Vermont's Efforts to Confront the Opioid Crisis

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VERMONT
DEPARTMENT OF HEALTH

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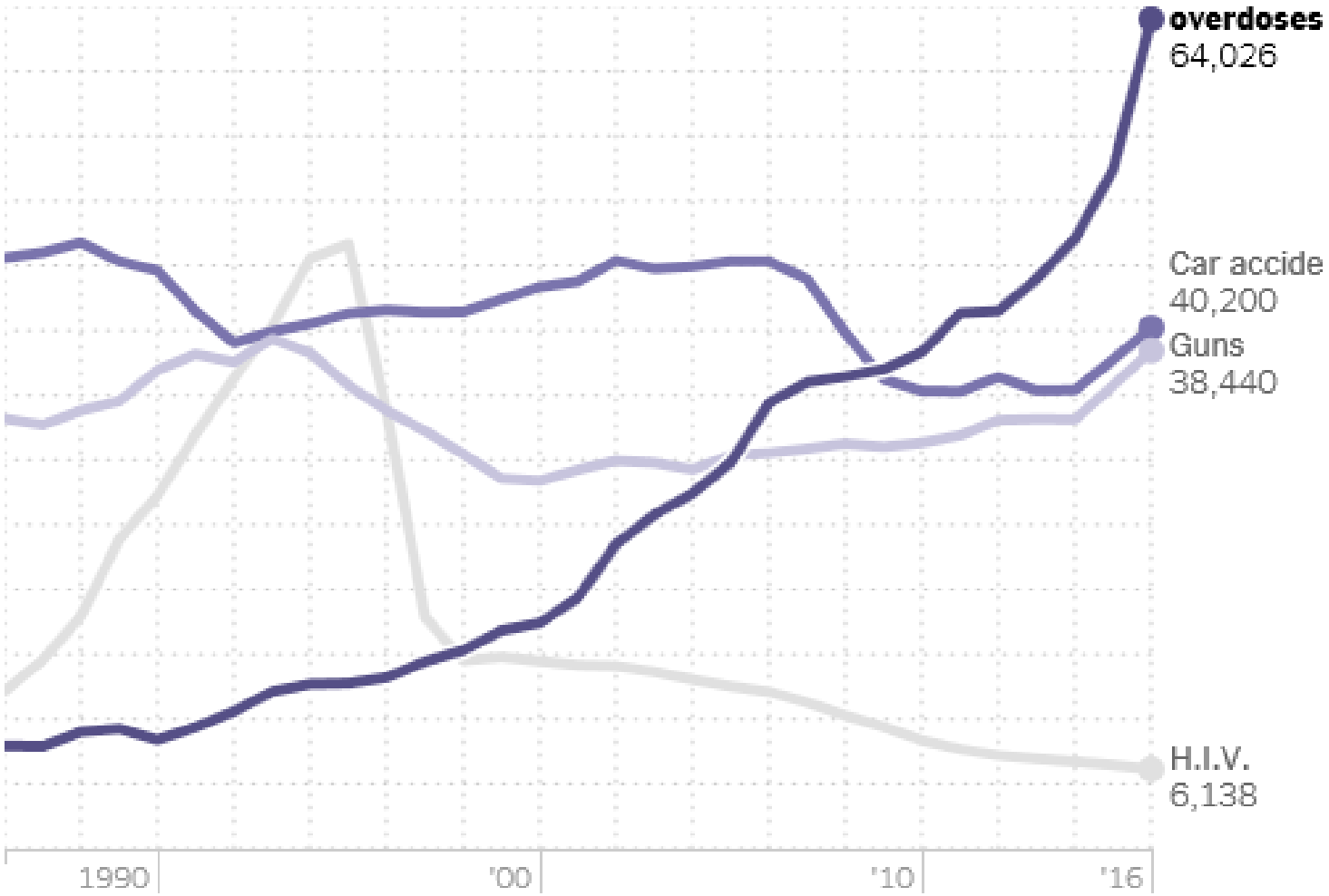
Objectives

- Review Vermont's opioid crisis, both challenges and successes and provide context
- Understand characteristics of a high functioning state's response
- Discuss Vermont's current and future response, the "four legged stool":
  - Prevention
  - Intervention and Treatment
  - Enforcement
  - Recovery
- Explore the successes of the Hub and Spoke model
- Highlight where we are planning major initiatives

Epidemiology

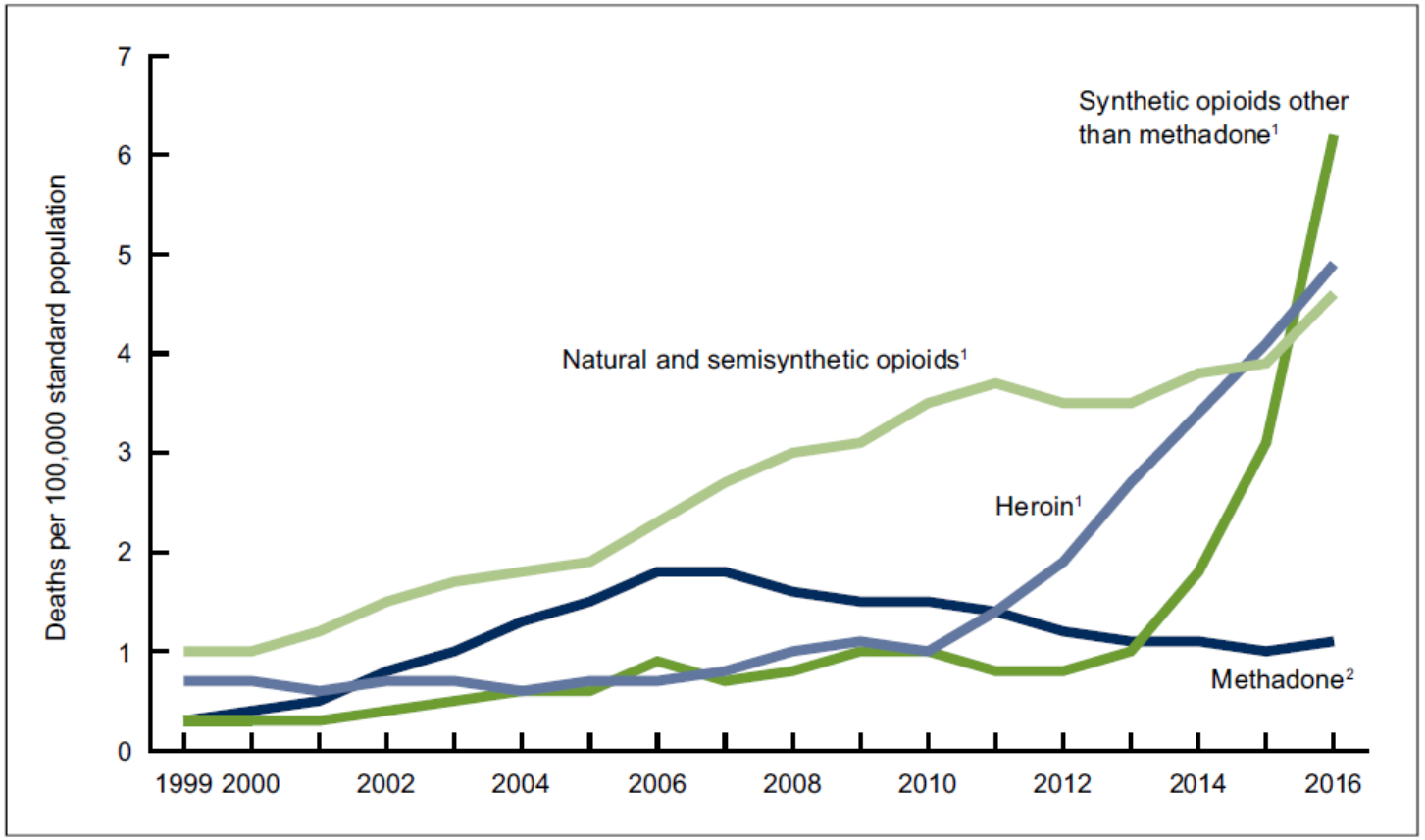
- 21 million Americans have a substance use disorder,
  - Comparable with the number of people diagnosed with diabetes
  - 1.5 times the prevalence of all cancers combined.
- 12.5 million Americans reported misusing prescription pain medications in the past year
  - 1.9 Million dependent on pain relievers
  - 517,000 dependent on heroin
- 1-2 in 10 people with a substance use disorder currently receives treatment.

US Drug overdoses have overtaken car accidents, guns and HIV as cause of death and are leading cause under age 50



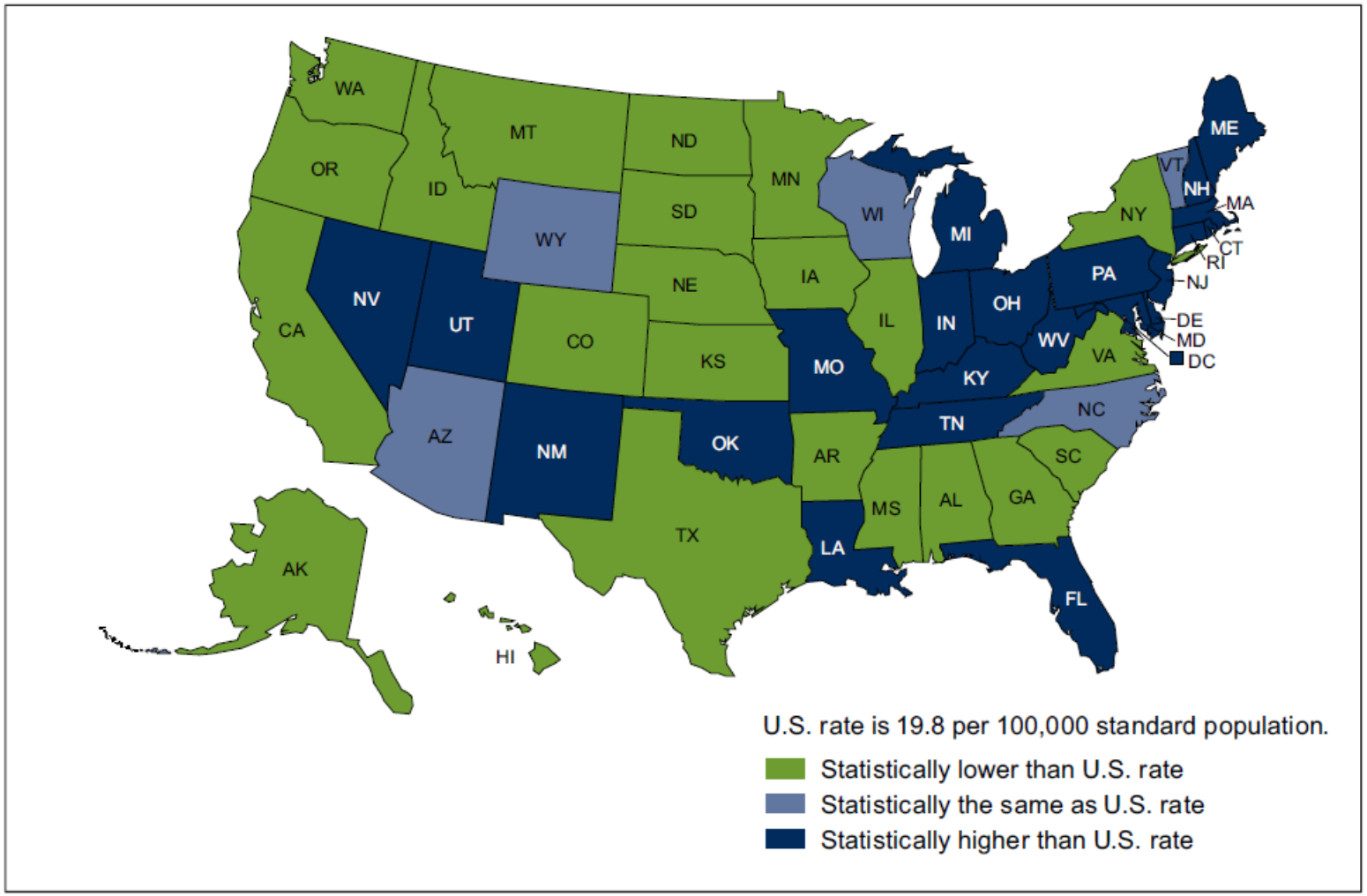
Vermont Department of Health

Age Adjusted Overdose Deaths Involving Opioids by Type of Opioid United States, 1999-2016



[1]Significant increasing trend from 1999 to 2016 with different rates of change over time, $p < 0.05$.
[2]Significant increasing trend from 1999 to 2006, then decreasing trend from 2006 to 2016, $p < 0.05$.
NOTES: Deaths are classified using the *International Classification of Diseases, Tenth Revision.* Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural or semisynthetic opioid) are counted in both categories. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, with ranges of 75%–79% from 1999 to 2013, and 81%–85% from 2014 to 2016. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db294_table.pdf#4.
SOURCE: NCHS, National Vital Statistics System, Mortality.

VT was statistically similar to the US rate in 2016: Age Adjusted Drug OD Death Rates



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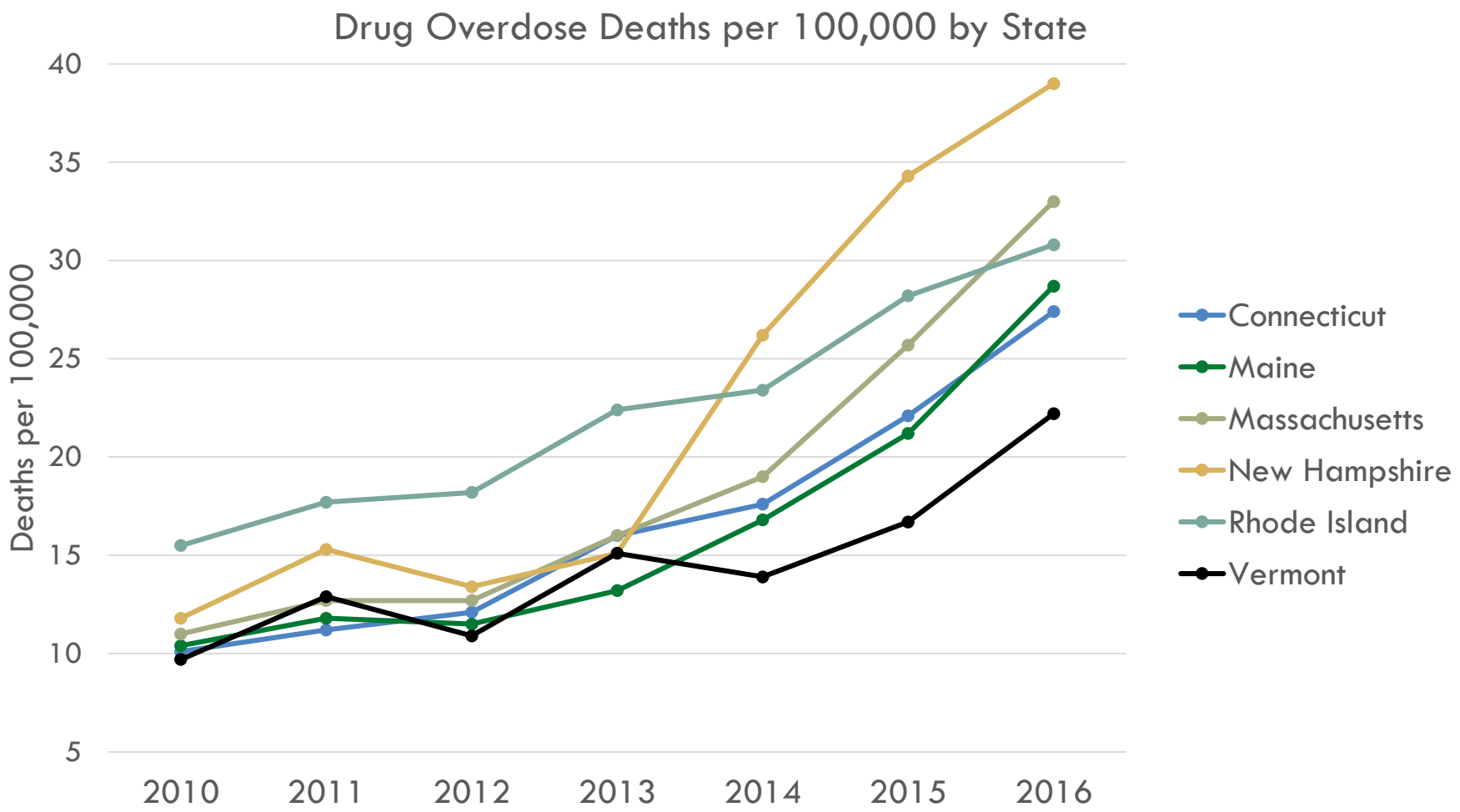
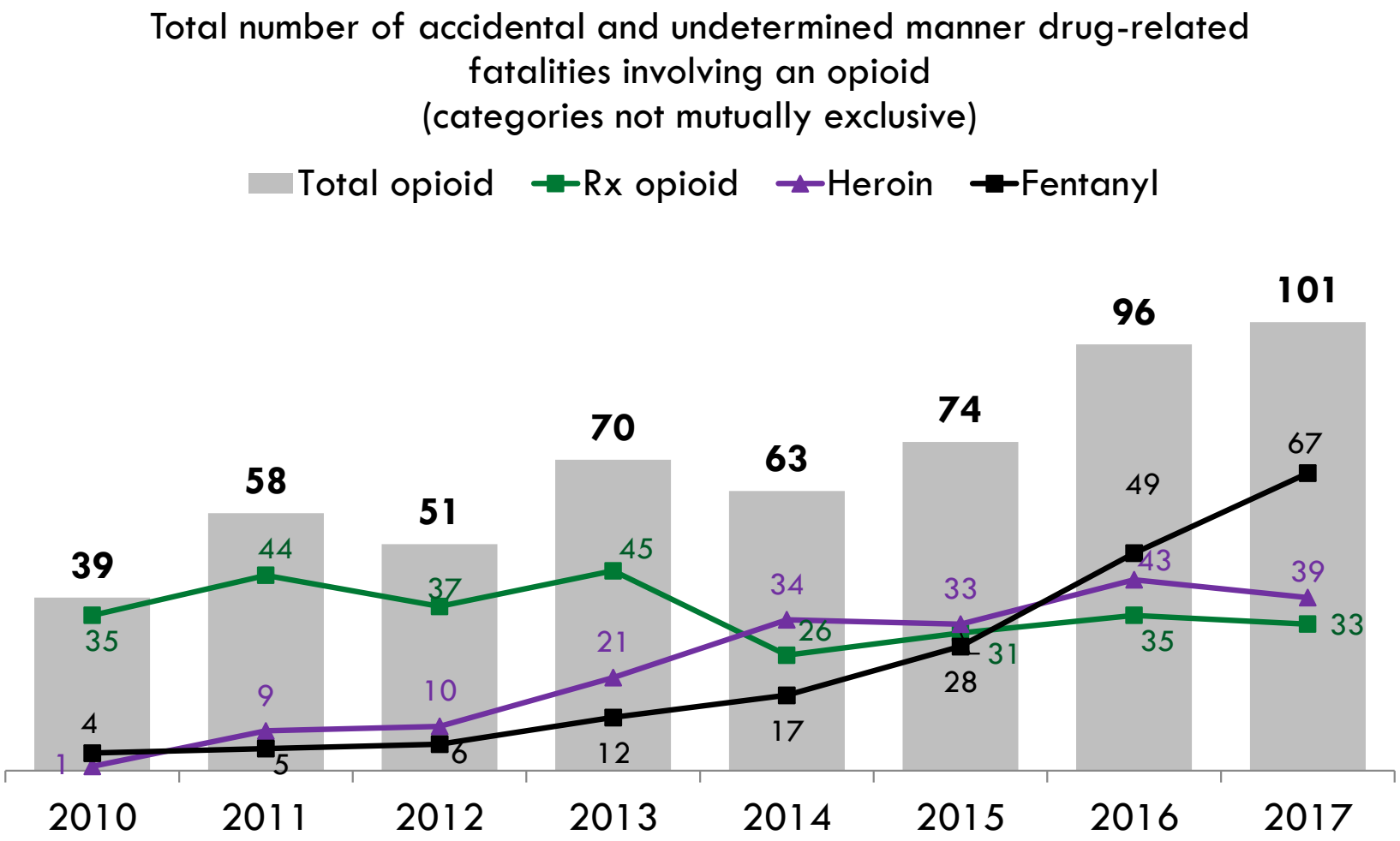
New England - Any Drug Overdose Deaths



Source: CDC/ NCHS

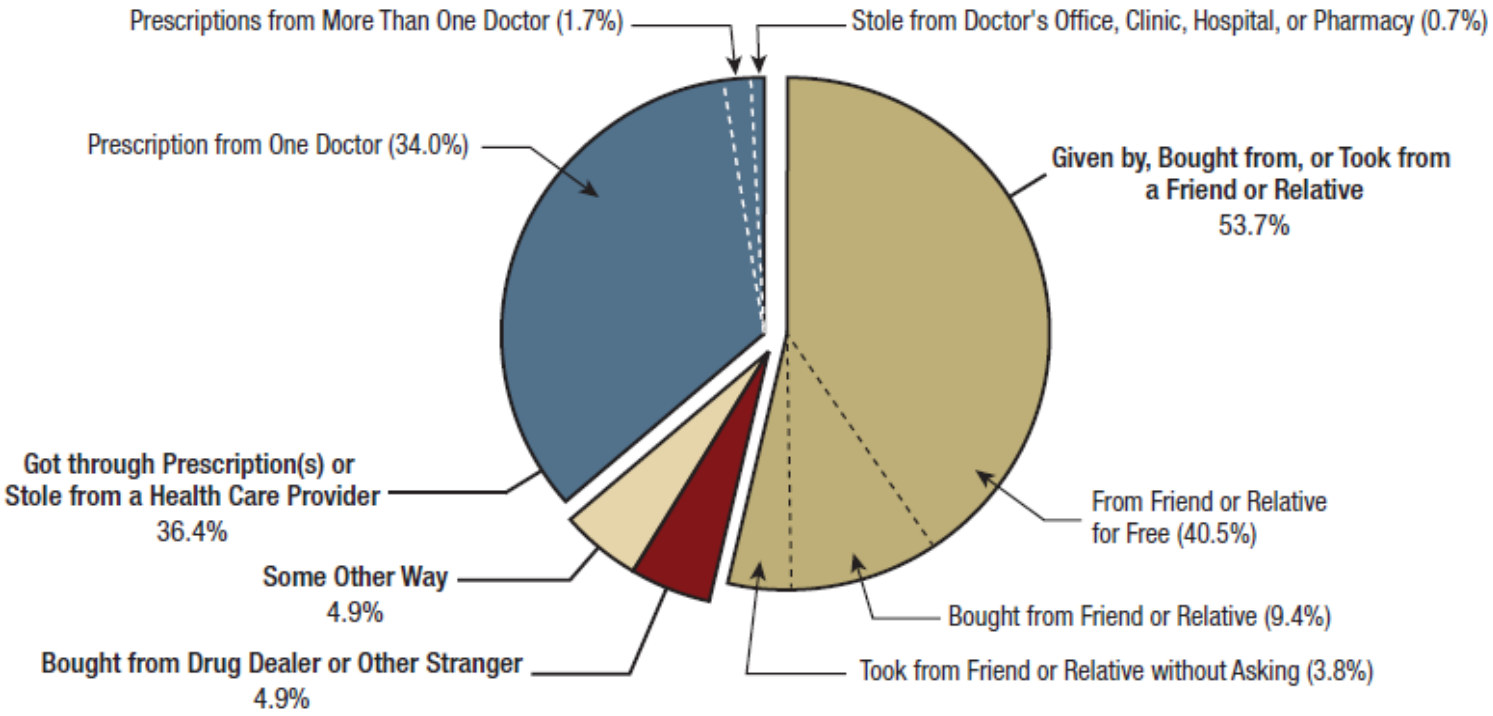
Drug-Related Fatalities Involving Opioids



Source: Vermont Department of Health Vital Statistics System

Nationally, over half of those who misused a prescription pain reliever got it from a friend or relative

Figure 24. Source Where Pain Relievers Were Obtained for Most Recent Misuse among People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year: Percentages, 2015

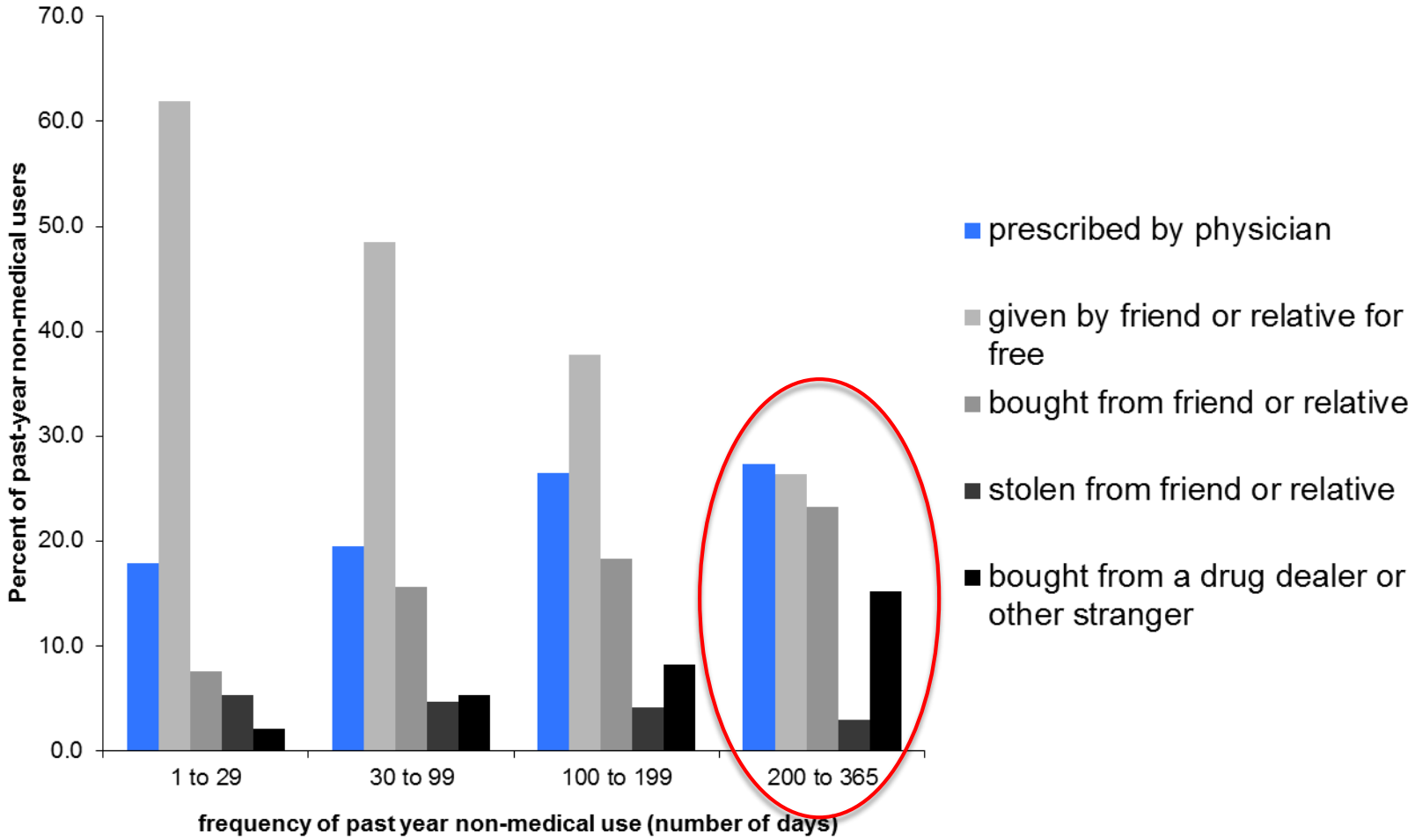


Note: The percentages do not add to 100 percent due to rounding.

Note: Respondents with unknown data for the Source for Most Recent Misuse or who reported Some Other Way but did not specify a valid way were excluded.

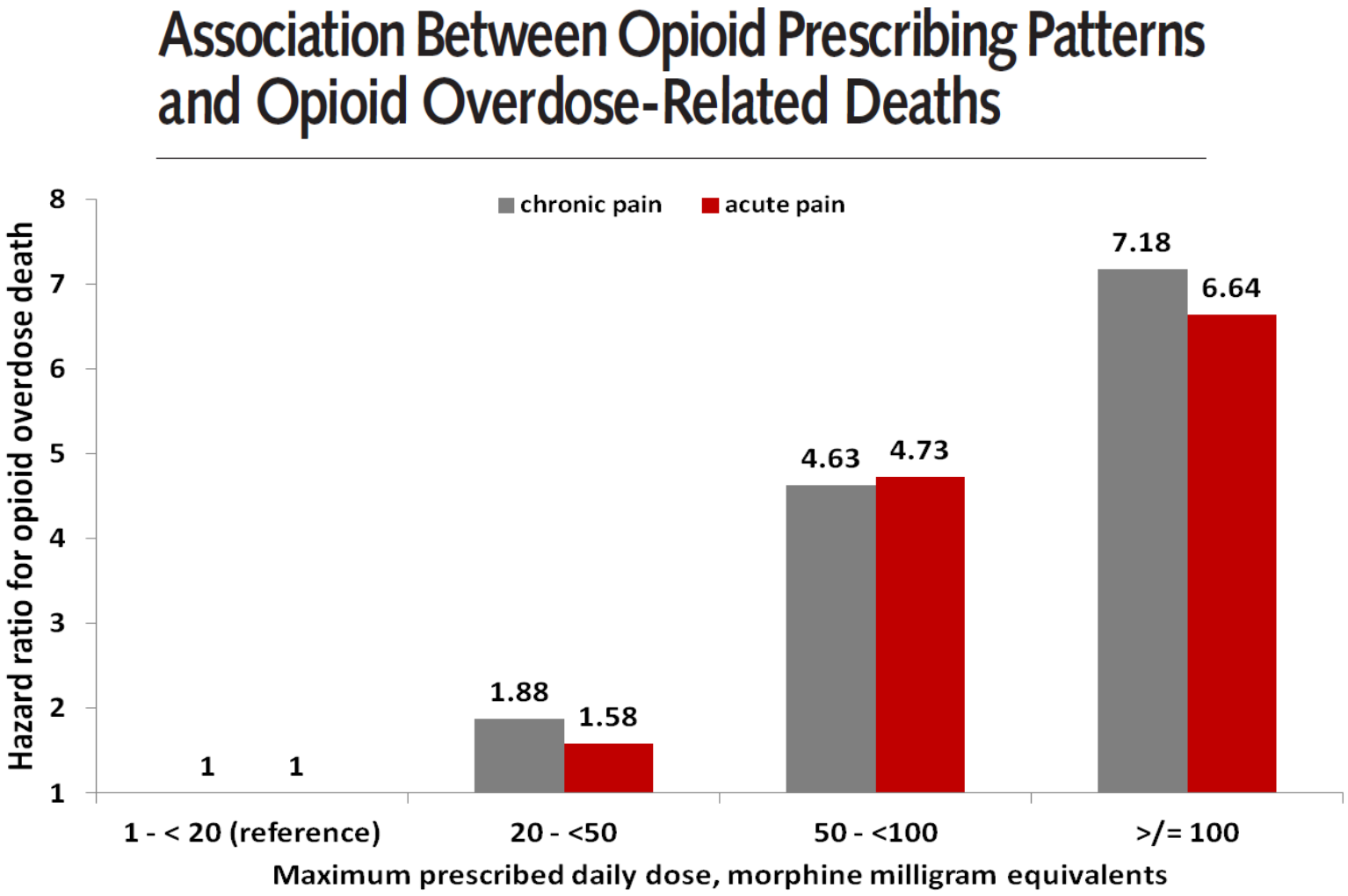
Source: National Survey on Drug Use and Health, 2015

Doctors are the most common source of opioids for most frequent nonmedical users



SOURCE: Jones CM, Paulozzi LJ, Mack KA. Sources of prescription opioid pain relievers by frequency of past-year nonmedical use: United States, 2008-2011. JAMA Internal Medicine. 2014

The higher the morphine milligram equivalent, the higher the overdose death hazard

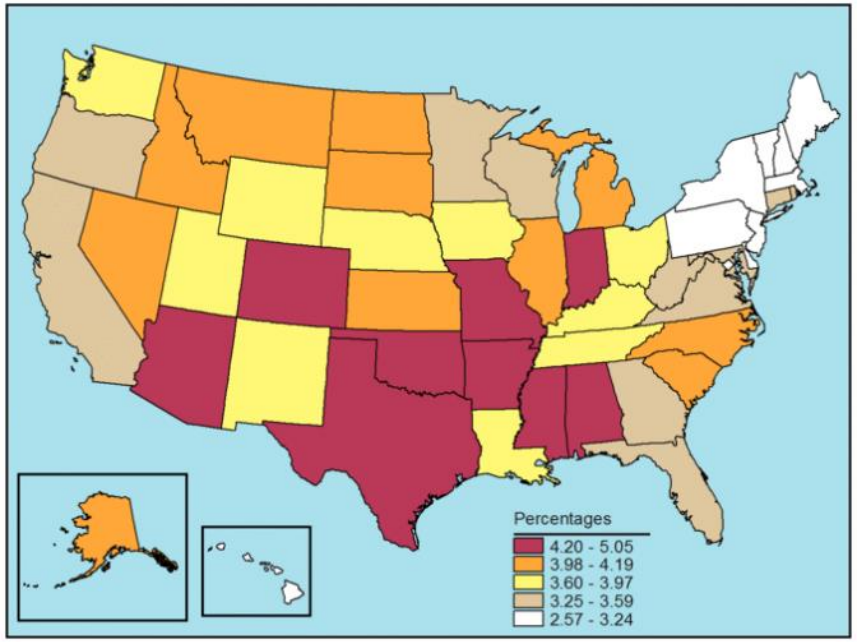


SOURCE: JAMA 2011;305:1315-1321

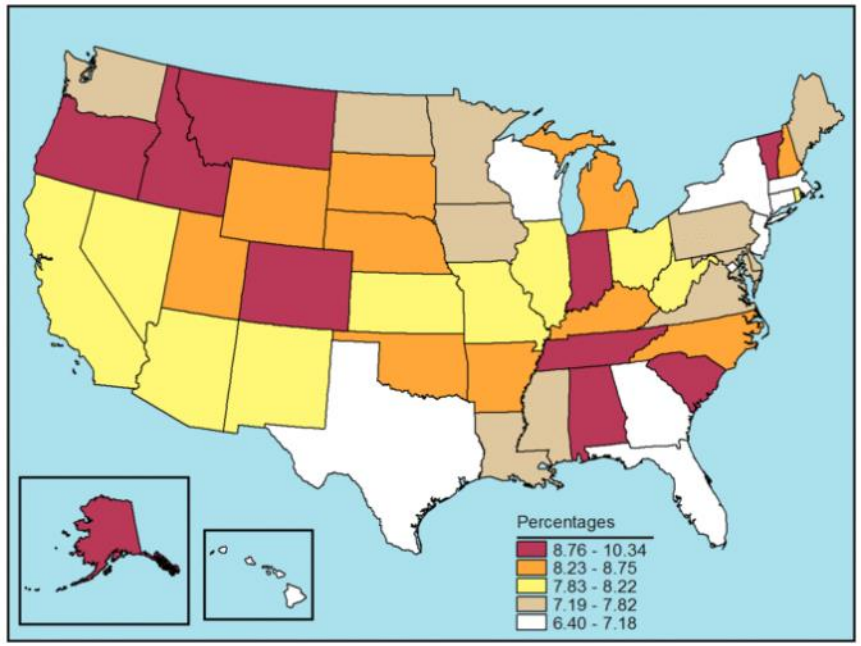
Past Year Pain Reliever Misuse by State: Percentages

Annual Averages Based on 2015 and 2016 NSDUH Surveys

Past Year Pain Reliever Misuse Age 12-17



Past Year Pain Reliever Misuse Age 18-25



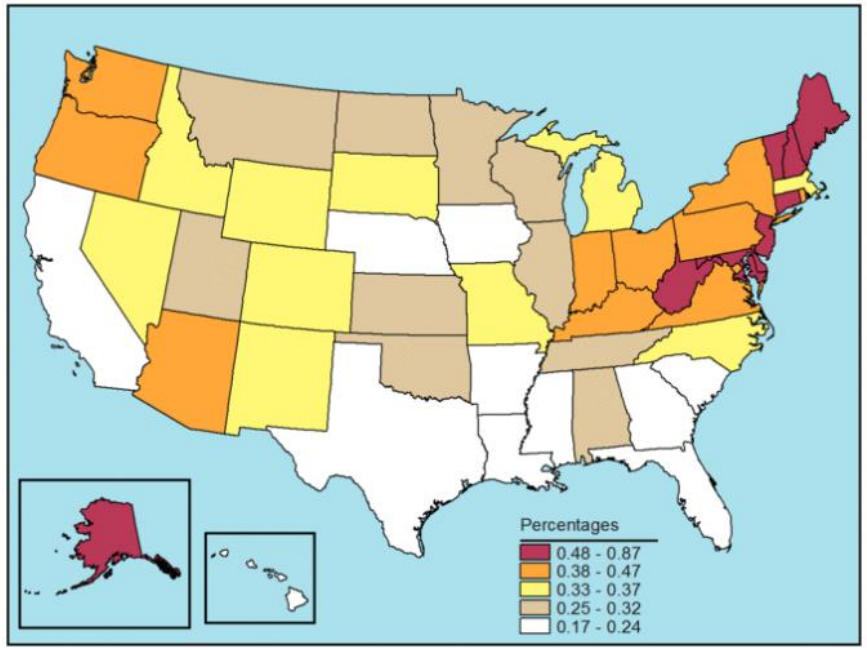
Vermont kids 12-17 have among the lowest rates of past year pain reliever misuse; those age 18-28 have among the highest

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2015 and 2016

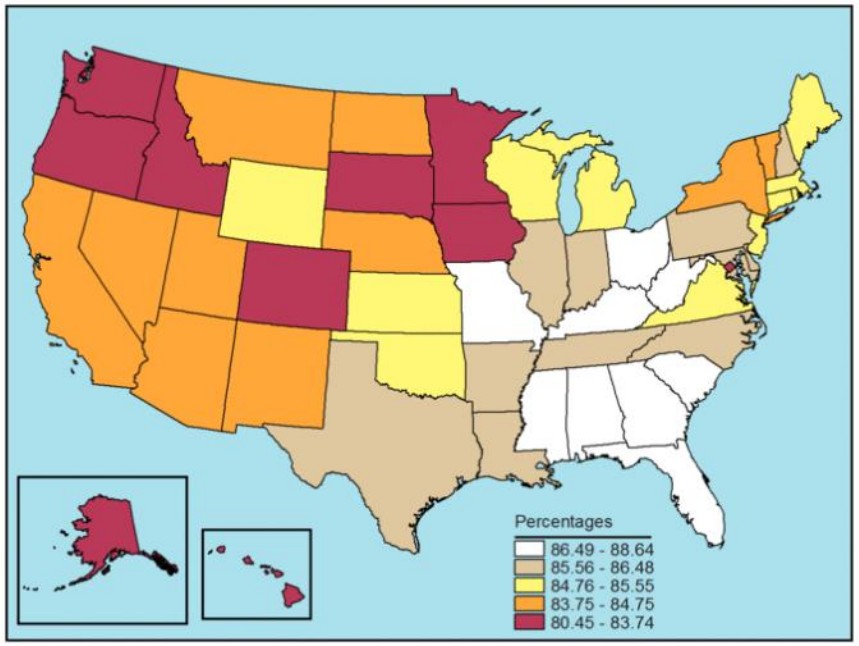
Past Year Heroin Use and Perceptions of Great Risk Aged 12 or Older, by State: Percentages

Annual Averages Based on 2015 and 2016 NSDUH Surveys

Past Year Heroin Use



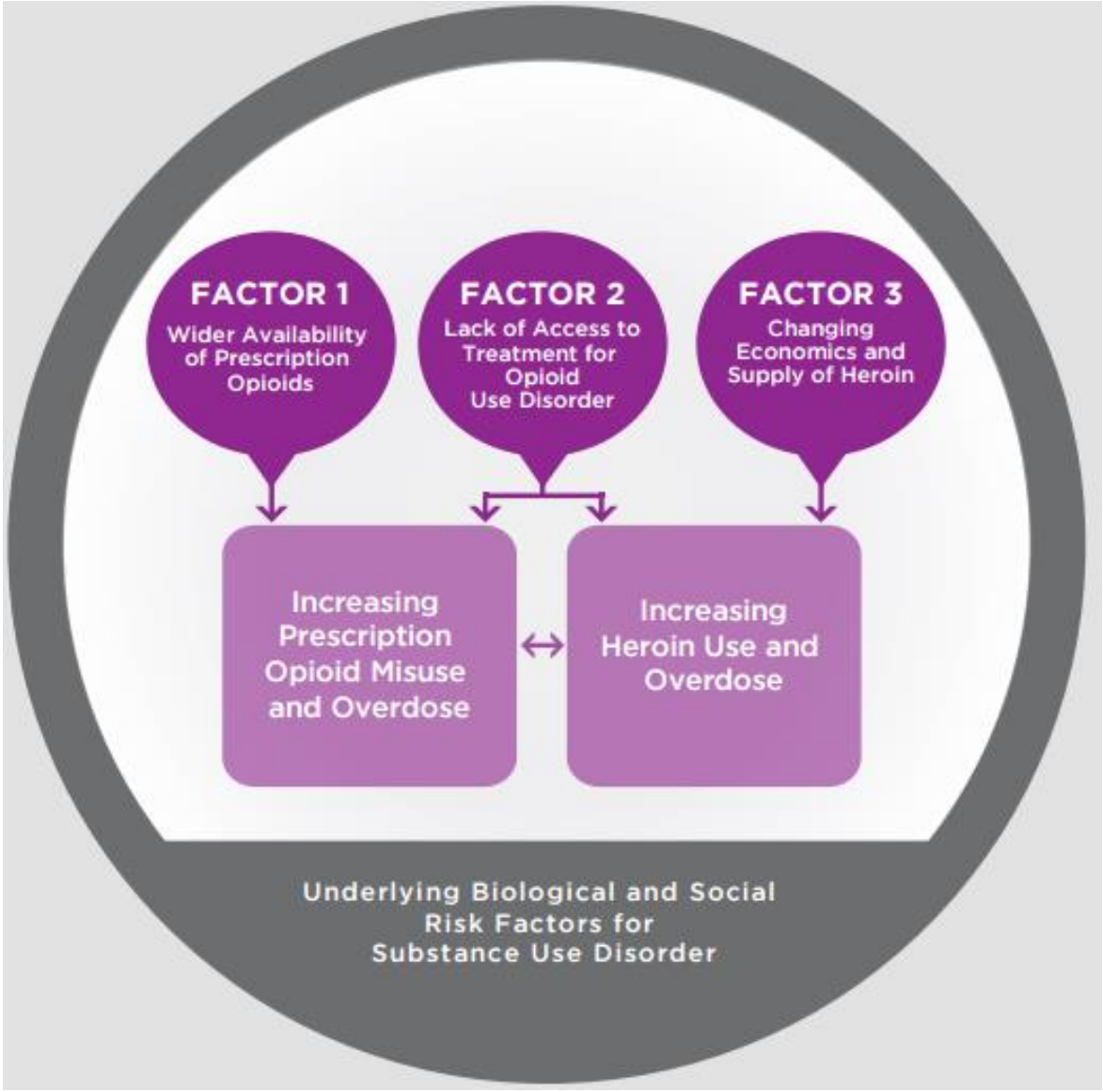
Perception of Great Risk of Trying Heroin Once or Twice



Vermonters have the highest use of heroin and amongst the lowest perception of great risk of trying heroin once or twice.

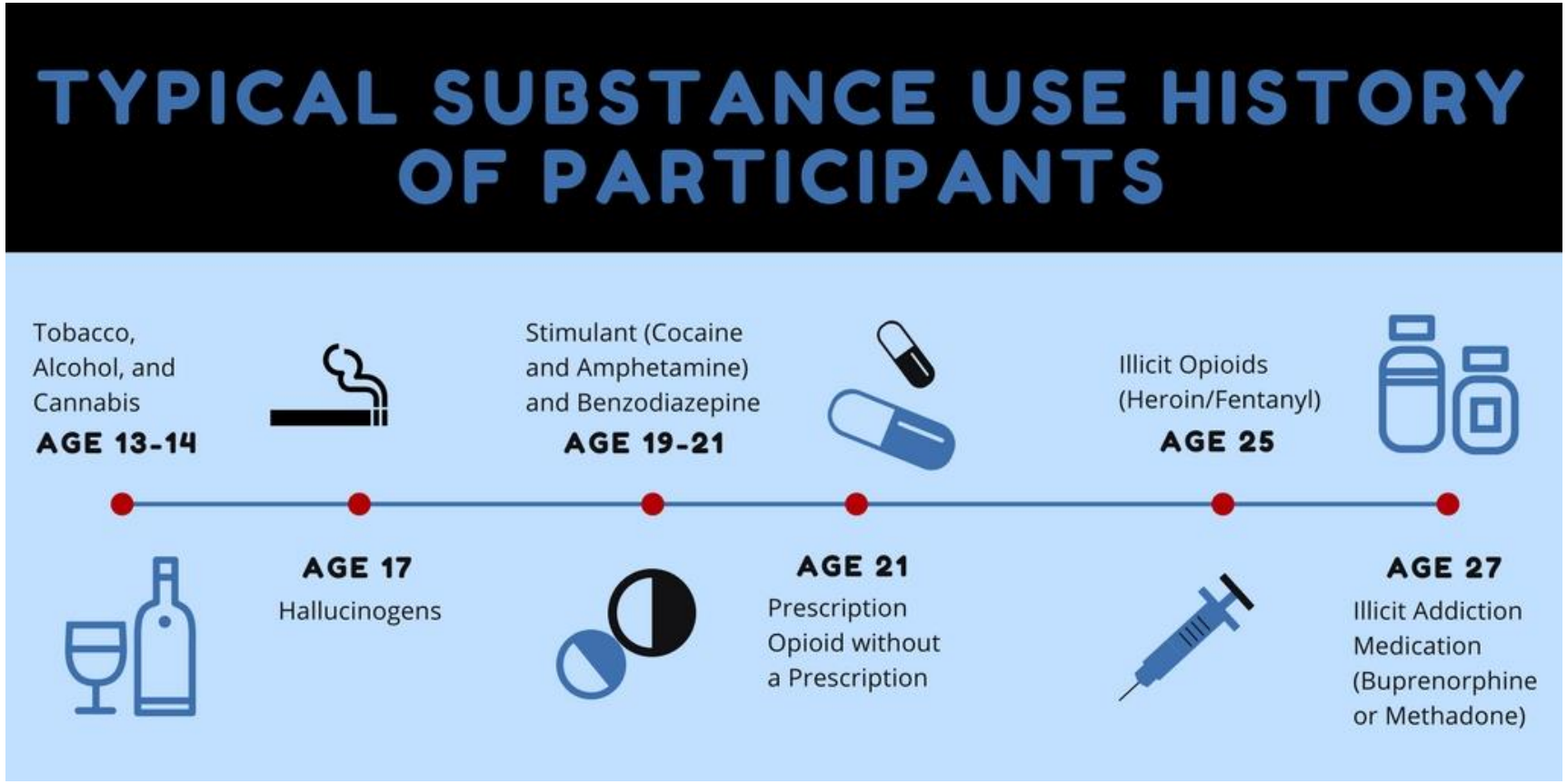
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2015 and 2016

Major Factors Driving the Prescription Opioid and Heroin Epidemic

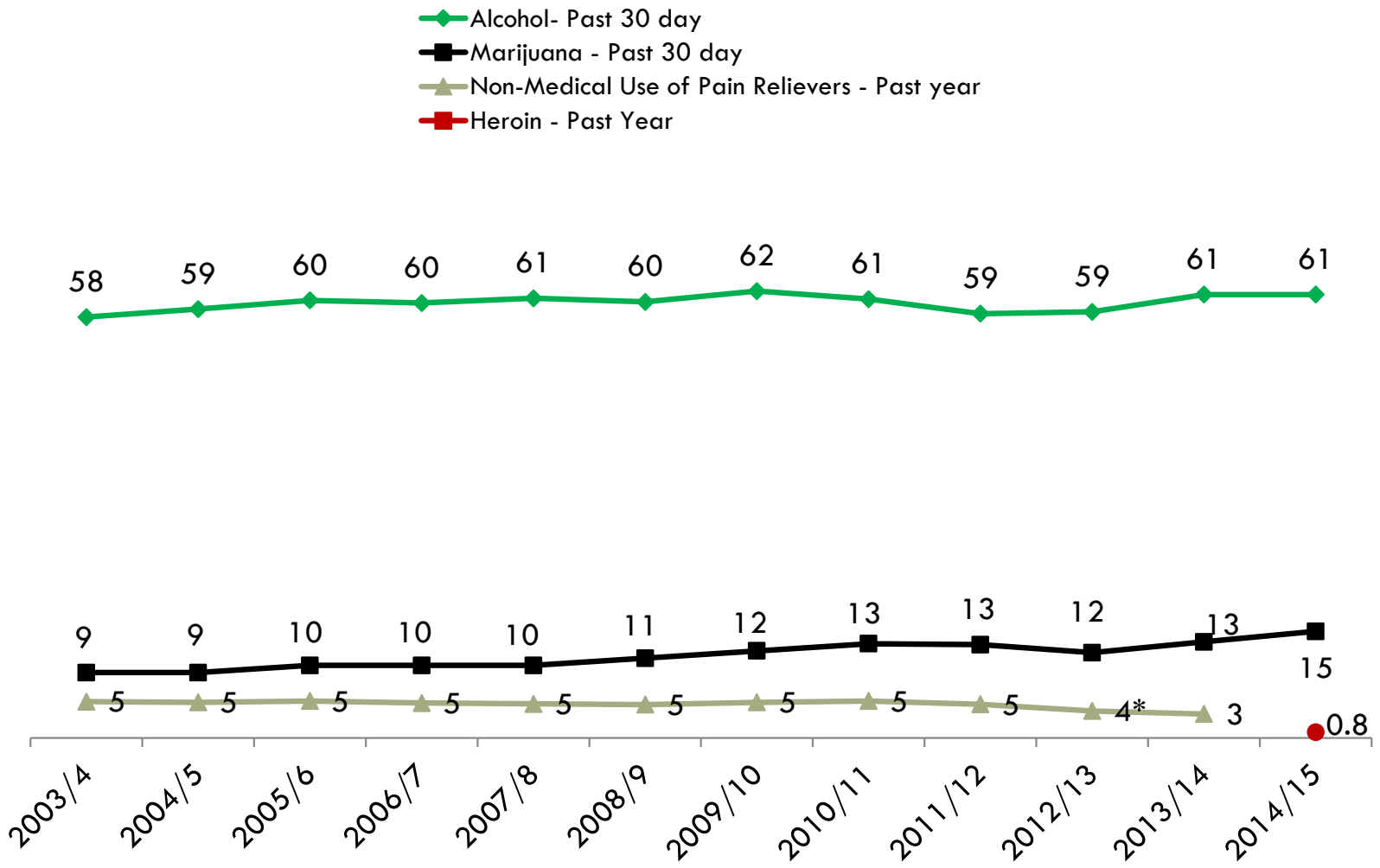


Source: NGA

Hub & Spoke Evaluation: Participants



Substances Used by Vermonters Ages 12+ by Substance Type



Source: National Survey on Drug Use and Health, 2002-2015
Note: * delineates a significant drop since 2011/2012 ($p<0.05$)

Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least 3 other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and **death** for users.

People who are addicted to...

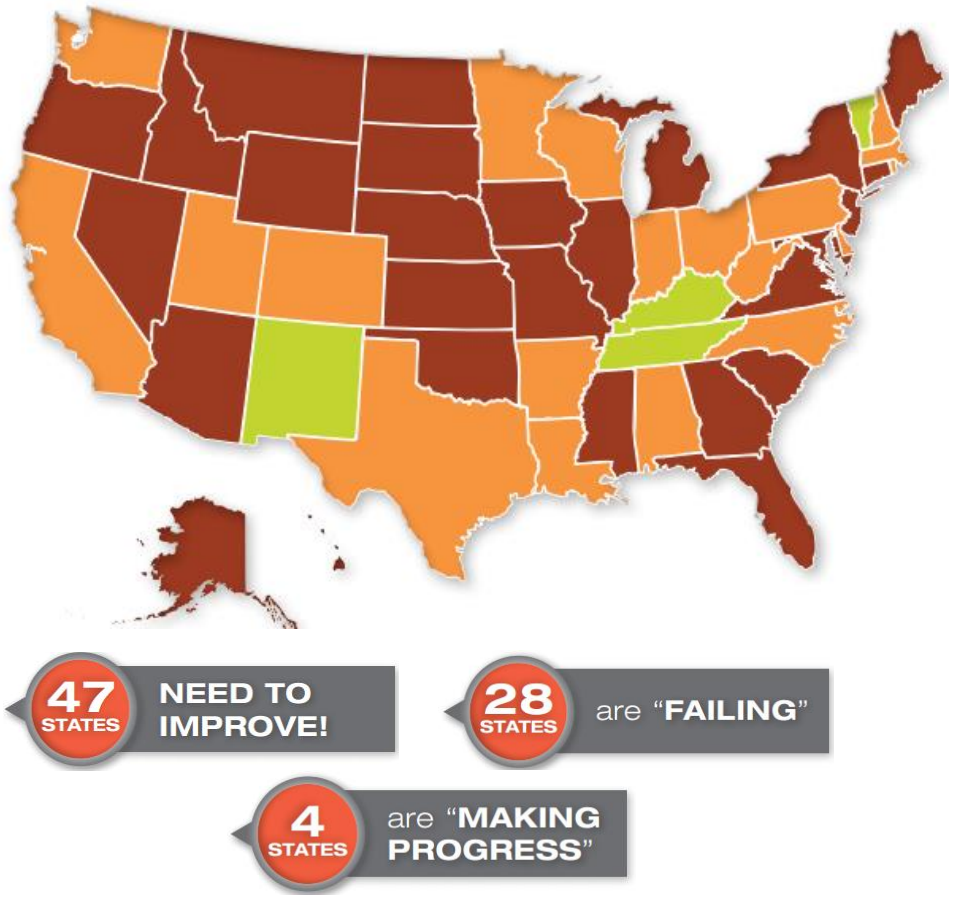
ALCOHOL	MARIJUANA	COCAINE	Rx OPIOID PAINKILLERS
are **2x**	are **3x**	are **15x**	are **40x**

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.

What is Vermont Doing?

The National Safety Council Categorized Vermont as One of Four States Making Progress in Strengthening Laws and Regulations Aimed at Preventing Opioid Overdose



Areas Assessed:

- Mandatory Prescriber Education
- Opioid Prescribing Guidelines
- Eliminating Pill Mills (VT doesn't have them but also doesn't have legislation to eliminate/prevent them)
- Prescription Drug Monitoring Programs
- Increased Access to Naloxone
- Availability of Opioid Use Disorder Treatment

In Place	Not in Place

Elements of a High Functioning State Response to the Opioid Crisis

Support at all levels

- Governor
- State legislature
- Collaboration
  - state agencies and departments
  - state regions/cities
  - surrounding states
  - public and private insurers
- Federal funders

Elements of a High Functioning State Response to the Opioid Crisis

Epidemiology

- Compile data from multiple data sources
- Study variability by region
- Maximize publicly available information
- Include stakeholder input
- Multi-state collaboration

Elements of a High Functioning State Response to the Opioid Crisis

Prevention

- Pain management and prescribing practices:
  - Education at all levels (practicing clinicians, students, GME)
  - Prescriber rules
  - Prescription Drug Monitoring System

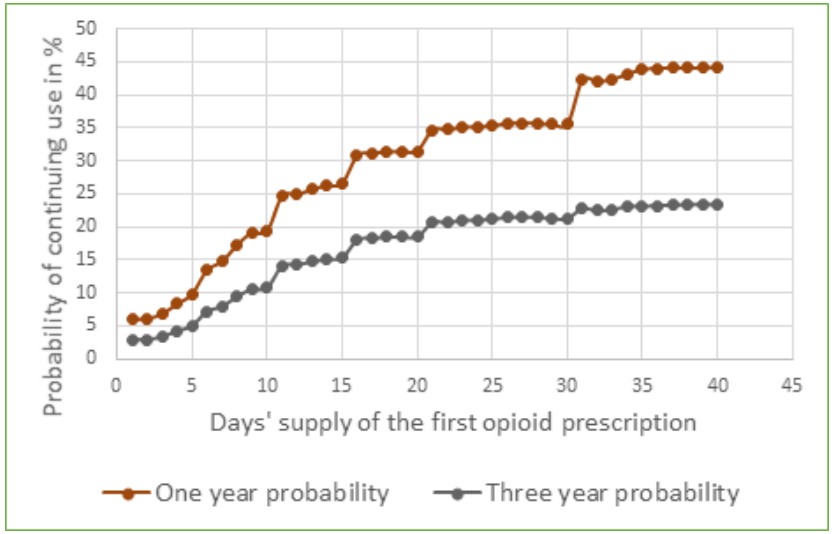
The Problem

- As many as four out of five heroin users begin by abusing prescription drugs
- Of those who abuse prescription opioids, seven out of 10 received these drugs through methods of diversion
- Opioids are overprescribed. They are prescribed:
  - Too often
  - At too high a dose
  - For too long
- Prescribers play a role in the supply and use of opioids in our and use of opioids in communities.

The more opioids prescribed during the first episode of opioid use, the greater the likelihood of continued opioid use

Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015

One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015



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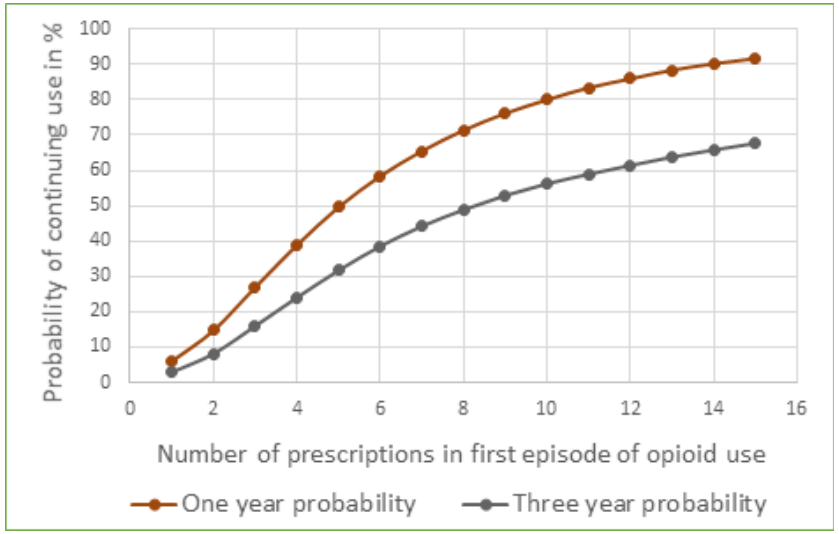


Source: Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015. MMWR Morb Mortal Wkly Rep 2017;66:265–269. DOI: http://dx.doi.org/10.15585/mmwr.mm6610a1.

If you remember nothing else…

- First consider non-opioid and nonpharmacologic treatments
- Upon first prescription, prescribers must:
  - discuss risks and safe storage and disposal
  - provide a patient education sheet, and
  - receive an informed consent for all first opioid prescriptions

MME Limits for First Prescription for Opioid Naïve Patients Ages 18+

Pain	Average Daily MME *(allowing for tapering)*	Prescription TOTAL MME based on expected duration of pain	Common average DAILY pill counts	Commonly associated injuries, conditions and surgeries
Minor pain	No Opioids	0 total MME	0 hydrocodone 0 oxycodone 0 hydromorphone	molar removal, sprains, non-specific low back pain, headaches, fibromyalgia, un-diagnosed dental pain
Moderate pain	24 MME/day	0-3 days: **72 MME** 1-5 days: **120 MME**	4 hydrocodone 5mg or 3 oxycodone 5mg or 3 hydromorphone 2mg	non-compound bone fractures, most soft tissue surgeries, most outpatient laparoscopic surgeries, shoulder arthroscopy
Severe pain	32 MME/day	0-3 days: **96 MME** 1-5 days: **160 MME**	6 hydrocodone 5mg or 4 oxycodone 5mg or 4 hydromorphone 2mg	many non-laparoscopic surgeries, maxillofacial surgery, total joint replacement, compound fracture repair
For patients with severe pain and extreme circumstance, the provider can make a clinical judgement to prescribe up to 7 days so long as the reason is documented in the medical record.				
Extreme Pain	50 MME/day	7 day MAX: 350 MME	10 hydrocodone 5mg or 6 oxycodone 5mg or 6 hydromorphone 2mg	similar to the severe pain category but with complications or other special circumstances

What is the Vermont Prescription Monitoring System?

- A statewide **electronic database** of controlled substance prescriptions dispensed from Vermont-licensed pharmacies that became operational in January 2009
- A **clinical tool** to promote the appropriate use of controlled substances and deter misuse, abuse, and diversion of controlled substances
- A **surveillance tool** used to monitor statewide prescribing, dispensing, and use of controlled substances trends

Source: Vermont Prescription Monitoring System

CDC GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

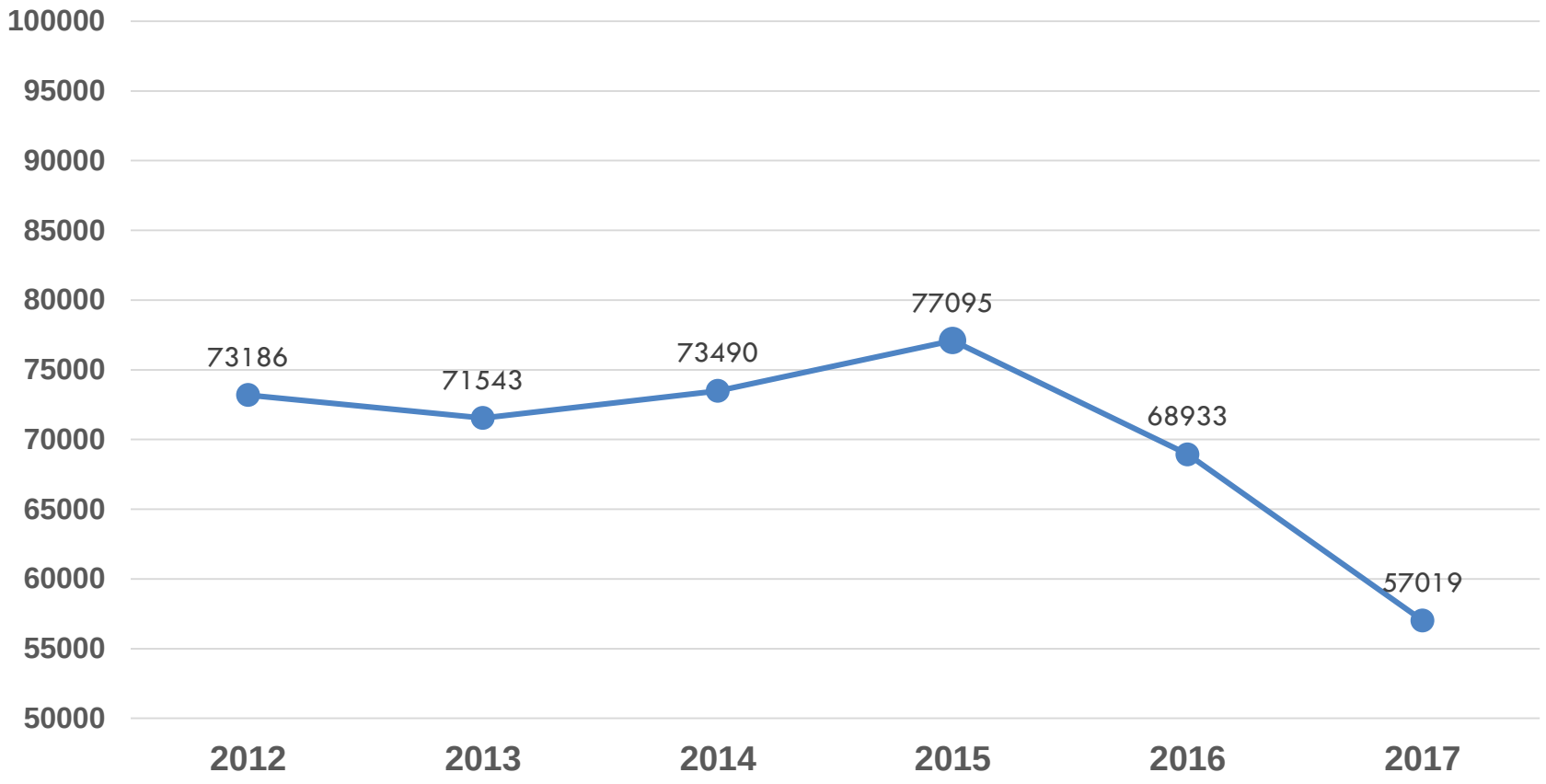
DETERMINING WHEN TO INITIATE OR CONTINUE OPIOIDS FOR CHRONIC PAIN

1. Opioids are not first-line therapy

2. Establish goals for pain and function

3. Discuss risks and benefits

Fewer Opioid Pain Relievers are Being Dispensed in Vermont - Total MME Opioid Analgesics per 100 Residents



Note: Prior to rescheduling tramadol was not reported to VPMS. On August 14, 2014 tramadol was changed from a schedule V to a schedule IV drug. There was a 26% decrease in dispensed opioids between 2015 and 2017, years that include tramadol.

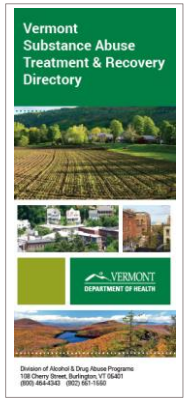
Data Source: VPMS

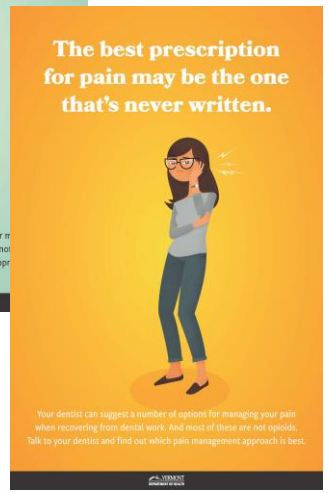
Elements of a High Functioning State Response to the Opioid Crisis

Prevention

- Public Level:
  - Prevention messaging campaigns/education
  - School-based primary prevention programs
  - Build prevention infrastructure and expertise
  - Community mobilization
  - Education in and insurance coverage for evidence-based pharmacologic and non-pharmacologic alternatives to opioids for pain management
  - Collaboration across state agencies

Communications & Marketing





Other examples of prevention

- Regional Prevention Partnership Grants
- ParentUpVT.org
- Public service announcements, office posters
- Academic detailing and Blueprint QI Opioid Prescribing
- Vermont's Most Dangerous Leftovers
- School based prevention education, student assistance programs
- Prevention consultants
- Secondary prevention = VT Recovery Network
- Community initiatives: Project VISION, CCOA and others

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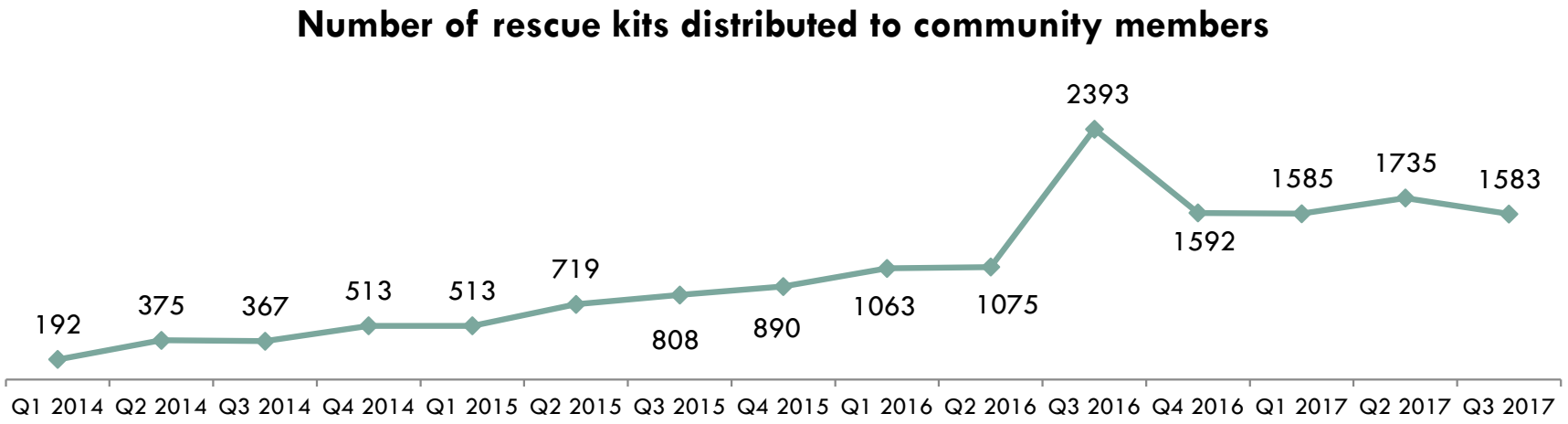
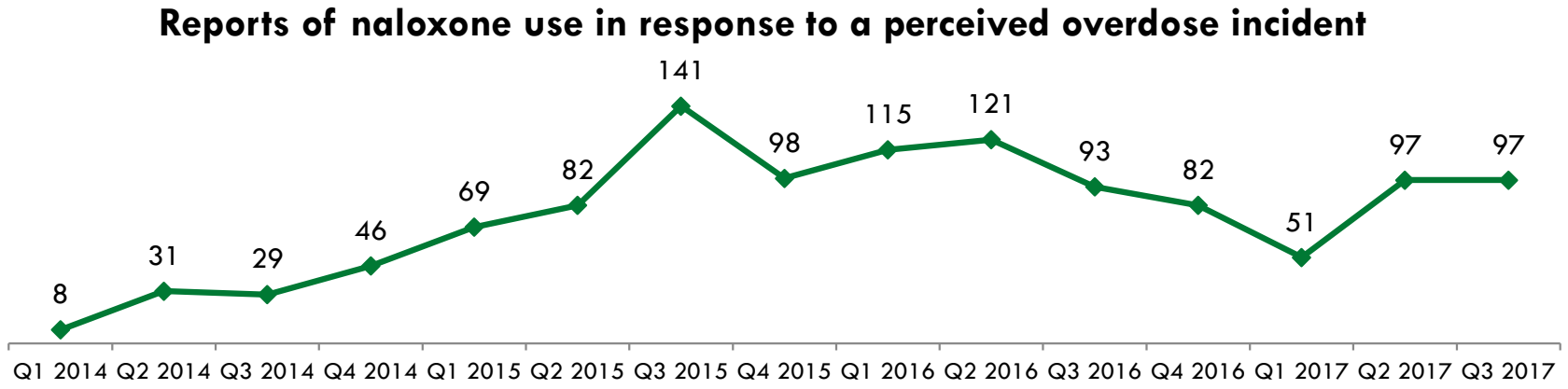
Elements of a High Functioning State Response to the Opioid Crisis

- Harm-reduction strategies:
  - Drug disposal options and systems; safe storage guidelines
  - Sharps collection and disposal programs
  - Naloxone distribution programs for first responders and the public
  - Naloxone standing order
  - Syringe services programs
  - Good Samaritan Law
  - Alternatives to incarceration for those at risk of entering the criminal justice system due to drug use

Naloxone

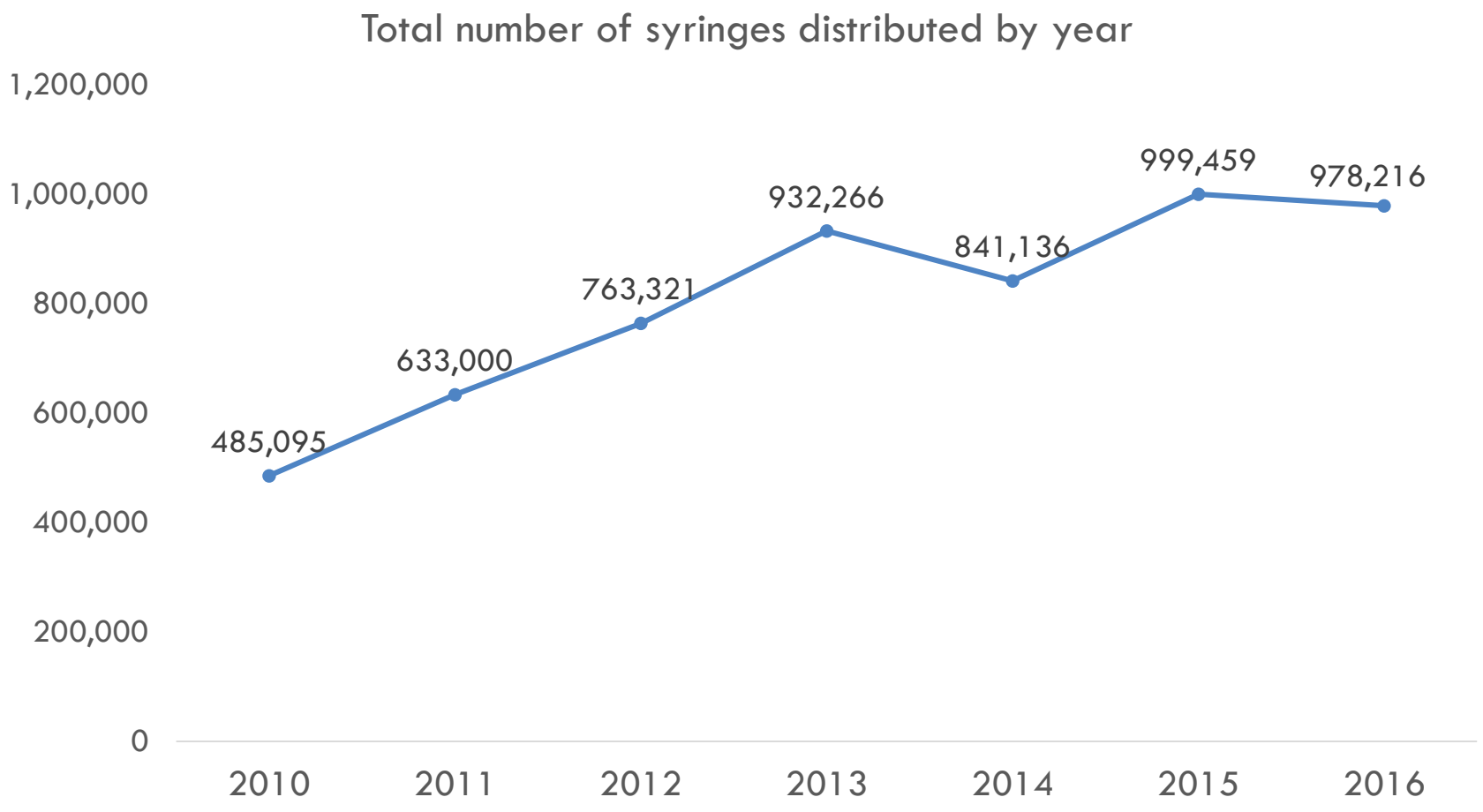




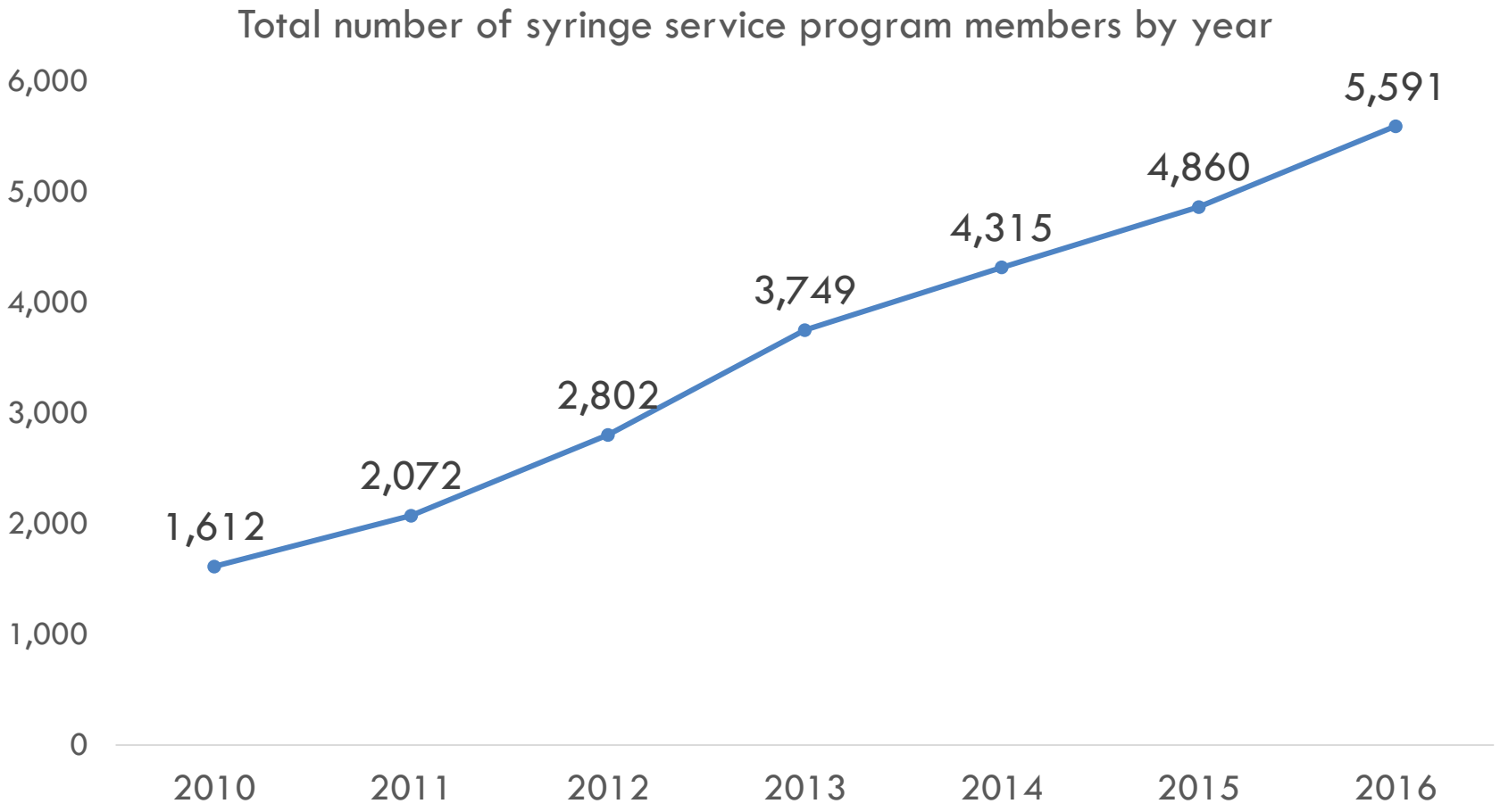
In July of 2016, VDH slowly began to switch to distributing naloxone in new packaging – demand for the new kits was high. Dose in the new kit is twice that of the old kit.

Source: Vermont Department of Health Naloxone Pilot Program

Syringe Service Distribution



Syringe Service Program Members



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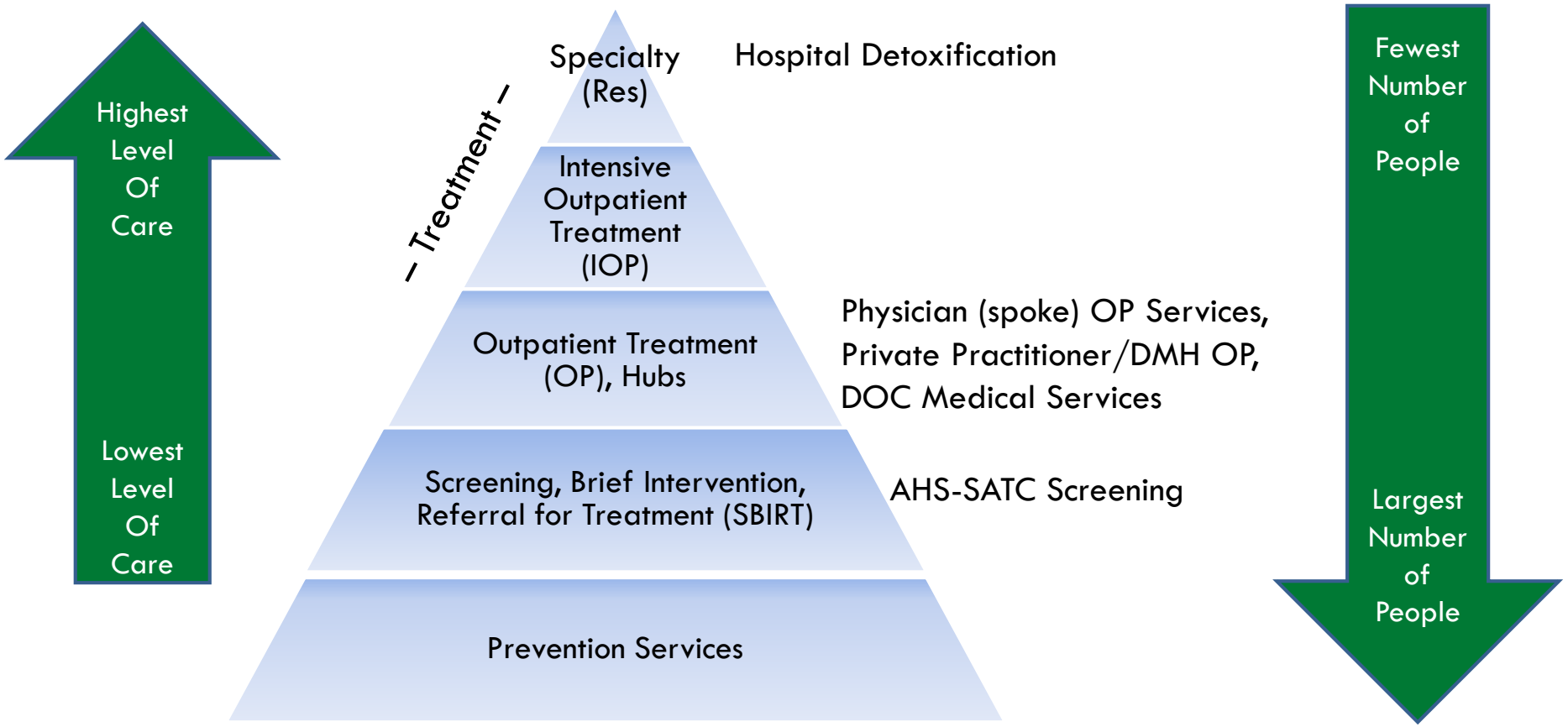
Elements of a High Functioning State Response to the Opioid Crisis

- Intervention and Treatment
  - Include screening, intervention, and referral services in medical settings (SBIRT)
  - Widely available evidence-based Medication Assisted Treatment (MAT) with methadone or buprenorphine with added:
    - Counseling services
    - A Health Home model, with services to integrate and coordinate primary, acute, behavioral health, and long-term services and supports
  - Residential treatment, with or without MAT, where clinically indicated
  - Non-MAT outpatient treatment, where clinically indicated

VT Prevention, Intervention, Treatment, Recovery Services



Recovery services are available at all service levels

Effectiveness of Medication Assisted Treatment

- Several studies have clearly demonstrated MAT is effective across a number of behavioral dimensions compared to placebo or psychological treatment alone:
  - Reduced opioid use (including IVDU)
  - Increased engagement and retention in treatment
  - Reduced morbidity and mortality
  - Improved social functioning
  - Reduced criminal activity
  - Reduced transmission of infectious diseases

Care for Opioid Use Disorder – the "Hub"

"HUB"

A *Hub* is a specialty regional treatment center responsible for coordinating the care of individuals with complex opioid use disorder across the health and substance abuse treatment systems of care. All Medications are dispensed. A *Hub* is designed to do the following:

- Provide comprehensive assessments and treatment protocols.
- Provide medication (methadone, buprenorphine, and/or vivitrol) treatment and supports.
- For clinically complex clients, initiate medication treatment and provide care for initial stabilization period.
- Coordinate referral to ongoing care.
- Provide specialty addictions consultation and support to ongoing care.
- Provide ongoing coordination of care for clinically complex clients.

5 Programs Operate 9 Sites Across Vermont

Care for Opioid Use Disorder – the "Spoke"

"SPOKE"

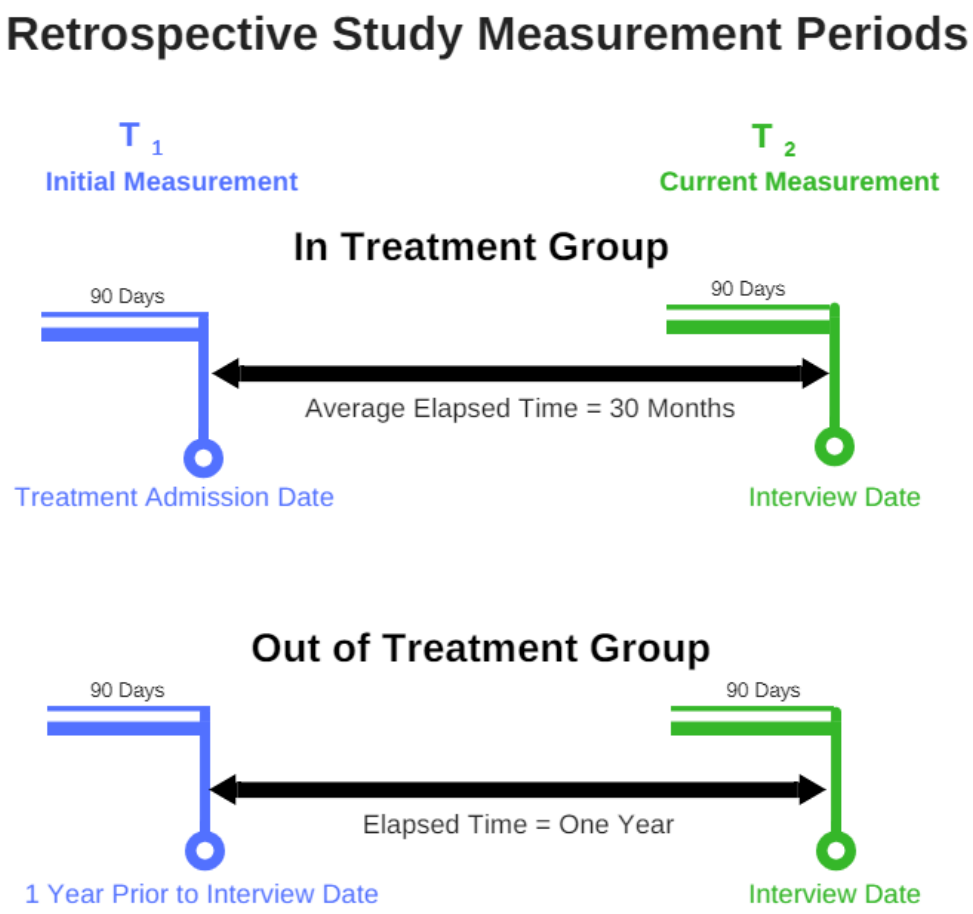
A *Spoke* is the ongoing care system comprised of a prescribing MD, APRN, or PA and collaborating health and addictions professionals who monitor adherence to treatment, coordinate access to recovery supports, and provide counseling, contingency management, and case management services. *Spokes* can be:

- Primary care offices
- Outpatient substance abuse treatment programs
- Pain clinics
- OB-GYN offices
- Independent psychiatry practices

Spoke Teams include the prescribing provider and 1 FTE RN + 1FTE MH/SU Counselor for every 100 patients

80 different practices / programs are Spoke sites in Vermont

Study Measurement Periods



Self-Reported Changes in Opioid Use: T_1 to T_2

Opioid use decreased substantially for people in both hubs and spokes. Those not in treatment continued to use at high levels.

Measure	In Treatment		Out of Treatment	
	Change in Ave Days Used	Percent Using at T_2	Change in Ave Days Used	Percent Using at T_2
Days of Opioid Use	-96% ↓	15%	+12%	100%
Days of Opioid Injection	-92% ↓	11%	-1%	85%

↓ Designates statistically significant change

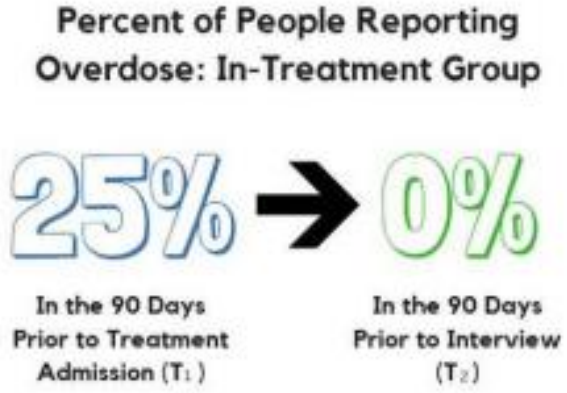
"The hub was really good in a lot of ways because of the structure, the discipline. It makes you get back on track if you want to get back on track." – Hub Patient

"The main support is always they focus on your health and your wellbeing. They always try to make sure you're safe. That's the number one thing, and then your substance abuse, to not using." – Spoke Patient

Self-Reported Changes in Functioning: T_1 to T_2

There were significant decreases in the number of ED visits, arrests, and days of illegal activity. No study participants overdosed in the 90 days prior to the interview. Days of school or training increased but there was not a significant change in days of work.

Measure	In Treatment Group (n=80)
Number of ED Visits	-89% ⬇
OD in the previous 90 days	-100% ⬇
Days of school or training	+257% ⬆
Days of work	+8%
Number of police stops or arrests	-90% ⬇
Days of illegal activity	-90% ⬇



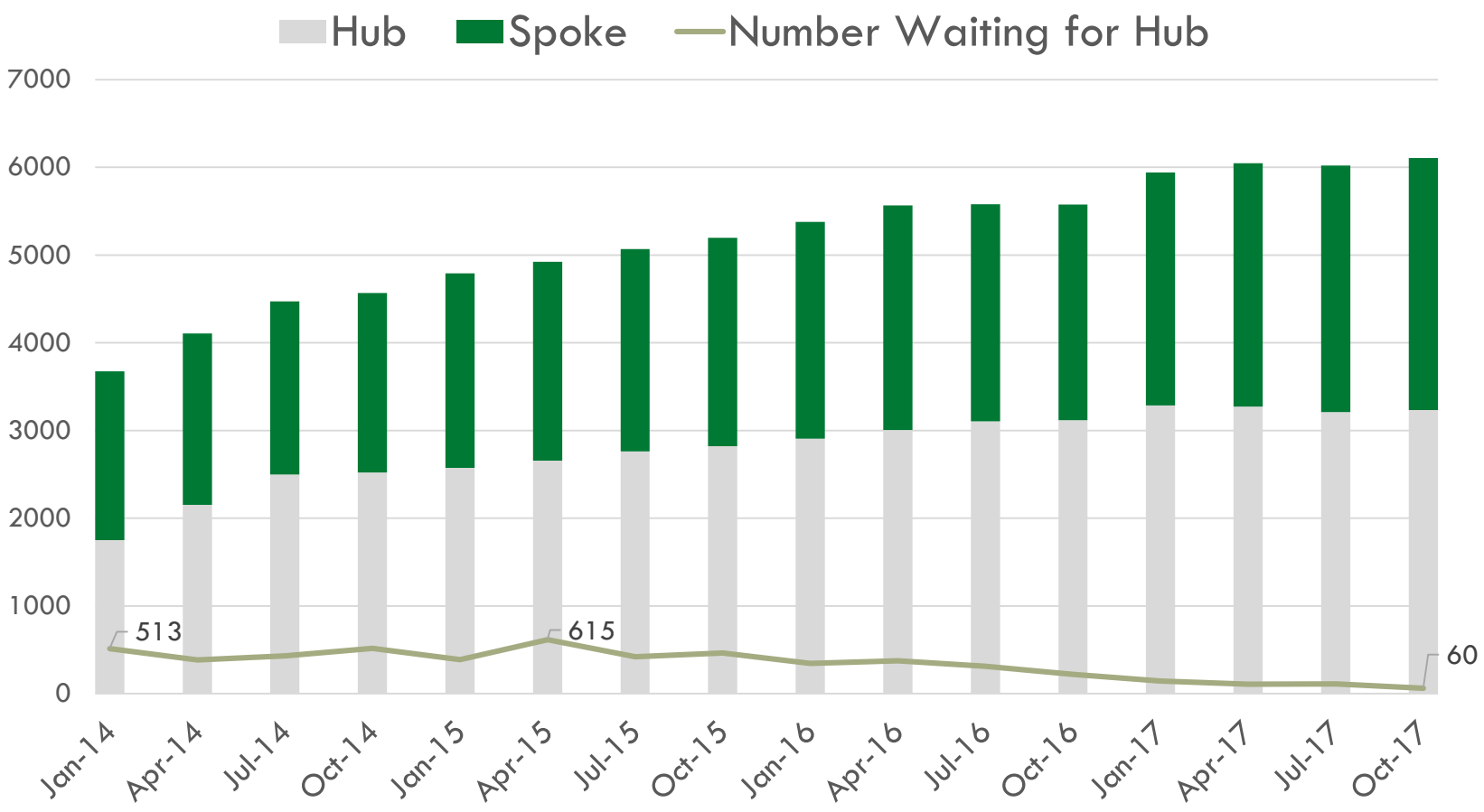
The out of treatment group is excluded because there were no significant changes

⬆⬇ Designates statistically significant change

DVHA/Blueprint Cost Analysis

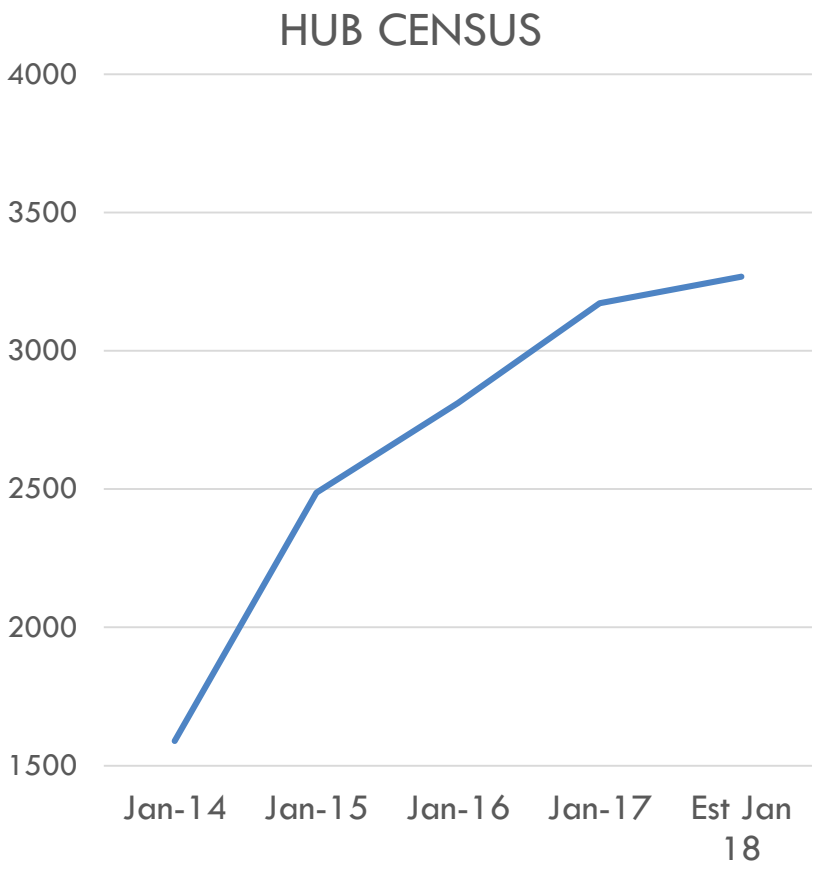
- "Impact of Medication-Assisted Treatment for Opioid Addiction on Medicaid Expenditures and Health Services Utilization Rates in Vermont" published in the Journal of Substance Abuse Treatment (August 2016)
  - Highlights:
    - Higher MAT treatment costs offset by lower non-opioid medical costs
    - MAT associated with lower utilization of non-opioid medical services
    - MAT suggested to be cost-effective service for individuals addicted to opioids
  - https://www.ncbi.nlm.nih.gov/pubmed/27296656

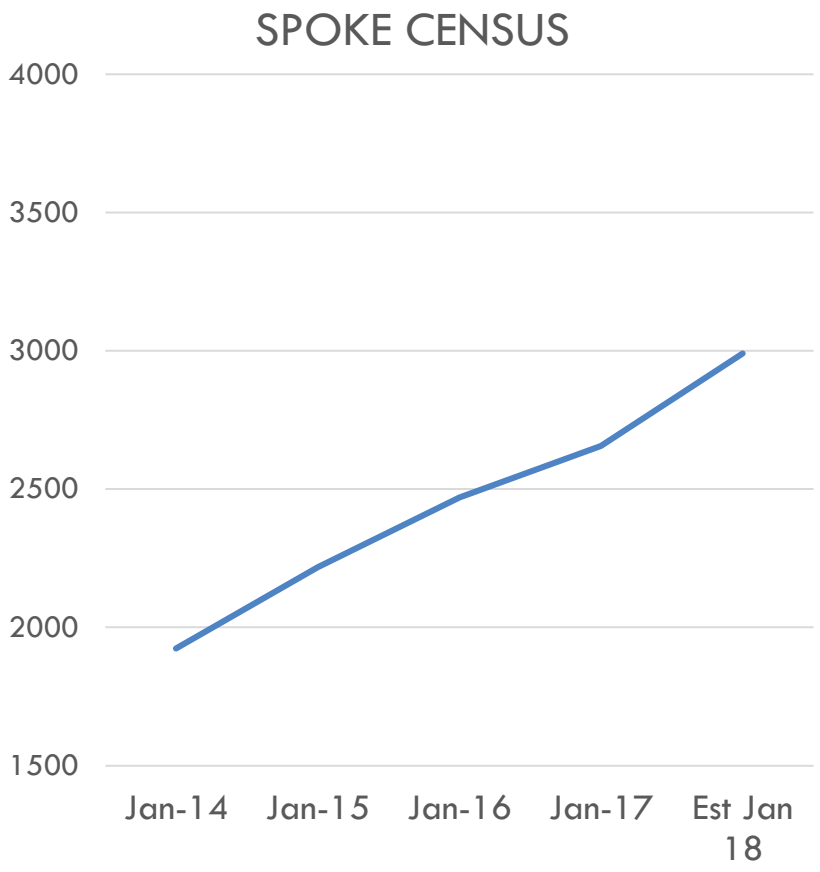
Number of people receiving MAT in hubs and spokes vs number waiting for services over time



Source: Hub Census and Waitlist, Medicaid Claims for Spokes

Census Change - Hubs and Spokes





Elements of a High Functioning State Response to the Opioid Crisis

- Intervention and Treatment
  - Include screening, intervention, and referral services in medical settings (SBIRT)
  - Widely available evidence-based Medication Assisted Treatment (MAT) with methadone or buprenorphine with added:
    - Counseling services
    - A Health Home model, with services to integrate and coordinate primary, acute, behavioral health, and long-term services and supports
  - Residential treatment, with or without MAT, where clinically indicated
  - Non-MAT outpatient treatment, where clinically indicated

Elements of a High Functioning State Response to the Opioid Crisis

- Intervention and Treatment, cont'd.
  - Peer recovery coach availability in ED and hospitals
  - Access to MAT in correctional facilities
  - Specialty treatment services for pregnant women and their infants

Elements of a High Functioning State Response to the Opioid Crisis

Recovery

- Strong statewide network of recovery centers with access to peer recovery coaches
- Availability of and equal access to stable recovery housing
- Opportunities to grow the state's workforce by employing individuals in recovery

Elements of a High Functioning State Response to the Opioid Crisis

Recovery

- Strong statewide network of recovery centers with access to peer recovery coaches
- Availability of and equal access to stable recovery housing
- Opportunities to grow the state's workforce by employing individuals in recovery

System of Care Enhancement: Workforce

- Strengthen the workforce & increase number of qualified providers
  - Support workers in pursing path to certification/licensure
  - Increase number of federally "waivered" prescribers trained to provide office-based opioid use disorder treatment
  - Expand opportunities for credentialed clinicians to access training