Suicide Risk and Prevention among Female and Male Veterans using and not Using VA Healthcare

VA HSR&D Suicide Prevention Cyberseminar Series: November 14, 2022

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This work is funded by VA HSR&D – Grant no. HX002757

Disclaimer

This presentation is based on work supported, in part, by the Department of Veterans Affairs (VA), but does not necessarily represent the views or policy of the VA or the United States Government.

Acknowledgments

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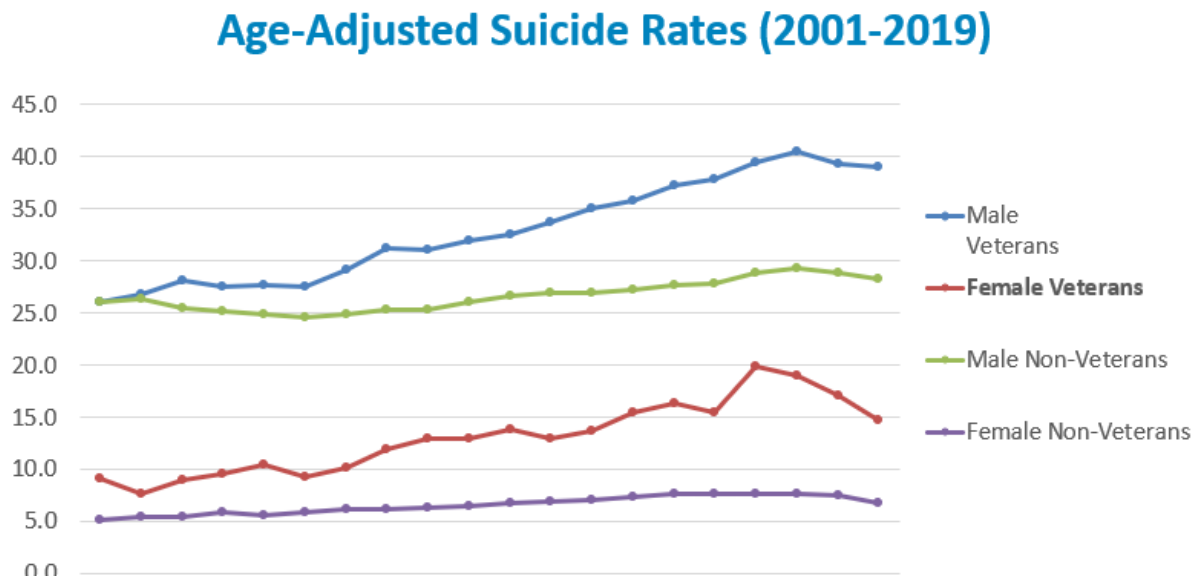
Thank you to all the Veterans who participated and the local Veteran Engagement Board

Read more about this ongoing study, our team, and future results here: https://www.mirecc.va.gov/visn19/inquire/

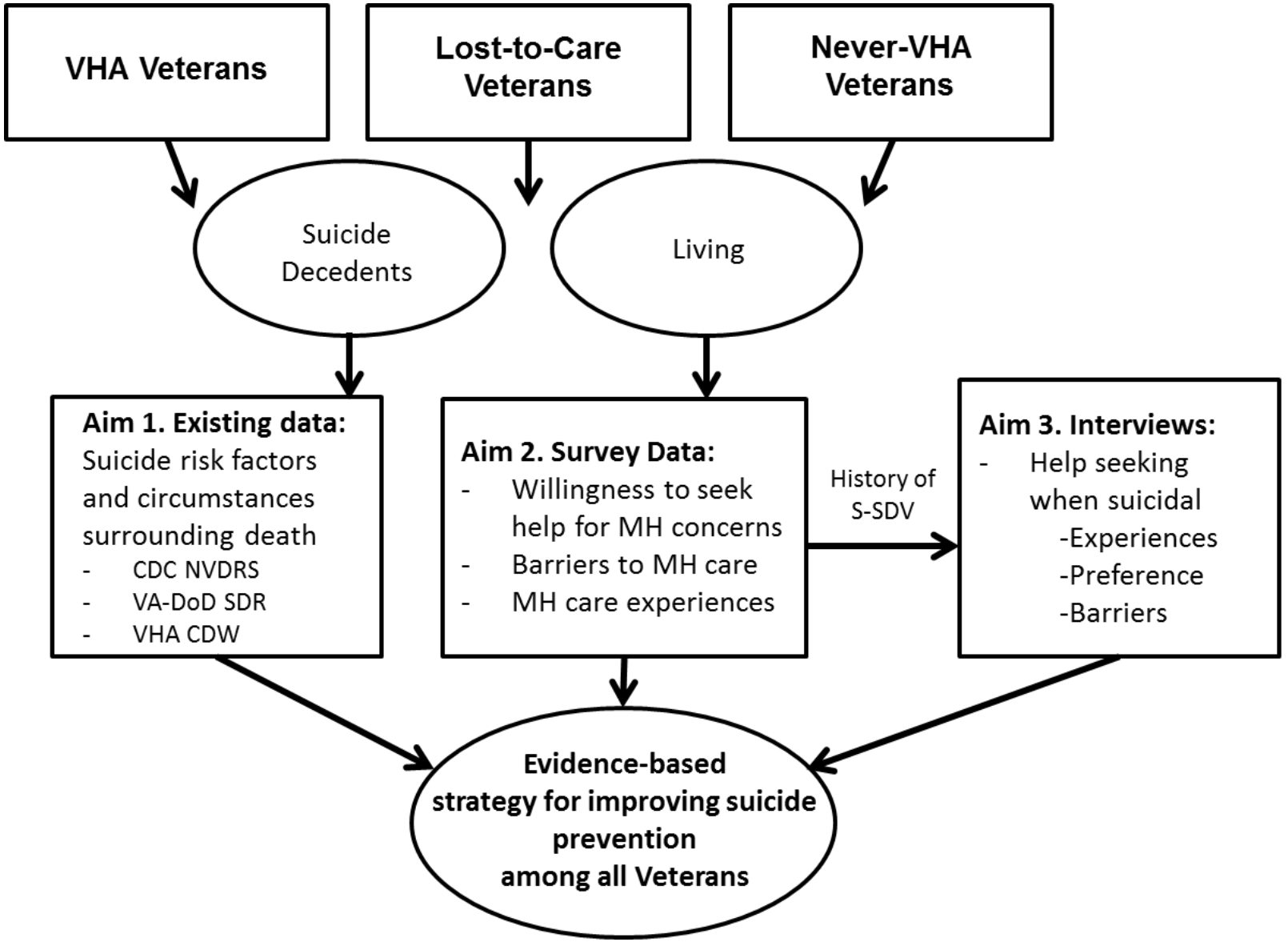
Background

- The majority of Veterans who die by suicide did not receive VHA services in the year preceding their death.
- Suicide rates among female Veterans also remain concerning and elevated relative to non-Veteran females.
- Yet knowledge regarding suicide risk and prevention among female Veterans and non-VHA users remains limited.
- Research is needed to understand differences by gender/sex and VHA use in circumstances of death, help-seeking barriers and experiences, and healthcare needs and preferences for when suicidal.

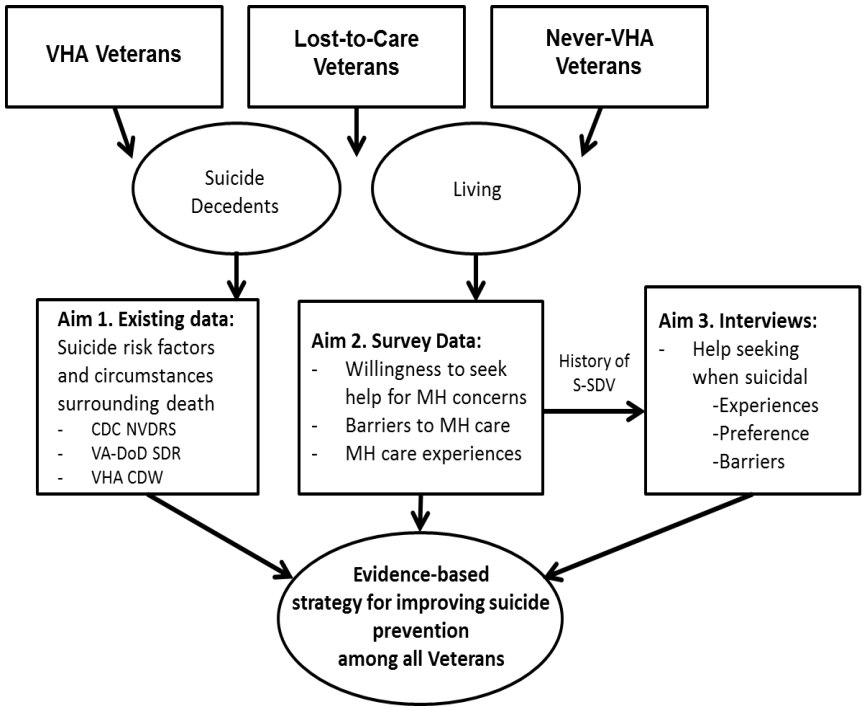


HX002757: Preventing Suicide Among Female and Male Veterans Not Receiving VHA Services

- **Objective:** Inform improved suicide prevention efforts for all Veterans by increasing understanding of female and male Veterans' preferences, prior experiences, and barriers to help-seeking and how these differ based on prior use of VHA services


VHA Veterans
Lost-to-Care Veterans
Never-VHA Veterans
Suicide Decedents
Living
Aim 1. Existing data:
Suicide risk factors and circumstances surrounding death
- CDC NVDRS
- VA-DoD SDR
- VHA CDW
Aim 2. Survey Data:
- Willingness to seek help for MH concerns
- Barriers to MH care
- MH care experiences
History of S-SDV
Aim 3. Interviews:
- Help seeking when suicidal
-Experiences
-Preference
-Barriers
Evidence-based strategy for improving suicide prevention among all Veterans

Study Aims



Gender-stratified, mixed method study:

1. Compare VHA, lost-to-care, and never-VHA Veteran suicide decedents regarding circumstances surrounding death
   - Compare VHA and lost-to-care decedents regarding VHA MH care use prior to death
2. Survey living VHA, lost-to-care, and never-VHA Veterans to compare:
   - Willingness to seek help for MH concerns
   - Barriers to MH care (among those who have experienced MH concerns)
   - MH care experiences (among those who have used MH care)
3. Interview living VHA, lost-to-care, and never-VHA Veterans with a history of suicidal ideation or suicide attempt to understand their experiences, preferences, and barriers to seeking help when suicidal.

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Definitions of VHA groups (by aim)

Group	Definition: *Veterans who…*	Suicide Decedents (Aim 1)	Living Veterans (Aims 2 and 3)
VHA	Used any VHA services (in/out patient) and/or received outside VHA but paid for by VA.	Used VHA services of any kind in the year (365 days) before death.	Used any VHA services in year (365 days) prior to study start date
Lost-to-care	Used services provided or paid for by VA at some point since most recent separation, not in past year.	VHA services used (≥1 encounter in electronic medical record [EMR]) before death, but not in year prior.	EMR documented VHA use at some point before study start date, with no use in prior year.
Never-VHA	Never used services provided or paid for by VA following separation.	No EMR documented use of any VHA services prior to death.	No EMR-documented VHA use prior to study start date.

Aim 1: VA-NVDRS Linkage Methods

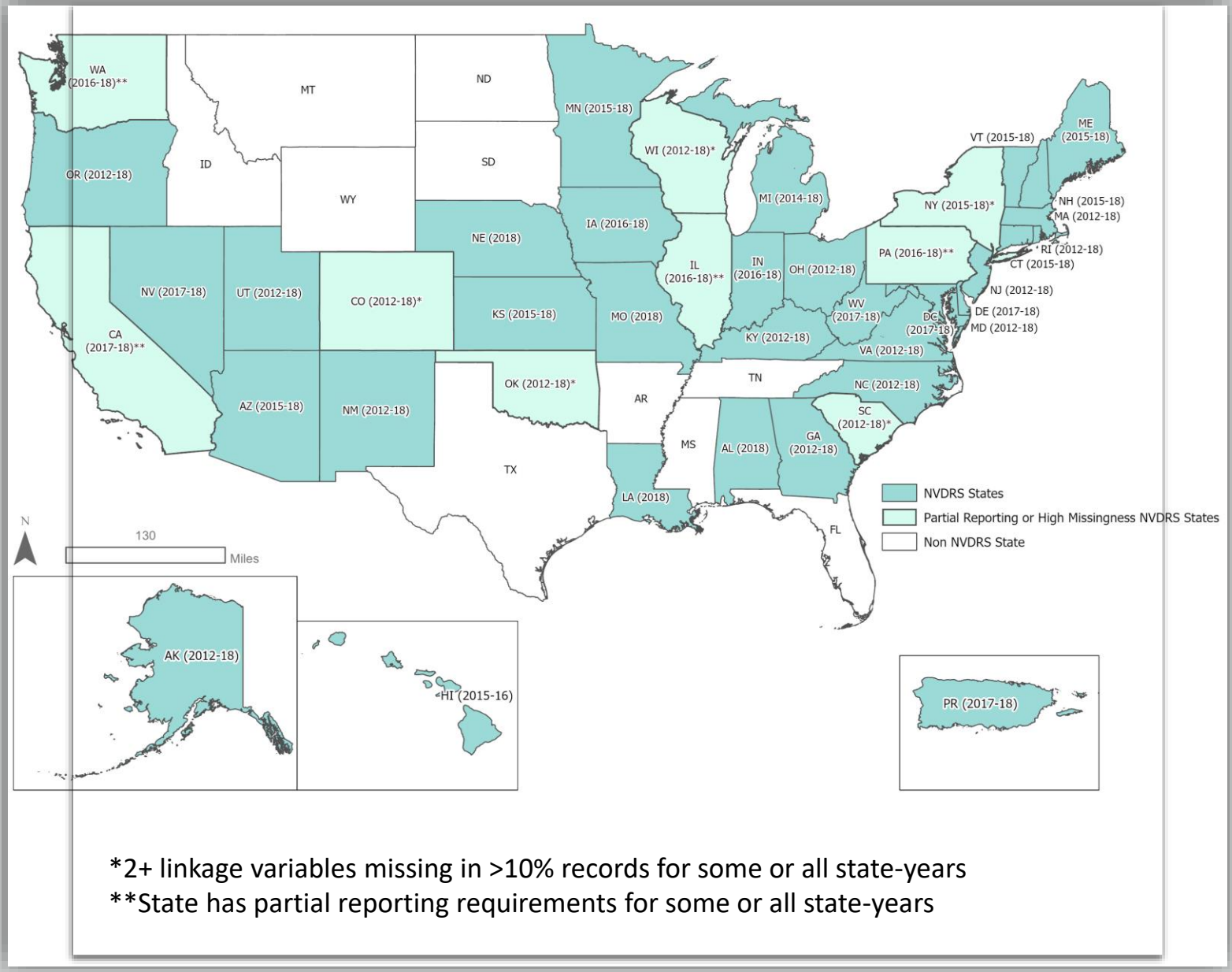
Multi-Stage, Deterministic, De-Identified

Aim 1 – Suicide Decedents

- **Demonstrate feasibility** of linking VA and National Violent Death Reporting System (NVDRS) records, developing a process that could be repeated in the future
  - Suicide and undetermined intent deaths included
- **Evaluate accuracy** of the NVDRS military history variable
- **Compare** VHA, lost-to-care, and never-VHA Veteran suicide decedents regarding circumstances surrounding death
- **Compare** VHA and lost-to-care decedents regarding VHA MH care use
- Among VHA decedents, examine concurrence between NVDRS- and VHA-documented MH problems (exploratory)
- Conduct a sensitivity analysis of the aims above, including deaths of undetermined intent

Methods: Data Sources

- **42 states/territories participating in NVDRS, 2012-2018**
  - Suicide and Undetermined
    - n = 170,038
    - Military n= 26,520
- VA-DoD MDR for same states/territories and years
  - Suicide and Undetermined
    - n= 26,852
    - All veterans



*2+ linkage variables missing in >10% records for some or all state-years
**State has partial reporting requirements for some or all state-years

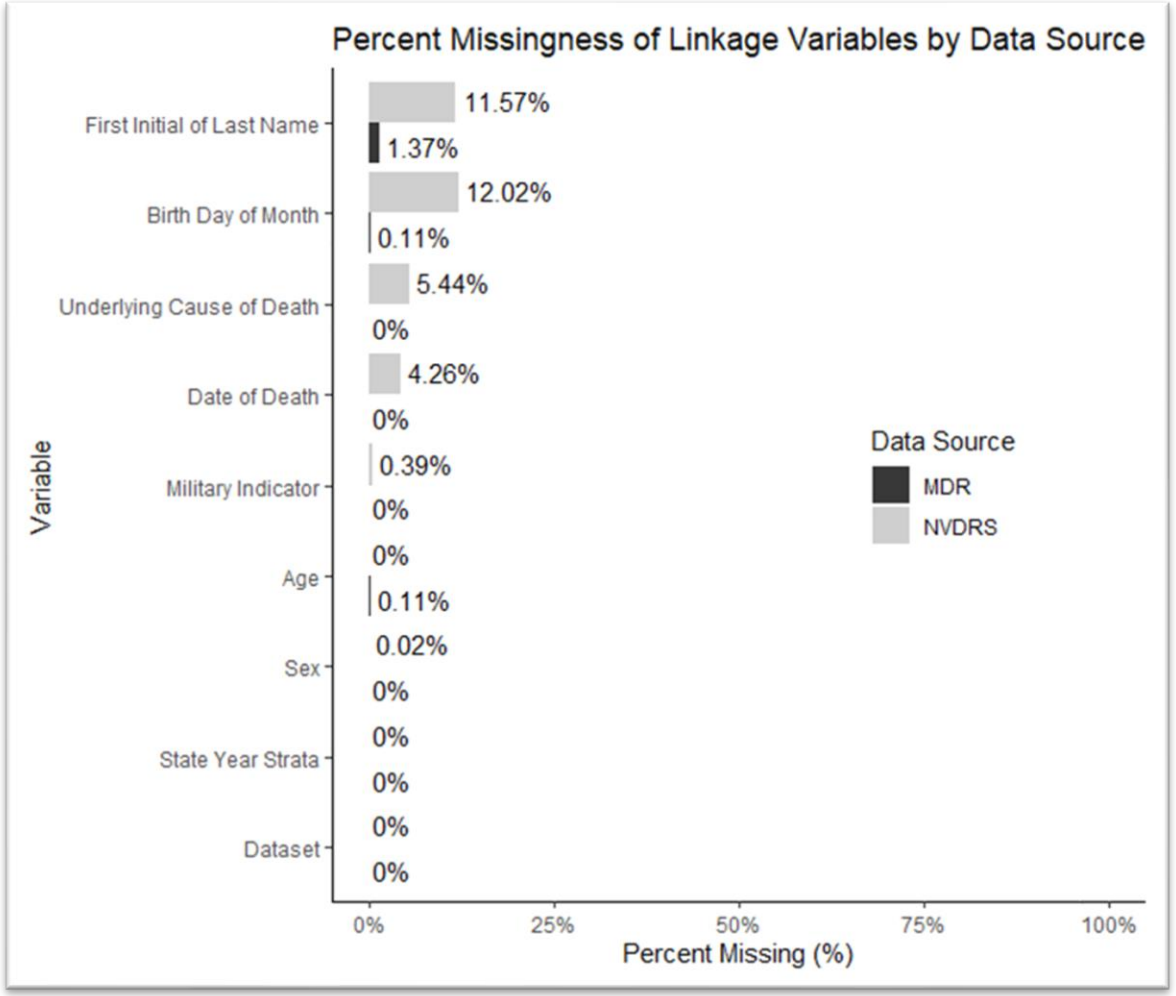
Methods: Variables

- **Linkage Variables available in both data sources included:**
  - Age at death
  - Sex
  - Underlying cause of death (UCOD)
  - Date of Death (DoD)
  - Day of month of birth (BDOM) – optional in NVDRS, not typically available in RAD
  - Last name first initial(LNFI) – optional in NVDRS, not typically available in RAD

- **Additional variables to confirm matches and resolve duplicates:**
  - Multiple cause of death (MCOD)
  - NVDRS military history indicator

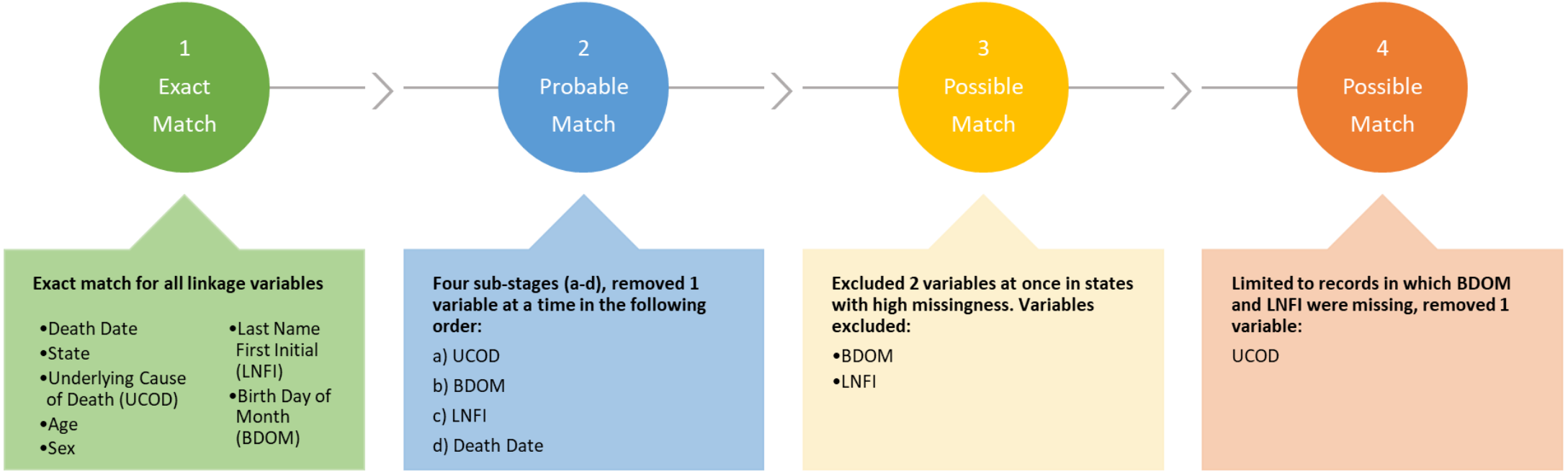
Methods: Data Quality

- Higher levels of missingness observed in NVDRS compared to MDR
- Across sources, LNFI and BDOM were most frequently missing (expected as optional)
- Notable missingness for UCOD and DoD in NVDRS as well



Methods: NVDRS-VA Data Linkage

- **4 stage deterministic design, by state-year**
  - Increasingly relaxed criteria by stage: Exact, Probable, Possible
  - Duplicate review and resolution at each stage (MCOD, linkage variables, military history)
  - Linkage quality review (UCOD mismatch: similar means, unspecified, MCOD capture)



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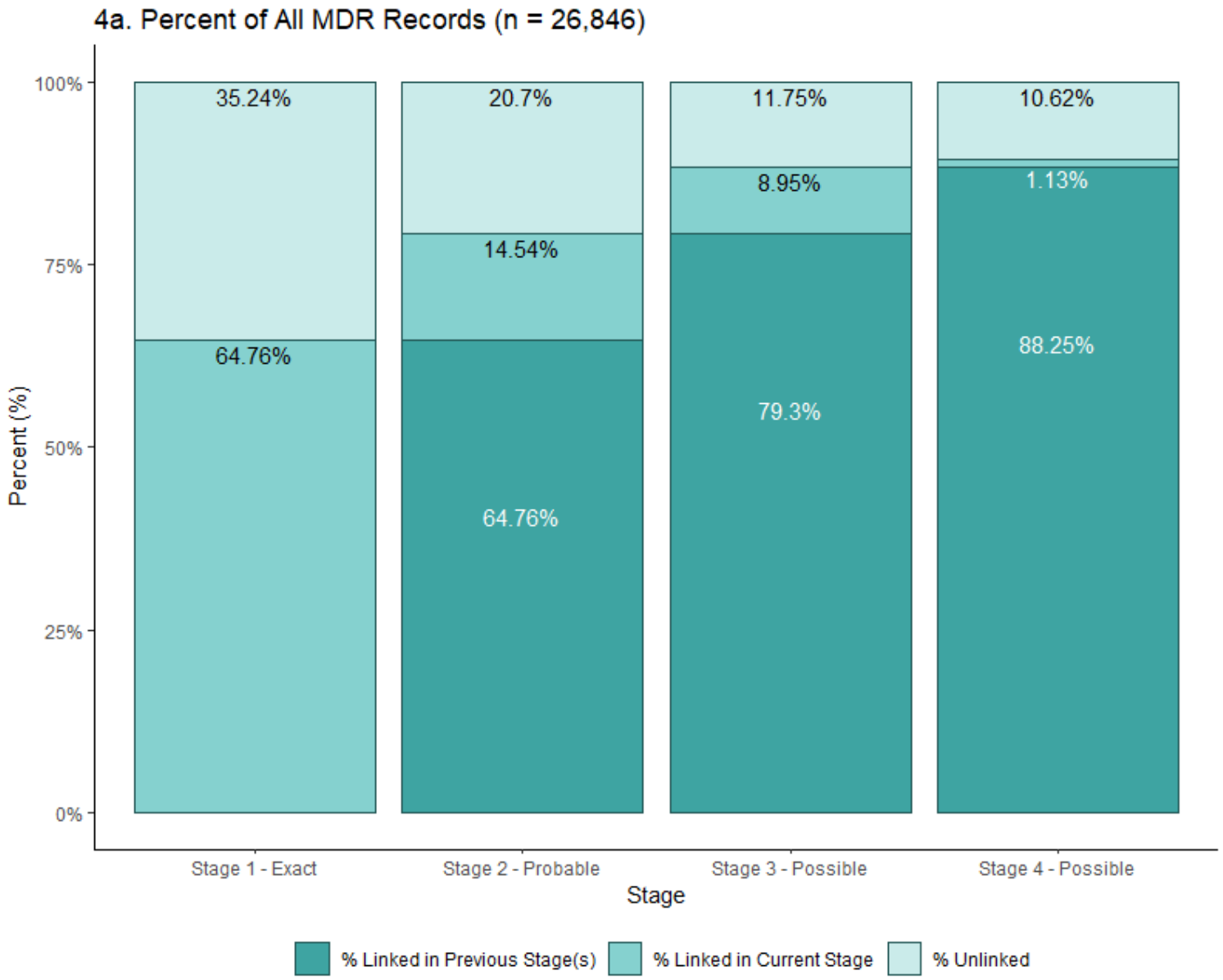
Results

Linkage Success and Quality – **suicides and deaths of undetermined intent**

Overall



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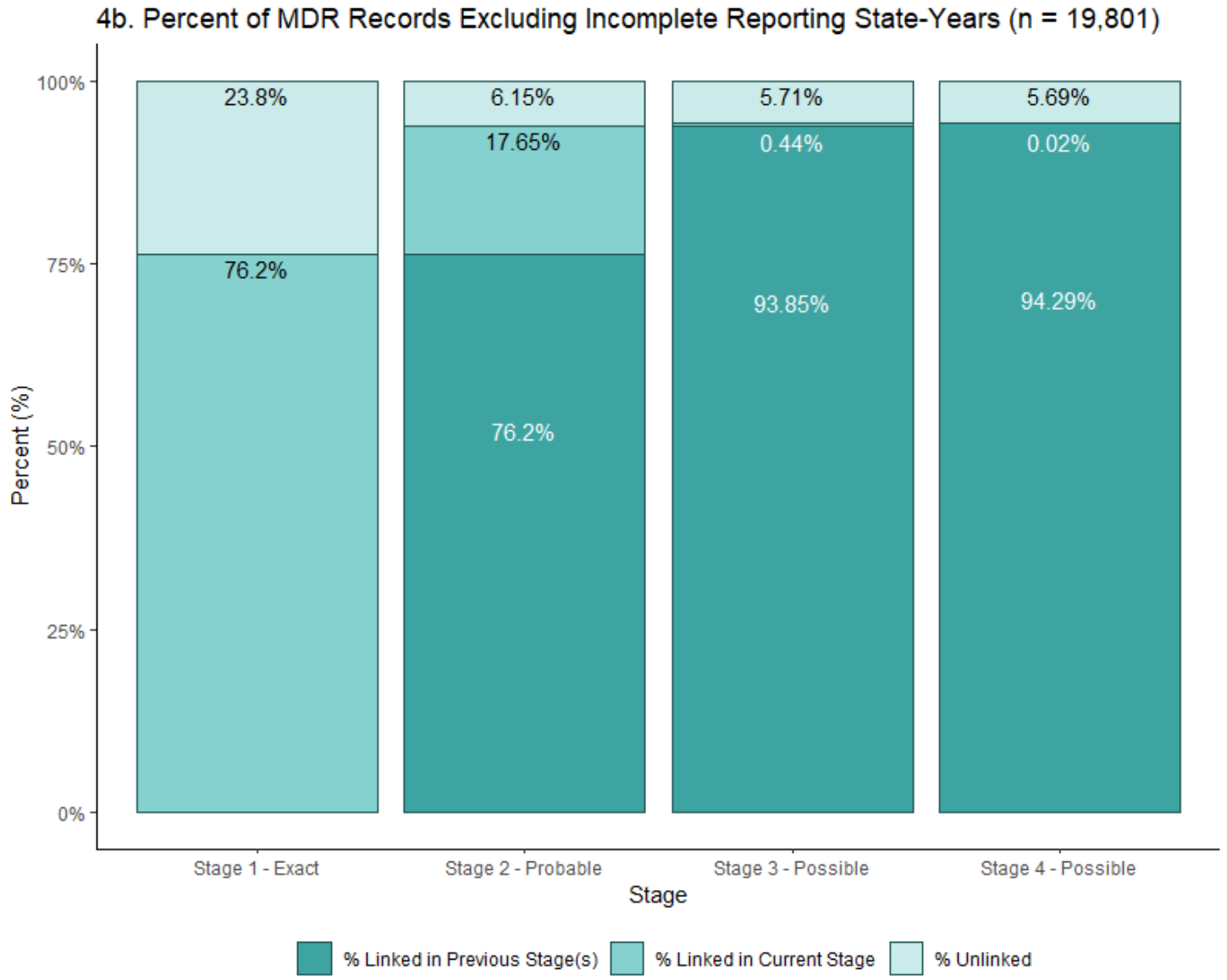
Complete* State-Years



*Excludes partial reporting states and state-years that meet the high missingness criteria

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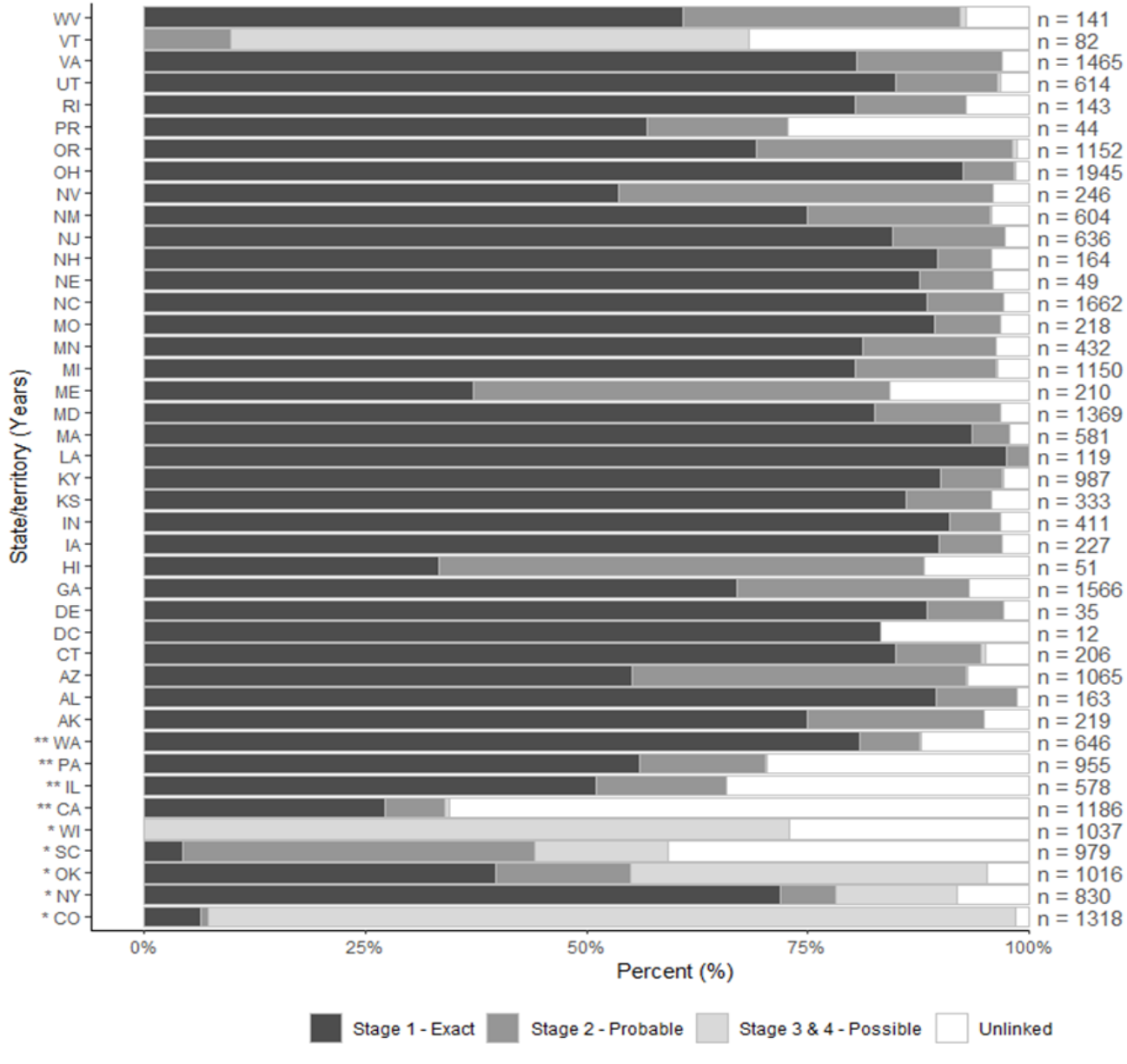
By State

(% Linked)



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Results

NVDRS Military History Variable – **suicides and deaths of undetermined intent**

Validity: Overall and by Age and Sex

	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Value	Overall Accuracy
Overall	80.8%	88.7%	73.8%	97.1%	87.6%
Sex					
Females	50.4%	92.8%	68.4%	98.2%	91.3%
Males	82.8%	87.2%	74.0%	96.7%	86.4%
Age at Death					
17-39	72.3%	90.9%	61.0%	97.9%	89.5%
40-64	76.3%	91.1%	88.4%	96.6%	89.0%
65+	91.6%	74.0%	67.5%	97.0%	79.3%

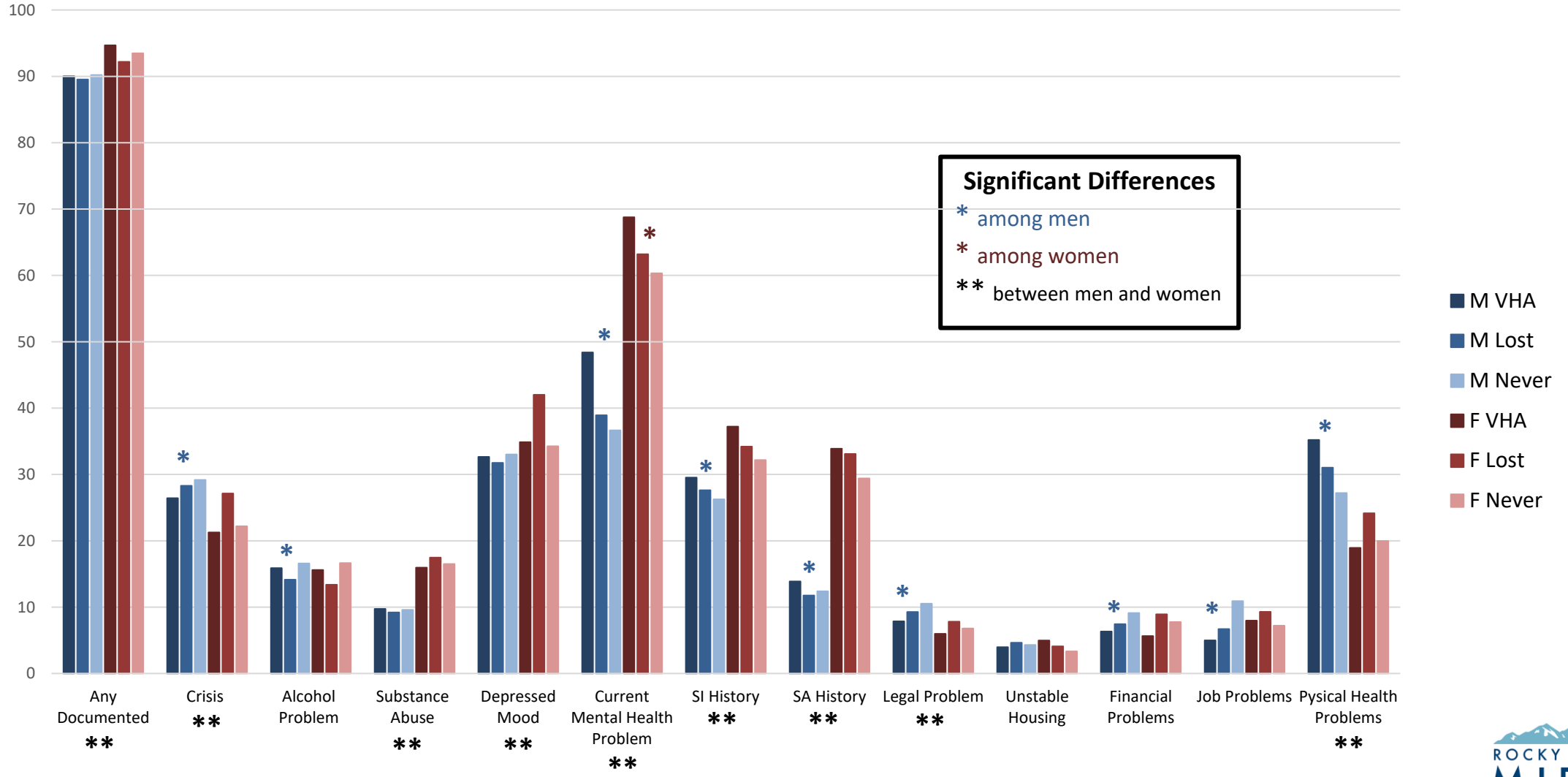
Accuracy (sensitivity) by VHA Group

- **VHA:** used in year prior to death
  - 94.3%
- **Lost to VHA Care:** used VHA prior to death, but not in the past year
  - 79.9%
- **Never VHA:** No documented use of any VHA services prior to death
  - 73.5%
  - Clear implications for understanding circumstances surrounding death for the majority population of Veterans who do not use VHA services

Results

Circumstances Surrounding **Suicide**, by VHA Group (Preliminary)

Documented Circumstances (NVDRS [%]) Prior to Suicide by VHA Group and Sex



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Implications

1. This approach can **expand the depth of suicide surveillance** data for all Veterans, inclusive of those not using VHA services
2. Differences identified in circumstances preceding death for men and women can **inform improved, gender sensitive suicide prevention**
3. Likewise, differences identified by history of VHA service use can **inform improved community-focused prevention efforts**. For example, focusing on SDOH is particularly important for (men) Veterans not engaged with VHA care

Next Steps

1. **Analyses planned and underway to further address grant aims**
   - Refine/additional circumstance comparisons
   - Compare VHA and lost-to-care decedents regarding VHA MH care use
   - Among VHA decedents, examine concurrence between NVDRS- and VHA-documented MH problems (exploratory)
2. **Validating linkage approach with updated NVDRS and MRD data**
   - 2019 mortality data now available
   - Additional death certificate data potentially available from NVDRS to expand linkage on partial reporting states

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Aim 2 Survey

National Cross-Sectional Survey

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Aim 2 – Survey living VHA, lost-to-care and never-VHA Veterans to compare:

- Willingness to seek help for MH concerns
- Barriers to MH care (in those who have experienced MH concerns)
- MH Care experiences (in those who have used MH care)

Sampling Plan

- **Inclusion Criteria:** Living Veteran, 18-89 years of age
- **Goal:** 2,000 complete surveys
  - 333 females and 333 males for each of the three VHA groups
- **Sampling Frame**: USVets (primary) + CDW (to determine VHA group)
- **Sampling Approach**
  - Stratified Random Sample: random sample within each of the 6 study groups/strata
    - Secondary strata = region and age
    - Control variables for proportionate allocation = rurality, race/ethnicity

Recruitment & Procedures

Up to 3 mailings inviting participation

- online, online, paper + online

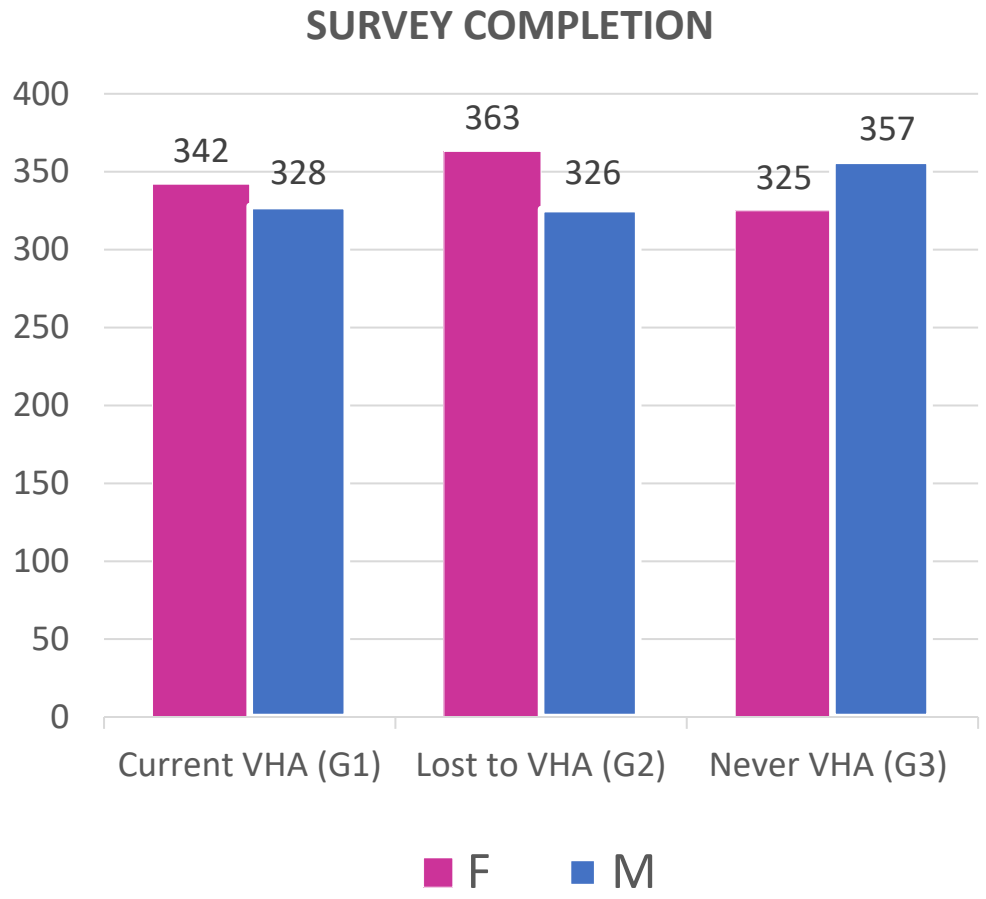
Procedures

- Postcard informed consent
- Survey (eligibility confirmed)
- Debriefing
- $25 compensation

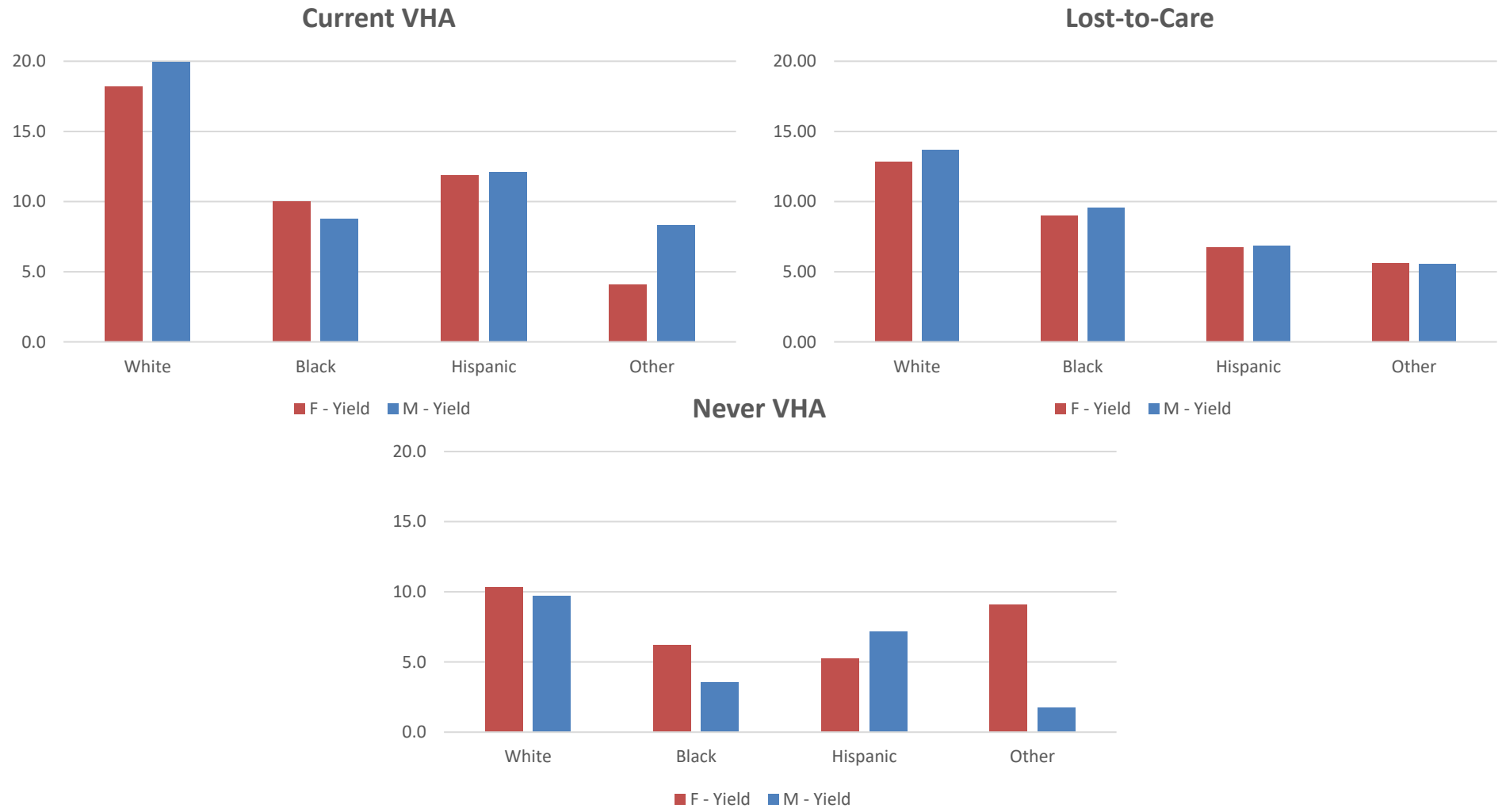
Measures
General Help-Seeking Questionnaire
Barriers to Access to Care Evaluation Scale
Patient Survey of Mental Healthcare
Patient Health Questionnaire-9
Self-Injurious Thoughts and Behaviors Interview, SF
Primary Care PTSD Screen for DSM-5
Alcohol Use Disorders Identification Test
Drug Abuse Screening Test
Veterans RAND 12-Item Health Survey
Multidimensional Scale of Perceived Social Support
National Survey of Veterans items
Demographics Questionnaire

Progress to Date

- **Wave 1:**
  - N = 980
  - Response Rate = 13.0%
- **Wave 2:**
  - N = 1061
  - Response Rate = 12.8%
- **Challenges**
  - Lower response for:
    - Females
    - Never VHA and lost-to-care
    - Racial and ethnic minorities



Wave 1 Yield by Race and Ethnicity



Preliminary Results

Wave 1: Changes in Veterans' Use of VA Healthcare during the COVID-19 Pandemic

Aims and Methods

- **Examine how Veterans' use of VA healthcare changed during the COVID-19 pandemic, perceived reasons for these changes, and if experiences differed based on gender**

- **980 eligible Wave 1 participants (3/2021 – 1/2022)**
  - Answered a question regarding change in their use of VHA services during the pandemic.
  - Those who reported a decrease or increase were asked to describe how their use of VHA services had changed and the reason(s) for these changes.

- Weighted analysis to examine prevalence

- Qualitative analyses in ATLAS.ti 22, using inductive thematic analysis

Change VA healthcare use during the COVID-19 pandemic (weighted analysis)

- No change: 83.93% [majority]
- Decreased: 11.45%
- Increased: 4.62%

No significant differences by gender.

Among Veterans who decreased use of VHA care:

- Difficulty obtaining services

I don't like tele-health and so when that's all that was an option I didn't make any appointments.

- Negative perceptions of telehealth services

I am now anxious about going to the VA Center for any type of treatments for fear of bringing the virus home to my family.

- Desire to protect themselves or family from contracting COVID-19

Specific to women Veterans

- Uniquely described altruism as a reason not to seek care

*I have put off scheduling my check ups due to COVID-19. I am generally feeling fine and **wanted to ensure that vets who are have worse health issues or may have fewer resources were able to access the care they needed**. I plan to schedule my check ups very soon.*

Among Veterans who increased use of VHA care:

- COVID-19 vaccination

I decided to get the vaccine at VA. I also sought out more covered services through the VA (including dental and ophthalmology)

- Increased mental health care

I was referred to the Vet Center one month prior to the Pandemic. I meet by phone or virtually with my therapist once a month.

- Increased medical coverage through the VHA

Implications

- Findings can inform approaches to addressing pandemic-related barriers and perceptions of VHA care to re-engage Veterans
- Import of addressing perceptions of safety in accessing healthcare services, as well as addressing concerns regarding “taking services away” from others
- Re-engaging those who decreased use due to negative perceptions of telehealth
- COVID-19 vaccinations may represent an important opportunity to engage Veterans in care, including those who never used or discontinued VHA care

Next Steps

1. Wave 2 data collection near complete
2. Data entry, cleaning
3. Analyses

Aim 3 Qualitative Interviews

Aim

- Interview living VHA, lost-to-care, and never-VHA Veterans with a history of suicidal ideation or suicide attempt to understand their **experiences, preferences, and barriers to seeking help when suicidal**

Methods

- Aim 2 survey participants who reported lifetime suicidal ideation or attempt are eligible and are asked if interested in participating in a qualitative interview
- Purposeful sampling to recruit a broad range of participants (e.g., race, ethnicity, age, region, suicidal ideation and attempt)
- Interviews are conducted in Teams and recorded
- A semi-structured interview guide (one for each VHA group) is used
- UWRAP pre- and post- assessment for safety and debriefing
- ATLAS.ti for analysis

Interview Progress and Experiences

- To date, **348** eligible Veterans have indicated interest in being interviewed
- Of these, **110** have been interviewed
- Recruitment experiences have differed by VHA group and gender, with the most difficulty recruiting eligible male Veterans from the never-VHA and lost-to-care groups
- Concerted efforts to interview racial and ethnic minority Veterans and younger Veterans

Interview Progress

Gender	VHA Group	Complete
Female	Current	28
	Lost/Past	16
	Never	17
Male	Current	22
	Lost/Past	14
	Never	13

Veteran Engagement

Local Veteran Engagement Board Project Contributions

Recruitment materials

Study materials (e.g., consent, debriefing)

Diversity

Suggestions from Veteran Engagement Board Members

- Have a strong “call to action”
- Include statistics
- Customize invitation letters by VHA group and gender to personalize
- Ensure letters are trauma-informed due to potential institutional distrust
- Transparency and clarity regarding confidentiality of responses (e.g., medical records)
- Phrasing of “Veteran” vs “those with military service”
- Study materials (e.g., consent, debriefing resources)

Concluding Remarks

- Through the multiple aims of this project, findings are poised to inform gender-sensitive suicide prevention initiatives for Veterans, across the VA's public health approach to suicide prevention.

Table 1. Study Aims Align with a Public Health Approach to Preventing Suicide

Strategy	Population of interest	Aim 1	Aim 2	Aim 3
Universal	Any Veteran, regardless of health status while living	x	x	
Selective	Veterans with a history of MH concerns or MH care	x	x	
Indicated	Veterans with lifetime SI or SA		x	x

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