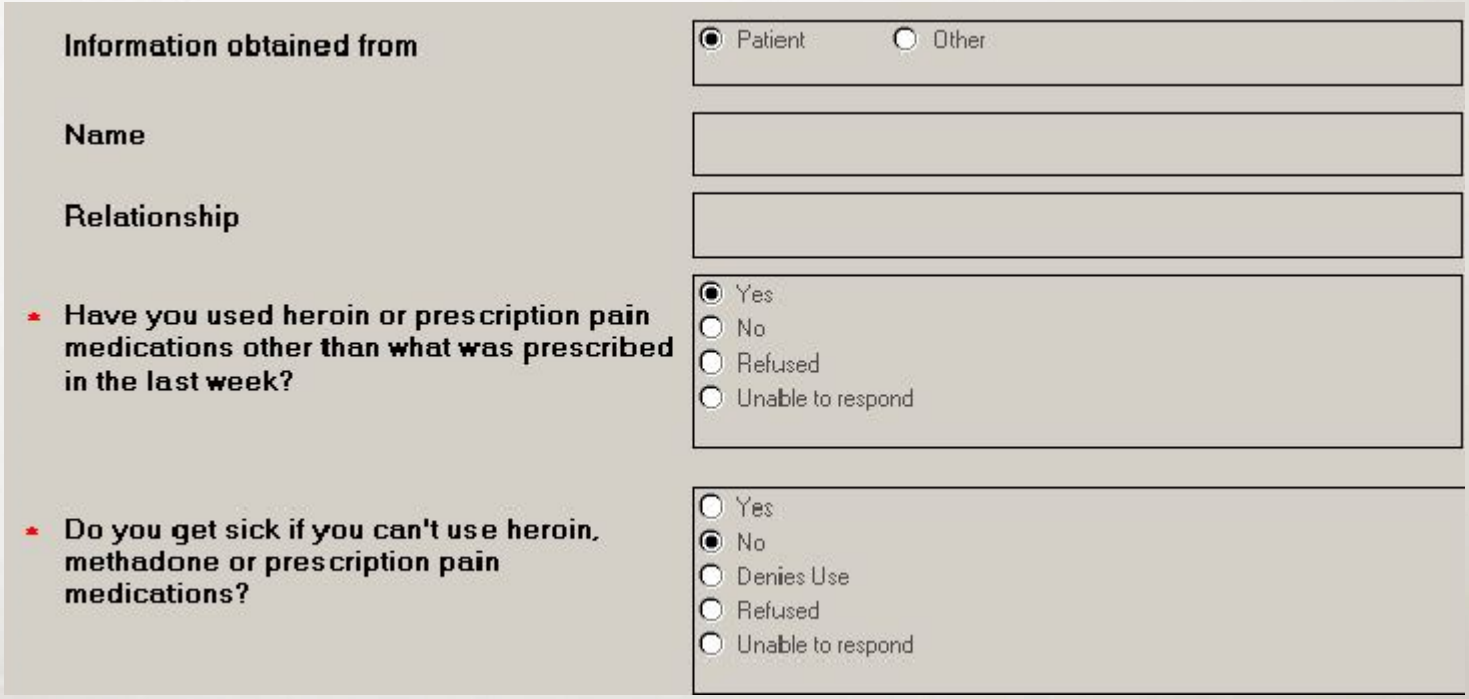
CCHS Response to the Opioid Epidemic

- 2016: Behavioral Health partnered with Acute Care Service Line
- Inpatient Medical Service
  - Screening and Identification of admitted patients
  - Rapid treatment of withdrawal by medical team
  - Inpatient initiation of drug abuse treatment
  - Addiction Medicine Consultation Service
  - Referral to community-based care using Project Engage

Opioid Withdrawal Clinical Pathway

- **Opioid Withdrawal Risk Assessment (OWRA)**

  Yes to either question prompts patient for next screening process – COWS assessment of withdrawal.



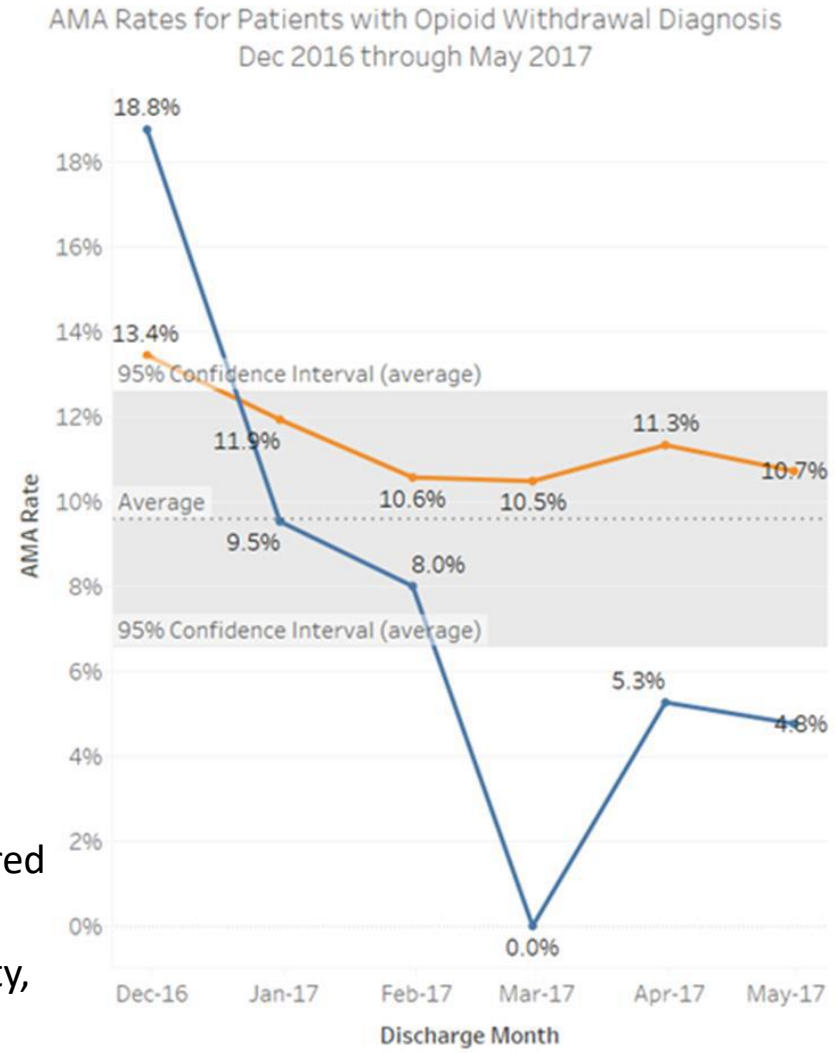
CHRISTIANA CARE HEALTH SYSTEM

Addiction Medicine Consult Liaison

- Initially starte ioid Pathway adoption at b
- One full time se Practitioner
- Project Engag /Social Worker partnering ar
- Goals: Patient support

Opioid Withdrawal Clinical Pathway Results

7 months of performance	#	%
Total Medical Service Admissions	**34,503**	
Total Medical Service Admission Screened	**24,748**	**72**
Total Screened positive	**767**	**3.1**
Showing opioid withdrawal COWS > 8	**173**	**.7**



- 22.5% of screen + have opioid withdrawal
- 49.7% of patients in Opioid Withdrawal (COWS>=8) receive bup/naloxone
- Estimate identifying 1000+ opioid use disordered patients a year not engaged in treatment
- Screening Tool Validation study: 98% specificity, 47% sensitivity

Reachable Moment

Early Outcomes from Addiction Medicine CL

- 53/86 **(62%)** asked to remain on agonist therapy and transition to community care
  - Only 27/86 refused
  - 4/86 already in care
  - 12/ 86 ama, rest into nursing homes or ICU
- 10/27 (37%) who refused, signed out AMA vs 4% accepting
- 41/53 **(78%)** successfully attended their initial appt
- 29/40 **(71%)** retained at least 1 month at the community program
- 180 patients, **2/3** requesting MAT of which **63%** remain in MAT at one month

Summary

1. Heroin use disordered patients likely to interact with health systems
2. Opioid withdrawal provides a reachable moment
3. Opioid pathway is showing early success identifying, engaging and transitioning patients into early recovery

Questions?

THorton@christianacare.org