

The logo features a large yellow circle on the left. The text "VA WOMEN'S HEALTH RESEARCH NETWORK" is written in blue, serif, all-caps font across the top and middle of the circle. Below the circle, a dark grey horizontal bar contains the text "Supporting Practice and Research Collaboration" in white, sans-serif font. The background of the slide has light green and blue curved decorative elements in the corners.

# VA WOMEN'S HEALTH RESEARCH NETWORK

Supporting Practice and Research Collaboration

## *Spotlight on Women's Health Cyberseminar Series*

### **Perinatal Depression among Veterans: State of the Research and Future Directions**

Sponsored by the VA Women's Health Research Network

[WHRN@va.gov](mailto:WHRN@va.gov)

# Today's Speaker & Discussant



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*Speaker*



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Acting Deputy Chief Officer,  
Office of Women's Health in VACO  
*Discussant*

# Perinatal Depression among Veterans: State of the Research and Future Directions

Aimee Kroll-Desrosiers, PhD  
VA Central Western Massachusetts  
May 7, 2024



U.S. Department  
of Veterans Affairs

WOMEN VETERANS HEALTH CARE



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## Disclaimers

- The views expressed in this presentation are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

# Overview

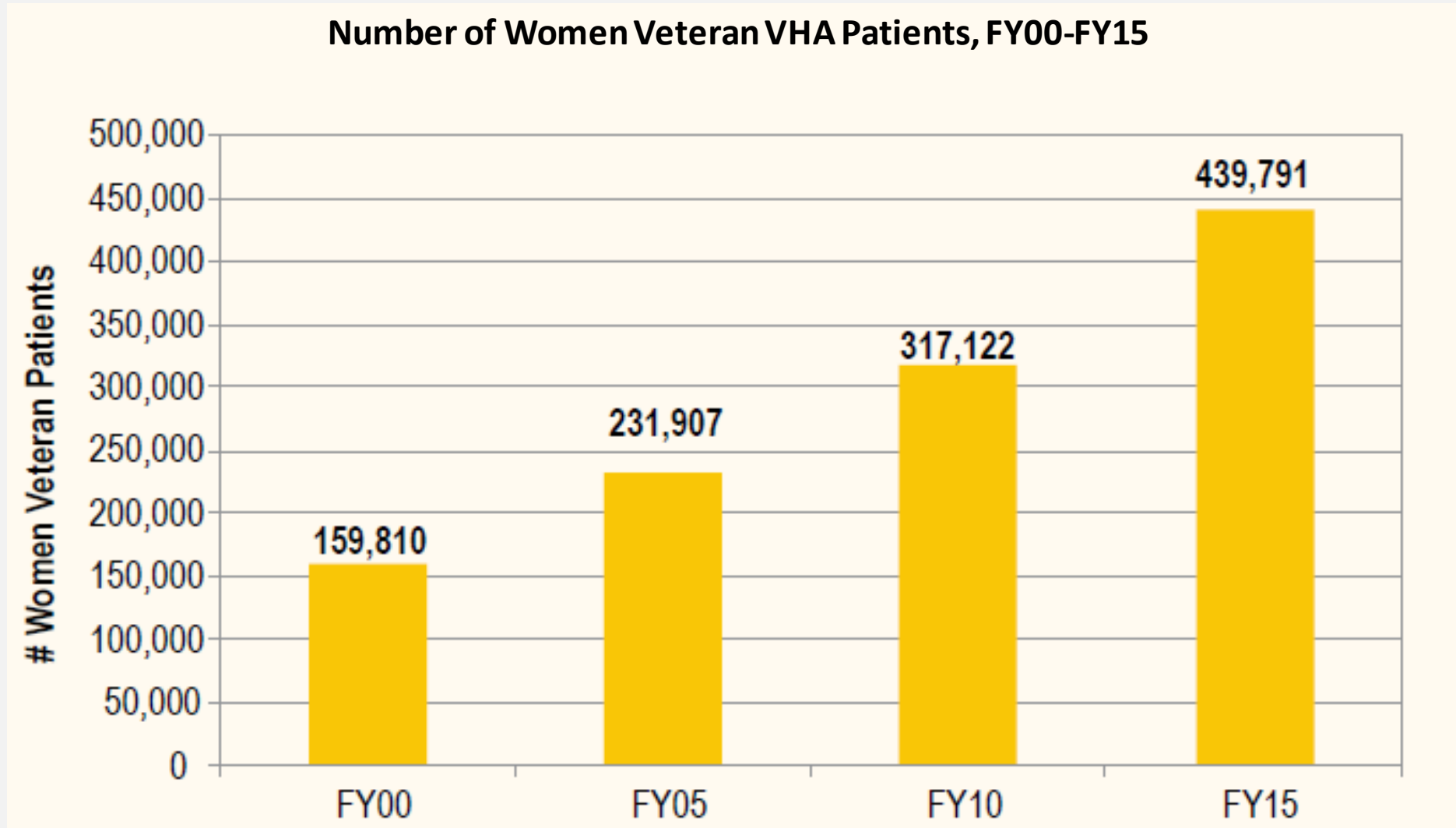
- Background
  - Women Veterans – demographic profile
  - Maternity Care in the VA
  - Perinatal Depression
- Perinatal Depression– State of the Research
  - In-depth examples from COMFORT
- Ongoing & Future Directions
- Discussion from Dr. Amanda Johnson



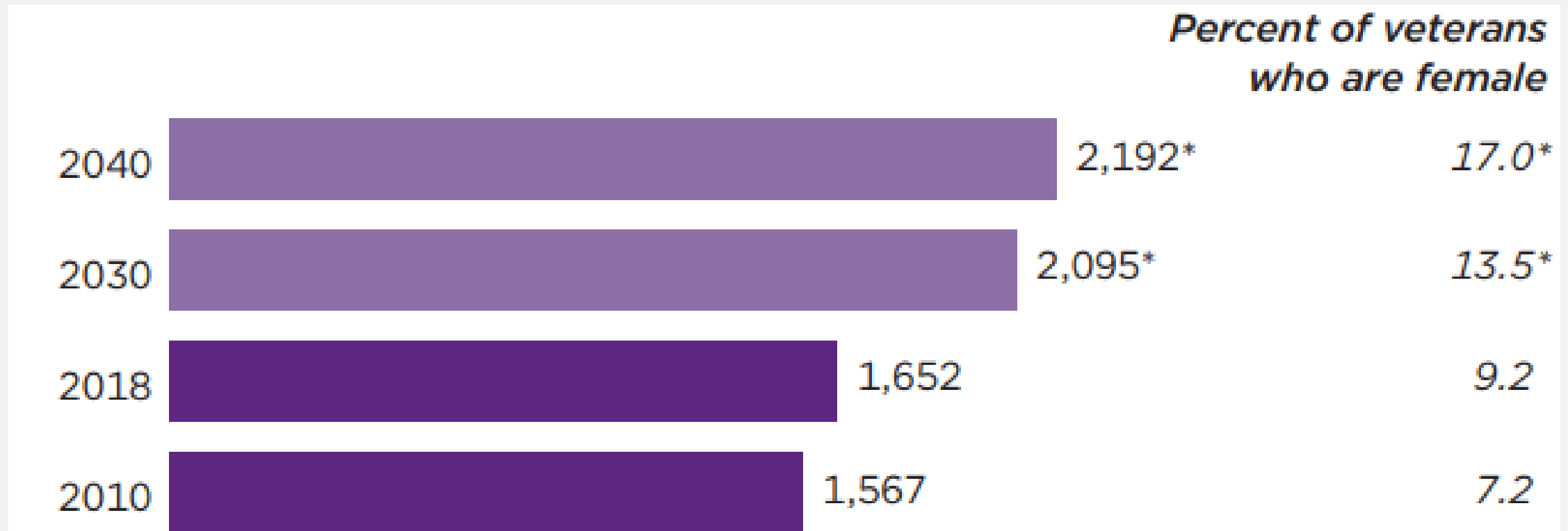
# Women Veterans in the VHA



# 175% Increase in Women Veterans using VA Health Care from 2000-2015

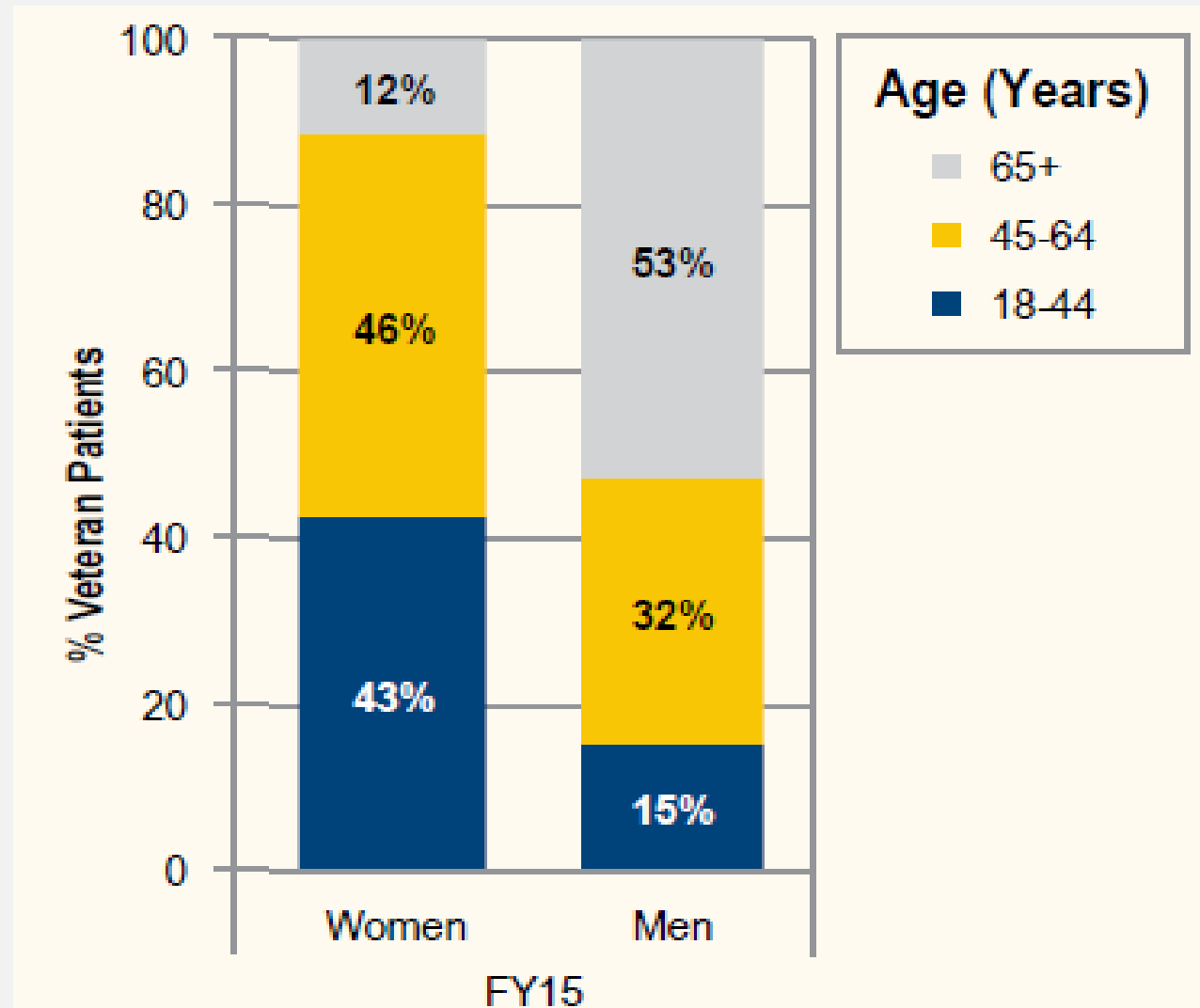


# Historical & Projected Trends of Female Veterans (in thousands)

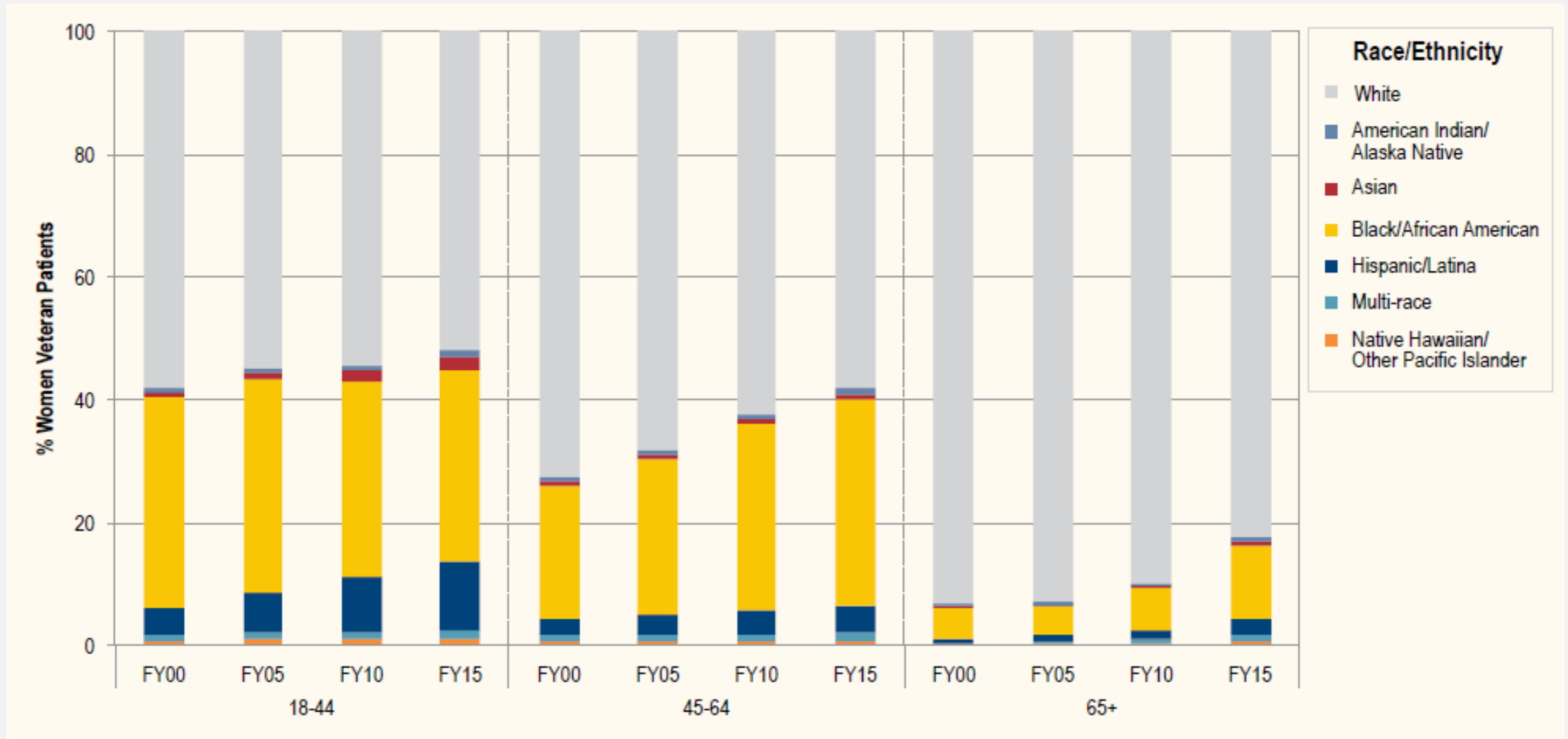




# Age Distribution of Women and Men Veteran Patients, FY15



# Race/Ethnicity Distribution of Women Veteran Patients by Age, FY00-FY15



Cohort: Women Veteran VHA patients with non-missing race/ethnicity and non-missing ages 18-110 years (inclusive). FY00: N=146,815; FY05: N=219,720; FY10: N=303,746; FY15: N=417,890.; Source: WHEI Master Database, FY00-FY15; Frayne SM, *et al.* Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4: Longitudinal Trends in Sociodemographics, Utilization, Health Profile, and Geographic Distribution. Women's Health Evaluation Initiative, Women's Health Services, Veterans Health Administration, Department of Veterans Affairs, Washington DC. February 2018.

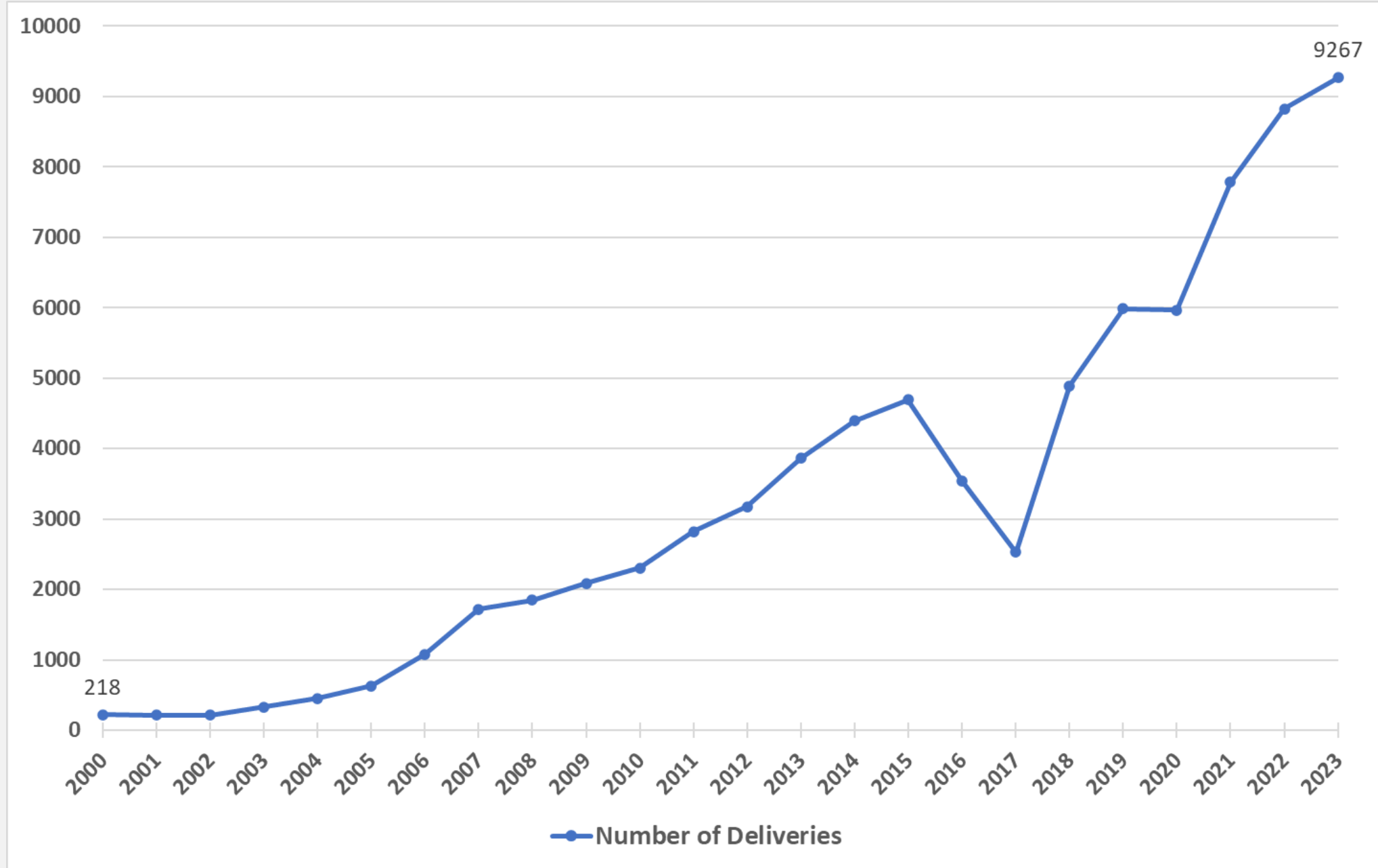
# Top Diagnosed Conditions in Women Veteran VHA Patients Ages 18-44, FY15

N=187,137		
Rank	Condition	%
1	Depression, Possible - Other	27.7
2	Anxiety Disorders - Other	23.2
3	Headache	22.1
4	PTSD	21.9
5	Spine Disorders - Lumbosacral	21.5
6	Joint Disorders - Lower Extremity	21.5
7	Dermatologic Disorders - Other	17.6
8	Overweight/Obesity	16.5
9	Contraceptive Care Management	14.9
10	Major Depressive Disorder	14.6

# Maternity Health Care within the VHA



# # of VHA-Paid Deliveries among Veterans Ages 18-50, by fiscal year



# Maternity Health Care within the VHA



- Maternity care services for women veterans (1996); first seven days of newborn care (2010)
- VHA Handbook 1330.03 standard of practice (2012; rev. 2020) established the Maternity Care coordination-Telephone Care Program (MCC-TCP)
  - “...ensure that women Veterans have access to timely prenatal care...(and) coordination of non-VA maternity care with VA care.”
- All obstetrical care is provided through the VA Community Care Network (CCN)



# Maternity Care Coordination-Telephone Care Program (MCC-TCP)

- Requires each VA health care system to have a designated Maternity Care Coordinator (MCC) to:
  - 1) serve as the “liaison between the patient, the non-VA provider and the VA medical facility” and
  - 2) be “responsible for monitoring the delivery of care, coordinating such care, and tracking outcomes of services that have been furnished through maternity purchased care”

# Maternity Care Coordination-Telephone Care Program (MCC-TCP)

- When pregnant, Veterans are referred to a community obstetric provider but remain in contact with the MCC at their facility.
- There are currently ~170 MCCs across all 18 VISNs of the VA system.
- In addition to maternity care coordination, MCCs often have collateral duties depending on their role.

# Maternity Care Coordination-Telephone Care Program (MCC-TCP)

MCCs:

- support pregnant Veterans through every stage of pregnancy and after delivery
- contact and educate pregnant Veterans at regular intervals
- ensure Veterans understand VA Maternity care and the process for maternity care provisions
- assess changes in pregnancy status (e.g., miscarriage, complications)
- connect Veterans to appropriate resources (e.g., mental health care, birthing classes)

... among many other tasks!

# Maternity Care Coordination-Telephone Care Program (MCC-TCP)

- In general, Veterans report high satisfaction with VA maternity care coordination

# **Perinatal Depression: Background**

# Perinatal Depression

- Depression during pregnancy and/or within one year postpartum
- Prevalence among U.S. women: 8.5-11% of pregnancies; certain high-risk groups 25-50%



# Perinatal Depression

- Associated with:
  - maternal sleep problems
  - compromised infant care giving practices
  - behavior problems and cognitive delays in infants
  - reduced rates of breastfeeding
  - suicidal ideation
- Selected risk factors:
  - anxiety, stress, history of depression, lack of social support

# Panel: Doctors Should Focus On Preventing Depression In Pregnant Women, New Moms

August 28, 2018

## Depression in pregnant millennial women higher than their mothers' generation, study shows

## Postpartum Depression May Not Wait for the Delivery

New Findings on Timing and Range of Maternal Mental Illness

By PAM BELLUCK JUNE 15, 2014



## The Secret Sadness of Pregnancy With Depression

Pregnant women often fear taking the antidepressants they rely on. But not treating their mental illness can be just as dangerous.

By ANDREW SOLOMON MAY 28, 2015

## Perinatal depression: Study links condition with premenstrual disorders

28 March 2024 By Aurelia Foster, Health reporter, BBC News



The researchers said there should be more awareness of the link, to prevent women suffering

## Women With Depression During or After Pregnancy Face Greater Suicide Risk, Even Years Later

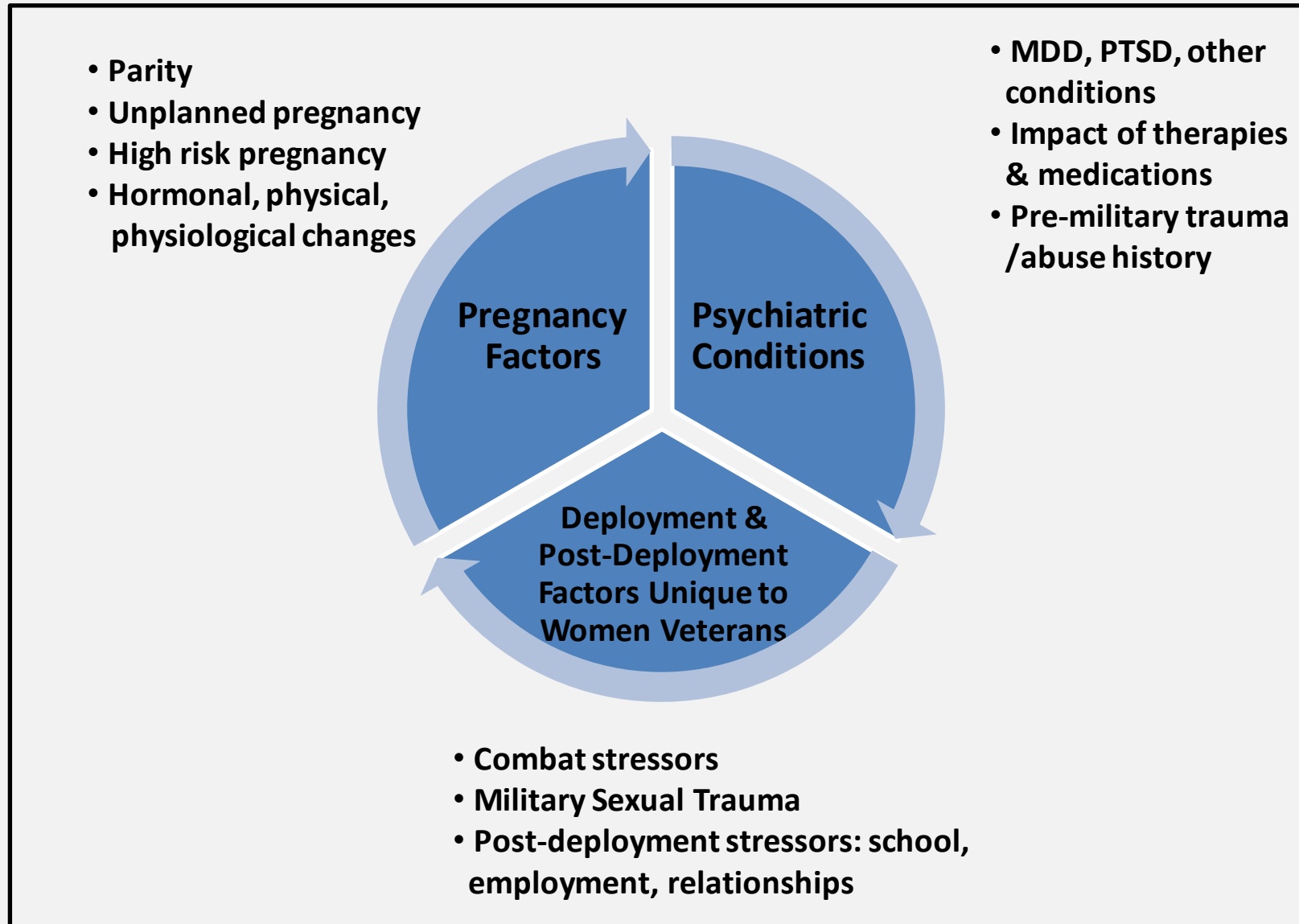
By Pam Belluck Pam Belluck has covered maternal mental health for a decade.

Jan. 10, 2024

## Pregnant women can feel pressured to go off antidepressants. But that carries risks too.

The impacts of the mother's mental health on her pregnancy aren't talked about enough. By Lauren M. Osborne, MD | May 2, 2018, 9:30am EDT

# Factors Associated with Perinatal Depression that are Unique to Veterans



# **Perinatal Depression among Veterans – State of the Research**

# Methods

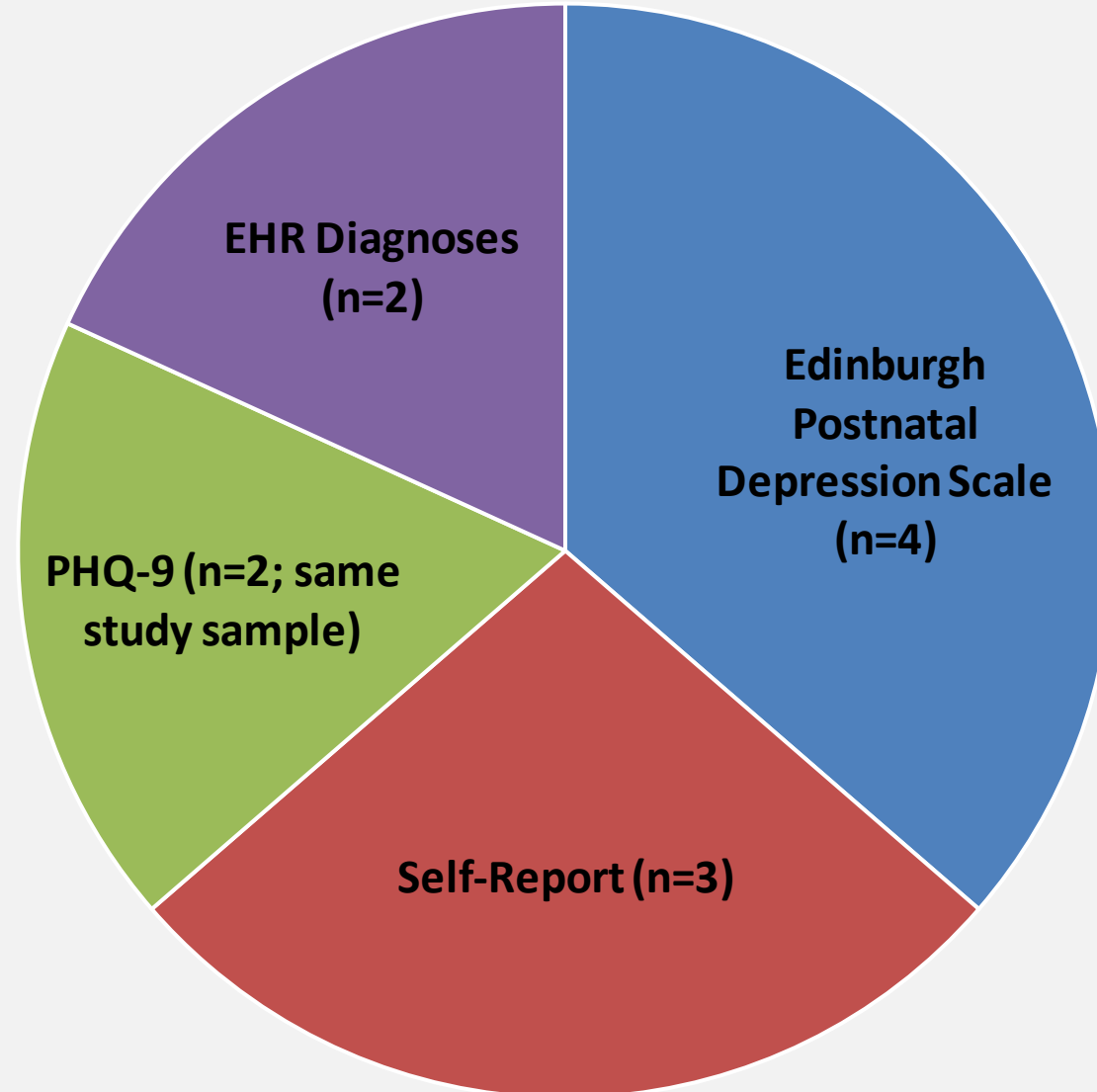
- Rapid review conducted March-April 2024
- Included articles published at any time on U.S. Veterans and had perinatal depression screening or diagnosis data

# Findings

- 11 studies that included perinatal depression screening results or diagnosis data (during pregnancy, postpartum, or both)
- Plus 18 COMFORT studies that included perinatal depression screening results



# Findings – Perinatal Depression Identification (n=11)



# Findings – EPDS Screening

- 36% studies screened Veterans with the 10-item EPDS
- EPDS is validated for use in postpartum & pregnant populations
- American College of Obstetricians and Gynecologists (ACOG) recommends the use of the EPDS during pregnancy for its ease in administration, its ability to capture anxiety symptoms, and its exclusion of symptoms of depression that are also frequent during pregnancy (such as sleep-related changes)
- Cut-offs for symptoms vary – usually 10-13

# Key Associations with Perinatal Depression

- Perinatal depression symptoms were correlated with:
  - Feelings of hopelessness (Szpunar 2020)
  - Lifetime suicidal ideation (Szpunar 2020)
  - Worse parent/infant bonding (Goger 2022)
  - Preterm birth in Veterans with active concurrent PTSD & depression & preeclampsia/eclampsia (Panelli 2023)

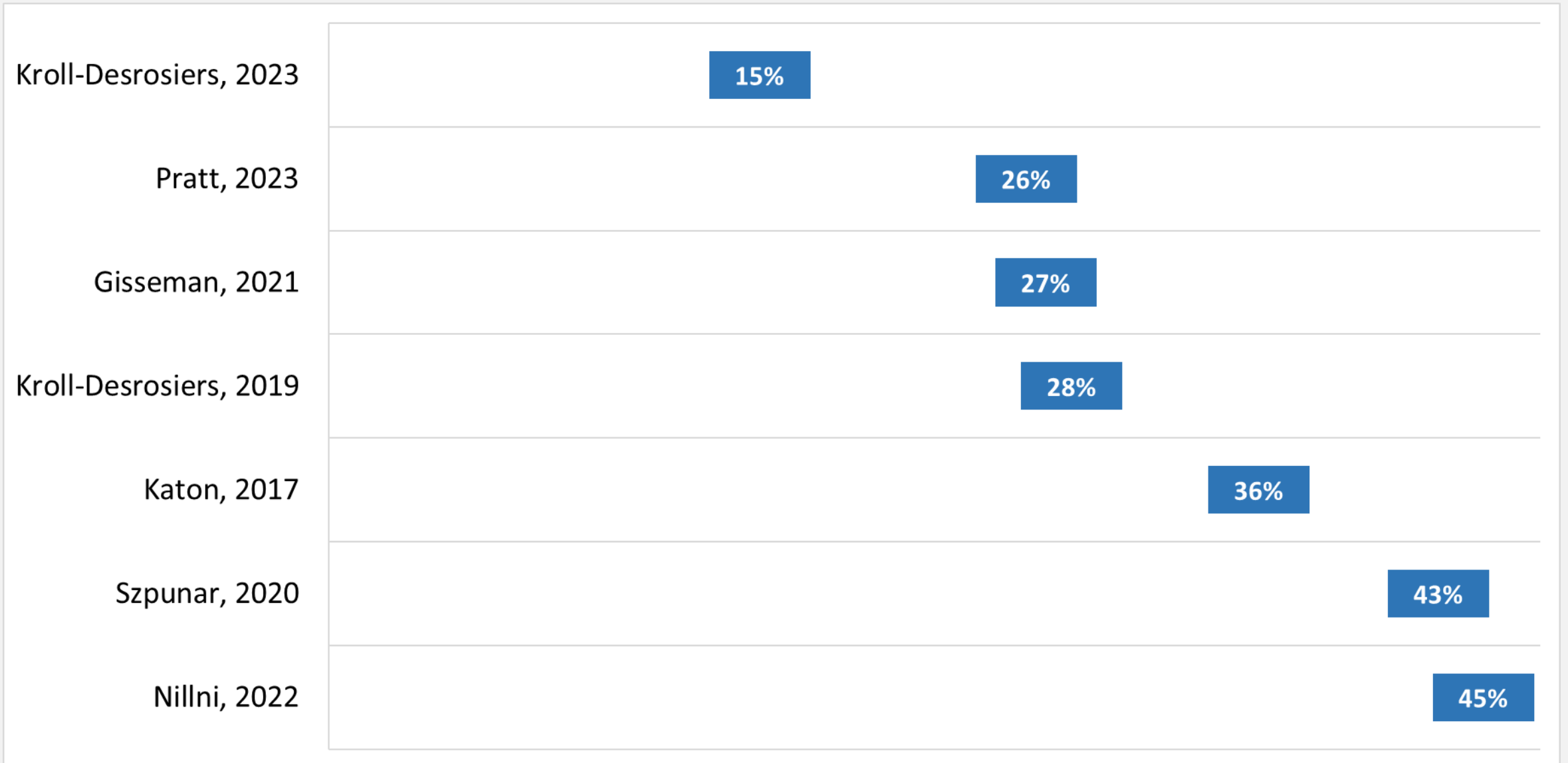
# Risk Factors for Perinatal Depression

- Risk factors for perinatal depression symptoms included:
  - PTSD symptoms significantly predicted a 1.4 times increased odds of experiencing postpartum depression and anxiety, after controlling for age, minority status, SES, and trauma exposure (Nillni 2020)
  - MST was associated with a 1.1 times increased odds of experiencing postpartum depression and/or anxiety after adjusting for age at pregnancy, racial/ethnic minority status, childhood violence exposure, and warfare exposure (Nillni 2022)
  - Previous traumatic birth experiences (Pratt 2023)
  - Sexual assault (Pratt 2023)

# Key Findings – Treatment

- VA patients (compared to active-duty women and dependent wives) were the least likely to decline mental health treatments (Gisseman 2021)
- Among Veterans with a pre-pregnancy mental health diagnosis and depressive symptoms, 88% received outpatient mental healthcare and 77% met with a clinical social worker during pregnancy or early postpartum (Katon 2017)
- Of Veterans on an antidepressant at the beginning of pregnancy, only 34% continued using antidepressants throughout their pregnancy (Howard 2024)

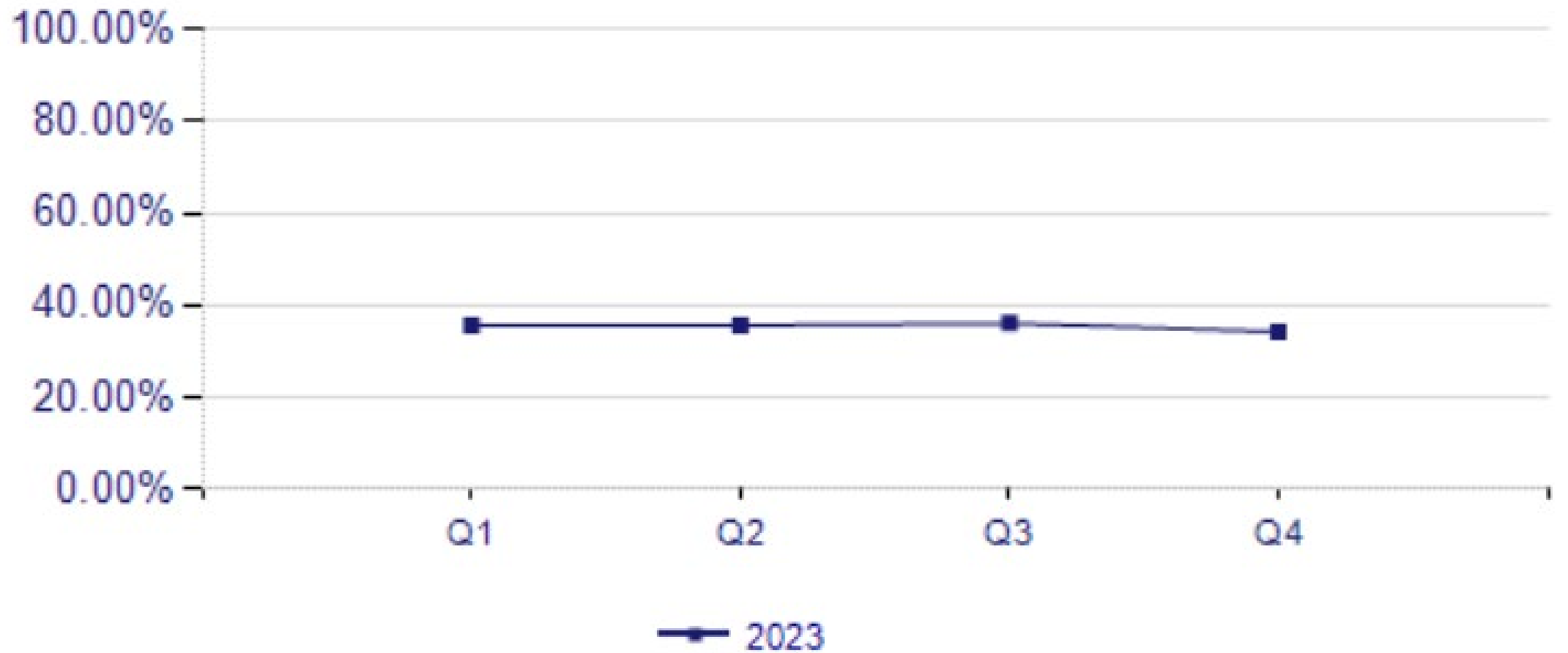
# Perinatal Depression Symptoms: Prevalence Estimates (n=7)



# Study Details for Studies with Prevalence Estimates (n=7)

Study	Sample Size (N)	Proportion with Symptoms (%)	Screening Type & Cut-Off	Screening Time Period	Notes
Kroll-Desrosiers, 2023	860	15%	EPDS 10+	Postpartum	COMFORT Data
Pratt, 2023	1039	26%	Self-Report	Postpartum	Most recent pregnancy
Gisseman, 2021	110	27%	EPDS 12+	Pregnancy and/or postpartum	Study done in a DoD facility
Kroll-Desrosiers, 2019	501	28%	EPDS 10+	Pregnancy	COMFORT Data
Katon, 2017	122	36%	EPDS 10+	Pregnancy and/or postpartum	Single VA healthcare system
Szpunar, 2020	23	43%	EPDS 13+	Pregnancy and/or postpartum	Single VA healthcare system
Nillni, 2022	911	45%	Self-Report	Postpartum	Any pregnancy, ever diagnosis

### % of Current Maternal Patients w/New or Ongoing Depression for VHA FY 2023





# Findings from **COMFORT**

Center for Maternal & Infant  
Outcomes Research in Translation  
(COMFORT)

HSR&D IIR 13-81 (Mattocks)



# COMFORT Study Design

- Pregnant Veterans enrolled 2016-2021
- Mixed methods
  - Prenatal & postpartum surveys (n=1,324 pregnancy; n=1,014 postpartum)
  - VA administrative/EHR data
  - Qualitative interviews

# COMFORT Study Participant Characteristics (n=1,274)



65% married



78% urban



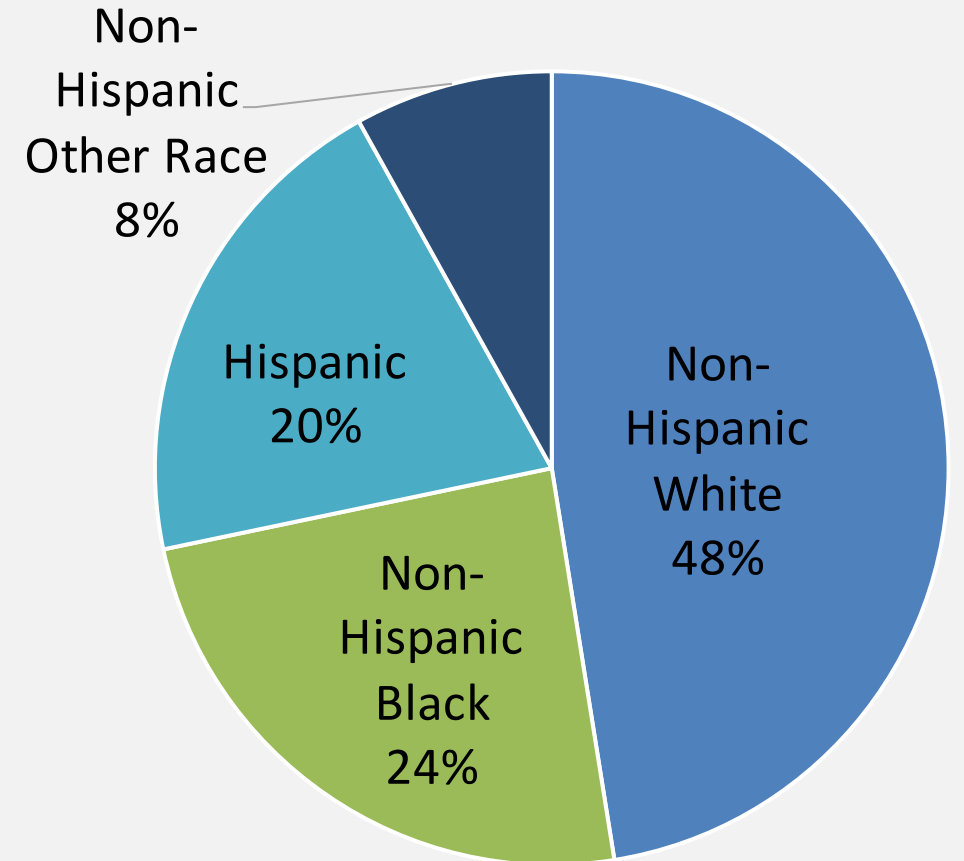
54% employed (full or part time)



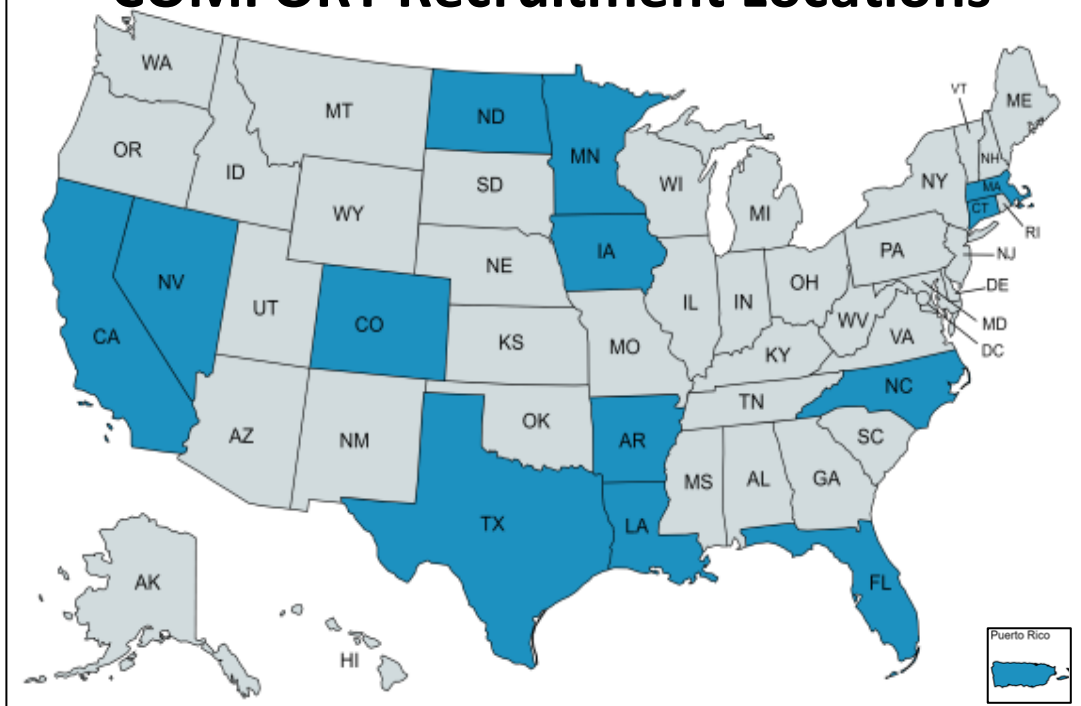
59% ever deployed



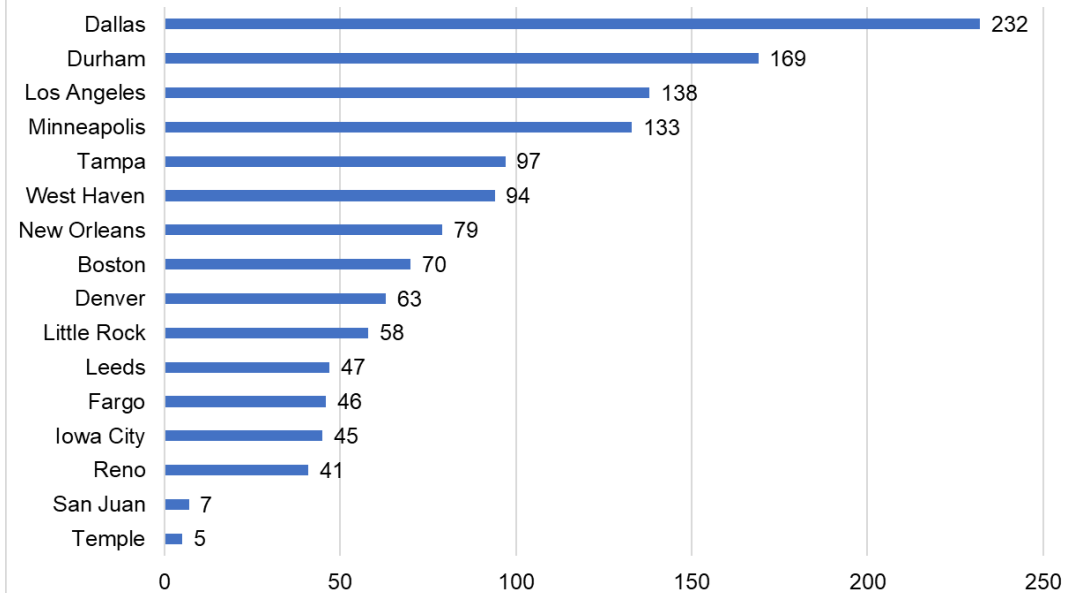
31% first pregnancy



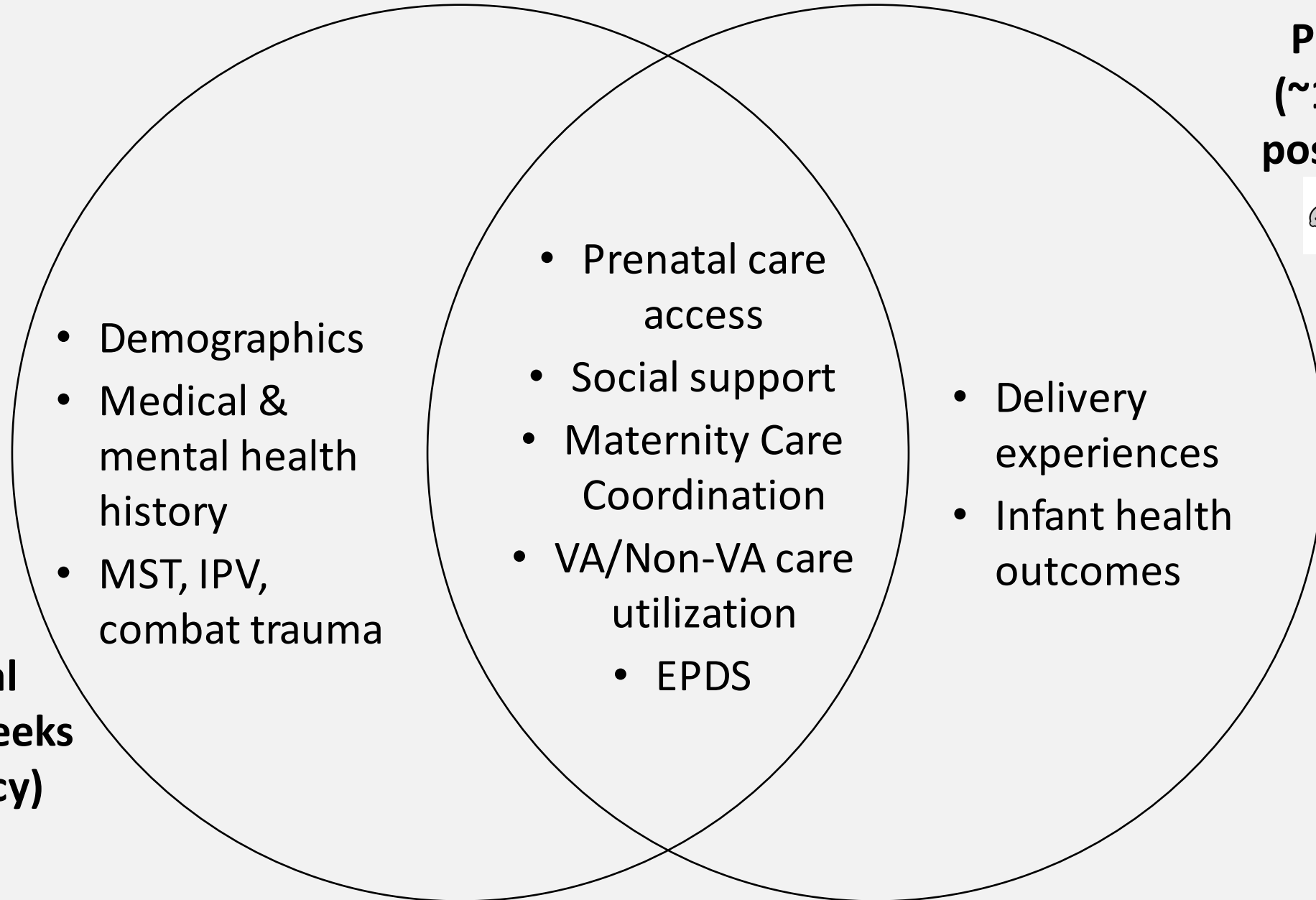
## COMFORT Recruitment Locations



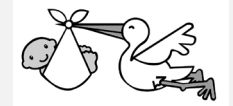
Number of Enrolled Participants, by Site (n=1,324)



# COMFORT Survey Domains by Timepoint



**Postnatal  
(~12 weeks  
postpartum)**



**Prenatal  
(~16-18 weeks  
pregnancy)**



## Perinatal Depression Prevalence and Risk Factors

### Perinatal Depression Prevalence: Key Findings

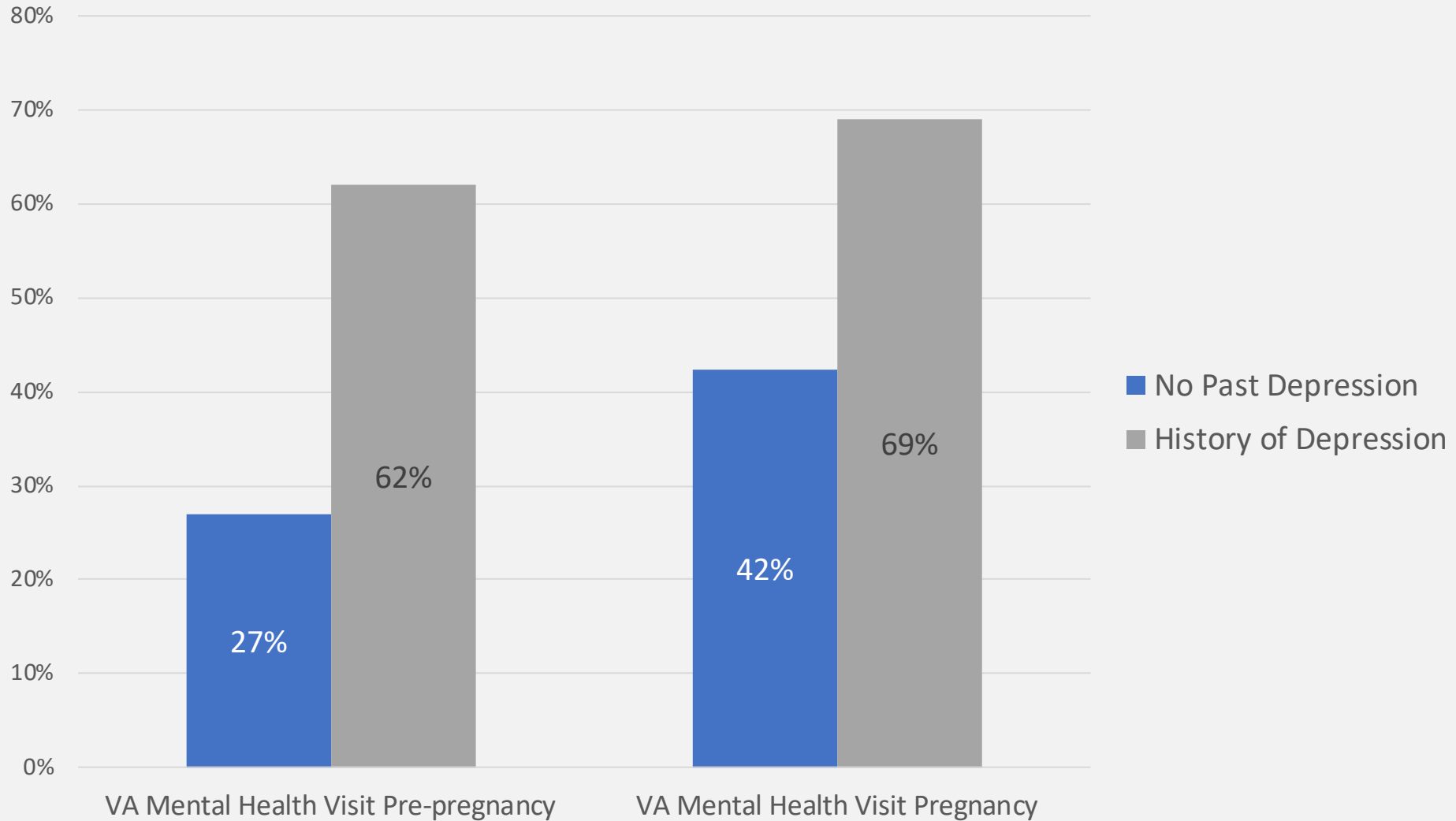
- Depression symptoms during pregnancy present in 28% of Veterans
  - Risk factors: unemployment, history of anxiety/depression, past active-duty status
  - Protective factor: partner support

# Perinatal Depression & VA Mental Health Care: Key Findings

## Perinatal Depression and VA Mental Health Care

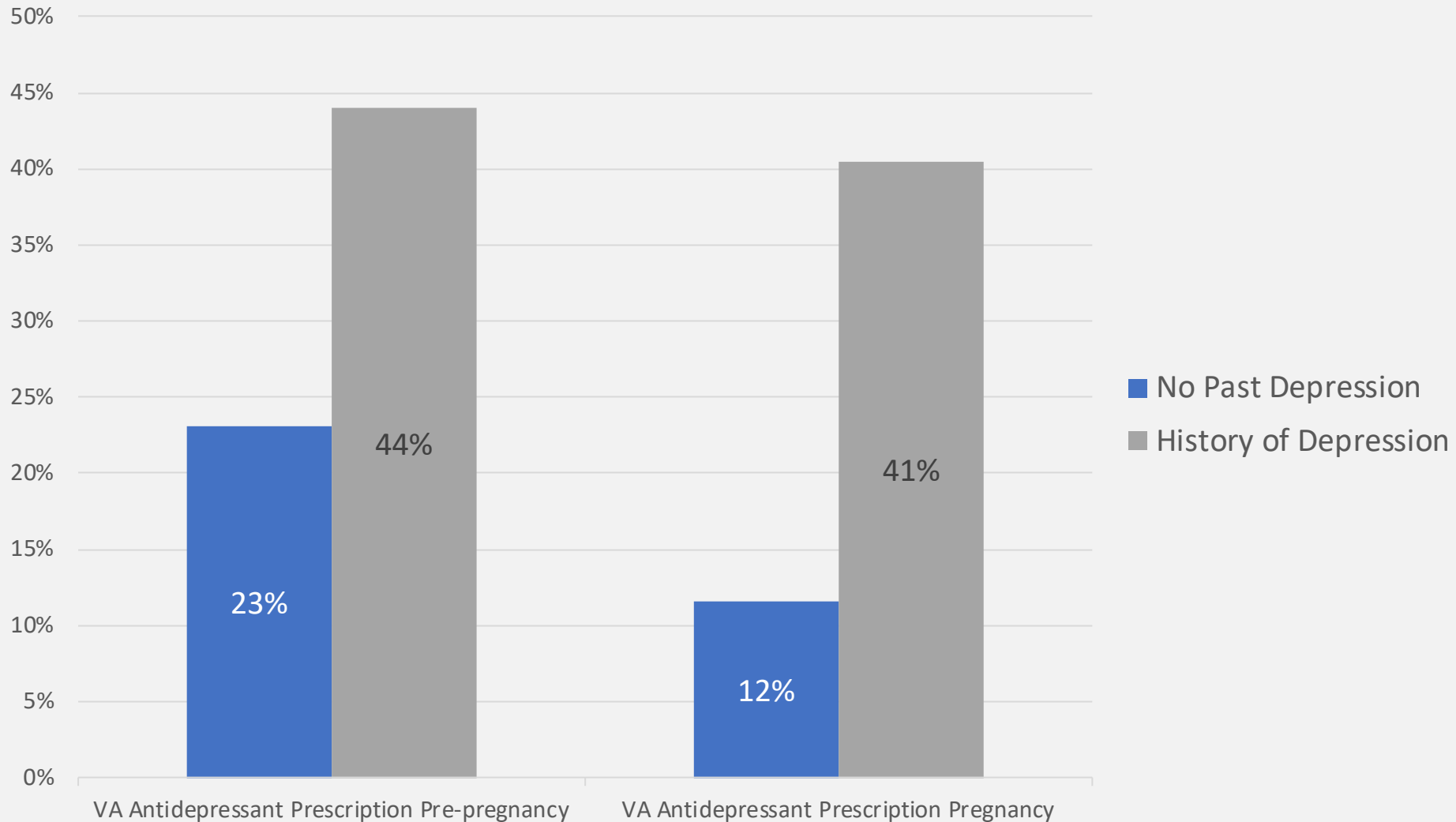
- Veterans are utilizing VA mental health care during pregnancy
  - ~70% 1+ VA MH visit or antidepressant prescription during pregnancy
  - Veterans self-reporting hx of depression more likely to receive MH care during pregnancy

# VA Mental Health Visits by Pregnancy Period and Self-Reported Past Depression Diagnosis (n=135)





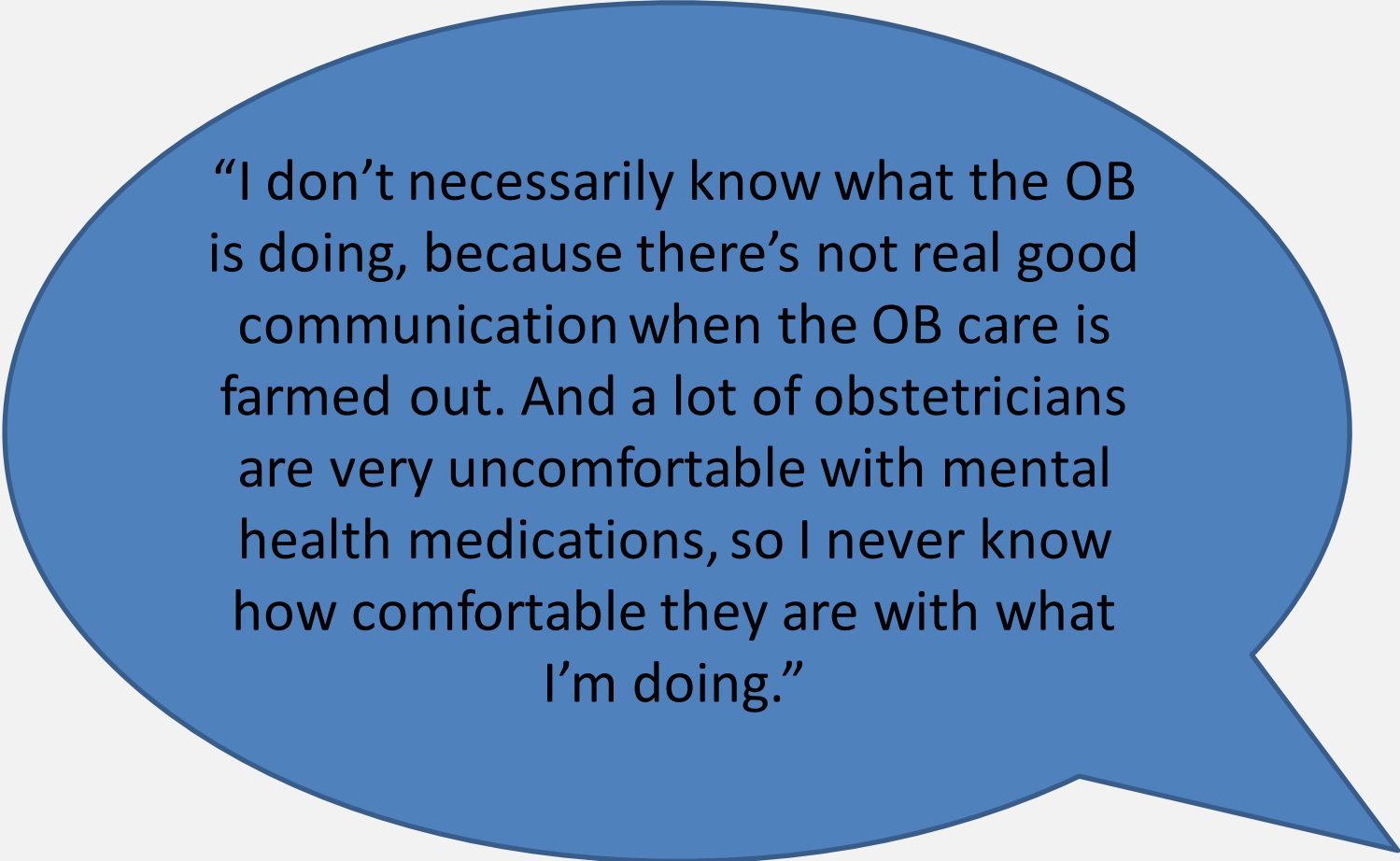
# VA Antidepressant Prescription by Pregnancy Period and Self-Reported Past Depression Diagnosis (n=135)



# Key Findings:

## Experiences of VA Mental Health Providers with Perinatal Veterans

- Challenges with care delivery when there is no communication with obstetricians




“I don’t necessarily know what the OB is doing, because there’s not real good communication when the OB care is farmed out. And a lot of obstetricians are very uncomfortable with mental health medications, so I never know how comfortable they are with what I’m doing.”

# Key Findings:

## Experiences of VA Mental Health Providers with Perinatal Veterans

- Concern of symptomatic Veterans “slipping through the cracks”

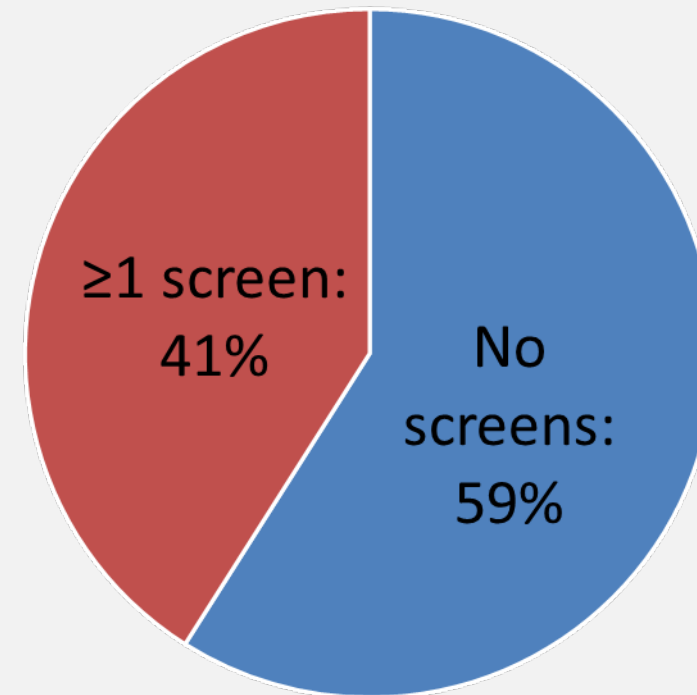


“We know that there’s underdiagnosed & underreported (cases)...I think if we more routinely screened for depression, we would probably catch some cases we’re not aware of right now.”

## Perinatal Depression Screening in Administrative Records

# Perinatal Depression Screening: Key Findings

Depression Screening during  
Pregnancy or Postpartum:



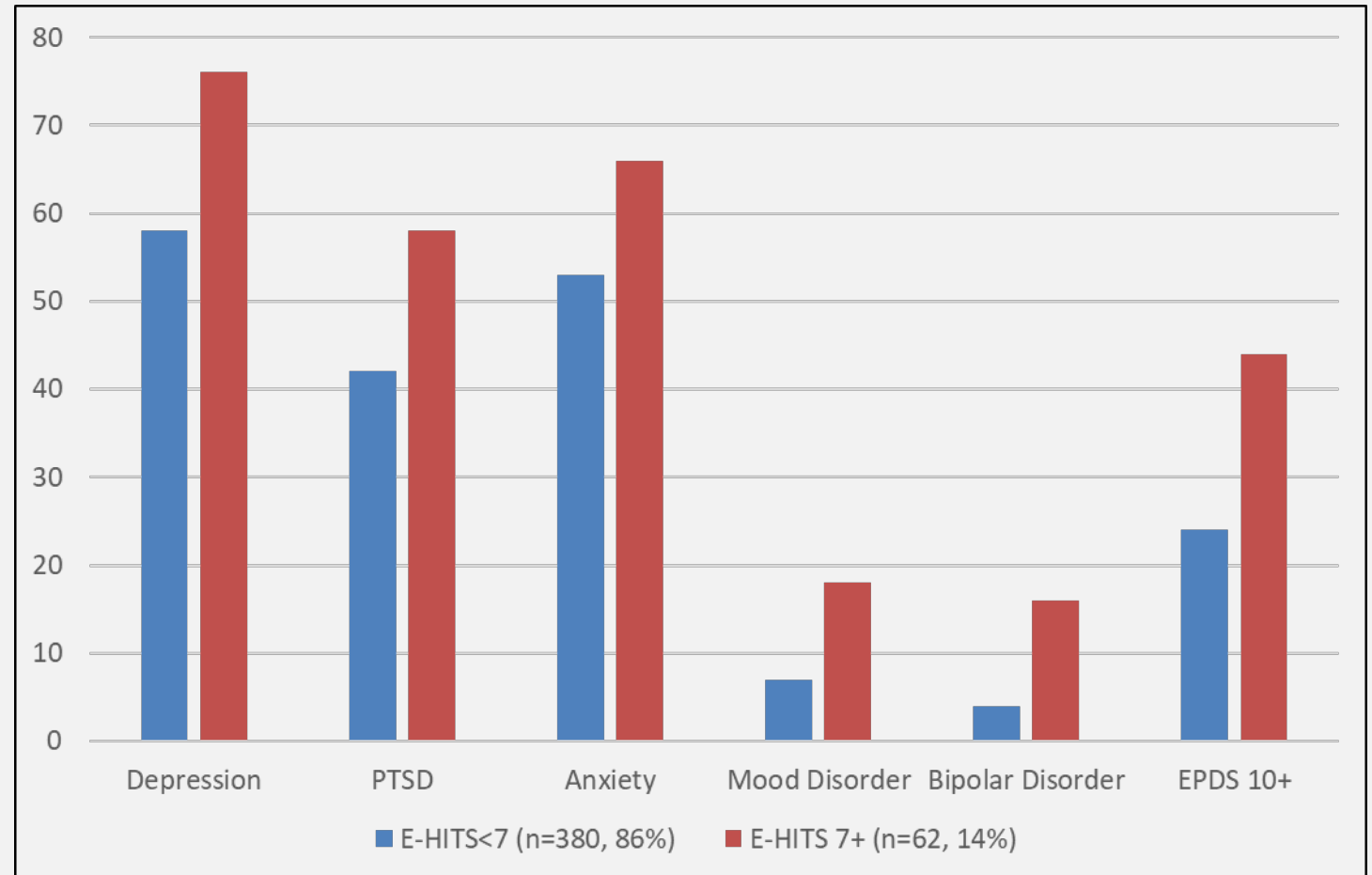
# Perinatal Depression & MST: Key Findings

## Perinatal Depression and MST

- MST was associated with higher pre- and postnatal symptoms of depression and prenatal depression mediated the association between MST and postnatal depression, even after controlling for demographic variables and prenatal stress.
- Veterans who have experienced MST may be at higher risk of perinatal depression.

# Perinatal Depression & IPV: Key Findings

## Perinatal Depression and IPV



*Notes: N=442; mental health conditions were self-reported diagnoses any time prior to prenatal survey. EPDS was administered at the time of the prenatal survey.*

# Exploring the Acceptability of Expanded Perinatal Depression Care Practices among Women Veterans: Key Findings

- Continuous relationship with one mental health provider is needed
- Mental health counseling is especially important when medications (e.g., antidepressants) are discontinued during pregnancy
- Veteran support groups (online or in-person) would be beneficial as many civilian friends do not necessarily understand Veteran experiences
- Depression screening could be more in-depth

“There are so many options out there for soldiers with PTSD and bipolar or any kind of mental disability that they may have acquired while they were in service. There’s plenty of choices out there, plenty of groups out there, but it seems like the women Veterans who are now experiencing a whole other level of stress and pressure on the body, have no one.”

~ Naomi, one week postpartum



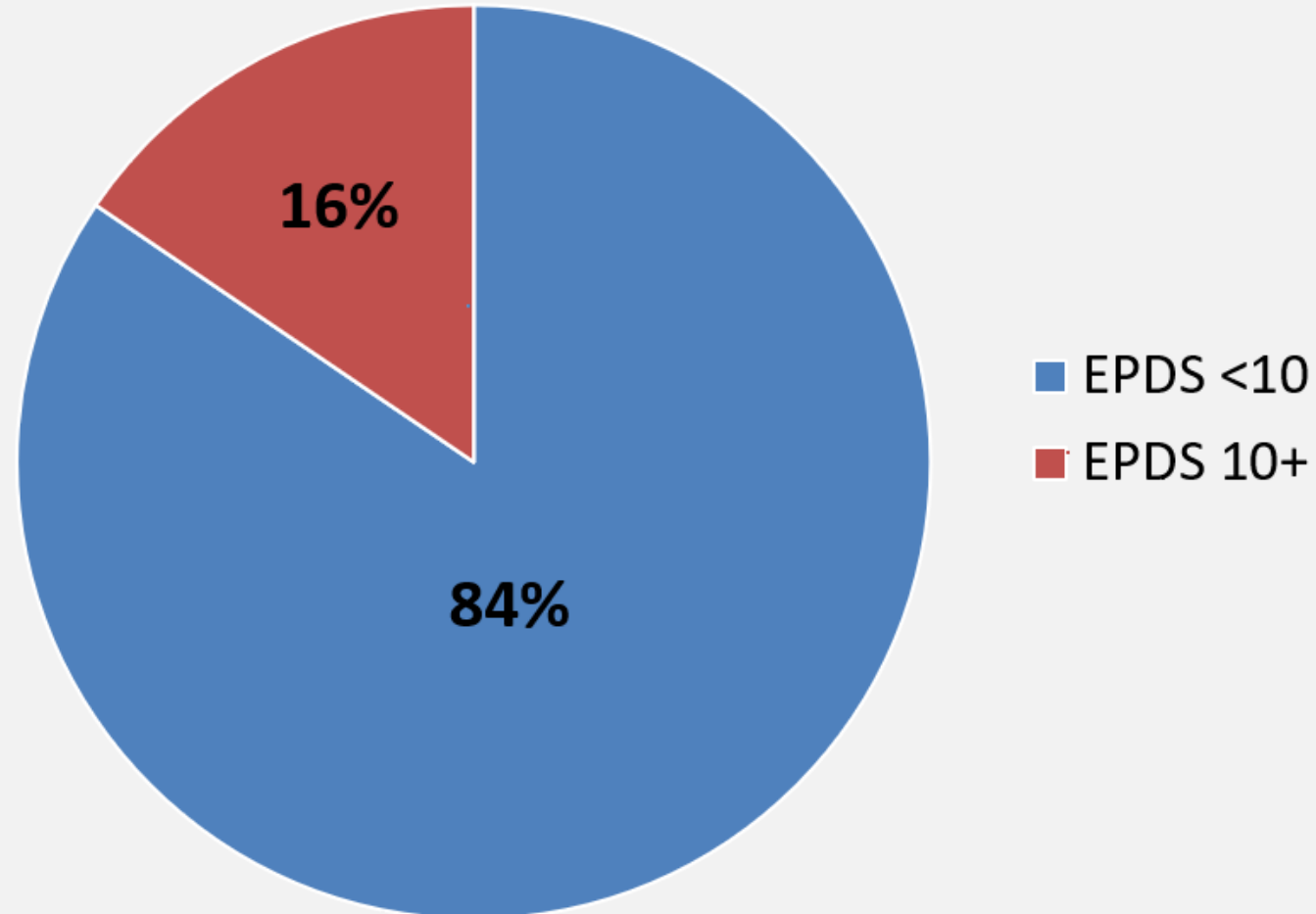
"It wasn't very good screening. They're asking you—'Do you feel tired?' Uh, duh. Of course I feel tired, I have two kids. 'Have you lost interest in doing things you love?' Uh, yeah. I have two kids. And of course you're not going to admit—'Oh, I have postpartum depression'. Because in your mind, you're just finding it as normal, because... (having a newborn) is difficult."

~Audrey, one month postpartum

"I just remember (during screening) she was all cheery and happy like, 'Oh, you should be so happy right now.' And it's like-Well, I'm not. So I felt bad."

~Catherine, 38 weeks pregnant

# Postpartum Depression Symptoms in the COMFORT Sample (n=860)



# VA Care for Veterans with Postpartum Depression Symptoms within 12 Months Postpartum (n=133)



**50%** received an antidepressant prescription



**65%** received 1+ mental health visit

# VA Care for Veterans with Postpartum Depression Symptoms within 12 Months Postpartum (n=133)



**21%** did not receive  
any VA care

# Associations with Postpartum Depression Symptoms

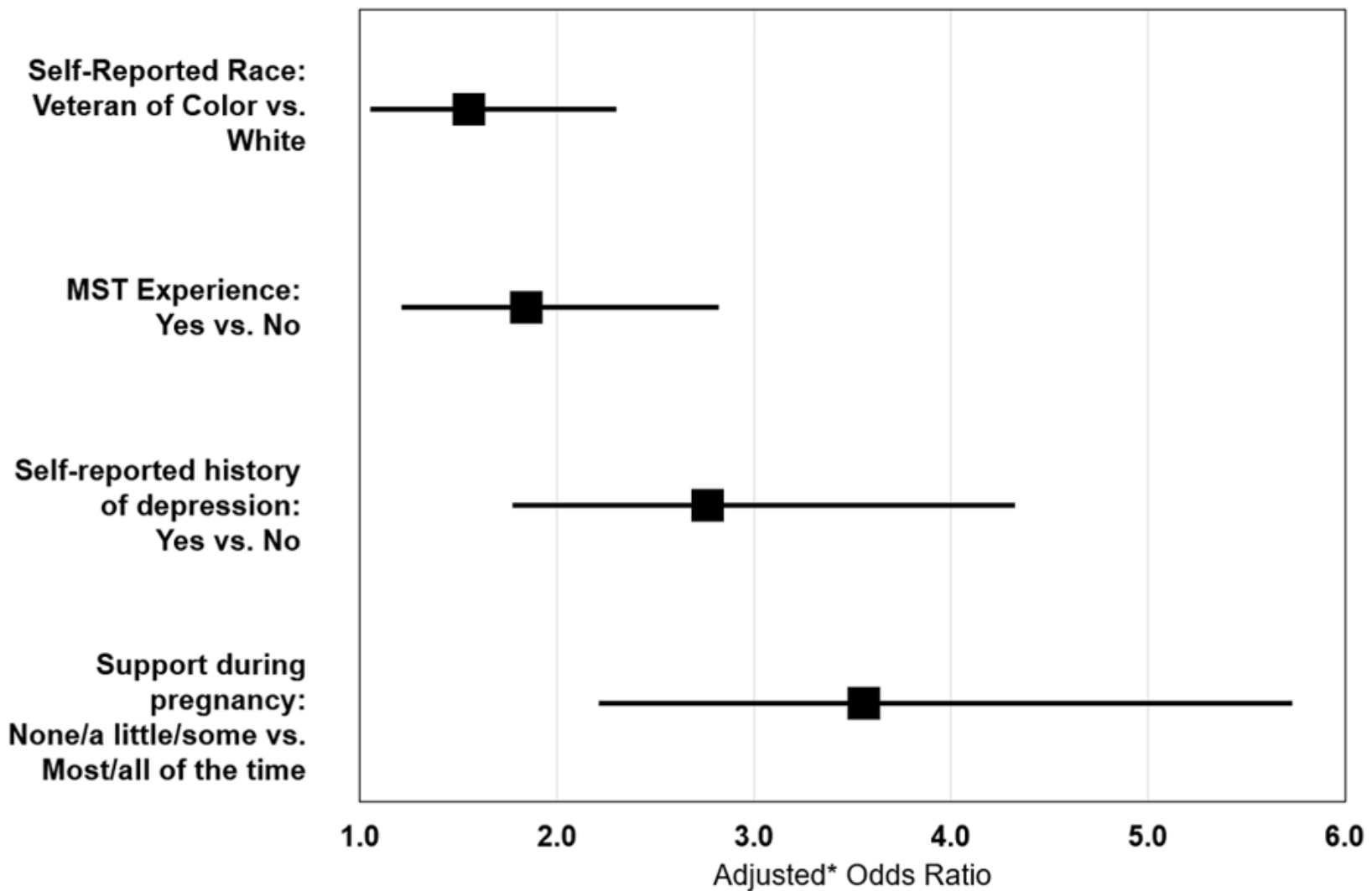


Parent-infant  
bonding



Feeling like mental health  
care was needed but not  
received during  
pregnancy

**Adjusted Logistic Regression Results Predicting EPDS $\geq$ 10 among Postpartum Veterans in the COMFORT Study (n=860)**



*\*Adjusted for age, marital status, first pregnancy, delivery type (cesarean vs. vaginal), intimate partner violence during pregnancy, risky behavior during pregnancy (cigarette, alcohol, or drug use), history of deployment*



# Ongoing & Future Directions

## Discussion

- Perinatal depression affects a substantial number of Veterans, with prevalence estimates ranging from 15%-45% (higher than estimates in civilian populations)
- Perinatal depression symptoms are associated with IPV, MST, parent/infant bonding, social support
- Treatment is available and being accessed; but there is a subset of symptomatic Veterans not receiving any care



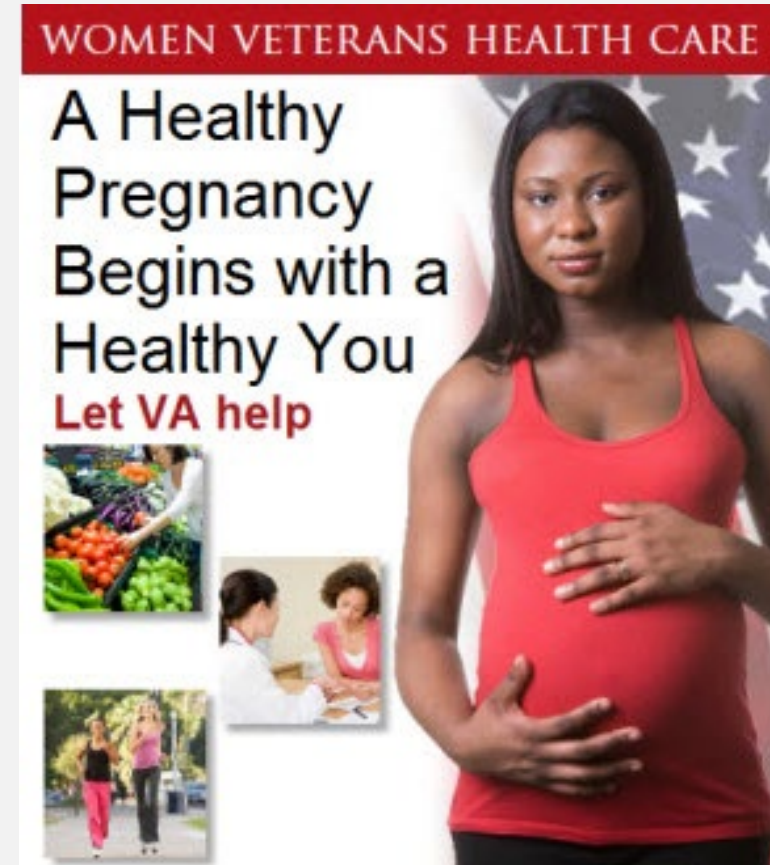
## Discussion

As Veterans receive their obstetrical care in the community, understanding the unique needs of Veteran's with mental and physical health concerns is important to provide quality care during the perinatal period.

**How can perinatal depression care be improved for Veterans?**

# MCC-TCP Expansion

- MCC-TCP conducts mental health screenings for Veterans, historically within 12 weeks postpartum
- In January 2023, the VA Office of Women's Health outlined plans for an expansion to the existing MCC-TCP



# Postpartum Mental Health Care Expansion in the VHA



Increase in Veterans served by the MCC-TCP since its inception



Increase in pregnancy-related maternal morbidity & mortality in the US between 1987-2019

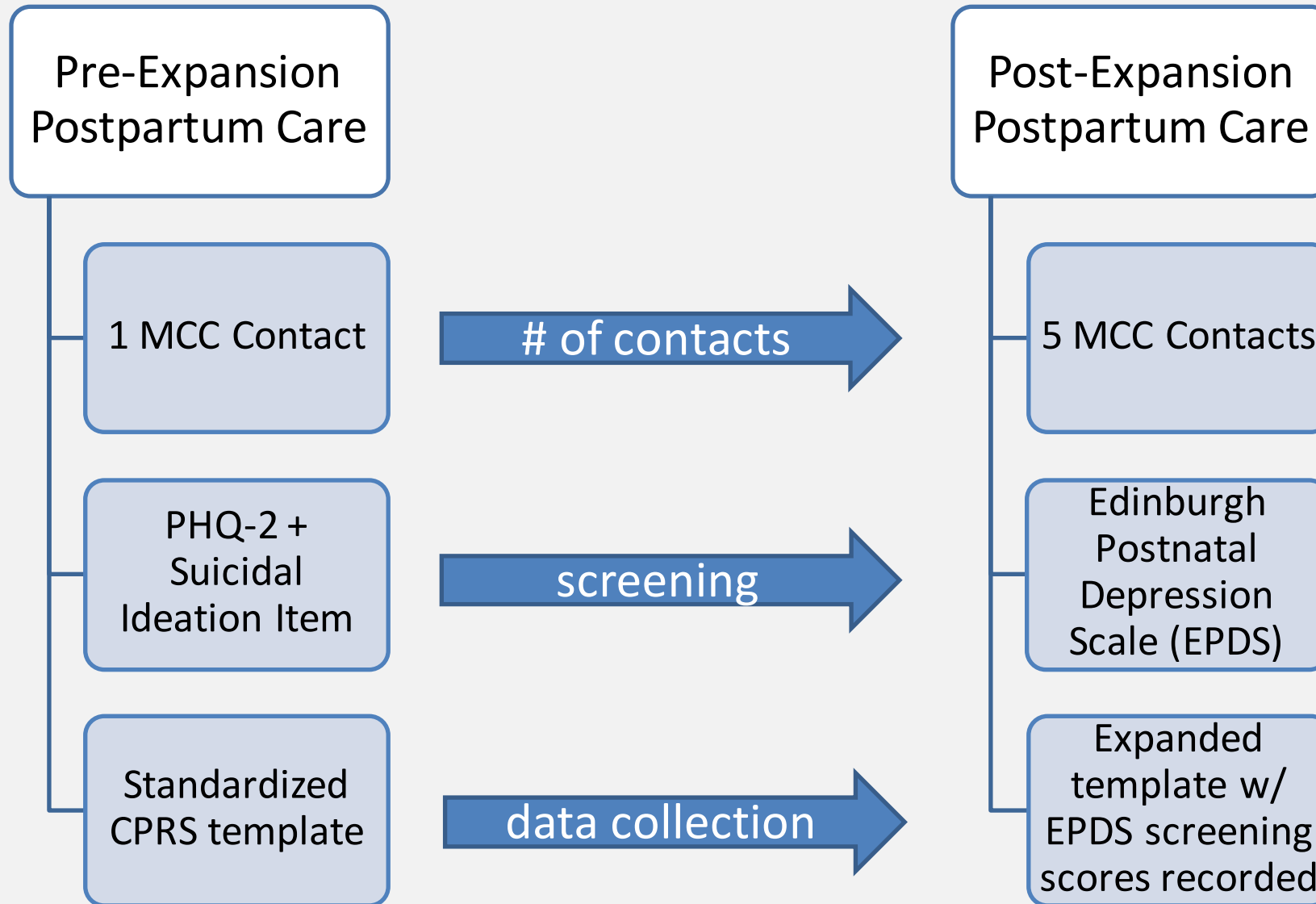


High rates of severe maternal morbidity among post-9/11 women Veterans



National efforts to reduce maternal morbidity & mortality rates specifically among Veterans

# Postpartum Mental Health Care in the VHA



## Other VA Programs and Interventions

- Reproductive Mental Health (RMH) Consultation Program
  - allows clinicians at any VA healthcare facility to receive consultation (via email) from a multi-disciplinary mental health team on a wide range of mental health conditions
- ROSE Program (Reach Out, Stay Strong, Essentials for mothers of newborns)
  - Evidence-based interpersonal psychotherapy program that has been shown to reduce cases of postpartum depression and bolster social support through small group connections
- MomMoodBooster
  - Empirically supported internet-delivered cognitive behavioral therapy
  - Found to reduce depressive symptoms over time for both rural and urban veterans (Solness 2021)
- Survivor Moms' Companion
  - Psychoeducation and skill building program for new moms with trauma histories

## Next Steps

- Understand the impact of new screening guidelines and subsequent treatment
- Examine other perinatal mood and anxiety disorders and the impact of these conditions in the perinatal period

Thank you!

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\*includes studies with perinatal depression screening and/or diagnosis data for Veteran samples



# Today's Discussant

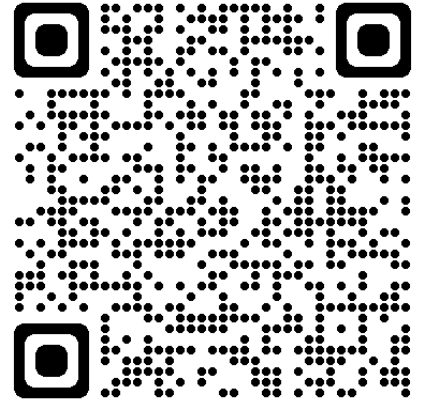
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