CommStat 11/30/17

The heart and science of medicine.

UVMHealth.org/MedCenter

Addiction and Recovery

Sanchit Maruti, MD, MS
Medical Director. UVMMC Addiction Treatment Program
Attending Psychiatrist
Assistant Professor of Psychiatry

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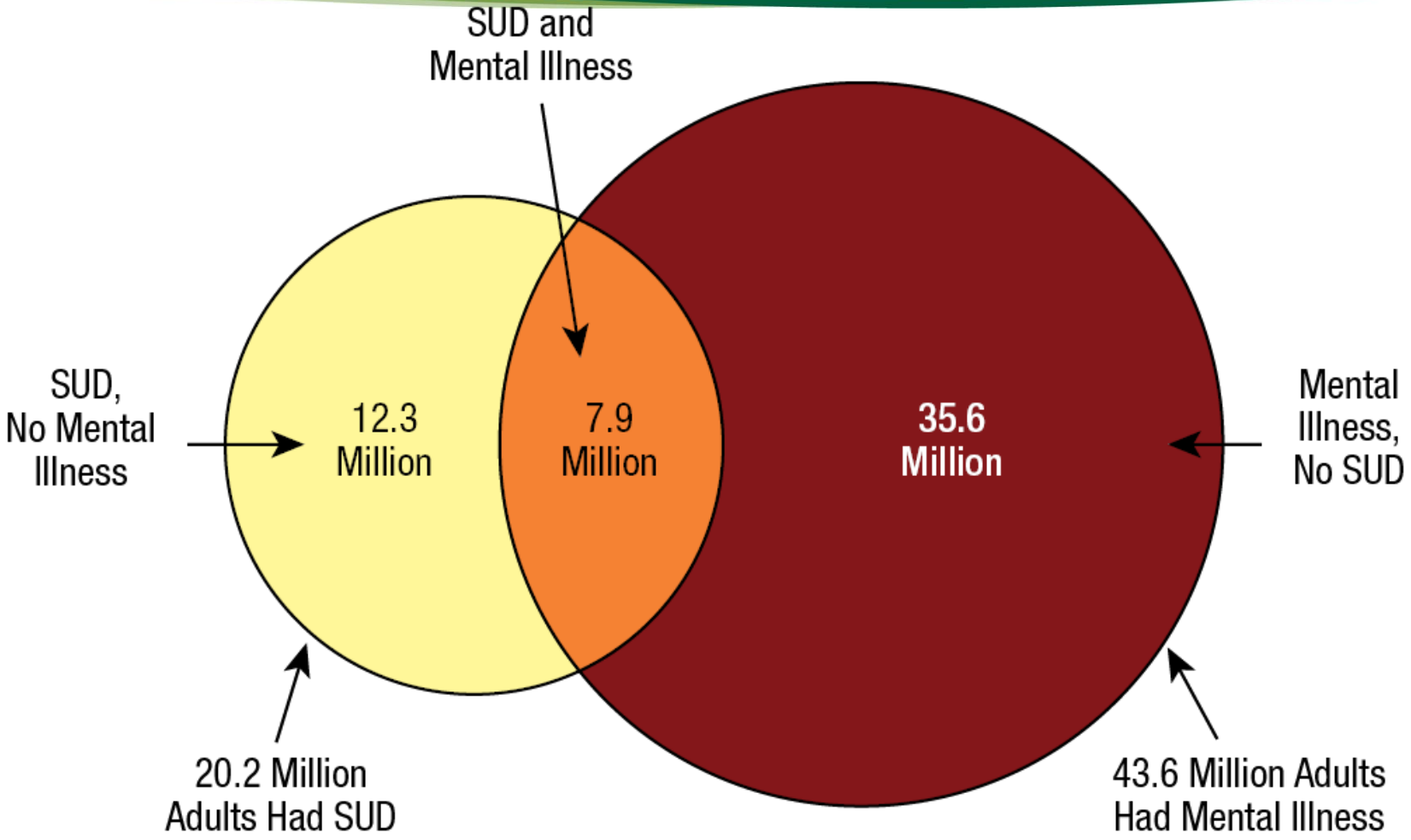
Magnitude of Problem



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SAMHSA, 2015

Substance Use Disorders

Loss of control

- more than intended
  - amount
  - time spent
- unable to cut down
- giving up activities
- craving

Physiology

- tolerance
- withdrawal

Consequences

- unfulfilled obligations
  - work
  - school
  - home
- interpersonal problems
- dangerous situations
- medical problems

formerly "dependence"

formerly "abuse"

- A ***substance use disorder*** is defined by having 2 or more in the past year resulting in distress or impairment.
- **Tolerance** and **withdrawal** alone don't necessarily imply a disorder.

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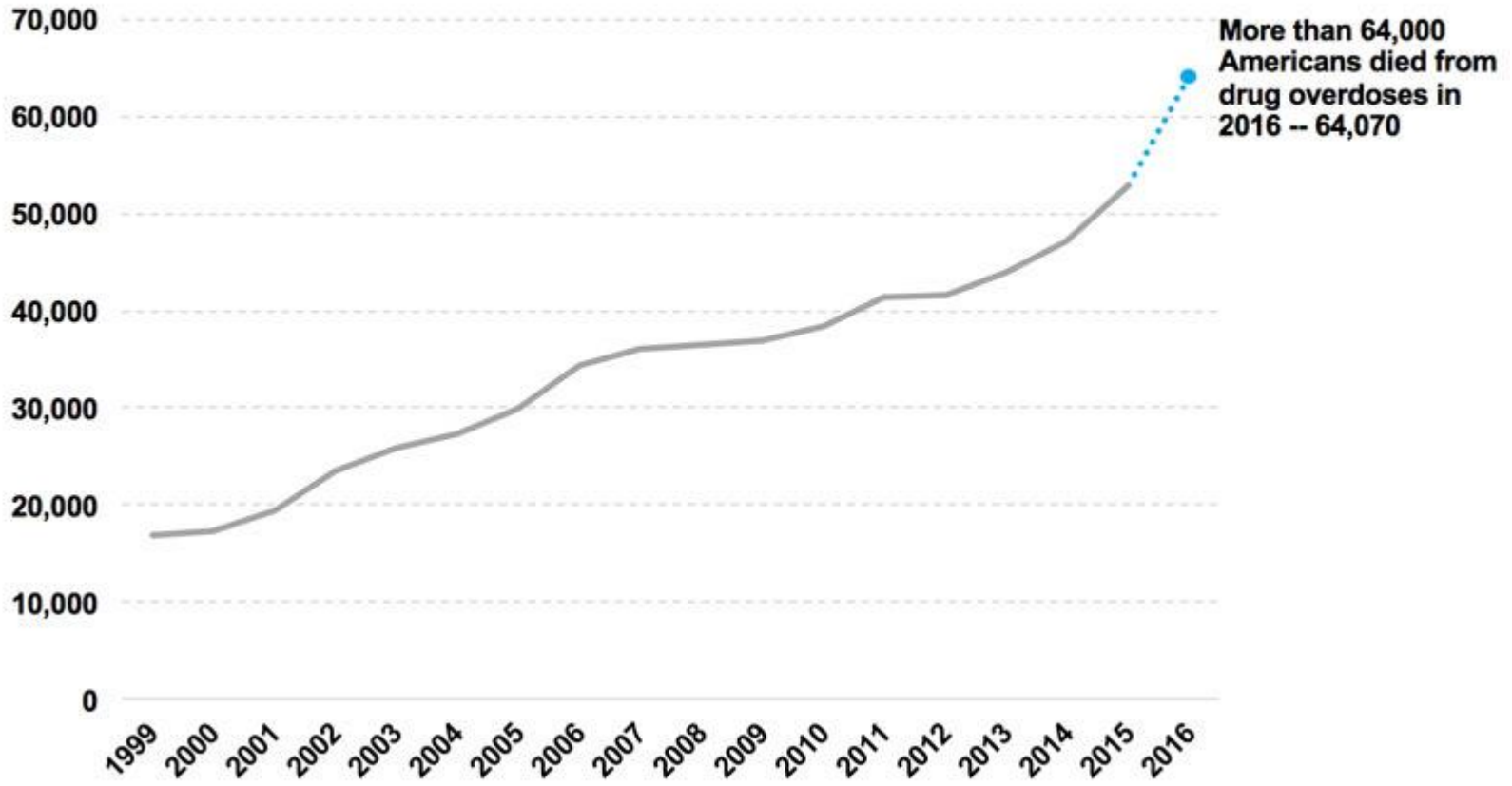
American Psychiatric Association, 2013

Total U.S. Drug Deaths



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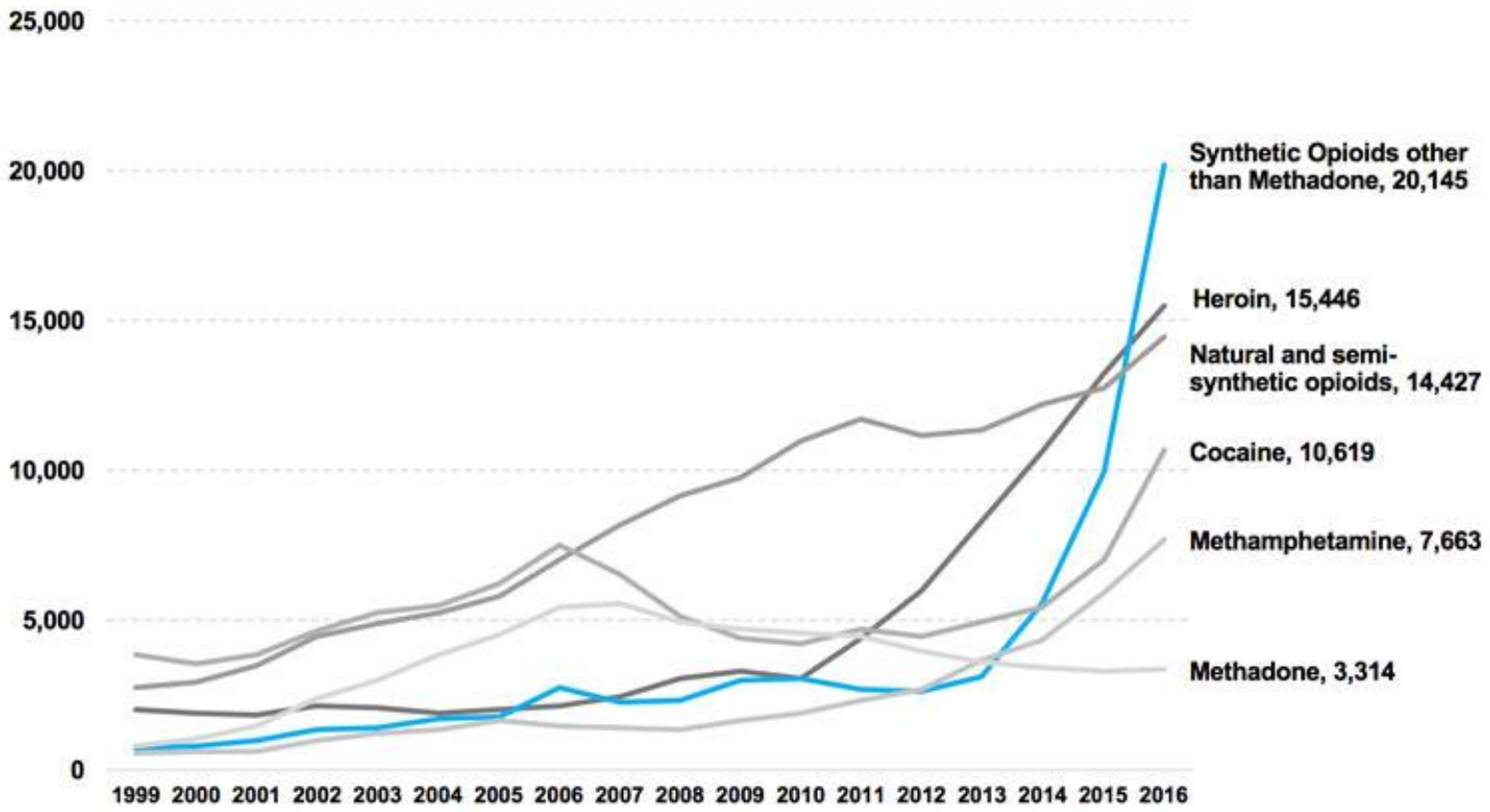
CDC, 2016

Drugs Involved in U.S. Overdose Deaths, 2000 to 2016



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CDC, 2016

Context

- 58,200 deaths during the *entire* Vietnam War
- 50,628 AIDS-related deaths in 1995 in the worst year of the AIDS.
- 35,092 motor vehicle deaths in 2015.
- 24,703 deaths due to homicides in 1991.

Biology of Motivation

Positive reinforcement

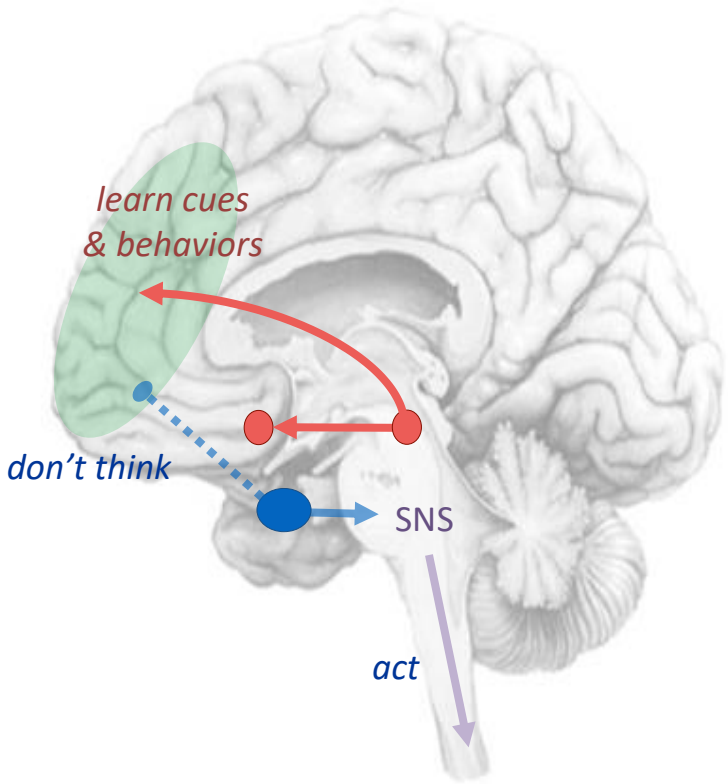
cells in the brainstem release **dopamine** in the **nucleus accumbens**

↓

liking and wanting

↓

seek out and do more



Negative reinforcement

cells in the **amygdala** are stimulated (by sensations, thoughts, memories)

↓

anxiety, fear, distress

↓

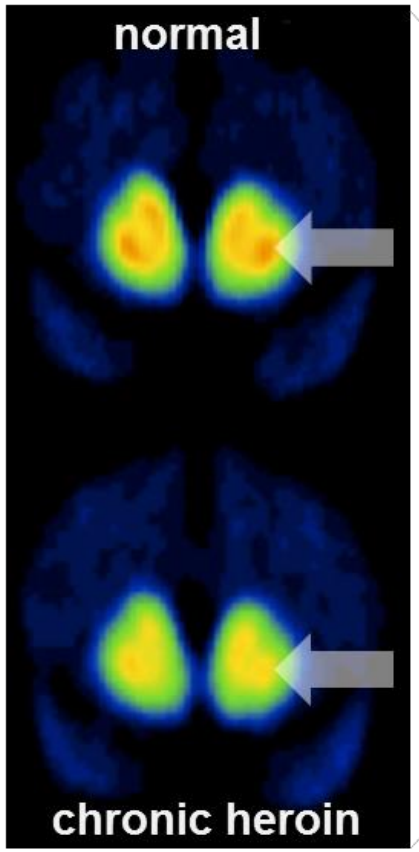
avoid things that cause, do things that relieve

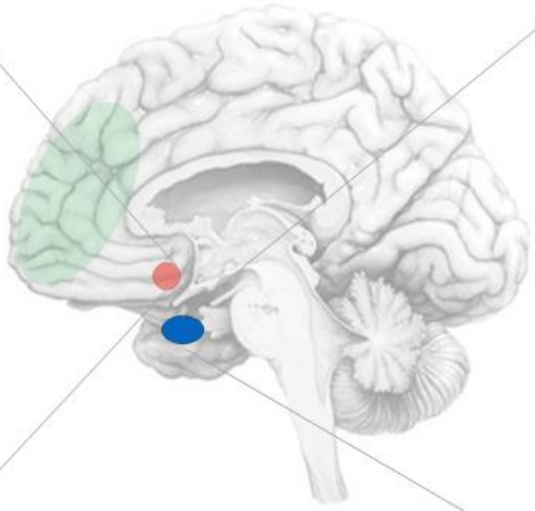
Attention, thinking, and judgment use the **prefrontal cortex**

Volkow et al 2016
Wise and Koob 2014

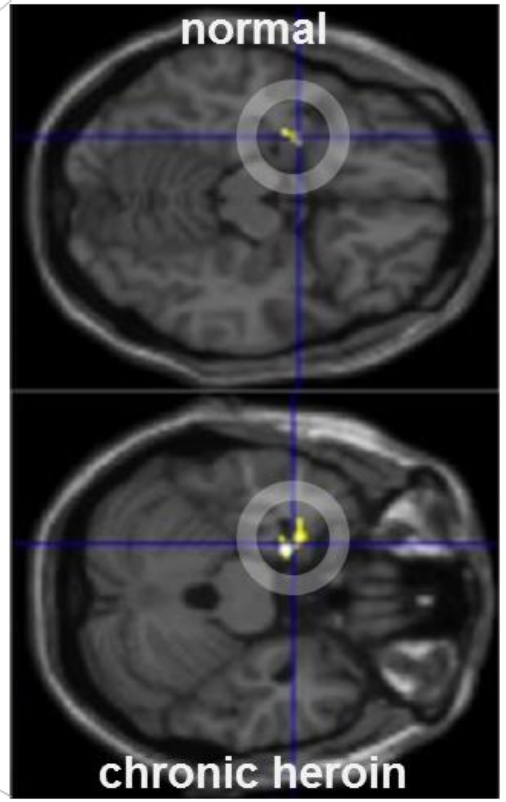
Imaging

dopamine receptors





amygdala reactivity



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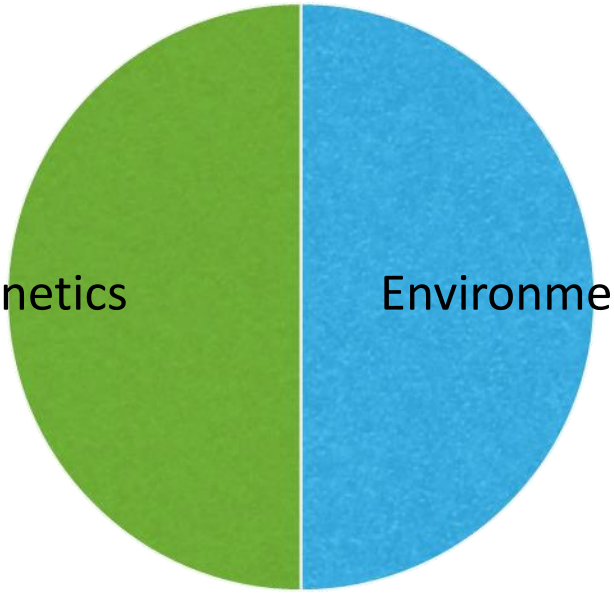
Martinez et al 2012
Schmidt et al 2014

Contributors

Biochemical
- opioid receptors
- dopamine
- other transmitters
- intracellular signals

Behavioral
- novelty seeking
- harm avoidance
- impulsivity
- psychiatric disorders



Social influence
- parents
- siblings
- friends

Adversity
- psychiatric disorders
- stressors
- lack of positive experiences

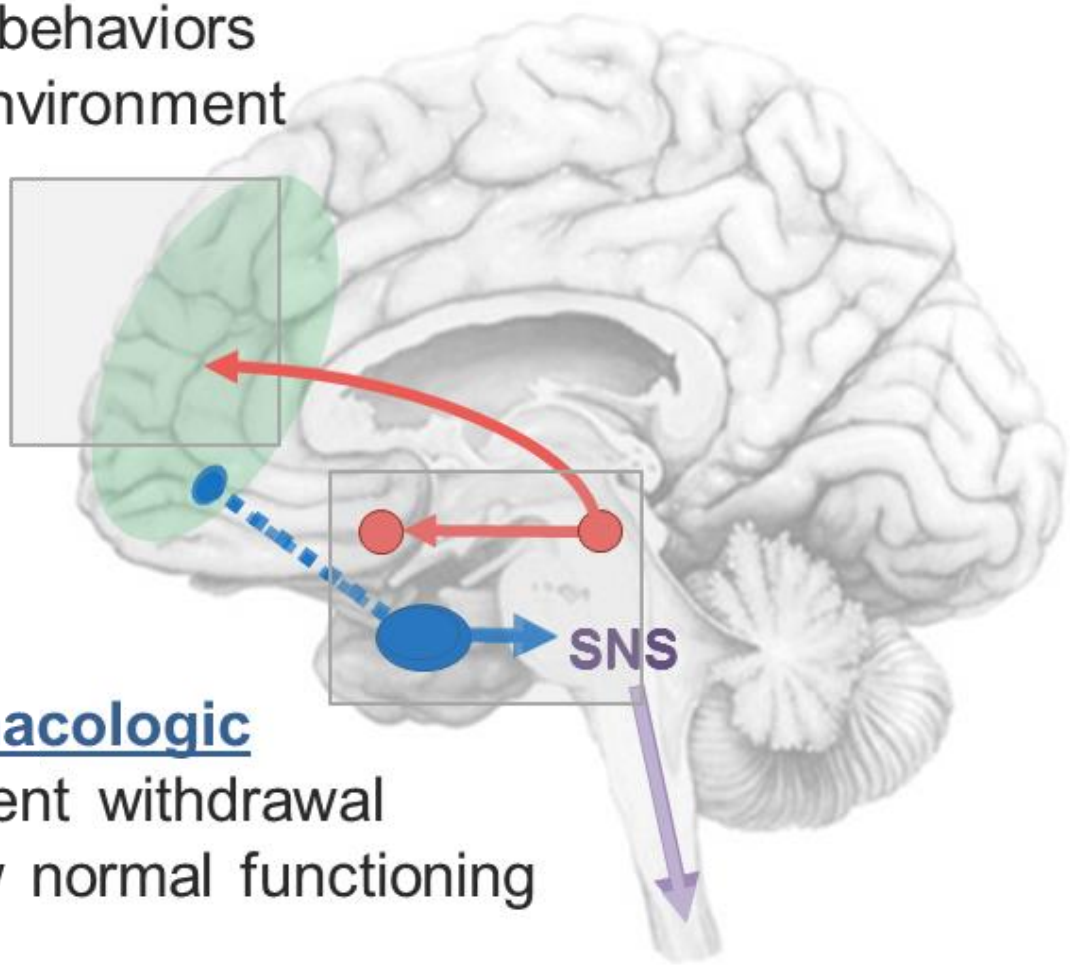
Availability
- illicit sources
- prescription
- family and friends

Anokhin et al 2015
Milivojevic et al 2012
Reed et al 2014
Wingo et al 2015
Volkow et al 2016

Treatment

behavioral

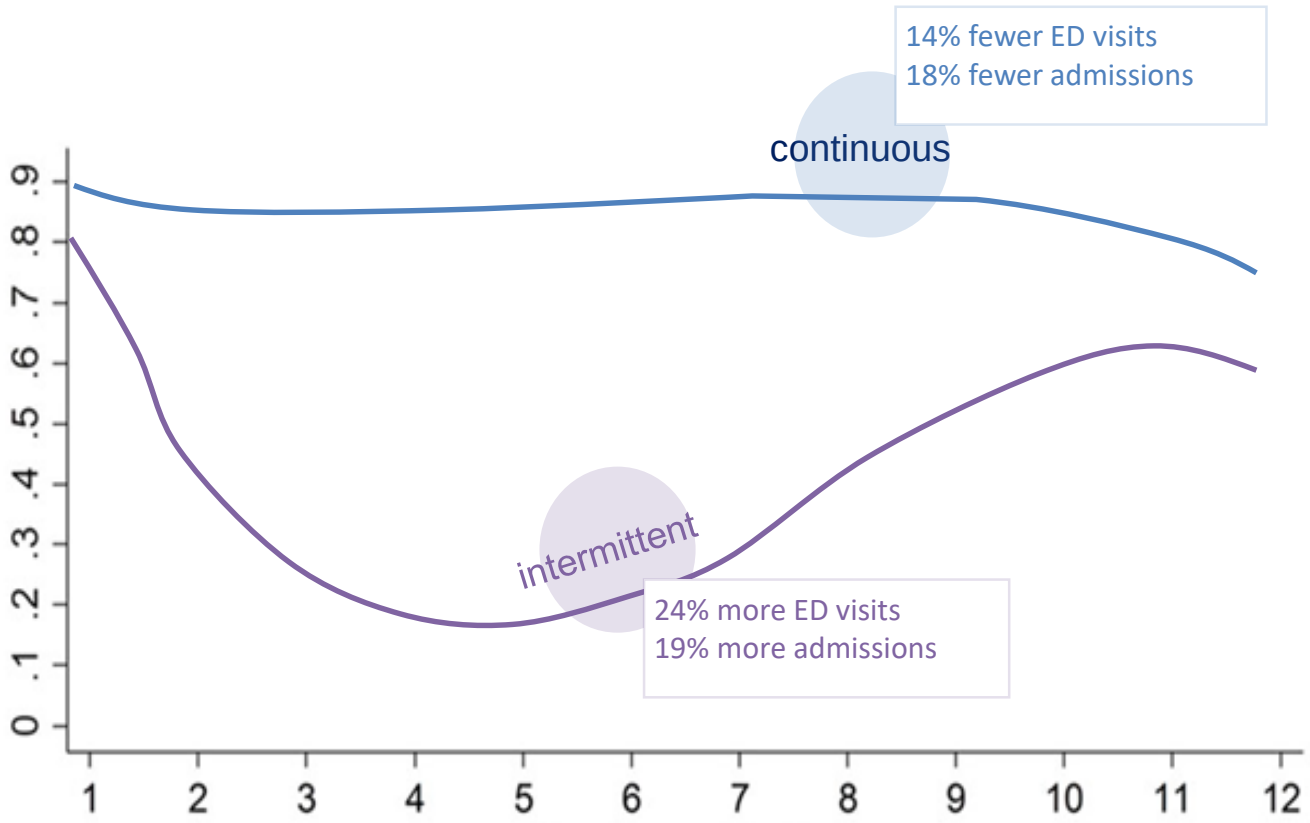
- learn new behaviors
- manage environment



pharmacologic

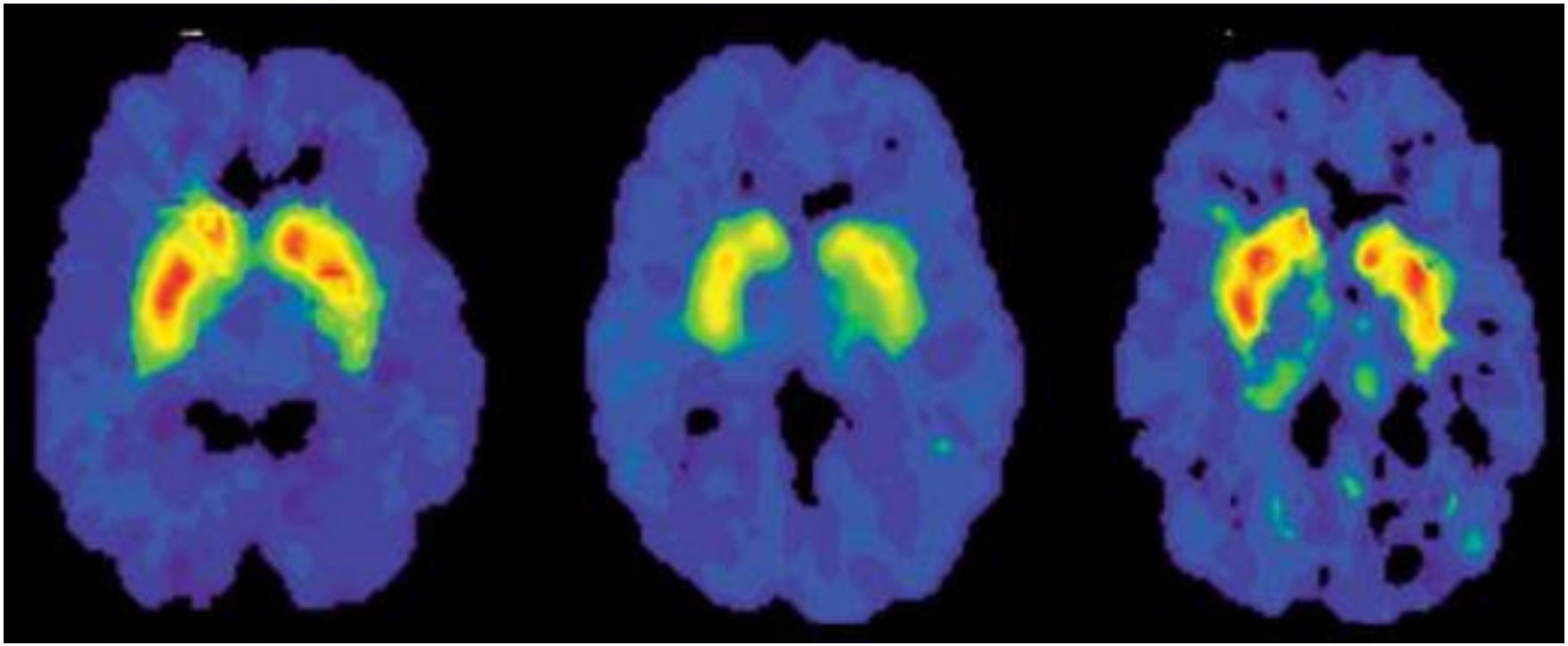
- prevent withdrawal
- allow normal functioning

Medication Assisted Treatment



Lo-Ciganic et al., 2016

The Recovering Brain



normal

1 month
of abstinence

14 months
of abstinence

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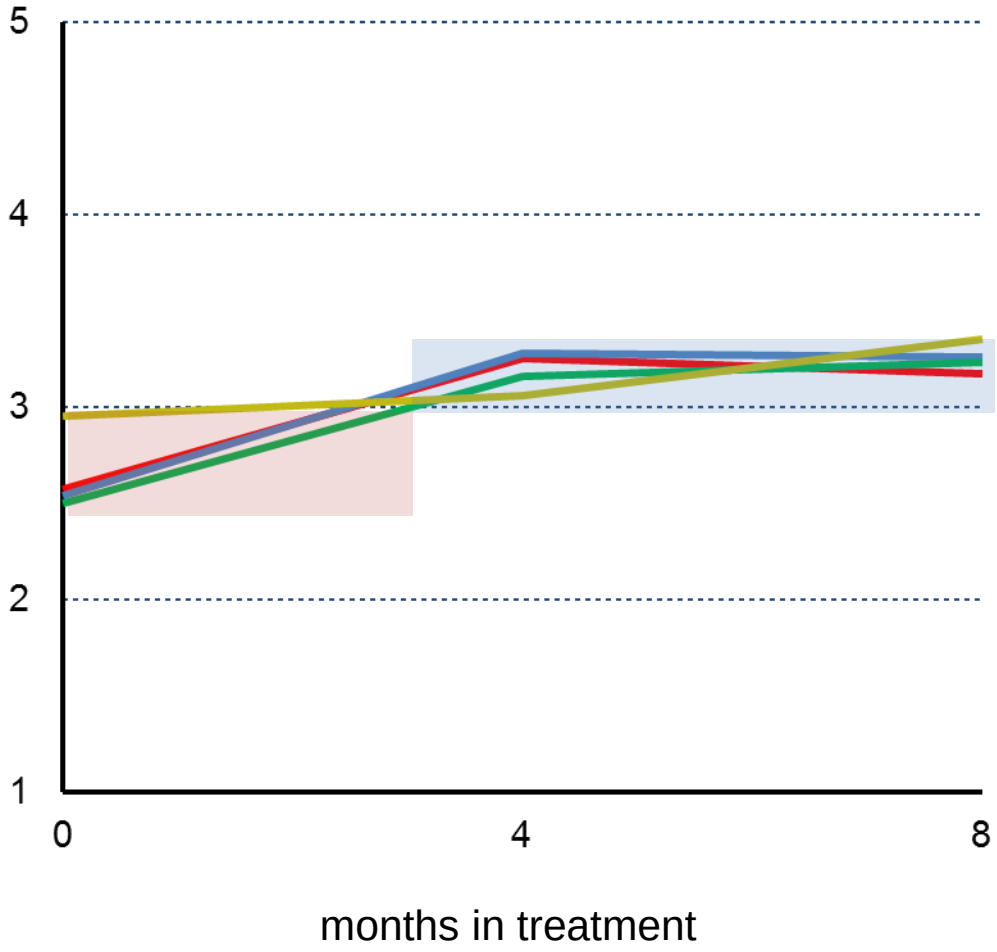
Volkow et al., 2001

Quality of Life

self-ratings on 1-5 scale:

- physical health
- social relationships
- subjective feelings
- leisure activities



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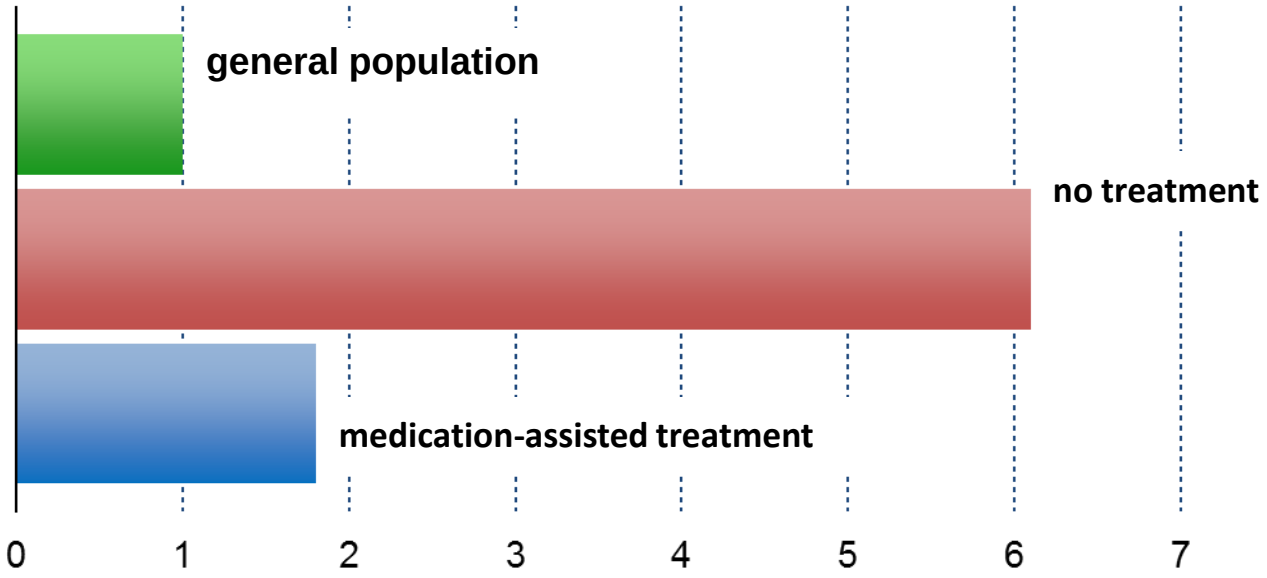
Ponizovsky & Grinshpoon 2007

Outcomes

Death rates:



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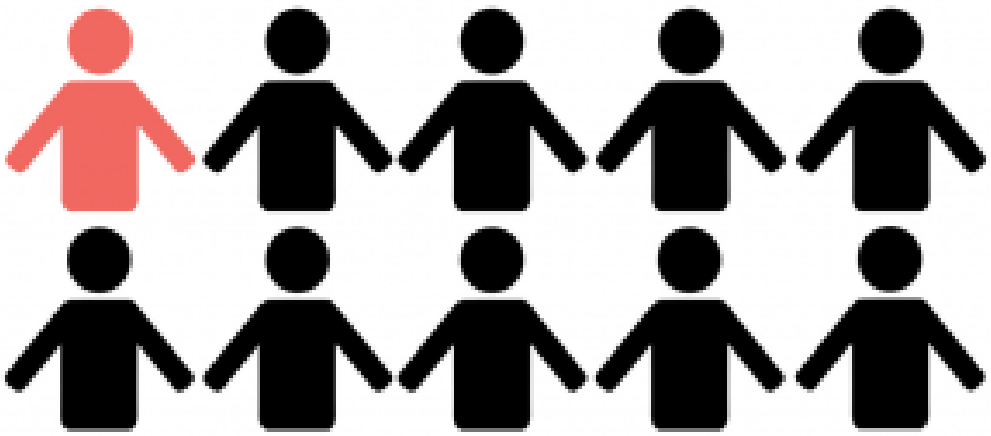
Evans et al., 2015

Treatment Gap

- 10% of those diagnosed with Substance Use Disorders received any type of specialty treatment.
- Although increasing, currently a minority of all providers are trained to provide Medication Assisted Treatment



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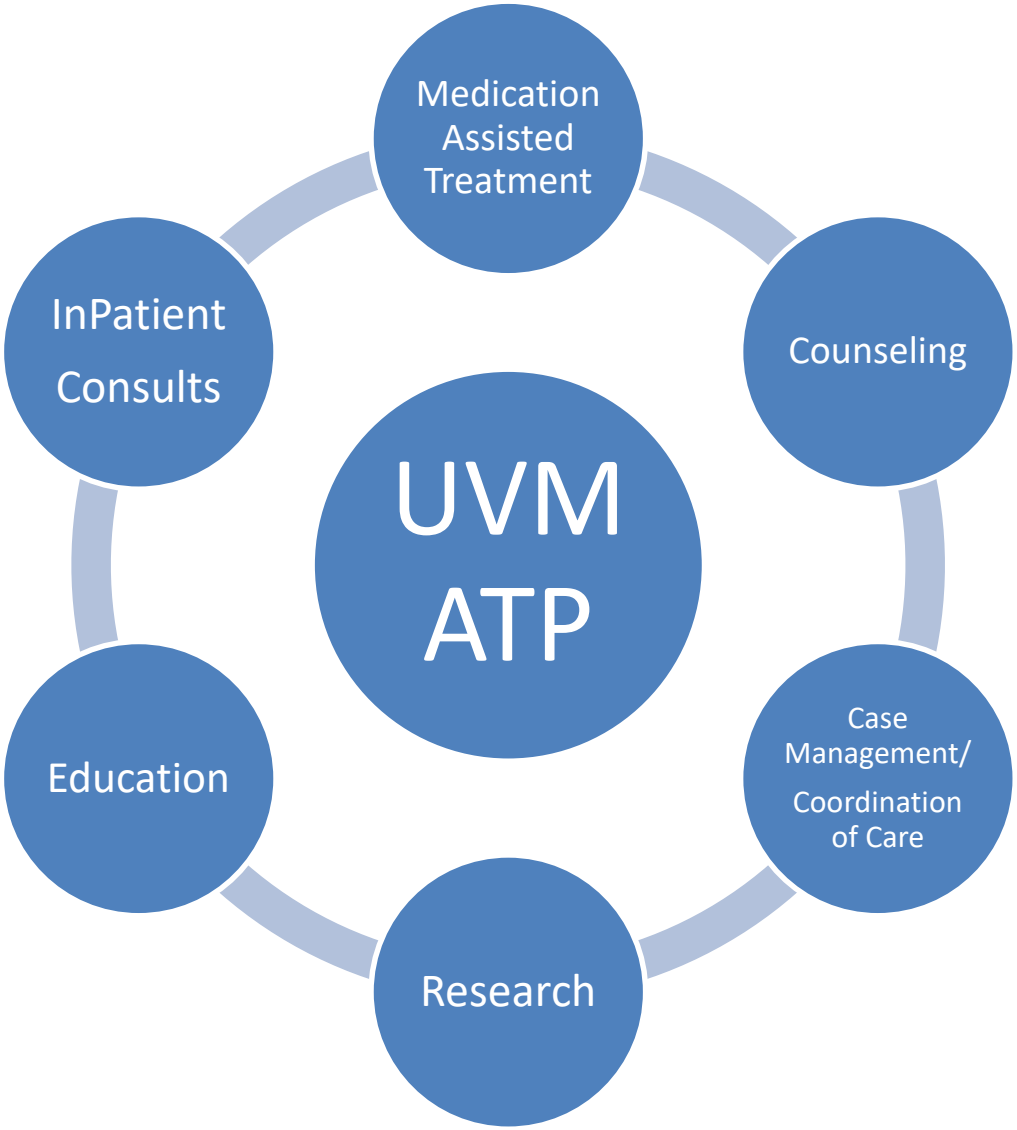
Jones et al., 2015
SAMHSA, 2015

UVMMC Addiction Treatment Program



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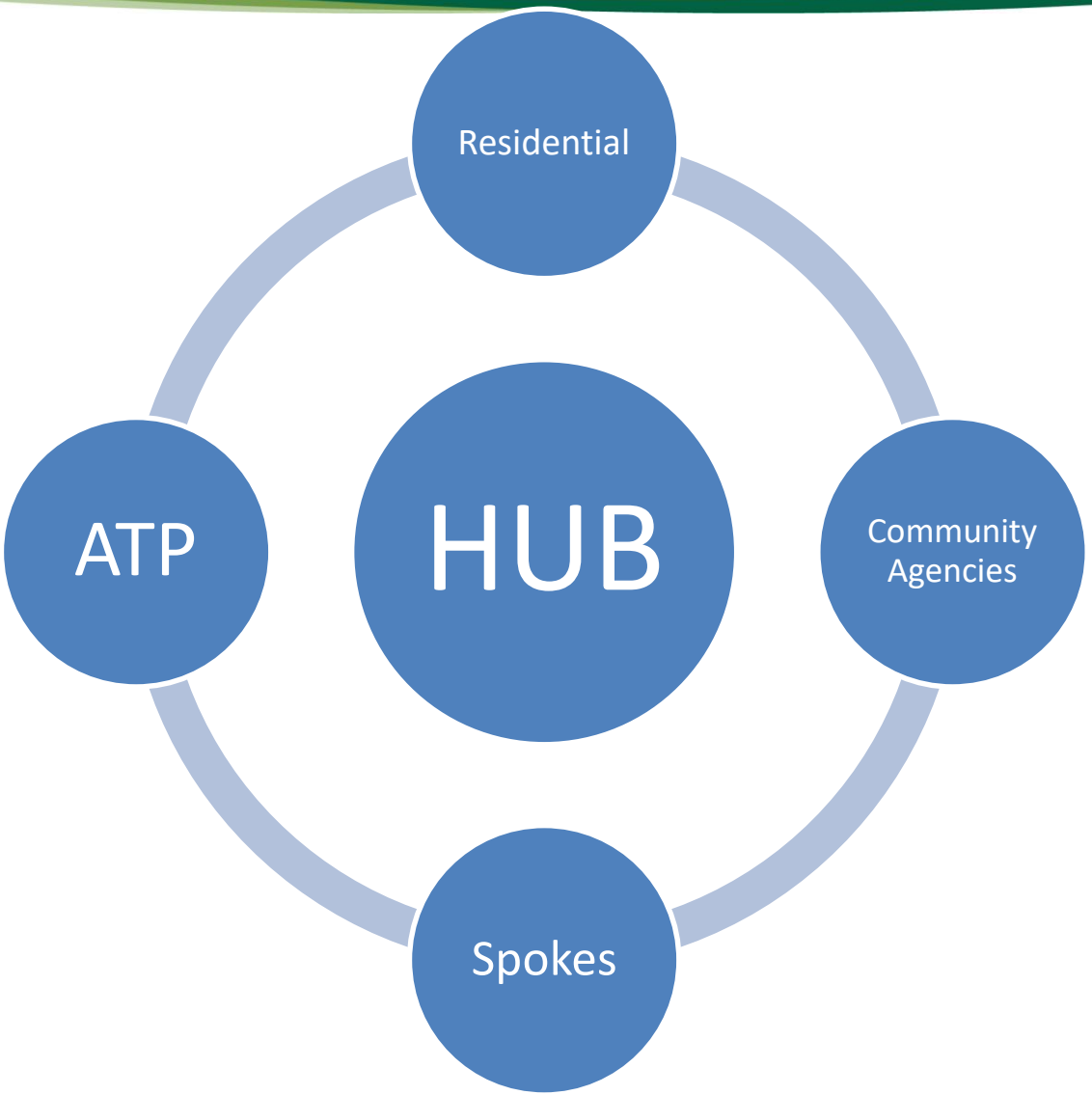
Hub and Spoke Model



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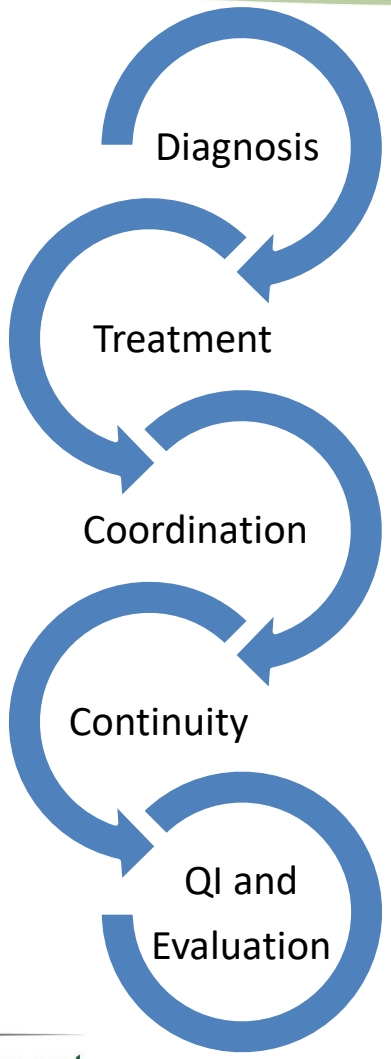
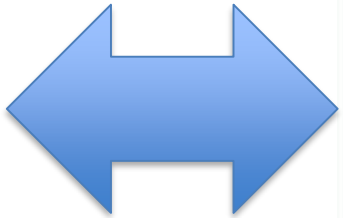
Hub-Spoke-UVMMC-State of Vermont Partnership





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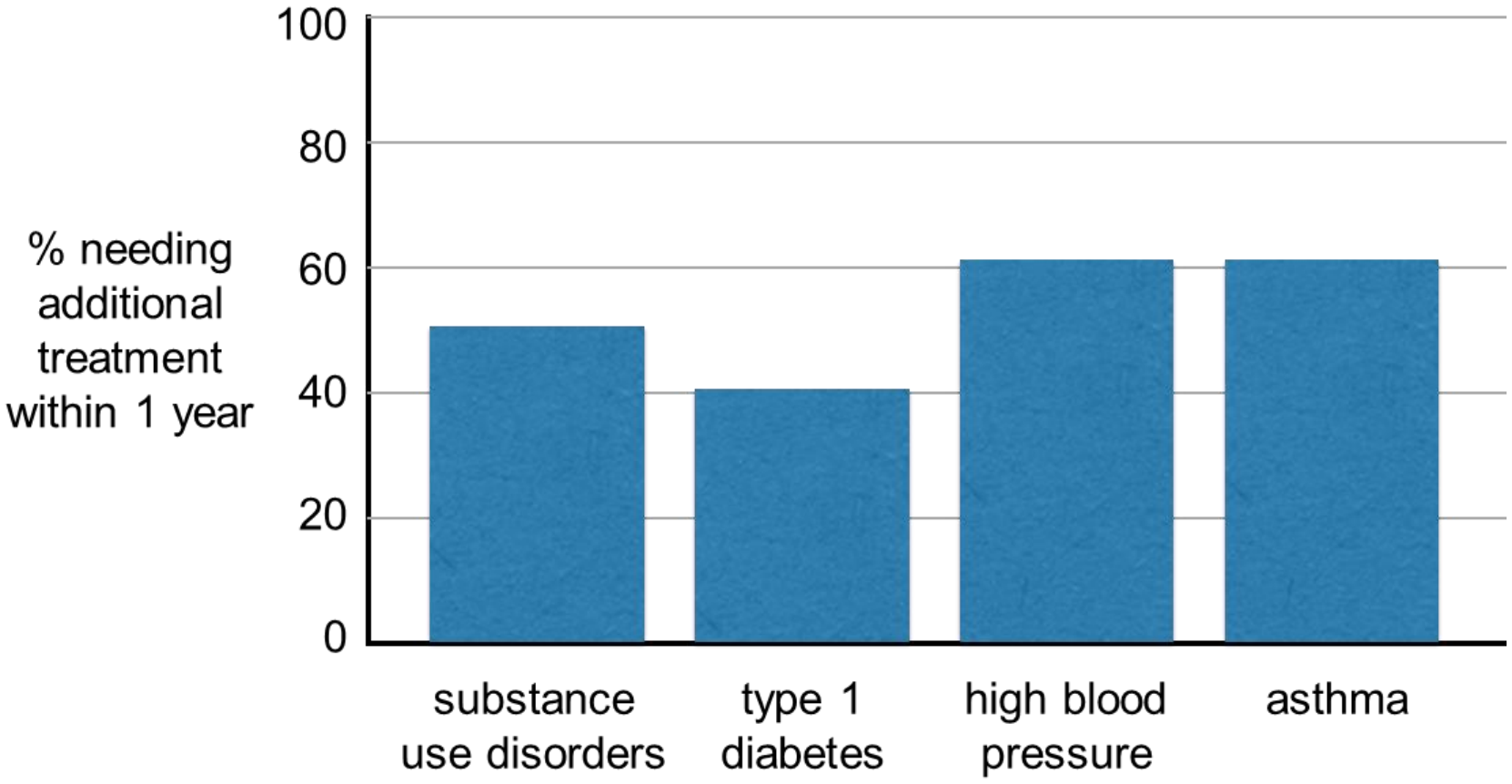
Berwick et al., 2008
Bodenheimer and Sinsky., 2014

Chronic Medical Conditions



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McLellan et al 2000

Summary

1. Humans have brain systems that motivate us to seek out pleasure, avoid distress, and learn behaviors that help us do these things.
2. Addictive substances hijack these basic systems by activating them more powerfully than natural experiences.
3. Addiction involves long-term changes in the brain that decrease pleasure, increase distress, and impair decision-making.
4. Vulnerability to addictive substances is complex, with genes and environment contributing about equally.
5. Addictions are chronic conditions, like asthma or diabetes, with similar rates of relapse and opportunities for recovery.

ATP Group

- Maureen Cassidy, RN
- Jay Chisholm, MD
- Jen D'Aiello, LADC, LICSW
- Michael Goedde, MD
- Peter Jackson, MD
- Anna Letendre, RN
- Bethany Mahler, LADC
- Amy Saunders, LICSW
- Sanchit Maruti, MD

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Center for Disease Control Wonder Database: https://wonder.cdc.gov/

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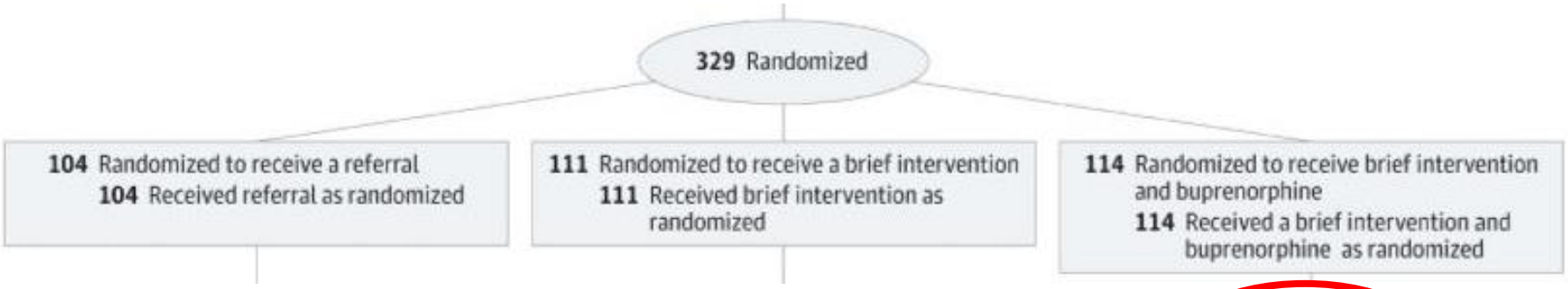
Emergency Department Initiated Buprenorphine Treatment for Opioid-Dependence

Daniel Wolfson, MD, FACEP, ABEM/EMS
University of Vermont Larner College of Medicine
Emergency Department

Emergency Department–Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence:

A Randomized Clinical Trial

Gail D'Onofrio, MD, MS,
Department of Emergency Medicine, Yale School of Medicine, New Haven, Connecticut



37% **45%** **78%**

Engaged at 30 Days

2.3 **2.4** **0.9**

Days of use per week from 5.4

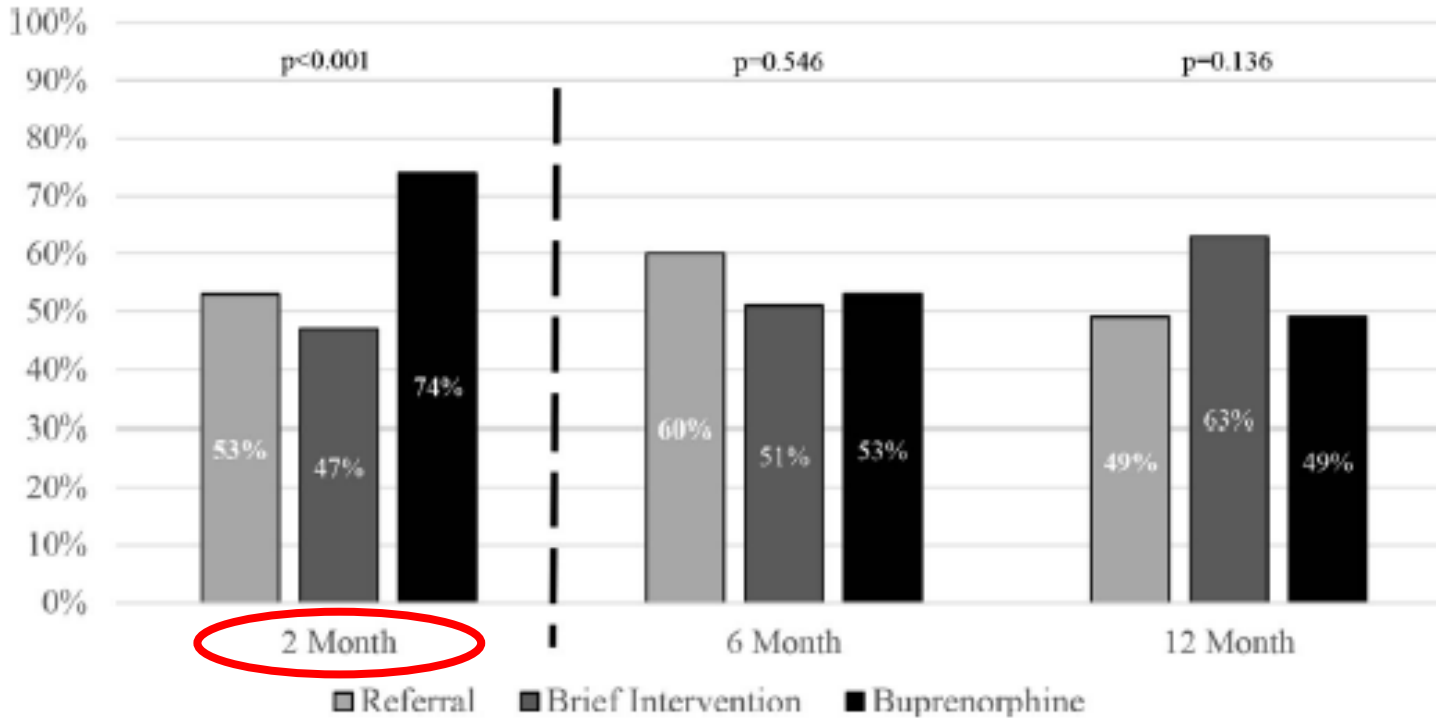
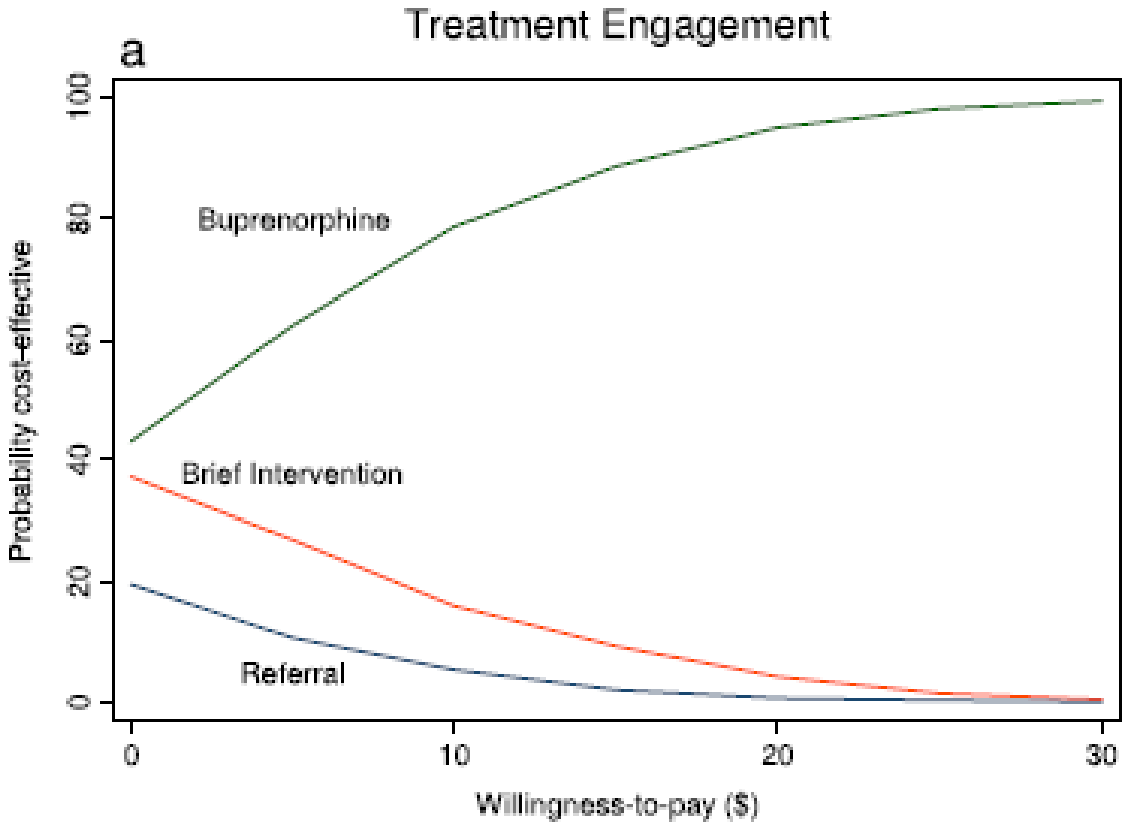


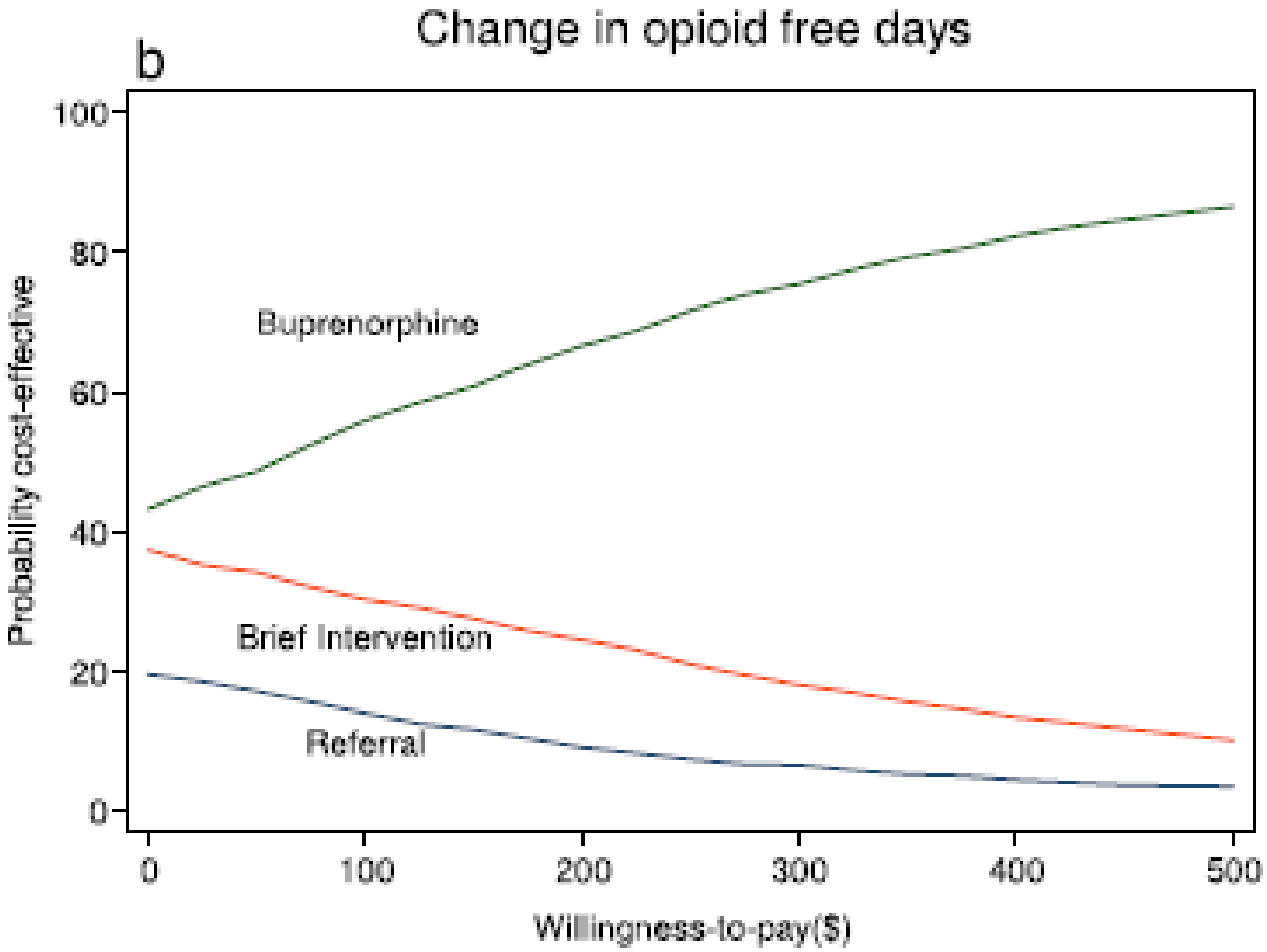
Figure 2 Engagement in formal addiction treatment.

Cost-effectiveness of emergency department-initiated treatment for opioid dependence

Susan H. Busch[1], David A. Fiellin[1,2], Marek C. Chawarski[3], Patricia H. Owens[4], Michael V. Pantalon[4], Kathryn Hawk[4], Steven L. Bernstein[4,5], Patrick G. O'Connor[2] & Gail D'Onofrio[4]

Department of Health Policy and Management, Yale School of Public Health, New Haven, CT, USA,[1] Department of Internal Medicine, Yale School of Medicine, New Haven, CT, USA,[2] Department of Psychiatry, Yale School of Medicine, New Haven, CT, USA,[3] Department of Emergency Medicine, Yale School of Medicine, New Haven, CT, USA[4] and Department of Chronic Disease Epidemiology, Yale School of Public Health, New Haven, CT, USA[5]


Treatment Engagement
a
Probability cost-effective
0
20
40
60
80
100
Buprenorphine
Brief Intervention
Referral
0
10
20
30
Willingness-to-pay ($)


Change in opioid free days
b
Probability cost-effective
100
80
60
40
20
0
Buprenorphine
Brief Intervention
Referral
0
100
200
300
400
500
Willingness-to-pay($)


CRIME SCENE DO NOT ENTER
CRIME COSTS
Referral $5357
Brief Intervention $3743
Buprenorphine $2566


TIME COSTS
Referral $283-382
Intervention $283-382
Buprenorphine $97

- Promising Model
- Emergency Department
  - Screening for opioid disorder
  - ED Buprenorphine Initiation
- Addiction Treatment Program
  - Follow up within 72 hours
  - Stabilize
  - Refer to spokes

- Plan protocols
- Work flows
- Funding
- Resources
- Anticipate start up early next year

Vermont: Governor's Opioid Coordination Council

November 30, 2017

Jolinda LaClair, Director of Drug Prevention Policy; Director of the OCC

jolinda.laclair@vermont.gov

Opioid Coordination Council
Executive Order No. 02-17; 09-17

- Negative effect/all demographics/all communities
- Vermont's opioid crisis results in increased drug and human trafficking, mortality, and costs to Vermont's resources and quality of life

OCC's MISSION

To lead and strengthen Vermont's response to the opioid crisis by ensuring full interagency and intra-agency coordination between state and local governments in the areas of prevention, treatment, recovery and law enforcement activities.

Alignment, and Consideration, of Strategies and Recommendations by Other State and National Commissions and Councils

Governor Scott's Top Three Priorities

- Grow the Economy
- Make Vermont More Affordable for Families and Businesses
- Protect the Vulnerable

Vermont's Challenges: **6 – 3 – 1**

"6": Six fewer Vermonters in the workforce every day.

"3": Three fewer children every day in the public school system.

"1": One baby born every day to a mother with addiction.

President's Commission, National Governors' Association (NGA)

- Comprehensive family centered approach for mothers & their children, prenatal to postnatal
- SUD workforce development: employers and employees
- Decouple felony convictions from business/license opportunities
- Prescriber & patient education
- National multi-platform media campaign to raise public awareness and stigma
- Drug Take Back Days
- Drug Treatment Courts
- Recovery Coaches, reimbursement for recovery support services, recovery housing
- Drug recognition training
- Data collection and sharing
- Non-pharmacological pain treatment options
- MAT in Corrections – Medicaid coverage to support

VT Marijuana Advisory Commission

The Education and Prevention, and Roadway Safety committees will address key OCC priorities, including youth prevention programs, availability of treatment services, broad-based prevention messaging, and an appropriate impairment testing mechanism.

Goals:

The Council challenges itself and the departments, agencies and communities of Vermont . . .

. . . to REDUCE . . .

- The number of people with substance use disorders (SUDs)
- The number of opioid overdose deaths
- The number of babies born into addiction
- The number of children in state custody as a result of SUDs
- The number of opioid prescriptions written each year
- The number of youth using illegal substances
- The supply of illicit drugs in Vermont
- Prevent, reduce, eliminate opioid related crime

. . . and to INCREASE . . .

- The number of people in treatment
- The number of people in recovery who have housing, jobs, and social supports
- Vermont communities will be strong, safe, and resilient

Strategies: Overarching

- Develop a statewide comprehensive Continuum of Care for pregnant mothers and their children
- Grow and Support VT's Workforce: Vermonters in Recovery; the SUD Workforce
- Data Interoperability

Strategies:
Prevention, Education & Intervention

- Statewide Comprehensive School-Based Prevention
- Health Care: Education, Monitoring and Screening for Providers and Patients
- Community-Based Prevention
- Statewide Prevention Messaging Campaign

<u>Intervention</u>

- Syringe Exchange
- Naloxone Supply and Training

<u>Harm Reduction</u>

- Drug Disposal
- Sharps Disposal

Strategies: Treatment

- MAT in Correctional Facilities
- Non-Pharmacological Approaches
- Drug Treatment Courts/Family Treatment Courts
- Medicare and Medicaid

Strategies: Recovery

- Recovery Centers; Recovery Coaches
- Family-Supportive and Recovery Housing
- Employment in Recovery

Strategies: Enforcement

- Drug Trafficking Investigations
- Drug Recognition Training
- Roadside Drugged Driving Test

Next Steps

- Review by Governor Scott
- Develop policy, program, infrastructure and investment portions of report (December 2017)
- Completion and release of report (Late January 2018)
- Phase 2 of OCC's work: deeper assessment of best practices and needs, especially in priority strategies (2018)

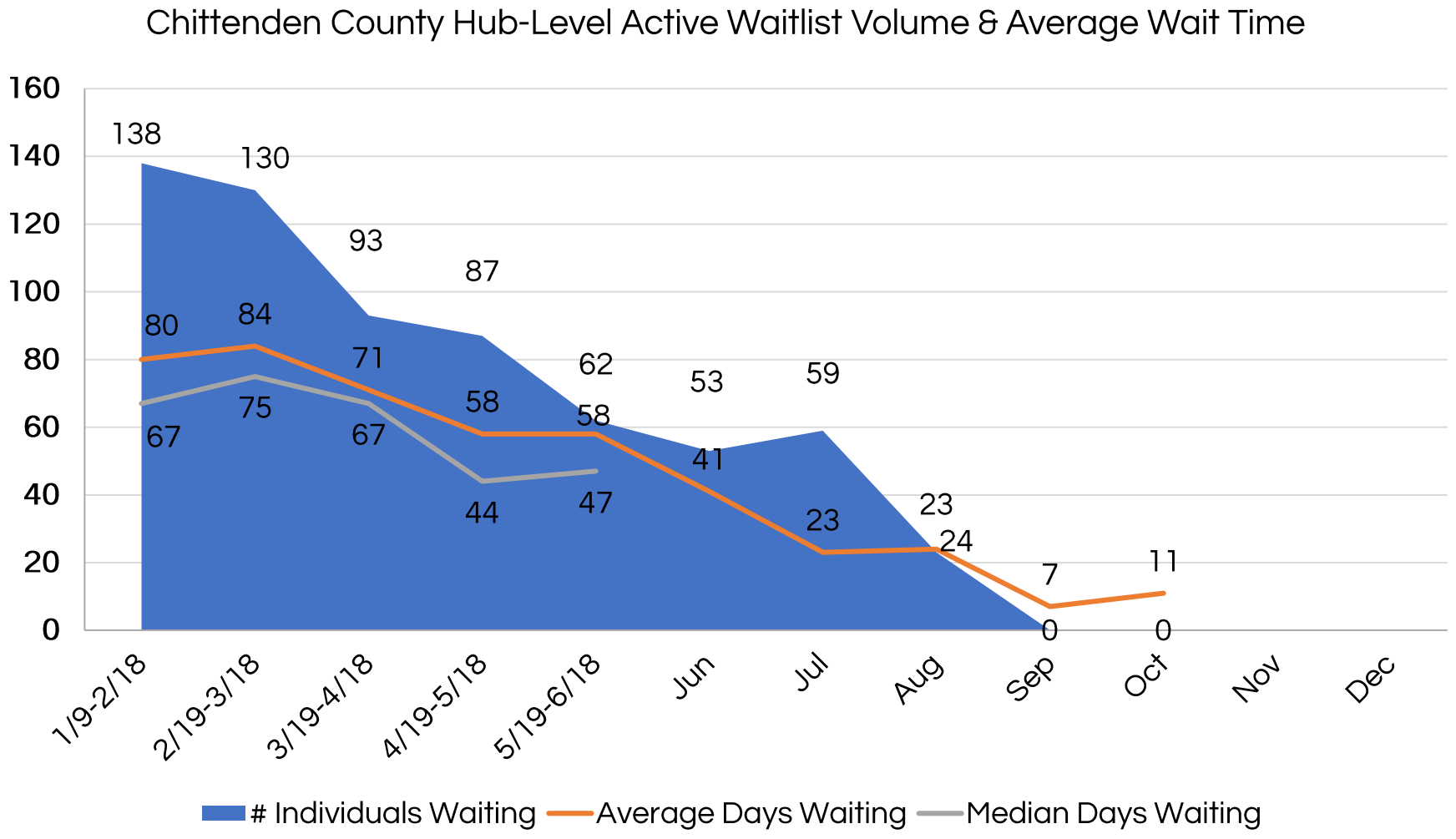
Updated Burlington 2018 Opioid Legislative Priorities

1) Expand medically assisted treatment in Vermont prisons
   - Consistent, 120-day treatment regime across all Vermont facilities, *potentially including re-assessments every 3 months***
   - Clarify and consistently apply a transition protocol, to include MAT medications, for these departing prison with a history of opioid use disorder
2) *Consider supporting study or pilot effort transitioning VT prisons to certified opioid treatment programs, with induction protocols enabling broader assessments*
3) Expand mental health resources by supporting the creation of new residential options for those with opioid or co-occurring mental health addiction challenges
4) Request a study reviewing Vermont treatment protocols and compare with national best practices and available information on opioid treatment outcomes
5) Support the expansion of family sober housing options that allows families to remain united with parents recovering from a struggle with co-occurring disorders (of which addiction is one)
6) Support for evidence-based prevention infrastructure that meets the whole community
   - *RiseVT has been recommended as a program to support*
7) *Support the UVM Medical Center extension of VPMS access*

Updated Additional Measures

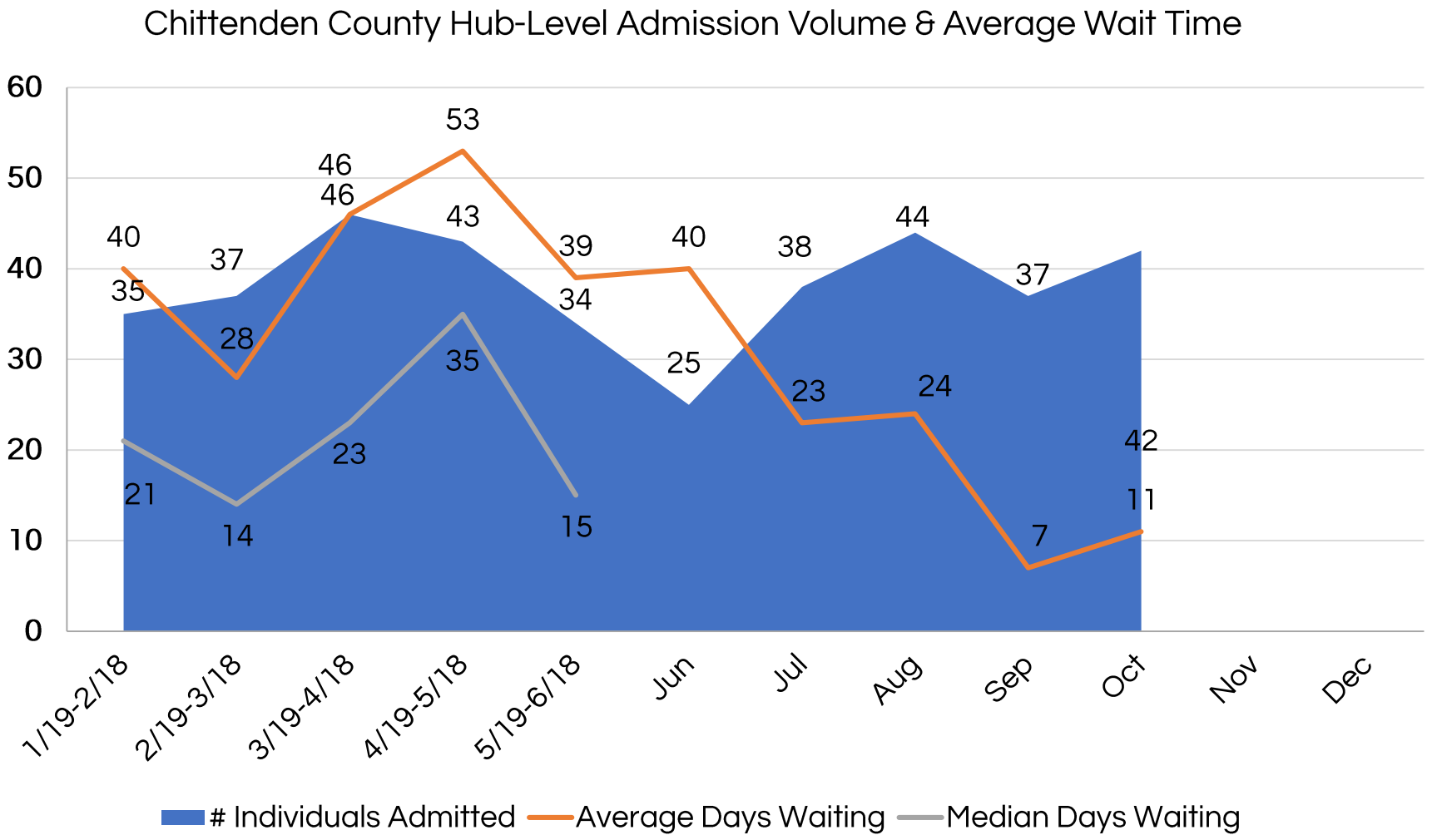
1) Support reviewing current health care payment system reform concepts and insurance incentives around pain management
    - I.E., acupuncture, massage, or other alternative therapies in lieu of prescription medication)
2) Allow Medicaid to be utilized to reimburse for out-of-state treatment options

Chittenden Hub Waitlist Volume & Delay



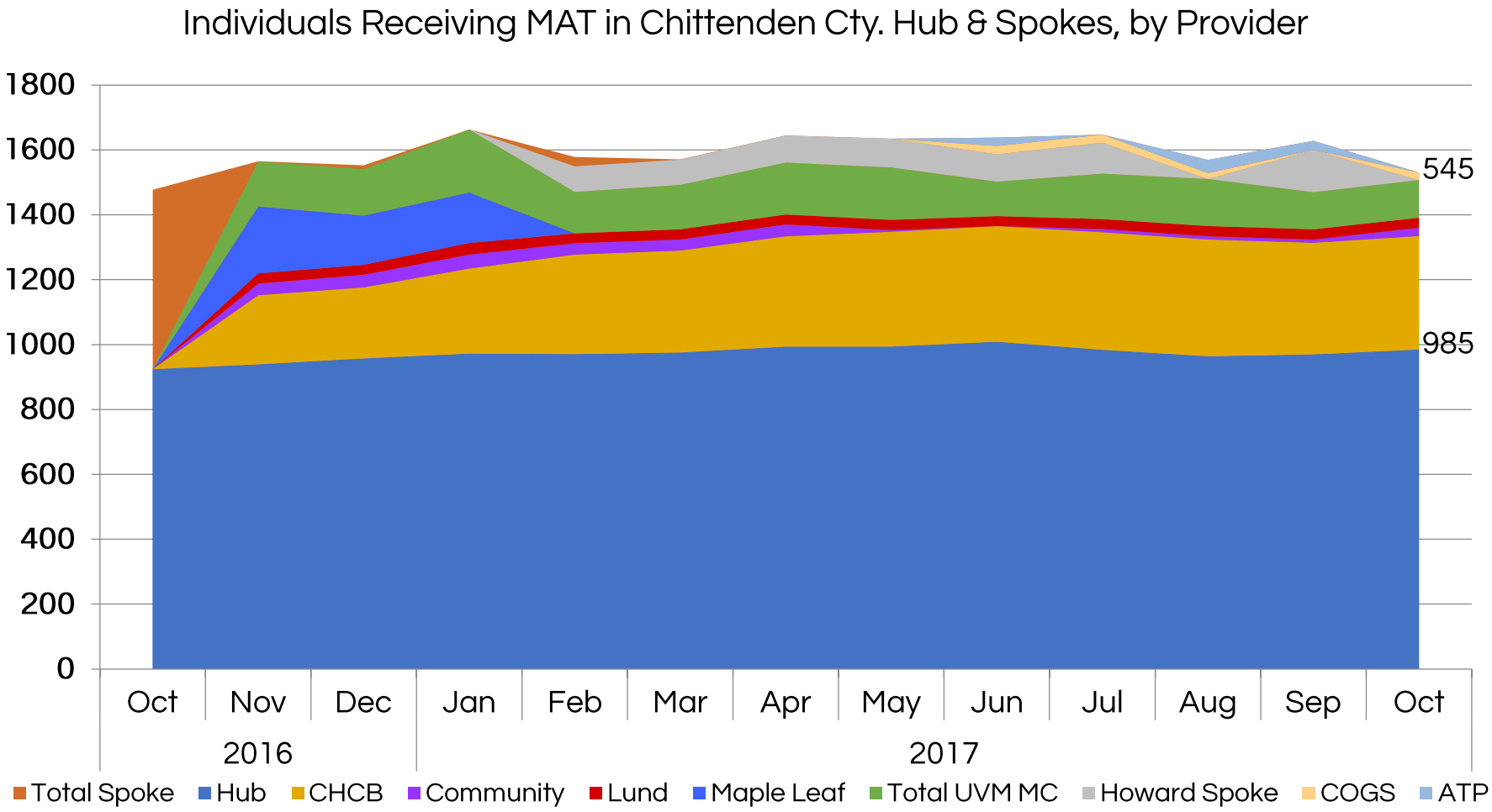
Data Source: Howard Center Triage Report

Chittenden Hub Admission Volume & Delay



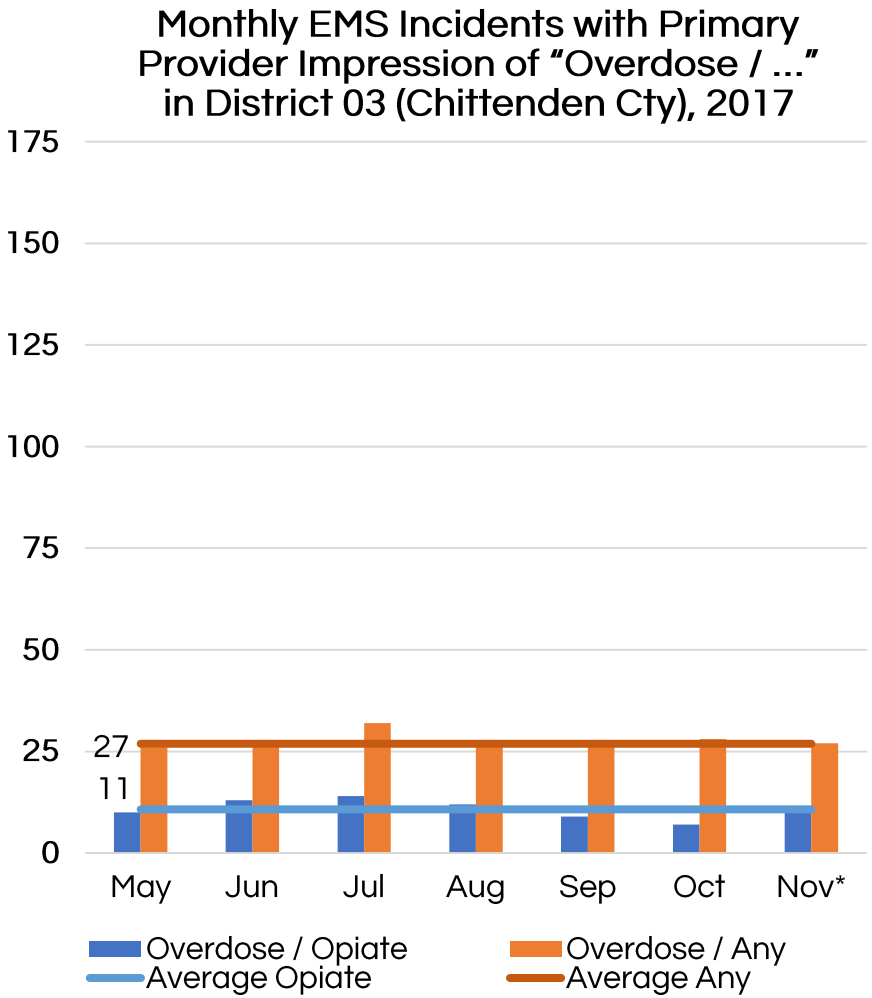
Data Source: Howard Center Triage Report

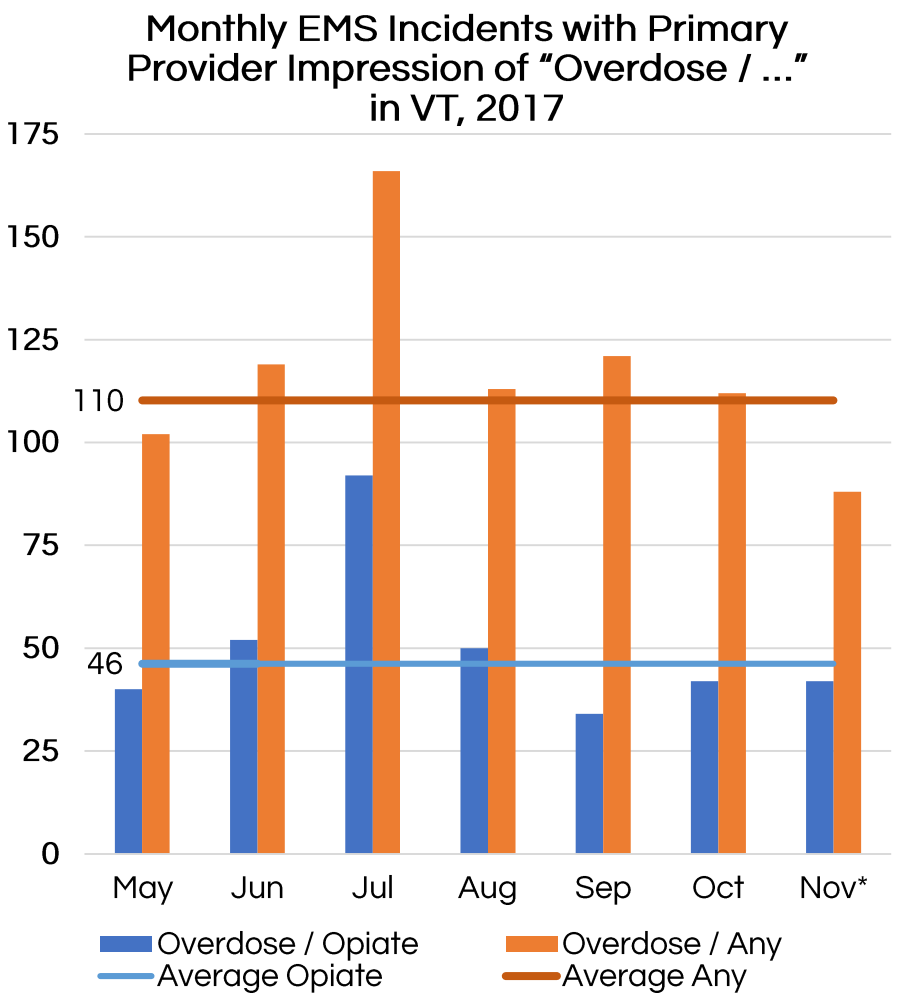
Individuals Treated in Chitt. Cty. Hub & Spokes



Data Source: Vermont Department of Health and Opioid Care Alliance of Chittenden County

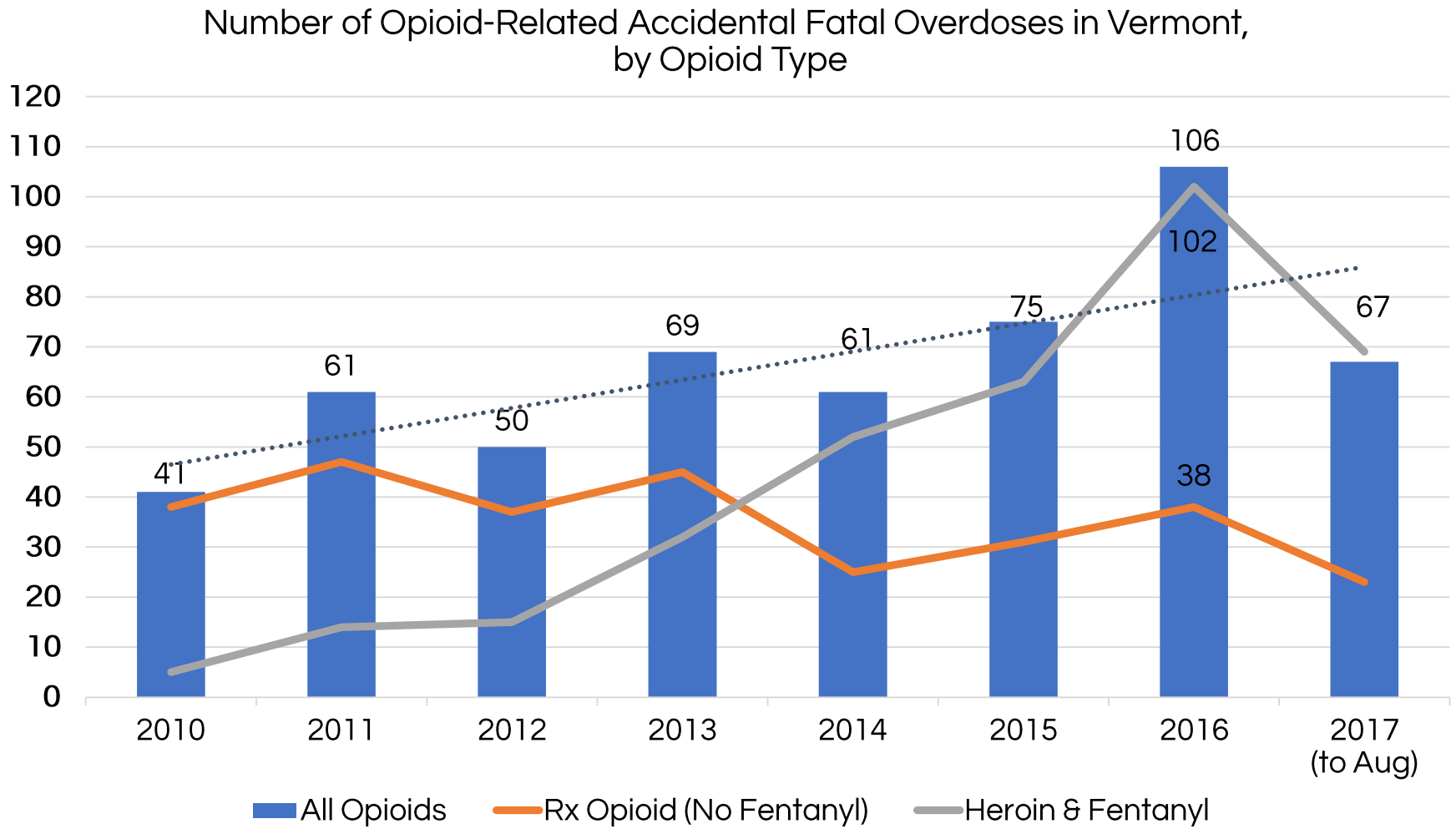
VT EMS Responses to Overdose Incidents





Data Source: SIREN EMS Incident Reports, *Preliminary Data

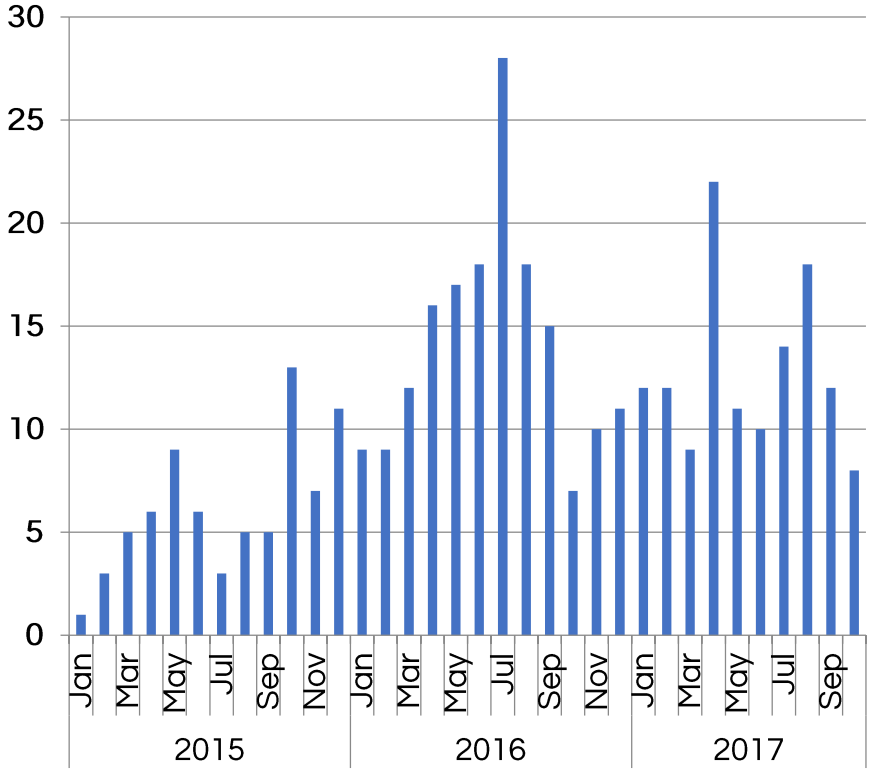
VT Opioid-Related Accidental Fatal OD



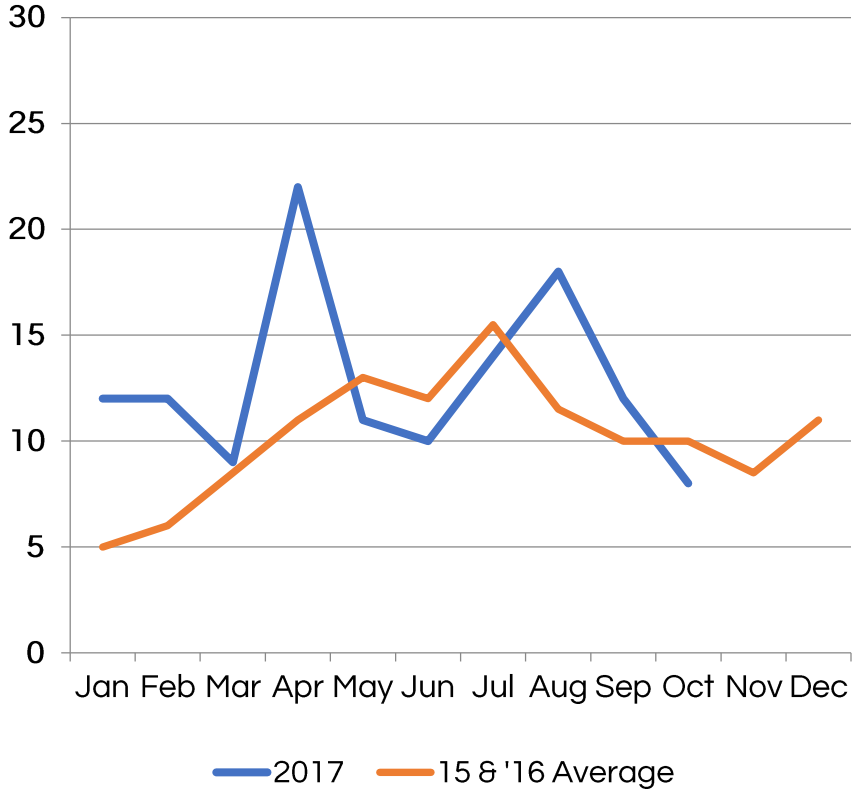
Data Source: Vermont Department of Health

UVM Medical Center Opioid-Related ED Visits

Monthly UVM Medical Center ED Encounters Coded as "Opioid OD" & "Opioid Poisoning"

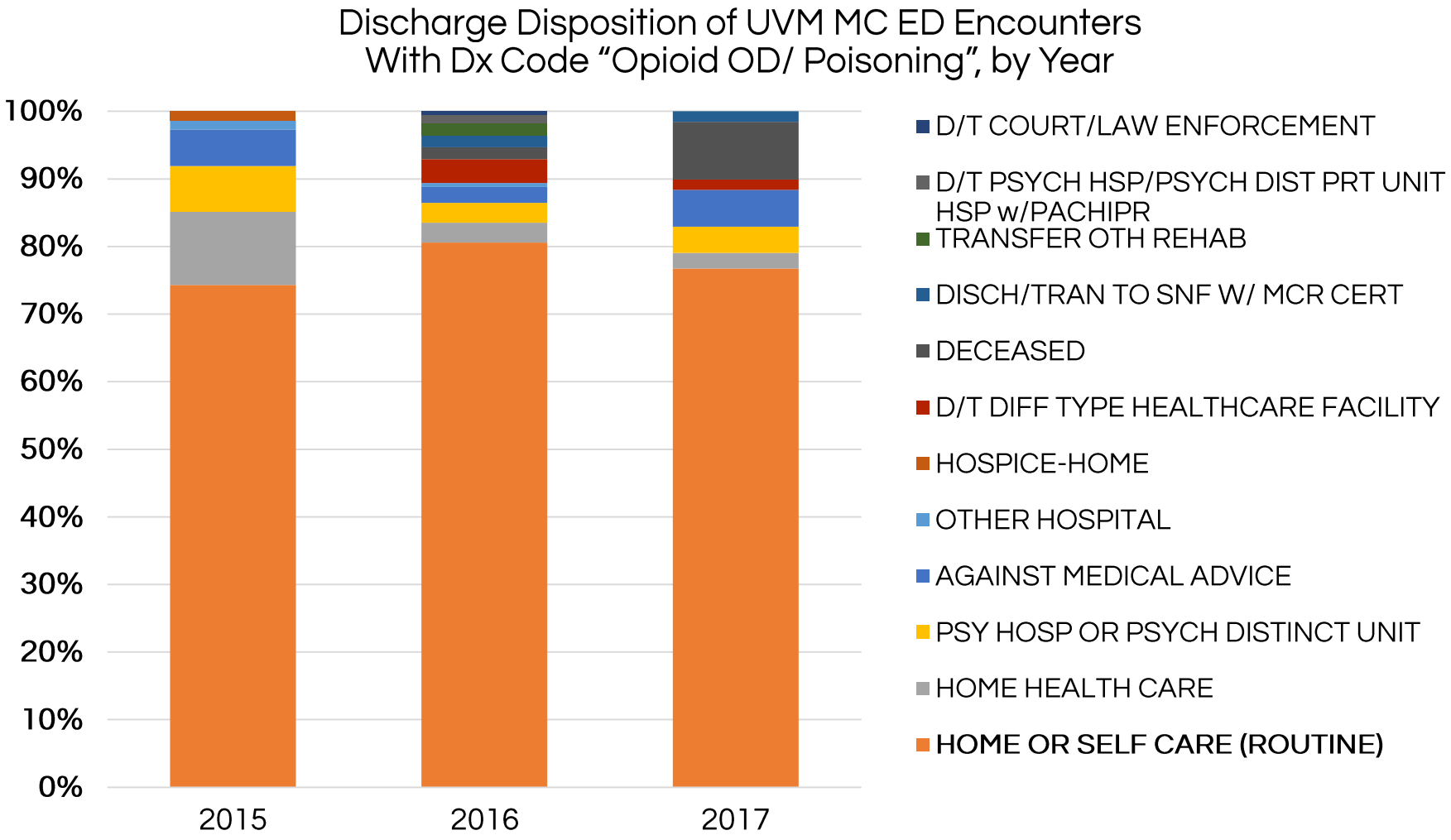


Average Monthly UVM Medical Center Opioid-Coded ED Encounters, by Year



Data Source: UVM MC ED

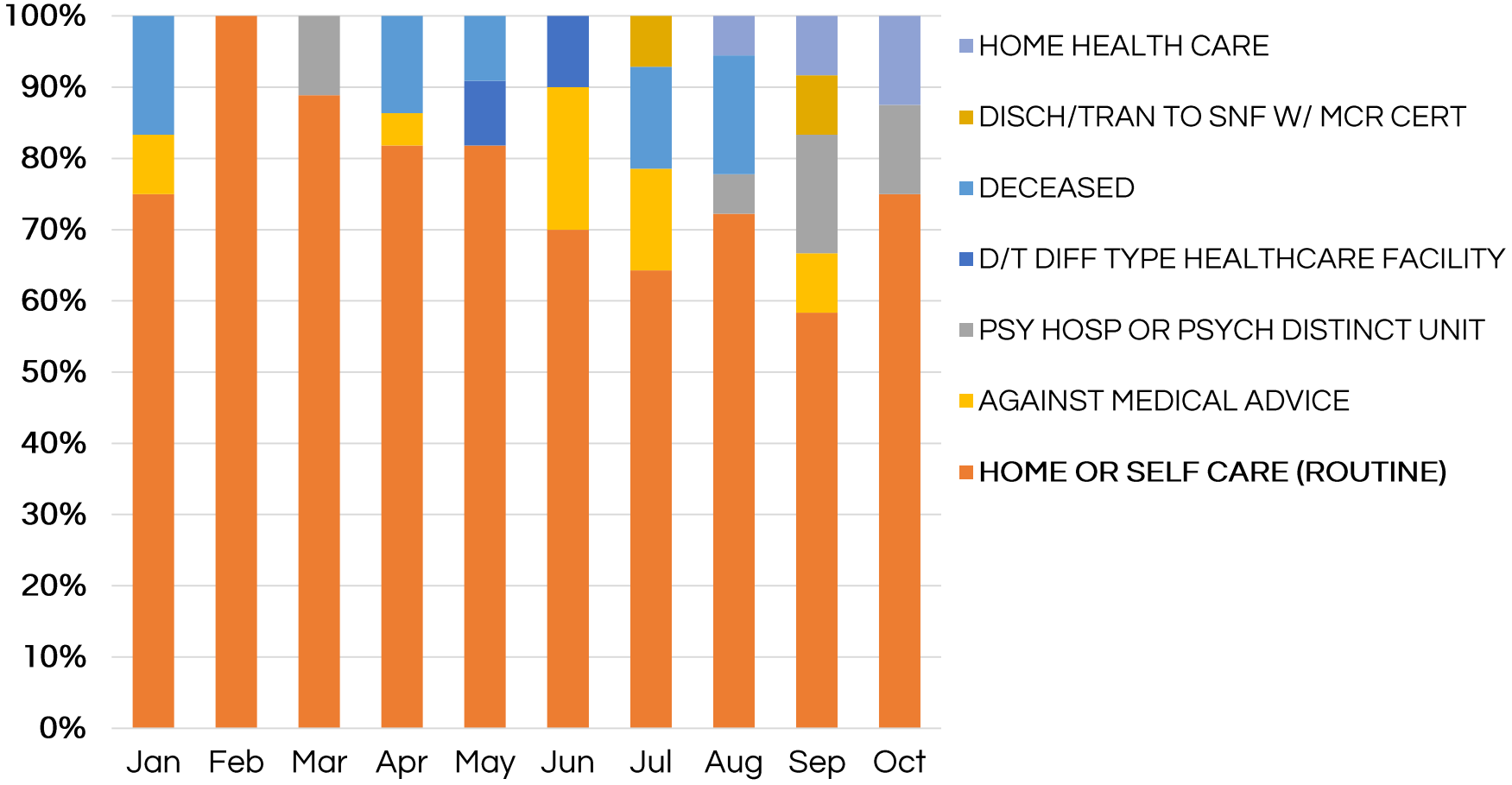
UVM Medical Center Opioid-Related ED Visits



Data Source: UVM MC ED

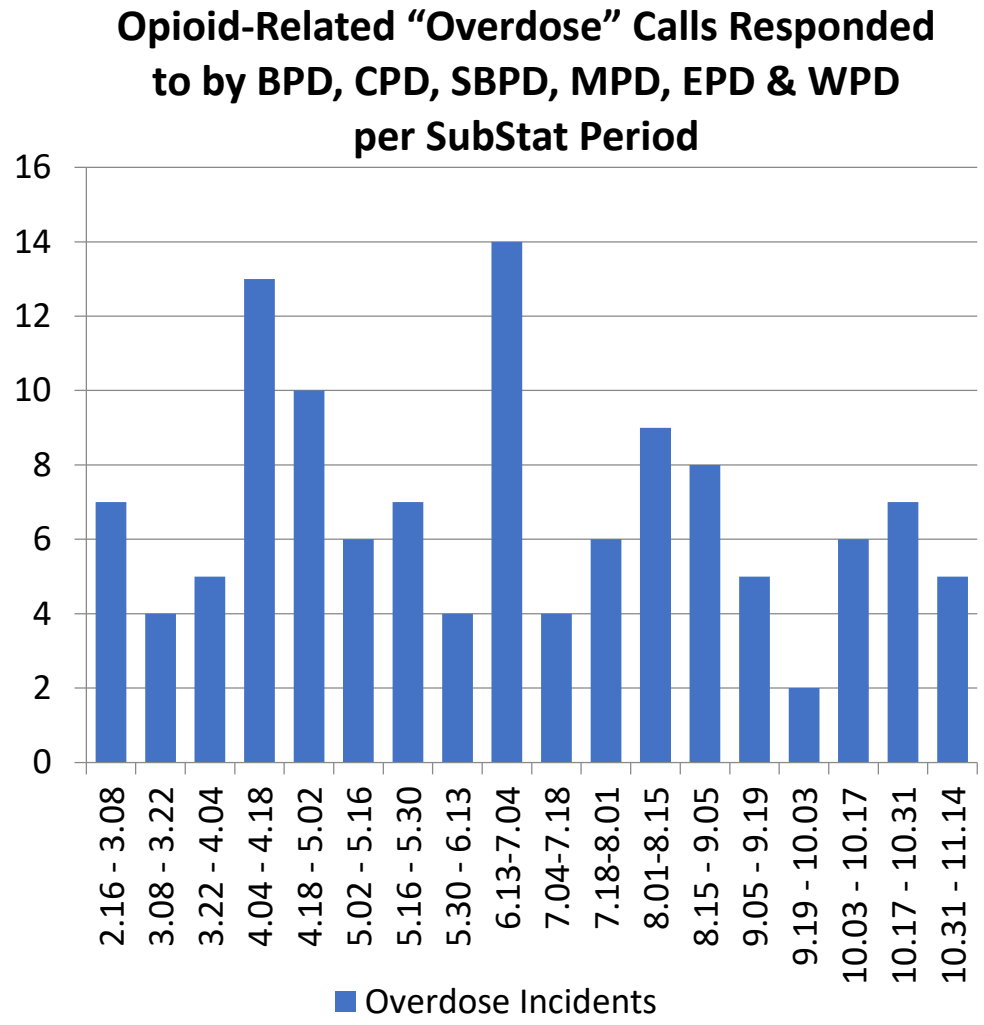
UVM Medical Center Opioid-Related ED Visits

2017 Discharge Disposition of UVM MC ED Encounters
With DX Code "Opioid OD/ Poisoning", by Month



Data Source: UVM MC ED

SubStat Opioid-Related Overdose Incidents



11

Non-Fatal Opioid-Related Overdose Incidents Among SubStat Partners Since Oct. 17th

1

Fatal Opioid-Related Overdose Incidents Among SubStat Partners Since October 17th

Data Source: Valcour Incident Report

The University of Vermont MEDICAL CENTER

Opioid Prescribing Practices

July 2017 – September 2017

Prepared by
Stephen Leffler, MD
Maureen Vinci, M. Ed

October 22, 2017

Table 1. Comparison of opioid prescriptions/quarter 2016-2017 - UVMMC Inpatient locations

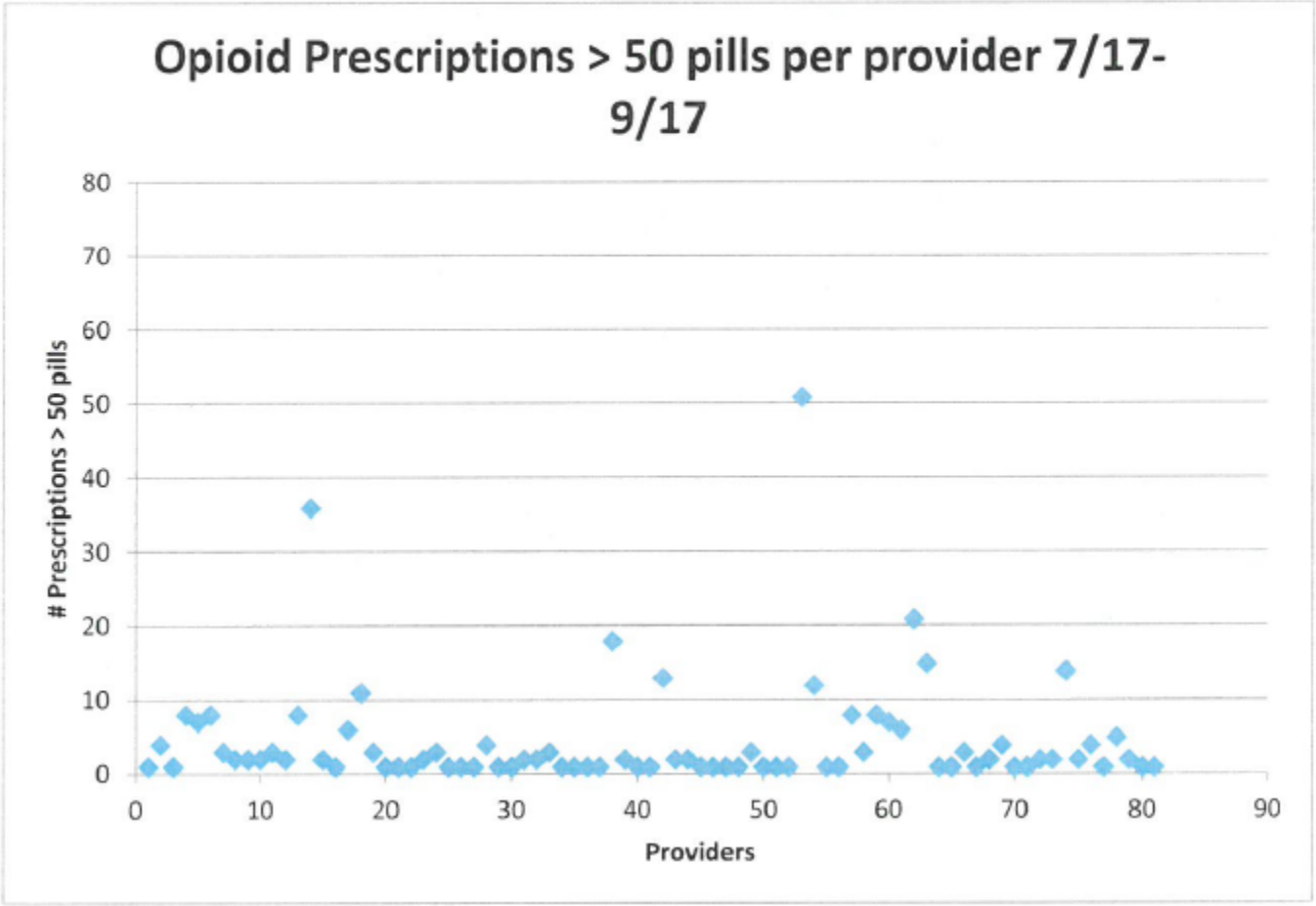
	Oct- Dec 2015	Oct – Dec 2016	Jan – Mar 2017	Apr – June 2017	July –Sept 2017
All Data	49705	49511	49571	48271	Not assessed
Tabs, Caps	7393	6529	6395	5938	5030
> 50 Tabs, Caps	1352	895	806	695	381
> 50 Tabs, Caps no HemOnc	1301	862	770	660	368
# of Providers > 50	147	124	131	108	81

Table 2. Comparison of opioid prescriptions per quarter 2016-2017, UVMMC Outpatient Practices

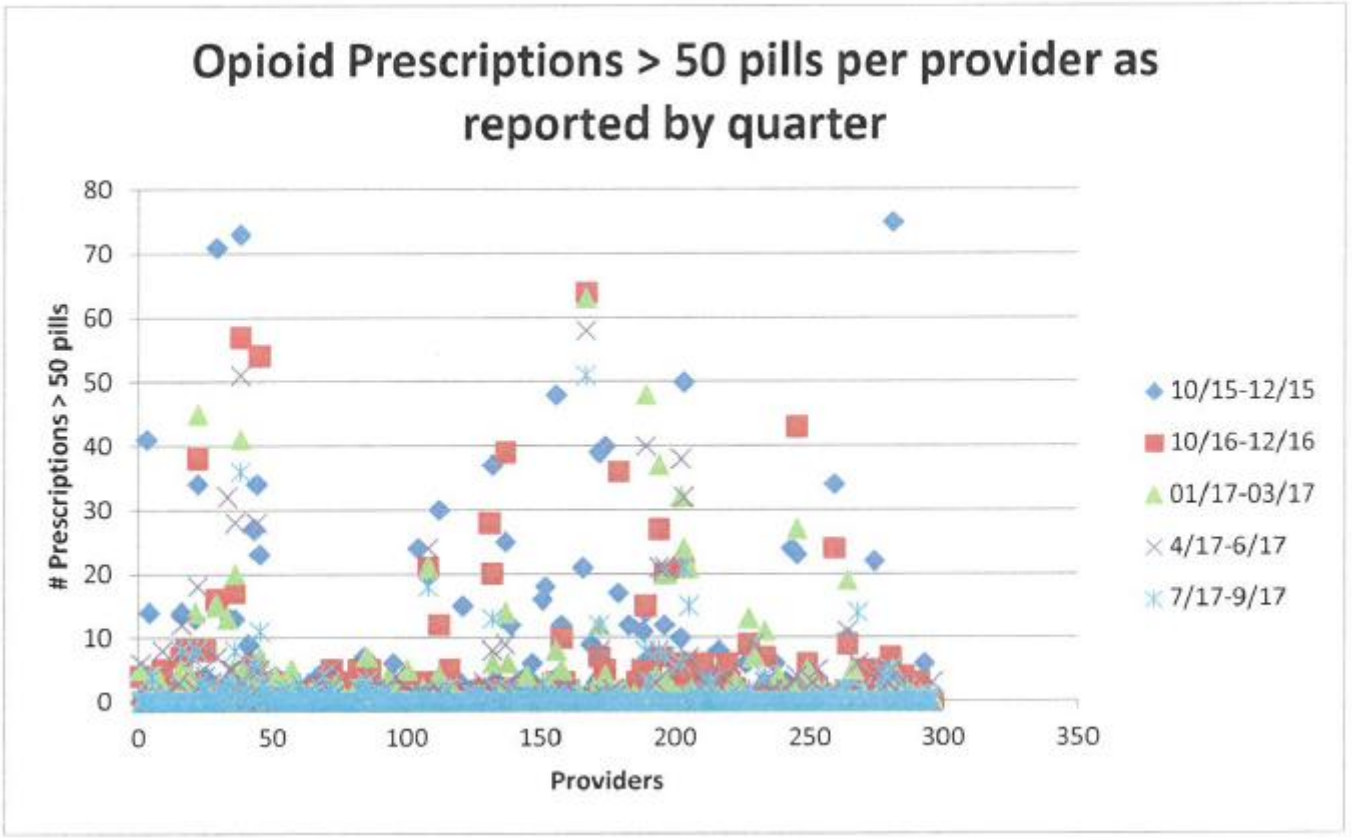
Characteristic	Q1 2016	Q2 2016	Q3 2016	Q1 2017	Q2 2017	Q3 2017
Patients						
Total prescribed for	3,442	3,167	3,164	3,138	2,908	2,630
Prescriptions						
# prescriptions	8,837	9,836	9,677	8,180	9,037	8,542
Average strength of prescription, MME	1,983	1,985	1,858	1,900	1,813	1,843
Total MME	20.5 M	19.5 M	18.0 M	18.5 M	16.4 M	15.7 M
MME by health care service						
Primary Care	14.0 M	13.3 M	13.0 M	12.7 M	12.3 M	12.0 M
Pain clinic	5.8 M	5.6 M	4.3 M	5.2 M	3.5 M	3.5 M
Orthopedics (outpatient)	233,142	214,155	255,706	204,555	227,082	213,029
Other	425,058	419,292	391,938	457,372	336,127	126,500

Detailed reporting of the quantity of prescriptions of over 50 pills per prescription at the provider level per quarter

a. Opioid Prescriptions over 50 pills per provider 7/17-9/17

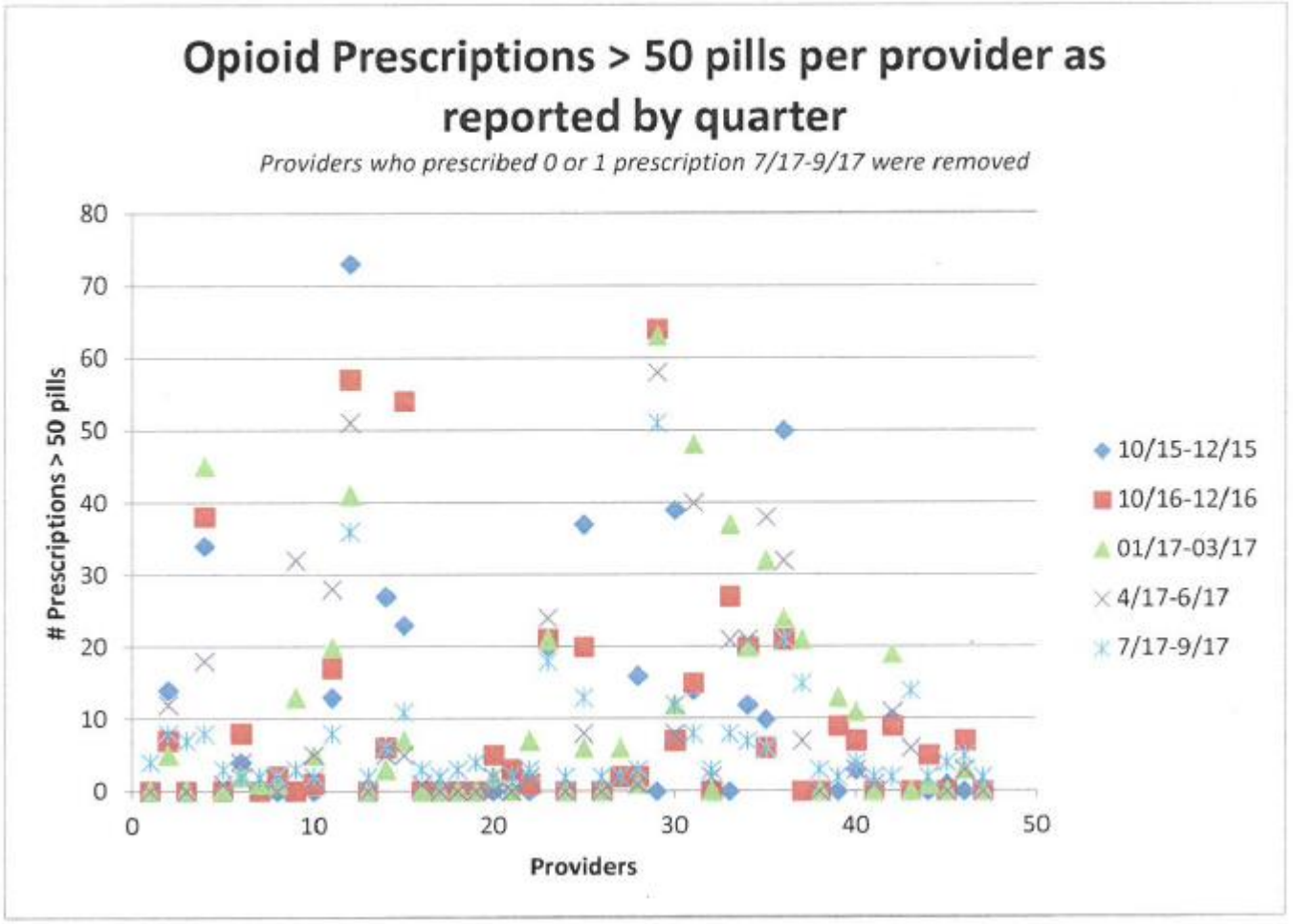


a. **Opioid Prescriptions > 50 pills per provider**



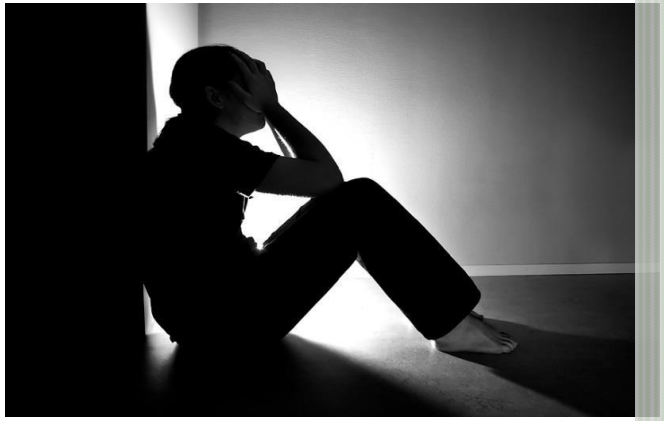
If we remove *providers who prescribed 0 or 1 prescription in the most recent quarter (7/17-9/17) the graph demonstrates a reduction of the number of prescriptions over 50 pills per prescription per provider. For the purposes of graphically reporting the data, they have been omitted from the scatter chart below.*

b. **Opioid Prescriptions > 50 pills per provider**

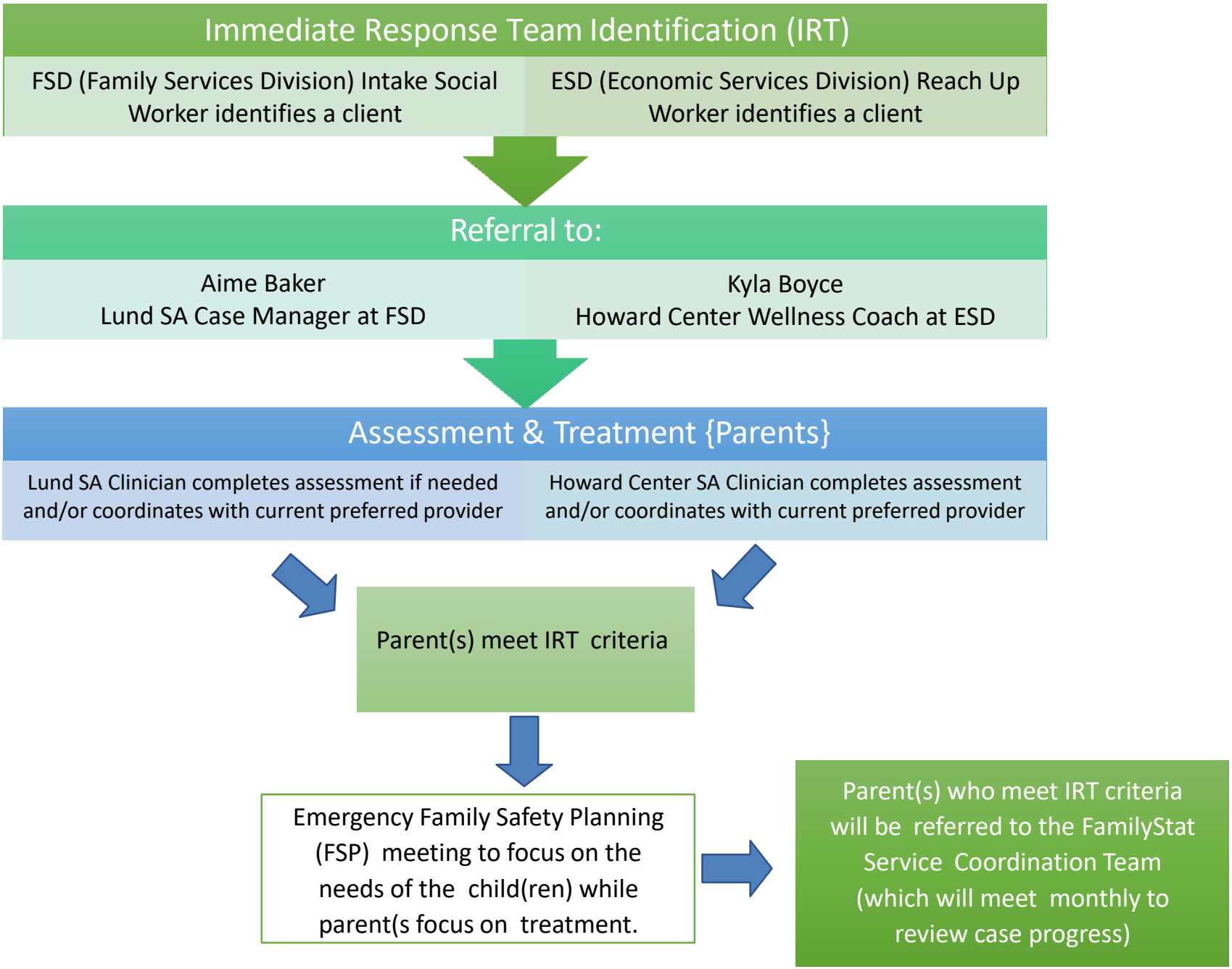


FamilySTAT

An introduction…



High risk/high needs families who are struggling with addiction and are at risk of separation because of incarceration and/or death.


Immediate Response Team Identification (IRT)
FSD (Family Services Division) Intake Social Worker identifies a client
ESD (Economic Services Division) Reach Up Worker identifies a client
Referral to:
Aime Baker
Lund SA Case Manager at FSD
Kyla Boyce
Howard Center Wellness Coach at ESD
Assessment & Treatment {Parents}
Lund SA Clinician completes assessment if needed and/or coordinates with current preferred provider
Howard Center SA Clinician completes assessment and/or coordinates with current preferred provider
Parent(s) meet IRT criteria
Emergency Family Safety Planning (FSP) meeting to focus on the needs of the child(ren) while parent(s focus on treatment.
Parent(s) who meet IRT criteria will be referred to the FamilyStat Service Coordination Team (which will meet monthly to review case progress)

Referral Source:

- FSD (Family Services Division) clients are identified by the front end team (intake), with a focus on CF cases (CF = Child and Family; open support cases, non-court involved)
- ESD (Economic Services Division) Reach Up clients

Criteria to access FamilySTAT:

- Parent(s) with a substance use disorder
- Child(ren) have been or are at high risk of being removed from the home
- FSD and/or Reach Up clients
- Parent(s) qualifies for residential, IOP (Intensive outpatient), Outpatient, or PHP (partial hospitalization program)
- Willingness to engage in treatment

Service Coordination looks at (using the CPFST- Child Protection and Family Support Team model):

- Treatment
- Housing
- Child Care
- Employment
- Other

FamilySTAT Service Coordination Team:

Meets *monthly* to review cases and includes:

Sally Borden (KidSafe)	Liz Nault/Beth Maurer (FSD)	Peggy Heath/Jess Holmes/Leslie Stapleton (ESD)
Jackie Corbally	Jan Schamburger	Mitch Barron
Parent navigator (TBD)	Sarah Russell (BHA)	Jane Helmstetter
Ann Dillenbeck/Liz Mitchell	DOC (TBD)	Julie Coffey (STEPS)
Julie Ryley (DV Specialist, FSD)	Mark Ciociola (Voc Rehab)	Chittenden Clinic

How will the team track "Is anyone better off?":

- Outcomes oriented by reviewing progress via:
  a) Risk Assessment and Risk Re-Assessments (FSD)
  b) Self-Sufficiency Matrix (ESD)- includes housing, wellness, education, employment, community, etc.
  c) Did child(ren) come into custody?
  d) Time between removal from home and reunification
  e) Timely access to treatment (documenting days between assessment of need and entry into treatment)
  f) Was parent incarcerated?

- Gaps remain in our system of care.
- We do not have safe beds/homes.
- We do not have adequate sober housing options (short and long term) for families.
- This model will not meet the needs of every parent in our county.
- The system needs to identify other community agencies who will serve people not a part of FamilySTAT.
- We do not currently have a universal method to capture overdose data on FamilySTAT clients.

Next CommStat Meeting

- 12/21 (Thursday) 8:30-11:00 AM?
- Contois Auditorium