Women Veterans' Reproductive Health Research Conference will begin at:

- 9 am PT
- 10 am MT
- 11 am CT
- 12 pm ET
Welcome!

Elizabeth M. Yano, PhD, MSPH

**Director**, VA HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy, VA Greater LA Healthcare System

**Director**, VA Women’s Health Research Network (WHRN) Consortium

**Adjunct Professor** of Public Health & Medicine, UCLA
Opening Remarks: HSR&D

David Atkins, MD, MPH
Director, VA HSR&D Service
VA Office of Women’s Health (OWH)

Patricia M. Hayes, PhD
Chief Officer, VA OWH, Veterans Health Administration

Amanda M. Johnson, MD
Director of Reproductive Health, VA OWH, Veterans Health Administration
The Role of Research in Meeting Reproductive Health Care Needs of Women Veterans

Patricia M. Hayes, PhD
Amanda M. Johnson, MD
Office of Women’s Health
Women in the Military: A Growing Trend

1945
WWII ends:
Women = 2.3% of Active Duty

1967
Women's Armed Services Integration Act modified
- 2% restriction lifted
- Senior ranks opened to women

1973
All-Volunteer Force begins
- Military recruits more women

1980
Women = 8% of Active Duty

1991
Gulf War I:
Women = 11% of Active Duty

September 11, 2001

Today
Women = nearly
16.9% of Active Duty
20.6% of Guard/Reserves

Age Distribution of Women VHA Patients

- Peaks Age 57, 62
- Peak Age 35
- Peak Age 95
## Reproductive Health Needs of Women Veterans

<table>
<thead>
<tr>
<th>Age</th>
<th>18-45</th>
<th>45-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career stage</td>
<td>Military (deployment/combat) → Separation → Veteran status</td>
<td></td>
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<tr>
<td>Reproductive Needs</td>
<td>Menstrual Health</td>
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<tr>
<td></td>
<td>Contraception</td>
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<td></td>
<td>Pregnancy</td>
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<td>Infertility</td>
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<tr>
<td></td>
<td>Cervical cancer screening</td>
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<td></td>
<td>Menopause</td>
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<td></td>
<td>Osteoporosis</td>
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<tr>
<td></td>
<td>Breast cancer screening</td>
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<tr>
<td></td>
<td>Sexual dysfunction</td>
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<tr>
<td></td>
<td>Sexually transmitted infections</td>
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<td></td>
<td>Pelvic floor disorders</td>
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<tr>
<td></td>
<td>Urinary conditions</td>
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<tr>
<td></td>
<td>Gynecologic basic and specialty care</td>
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**VA WOMEN'S HEALTH RESEARCH NETWORK**
**Vision:**
VHA strives to be a national leader in the provision of health care for women Veterans, thereby raising the standard of care for all women.

**Mission:**
VHA Women’s Health serves as a trusted resource for the field and works to ensure that women Veterans experience timely, high quality comprehensive care in a sensitive and safe environment at all points of care.
Role of Research In Meeting Reproductive Health Needs of Veterans

• Women Veterans have unique characteristics compared to general population
• It is critical to understand women Veterans in order to best serve them
  – Demographics
  – Medical and Mental Health Conditions
  – Healthcare utilization
• Research is been critical to informing OWH Policy in every area
  – Maternity care, Infertility care, Contraceptive Access, Pelvic Pain and Pelvic Floor Disorders
• Unique opportunity in VHA – large national health system
Thank You for Your Dedication to Women Veterans

POCs:
Patricia M. Hayes, Ph.D.
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Amanda M. Johnson, MD
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Conference Overview

Elizabeth W. Patton, MD

Senior Consultant to the Reproductive Health group, VA Office of Women’s Health
Director, Generalist Division Department of Obstetrics & Gynecology, Boston Medical Center
Assistant Professor, Obstetrics & Gynecology, Boston University School of Medicine
Please share in the Q&A panel/box

Where are you joining in from?

What is your role or connection to the topic of Veteran Reproductive Health?
Conference Goals

• To give a snapshot of the dynamic and growing research field around veteran reproductive health

• To connect research to the needs of the end users – the VA health system, veterans and their clinicians

• To explore areas for future research directions with a diverse group of stakeholders.
<table>
<thead>
<tr>
<th>Time</th>
<th>Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30-10:15 am PT</td>
<td><strong>Panel 1: Women Veterans' Reproductive Health: From Epidemiology to Implementation</strong></td>
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<tr>
<td>(12:30-1:15 pm ET)</td>
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<tr>
<td>10:15-11 am PT</td>
<td><strong>Panel 2: VA Gynecology Across the Life Course</strong></td>
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<td>(1:15-2 pm ET)</td>
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<tr>
<td>11-11:15 am PT</td>
<td>BREAK</td>
</tr>
<tr>
<td>(2-2:15 pm ET)</td>
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<tr>
<td>11:15-12 pm PT</td>
<td>**Panel 3: Reproductive Mental Health from Pregnancy to Menopause</td>
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<tr>
<td>(2:15-3 pm ET)</td>
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<tr>
<td>12-12:45 pm PT</td>
<td><strong>Panel 4: Where Do We Go From Here? Setting a VA Reproductive Health Research Agenda</strong></td>
</tr>
<tr>
<td>(3-3:45 pm ET)</td>
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</tbody>
</table>
• Put your questions in the Q&A box!

• Tech issues?
  • *Dissociation of sound from slides is often a bandwidth issue that will fix itself in a few moments*
  • *Audio not working? If using the computer audio, try using the phone callback option*
  • *Bigger struggles? Contact the VA IT Helpdesk*
Panel 1: Women Veterans’ Reproductive Health: From Epidemiology to Implementation

Lisa Callegari, MD, MPH
Kristin M. Mattocks, PhD, MPH
Ginny Ryan, MD, MA
Amanda M. Johnson, MD
Discussant
The MyPath Journey: Innovating to Improve Family Planning in VA Primary Care

Lisa Callegari, MD, MPH
VA Puget Sound Health Care System
University of Washington
Introduction

- Veterans who could become pregnant are a growing population
- Elevated risk of poor reproductive health outcomes, due to high burden of medical/mental health comorbidities
- Majority have needs for family planning services to support their reproductive goals/desires
- VA primary care physicians (PCPs) poised to address needs

...BUT only 44% of women Veterans capable of pregnancy discussed family planning needs with PCPs in past year

VA Sourcebook 2018; Borrero et al., JGIM 2017; Quinn et al., under review
The Opportunity: What’s going on?

**PCP Barriers**
- Lack of time
- Patient didn’t ask
- Insufficient skills/practice with counseling

**Patient Barriers**
- Not sure how to bring it up
- Concerned not a priority for PCP
- Prior negative experiences

How can we use technology to address barriers and improve quantity and quality of family planning discussions?

Callegari et al. 2017, *Women’s Health Issues*; Callegari, unpublished
Approach: Innovation Part 1

- Patient-facing web-based decision support tools promote shared decision making
- No existing tools provided holistic approach to both preconception and contraception
- “MyPath” developed in conjunction with Veterans, PCPs and scientific content experts

Stacey, Cochrane Review 2017; https://info.mypathtool.org/
MyPath Overview

- Designed to be used *prior to* visits by Veterans
- MyPath’s objectives include to
  - Elicit reproductive desires and goals
  - Build knowledge and address common misperceptions
  - Facilitate selection of birth control aligned with values and preferences
  - Promote patient-centered discussions/shared decision making
- MyPath *Summary Page* can help guide clinic visit

https://info.mypathtool.org/
Key Findings: Pilot Testing

Reproductive Needs Discussions
Total N=58 Veterans (30 intervention, 28 control)

- Pregnancy plans/goals: Intervention 70.0%, Control 57.1%, p=0.31
- Birth Control: Intervention 84.6%, Control 50.0%, p=0.007
- Any Family Planning: Intervention 92.3%, Control 67.9%, p=0.03

Callegari et. al. JGIM 2021
## Key Findings: Pilot Testing

<table>
<thead>
<tr>
<th>Patient-Centered Outcomes</th>
<th>Baseline to Post-Visit Change Within-Group</th>
<th>Comparison of Change Between-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention N=30</td>
<td>Control N=28</td>
</tr>
<tr>
<td>Communication self-efficacy (5-point scale)</td>
<td>+0.8 (1.0)***</td>
<td>+0.2 (0.7)</td>
</tr>
<tr>
<td>Correct family planning knowledge (14-item assessment)</td>
<td>+1.7 (1.5)***</td>
<td>+0.2 (1.3)</td>
</tr>
<tr>
<td>Contraceptive decision conflict</td>
<td>-23%*</td>
<td>-7%</td>
</tr>
<tr>
<td>Contraceptive values concordance</td>
<td>+33%**</td>
<td>+7%</td>
</tr>
</tbody>
</table>

***p<0.001, **p<0.01, *p<0.05

Callegari et. al. *JGIM* 2021
Approach: Innovation Part 2

How can we deliver MyPath as part of routine care in a low-cost, scalable way?
Impact: Towards Implementation

• MyPath pragmatic cluster RCT (IIR 19-387)
• 7 Women’s Health PBRN sites
• 32 providers recruited; Veteran recruitment ongoing (target N=456)
• Patient-centered & clinical outcomes
• Treatment effect by race/ethnicity
• Partnership with **Office of Women’s Health Services** to implement in VA if found to be effective
Impact Beyond VA…
The MyPath Collaborative
Acknowledgments

Collaborators
Sonya Borrero, MD MS
Karin Nelson, MS MSHS
David Arterburn, MD MPH
Alison Hamilton, PhD
Christine Dehlendorf, MD MS
Lori Gawron, MD MPH

VA Puget Sound MyPath Team
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Molly Silvestrini, BA
Rachel Hunter-Merrill, MS
Leslie Taylor, PhD

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VA IIR 19-387

Operational Partners
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Alicia Christy, MD MHSCR
Sally Haskell, MD MS

VA Women’s Health Practice-Based Research Network
Susan Frayne, MD MPH
Diane Carney, MA

Veteran Advisory Board
Women 4 Women Veterans
Center for Maternal & Infant Outcomes Research in Translation (COMFORT)

Kristin Mattocks, PhD, MPH
VA Central Western Massachusetts
Introduction

• In 2013, little was known about pregnancy and maternity care among women Veterans. Small number of papers looking at mental health among pregnant Veterans and a few estimates on numbers of pregnant Veterans in VA care.

• My interest was in pregnancy as an example of non-VA care, since nearly all obstetrical care is provided by non-VA providers. This interest led to a focus on:
  – VA/non-VA care coordination (maternity care coordination)
  – Ability to find/select non-VA providers
  – Degree to which pregnant Veterans remained in VA care during pregnancy
Introduction

• I also had an interest in understanding disparities in care and outcomes among racially/ethnically diverse pregnant Veterans, and among pregnant Veterans living in rural areas

• Overarching goals of the study over time:
  – Examine use of maternity care coordination among pregnant Veterans
  – Examine engagement with VA healthcare during and following pregnancy
  – Examine mental and physical health conditions among pregnant and postpartum Veterans
  – Examine infant outcomes and long-term health and social well-being among postpartum Veterans
COMFORT Study Design and Participants

• Mixed methods (prenatal & postpartum surveys, VA administrative/EHR data, qualitative interviews)
• 15+ site study that includes urban and rural VA facilities and outstanding PBRN site leads and study coordinators
• To date: we have enrolled 1,324 pregnant Veterans and have conducted follow-up interviews with nearly 1,000 of these women.
• Demographics: 50% white, 25% Black, 21% Asian or Native American
COMFORT Participants, by Site

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

- Dallas: 232
- Durham: 169
- Los Angeles: 138
- Minneapolis: 133
- Tampa: 97
- West Haven: 94
- New Orleans: 79
- Boston: 70
- Denver: 63
- Little Rock: 58
- Leeds: 47
- Fargo: 46
- Iowa City: 45
- Reno: 41
- San Juan: 7
- Temple: 5
COMFORT Areas of Study

• Factors impacting access to prenatal care and utilization of maternity care coordination (Mattocks, 2019)

• Understanding perinatal depression (Kroll-Desrosiers, 2019, 2019, 2019, 2020, 2021 under review)

• Disparities in breastfeeding (Keddem, 2019)

• VA health services utilization during pregnancy (Grekin, 2020; Shivakumar, 2020)

• Racial differences in Cesarean section rates (Mattocks, 2021)

• Intimate partner violence among pregnant Veterans (Creech, 2021)
COMFORT Areas of Study

• Prenatal stress and alcohol use during pregnancy (Holzhauer, 2021)
• Factors associated with quitting smoking during pregnancy (Kroll-Desrosiers, 2021)
• Racial differences in cardiovascular risk factors during pregnancy (Lumsden, under review)
• Impact of MST on maternal/infant bonding (Creech, under review)
• COVID-19 vaccine hesitancy among pregnant Veterans (Mattocks, under review)
COMFORT Areas of Study

• Sufficiency of information received during pregnancy (Sheahan, under review)
• Veterans’ perinatal care and mental health experiences during COVID: The impact of past trauma (Mattocks, under review)
• Newborn outcomes among Veterans utilizing VHA Maternity Care Services (Kinney, under review)
• Prescription medication use among perinatal Veterans (Copeland, under review)
Conclusions

• We have made important strides in several areas of Veteran pregnancy and maternity care:
  – VA care utilization during and following pregnancy
  – Perinatal mental health conditions/care utilization
  – Comorbid conditions during pregnancy
  – Maternity care coordination

• More work needs to be done in these areas:
  – Racial/ethnic disparities in maternal and infant outcomes
  – The impact of social determinants of health on pregnant Veterans
  – Quality of non-VA obstetrical care
Clinical and Policy Implications/Impact

• Should consider targeted interventions promoting COVID vaccines to pregnant women in VA

• We should continue to examine pregnant Veterans’ access to high quality obstetrical care, particularly under relatively-new Optum and TriWest contracts.

• Always some degree of concern regarding network adequacy of contracted providers, particularly in rural areas where obstetrical specialists are few (e.g., Montana, Wyoming)

• Social determinants are key: can we better understand housing, employment, WIC for pregnant Veterans?
Thank you!
Infertility Prevalence and Associations in US Military Veterans and Care in VHA

Ginny L. Ryan, MD MA
Professor and REI Division Chief, University of Washington
Women’s Health Provider and REI Consultant, Puget Sound VA
Introduction

Trimodal Age Distribution of Women Veterans 2020
Total: > 2 million

www.va.gov/vetdata/veteran_population.asp
We Need a Better Understanding of Infertility in Veterans
Assess **infertility prevalence** using multiple measures

Assess **associations** with sociodemographic, military, and medical characteristics as well as military combat and environmental exposures
Key Findings

Infertility Prevalence by Definition Among Veterans

- **Infertility Prevalence by Definition Among Veterans**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTP &gt; 12 mo. (Unprot. Intercourse)</td>
<td>42.1</td>
<td>45.5</td>
</tr>
<tr>
<td>TTP &gt; 12 mo. (tried to conceive)</td>
<td>22.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Ever diagnosed</td>
<td>13.7</td>
<td>10.7</td>
</tr>
<tr>
<td>Ever treated</td>
<td>8.4</td>
<td>5.6</td>
</tr>
</tbody>
</table>
## Key Findings

<table>
<thead>
<tr>
<th>Association with infertility</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Deployments</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Length of Deployments</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>PTSD</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Depression</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Dissatisfaction with sexual function</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
Key Findings

• 56% of women and 12% of men Veterans experienced a lifetime sexual assault – highest risk time for women was in-military; highest risk time for men was in childhood

• Lifetime sexual assault and SAIM were associated with diagnosis of infertility (but not with other prevalence measures) in women Veterans; no statistically significant associations in men
Key Findings

• During military service, Veterans exposed to PCBs and sulfur fires more likely to meet the definition of infertility than those not exposed to these chemicals.

• 30% of women Veterans and 33% of men Veterans were concerned about the impact of military environmental exposures on their reproductive health
Clinical and Policy Implications/Impact

• Veterans may represent a unique population at high risk of infertility
• There is likely an unmet need for infertility care in the VA, which is not set up to treat couples / family
• Studying this population may tell us something about the risks of these experiences, traumas, and exposures to reproductive health in the broader community
• We need to better understand the pathophysiology behind these associations
Discussion: Women Veterans’ Reproductive Health: From Epidemiology to Implementation

Lisa Callegari, MD, MPH  
Kristin M. Mattocks, PhD, MPH  
Ginny Ryan, MD, MA  
Amanda M. Johnson, MD  
Discussant
Panel 2: VA Gynecology Across the Life Course

Lauren Beste, MD, MSc, FACP
Elisheva Danan, MD, MPH
Jodie G. Katon, PhD, MS
Alicia Y. Christy, MD, MHSCR

Discussant
Chlamydia and Gonorrhea Testing and Infection in Women Veterans

Lauren A. Beste, MD MSc FACP
VA Puget Sound Health Care System
Introduction

• Chlamydia trachomatis (CT) in US (2018)
  – Highest number ever reported; 19% increase since 2014
  – 1.8 million US cases

• Gonorrhea (GC) in US (2018)
  – Highest number reported since 1991; 63% increase since 2014
  – 583,405 US cases

Sexually Transmitted Disease Surveillance Fast Facts; CDC. https://www.cdc.gov/std/stats18/default.htm
Chlamydia and gonorrhea disproportionately impact women

- Risk of HIV acquisition
- Transmission to infants during pregnancy

- Disease sequelae
  - Pelvic inflammatory disease
  - Infertility
  - Chronic pelvic pain
  - Ectopic pregnancy

CDC recommends annual screening for sexually active women <25 years old and those with risk factors
Approach

• Analysis of trends in GC and CT testing and infection in women Veterans from 2009-2019

• Included all women Veterans receiving VA health care in each year
Case definition

• **Lab testing and results**
  – VHA electronic medical record data
  – Genitourinary, rectal, throat specimens

• **New cases** defined as positive lab result separated by ≥30 days from last positive lab

• **Limitation**
  – Only able to capture VHA-based tests
Chlamydia and gonorrhea tests per 100,000, by sex (2009-2019)

22.6% of women under age 25 were tested for GC/CT in 2019

### GC/CT cases in women Veterans (2019)

<table>
<thead>
<tr>
<th></th>
<th>Percent positivity (n=52,315 tests)</th>
<th>Total Incidence (/100k women)</th>
<th>Incidence in 18-24yo (/100k women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>2.4%</td>
<td>222</td>
<td>2,050</td>
</tr>
<tr>
<td>(n=1,303 cases)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gonorrhea</td>
<td>0.6%</td>
<td>56</td>
<td>282</td>
</tr>
<tr>
<td>(n=331 cases)</td>
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</tbody>
</table>

Subgroups of women Veterans have higher incidence

**Chlamydia**
- Younger age
- Urban residence
- South Atlantic
- HIV infection
- Black

**Gonorrhea**
- Younger age
- HIV infection
- Black or Multiracial

Key findings

• Chlamydia and gonorrhea incidence substantially increased from 2009-2019 among women Veterans

• Low overall screening rates among women < 25
Clinical and Policy Implications/Impact

- GC and CT testing underused, especially in younger women
- Opportunities to develop a strategy for screening, such as:
  - Provider training
  - Improved access to testing (e.g., home-based, MH clinics)
  - Routine screening for younger women
- Gaps: Lack of data on sexual risk behavior or SOGI status
- Future study ideas: sequelae of GC and CT infection in women Veterans, PrEP access, role of stigma
Special thanks to HHRC Data and Analytics team and collaborators

- Shimrit Keddem, PhD
- Carolyn Gardella, MD MPH
- Joleen Borgerding, PhD
  - Elliott Lowy, PhD
- George Hauser, MD
- Marissa Maier, MD
- Maggie Chartier, PsyD
- David Ross, MD PhD
Cervical Cancer Screening

Elisheva Danan, MD, MPH
Minneapolis VA Health Care System
Cervical Cancer

2021 U.S. Estimates:

- 14,480 new cervical cancer cases
- 4,290 cervical cancer deaths

Most new cases of cervical cancer are in women who have never been screened

- Lower screening rates:
  - Uninsured or no usual source of care
  - Rural area
  - Older women
  - Lower health literacy or education
  - Female sexual partners
  - Transgender
  - Severe mental illness
  - Disabilities
  - +/- Sexual assault

Approaches to cervical cancer screening research in VA

- Risk factor data
- Screening completion
- Patient results notification and follow-up
- Screening experience and perspectives
- Clinical trial vs. implementation study

Data sources:
- CDW
- OIG
- EPRP
- Survey
- eQM
Key Findings in VA Cervical Cancer Screening

System-level predictors of variation in screening and follow-up:

• 85% screening rate across all VA facilities (low: 72%) (eQM data)
  • 93% Health People 2020 goal

• Designated WHPs screen more reliably (Bean-Mayberry 2015)
  • 25% of women receive primary care from a non-WHP (Cordasco 2019)

• Clinical facility features predict screening completion (Soban 2005)

• 48% of VA sites (20 out of 42) inspected by VA OIG in 2019-2020 were non-compliant with follow-up requirements
Key Findings in VA Cervical Cancer Screening

Individual risk for cancer and inadequate screening:

• 1 in 4 smokes cigarettes

• 75% ages 19-26 not vaccinated against HPV when arrive at VA

• 25% live in rural areas

• Women Vets ages 50-64 less likely to be screened in past 3 years than women 21-29

(Brown 2010; Duffy 2012; Farmer 2011; Weinberger 2016)

(Nobel 2019)

(Frayne 2018)

(Bean-Mayberry 2015)

Age 60-64

Age 50-59

OR 0.42

OR 0.6

Comparison group: women 20-29
Key Findings: screening & sexual assault

58.7% of women veterans using VA primary care reported lifetime sexual assault (616 of 1,049)

Women Veterans with history of lifetime sexual assault (LSA):

- Higher rate of abnormal Pap test (Sadler 2011)
- Higher rate of mod-high anxiety, distress and discomfort related to pelvic exams (44% vs. 25%)
- LSA + PTSD: higher rate of beliefs that pelvic exams are unnecessary or unsafe (Weitlauf 2010)

No difference in Pap completion (CDW data) based on Depression or PTSD diagnosis (Weitlauf 2013), or lifetime sexual assault

Ever delayed a Pap test or gynecologic exam due to distress

- Lifetime sexual assault history: 21.6%
- No lifetime sexual assault history: 12.1%

(Danan, unpublished data)
Conclusions

• Women Veterans face both common and unique individual risk factors for cervical cancer and inadequate screening, and system-level variation in inadequate screening and follow-up of abnormal results.

• Screening experiences vary.

• Overall screening rates are relatively high.
Clinical and Policy Implications/Impact

- Smoking cessation
- HPV vaccination
- Clinical facility features
- Designated WHPs
- Trauma-sensitive care
- Novel screening methods
- Evidence-based care models
Questions?

Elisheva Danan, MD, MPH
elizabeth.danan@va.gov
VA Care for Uterine Fibroids & Racial Inequities

Jodie G Katon, PhD, MS
VA Puget Sound Health Care System, HSR&D Center of Innovation for Veteran-Centered & Value-Driven Care
Introduction: Uterine Fibroid Basics

• By age 50, 70% of White and 85% of Black women have fibroids, with 30% symptomatic
• Negatively impact health, functioning, and quality of life
• Estimated $34 billion in annual healthcare costs
• Account for a third of hysterectomies in the US
• Treatment decision making is complex
• If surgical treatment indicated minimally invasive approaches are preferred

Baird, 2003; Cardoso, 2012; ACOG, 2008; Laughlin-Tommaso, 2017
Introduction: Black/white Inequities

Black women more likely than white women to:
- Have uterine fibroids
- Have more and larger fibroids
- Undergo hysterectomy for uterine fibroids
- Have open abdominal vs minimally invasive surgeries
- Experience complications from surgeries

Race is a SOCIAL not biologic construct. Racial health inequities are downstream consequences of RACISM

Baird, 2003; Wechter, 2011; Kjerulf, 1996
Approach

• Retrospective cohort using VA administrative data & chart abstraction
• Race identified in administrative data
• ICD-9s used to identify those undergoing hysterectomy for uterine fibroids & surgical mode (minimally invasive vs abdominal)
• Chart abstraction used for parity, surgical history, post-operative uterine weight on a subset (N~700)

Callegari, 2019; Katon, 2019
Key Findings

• Black veterans less likely than white veterans to have a minimally invasive hysterectomy (36% vs 57%)
• Difference cannot be explained by differential access
• Black veterans have larger median post-operative uterine weight compared with white veterans (276 g vs 140 g)

Callegari, 2019; Katon, 2019
Key Findings
Post-operative uterine weight is more weakly associated with minimally invasive hysterectomy among Black vs white veterans

Difference: ~29 % pt

Difference: ~48 % pt

Carey, 2020
Conclusions

• Despite enhanced access VA has racial inequities in uterine fibroid care
• Differences in receipt of minimally invasive hysterectomy cannot be wholly attributed to fibroid size & number
• Understanding racial inequities in uterine fibroid care requires understanding WHY Black veterans have larger fibroids, treatment preferences, & experiences with health care
Clinical and Policy Implications/Impact

• Access is necessary but not sufficient to ensure equitable health & health care

• Necessary to consider structural and social determinants of health (e.g., how structural racism and resulting policies drive inequities)

• As the number of women Veterans increases & VA gynecology practices expand equity must be considered as a key component of health care quality
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Discussion: VA Gynecology Across the Life Course

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Discussant
Break!
Panel 3: Reproductive Mental Health from Pregnancy to Menopause

Jonathan G. Shaw, MD, MS  
Aimee Kroll-Desrosiers, PhD  
Carolyn Gibson, PhD, MPH  
Laura J. Miller, MD  
Discussant
Epidemiology of Mental Health and Pregnancy Outcomes in Veterans

Jonathan G. Shaw, MD, MS
Stanford University
VA Palo Alto, Women’s Health Evaluation Initiative
Introduction

Growing number of Veterans of reproductive age
• Increasingly relying on VA for maternity care
• With high burden of mental health and trauma history
• Impact of PTSD/trauma on pregnancy poorly understood

Pregnancy care represents a transition between VA and non-VA community care, raising important questions of:
• Utilization and access?
• Outcomes?
• Quality and equality of care?
Growth in VA Covered Deliveries

VA Community Care Delivery Claims, FY00-FY15

Deliveries

Paid
Occurred

FY00  FY02  FY04  FY06  FY08  FY10  FY12  FY14  FY16
Approach

• **Quantitative analysis of VA administrative data**
  – Delivery claims for non-VA care: Maternal outcomes
  – VA clinical data: mental health, medical dx, demographics

• **Early work (National): VA-covered, maternal data only**
  – N=16,000 deliveries, 2000-2012
  – Focus on PTSD impact on pregnancy/outcomes

• **Subsequent research (State): linked VA and California vital statistics to observe:**
  – N= 17,500 Veterans with births in California, 2000-2012
  – Infant outcomes
  – VA-enrollees using other coverage (e.g. Medicaid, private)
Key Findings

**Prevalence:** Antepartum PTSD: 12%  Preterm Birth: 8%

1. **PTSD associated with 35% increased risk of spontaneous preterm birth (aOR 1.35, \(p<0.001\)), in VA**
   - More so than other MH associations
   - MST (military sexual trauma) prevalent, but not predictive

2. **PTSD associated with more complex peripartum course**
   - Gestational Diabetes (6.7%) – 50% increased risk
   - Preeclampsia (6.2%) – 30% increased risk
   - Repeated pregnancy hospitalizations (aOR 1.5)
   - Prolonged (>4 days) length of delivery stay (aOR 1.3)

*Shaw, 2014; Shaw, 2017*
Key Findings

Analysis of VA vs non-VA covered Veterans (California)

- By 2012, Veterans almost as likely to rely on VA (14%) as Medicaid (15%) for maternity care

- VA-covered pregnancies show similar outcomes, with notable exceptions (vs private insured):
  - More preeclampsia (aOR 1.4)
  - Slightly more c-sections (aOR 1.2)

- Veterans’ Infants had higher NICU use (aOR 1.15)
  - 13.7% of infants in NICU among VA-covered births

Shaw, 2018
Conclusions

Mental health comorbidities have significant physiologic impacts on pregnancy, and as such:

• VA covers a high-risk pregnant population

• VA pregnancies highly impacted by PTSD, and PTSD-affected births are more likely to:
  – be medically complex (antepartum complications)
  – end in poor birth outcomes (preterm birth)
  – have long term health implications (maternal/infant)
Clinical and Policy Implications/Impact

Findings justifying increased focus on, and investment in:

• Maternal care coordination
• Perinatal mental health services
• Further study of maternal-fetal impacts of Veterans’ MH

What next?

• Assess Veterans’ access to high quality perinatal care
• Surveillance of SMM (severe maternal morbidity & mortality), with a health equity lens.
• Study how MH/PTSD treatment modifies birth outcomes?
Perinatal Mental Health and Healthcare Utilization among Veterans

Aimee Kroll-Desrosiers, PhD
VA Central Western Massachusetts
Introduction

• Perinatal depression is one of the most common complications of pregnancy

• Why study perinatal depression in women Veterans?

~25% of WVs 18-44 dx with possible depression

↑ use of VA maternity benefits

Gap in perinatal MH dx & MH care utilization research
Introduction

• Research questions:
  – What is the rate of depression symptoms in pregnant Veterans?
  – Are pregnant Veterans with depression symptoms utilizing VA mental health care?
  – What are the experiences of VA mental health providers with pregnant and postpartum Veterans?
  – Are Veterans being screened for depression during the perinatal period?
Approach

- Center for Maternal & Infant Outcomes Research in Translation (COMFORT) [HSR&D IIR 13-81, PI: Mattocks, 2015-2021]
- Mixed methods (prenatal & postpartum surveys, VA administrative/EHR data, qualitative interviews)
- 1,324 pregnancy & 988 postpartum interviews (as of 8/13/21)
Key Findings:
Pregnancy Mental Health & Mental Health Care Utilization

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

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

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.”

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:
Perinatal Depression Screening in Administrative Records

Depression Screening during Pregnancy or Postpartum:

- There were no differences in receipt of PCP or MH visits between Veterans screened vs. not screened during pregnancy.
Conclusions

• Mental health care is available during the perinatal period; WVs engaged prior to pregnancy tend to stay engaged during pregnancy

• WVs without a previous diagnosis of depression may be less likely to receive needed MH care during pregnancy

• True estimate of perinatal depression screening is unknown
Clinical and Policy Implications/Impact

• Unclear if screening is happening as recommended or if results are not reflected in the data → potential point of intervention

• No data on provider efficacy in providing perinatal care

• Social support found to be protective of sx & WVs would like more (e.g., virtual support groups)

• More research on anxiety, PTSD, bipolar, etc. needed

• Preliminary work suggests Veteran & provider acceptability of increased MH provisions during pregnancy/postpartum
Thank you!
Women Veterans’ Mental Health in the Menopause Transition

Carolyn Gibson, PhD, MPH
San Francisco VA Health Care System
University of California, San Francisco,
Department of Psychiatry & Behavioral Sciences
• Changes: Role, social, health and mental health (2-5x risk for major depressive episode in perimenopause)

• Common menopause symptoms: Hot flashes/night sweats, sleep, genitourinary symptoms, mood

Matthews, 2013; Lobo, 2014; Freeman, 2010
Over half of women Veterans in VA may be peri- or postmenopausal

Are bothersome menopause symptoms associated with key mental health-related issues for women Veterans?

- ICD codes
- Menopausal hormone therapy

Chronic pain

Higher risk opioids
Are bothersome menopause symptoms associated with key mental health-related issues for women Veterans?

- Menopausal hormone therapy
- Chronic pain
- Higher risk opioids
- Suicide risk
Are bothersome menopause symptoms associated with key mental health-related issues for women Veterans?

- Menopause symptoms
  - Self-reported symptoms
  - Chronic pain
  - Higher risk opioids
  - Suicide risk
  - Trauma (IPV, MST, PTSD)
Menopause symptoms are associated with chronic pain, opioids, and suicide

- Chronic pain
- Long-term opioids
  - >50 mg MEDD
  - + Sedative-hypnotics
  - + Gabapentin
  - + Muscle relaxants
- Death by suicide

Gibson *Menopause* 2019; Gibson *JGIM* 2019; Gibson *Medical Care* 2021
Menopause symptoms are associated with trauma and PTSD

- Intimate partner violence
- Military Sexual Trauma
- Probable PTSD

Vaginal symptoms (69%)
Insomnia (36%)
Hot flashes/night sweats (54%)
Urinary symptoms (44%)

Odds Ratio
Conclusions

• Menopausal hormone therapy/bothersome menopause symptoms may indicate complex comorbidity

• Menopause symptoms are common and likely under-recognized in health care setting

• Greater burden of menopause symptoms in women with trauma history and mental health comorbidity
Clinical and Policy Implications/Impact

• Comprehensive care includes recognition of the role of menopause/symptoms in experience and management of other conditions (e.g. pain)

• We need integrated approaches to comprehensive, trauma-informed, menopause-related care
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Discussion: Reproductive Mental Health from Pregnancy to Menopause

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Panel 4: Where Do We Go from Here? Setting a VA Reproductive Health Research Agenda

Amanda M. Johnson, MD
Laurie Zephyrin, MD, MPH, MBA
Kayla M. Williams, MA
Elizabeth W. Patton, MD
Kara Zivin, PhD, MS, MA, MFA
Moderator

Kara Zivin, PhD, MS, MA, MFA
Moderator
Based on your expertise, and from what you have heard today, what are 1-2 key priorities for VA reproductive health research in the next 3-5 years?
Gratitude

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  • The Office of Women’s Health

• **Get involved!**
  • Email Jodie.Katon@va.gov and Elizabeth.Patton@va.gov to join the VA WHRN Reproductive Health Research Work Group.
  • Subscribe to the VA WHRN Listserv here: [https://www.research.va.gov/programs/womens_health/listserv.cfm](https://www.research.va.gov/programs/womens_health/listserv.cfm)