

A photograph of a woman with long dark hair, wearing a white shirt, smiling warmly as she holds the hand of a young child with blonde hair. The background is softly blurred, suggesting an indoor setting.

# Overview of Maternal Mental Health in Arizona:

**Innovations to Increase  
Access to Care**

**Presented by:**

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**Date:**

June 2024

# Objectives

Review the burden and cost of disease

Identify major barriers to care

Review innovative approaches to increase access to care

- Collaborative Care
- M Health
- Access Lines

# Current Landscape of Perinatal Mental Health



# National Mental Health Crisis

- In 2019-2020, 20.78% of adults were experiencing a mental illness. **That is equivalent to over 50 million Americans.**
- The percentage of adults reporting serious thoughts of suicide is 4.84%, totaling **over 12.1 million individuals.**
- Over half (54.7%) of adults with a mental illness do not receive treatment, totaling over 28 million individuals.
- **In the U.S., there are an estimated 350 individuals for every one mental health provider.** However, these figures may actually be an overestimate of active mental health professionals, as it may include providers who are no longer practicing or accepting new patients..

# Perinatal Mood And Anxiety Disorders

PMADS: 1 in 5 pregnant people

- most common obstetric complication

Pre-Eclampsia: 1 in 25 pregnant people

- screened for at EVERY prenatal appointment



### To mom

Increased risk of miscarriage, hemorrhage, gestational hypertension, **suicide**, preeclampsia, poor attachment, placental abnormalities, poor maternal nutrition, breastfeeding difficulties.

### To Baby

Increased risk of preterm birth, NICU admission, low birth weight, neonatal hypoglycemia, microcephaly, increased risk of illness in childhood and adolescence, poor attachment, cognitive and motor delays.

### To Community

- Average cost per affected mother–child dyad is \$31, 800
- Loss of economic productivity, cost of pre-term birth, cost of other maternal health expenditures.
- AZ: \$399 million/year

# Maternal Suicide

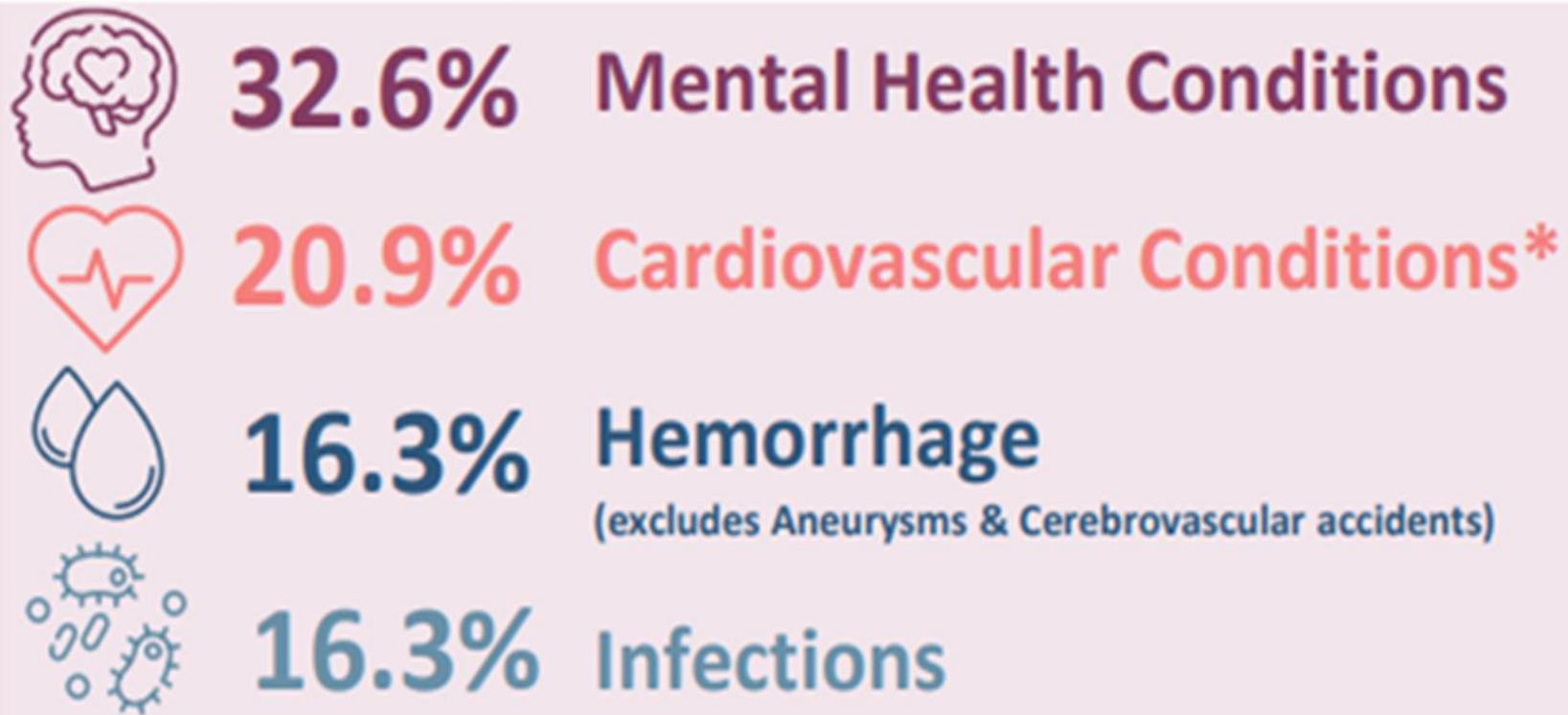
Mental health conditions are the **MOST COMMON** complication of pregnancy and childbirth, affecting 1 in 5 women and childbearing people (800,000 new parents each year in the United States).

Suicide and overdose combined are the **LEADING CAUSE** of death for women in the first year following pregnancy.

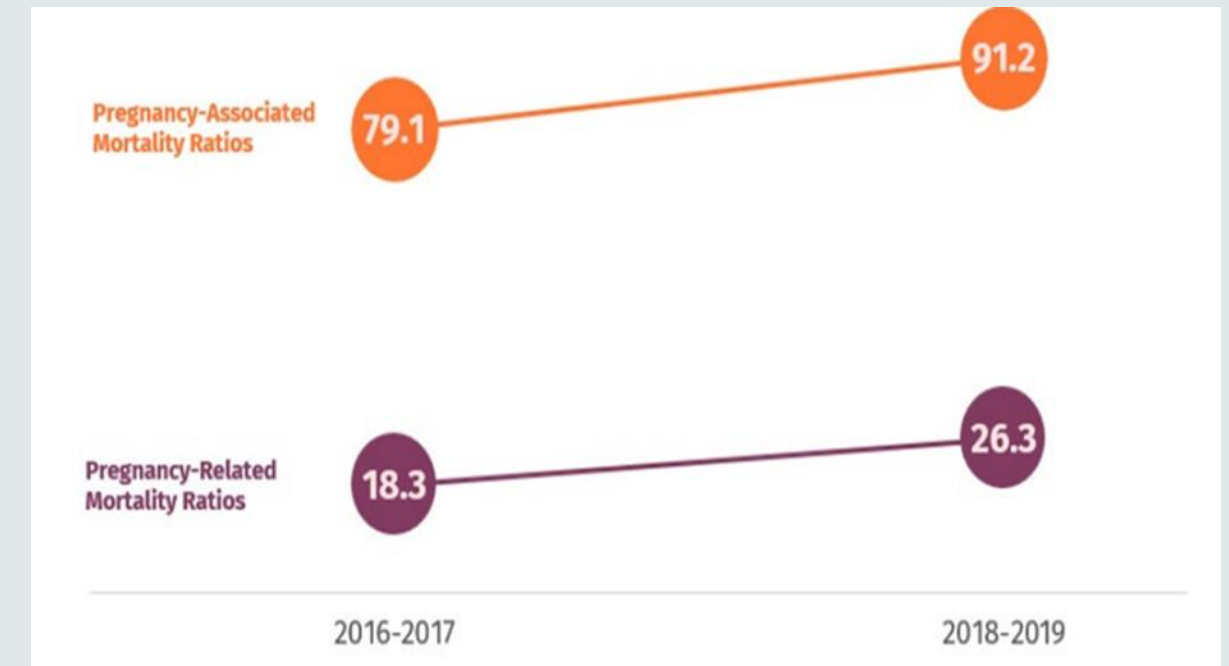
The peak incidence of suicide is 6-9 months postpartum. New mothers who die by suicide

- Are mostly white and older
- Use the most violent forms of suicide (hanging, jumping, shooting)
- Die in the late postpartum period
- Do not attend a postpartum obstetric visit (<50%)

## The most common primary underlying cause of death among Pregnancy-Related cases was mental health



\*Includes Amniotic Fluid Embolism, Cardiomyopathy, Embolism- Thrombotic (Non-Cerebral), Hypertensive Disorders of Pregnancy, and Other Cardiovascular Conditions



**90%** of Pregnancy-Associated deaths were considered **PREVENTABLE**



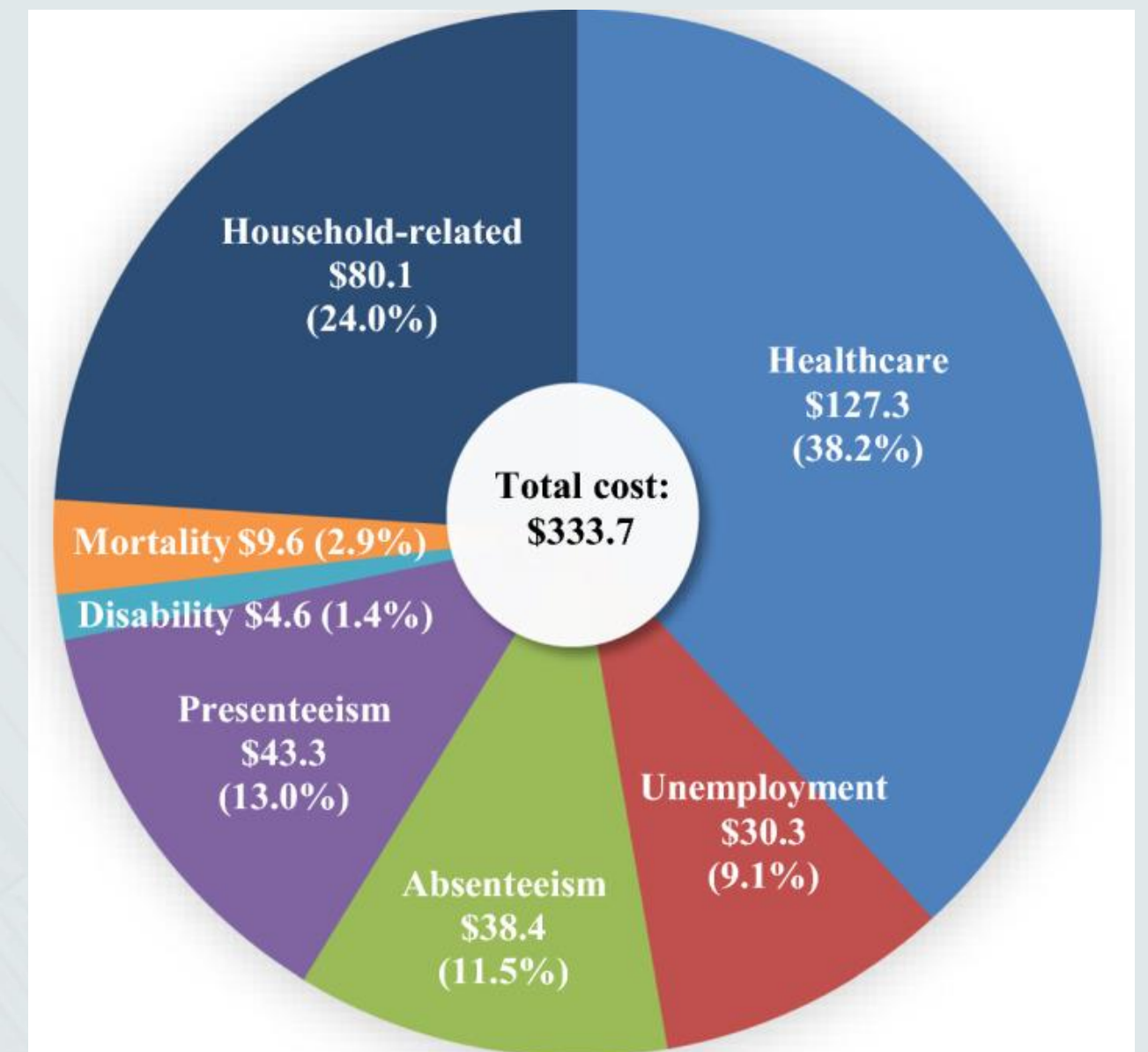
## The Economic Cost of Depression is Increasing; Direct Costs are Only a Small Part

May 27, 2021 Depression, Patients and Families

The economic burden of major depressive disorder among U.S. adults was an estimated \$236 billion in 2018, an increase of more than 35% since 2010 (year 2020 values), according to research published in early May in the journal *Pharmacoeconomics*.

The increase has been greater among younger adults. Young adults, 18 to 34 years, accounted for nearly half (48%) of adults with depression in 2018, up from 35% in 2010

Substantial unmet treatment needs remain in the MDD population as the proportion of patients with MDD receiving treatment has not increased from 2010 to 2018



# Barriers to treatment for special populations

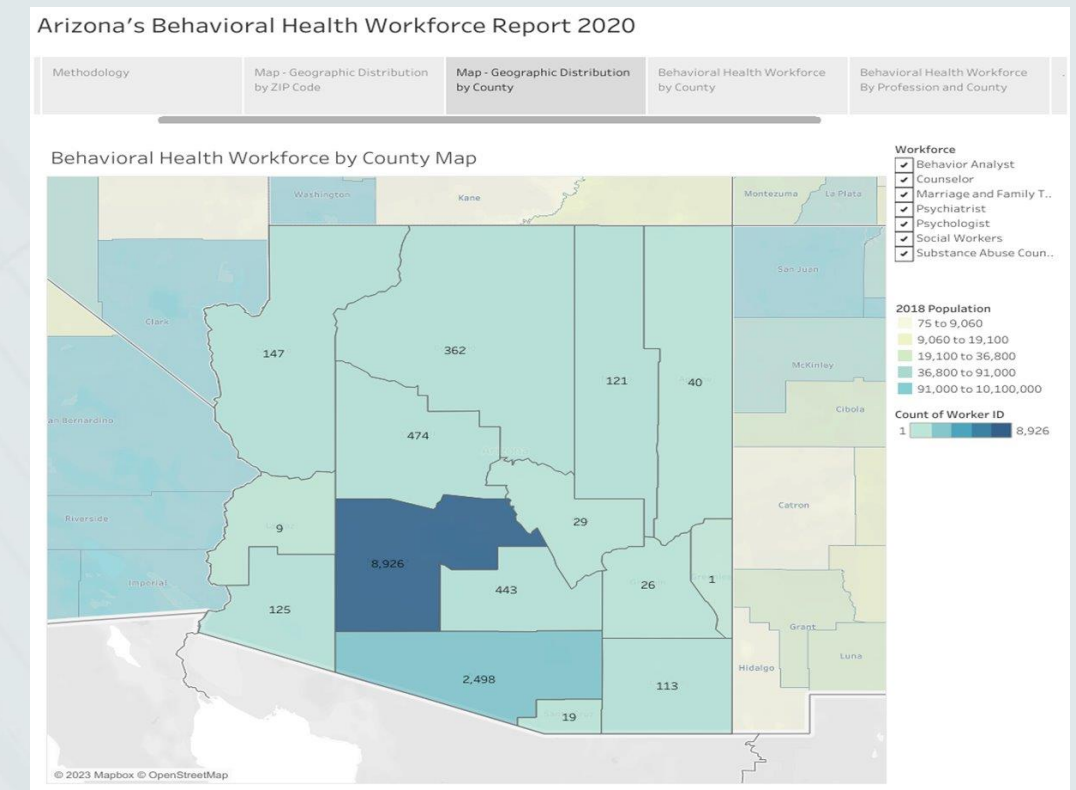
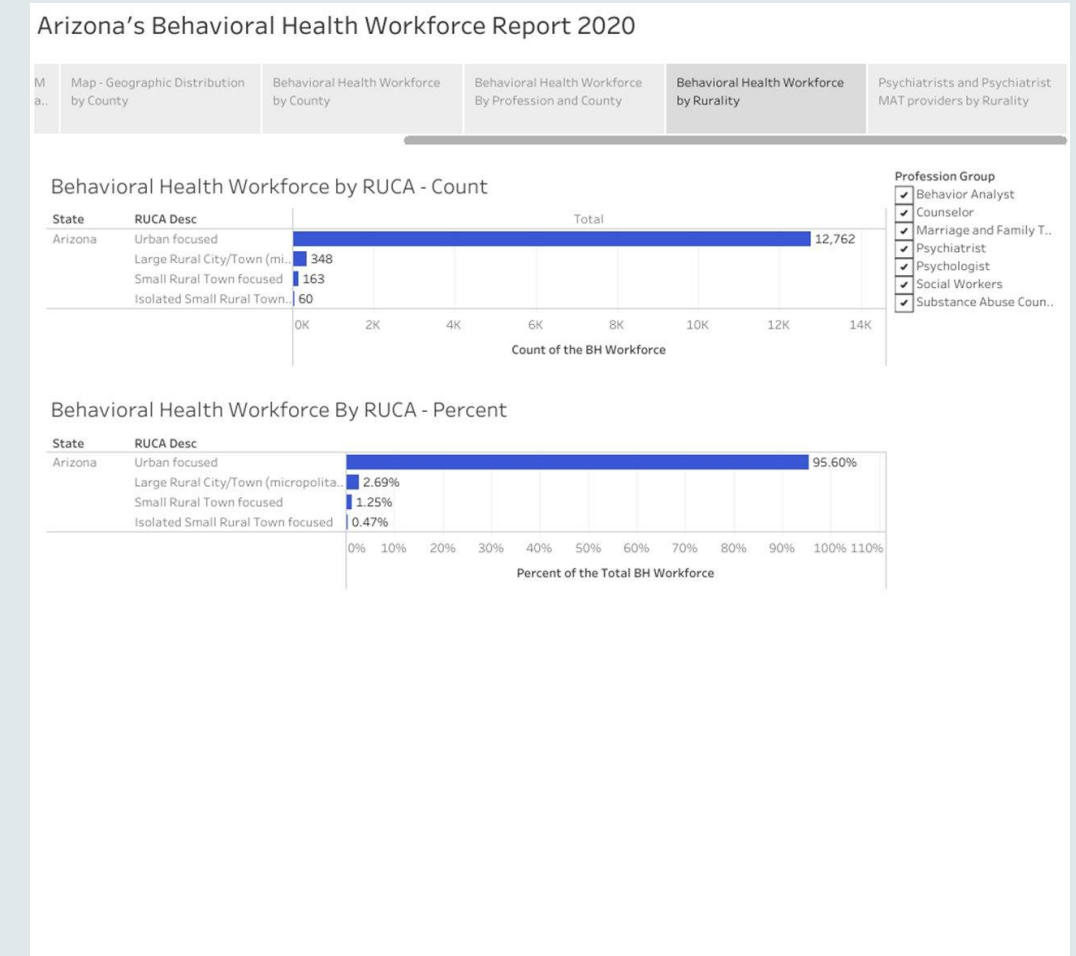


# Workforce – Psychiatry AZ

Over 95% of providers are in urban areas.

Total of 915 psychiatrists- variable comfort with perinatal mental health and substance use treatment.

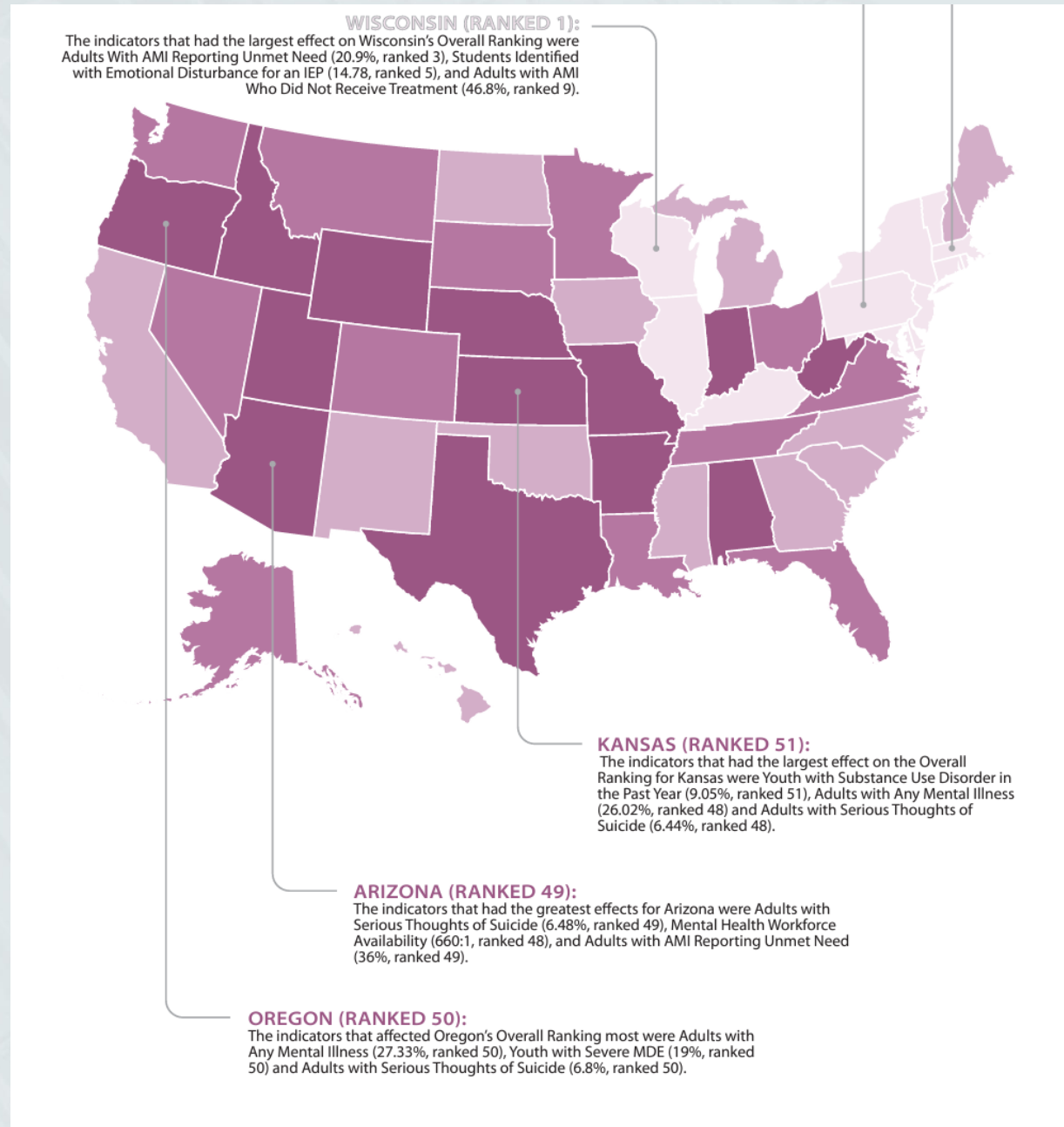
Difficulty with access to care for general adult population.



## Report ranks Arizona 49th in adult mental health care

By Leah Mesquita/Cronkite News

Published: Friday, May 3, 2024 - 7:05am



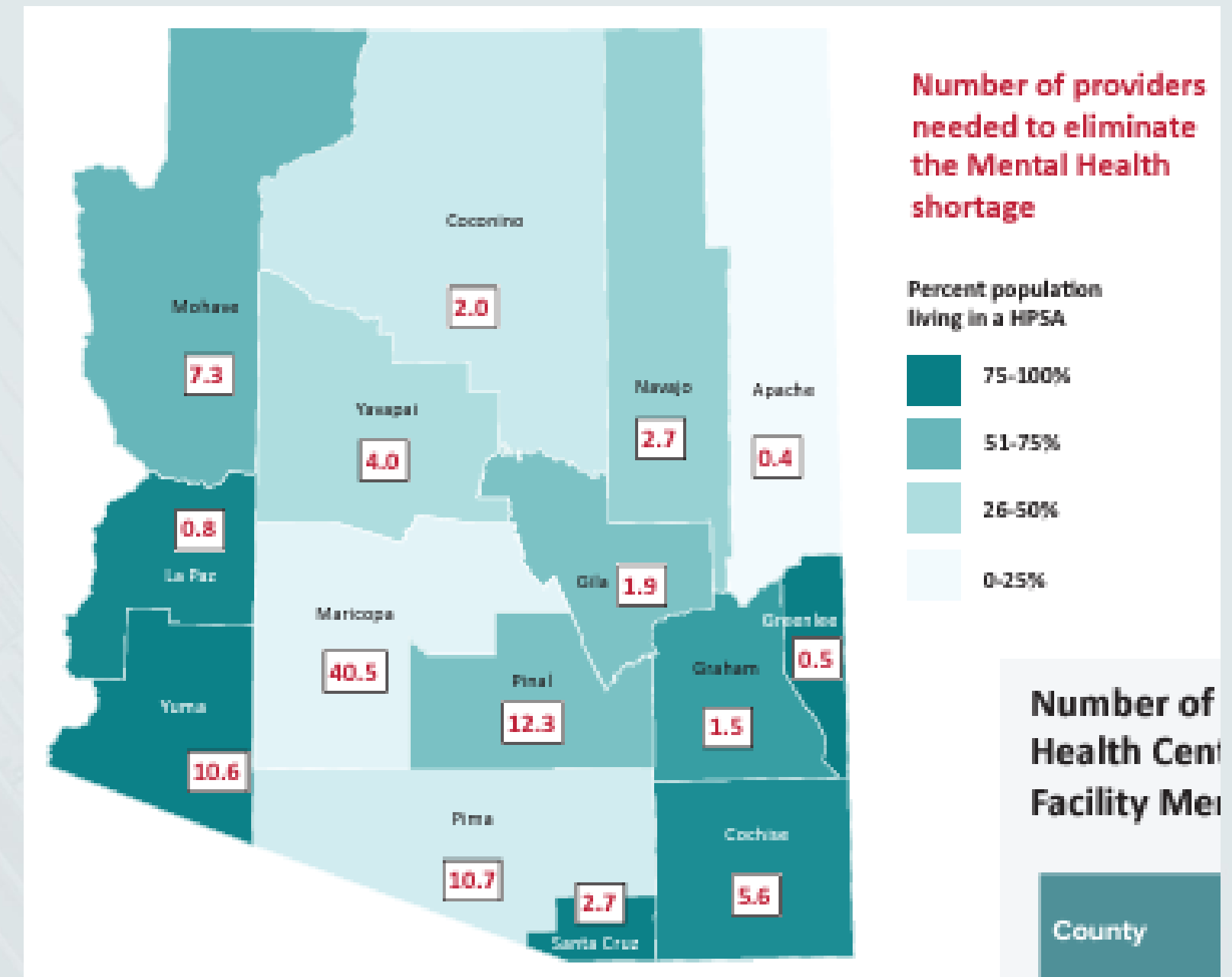
Rank	State	%	#
27	Kentucky	51.80	378,000
28	Pennsylvania	51.80	1,006,000
29	Kansas	52.30	320,000
30	Louisiana	52.90	385,000
31	Maine	53.50	127,000
32	Oklahoma	53.50	457,000
33	Wyoming	54.00	56,000
34	Oregon	54.10	494,000
35	Alaska	54.90	61,000
36	Maryland	55.00	422,000
37	District of Columbia	55.50	75,000
38	Colorado	55.50	570,000
39	Ohio	55.60	1,232,000
40	Connecticut	55.80	248,000
41	Mississippi	56.10	273,000
42	New Jersey	56.20	677,000
43	Georgia	57.80	722,000
44	New York	58.00	1,637,000
45	Florida	58.40	1,679,000
46	Nevada	61.40	309,000
47	Texas	62.30	2,306,000
48	Alabama	62.40	478,000
49	California	62.60	3,757,000
50	Arizona	63.50	854,000
51	Hawaii	69.10	130,000
	National	54.70	28,066,000

Arizona ranks 49th for overall mental health care and 47th specifically for access to care.

Percentage of population with mental illness who are not receiving treatment – 63% in Arizona

# Underserved areas

- Arizona meets 8.5% of its mental health need
- 722 federally designated Health Professional Shortage Areas (HPSA)
  - 233 mental health HPSAs
  - Arizona would need an additional 142-223 full-time psychiatrists statewide to eliminate the existing HPSAs



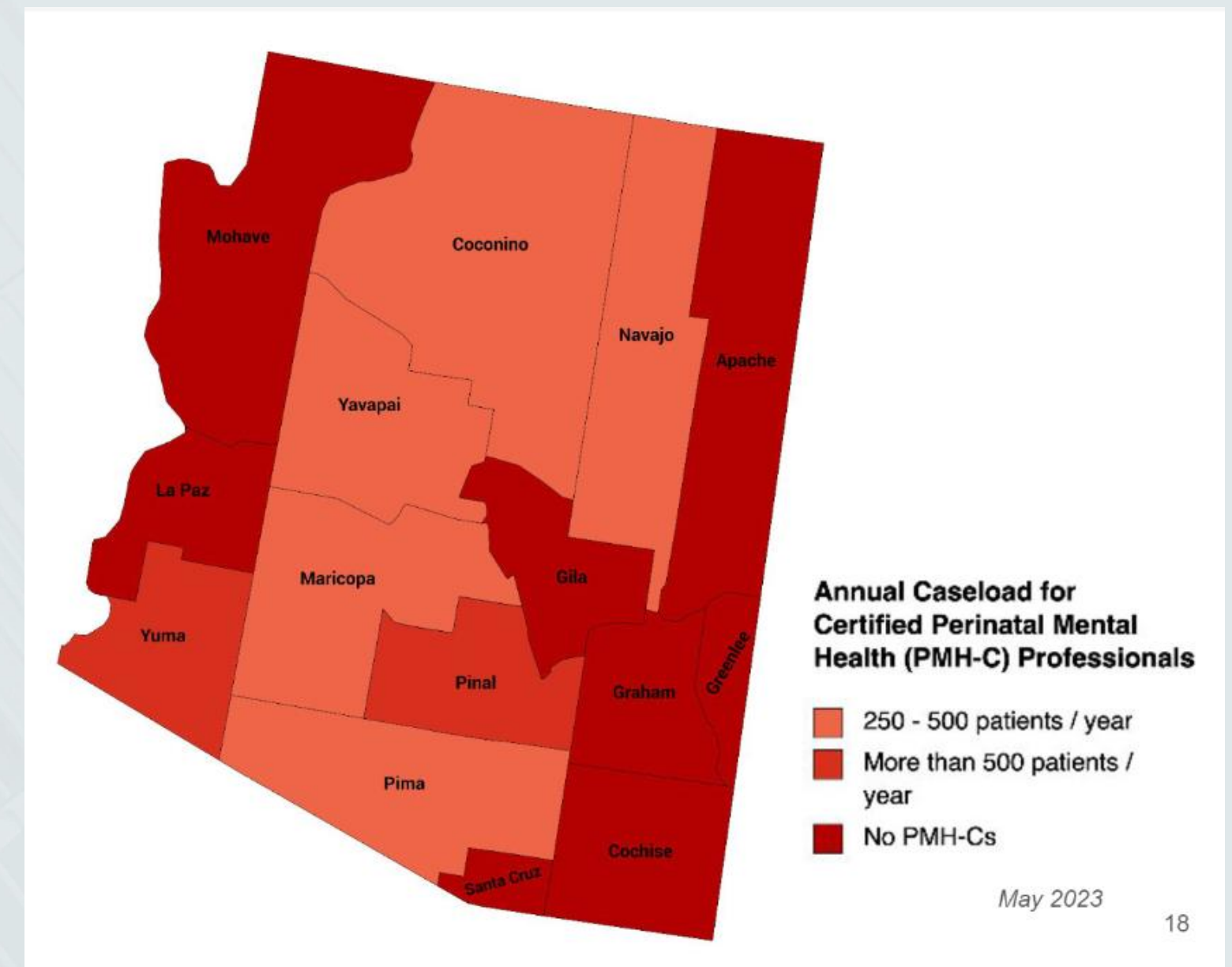
## Perinatal Mental Health Certified (PMH-C) Professionals

This map includes ALL PMH-C professionals

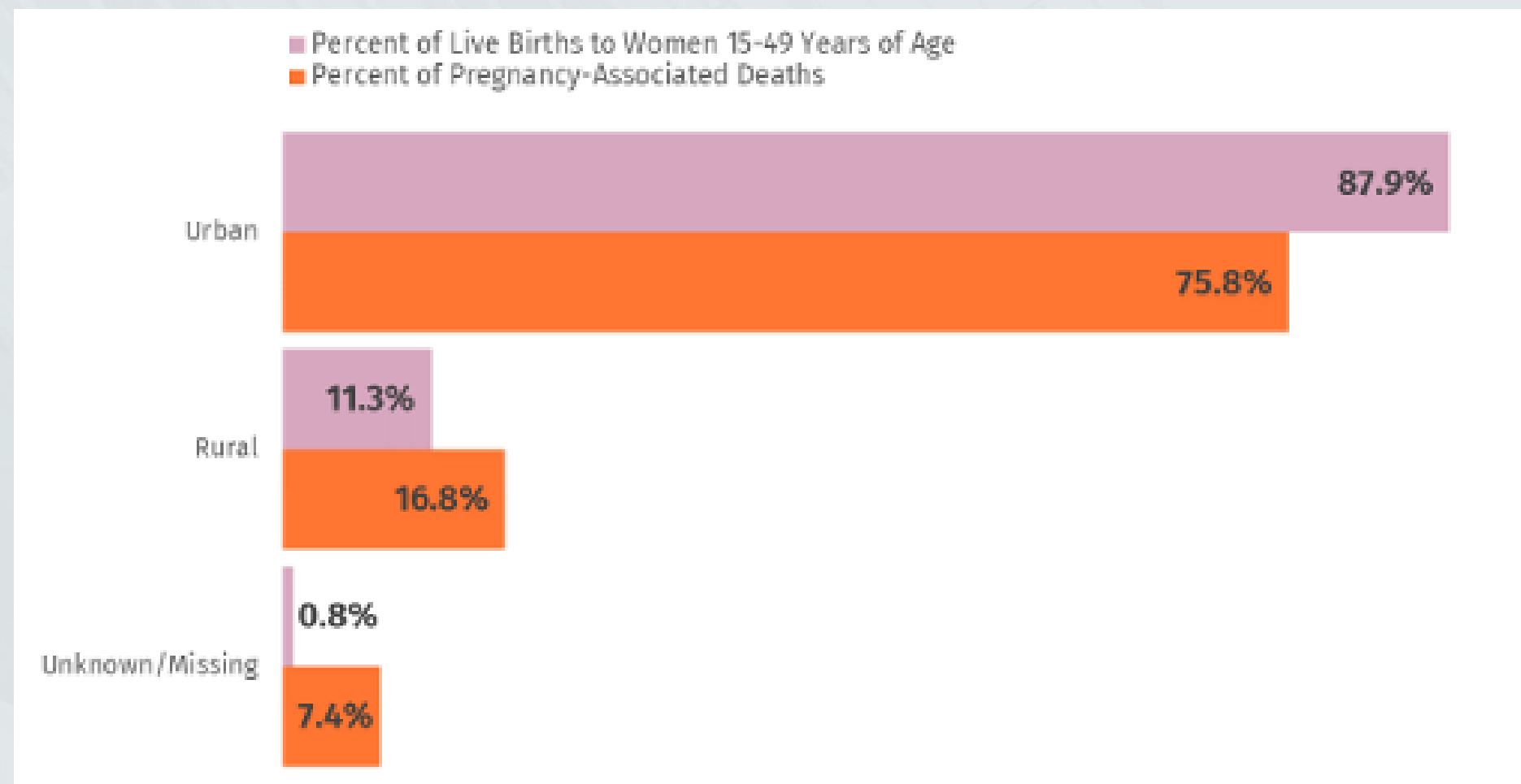
Includes therapists, doulas

Many are not prescribers

Even at its most inclusive, many counties have *no access* to trained PMH-C at any level.



# Maternal mortality by residence:



# Additional barriers

## COST:

- 23% of Arizonans with > 14 poor mental health days a month were unable to see a doctor due to cost.
- 15% of Arizonans have no insurance
  - Nationally, 19% of Hispanic adults with mental illness have no insurance
- Nationally, 42% of individuals cannot afford mental health treatment for a variety of reasons.

## AWARENESS:

- 27% of people who need treatment do not know where to get services or what services are available.

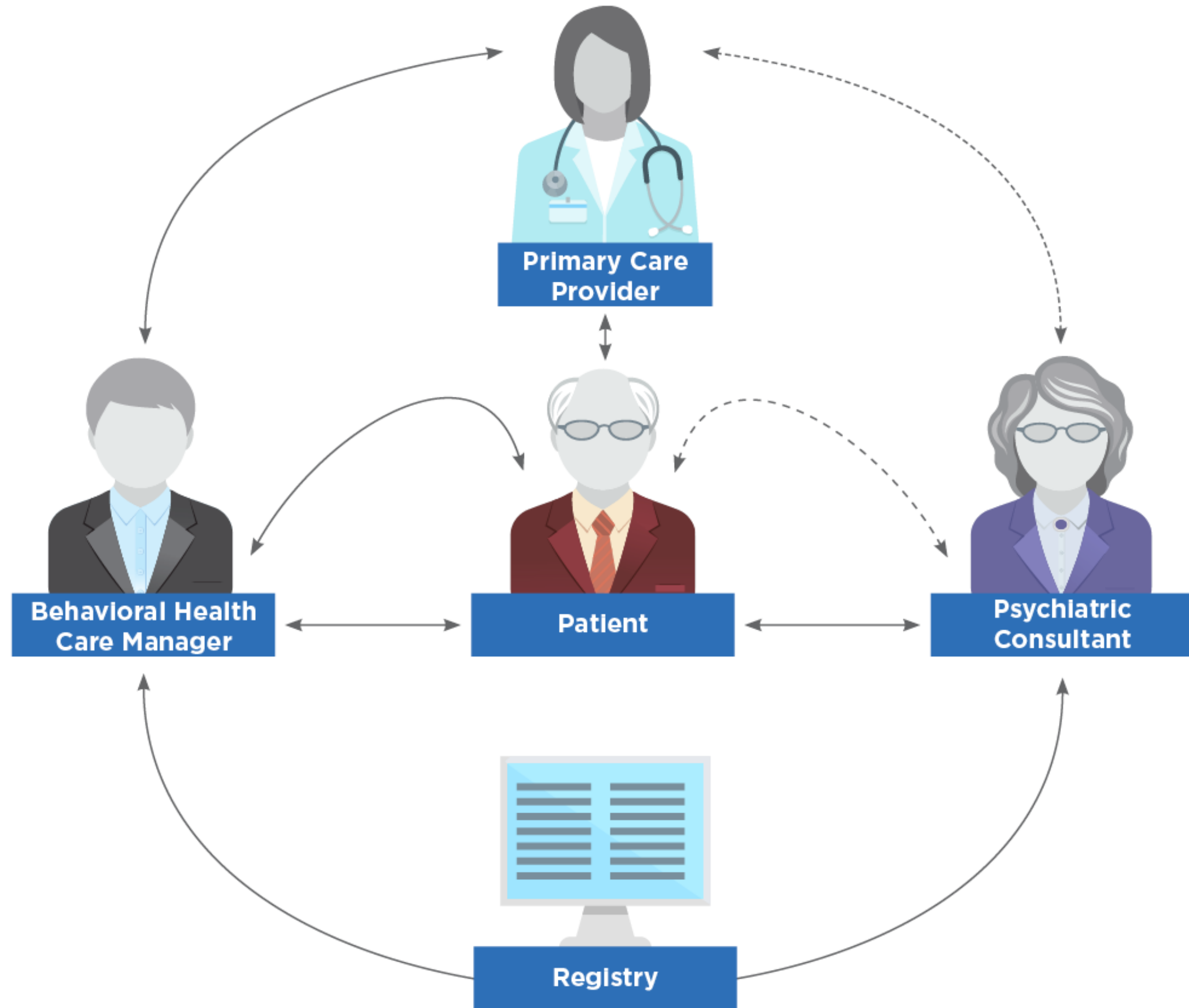
## CULTURAL:

- lack of diverse representation in the mental health field, language barriers, and implicit bias from providers.
- In 2021, 84% of psychologists, 67% of social workers, and 88% of mental health counselors were white. Only 10.4% of practicing psychiatrists were Black, Latino or Native American.



# Mental Health Innovations to Meet the Need for Care



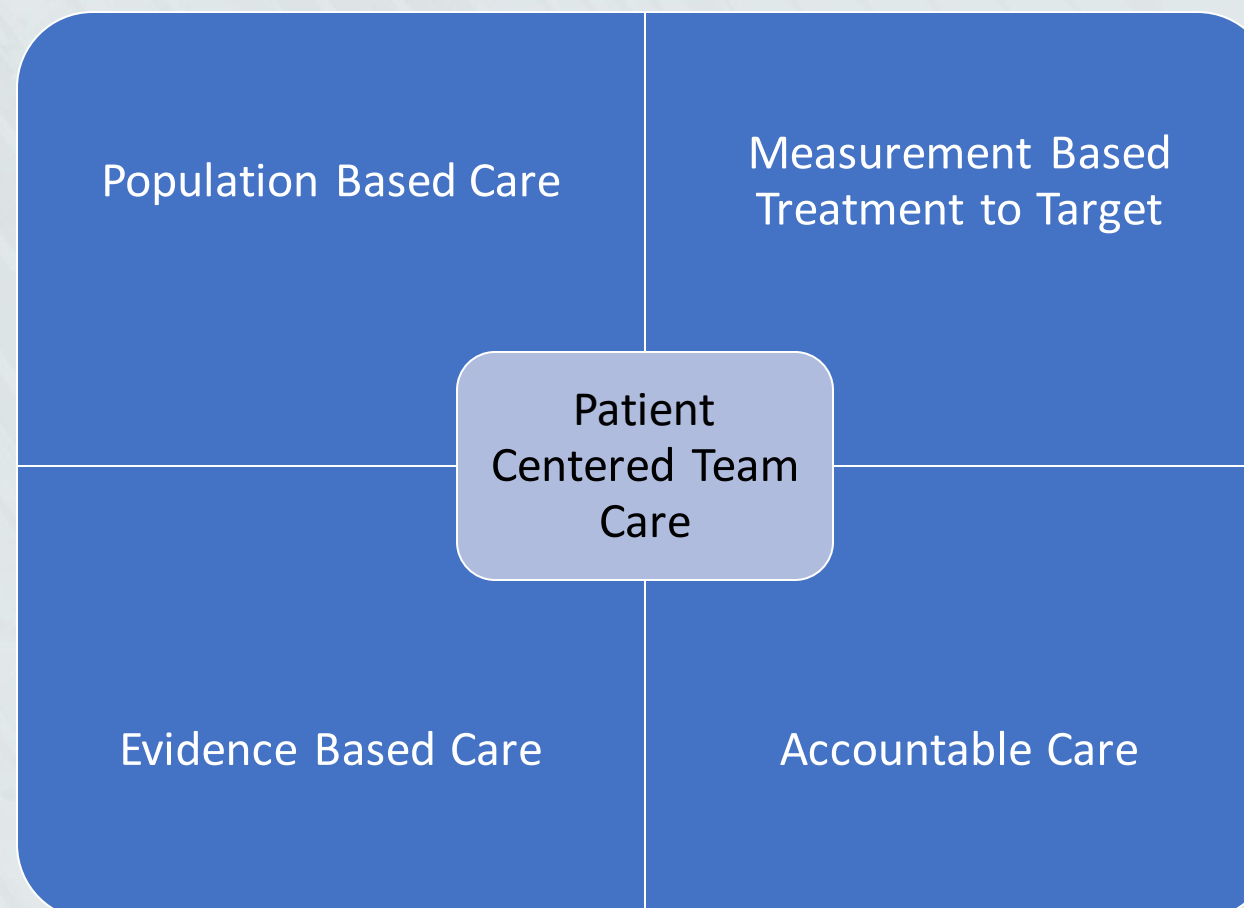




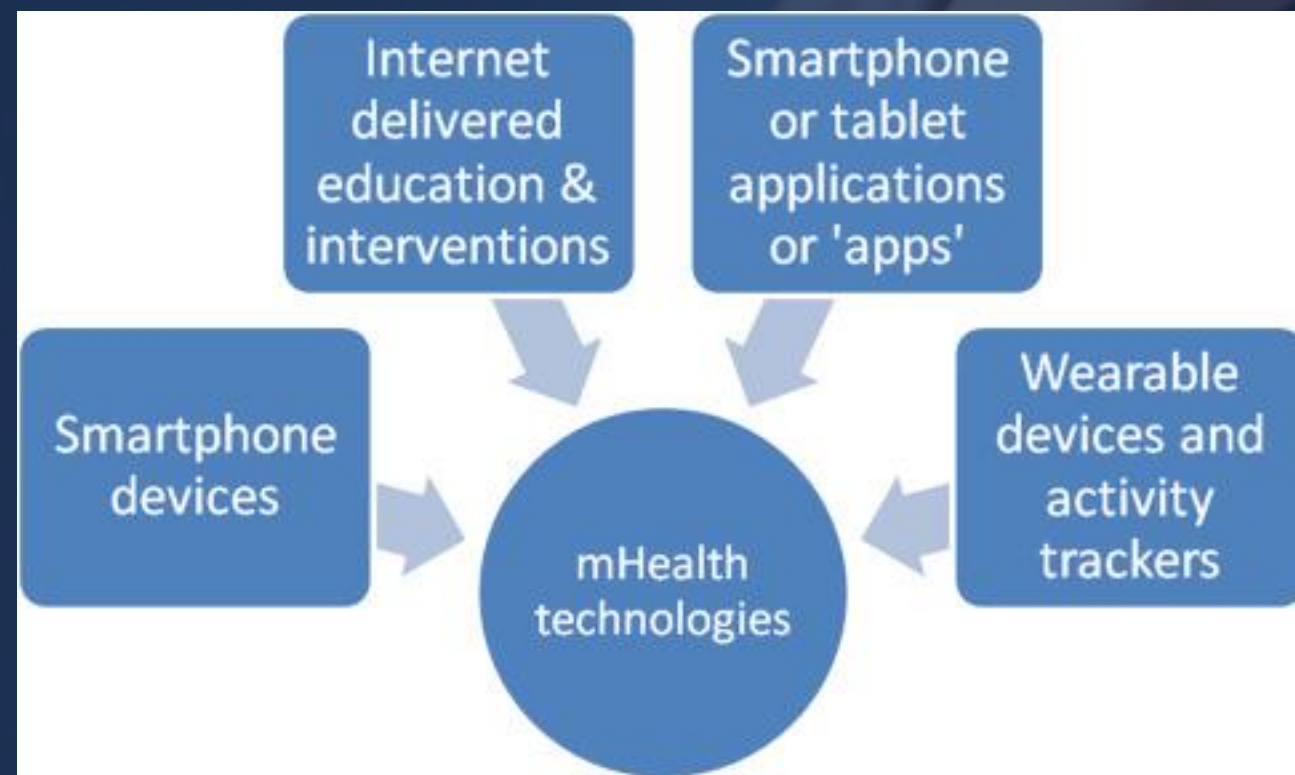
## The Role of Collaborative Care in Reducing Mental Health Inequities

Prepared by members of the APA Committee on Integrated Care

AMERICAN  
PSYCHIATRIC  
ASSOCIATION 



The World Health Organization's (WHO) Global Observatory for eHealth defines mobile health (mHealth) as "medical and public health practice supported by mobile devices".



# Challenges to Providers

- Telehealth
- Data Sharing



# Evaluation of Mobile Apps

FDA Approval

Pros: Highest Endorsement

Cons: Lengthy Process

Reviewed by Independent Organization

Pros: Faster, Thorough

Cons: Not comprehensive

Reviewed by stakeholder(you)

Pros: Product reviewed PRN

Cons: Burden of review falls to the provider

# FDA Approval/Clearance

- Wellness apps are not subject to FDA oversight
- Those that falls under “medical device” category may be considered low risk
- Approval process slower than the technology
- Clearance is a low bar
  - Clarifies that there is no risk
  - Doesn't say there is benefit or comment on efficacy

# Review from Independent Organization

## One Mind PsyberGuide

One Mind PsyberGuide is a nonprofit project that offers unbiased expert reviews of apps and digital health resources in order to help people use technology to live a mentally healthier life.

The screenshot shows the One Mind PsyberGuide website interface. At the top left is the MIND logo and the text "M-HEALTH INDEX & NAVIGATION DATABASE". The navigation menu includes "Application Library" (selected), "Framework", and "Community". A "Switch to Lite Version" button and a user profile icon are on the right. A left sidebar lists "Search Filters" with expandable sections for "Cost", "Developer Types", and "Engagements". The main content area is titled "App Library" and features a search bar with the placeholder "Search by name, company, feature or platform", a "Grid View" button, and a "Table View" button. A dropdown menu shows "All Platforms". A blue banner at the bottom of the main area says "Not sure? Watch this short video!".



# Stakeholder evaluation

- APA App Evaluation Model
- Mobile Application Rating Scale (uMARS)
- Framework to assist Stakeholders in Technology evaluation for Recovery (FASTER)



# APP ADVISOR

An American Psychiatric Association Initiative

## The App Evaluation Model

Can data be shared and interpreted in a way that is consistent with the purpose of the app? Can the app share with the EMR? Is it individual or in collab with the provider

Usability, Adherence, Engagement- What are the main engagement styles of apps? Is it customizable? Does it align with the needs? Is it easy to use?

Clinical Foundation: Does it do what it claims? What are references? Is there evidence of efficacy? Was there an attempt to validate usability?

Privacy – Can you opt out of data collection? Does the app collect data? How is it secured? What third parties does it share the data with?

Ownership? Trusted Source? Funding Source? Additional/Hidden Cost  
Does it work with the accessibility features for Android/IOS?

Interoperability

Ease of Use

Evidence

Risk

Ground

## Breathe, Think, Do with Sesame® Evaluation

"A resource app for you to share with your child to help teach skills such as problem solving, self-control, planning, and task persistence." Evaluated: December 2019

### **Does the app identify ownership?**

Sesame Street

### **Does the app identify funding sources and conflicts of interest?**

Yes, funded by Sesame Street. Their full financials are available on their website.

### **Does the app come from a trusted source?**

Yes, Sesame Street is a global non-profit educational organization.

### **Does the app claim to be medical?**

No

### **Are there additional or hidden costs?**

No

### **Do you own your data?**

The app does not collect data.

### **Can the app share data with EMR and other data tools (Apple HealthKit, FitBit)?**

No, the app does not collect data.

### **Is the app content correct, well-written, and relevant?**

Yes, activities are simple, well-written, age-appropriate, and easy to understand.

### **What are the relevant sources or references supporting the app use cases?**

A [peer reviewed article](#) comparing similar apps.

# Psychiatry Access Programs

- Perinatal individuals interact with a healthcare provider 20-25 times during routine prenatal/postpartum care, and well-child visits for the infant until one year of life.
- In 2018, 86.5% of children 0-17 received a well-child checkup.
- Frontline providers can play a critical role in addressing mental health conditions but face significant challenges including low comfort with treatment options, evolving guidelines for treatment, limited access to resources for patients.
- Access programs are designed to address gaps in care of these special populations by increasing capacity of frontline care workers to screen, treat and provide resources for mental illness in these populations.

# Origins of Access Lines

- First program launched in MA in 2014
- Started with a child line and added perinatal
- Access lines have emerged as evidence based, scalable and affordable, reaching a variety of frontline providers.

## Improving perinatal depression care: the Massachusetts Child Psychiatry Access Project for Moms

Nancy Byatt <sup>1</sup>, Kathleen Biebel <sup>2</sup>, Tiffany A Moore Simas <sup>2</sup>, Barry Sarvet <sup>3</sup>, Marcy Ravech <sup>4</sup>, Jeroan Allison <sup>2</sup>, John Straus <sup>4</sup>

**Table 2**

Reason for telephone encounter from June 30, 2014 to February 29, 2016 for all for the 976 telephone consult encounters with providers

Contact Reason	Reason for Telephone Consult Encounters	% of Total Initial Encounters
Medication Question(s)	529	55%
Resources-Community Access	525	55%
Risk/Benefits of Medication Use in Pregnancy	315	33%
Positive Screen	188	20%
Diagnostic Question(s)	135	14%
Lactation Question(s)	126	13%
Safety Concerns	62	6%
Screening Tool Question	18	2%
Other	14	1%
Preconception Question(s)	11	1%
Nonmember Specific	5	1%

There may be more than one reason for each telephone encounter.

**Table 1**

Encounters according to services provided and provider types from June 30, 2014 to February 29, 2016 for 1123 women served

Provider Type	Total Number of Encounters	Consult Encounters <sup>a</sup>	Face-to-Face Encounters	Care Coordination Encounters with Providers
Obstetrician	1479 (57%)	497 (50%)	34 (42%)	890 (63%)
Midwife	395 (15%)	141 (14%)	15 (19%)	237 (17%)
Psychiatrist	198 (8%)	156 (16%)	9 (11%)	21 (2%)
Family Physician	187 (7%)	84 (8%)	9 (11%)	86 (6%)
Physician Assistants/Nurse Practitioner	181 (7%)	54 (5%)	4 (5%)	123 (9%)
Internal Medicine Physician	71 (3%)	28 (3%)	8 (10%)	33 (2%)
Pediatrician	67 (3%)	32 (3%)	2 (2%)	29 (2%)
Other	5 (0%)	4 (0%)	0 (0%)	1 (0%)
<b>Total</b>	<b>2583</b>	<b>996</b>	<b>81</b>	<b>1420</b>

Each provider and women served can have multiple encounter types.

<sup>a</sup> Includes encounters with nonproviders and hallway, email and follow-up consultations.

# Perinatal Psychiatry Access Programs

Generally, multiple components including education, consultation and resources

1

## EDUCATION

### **Trainings and toolkits for providers and staff**

on evidence-based guidelines for screening, triage, and referral; risks and benefits of treatment; and discussion of screening results and treatment options.

2

## CONSULTATION

### **Real-time psychiatric consultation**

for frontline providers caring for individuals during the perinatal time frame.

3

## RESOURCE & REFERRAL

### **Linkages with community- based mental health resources**

including individual and group therapy, support groups, and other resources to support perinatal health and wellness.



COLLEGE OF MEDICINE TUCSON  
Arizona Perinatal  
Psychiatry Access Line



THE UNIVERSITY OF ARIZONA  
COLLEGE OF MEDICINE TUCSON

Arizona Perinatal  
Psychiatry Access Line

# Consultation

## Callers:

- Statewide service- calls from over 70% of Arizona counties
- Wide range of front-line providers - RNs, MD/DOs, NPs, PAs, CNMs, doulas

## Prioritizing provider needs:

- Clinical question directed by the caller- diagnosis, medications, informed consent discussion.
- Average total call time (navigator+ psychiatrist) is 12 min, with a wide range of 4min- 20+ min
  - able to adapt to availability and needs of provider
  - can provide further information in follow up email
- New: ability to schedule consultation call on our website

## Arizona Perinatal Psychiatry Access Line

Is your pregnant or postpartum patient struggling with substance use and/or their mental health?

**Call 888-290-1336**

to consult with perinatal psychiatrists who will provide free clinical guidance.

**Mon - Fri | 8:30 a.m. - 4:30 p.m.**

*APAL is a free statewide perinatal psychiatry access line funded by AHCCCS. In addition to our access line, we also offer a variety of trainings as well as numerous resources for families and medical providers at **APAL.arizona.edu**.*

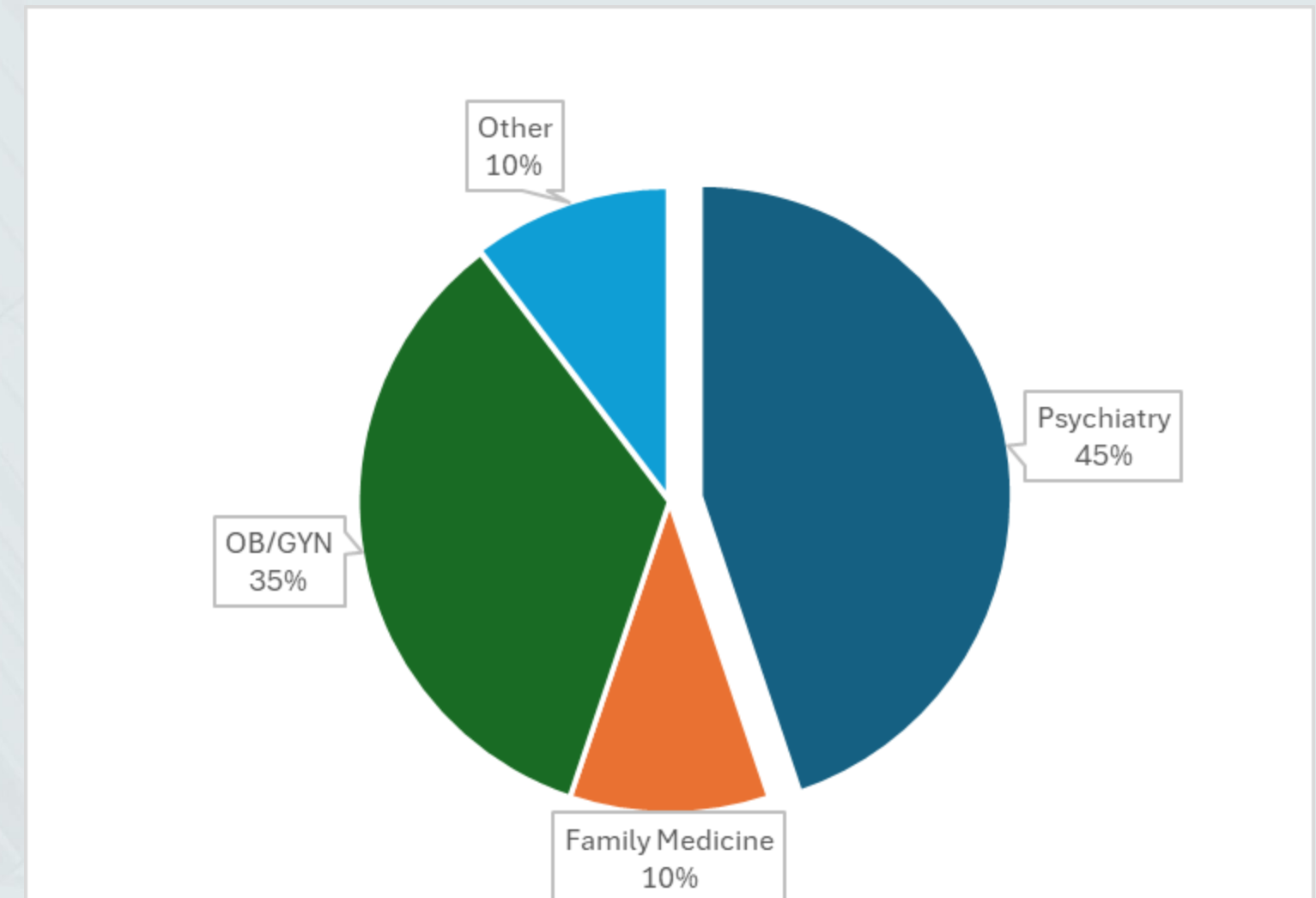
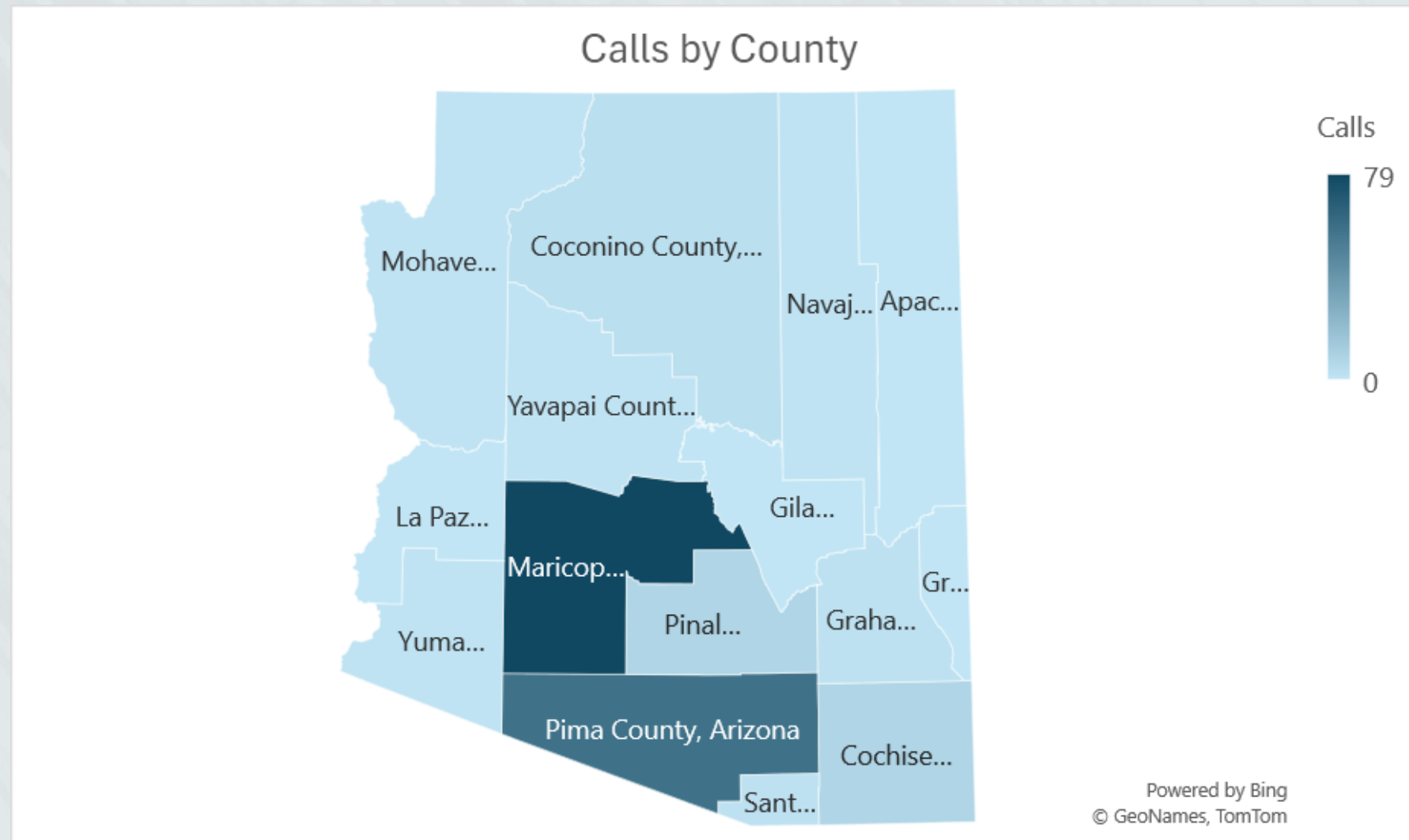


Scan the QR code to sign up for our newsletter.

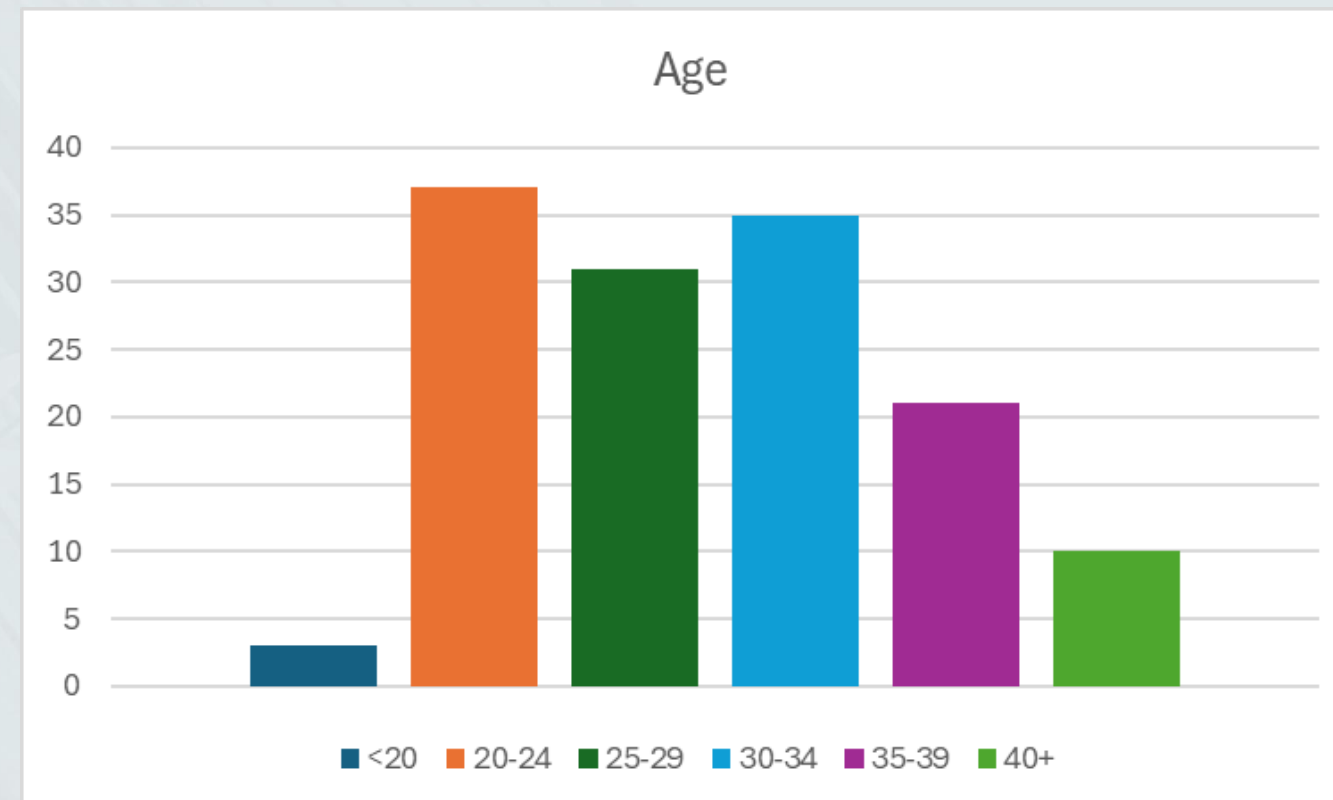
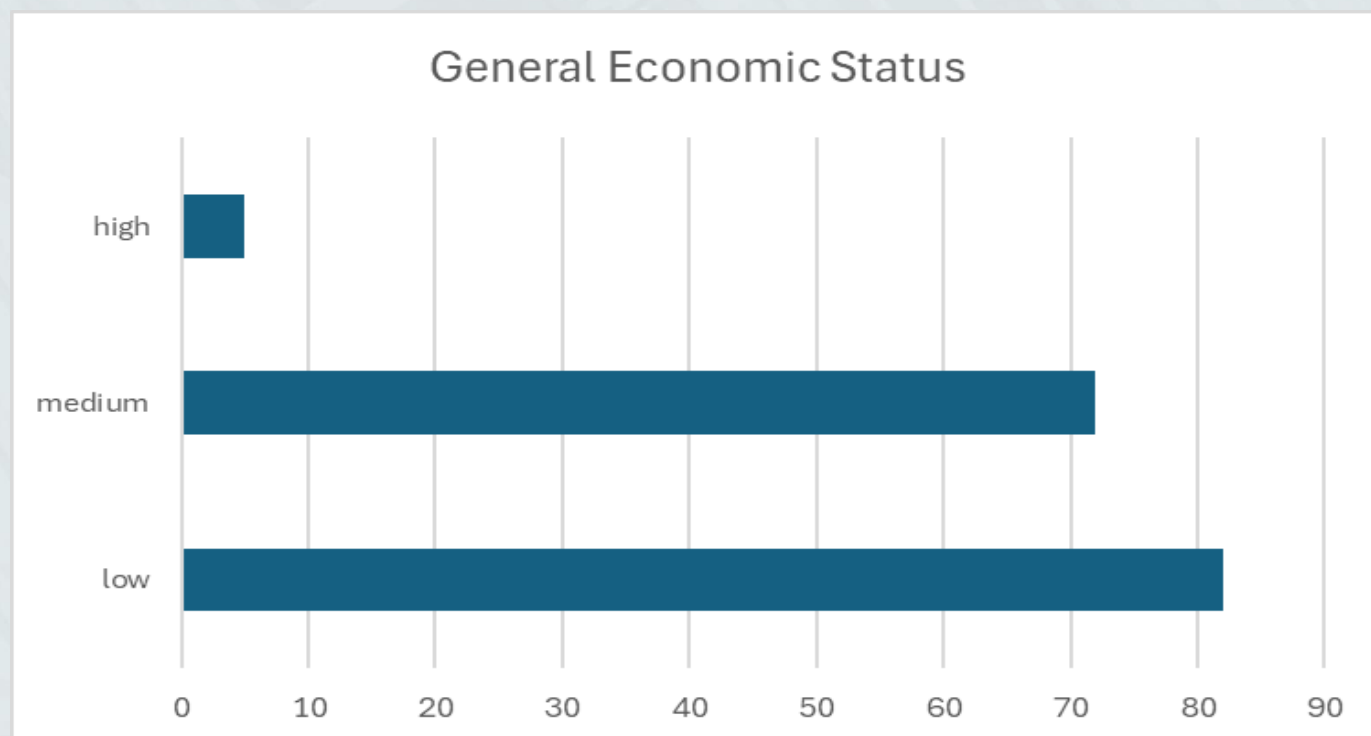
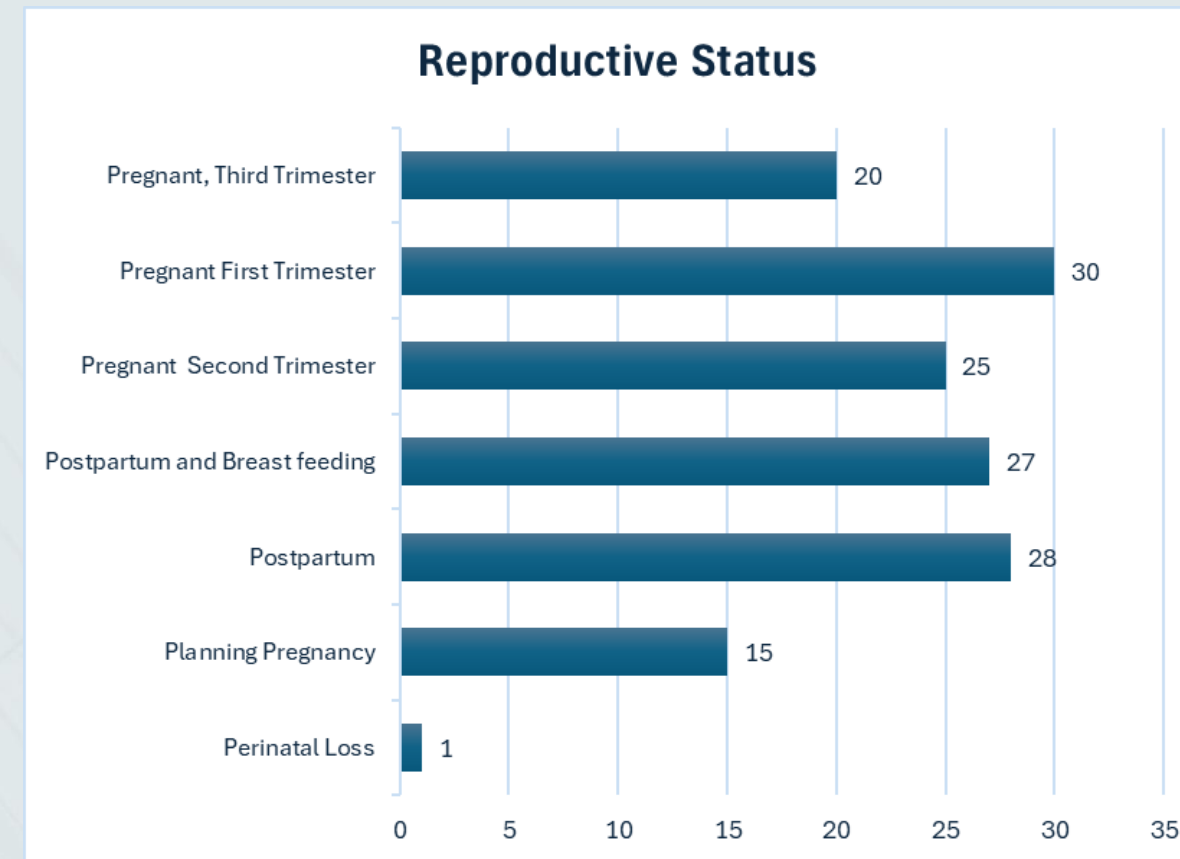
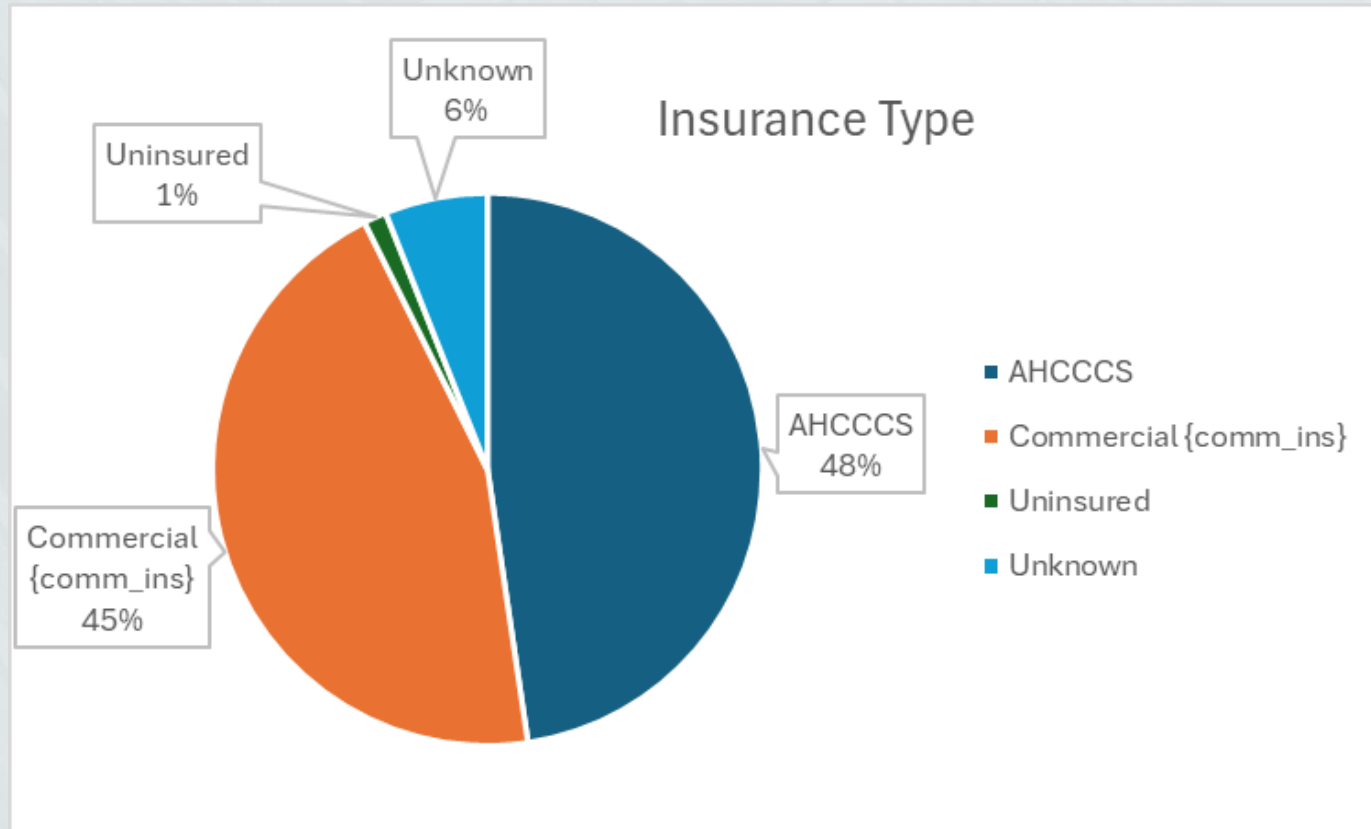
Facebook.com/APerinatalIPAL  
team@apal.arizona.edu



# Caller Demographics



# Patient Demographics



# Resources for moms and families



## Books

For Kids



Grief, Loss & Trauma



Parenthood & Stress



Parenting



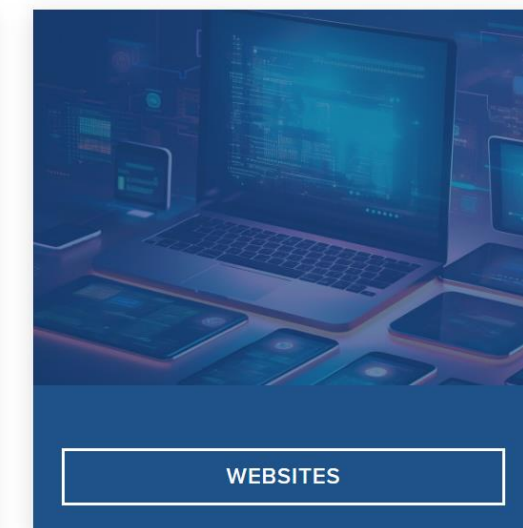
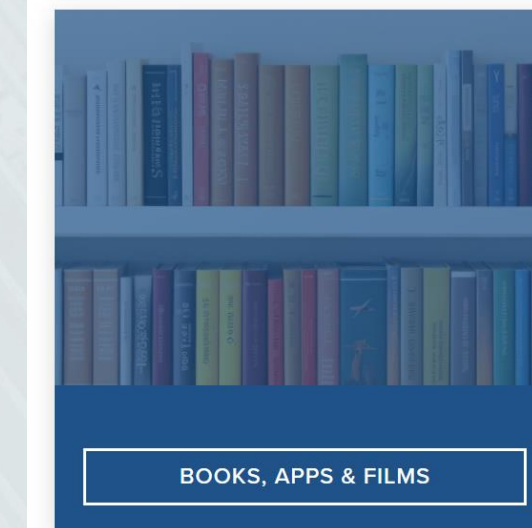
Postpartum Depression and Psychosis



Pregnancy & Infancy



Relationships



# Trainings

## Request APAL Trainings

Type of Training Requested (All trainings are 1 hour unless otherwise noted)

Perinatal Mood and Anxiety Disorders

Substance Use Disorders in Pregnancy and Breastfeeding

Physiologic Changes in Perinatal Period

Postpartum Psychosis and Perinatal Mental Health

ADHD Management in Pregnancy and Lactation

Sleep Disorders in the Perinatal Period: Assessment and Treatment

Other

Completed 37 training in 2023

Have 25 scheduled for 2024 so far

Applied for and got approved to offer CME credit for lectures

Wide variety of audiences- from Doulas, to community members, obgyn residents, project ECHO participants, health plans and family law attorneys.

# Responses to APAL: consultation and training

*“I am profoundly grateful that the Arizona Perinatal Psychiatry Access Line (APAL) exists. For providers who are not trained in perinatal psychiatry, there is so much uncertainty in treating this population. When I called APAL, I had a mom who really needed help. I was quickly connected to an expert perinatal psychiatrist who provided clear, evidence-based guidance. After the call, I felt reassured and confident moving forward and my patient didn’t have to wait to see a specialist to start treatment. This resource not only helped my patient but contributed significantly to my own education on this topic.”*

*“Thank you so much for helping me provide better patient care!”*

*“Extremely helpful and practical advice relevant to my specific case/question”*

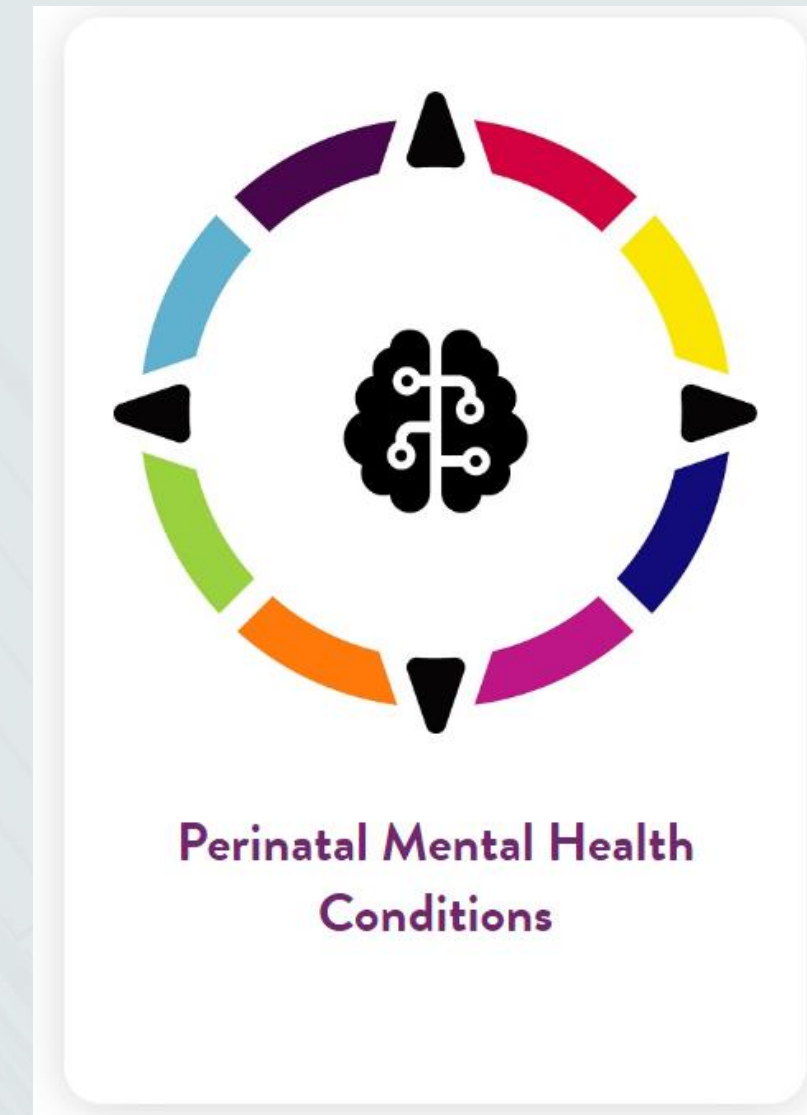


# **New Directions for Arizona Perinatal Psychiatry Access Line**



# AIM: Alliance for Innovation on Maternal Health

- A quality improvement initiative to support best practices that make birth safer, improve maternal health outcomes and save lives.
- Enrolled states have access to Patient Safety Bundles- a structured way of improving the processes of care and patient outcomes- they are collections of evidence-informed best practices with actional steps that states can adapt.
- The goal is to improve maternal outcomes.



*Arizona's AIM 2024*

## Readiness — Every Unit

Develop workflows for integrating mental health care into preconception and obstetric care before pregnancy through the postpartum period including provision of pharmacotherapy when indicated, including:\*

- ▶ Identify mental health screening tools to be integrated universally in every clinical setting where patients may present.\*
- ▶ Establish a response protocol based on what is feasible for each area of practice and local mental health resources.
- ▶ Educate clinicians, office staff, patients, and patients' designated support networks on optimal care across the preconception and perinatal mental health pathway including prevention, detection, assessment, treatment, monitoring, and follow-up best practices.\*

Facilitate trauma-informed trainings and education to address health care team member biases and stigma related to perinatal mental health conditions, including anti-racism considerations.

Develop and maintain a set of referral resources and communication pathways between obstetric providers, community-based organizations, and state and public health agencies to address patient needs, including social drivers of mental and physical health.\*

## Response — Every Event

Initiate an evidence-based, patient-centered response protocol that is tailored to condition severity, and is strength-based, culturally relevant\*, and responsive to the patient's values and needs: \*

- ▶ Activate an immediate suicide risk assessment and response protocol as indicated for patients with identified suicidal ideation, significant risk of harm to self/others or psychosis.

Establish care pathways that facilitate coordination and follow-up among multiple providers throughout the perinatal period for pregnant and postpartum people referred to mental health treatment.\*



# **New Treatment Available for Post-Partum Depression: Zuranolone**



# Brexanolone

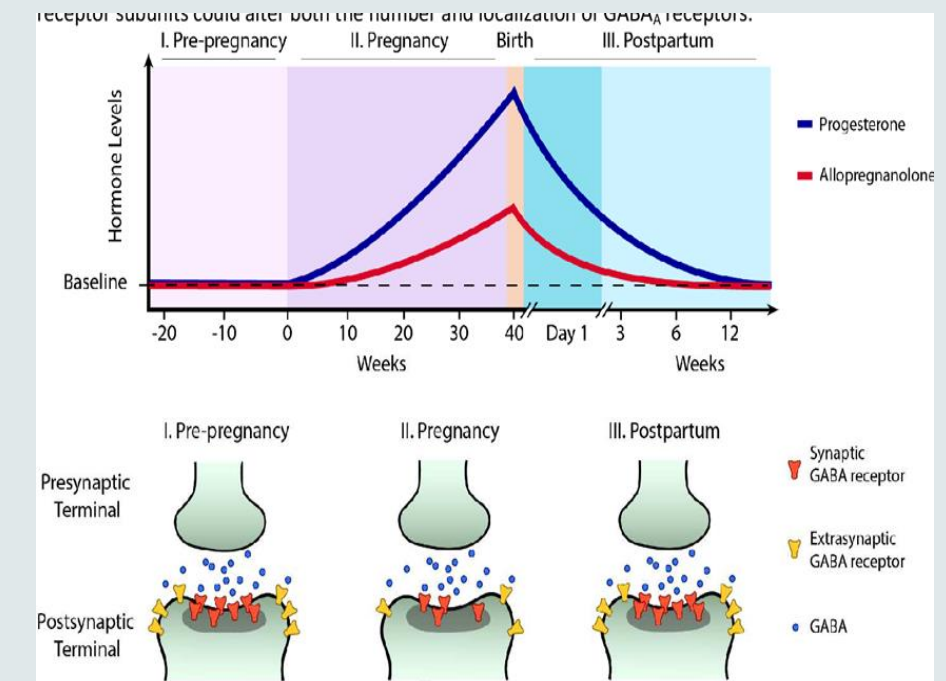
- First medication FDA approved for post-partum depression in 2019
- Novel mechanism targeting one suspected pathway of PPD
- Very exciting data- rapid improvement of severe post-partum depression as well as improving sleep and anxiety.
- Significant barriers to access including cost, sedation, separation of mother and baby, only available as 60-hour IV infusion in hospital
- From 2019-2021 only 499 people received Brexanolone

# Zuranolone

- FDA approved treatment for post-partum depression August 2023
  - Defined as onset from third trimester to 4 weeks postpartum
- Same MOA as Brexanolone but bioavailable and longer half-life meaning that it can be taken in oral form
- Taken daily (evening) over 2 weeks

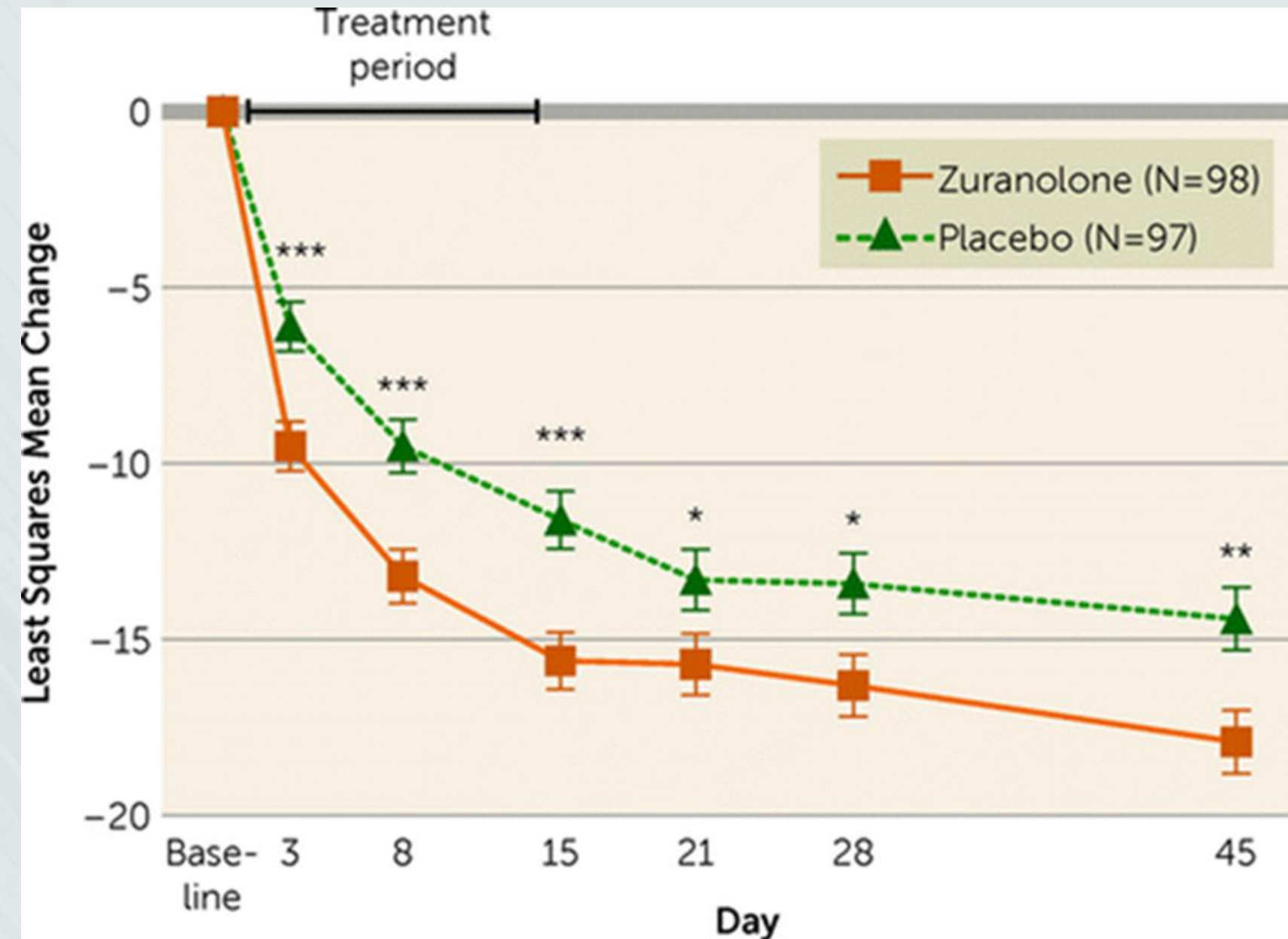
# How Does it work?

- Same mechanism as brexanolone
- Not really drugs - they are synthetic analogues of a naturally occurring neuroactive steroid allopregnanolone.
- Positive allosteric modulator of GABA-A receptor –
  - Same as benzodiazepines
  - Involved in anxiety, mood, cognition
- Level of allopregnanolone rises during pregnancy and drops in the post-partum period.
  - For some moms, this change results in symptoms of depression



## ROBIN study:

- Double blind, placebo-controlled trial
- Participants: 196, 18- to 45-year old women with a baseline score >26 on HAM-D with onset of symptoms during third trimester or < 4 weeks postpartum.
- Antidepressant use was permitted as long as patients were on a stable dosage for >30 days prior to first study treatment dose.
- Effective for PPD with improvement occurring in 3 days and sustained beyond the 14-day course of treatment.
- Was NOT effective for MDD in other trials



# Is it a Benzodiazepine?

- Zuranolone binds to GABA-A receptor as do benzodiazepines, but it binds to a different part, with different effects.
- Zuranolone has a broader effect- both synaptic and extra synaptic
  - Extra synaptic GABA receptors with delta subunit are insensitive to benzos, but sensitive to allopregnanolone
  - Over the long-term benzodiazepines downregulate GABA-A receptors while Zuranolone upregulates them.

# What are the side effects?

- Generally well tolerated
- Main side effects: Drowsiness/sedation, dizziness, headache, UTI and diarrhea

Black box warning that people taking medication cannot drive or operate heavy machinery for 12 hours after dose

Need to ensure NO other sedating meds or drugs (opiates, alcohol, benzos etc)

Summary of Adverse Events (Incidence of  $\geq 5\%$  in Any Zuranolone Treatment Arm)<sup>9-11</sup>

Preferred Term, n (%)	PPD		MDD			
	ROBIN		MDD-201B		MOUNTAIN	
	ZRN30 N=78	Placebo N=73	ZRN30 N=45	Placebo N=44	ZRN30 N=192	Placebo N=190
Any adverse event	47 (60)	38 (52)	24 (53)	20 (45)	105 (55)	93 (49)
Somnolence	12 (15)	8 (11)	3 (7)	1 (2)	13 (7)	8 (4)
Headache	7 (9)	9 (12)	8 (18)	7 (16)	12 (6)	14 (7)
Dizziness	6 (8)	4 (6)	5 (11)	1 (2)	11 (6)	7 (4)
Upper respiratory tract infection	6 (8)	1 (1)	0	2 (5)	6 (3)	4 (2)
Diarrhea	5 (6)	2 (3)	0	3 (7)	12 (6)	10 (5)
Nausea	3 (4)	6 (8)	5 (11)	1 (2)	7 (4)	9 (5)
Sedation	4 (5)	0	2 (4)	2 (5)	9 (5)	6 (3)

MDD = major depressive disorder; PPD = postpartum depression; ZRN30 = zuranolone 30 mg.

# How would you prescribe Zuranolone?

- Call specialty pharmacy, they will help with patient cost: [1-844-987-9882](tel:1-844-987-9882)
- Standard dose of 50mg (25mg cap x 2)
  - Can use lower dose of 30mg for severe hepatic impairment or moderate renal impairment or side effects
- Take every evening (around 8pm) due to drowsiness x 14 nights
- If a dose is “missed”- do not make up dose, just continue with next scheduled dose and continue for a total of 14 doses.
- Needs to be taken with fat-containing food with at least 400 calories (avocado, eggs, full fat yogurt).



# Medication Interactions and other considerations

- Other sedating medications increase risk of confusion and sedation
- Check for other concurrent medications to ensure no strong 3A4 inhibitors or inducers
- Zuranolone *MAY* have adverse effect on fetus- need to be on birth control x 21 days (14 days of treatment and 1 week after).
- Zuranolone can be taken with an SSRI



# Zuranolone and Breastfeeding

- Breastfeeding – unknown risk. The FDA is recommending against breastfeeding while taking the drug.
- No data on infant serum levels  
Dose of 30mg was shown to have RID of .35%, but impact of dose unknown  
  
Sedation remains a concern
- Patients can pump for the 2 weeks to maintain/establish supply



# New Directions for APAL





## Arizona Pediatric Psychiatry Access Line

APAL is a statewide pediatric psychiatry access line. We assist **medical providers** in caring for their child and adolescent patients with behavioral health concerns.

Child and adolescent psychiatrists are available by phone, **Monday-Friday, from 12:30 - 4:30 p.m.**, to answer provider questions and review treatment options.

**Call 888-290-1336**





Thank you

Please visit us at:  
[Apal.arizona.edu](http://Apal.arizona.edu)

And contact us at: [team@apal.arizona.edu](mailto:team@apal.arizona.edu)

