ESKENAZI HEALTH

SCHOOL OF MEDICINE
EMERGENCY MEDICINE

Common Drug Trends: Overdoses, Treatment, and Discharge in the ED

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Patient 1

- Tommy, 45 years old
- Known psychiatric history, schizophrenia chiefly
- Arrives via EMS somnolent under ketamine sedation after spending the last 60 minutes fighting EMS and police
- Unable to get history or vitals, quite diaphoretic

Patient 2

- Sonja, 32 years old
- Found behind the wheel of her car unresponsive, blue
- Received 8 mg intranasal Narcan, then 0.4mg intravenous by EMS
- Now clutching emesis basin, sweating, wants to leave

Patient 3

- Oscar, 76 years old
- Slumped over on his porch while talking to friends and drinking a bit of alcohol
- Several visits for similar, reversed by EMS with Narcan
- Started on heroin when his doctor wouldn't treat his chronic pain, "really it's the only thing that helps" the back pain he has
- Unsure if the new supply has the same things in it as what he's used to
- Has his hat in his hand and is ready to go

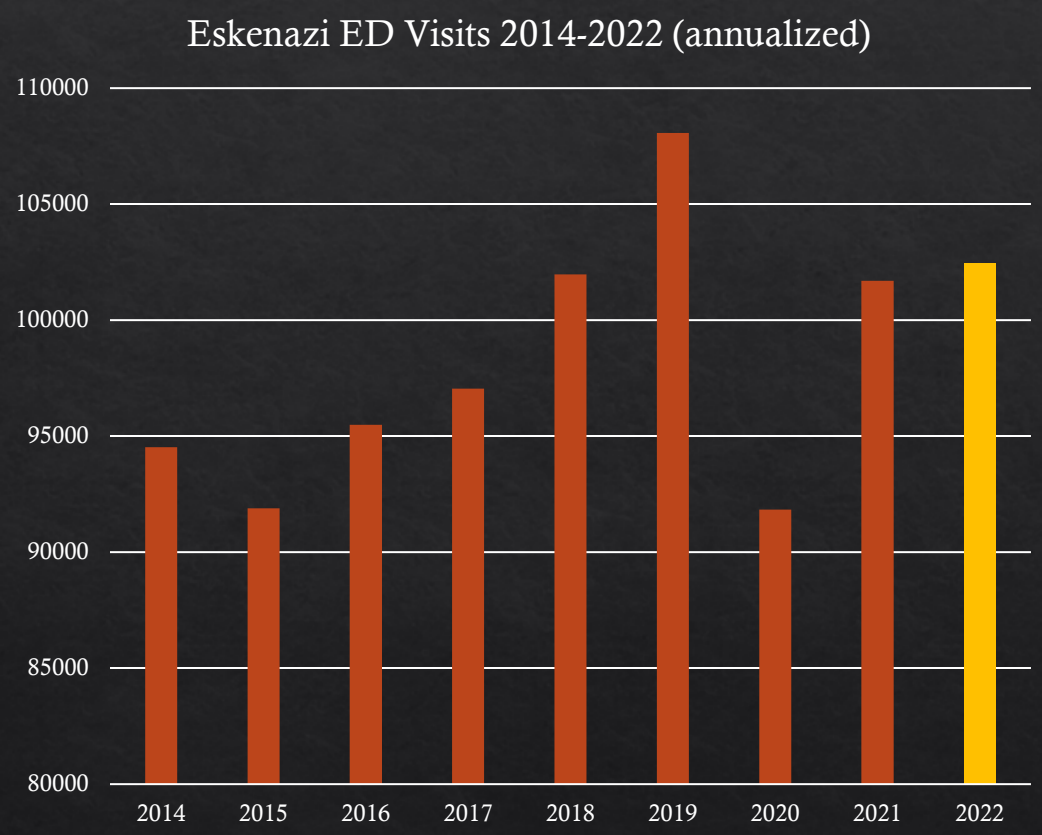
Patient 4

- Raven, 58 years old
- Chronic homelessness and alcoholism
- Nearly daily visits to the ED as he passes out in full view of the public while drinking
- Has been offered follow-up, has been placed in long term services (which worked for a bit), but because most 28-day facilities won't detox, a specific detox center must have space and he has to consent at the right time of day to go (usually he leaves before then)

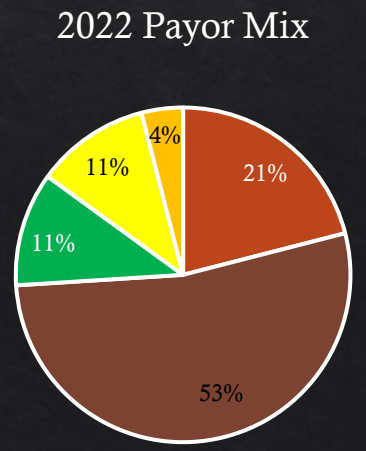
Patients 5-8

- Several patients are transported to the ED at the same time from the local homeless shelter after smoking what they thought was “wet”
- One is unconscious, two are quite agitated and not answering questions, the last is vomiting and saying he is dizzy, but is the one who provided the history

Eskenazi Health



- Level 1 Trauma, Level 1 Burn, Primary Stroke/Thrombectomy Capable
- Only hospital in state with inpatient eye
- County hospital for Marion Co residents
- Provides majority of care for homeless population
- Medicaid expansion



Indiana State Police Trends

	2020	2021
Methamphetamine	5,873	9,245
Withdrawn	3,783	4,031
Marijuana	2,508	2,876
Fentanyl	1,246	1,870
Tetrahydrocannabinol (THC)	754	941
Heroin	683	867
Cocaine	614	924

Source: Indiana Poison Center

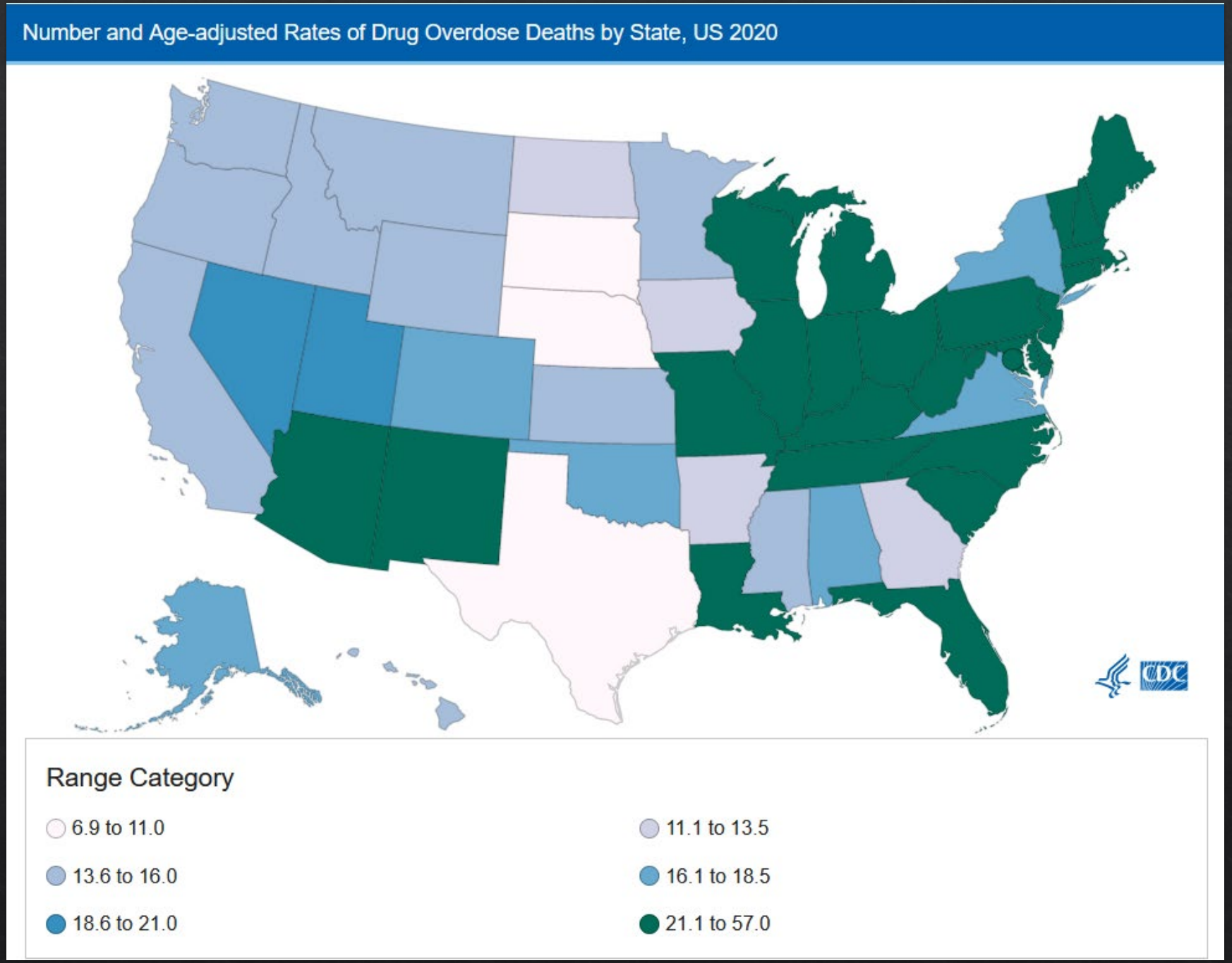
Project POINT Trends

	2021	2022
Patients engaged	2687	2100
Tx referrals	430	417
new	1012	
Alcohol	276	350
Benzo	40	22
RX	59	48
Heroin	604	411
Methadone	12	11
Fentanyl	86	79
Bup	8	10
Methamphetamine	100	128
Cocaine	35	45
Other/unknown	152	229

Trends in Overdose Deaths (Nat'l)

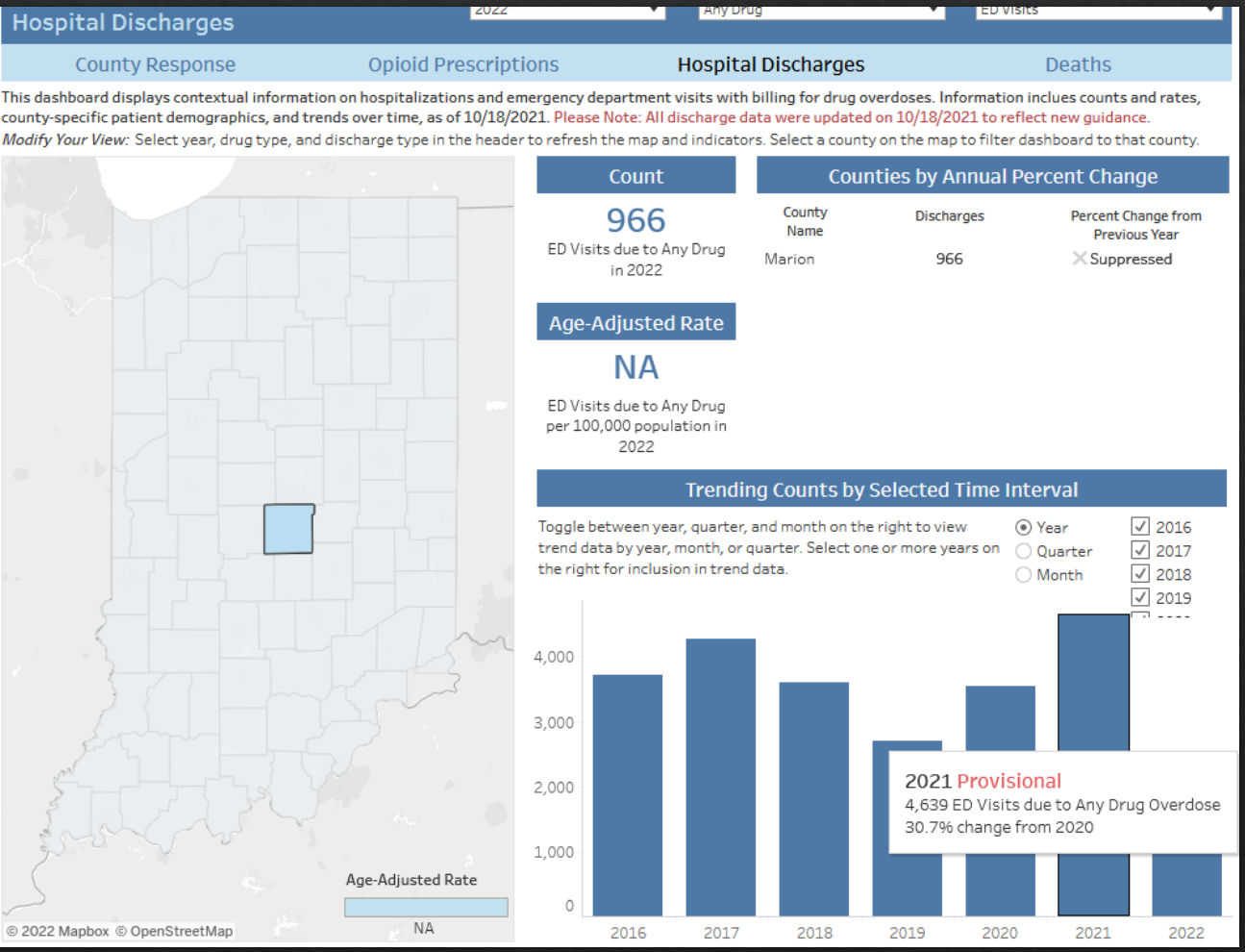
- Opioids – over 74.8% of overdose deaths in 2020 in US (68,630 documented)
  - 6% **increase** in all opioid related deaths
  - 7% **decline** in prescription opioid
  - 6% **decline** in heroin
  - 15% **increase** in synthetic opioids (excluding methadone) → 82.3% of all opioid OD deaths
- 21.6→28.3/100,000 age adjusted rate of all overdose deaths 2019 to 2020
- Increasing Deaths due to psychostimulants both with and without opioids

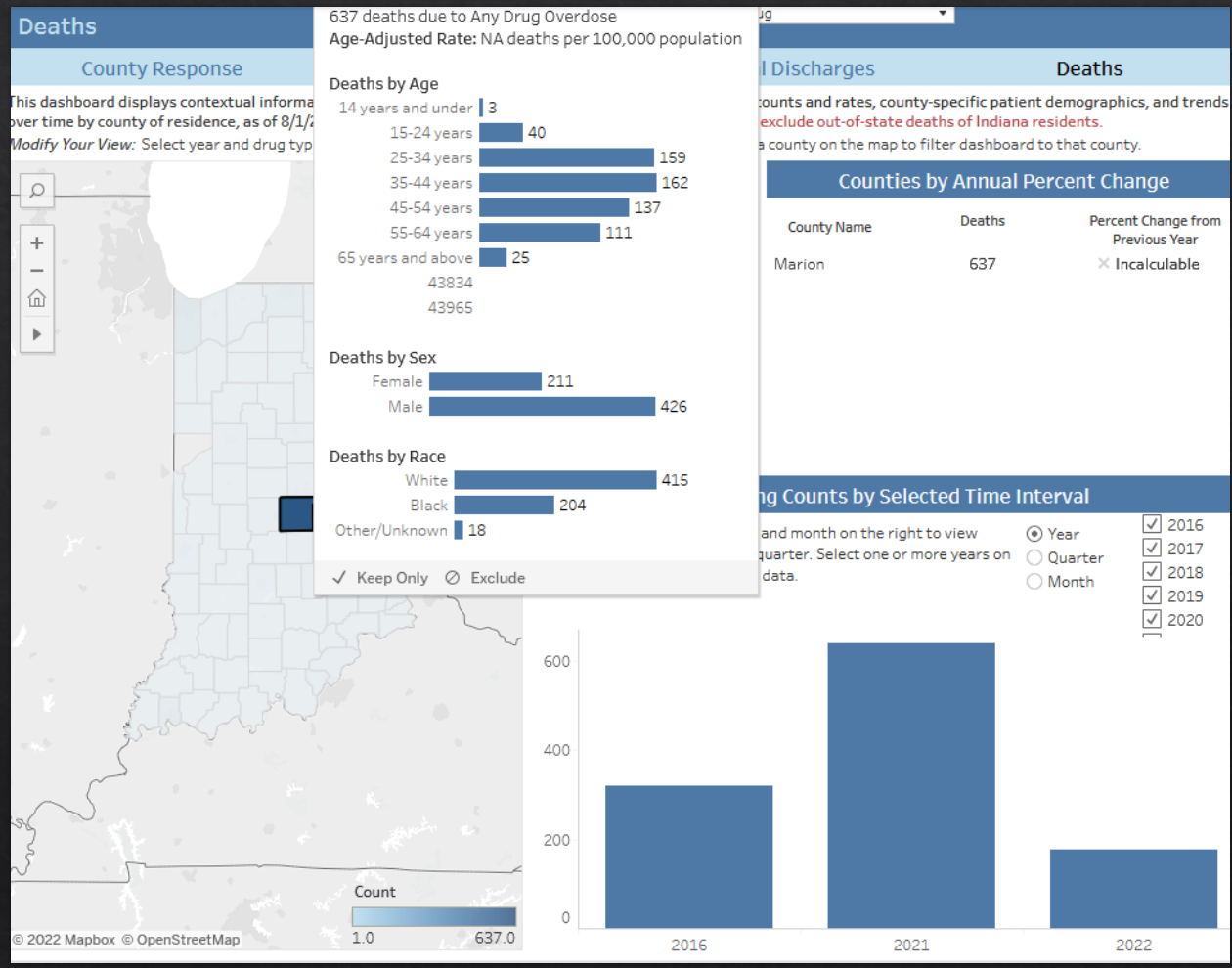
https://www.cdc.gov/drugoverdose/epidemic/index.html



https://www.cdc.gov/drugoverdose/deaths/2020.html

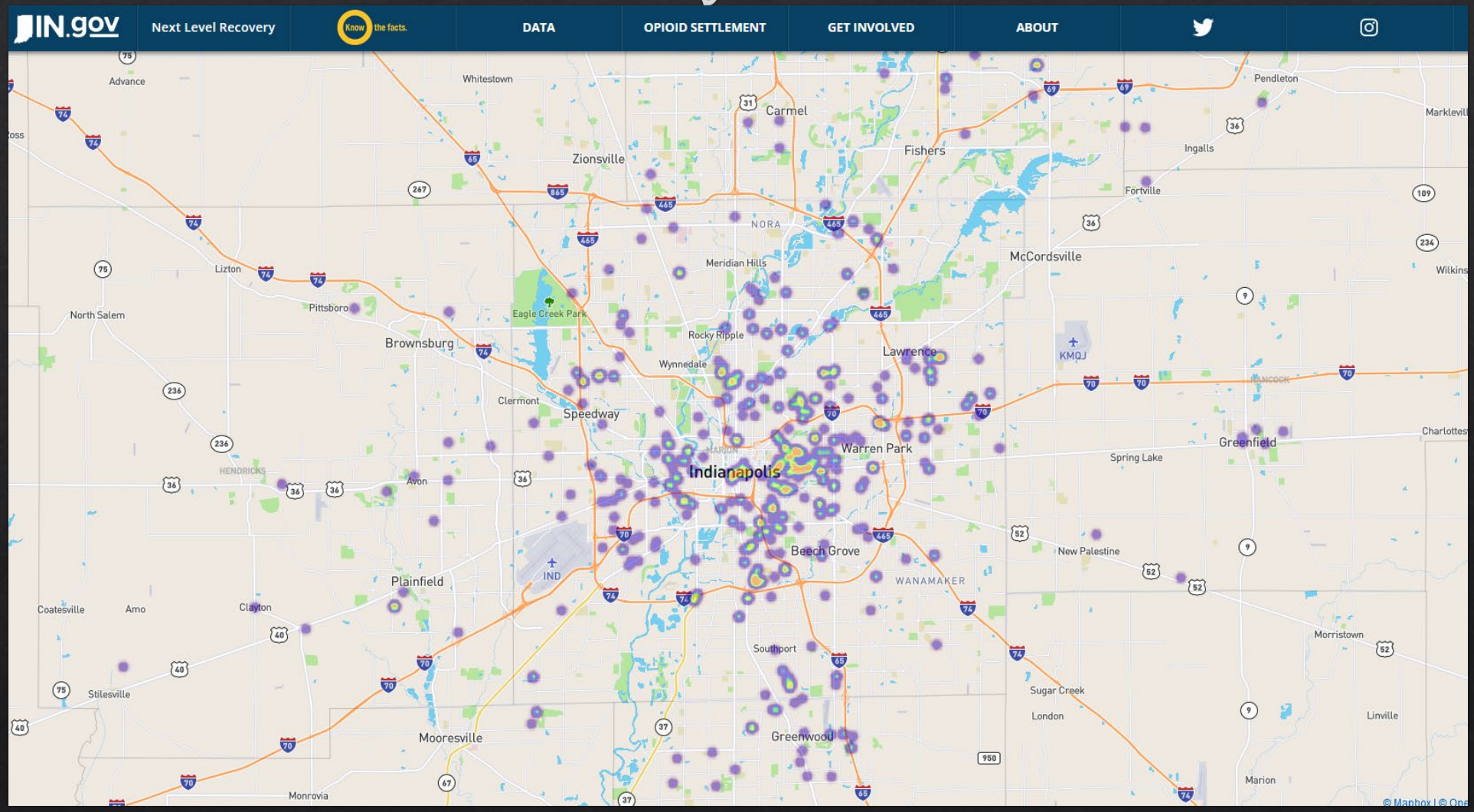
Indiana Trends





https://www.in.gov/isdh/27393.htm

Marion County Narcan Trends



https://www.in.gov/recovery/naloxone/heatmap.html

How do patients arrive?

- Typically – via EMS
  - Post-Narcan induced withdrawal
  - Assisted ventilations
  - CPR/Mechanical Ventilation
  - Restrained and/or sedated
  - Fighting, Biting, Spitting
  - Psychiatrically altered
- How else (a few of the many ways)
  - Private car – active overdose
  - In withdrawal
  - With sequelae of use (endocarditis, abscesses, lung/brain complications, etc)
  - Domestic violence
  - Immediate Detention

Table 1.
Reports of False-Positive Results of Urine Drug Screens for Selected Formulary Agents[6-30]

Medication	False-Positive Result						
	Amphetamine or Methamphetamine	Phencyclidine	Methadone	Opiates	Benzodiazepines	Cannabinoids	Barbiturates
Antihistamines/decongestants							
Brompheniramine	X						
Diphenhydramine			X				
Doxylamine			X				
Phenylpropanolamine	X						
Nonprescription nasal inhaler	X						
Antidepressants							
Bupropion	X						
Clomipramine			X				
Sertraline					X		
Trazodone	X						
Venlafaxine		X					
Antibiotics							
Quinolones (selected agents)				X			
Analgesics							
Ibuprofen		X				X	X
Naproxen						X	X
Antipsychotics							
Chlorpromazine	X		X				
Promethazine	X						
Quetiapine			X				
Thioridazine			X				
Other agents							
Dextromethorphan		X					
Ranitidine	X						
Verapamil			X				

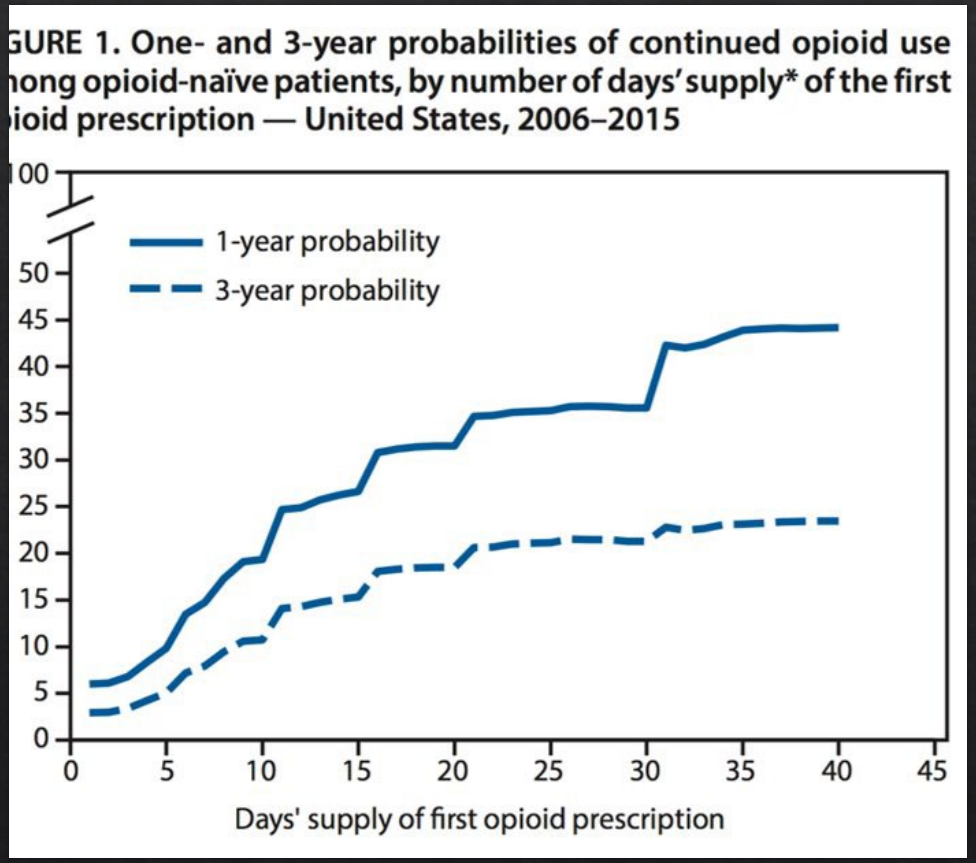
Brahm N et al, Am J Health-Syst Pharm 2010 (67); 1344-13

Saitman A et al, Journal of Analytical Toxicology 2014; 1-10

Are UDSs Useful in the ED setting?

- No.
- Toxidromes don't lie
- Treatment for most is supportive care
- Patients are pretty reliable about what they ingested

Acute Pain and OUD



- Obvious – more pills, more chance for chronic use
  - Rapid rise after 3 days
- Less obvious – what's the "right amount"?
  - Lots of work into this very concept on a surgical side
  - Multimodal pain control
- Continuing suboxone use
  - YES – may need to divide into 2 or 3 daily doses

Shah A et al. MMWR. 2017;66(10):265–269

Chronic Pain and OUD

21-29%
Misuse Rx

8-12%
Develop OUD

4-6%
Transition to heroin

80% People who use heroin that first started on prescription meds

PAIN IS THE 5TH VITAL SIGN

https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis

How can EDs help?

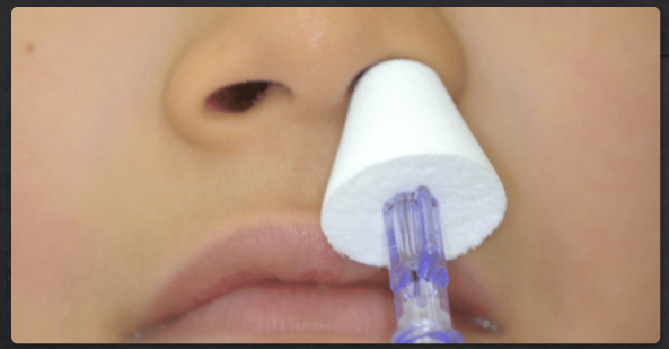
- Three-pronged approach – goal is HARM REDUCTION
  - Narcan
  - Buprenorphine/withdrawal care and linkage to treatment
  - Peer Recovery Coaching
- Slow in adoption
- Tend to see people at their lowest

Narcan

- Massachusetts DOH in response to 6-fold OD deaths from 1990-2006
  - Typically use of Narcan by bystanders decrease EMS use by 70-90%
- Initiation of education/naloxone distribution
  - Significantly decreased deaths in treatment arm
  - No change in hospital utilization
- Other studies have been mixed on confirming
  - Low downside, no increased "risk taking" because of it
  - Vast majority of patients getting instructions alone, not with another responsible party

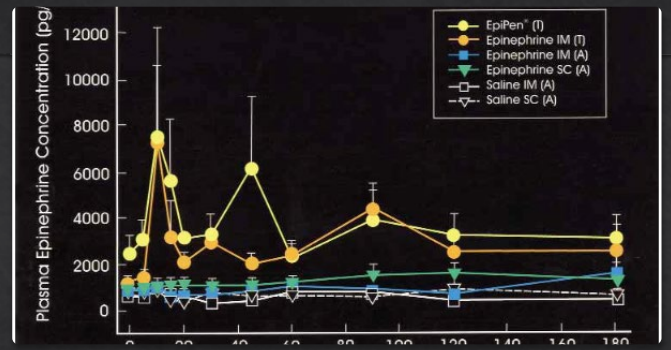
Doe-Simmons M et al. Am J Public Health 2009;99:788-791
Walley A et al. BMJ. 2013;346:f174

Narcan – RR10, GCS 13 – How?



Intranasal

- 15 min to GCS, 17 to RR
- More likely to redose
- More likely to induce w/d
- Less risk to administrator



Dietze P et al. JAMA Open. 2019;2(11):e1914977

Simons F et al. J Allergy Clin Immunol. 2001; 108(5): 871-873

Intramuscular

- 8 min to GCS, 8 to RR
- Less likely to redose
- More consistent concentration in doses
- More risk to administrator

Buprenorphine in the ED

- 2015 study, 3 arms
  - Screening and referral to treatment (referral)
  - Screening, brief intervention, and facilitated referral to community-based treatment services (brief intervention)
  - Screening, brief intervention, ED-initiated treatment with Suboxone, and referral to primary care for 10 week follow-up (buprenorphine)

- 78% buprenorphine, 37% referral, 45% brief intervention engaged in treatment at day 30

- Number of days of illicit opioid use per week
  - Buprenorphine – 5.4 days → 0.9 days
  - Brief intervention – 5.4 days → 2.3 days
  - Referral – 5.4 days → 2.4 days

D'Onofrio G et al. JAMA. 2015:313(6): 1636-1644

D’Onofrio Follow-Up

- Less likely to use inpatient treatment services
  - Buprenorphine 11%
  - Referral 37%
  - Brief intervention 35%

- Conclusions – get those with OUD on treatment where they present and linked to outpatient care

- Follow up – effect stays 2 months when engaged in primary care, but falls back to referral and brief intervention groups at 6 and 12 months

D’Onofrio G et al. J Gen Intern Med. 2017;32(6): 660-6

Barriers to Initiation

- Concerns about diversion and misuse (community review showed 16-46% misuse and 18-28% diversion)
- Worry about prescribing a chronic medication in an acute setting
- Unfamiliarity with medication indications and side effects
- Gaps in knowledge about induction
- Limits to long term care access (< 50% of EDs within 1 hour of tx provider)
- Patient lack of acceptance due to fear of stigmatization

Cao S et al. Open Access Emergency Medicine. 2020;12:261-274

New Directions

- High dose buprenorphine induction does not seem to precipitate withdrawal or cause any respiratory depression (>12mg at start, up to as high as 28mg/dose)
  - Release on 16mg/day for bridge to outpatient care
  - Seems to be overall quite safe

- Project ED-INNOVATION
  - Ongoing trial comparing SL induction vs. 7-day IM extended release variety

Herring A et al. JAMA Netw Open. 2021;4(7):e2117128
D'Onofrio G et al. Contemp Clin Trials 2021 May; 104:106359

Peer Recovery

- 2016 systematic review
  - Significant decreases in substance use
  - Significant increases in “recovery capital” (housing stability, self-care, independence, health management)
  - Trend toward increased likelihood of abstinence among those exposed to PRCs

Sightes E et al. Use of PRCs to Combat Barriers to OUD Treatment in Indiana. IUPUI Richard Fairbanks School of Public Health 2017

Peer Recovery – Next Steps

- Traditional PRC functions – identification of people ready to enter treatment and bridging to care

- Future – does adapted behavior activation intervention delivered BY PRCs themselves actually help reach more people with OUD?
  - Tailoring behavioral activation to include accessible and feasible activities in the community
  - Case management and linkage to care inclusion to provide some stability to SDOH
  - Overall preference is toward "lived experience" and role modeling

Reif, Sharon et al. PLoS One. 2020; 15(1): e0228084.

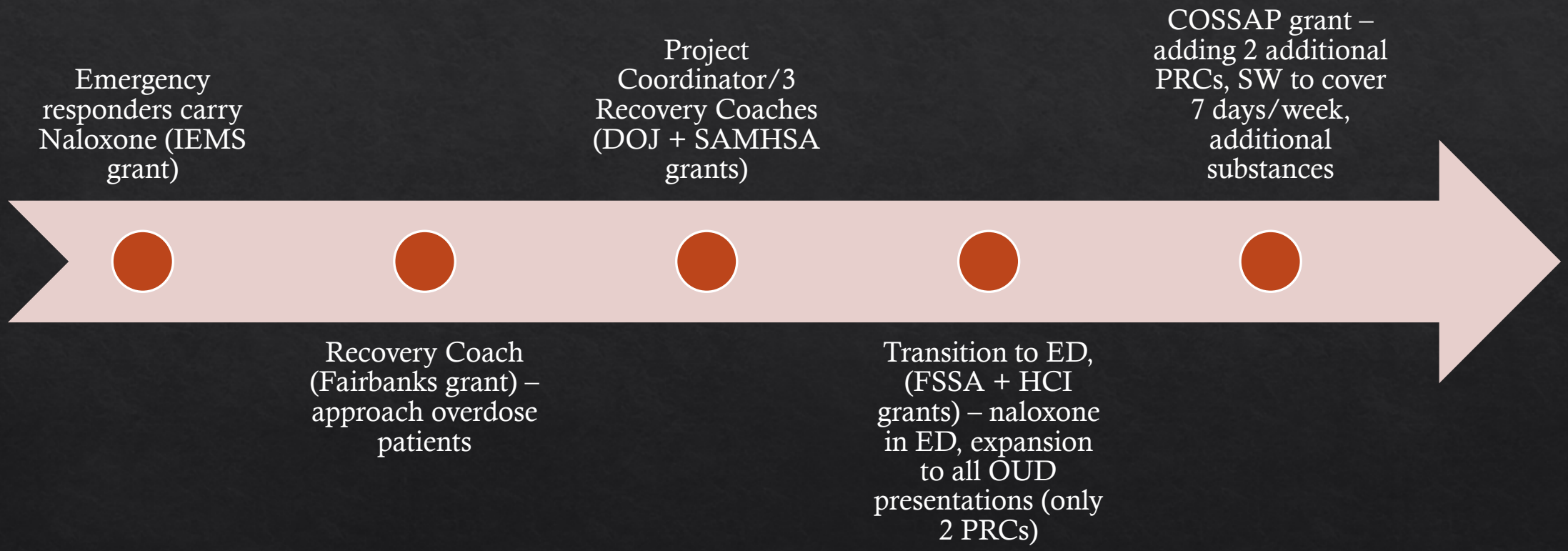
The Eskenazi ED Approach

- Pain encounter
  - Multimodal pain control for acute pain during stay
  - Limiting narcotic days for acute pain
  - No parenteral narcotics to control chronic pain
  - Referral to prescribing physician for any pain medication refills
- Overdose/Withdrawal
  - Narcan kits
  - Consideration of buprenorphine – at least 1 provider (NPs all are x-waivered) present 24/7
  - Involvement of Project POINT

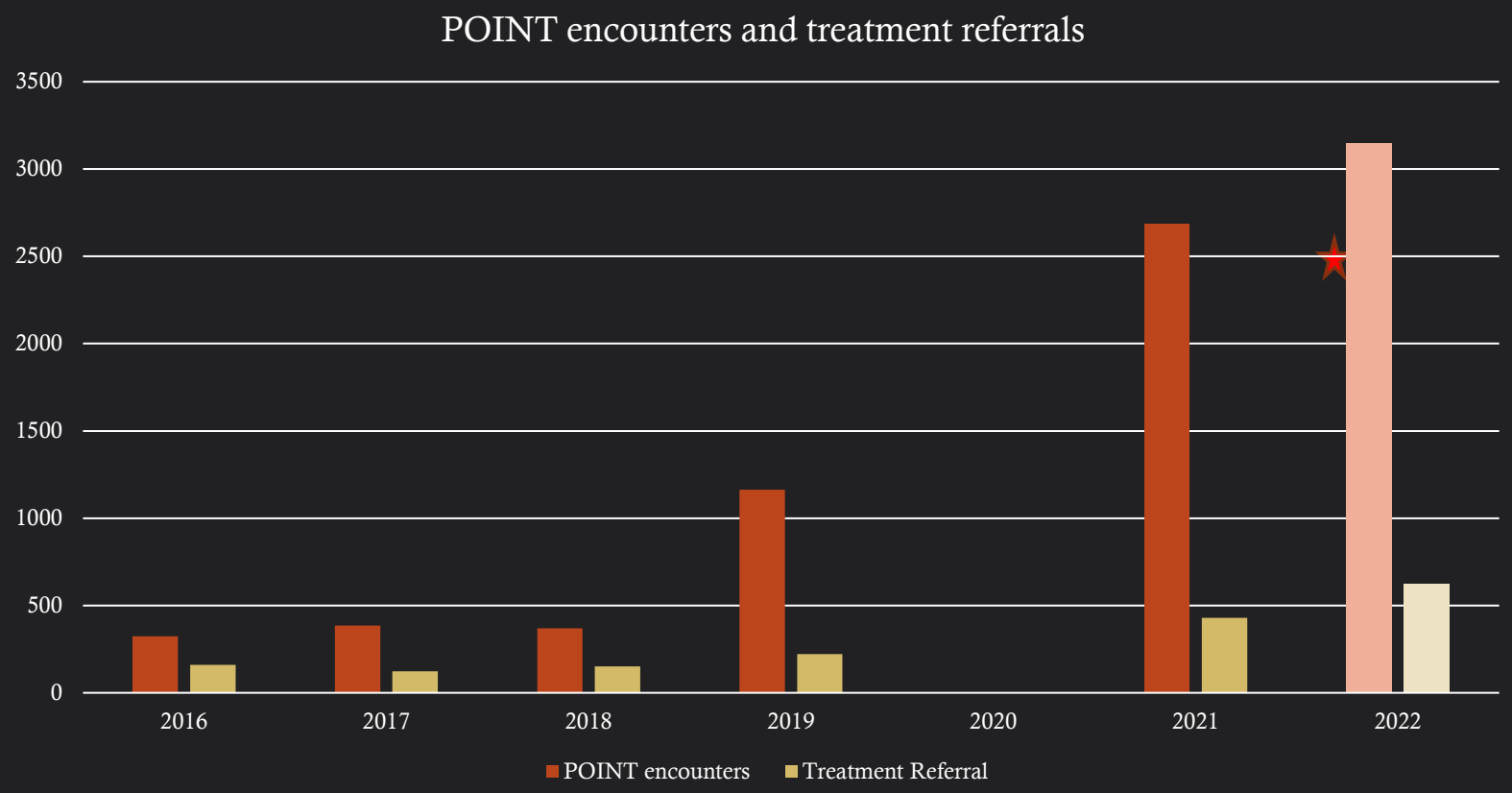
Project POINT

- Planned Outreach, Intervention, Naloxone, and Treatment
- Grant funded since inception
- Continues growth
- Partnering with many different treatment venues
- Alcohol, benzodiazepines, stimulants, opiates

POINT Growth 2015-2020



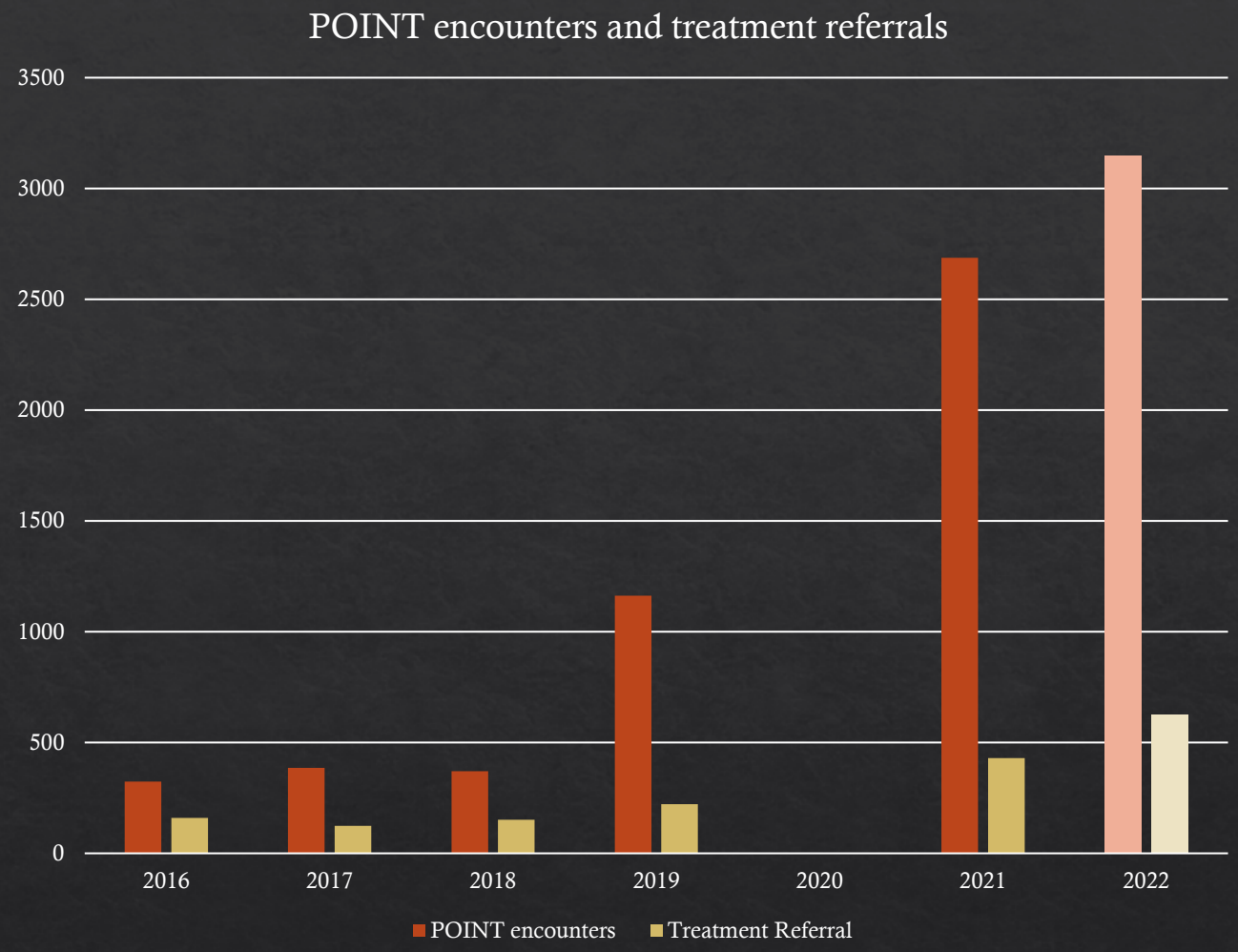
POINT's Impact in the Eskenazi ED



Data from Epic, including commonly encounter discharge diagnoses as given; includes poisoning by heroin/opioids, opioid dependence with/without intoxication/withdrawal, opiate abuse with/without intoxication

2019 – 2 PRC the majority of the year

POINT Impact in the Eskenazi ED



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2019 – 2 PRC majority of the year
2020 – not in person for greater than half the year, started to see return patients as well
2021 – rise in alcohol/stimulant referrals

Services

Ready for Treatment

- Financial Counseling link
- Prescription Vouchers
- Lyft/Bus passes to appts
- Fees for 4 weeks of recovery housing
- Grocery gift cards
- Eskenazi food cards
- Prepaid cell phones
- Naloxone kits
- Clothing/winter gear

Not Ready for Treatment

- Financial Counseling
- Care package
  - 11 Naloxone kits
  - Fentanyl test strips
  - Condoms
  - Sterile injection equipment
  - Sharps container
  - Info for Safe Syringe program
- Community resources

POINT Services

- Follow-up with POINT patients every 2 weeks
  - Peer support
  - Community resources
  - Revisit treatment options – soon will be able to schedule directly into primary care
- COSSAP grant
  - Adding SW and another PRC – coverage 7d/week
  - Adding stimulants, benzodiazepines, alcohol abuse

TAKE CARE
TAKE CHARGE

Safety Tips for People Who Use or Inject Drugs

**If you use drugs,
take care and take charge of your safety.**

For support to stop using drugs and for other resources, call 211 or visit in211.communityos.org.

Additional resources:
Safe Syringe Access and Support
317.221.8332

The Never Alone Project
317.203.9850
info@theneveraloneproject.org

Project POINT
317.880.9334
317.489.2965

What it's like to work as a PRC in the ED

- Being a Peer Recovery Coach in in the emergency department of a public hospital is a very special role and it is definitely not for everyone.
- It requires a great desire to help people with substance use disorder, a tolerance for chaos and a lot of self care (in some cases, debriefing).
- In our roles we are seed planters and we are planting positive, hopeful seeds at a very low point for many people.
- We work to remove immediate barriers that keep people from considering recovery and refer them to community services that can help with their long term goals.
- Our team of 4 is currently engaging with an average of 93.5 and up to 145 patients per month.
- As a fully granted project we are able to work as a team to help all of our patients together rather than have a set client list and quota.
- We are an integrated part of the hospital and we collaborate with the Doctors, Nurses, Inpatient Transitional Care, Security, Patient Experience, Transport, Primary Care, Outpatient Clinics, etc

Future directions

- Increase presence of OUD treatment in jail/transition (35% of POINT encounters are arrested patients)
- Increase availability of treatment providers both in mental health and primary care
- Increase availability of inpatient/residential treatment options

Thank You