

# *Evidence to Action: Reducing Opioid Overdoses in Arizona through Medical and Pharmacy Practice Change*

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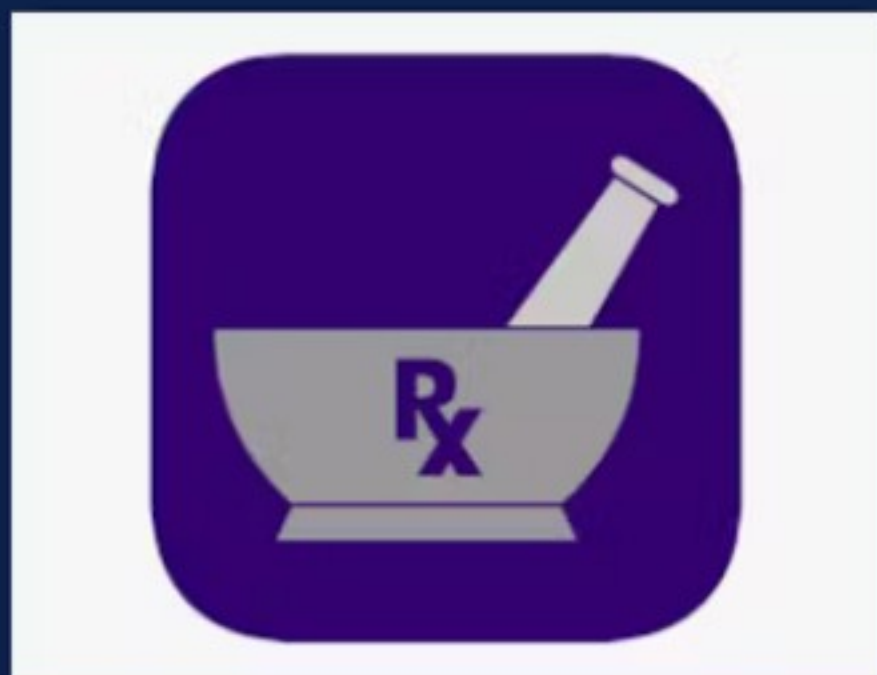


COLLEGE OF MEDICINE TUCSON

Family & Community  
Medicine



Improving opioid use disorder treatment, reducing opioid overdose, eliminating bloodborne infections & empowering patients



micro, mezzo and macro impacts on research outcomes, policy, practice and communities



characterizing and validating latent harm reduction classes to guide intervention testing & targeting

## WHO: Arizona, statewide transdisciplinary group of experts

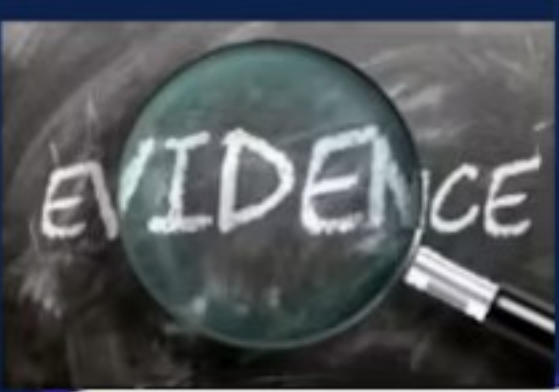
- MOUD\*\* treatment & harm reduction service providers
- People on MOUD
- People with lived/living drug use experience
- Funders (govt/nongovt)
- Harm Reduction NGOs
- Harm Reduction Research Lab researchers



## WHAT:

- Guides the research of UA's Harm Reduction Research Lab
- Generates recommendations to change policy & practice
- Builds community capacity

\*\*MOUD= medication for opioid use disorder



# Studies Informing Evidence Today

## Naloxone

- Co-prescribing
- Layperson access
- Public beliefs



## Medicine

- MOUD treatment change
- Waiver use
- OTP staff beliefs and characteristics



## Lived experience

- Experience of MOUD treatment changes
- Retention in MOUD
- Experience with healthcare

# Questions For AZ Overdose Reduction



1. Do Arizonans have **access to naloxone** to reverse opioid overdose?
2. Do Arizonans have **access to MOUD** medication for opioid use disorder (*NOT MAT!*)
3. Is **MOUD in AZ evidence-based & high quality** to assure optimal patient outcomes?

# Questions For AZ Overdose Reduction

Depends upon where you live



1. Do Arizonans have access to naloxone to reverse overdose?
2. Do Arizonans have access to MOUD (NOT MAT!) for opioid use disorder?
3. Is MOUD in AZ evidence-based & high quality to assure optimal patient outcomes?



# True or False?



Free naloxone is easy to get



All pharmacies have free naloxone



The price of naloxone is not high

# Layperson Access to Naloxone in AZ

## Lay Person Distribution/Beliefs

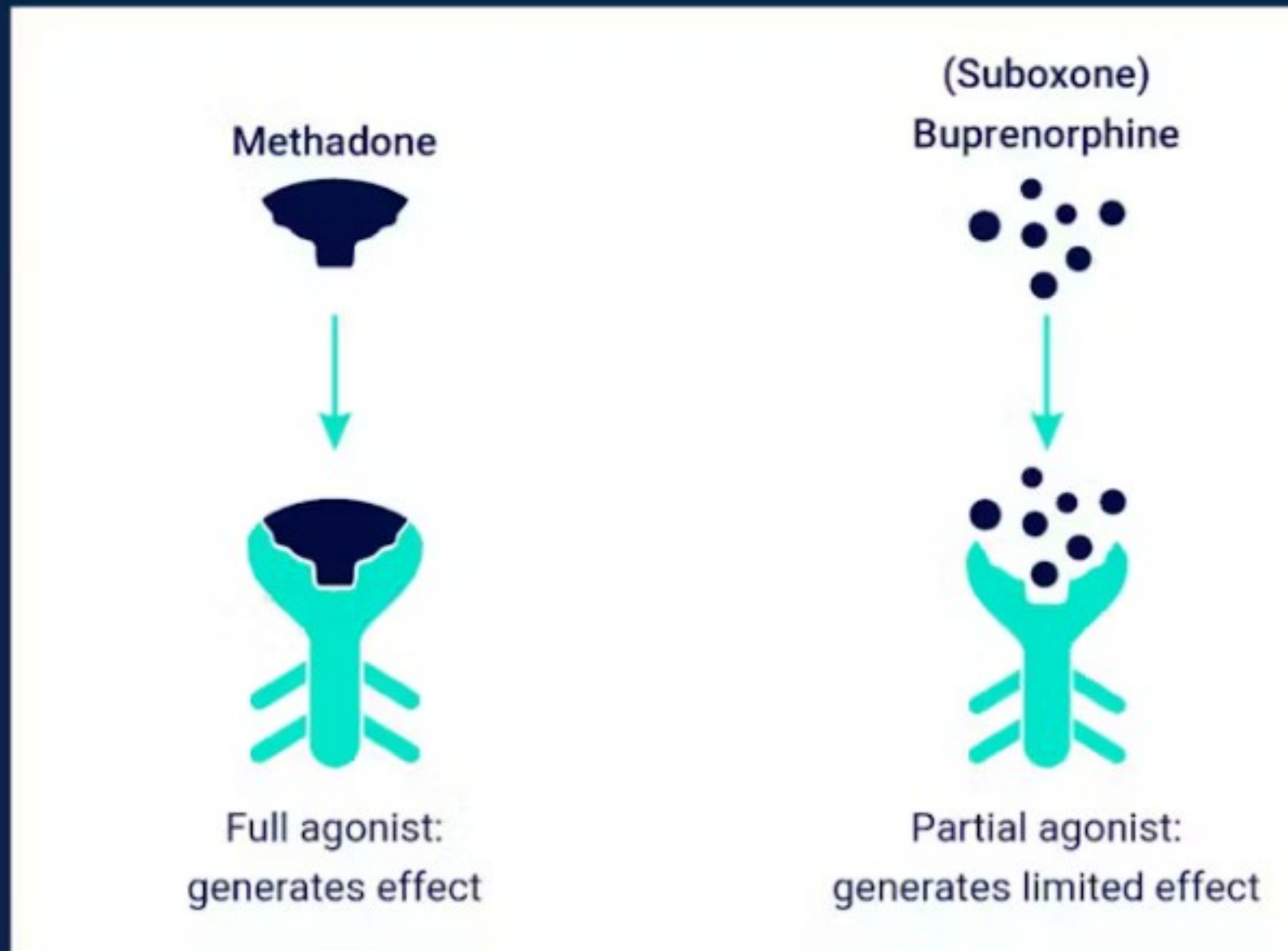
- In 2021, 61% of state-registered AZ naloxone distributors *did not permit layperson access*
- Laypersons continue to have mixed beliefs about naloxone

## Pharmacy Access

- Since AZ's 2018 co-prescription mandate, clinicians are generally prescribing naloxone with high dose opioids (50-120+MME)
- But the price ranges from \$29.00-\$60.00 with coupon (RX and OTC)
- However, 101 AZ pharmacies want to distribute subsidized naloxone (and are not doing so now)

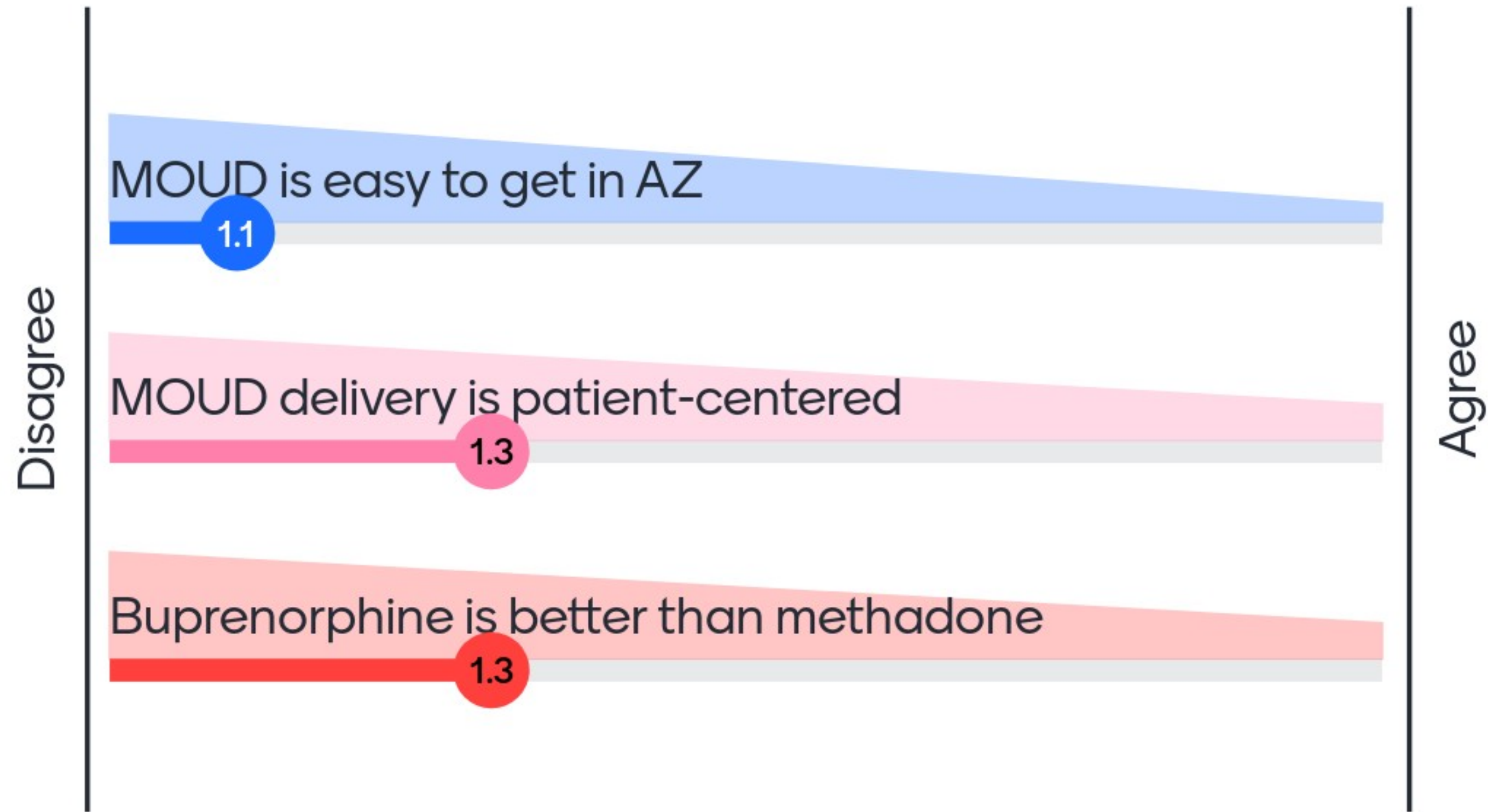


# AZ Access to Medication for Opioid Use Disorder (MOUD)



1. Rural and treatment type disparities persist
2. Treatment practice lags behind evidence base
3. System is changing, *are we ready?*

# Agree or Disagree?

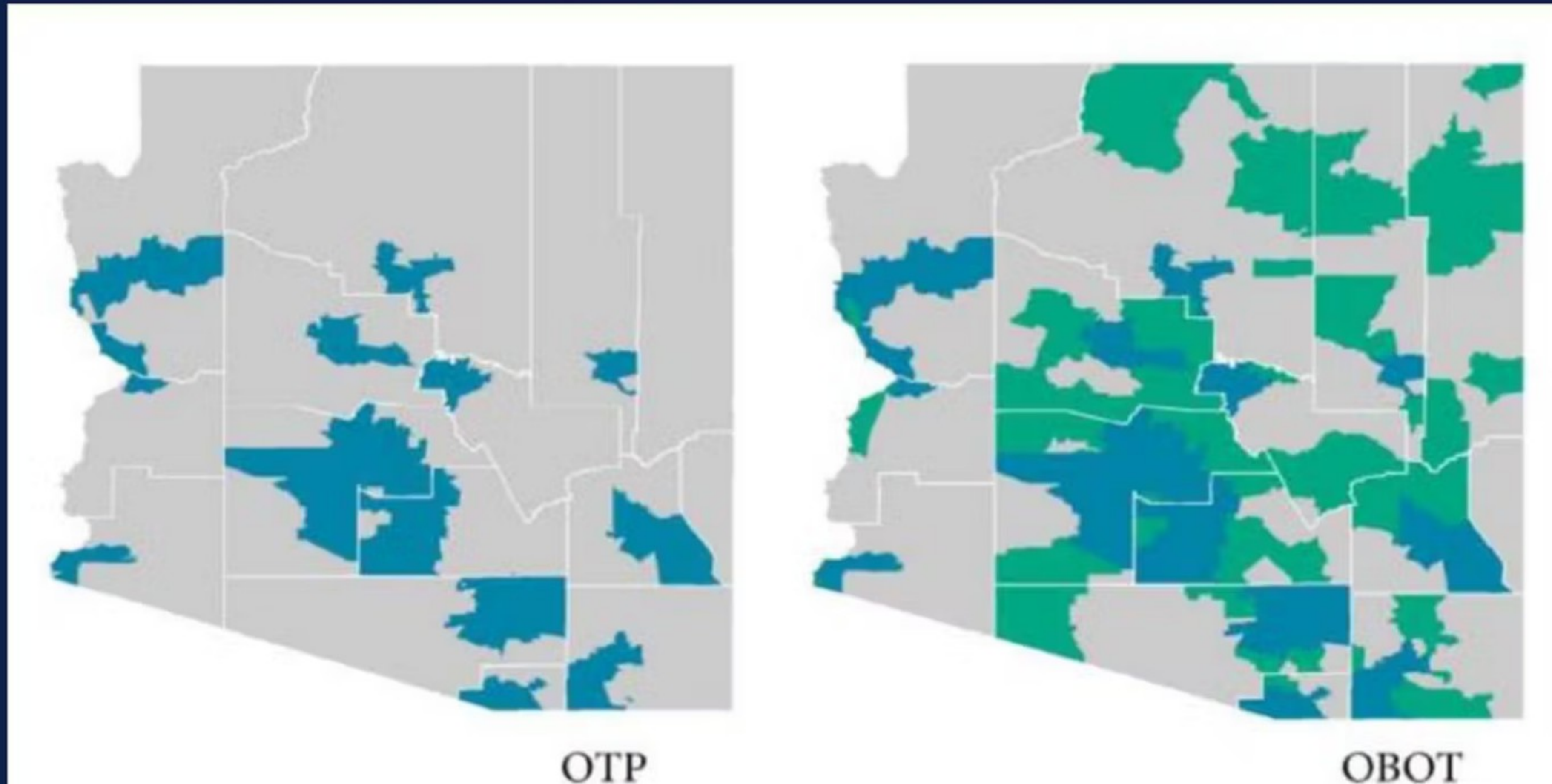


# Arizona Drive Time to Treatment for Opioid Use Disorder

Adapted, Brady BR et al., *Health Serv Ins* 2021: 14:1-9

Methadone Clinics (Blue)

**PRIMARY**  
Care Options (GREEN)

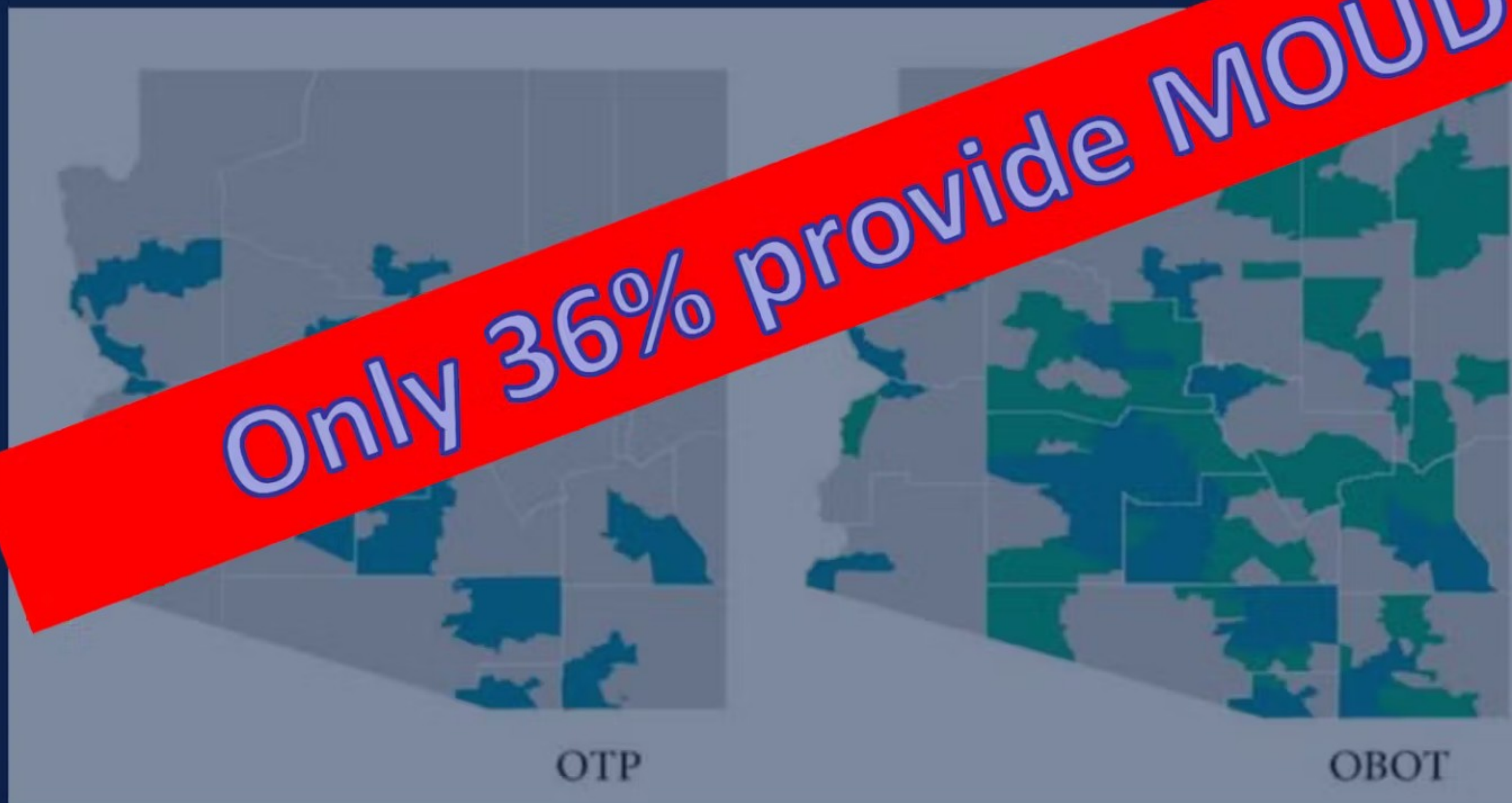


# Dialing for doctors: Secret shopper study of Arizona methadone and buprenorphine providers, 2022

Meyerson BE, Treiber D., et al, *J Sub Use Addict Treat* 2024

Mentimeter

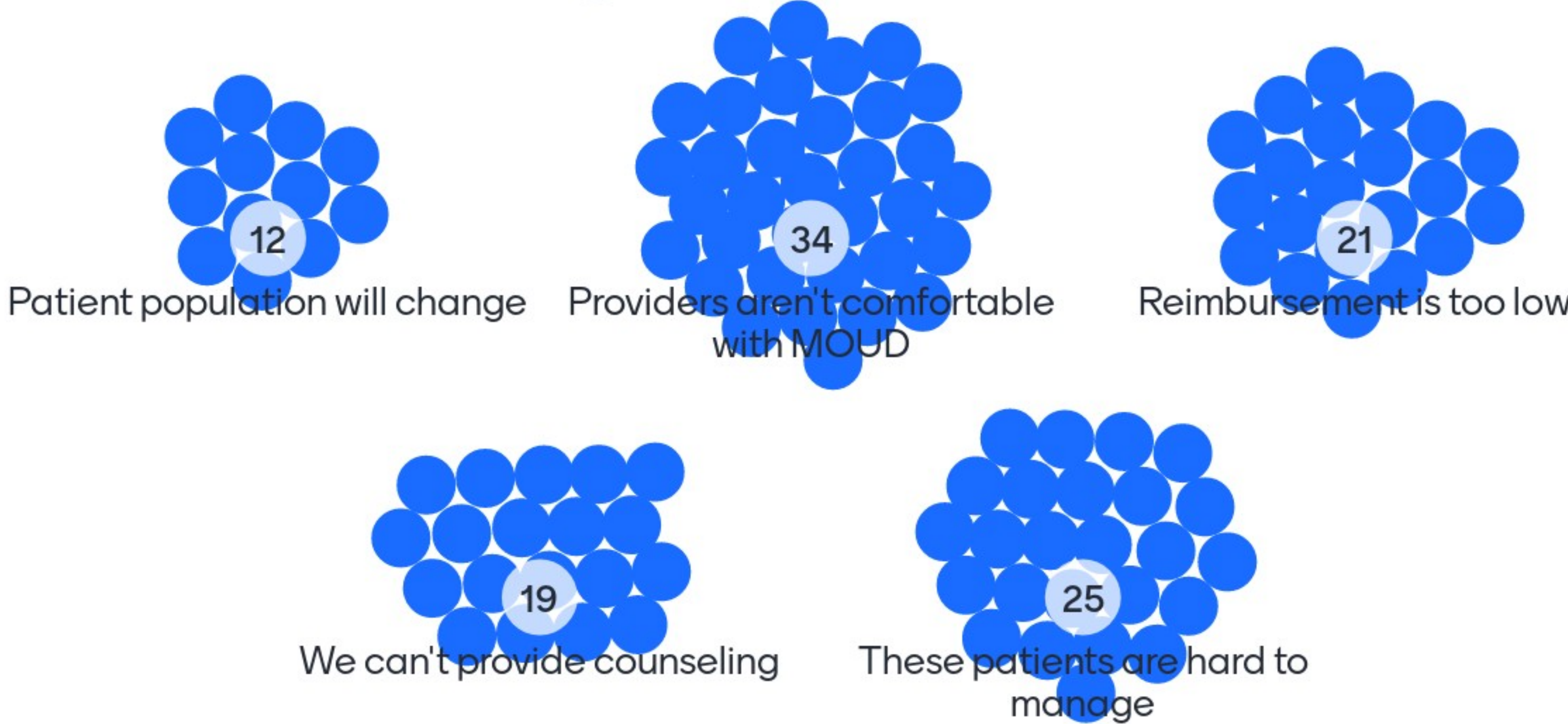
Only 36% provide MOUD



- ≤30 Min
- ≤30 Min
- ≥30 Min



# Barriers to MOUD in Primary Care Settings



# Suboptimal Treatment Retention Rates

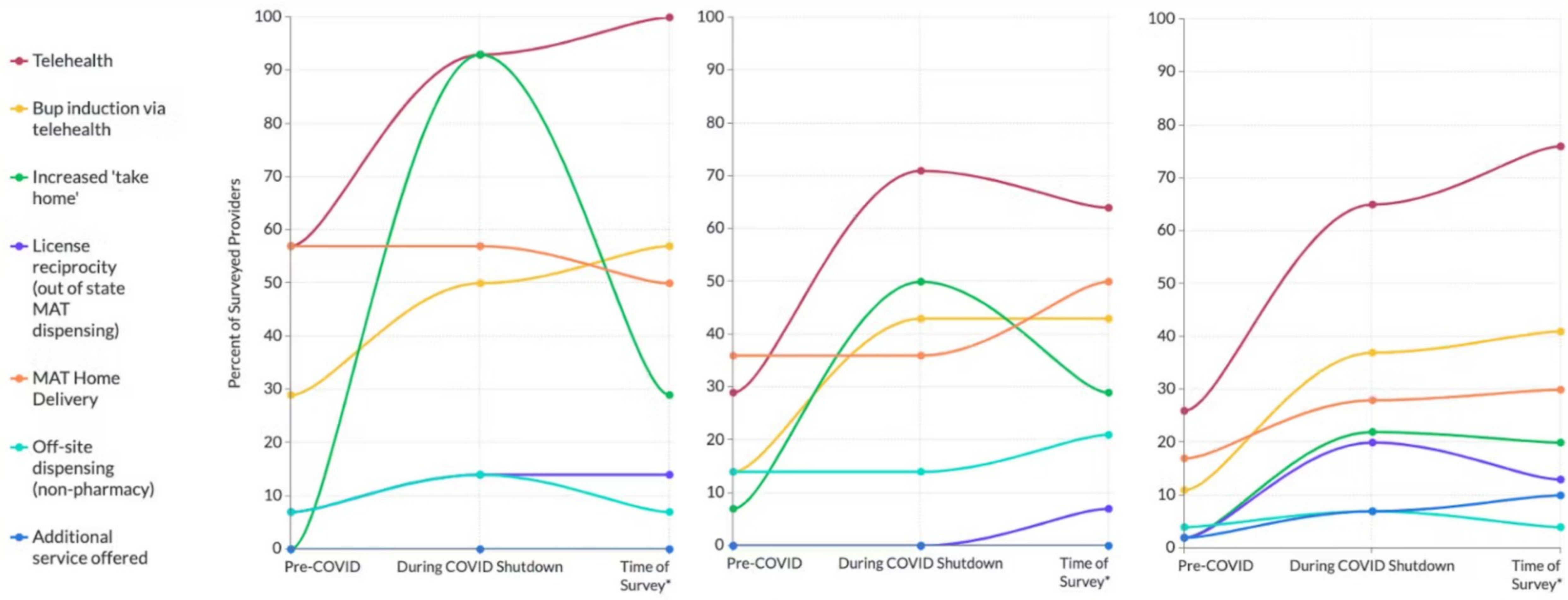
Klimas J. et al., *Systematic Reviews* 10(1): 216 (2021)



	<b>Methadone</b>	<b>Buprenorphine</b>
Randomized Controlled Trials “RCT”	30.7–83.8%	20.0-82.5%
Observational Studies	48.3-74.8%	20.2-78.3%

# MOUD Accommodations Implemented by AZ Providers Before and During COVID-19 Shutdown and at Time of Survey by Practice Setting, Arizona 2022 (N=74)

(Meyerson, Bentele, Brady et al., 2023)



\*The survey was administered from Sept. 14, 2021 – Apr. 15, 2022.

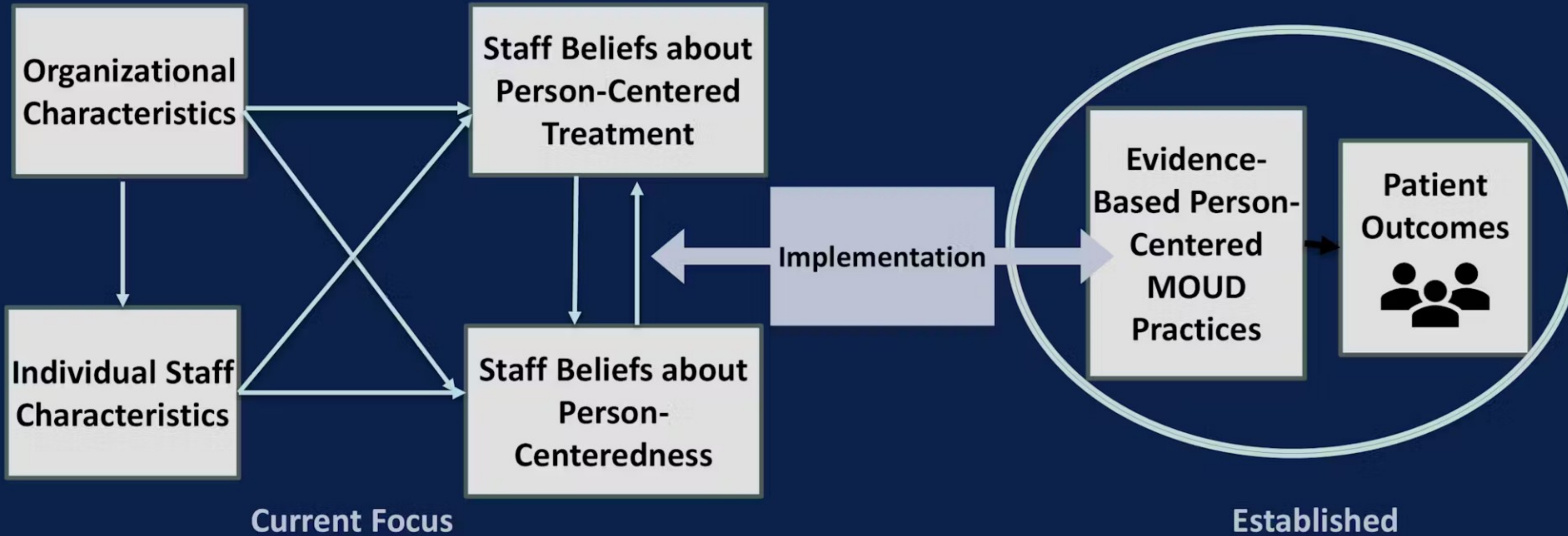
**Methadone Clinic**  
(n = 14)

**Non-methadone OUD Clinic**  
(n = 14)

**Other Healthcare Facility**  
(n = 46)



# Potential Inner Setting Factors Affecting Evidence Based MOUD Treatment Practice





# Trauma Outcomes among OTP Staff in 3 AZ Clinics, 2023 (N=40)

Mentimeter

Linde-Krieger, Meyerson, Huff, Carter (in review)

## History

- 90% report at least one traumatic event
- 58%  $\geq 4$  traumatic events
- Interpersonal violence & assault were common

## Symptoms

- 63% had *clinically significant* PTSD symptoms
- 73% endorse vicarious trauma symptoms
- Much higher than population
- Higher than First Responders

## Vicarious Trauma

- 82.5% say job exposes them to traumatized clients
- 65% say job involves distressing experiences
- Burnout

# MOUD Future: Normalized Care

42 CFR Part 8, MOTAA, etc



- Normalize methadone treatment – patient centered, low barrier, pharmacy dispensing, multiday dosing
- Further integration of MOUD into primary care
- Quality improvement – medication and counseling

# Take Aways



- ▶ We must systemically expect (policy and practice) that MOUD treatment is primary care
- ▶ We need to normalize MOUD training in all graduate health professions with clinical interface
- ▶ We should devise state-based system to track MOUD access AND quality
- ▶ We should devise state-based system to track naloxone access

# Studies Informing This Presentation

- Meyerson BE, Moehling TJ, Agle J, Coles HB, Phillips J. Insufficient access: Naloxone availability to laypersons in Arizona and Indiana, 2018. *J Health Care Poor Underserved* 2021; 32(2):819-829.
- Meyerson BE, Bentele KG, Russell DM, et al. *Nothing really changed: Arizona patient experience of methadone and buprenorphine access during COVID.* *PLoS ONE* 2022; 17(10): e0274094
- Meyerson BE, Bentele KG, Brady BR, et al., Insufficient Impact: Limited implementation of federal regulatory changes to Methadone and Buprenorphine access in Arizona during COVID. *AJPM Focus* 2023
- Meyerson BE, Treiber D, Brady BR, et al., Dialing for doctors: Secret shopper study of Arizona methadone and buprenorphine providers, 2022. *J Substance Use and Addiction Treatment* 2024: 160(May).
- Agle J, Xiao Y, Eldridge LA, et al., Beliefs and misperceptions about naloxone and overdoses among U.S. laypersons: A cross-sectional study. *BMC Pub Health* 2022; 22(924)
- Brady BR, Gildersleeve R, Koch BD, et al., Federally Qualified Health Centers Can Expand Rural Access to Buprenorphine for Opioid Use Disorder in Arizona. *Health Serv Insights*. 2021 Aug 6;14:11786329211037502.

## Forthcoming

- Cunningham J, Meyerson BE, Mitchell C, et al., Co-prescribing of naloxone and high dose opioids, Arizona 2017-2022
- Meyerson BE, Richter S, Gordon R, et al., Pharmacy Harm Reduction Practices Arizona, 2023
- Meyerson BE, Linde-Krieger L, Carter GA, Huff A, Brady BR, Crosby, RA De La Rosa JS, Schaeffer M. Changing methadone treatment practice in the U.S.: Exploring the connection between staff characteristics, work characteristics, and beliefs about treatment and the clinic. (in review)
- Linde-Krieger L, Meyerson BE, Huff A, Carter A. An Exploratory Study of Trauma Histories, Symptoms and Vicarious Trauma among Opioid Treatment Program Staff. (In review)

# Let's Connect

<https://tinyurl.com/BethMeyerson>



# Expanding MOUD Prescribers: How the Arizona State University Edson College of Nursing is addressing the Opioid epidemic

Ann Guthery, PhD, RN, PMHNP-BC

ASU Edson College of Nursing and Health Innovation

Matt Martin, PhD, LMFT, CSSBB

ASU College of Health Solutions



# Learning Objectives

1. Review the Arizona State University Waiver Expansion (AWE) training program objectives and strategies.
2. Discuss how preceptorships prepare nursing practitioner students for medication for opioid use disorder management (MOUD) and substance use treatment.
3. Evaluate training program outcomes and implications for future workforce development.

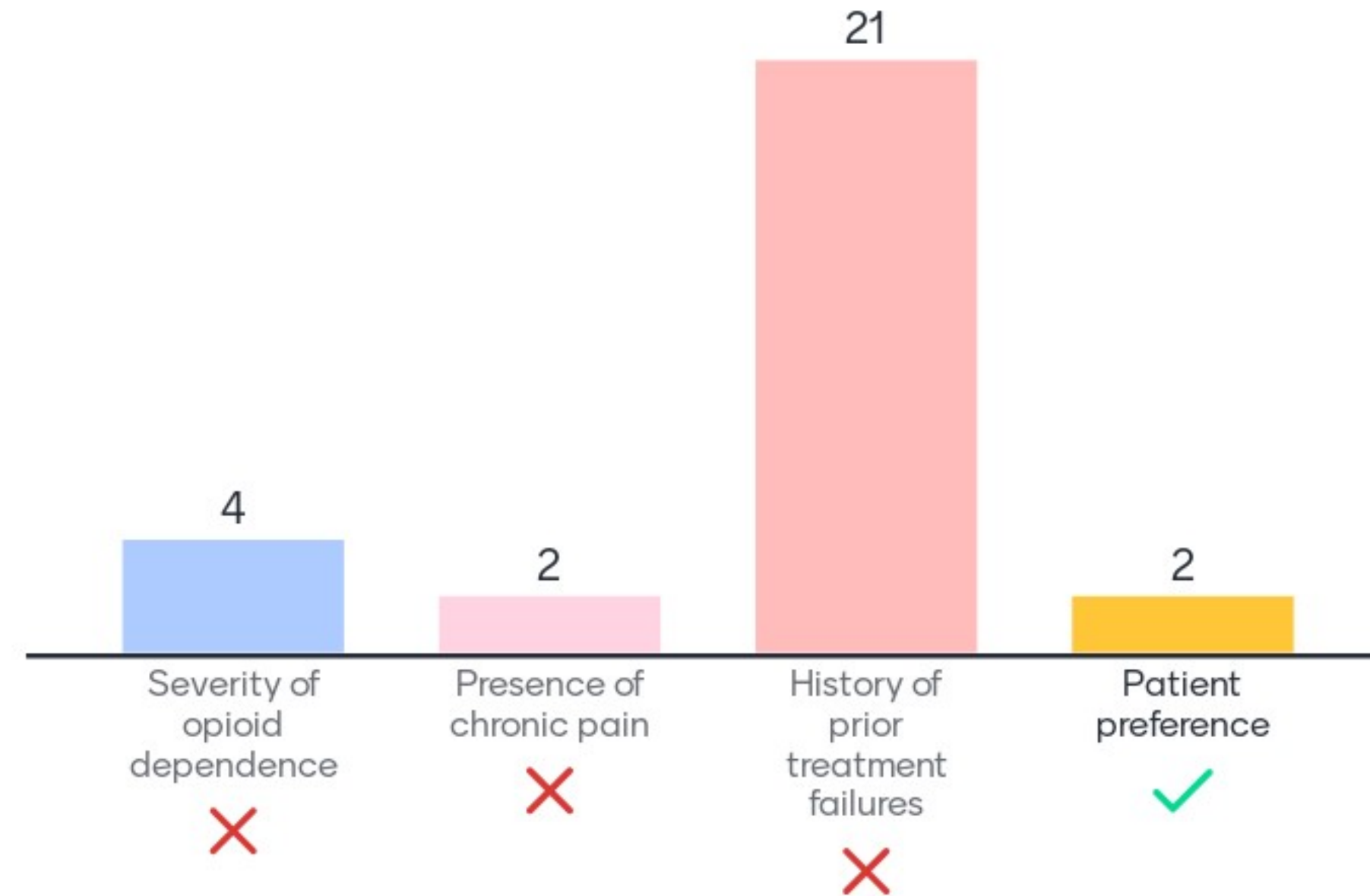


The SAMHSA guidelines identify which of the following as core components of a patient-centered approach to OUD treatment:





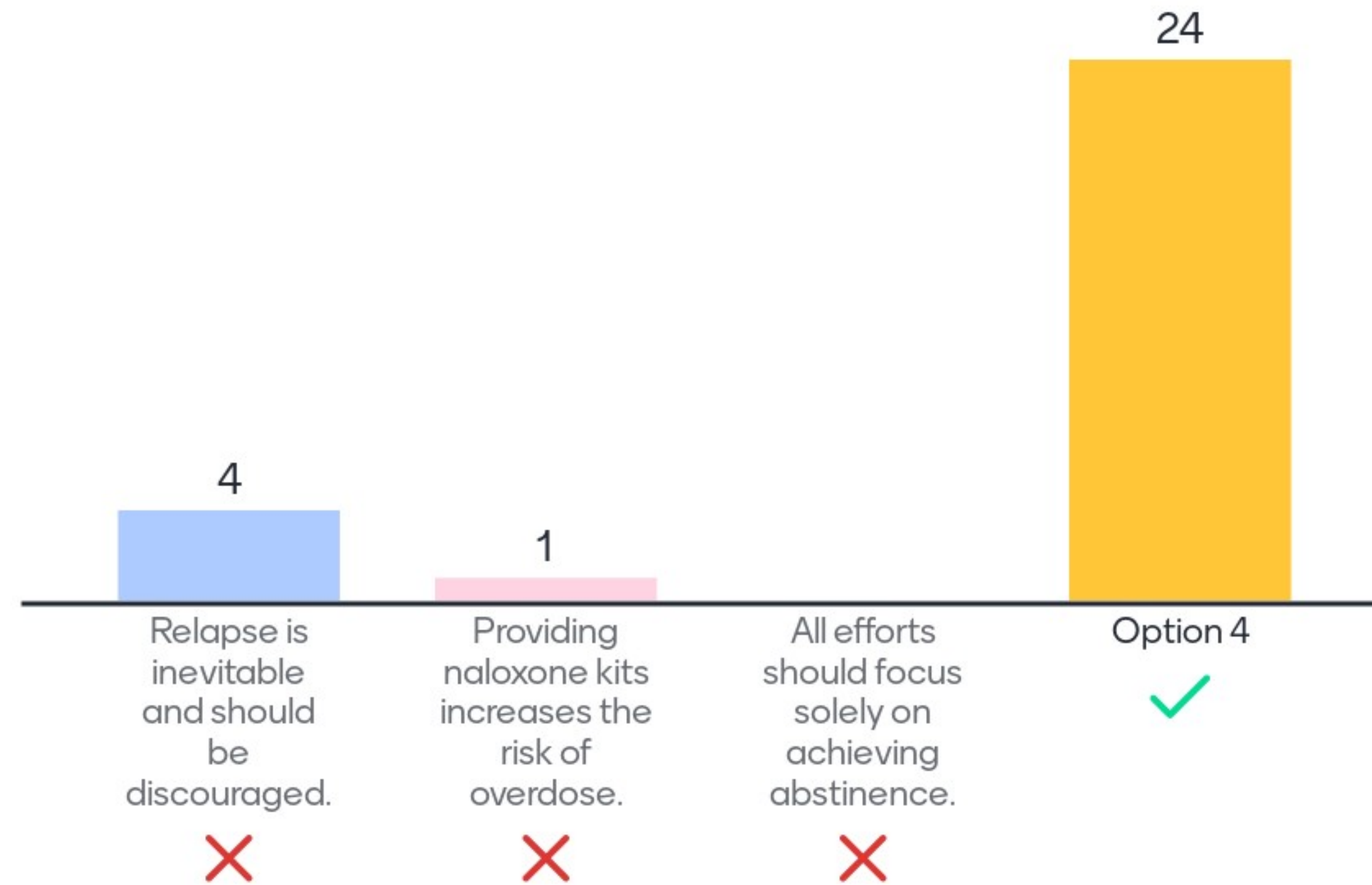
Studies demonstrate that which of the following patient factors should NOT influence the initial choice of MOUD medication?



# Which collaborative team approach has been shown to improve patient outcomes in OUD treatment?



# The concept of harm reduction in OUD treatment recognizes that:



# Background: AWE Objectives

1. Develop a comprehensive student-facing buprenorphine waiver training program for Arizona State University nurse practitioner students, training 225 students across three years.
2. Build internal faculty capacity for ongoing buprenorphine waiver student instruction, training a minimum of six nursing faculty to become buprenorphine waiver instructors.
3. Establish formal relationships with a minimum of 10 community-based practicum and internship sites which deliver opioid use disorder treatment to provide experiential student learning opportunities, placing 10-20 students per year at these sites.



# Background: AWE Objectives

4. Provide ongoing technical assistance and implementation support to new MAT practitioners at the pre-service and post-graduate levels using proven workforce development models (e.g., Project ECHO) by recruiting students and graduates to the MAT ECHO program.
5. Measure program success through systematic longitudinal tracking of prescribing practices and waiver attainment by nurse practitioner students post-graduation

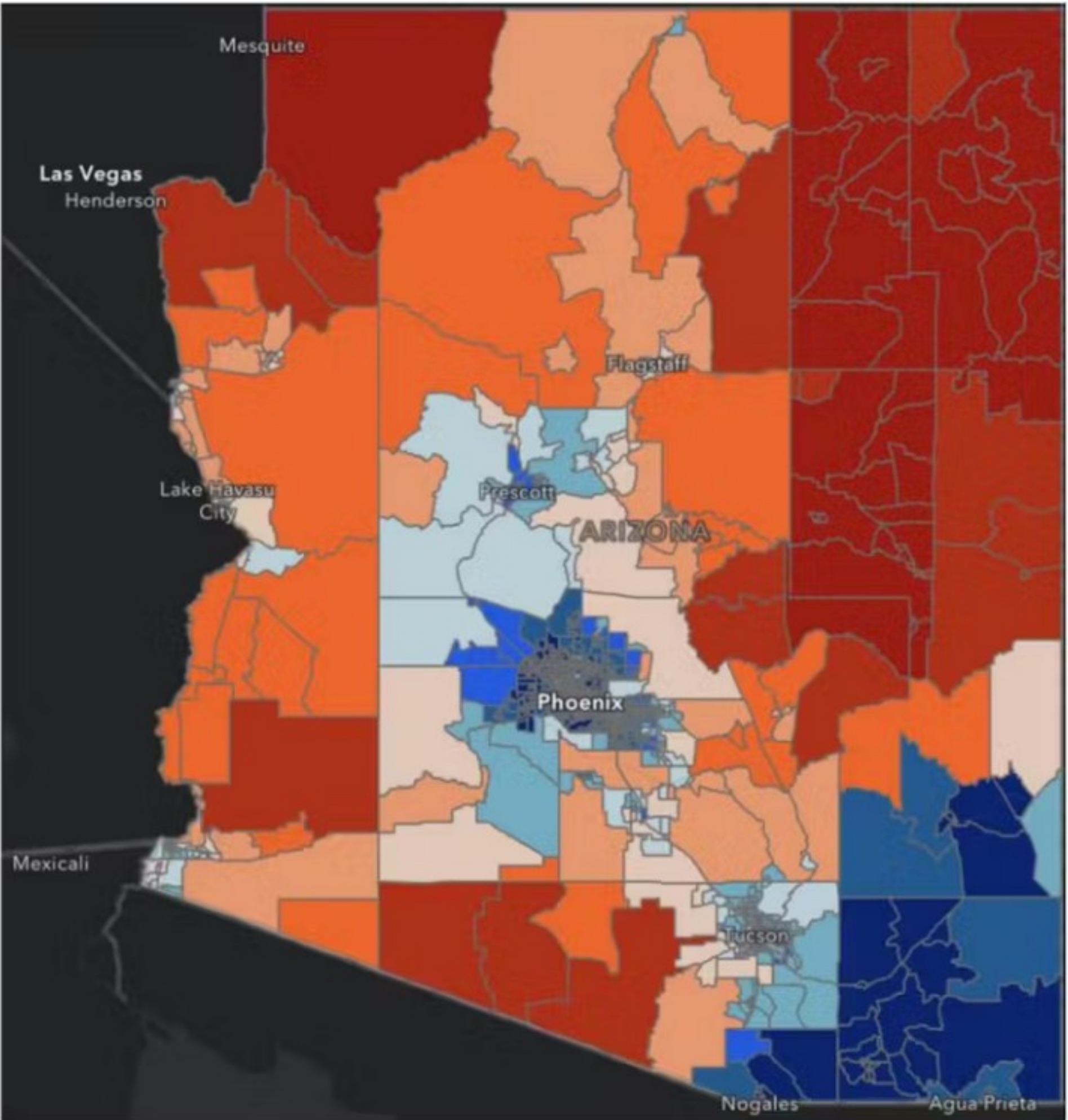


# Background: Prevalence & Workforce

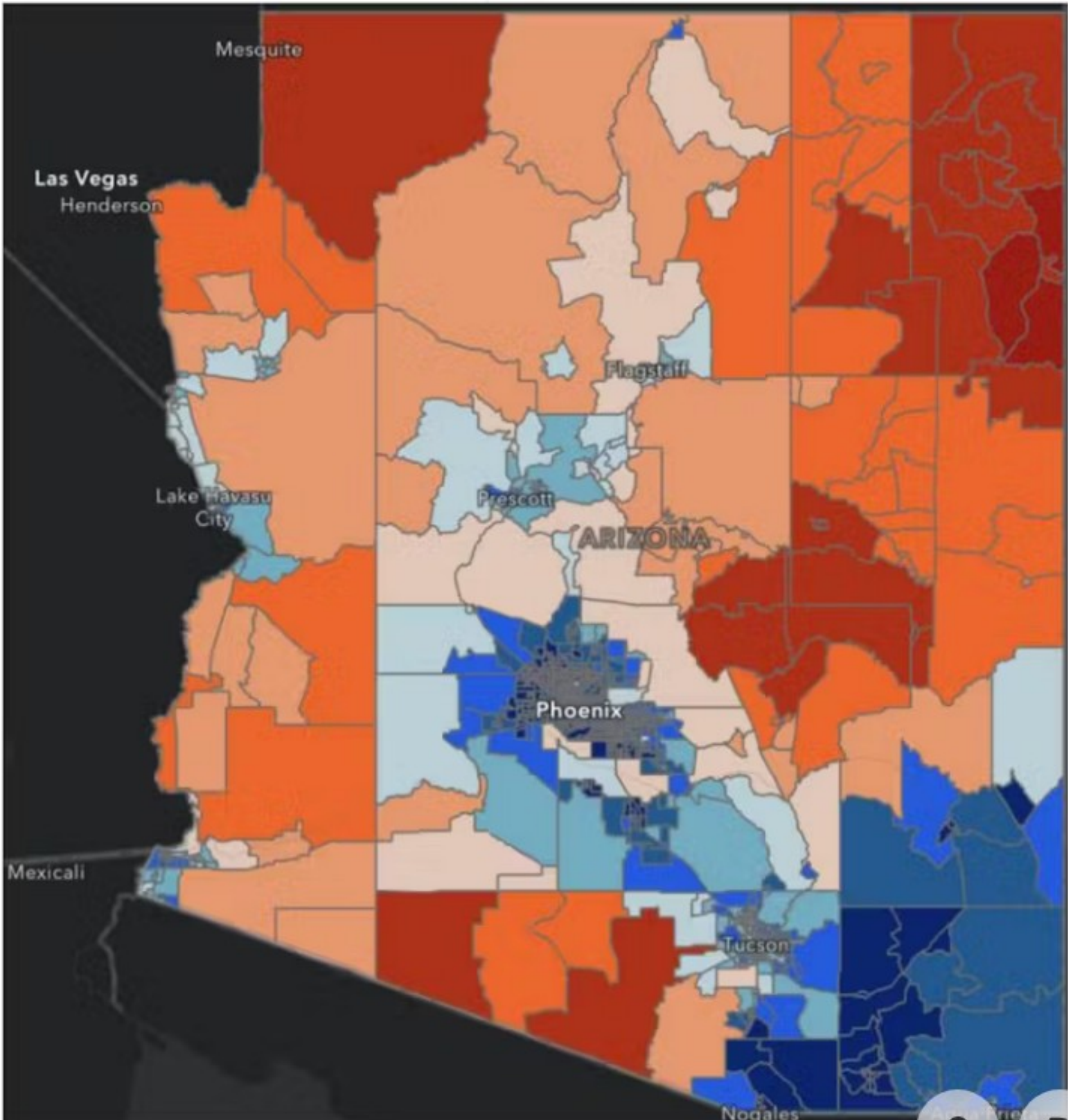
- 2022: 1,931 confirmed opioid deaths; 1,294 in 2019<sup>1</sup>
  - 64% of those deaths among individuals under the age of 44
- 40,000 AZ youth, young adults misused opioids in the past year<sup>2</sup>
- Nurse practitioners: poised for pivotal role in MOUD
  - NP jobs will grow faster than physician jobs between 2019 and 2029, 45% and 4%, respectively<sup>3-4</sup>
  - NPs are also more likely than physicians to practice in rural areas where opioid overdose rates are often high<sup>5</sup>

# Opioid Overdose Risk<sup>6</sup>

2016

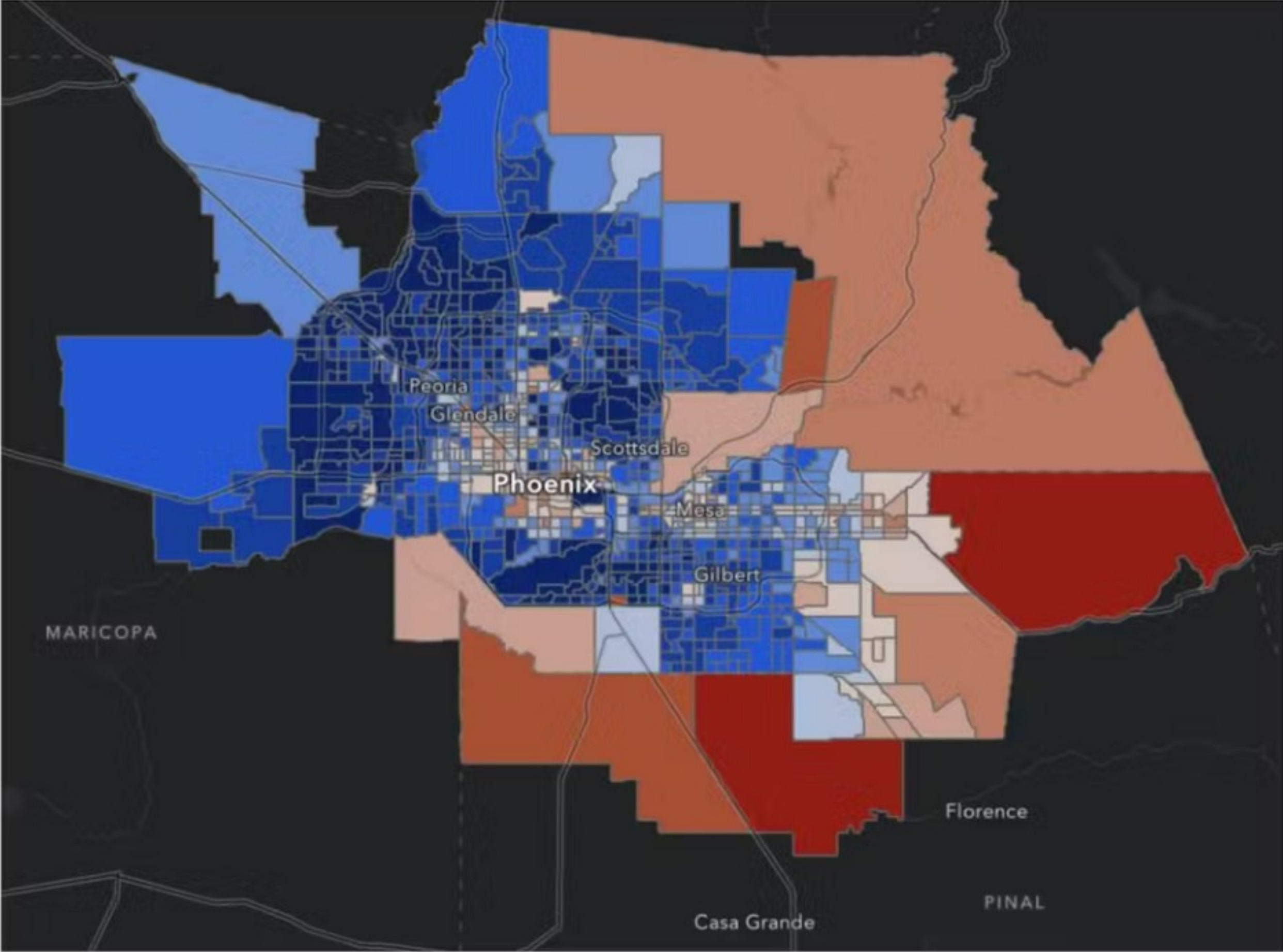


2020

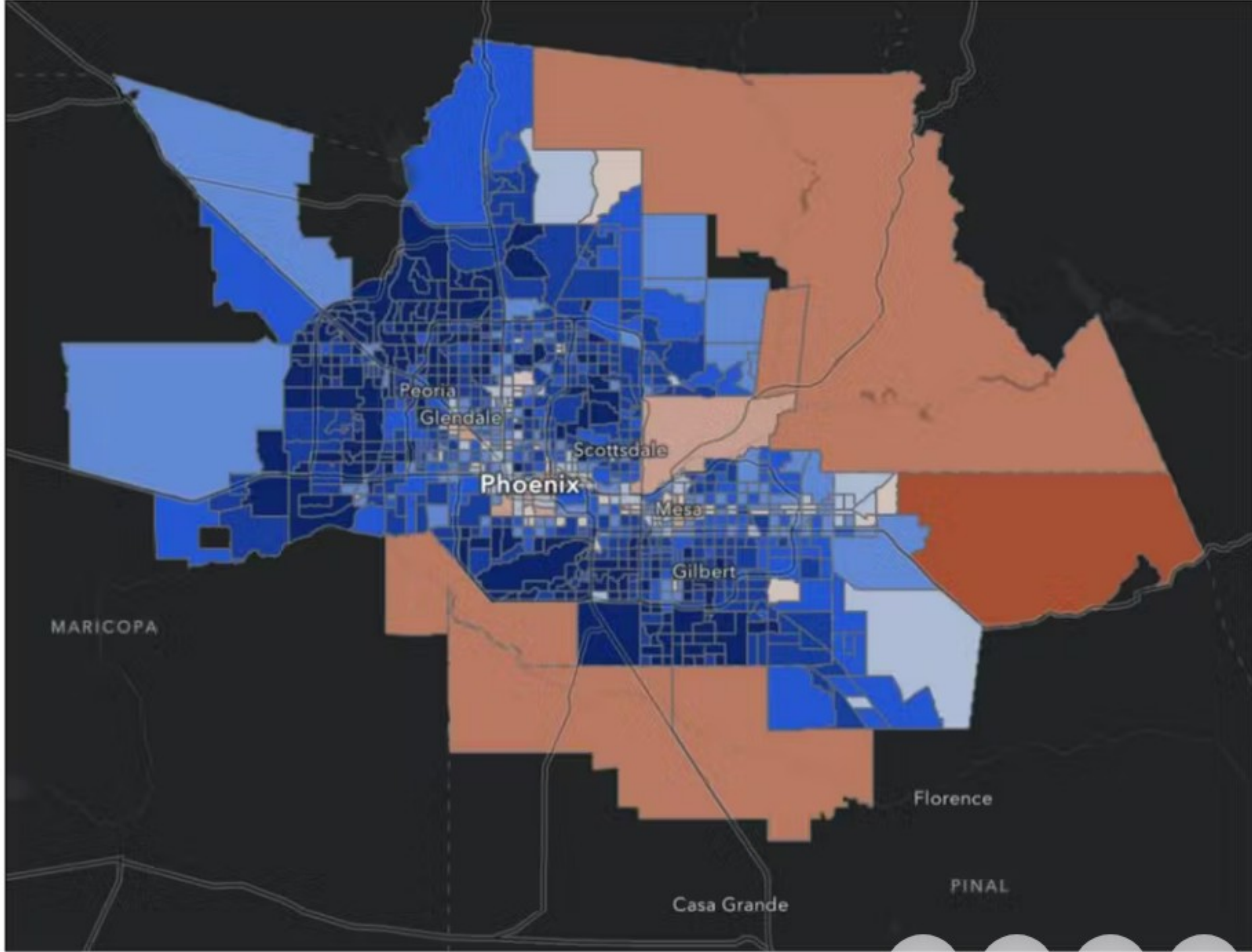


# Opioid Overdose Risk – Phoenix Metro

2016



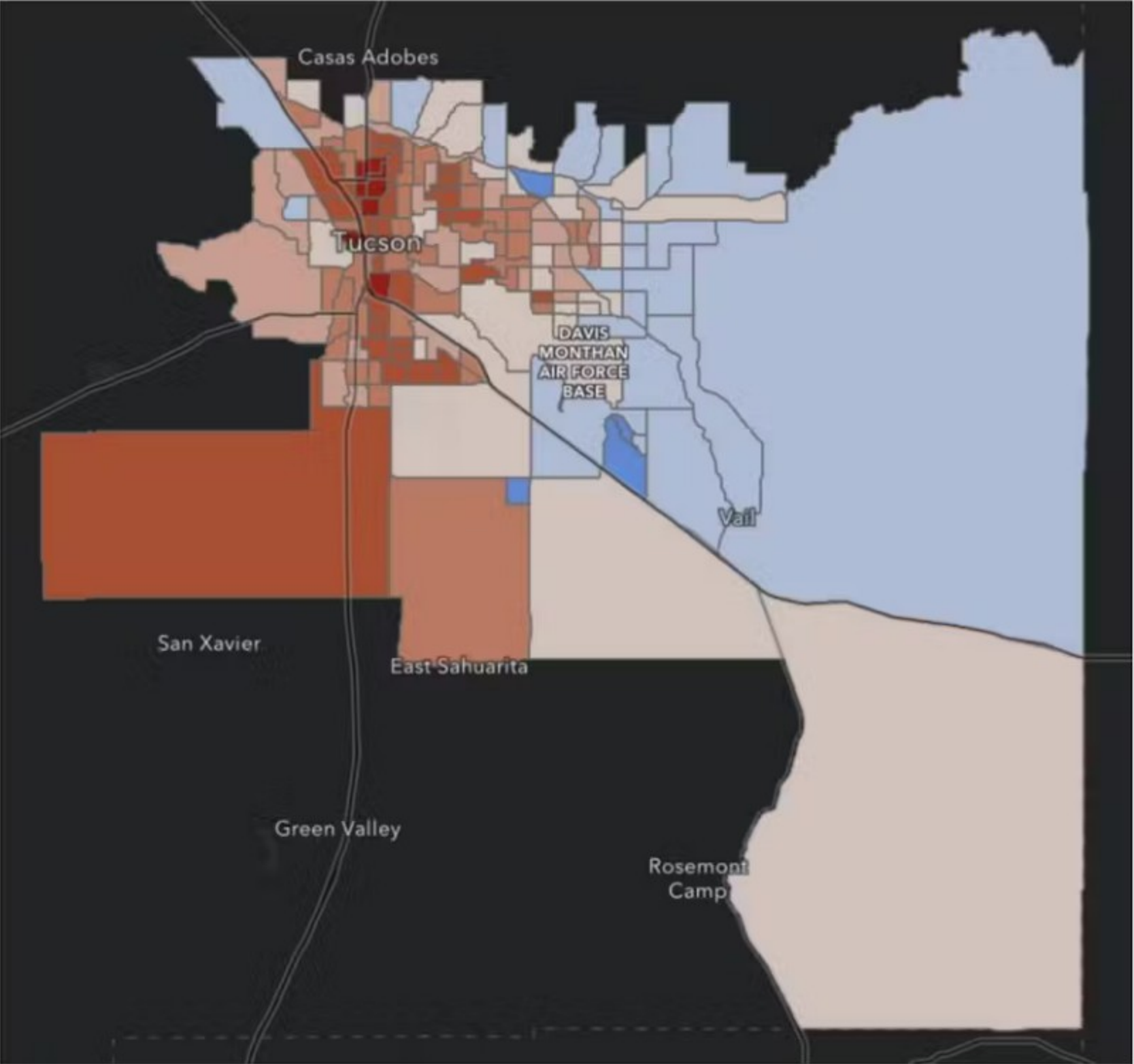
2020



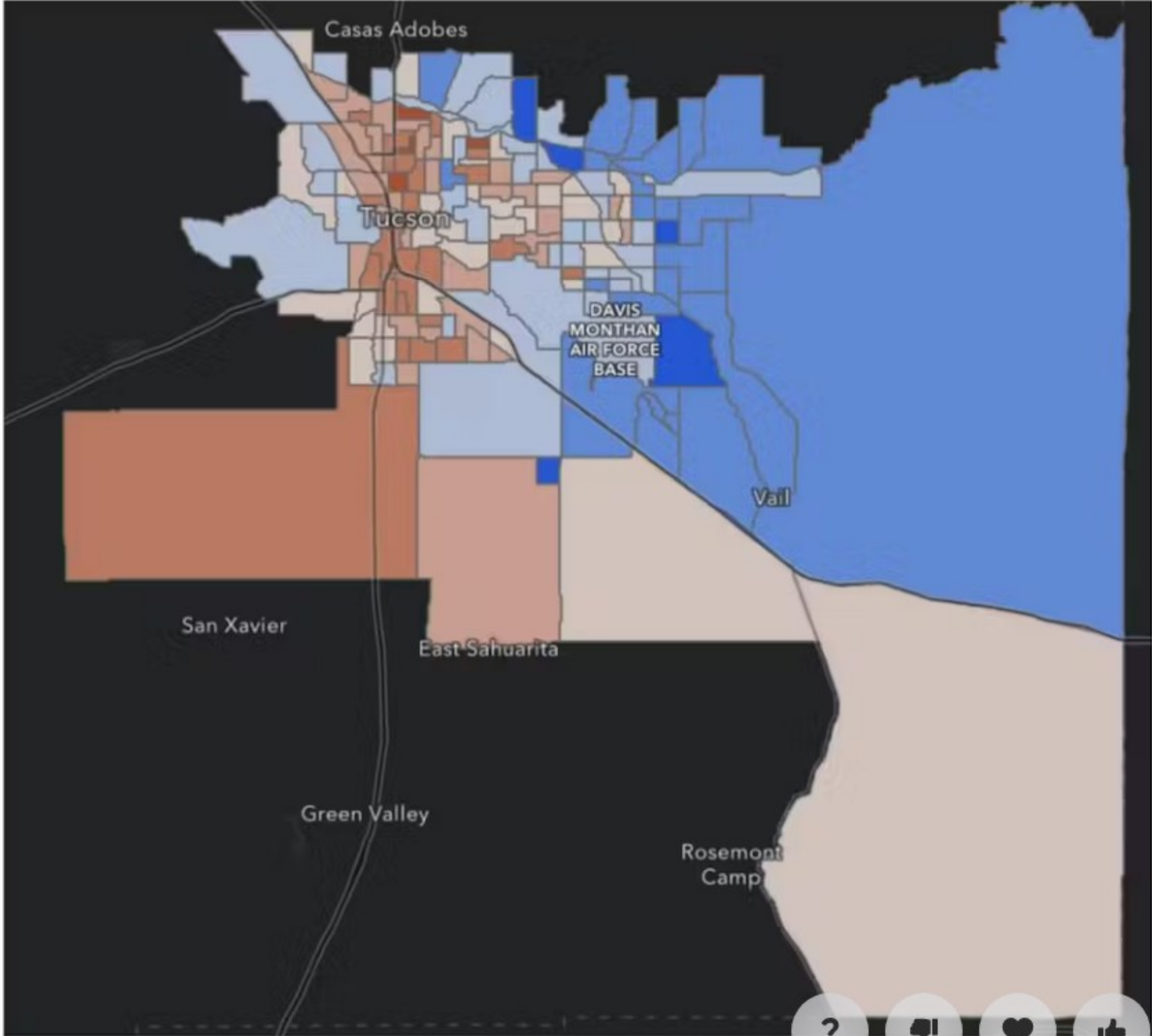


# Opioid Overdose Risk – Tucson Metro

2016



2020



# Buprenorphine Waiver

Previously (until December 2022):

- Prescribing buprenorphine for opioid use disorder (OUD) in outpatient settings required a special "X-waiver" from the Drug Enforcement Administration (DEA).
- Obtaining the waiver involved:
  - Completing eight hours of specialized training in OUD treatment and buprenorphine prescribing.
  - Submitting an application to the DEA with documentation of qualifications and patient capacity.
  - Facing potential delays and limitations in patient numbers.



# Curriculum

Provider Clinical Support System from SAMHSA (PCSS) curriculum is used with PCSS trained faculty

Initially the grant was to provide waiver training 8 hours in person and then 16 hours online  
Once the DEA changed to no waiver and requiring the 8 hours of training for all prescribers, we changed to just the 8 hours of training

Students liked the interactive and more hands-on event

Case examples and application part of the training.



# Precepted training

- Able to find clinical sites for students to learn how to prescribe MOUD during their last year in the program and obtain hands on experience
- Student's comments
  - The waiver training changed my entire career trajectory. After completing it I went through two clinical rotations with MAT providers and left my hospital job to pursue work as a nurse in an opioid treatment program. I hope to work as an NP in this field as soon as I'm licensed. Thank you for helping introduce me to my passion.
  - Everyone should have this clinical rotation, it has changed how I view and interact with my patients.

# Evaluation

- Training events: 3
- Total number of DNP students and faculty: 191



# Gender, Race/Ethnicity

Gender	% (N)
Female	91.7 (177)
Male	8.3 (16)
None of these	0 (0)
<b>Race/Ethnicity</b>	
American Indian or Alaska Native	1.6 (3)
Asian	11.4 (22)
Black or African American	5.7 (11)
Hispanic or Latino	14.0 (27)
Native Hawaiian or Other Pacific Islander	0.5 (1)
White	71.0 (137)



# Highest Degrees, Primary Profession

Highest Degree	% (N)
Bachelor's degree	74.1 (143)
Master's degree	17.1 (33)
Other doctoral degree or Equivalent (e.g., PhD, EdD, DPT)	7.3 (14)
Other	1.6 (3)
<b>Primary Profession</b>	
Educator/Health Educator	1.0 (2)
Nurse	66.8 (129)
Advanced Practice Registered Nurse	1.6 (3)
Nurse Practitioner	10.4 (20)
Full-Time Student	14.0 (27)
Part-Time Student (not working)	1.0 (2)
Part-Time Student (working)	2.1 (4)
Other	3.1 (6)



# Principal Employment Setting

Principal Employment Setting	% (N)
Substance Use Disorder Treatment Program	2.6 (5)
Community Recovery Support Program	0.5 (1)
Mental Health Clinic or Treatment Program (Community Mental Health Program)	3.1 (6)
Community Health	2.1 (4)
Primary Care	9.3 (18)
Solo Practice	0.5 (1)
Group Practice	1.0 (2)
Hospital	57.5 (111)
FQHC Hospital	0.5 (1)
Military/VA	3.1 (6)
Higher Education Setting	7.3 (14)
Elementary or Secondary Education Setting	0.5 (1)
Community-Based Organization (including Faith-Based Organizations)	0.5 (1)
Other	11.4 (22)





# MOUD Knowledge & Attitude

- Prior to the training, an average percent correct for the mini quiz was 36.3% (SD = 18.8). After the training, an average percent correct for the mini quiz was 73.9% (SD = 22.3) indicating 103.8% increase in knowledge base score for MOUD.
- The 1st cohort completed the post-graduation survey after the training. 86.8% of participants in this cohort indicated they either “Agree” or “Strongly Agree” that buprenorphine is effective. In addition, 78.9% of participants reported they either “Agree” or “Strongly Agree” buprenorphine is consistent with my treatment philosophy.



# Sustainability

- Goal is to embed this in our program for sustainability
- Training of faculty- PCSS strict requirements, but we were able to have one of our preceptors meet criteria and be trained



## Lessons learned

- How comfortable are students feeling that they can go out and do this.
- More pediatric training
- More on treating alcohol use
- Continue to provide this training and precepting.



# Thank you!

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Matt Martin: [matthew.perry.martin@asu.edu](mailto:matthew.perry.martin@asu.edu)



# References

1. Opioid Dashboard. Arizona Department of Health. Retrieved from <https://www.azdhs.gov/opioid/#dashboards-overdose-deaths>
2. National Survey on Drug Use and Health: Model-Based Estimated Totals (in Thousands) (50 States and the District of Columbia). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD. Retrieved from <https://www.samhsa.gov/data/sites/default/files/reports/rpt39466/2021NSDUHsaeTotals121522/2021NSDUHsaeTotals121522.pdf>
3. US Bureau of Labor Statistics (2021). Nurses, Anesthetists, Nurse Midwives and Nurse Practitioners: Occupational Outlook Handbook. Retrieved from: <https://www.bls.gov/ooh/healthcare/nurse-anesthetists-nurse-midwives-and-nurse-practitioners.htm>
4. US Bureau of Labor Statistics (2021). Physicians and Surgeons: Occupational Outlook Handbook. Retrieved from: <https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm>
5. Baerhaus, P. (2018). Nurse Practitioners: A Solution to America's Primary Care Crisis. America Enterprise Institute. Retrieved from: <https://www.aei.org/research-products/report/nurse-practitioners-a-solution-to-americas-primary-care-crisis/>
6. Arizona MOUD Map. <https://sgsup.asu.edu/sparc/azmentalhealthmap>

