



January 2024

VETERANS HEALTH

VA Should Improve Its Monitoring of Severe Maternal Complications and Mental Health Screenings

Accessible Version

GAO Highlights

Highlights of [GAO-24-106209](#), a report to congressional committees

Why GAO Did This Study

Pregnant veterans are more likely than other pregnant women to have physical and mental health conditions that may contribute to adverse maternal health outcomes, according to research. Veterans' hospital deliveries, a service VA pays for by referral to community providers, grew by about 85 percent (from 2,567 to 4,766 deliveries) from fiscal years 2011 through 2020.

Congress included a provision in statute for GAO to review veterans' maternal health. This report, among other objectives, examines available VA data on, and VA's monitoring of, maternal health outcomes, as well as mental health screenings for pregnant and postpartum veterans.

GAO analyzed VA data on deaths and severe maternal morbidity among pregnant and postpartum veterans from fiscal years 2011 through 2020 (the most recent data available); reviewed VA policy and guidance on maternity care coordination; and interviewed VA officials and VA medical center staff. Staff were from four medical centers GAO selected for variation in the average number of deliveries among veterans, among other factors.

What GAO Recommends

GAO is making two recommendations to VA to monitor (1) trends in severe maternal morbidity by veteran characteristics, such as race and ethnicity; and (2) maternity care coordinators' screening of veterans for mental health conditions, including the completion of these screenings and screening results. VA concurred with GAO's recommendations.

View [GAO-24-106209](#). For more information, contact Alyssa M. Hundrup at (202) 512-7114 or hundrupa@gao.gov.

January 2024

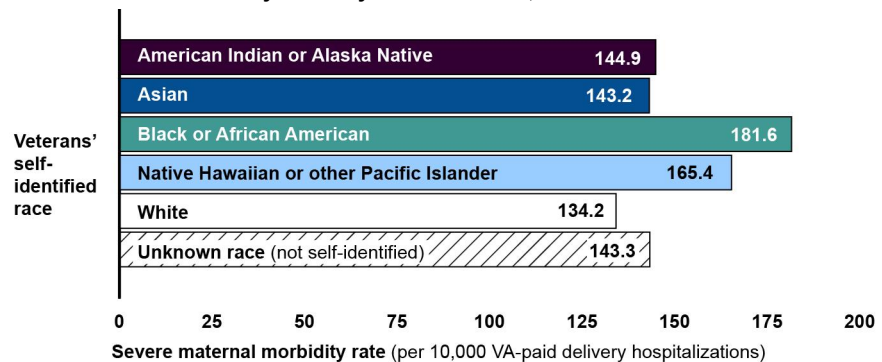
VETERANS HEALTH

VA Should Improve Its Monitoring of Severe Maternal Complications and Mental Health Screenings

What GAO Found

The Department of Veterans Affairs (VA) set a goal to understand and reduce veterans' maternal deaths and severe maternal morbidity, which is an unexpected outcome or complication of labor and delivery resulting in significant health consequences. VA data showed that 13 veterans died from pregnancy-related causes out of about 40,000 VA-paid delivery hospitalizations from fiscal years 2011 through 2020, 11 of whom were White. Further, GAO's analysis indicates the severe maternal morbidity rate increased from 93.5 per 10,000 VA-paid delivery hospitalizations in fiscal year 2011 to 184.6 per 10,000 in fiscal year 2020. This rate was highest among Black or African American veterans. VA monitors information on maternal deaths by race and ethnicity, and intends to start monitoring severe maternal morbidity rates. However, VA has not specified whether it will monitor these rates by race and ethnicity, among other veteran characteristics. Doing so would enhance VA's ability to improve this adverse maternal health outcome by identifying needed medical interventions or care coordination improvements for particular populations.

Severe Maternal Morbidity Rates by Veterans' Race, Fiscal Years 2011–2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | [GAO-24-106209](#)

Note: VA data capture the number of veterans who had at least one severe maternal morbidity that was not a blood products transfusion as of labor and delivery, using the Centers for Disease Control and Prevention's definition of such morbidity and the Office of Management and Budget's categories of race. American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander veterans had fewer than 1,000 VA-paid delivery hospitalizations each from fiscal years 2011 through 2020; thus, rates for these groups may be subject to fluctuations if calculated for different periods.

According to research, mental health conditions may increase the risk for severe maternal health complications, as well as the risk of maternal death by suicide. VA requires that each VA medical center designate a maternity care coordinator to serve as a liaison among pregnant and postpartum veterans and their health care providers. These staff are required to screen veterans for depression, suicide risk, and, as of October 2023, anxiety and post-traumatic stress disorder. VA officials have taken initial steps to monitor the occurrence and results of these screenings by hiring knowledgeable staff to help identify relevant data. However, VA officials have yet to determine when they will begin such monitoring or how frequently it will occur. As a result, VA may not have necessary information to ensure screenings are completed, which may be particularly important as the new screenings are implemented. Further, VA may lack information on ways to improve maternity care coordination based on screening results.

Contents

GAO Highlights	ii
Letter	1
Background	6
Most Pregnancy-Related Deaths and Deliveries Were Among White Veterans, while Black Veterans Had Higher Severe Maternal Morbidity Rates	12
VA Reviews Maternal Deaths and Plans to Monitor Severe Maternal Morbidity, but Has Not Fully Specified What Such Monitoring Will Include	21
VA Requires that Maternity Care Coordinators Conduct Mental Health Screenings, but Does Not Monitor their Occurrence or Results	25
Maternity Care Coordinators Are Required to Obtain Health Information from Pregnant Veterans, and Communicate Information Based on Need	32
Conclusions	37
Recommendations for Executive Action	37
Agency Comments	38
Appendix I: Additional Information on Scope and Methodology	40
Appendix II: Severe Maternal Morbidity Rates among Veterans, Fiscal Years 2011 through 2020	46
Appendix III: Severe Maternal Morbidity Rates by Veterans' Age, Fiscal Years 2011 through 2020	48
Appendix IV: Severe Maternal Morbidity Rates by the Location of Veterans' Residences, Fiscal Years 2011 through 2020	51
Appendix V: Comments from the Department of Veterans Affairs	54
Accessible Text for Appendix V: Comments from the Department of Veterans Affairs	57
Appendix VI: GAO Contact and Staff Acknowledgments	59
Tables	
Table 1: Number and Proportion of VA-Paid Delivery Hospitalizations by Selected Races and Ethnicity of Veterans, Fiscal Years 2011 and 2020	7
Accessible Data Table for Figure 1	16

Table 2: Severe Maternal Morbidity Rates among Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020⁶

Figures

Figure 1: Severe Maternal Morbidity Rates among Veterans with a VA-Paid Delivery Hospitalization as of Delivery, Postpartum, and Late Postpartum, Fiscal Years 2011—2020	16
Figure 2: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Race of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020	18
Figure 2: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Race of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020	19
Figure 3: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Ethnicity of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020	20
Accessible Data Table for Figure 3	20
Figure 4: Department of Veterans Affairs Maternity Care Coordinator (MCC) Telephone Care Program Requirements on Veterans Mental Health Screenings and Questions Related to Substance Use	26
Figure 5: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Age of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020	49
Accessible Data Table for Figure 5	50
Figure 6: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by the Location of the Residences of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020	52
Accessible Data Table for Figure 6	52

Abbreviations

CDC	Centers for Disease Control and Prevention
MCC	maternity care coordinator
OWH	Office of Women's Health
PTSD	post-traumatic stress disorder
SMM	severe maternal morbidity
VA	Department of Veterans Affairs

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



January 16, 2024

The Honorable Jon Tester
Chairman
The Honorable Jerry Moran
Ranking Member
Committee on Veterans' Affairs
United States Senate

The Honorable Mike Bost
Chairman
The Honorable Mark Takano
Ranking Member
Committee on Veterans' Affairs
House of Representatives

In the United States, an increasing number of women are dying from complications related to pregnancy.¹ The maternal mortality rate in the United States is higher than that of other comparable, developed nations and most of these deaths are considered preventable.² Further, every year, tens of thousands of women in the United States experience negative health consequences from severe maternal morbidity (SMM). Specifically, SMM is an unexpected outcome or complication of labor and delivery resulting in significant short- or long-term health consequences. Black or African American and American Indian or Alaska Native women are particularly at risk for these types of adverse maternal health

¹According to the Centers for Disease Control and Prevention (CDC), approximately 750 women in the United States died from pregnancy-related causes in 2019, increasing to approximately 850 women in 2020 and approximately 1,200 women in 2021. See Donna L. Hoyert, *Maternal Mortality Rates in the United States, 2021*, NCHS Health E-Stats (March 2023).

²See Roosa Tikkanen et al., *Maternal Mortality and Maternity Care in the United States Compared to 10 Other Developed Countries* (Commonwealth Fund, Nov. 18, 2020), and Michael C. Lu, "Reducing Maternal Mortality in the United States," *JAMA*, vol. 320, no. 12 (2018): 1237-1238. The World Health Organization defines the maternal mortality ratio as the number of maternal deaths per 100,000 live births. Maternal deaths are defined as female deaths from any cause related to or aggravated by pregnancy or its management—excluding accidental or incidental causes—while pregnant or within 42 days of the end of pregnancy irrespective of the duration and site of the pregnancy.

outcomes.³ These outcomes and risks prompted the White House to issue a report in June 2022 on the nation’s maternal health crisis.⁴

The Department of Veterans Affairs (VA) operates one of the nation’s largest health care systems (administered by VA’s Veterans Health Administration) and provides services to a diverse population of veterans, including women. According to VA, women are the fastest growing group in the population of veterans using VA services, and female veterans accounted for 30 percent of new VA health care system enrollees as of September 2023.

VA provides maternity benefits by referring veterans to local community maternity care providers and covering the cost of care rather than providing maternity care at VA medical centers.⁵ VA requires that each VA medical center designate a maternity care coordinator (MCC) to serve as a liaison among pregnant and postpartum veterans, veterans’ community maternity care providers, and veterans’ VA providers who may

³Throughout this report, we use the term “Black” to collectively refer to veterans who are Black or African American. GAO previously reported that according to CDC data, from 2007 through 2016, non-Hispanic Black women were more than three times as likely to die from pregnancy-related causes compared to non-Hispanic White women. Further, non-Hispanic American Indian or Alaska Native women were more than two times as likely to die from pregnancy-related causes. See GAO, *Maternal Mortality: Trends in Pregnancy-Related Deaths and Federal Efforts to Reduce Them*, [GAO-20-248](#) (Washington, D.C.: Mar. 12, 2020). Research shows that SMM rates among non-Hispanic Black women follow similar patterns. See Kathryn R. Fingar et al., *Trends and Disparities in Delivery Hospitalizations Involving Severe Maternal Morbidity, 2006-2015*, Healthcare Cost and Utilization Project Statistical Brief #243 (Rockville, Md.: Agency for Healthcare Research and Quality, September 2018).

⁴See The White House, *White House Blueprint for Addressing the Maternal Health Crisis* (June 2022). The blueprint includes actions to be taken across the federal government, including by the Department of Veterans Affairs, to improve maternal health care.

⁵VA uses the term women to refer to gender identities inclusively. As such, for the purposes of this report, we use the term “women,” or the related pronouns “she” and “her,” to refer to the population who may become pregnant, but acknowledge it does not include all people who may do so. For example, people who do not identify as either male or female may become pregnant, as may some transgender men. VA covers maternity care provided by authorized community health care providers, including, according to VA officials, obstetricians, family medicine physicians who practice obstetrics, and certified nurse midwives. For the purposes of this report, we use the term “community maternity care providers” to refer to all such providers.

treat these veterans for co-existing physical or mental health conditions.⁶ VA data indicate that in fiscal year 2020 there were 4,766 delivery hospitalizations among veterans who used VA maternity benefits to pay for their deliveries, an increase of approximately 85 percent from fiscal year 2011.⁷ Among the delivery hospitalizations that occurred in fiscal year 2020, approximately 30 percent were among veterans self-identified as other than White.

The Protecting Moms Who Served Act of 2021 codified VA maternity care coordination, and the White House report on the nation's maternal health crisis called for VA to expand the period such coordination is available to veterans.⁸ In October 2023, VA made maternity care coordination available to veterans from their pregnancy through 12 months after delivery, rather than MCCs providing one contact after delivery or postpartum, as MCCs did under previous guidance.

The Protecting Moms Who Served Act of 2021 also includes a provision for GAO to review maternal health outcomes among veterans, as well as VA maternity care services.⁹ In this report, we examine

1. what available VA data indicate about maternal health outcomes among pregnant and postpartum veterans;
2. actions VA has taken to monitor maternal health outcomes among pregnant and postpartum veterans;

⁶See Department of Veterans Affairs, *Veterans Health Administration Directive 1330.01(6), Health Care Services for Women Veterans* (Washington, D.C.: amended Sept. 9, 2022). VA provides enrolled veterans with a full range of inpatient and outpatient services through VA medical centers, including primary care and some specialty care services. According to VA officials, MCCs are expected to have a health professional background, and most MCCs are nurses or social workers. VA officials stated that some MCCs have other health professional backgrounds as physicians, psychologists, or registered dietitians.

⁷We reviewed data on VA-paid delivery hospitalizations rather than pregnancies because, according to VA officials, it is difficult to accurately identify the number of pregnant veterans. For example, the officials said they are not always informed if a veteran's pregnancy ends early, possibly leading to an over count of this number. Using VA data, we also calculated the rate of certain maternal health outcomes per the number of VA-paid delivery hospitalizations. Specifically, we calculated the SMM rate per 10,000 VA-paid delivery hospitalizations, as well as the rate of deaths among pregnant and postpartum veterans per 100,000 VA-paid delivery hospitalizations.

⁸Pub. L. No. 117-69, § 3, 135 Stat. 1495, 1496.

⁹Pub. L. No. 117-69, § 4, 135 Stat. at 1496.

3. the extent to which VA facilitates mental health screenings for pregnant and postpartum veterans; and
4. how and when VA MCCs obtain health information about pregnant and postpartum veterans, and communicate health information to VA providers and community maternity care providers.

To examine what available VA data indicate about maternal health outcomes, we analyzed VA data on deaths and severe maternal morbidity from fiscal years 2011 through 2020—the most recent years for which data were available at the time of our review—among pregnant and postpartum veterans. These data reflect outcomes among veterans who received maternity care provided by referral to local community maternity care providers through VA’s Veterans Community Care Program, because VA does not provide such care at VA medical centers.¹⁰ We analyzed these data by veterans’ self-identified race and ethnicity, veterans’ age, and whether veterans lived in rural areas.

To examine actions VA has taken to monitor maternal health outcomes among pregnant and postpartum veterans, we interviewed VA officials, including Office of Women’s Health (OWH) officials who are responsible for VA maternity care services, and reviewed relevant agency documentation, such as a form that describes information officials review related to deaths among pregnant and postpartum veterans. We evaluated VA’s monitoring efforts against OWH’s Maternal Health Strategic Plan, which outlines goals to improve maternal health outcomes. We also evaluated VA’s efforts against federal internal control standards.¹¹

To examine the extent to which VA facilitates mental health screenings for pregnant and postpartum veterans by its providers, we interviewed

¹⁰The VA MISSION Act of 2018 required that VA implement a community care program to ensure veterans’ access to timely, quality care. See Pub. L. No. 115-182, tit. I, § 101, 132 Stat. 1393, 1395-1404. VA pays for community provided health services under certain conditions, such as if a veteran needs a service—such as maternity care—that is not available at any VA medical center. As of September 2023, VA contracts with two third-party administrators—Optum and TriWest—to develop and manage five regional Community Care Networks to provide such care.

¹¹See GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014). Internal control is a process effected by an entity’s management, oversight body, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved. We determined that the information and communication component of internal controls were significant to this objective, along with the related principle that management should use quality information to achieve their objectives and identify and address risks.

OWH officials regarding VA providers' roles and responsibilities. We also reviewed the relevant VA policy and guidance, such as VA's directive on maternity care and coordination; MCC training materials; and VA guidance for MCCs on outreach to veterans.¹² We evaluated VA's monitoring of mental health screenings against VA's directive on policy management, as well as federal internal controls.¹³

To examine how and when MCCs obtain and communicate health information about pregnant and postpartum veterans, we similarly interviewed OWH officials regarding this process and reviewed the same VA policy and guidance as for our third objective. We also interviewed officials from the VA Office of Integrated Veterans Care who are responsible for coordinating referrals to community maternity care providers. Additionally, we interviewed staff from four selected VA medical centers and their associated Veterans Integrated Service Networks, as well as selected stakeholder organizations, including those knowledgeable in maternal issues and veterans' perspectives.¹⁴ (See app. I for additional details on our data analysis, selection of VA medical centers, and stakeholder interviews.)

We conducted this performance audit from August 2022 to January 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹²See Department of Veterans Affairs, *Veterans Health Administration Directive 1330.03, Maternity Health Care and Coordination* (Washington, D.C.: Nov. 3, 2020).

¹³See Department of Veterans Affairs, *Veterans Health Administration Directive 0999: Policy Management* (Washington, D.C.: Mar. 29, 2022); and [GAO-14-704G](#). We determined that the internal controls principle that management should use quality information to achieve their objectives and identify and address risks was significant to this objective.

¹⁴Veterans Integrated Service Networks are regional health care networks that manage the day-to-day functions of VA medical centers within their networks through, for example, administrative and clinical oversight. There are 18 regional networks that manage 172 medical centers.

Background

VA's OWH is responsible for addressing the needs of and ensuring gender-sensitive health care is available to the female veteran population. This includes maternity care throughout pregnancy; during labor and delivery; and postpartum, the period after delivery.¹⁵

VA Maternity Benefits

VA pays for maternity care provided by referral to local community maternity care providers through VA's Veterans Community Care Program, rather than providing such care at VA medical centers. However, veterans may continue to receive health care from VA providers related to co-existing physical or mental health conditions during their pregnancies, or for maternity-related laboratory tests or medications. Veterans may also have an appointment with a VA primary care provider generally 3 months after delivery.

VA data indicate that 39,720 veterans used VA maternity benefits from fiscal years 2011 through 2020 to pay for their delivery hospitalizations. Further, the annual number of such veterans almost doubled over this 10-year period, from 2,567 veterans in fiscal year 2011 to 4,766 veterans in fiscal year 2020 (an increase of 85.7 percent).

According to the VA data, the majority of these VA-paid delivery hospitalizations were for veterans who self-identified their race as White and their ethnicity as non-Hispanic or Latino. However, the proportion of VA-paid delivery hospitalizations among these two populations decreased over this 10-year period, whereas it increased among veterans who self-identified their race as Black or their ethnicity as Hispanic or Latino. (See table 1.)

¹⁵Such care includes, for example, prenatal education, physical exams, obstetrical ultrasounds, prescription drugs, and social work and mental health services.

Table 1: Number and Proportion of VA-Paid Delivery Hospitalizations by Selected Races and Ethnicity of Veterans, Fiscal Years 2011 and 2020

	Fiscal year 2011		Fiscal year 2020		Total, fiscal years 2011—2020	
	Number of hospitalizations	Proportion of hospitalizations ^a	Number of hospitalizations	Proportion of hospitalizations ^a	Number of hospitalizations	Proportion of hospitalizations ^a
Veterans' race^b						
White	1,681	65.5%	2,890	60.6%	25,840	64.2%
Black or African American	589	23.0%	1,203	25.2%	9,305	23.4%
Veterans' ethnicity^c						
Non-Hispanic or Latino	2,265	88.2%	3,920	82.3%	34,046	85.7%
Hispanic or Latino	252	9.8%	675	14.2%	4,795	12.1%

Source: GAO Analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

^aVA data indicate there were 2,567 VA-paid delivery hospitalizations in fiscal year 2011, 4,766 in fiscal year 2020, and 39,720 from fiscal years 2011 through 2020. We used these total numbers to calculate each reported proportion, respectively.

^bAccording to VA officials, veterans' race was self-identified using categories established by the Office of Management and Budget as American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. The proportion of VA-paid delivery hospitalizations among American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander veterans ranged from approximately 1 to 2 percent. Veterans of any race may be Hispanic or Latino or non-Hispanic or Latino for the purposes of these data.

^cAccording to VA officials, veterans' ethnicity was also self-identified using categories established by the Office of Management and Budget as Hispanic or Latino or non-Hispanic or Latino. Veterans who are non-Hispanic or Latino, or Hispanic or Latino, may be of any race for the purposes of these data. The number (or proportion) of veterans with a VA-paid delivery hospitalization by each ethnicity may not add up to the total number veterans with such deliveries (or 100 percent) for each period because some veterans did not self-report their ethnicity, so it was unknown.

Maternity Care Coordination

According to VA officials, all enrolled veterans are eligible to participate in maternity care coordination regardless of whether they choose to use VA maternity benefits.¹⁶ MCCs are required to have a series of contacts with

¹⁶VA officials told us they are unable to accurately identify the number of veterans who participate in maternity care coordination due to data limitations. Specifically, according to the officials, they recently completed a survey of MCCs that included questions about MCCs' caseloads, but these data have not been validated. With these limitations, they said that the number of pregnant veterans is a reasonable proxy, and therefore they estimate that approximately 9,000 veterans participated in maternity care coordination in fiscal year 2022. However, as previously noted, VA officials also stated it is difficult to accurately identify the number of pregnant veterans.

veterans who choose to participate in this service to discuss their health during pregnancy, as well as postpartum. MCCs may share any resulting information with these providers. Prior to October 2023, VA expected that MCCs have a minimum of four telephone contacts with veterans who participated in this service—one contact during each of the three trimesters of pregnancy and one contact during the postpartum period that may occur anytime up to 8 weeks after delivery, according to VA officials. However, in October 2023, VA officials increased the minimum number of contacts to eight, with an expectation that MCCs make an additional four quarterly postpartum contacts as part of the department's efforts to provide support to veterans for up to 12 months after delivery.

VA developed the MCC Telephone Care Program manual to guide each contact MCCs have with veterans. The manual outlines various topics that MCCs are to discuss with veterans during each contact and specifically includes conversation scripts, questions, or health screenings related to these topics. VA issued an updated manual as part of its October 2023 expansion of the number of contacts MCCs have with veterans. This manual also adds to the topics included in the prior version—which, according to officials, was issued in August 2021.¹⁷ VA also developed a corresponding template for documenting each contact in a veteran's VA electronic health record. MCCs specifically can use this template—known as the electronic health record national MCC note template—to document a veteran's responses to the topic-specific questions and health screening results.¹⁸

Maternal Health Outcomes

VA's OWH developed a Maternal Health Strategic Plan that includes a vision of understanding and reducing deaths and severe maternal morbidity among pregnant and postpartum veterans, and a goal of reducing racial and ethnic disparities, as well as other disparities in these outcomes. VA OWH developed the plan in 2022, according to VA officials. We have previously reported on research showing that racial and ethnic disparities in maternal health outcomes persist, even after

¹⁷For the purposes of this report, we use the terms "Telephone Care Program manual" or "manual" when referring to topics or related conversation scripts, questions, or health screenings included in both versions of the manual—that is, the version issued in August 2021, as well as the version issued as part of the October 2023 expansion of the number of contacts MCCs have with veterans.

¹⁸For the purposes of this report, we refer to this as the "electronic health record MCC template."

controlling for other factors such as socioeconomic status, education, and access to care.¹⁹

Deaths among pregnant and postpartum women may be reported as pregnancy-associated deaths or pregnancy-related deaths. The Protecting Moms Who Served Act of 2021 defines a pregnancy-associated death as the death of a pregnant or postpartum individual, by any cause, that occurs during pregnancy or within 1 year following pregnancy, regardless of the outcomes, duration, or site of the pregnancy.²⁰ A subset of pregnancy-associated deaths are pregnancy-related deaths, which the act defines as the death of a pregnant or postpartum individual that occurs during pregnancy or within one year following pregnancy from a pregnancy complication, a chain of events initiated by a pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.²¹

In contrast, severe maternal morbidity, or SMM, typically is defined as an outcome specifically of labor and delivery.²² However, CDC has stated that expanding the reporting of SMM to also focus on postpartum outcomes may improve understanding of the burden and impact of such morbidity and create opportunities to improve maternity care. One study found that an average of 15 percent of women with Medicaid or

¹⁹See GAO, *Maternal Health: Outcomes Worsened and Disparities Persisted During the Pandemic*, [GAO-23-105871](#) (Washington, D.C.: Oct. 19, 2022).

²⁰Pub. L. No. 117-69, § 2, 135 Stat. at 1495.

²¹Pub. L. No. 117-69, § 2, 135 Stat. at 1495. CDC's Pregnancy Mortality Surveillance System defines a pregnancy-related death as the death of a women while pregnant or within one year of the end of pregnancy from any cause related to or aggravated by the pregnancy. CDC uses this surveillance system to calculate the pregnancy-related mortality ratio, an estimate of the number of pregnancy-related deaths per 100,000 live births.

²²CDC developed a list of 21 indicators based on International Classification of Diseases diagnosis and procedure codes that it uses to identify SMM that is present during delivery hospitalizations using hospital discharge data.

commercial insurance in the general population who had a SMM were first diagnosed after delivery.²³

Maternal Mental Health

In addition to being a risk factor for maternal mortality and severe maternal morbidity, mental health conditions such as depression can interfere with a woman's ability to care for herself and her pregnancy, according to the CDC. For example, researchers have reported that women with depression, as well as anxiety, may be more likely to smoke, have a substance use problem, or not follow medical advice.²⁴

Among veterans, research indicates that mental health conditions may also contribute to the risk of adverse maternal health outcomes. For example, researchers have found that veterans with depression or post-traumatic stress disorder (PTSD) may be at increased risk for gestational diabetes and hypertensive disorders such as preeclampsia—a pregnancy-related high blood pressure disorder that can lead to the onset of seizures or coma.²⁵ Further, mental health conditions may increase the risk of suicide—a common direct cause of maternal mortality nationally,

²³The study's authors reviewed SMM among two cohorts of women—those who had Medicaid coverage and those who had commercial insurance. Among the former, 15.7 percent were diagnosed with SMM after their delivery hospitalizations. Among the latter, 14.1 percent received such a diagnosis after their delivery hospitalizations. See Jiajia Chen et al., "Assessment of Incidence and Factors Associated with Severe Maternal Morbidity After Delivery Discharge Among Women in the US," *JAMA Network Open*, vol. 4, no. 2 (2021), 1-14.

²⁴See Susan Kendig et al., "Consensus Bundle on Maternal Mental Health: Perinatal Depression and Anxiety," *Obstet Gynecol*, vol. 129, no. 3 (2017), 422-430.

²⁵See Jonathan G. Shaw et al., "Post-Traumatic Stress Disorder and Antepartum Complications: A Novel Risk Factor for Gestational Diabetes and Preeclampsia," *Paediatric and Perinatal Epidemiology*, vol. 31, issue 3 (2017), 185-194; and Jodie Katon et al., "Gestational Diabetes and Hypertensive Disorders of Pregnancy Among Women Veterans Deployed in Service of Operations in Afghanistan and Iraq," *Journal of Women's Health*, vol. 23, no. 4 (2014), 792-800. The former found that among approximately 14,000 veterans who used VA maternity benefits to pay for their deliveries between 2000 and 2012, those with a current diagnosis of PTSD had higher rates of gestational diabetes and preeclampsia compared to those without such a diagnosis. Similarly, the latter found that among approximately 2,500 veterans who used VA maternity benefits between 2001 and 2010, those with depression or PTSD also had higher rates of gestational diabetes and hypertensive disorders such as preeclampsia.

according to researchers.²⁶ VA has reported that mental health conditions are more common among pregnant veterans than non-pregnant veterans and pregnant women in the general population.²⁷

Researchers have also identified that maternity care coordination programs—which aim to optimize communication among all providers concerned with a pregnant patient’s health care to ensure they have current information regarding the patient’s condition—are associated with improved maternal health outcomes.²⁸

VA’s directive on maternity care and coordination requires that VA providers screen pregnant veterans for specific mental health conditions, including anxiety, depression (inclusive of postpartum depression), PTSD, and substance use.²⁹ VA has developed several programs intended to make close to real-time mental health care support available to providers who conduct these screenings, because they may not be mental health providers themselves. For example, under VA’s Reproductive Mental Health Consultation Program, all VA providers are to have virtual access to a multidisciplinary team of experts (two psychiatrists, a social worker, and a clinical pharmacy specialist) to answer questions about mental health concerns related to pregnancy, among other reproductive mental health issues.³⁰

Further, VA’s Primary Care Mental Health Integration model requires that VA medical centers annually serving at least 5,000 veterans integrate

²⁶See Joan L. Combellick et al., “Severe Maternal Morbidity Among a Cohort of Post-9/11 Women Veterans,” *Journal of Women’s Health*, vol. 29, no. 4 (2020), 577-584. The CDC has reported that from 2017 through 2019, mental health conditions were the leading underlying cause of pregnancy-related deaths, accounting for 23 percent of such deaths and including deaths by suicide and overdose related to substance use disorder.

²⁷See Department of Veterans Affairs and Department of Defense, *VA/DOD Clinical Practice Guideline for the Management of Pregnancy*, version 3.0 (March 2018).

²⁸See Kristina M. Cordasco et al., “Care Coordination for Pregnant Veterans: VA’s Maternity Care Coordinator Telephone Care Program,” *Translational Behavioral Medicine*, vol. 8, issue 3 (2018), 419-428.

²⁹See Department of Veterans Affairs, *Veterans Health Administration Directive 1330.03*.

³⁰See Laura J. Miller et al., “The Veterans Health Administration Reproductive Mental Health Consultation Program: An Innovation to Improve Access to Specialty Care,” *J Gen Intern Med*, vol. 37, suppl. 3 (2022), S833-S836. The *White House Blueprint for Addressing the Maternal Health Crisis* noted the importance of screening women for maternal mental health conditions and this type of real time consultation. The blueprint also cited VA’s program as an example of such a consultation service.

mental health services into the facility's primary care services.³¹ Specifically, facilities are required to have mental health providers (such as psychologists, psychiatrists, and social workers) available within primary care settings. These mental health providers work collaboratively with primary care providers to assess and treat veterans with mental health symptoms and conditions, such as anxiety or depression.

Most Pregnancy-Related Deaths and Deliveries Were Among White Veterans, while Black Veterans Had Higher Severe Maternal Morbidity Rates

Most of the 13 Pregnancy-Related Deaths and the Almost 40,000 Deliveries that Occurred from Fiscal Years 2011 through 2020 Were Among White Veterans

Our analysis of VA data indicates there were 13 pregnancy-related deaths—or deaths from a pregnancy complication—among the almost 40,000 VA-paid delivery hospitalizations from fiscal years 2011 through 2020. Our analysis also indicates that there were an additional 16 deaths from any cause, including accidental causes, bringing the total number of pregnancy-associated deaths to 29.

Pregnancy-related deaths. Our analysis of the VA data indicates that 13 pregnancy-related deaths occurred out of the almost 40,000 VA-paid delivery hospitalizations, the majority of which (11) were among White

³¹For more information on VA's Primary Care Mental Health Integration model, see GAO, *Veterans Health Care: Staffing Challenges Persist for Fully Integrating Mental Health and Primary Care Services*, [GAO-23-105372](#) (Washington, D.C.: Dec. 15, 2022).

veterans. All of these pregnancy-related deaths occurred during pregnancy through 42 days postpartum.³²

Further, our analysis of the VA data on these 13 pregnancy-related deaths indicates that

- all were among non-Hispanic or Latino veterans;
- 10 were among veterans over the age of 30; and
- 11 were among veterans residing in an urban area.

The majority of VA-paid delivery hospitalizations were also among veterans of these same characteristics.³³

The causes of these pregnancy-related deaths varied and included suicide, COVID-19 related pneumonia, pulmonary embolism, and aneurysm.³⁴ According to our analysis of the VA data, the rate of

³²As previously noted, deaths that occur while pregnant or within 42 days of the end of pregnancy are referred to as “maternal deaths,” as defined by the World Health Organization, and are used to calculate the maternal mortality ratio. Thus, VA refers to these 13 deaths as cases of “maternal mortality.” We refer to these as “pregnancy-related deaths” instead, as we requested data on such deaths that occurred within one year of the end of pregnancy, as defined by the Protecting Moms Who Served Act of 2021. However, VA officials told us that determining whether a death that occurs between 43 and 365 days postpartum is pregnancy-related is often disputable, especially in cases related to a mental health condition. Thus, the officials told us they did not review the deaths that occurred during this late postpartum period specifically to determine whether they were pregnancy-related.

³³As previously noted, VA data indicate that VA-paid for 39,720 delivery hospitalizations for veterans from fiscal years 2011 through 2020. The majority of these hospitalizations were for White veterans (approximately 25,480, or 64.2 percent). Black veterans’ delivery hospitalizations accounted for the second highest share by race (9,305, or 23.4 percent). Further, the majority of total delivery hospitalizations were for non-Hispanic or Latino veterans (34,046, or 85.8 percent), veterans over the age of 30 (25,318, or 63.7 percent), and veterans who resided in urban areas (28,887, or 72.7 percent).

³⁴A pulmonary embolism occurs when a clot breaks loose and travels through the bloodstream to the lungs. An aneurysm is an abnormal swelling or bulge in the wall of a blood vessel, such as an artery.

pregnancy-related deaths over this 10-year period was about 32.7 per 100,000 VA-paid delivery hospitalizations.³⁵

Remaining pregnancy-associated deaths. Our analysis of the VA data indicates the remaining 16 of the 29 pregnancy-associated deaths occurred postpartum (through 365 days after delivery). For the cases that occurred between 43 and 365 days postpartum, which accounted for the majority of these 16 deaths, VA officials told us they did not review them specifically to determine whether they were pregnancy-related. According to VA officials and as previously noted, determining whether a death that occurs between 43 and 365 days postpartum is pregnancy-related is often disputable, especially in cases related to a mental health condition.³⁶

Further, our analysis of the VA data on these 16 deaths indicates that

- eight were among White veterans and seven were among Black veterans;
- all were among non-Hispanic or Latino veterans;
- 11 were among veterans over the age of 30; and
- 14 were among veterans residing in an urban area.

Examples of the causes of death in these cases included cardiomyopathy, aneurysm, suicide, overdose, homicide, and accidental causes.³⁷

³⁵The maternal mortality ratio and pregnancy-related mortality ratio are commonly used by the World Health Organization and CDC, respectively, to report on deaths among pregnant and postpartum women. The data VA captures differs from the World Health Organization's and CDC's definition of each ratio. Specifically, as previously noted, the World Health Organization defines the maternal mortality ratio, and CDC defines the pregnancy-related mortality ratio, as the number of such deaths that occurred per 100,000 live births. However, the VA data capture the number of VA-paid delivery hospitalizations, which may differ from the number of live births. Given this limitation, we (1) report the "rate of pregnancy-related deaths," rather than maternal mortality ratio or pregnancy-related mortality ratio; and (2) are unable to compare such deaths among veterans to those among the general population.

³⁶Thus, according to VA officials, these 16 deaths may include deaths related to or aggravated by pregnancy or its management, but the VA data do not differentiate these deaths from deaths with accidental causes.

³⁷Cardiomyopathy refers to problems with a person's heart muscles that can make it harder for the heart to pump blood, which can lead to heart failure or cardiac arrest.

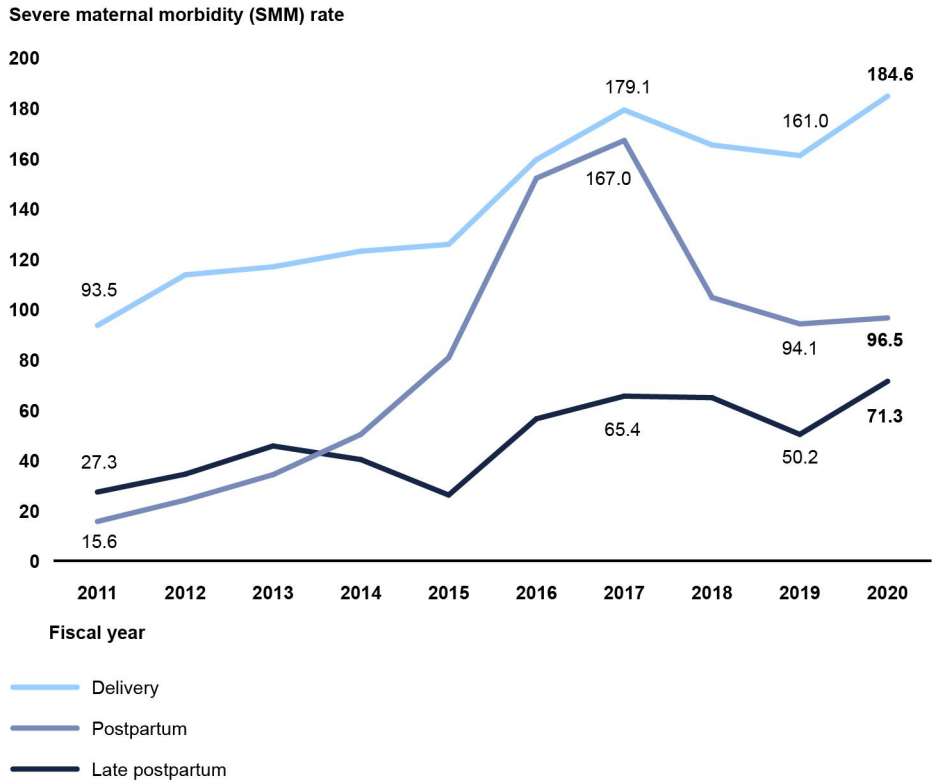
Severe Maternal Morbidity Rates Generally Increased and Were Higher Among Black Veterans

SMM rates among veterans. Our analysis of VA data indicates that SMM rates generally increased from fiscal years 2011 through 2020.³⁸ Specifically, SMM rates among veterans at the time of their deliveries increased from 93.5 per 10,000 VA-paid delivery hospitalizations in fiscal year 2011 to 184.6 per 10,000 VA-paid delivery hospitalizations in fiscal year 2020. Further, SMM rates increased postpartum (within 42 days of delivery) and late postpartum (within 43 and 365 days after delivery) over this 10-year period, although these rates were consistently lower than the SMM rate as of delivery.³⁹ (See fig. 1.)

³⁸We did not compare SMM rates among veterans to those among the general population, because certain risk factors that have been associated with maternal morbidity are more common among veterans than among the general population, according to literature we reviewed. As such, according to VA officials, a risk adjustment would need to be completed to account for these differences and make the rates comparable. However, relevant data and information were not available to do so.

³⁹We defined three maternal health stages for purposes of our reporting: (1) delivery, defined as a veteran's VA-paid delivery hospitalization through discharge; (2) postpartum, defined as the period within 42 days of the last day of a veteran's VA-paid delivery hospitalization; and (3) late postpartum, defined as the period within 43 to 365 days of the last day of a veteran's VA-paid delivery hospitalization. For the latter two periods, the VA data capture veterans who had a SMM during a VA-paid hospital readmission that occurred postpartum or late postpartum. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

Figure 1: Severe Maternal Morbidity Rates among Veterans with a VA-Paid Delivery Hospitalization as of Delivery, Postpartum, and Late Postpartum, Fiscal Years 2011—2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Accessible Data Table for Figure 1

	Delivery	Postpartum	Late postpartum
2011"	93.5	15.6	27.3
2012"	113.6	24.1	34.4
2013"	116.8	34.2	45.6
2014"	123	50.2	40.2
2015"	125.7	80.7	26.1
2016"	159.4	152	56.4
2017"	179.1	167	65.4
2018"	165.2	104.6	64.8
2019"	161	94.1	50.2
2020"	184.6	96.5	71.3

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Note: The SMM rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services.

The VA data we used to calculate the postpartum and late postpartum SMM rates capture veterans' who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

Additionally, VA data indicate the SMM rate as of delivery and postpartum increased each year from fiscal years 2011 through 2017. Although these SMM rates, as well as the late postpartum rate, decreased over the next 2 years (from fiscal years 2018 through 2019), all three SMM rates increased again in fiscal year 2020. While the cause of this recent increase is unknown, research indicates the COVID-19 pandemic may have contributed to it.⁴⁰ (See app. II for additional information on annual SMM rates and the percent changes in those rates.)

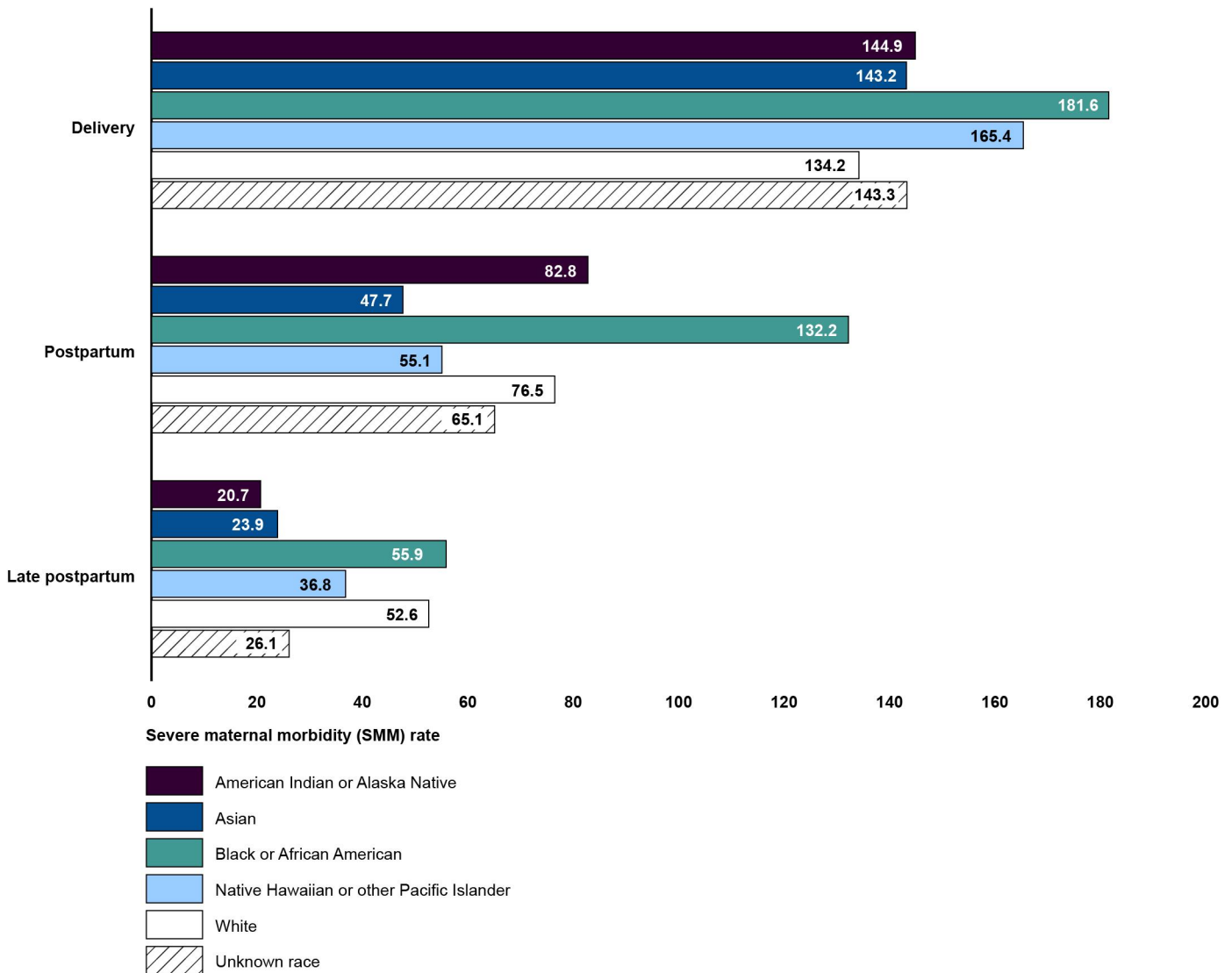
SMM rates by veterans' race and ethnicity. We identified disparities in SMM rates by veterans' race and ethnicity from fiscal years 2011 through 2020. Specifically, our analysis of VA data indicates that among veterans whose race was known, the SMM rate was highest among Black veterans for each maternal health stage—that is, as of delivery (181.6 cases per 10,000 VA-paid delivery hospitalizations), postpartum (132.2 per 10,000 VA-paid delivery hospitalizations), and late postpartum (55.9 cases per 10,000 VA-paid delivery hospitalizations). Compared to the rates for White veterans as of delivery (134.2 per 10,000 VA-paid delivery hospitalizations) and postpartum (76.5 per 10,000 VA-paid delivery hospitalizations), the differences were pronounced.

However, the difference in the SMM rate for Black veterans in the late postpartum period was not as pronounced when compared to the SMM rate for White veterans (52.6 cases per 10,000 VA-paid delivery hospitalizations). Among veterans whose ethnicity was known, the SMM rate was higher among non-Hispanic or Latino veterans (who are of any race) compared to Hispanic or Latino veterans for each maternal health

⁴⁰See, for example, Koji Matsuo et al., "Severe Maternal Morbidity and Mortality of Pregnant Patients with COVID-19 Infection During the Early Pandemic Period in the US," *JAMA Network Open*, vol. 6, no. 4 (2023), 1-6.

stage. (See fig. 2 for SMM rates by veterans' race and fig. 3 for SMM rates by veterans' ethnicity.)

Figure 2: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Race of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Figure 2: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Race of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020

	American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or other Pacific Islander	White	Unknown race
Delivery	144.9	143.2	181.6	165.4	134.2	143.3
Postpartum	82.8	47.7	132.2	55.1	76.5	65.1
Late postpartum	20.7	23.9	55.9	36.8	52.6	26.1

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

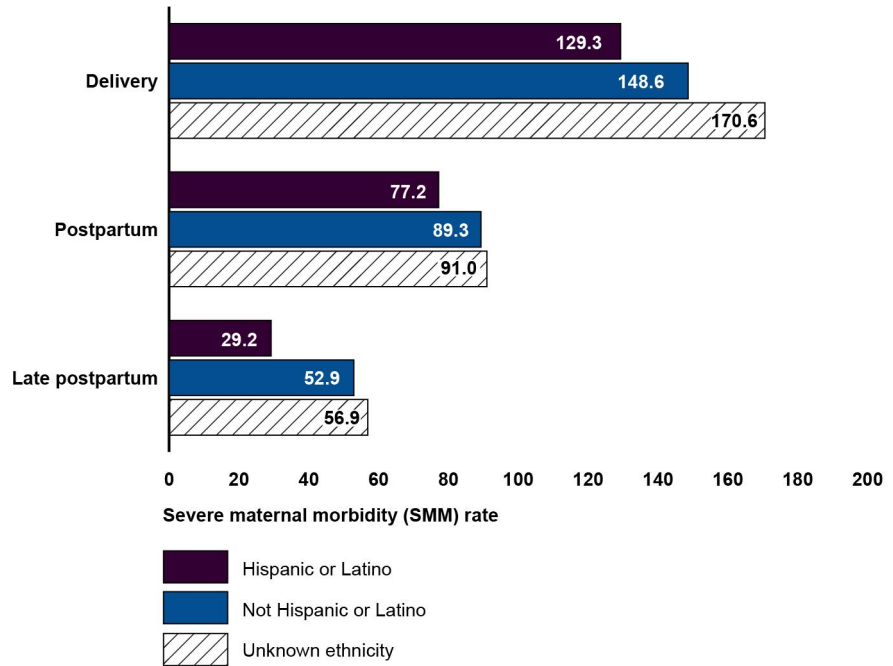
Note: The SMM rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services. American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander veterans had fewer than 1,000 VA-paid delivery hospitalizations each from fiscal years 2011 through 2020; thus, rates for these groups may be subject to fluctuations if calculated for different periods.

The VA data we used to calculate the postpartum and late postpartum SMM rates capture veterans' who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

According to VA officials, veterans' race is self-identified for the purposes of these data using categories established by the Office of Management and Budget. As such, the unknown race category reflects veterans who did not identify their race.

Figure 3: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Ethnicity of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Accessible Data Table for Figure 3

		Hispanic or Latino	Not Hispanic or Latino	Unknown ethnicity
Severe maternal morbidity (SMM) rate	Delivery	129.3	148.6	170.6
	Postpartum	77.2	89.3	91
	Late postpartum	29.2	52.9	56.9

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Note: The SMM rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services. Veterans of unknown ethnicity had fewer than 1,000 VA-paid delivery hospitalizations from fiscal years 2011 through 2020; thus, rates for this group may be subject to fluctuations if calculated for different periods.

The VA data we used to calculate the postpartum and late postpartum SMM rates capture veterans' who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

According to VA officials, veterans' ethnicity is self-identified for the purposes of these data using categories established by the Office of Management and Budget. As such, the unknown ethnicity category reflects veterans who did not identify their ethnicity. Further, individuals that identify as Hispanic or Latino, or non-Hispanic or Latino may be of any race.

SMM rates by veterans' age and urban or rural residence. Our analysis of VA data also indicates differences in SMM rates by veterans' age, as well as disparities in SMM rates by the urban or rural location of veterans' residences from fiscal years 2011 through 2020. Specifically, SMM rates generally increased along with veterans' age for each maternal health stage, with veterans 40 or older (including veterans 40 to 44 and 45 or older) having among the highest SMM rates for each stage.⁴¹ With respect to veterans' urban or rural residences, SMM rates were slightly higher for veterans living in urban areas compared to those living in rural areas as of delivery and postpartum. Conversely, veterans living in rural areas had a higher SMM rate late postpartum. (See app. III and app. IV for more information on SMM rates by various characteristics, such as veterans' age.)

VA Reviews Maternal Deaths and Plans to Monitor Severe Maternal Morbidity, but Has Not Fully Specified What Such Monitoring Will Include

VA monitoring of maternal deaths. In April 2022, VA established a Maternal Mortality Review Committee to help identify and inform needed improvements related to maternal mortality among the veteran population.⁴² Officials told us the committee includes specialists in internal medicine, obstetrics and gynecology, and psychiatry, as well as MCCs. Officials explained the committee is responsible for identifying and

⁴¹Veterans over the age of 45 had the highest SMM rate for each stage, but also had fewer than 1,000 VA-paid delivery hospitalizations from fiscal years 2011 through 2020. Thus, rates for this group may be subject to fluctuations if calculated for different periods. Further, of the 39,720 veterans who used VA maternity benefits from fiscal years 2011 through 2020 to pay for their delivery hospitalizations, 143 veterans (or about 0.4 percent) were over the age of 45.

⁴²Maternal Mortality Review Committees are multidisciplinary committees typically developed by states and other jurisdictions that systematically and comprehensively review information about deaths among pregnant and postpartum women to develop and recommend strategies for preventing future deaths.

reviewing pregnancy-associated deaths (which would include the subset of such deaths that are pregnancy-related), and discussing what could be improved and any contributing factors to the veteran's death. Specifically, officials told us that the committee reviews information related to such deaths every other month. Examples of information reviewed during these meetings include

- veteran demographic information such as age, race, ethnicity, and residence;
- social determinants of health;
- care provided during the pregnancy and postpartum periods; and
- care provided by VA separate from the veteran's pregnancy, including health conditions that could have contributed to maternal mortality.

The committee is to then analyze the extent to which there was an opportunity to alter the maternal health outcome, and practices that were done well and should be reinforced. According to VA officials, the committee primarily reports its findings to OWH, which may share the committee's findings with VA providers or other VA offices as relevant, such as the Office of Social Work and the Office of Integrated Mental Health Care.

VA monitoring of severe maternal morbidity. VA also intends to monitor SMM among pregnant and postpartum veterans on an ongoing basis, but has not fully specified what such monitoring will include. According to VA officials, they worked with a VA research team to develop an approach to use VA-paid delivery hospitalization billing data to identify cases of SMM in a manner consistent with CDC's definition.⁴³ The officials told us they developed their general approach in 2022 and have been working since then to refine it. The officials said the VA research team intends to begin compiling this information in calendar year 2023. The officials also said they intend to use it to facilitate a review of (1) a sample of individual cases of SMM annually, and (2) data on aggregate trends in SMM rates quarterly.⁴⁴ Identifying the best approach to compile, as well as to review, information on cases of SMM took time because of the large number (compared to the number of cases of maternal

⁴³According to VA officials, these data also include billing data for VA-paid hospital readmissions that occur after delivery.

⁴⁴Although VA officials have yet to monitor these data, the officials told us they used this approach to identify and provide us with data on cases of SMM among veterans with a VA-paid delivery hospitalization for this review.

mortality) and complexity of such cases, which often requires review of extensive medical information, according to VA officials. As such, the officials said they prioritized the Maternal Mortality Review Committee's review of pregnancy-associated deaths before focusing on SMM.

Regarding the sample of individual cases of SMM, VA officials told us the existing Maternal Mortality Review Committee will review this information annually beginning in December 2023. The form the committee uses to collect and review information on maternal mortality indicates that it will collect and review the same types of information related to individual cases of SMM. Similar to the committee's review of maternal mortality, its review of cases of SMM will include an analysis of the extent to which there was an opportunity to alter the maternal health outcome and practices that were done well that should be reinforced.

For aggregate trends on SMM rates, the VA research team will compile and report to OWH quarterly, according to VA documentation we reviewed. VA officials stated the researchers likely will begin compiling these data in October 2023. The officials indicated they will review these data to better understand how the VA health care system can help address SMM among veterans. The officials added they may share these data with the Maternal Mortality Review Committee for its awareness, but noted the committee's primary role is to review the sample of individual cases of SMM.

The VA documentation did not outline any specific data trends it plans to examine. VA officials told us they could likely disaggregate data on trends in SMM rates by certain veteran characteristics, such as race and ethnicity, as well as age. However, neither these officials nor available documentation specified whether this will be part of their planned monitoring. Thus, it is unclear whether VA will focus on these or other characteristics, such as whether veterans lived in a rural area, in compiling and reviewing data on trends in SMM rates. Officials explained that developing their approach for monitoring SMM has been an iterative process that may change over time. As such, the specifics of how they will monitor SMM will not be clear until VA fully implements the monitoring efforts.

VA established the goal of understanding and reducing severe maternal morbidity and related disparities in the OWH Maternal Health Strategic Plan. According to the CDC, tracking and understanding trends related to such morbidity are essential in reducing this adverse maternal health outcome. Further, in our prior work, we identified leading practices for

using performance information—such as morbidity rates—by disaggregating data to identify specific aspects of performance, and to analyze the information as needed to focus on particular problem areas.⁴⁵ In addition, a 2020 VA study on SMM among veterans noted that systematic reporting and monitoring of SMM data could better position VA and MCCs to determine the most appropriate medical interventions for veterans, identify service coordination issues, and focus on populations at higher risk to improve maternity care.⁴⁶ The study also noted disparities among the women who experienced SMM across several veteran characteristics, including race and whether veterans lived in a rural area.

VA's intention to monitor SMM is an important step toward meeting its established goal of understanding and reducing severe maternal morbidity and related disparities. However, without clarity on VA's approach, the agency could miss opportunities to monitor data on trends in SMM rates by veteran characteristics, such as race and ethnicity, as it implements this monitoring process. By monitoring trends disaggregated by veteran characteristics, VA can better understand the extent to which there are disparities in veterans' SMM rates—as we, and research, have identified.⁴⁷ This, in turn, will enhance VA's ability to address this adverse maternal health outcome, such as by identifying needed medical interventions or care coordination improvements for particular populations. As the number of veterans using VA maternity benefits increases, monitoring trends of disaggregated data can help VA better ensure all such veterans have the healthiest pregnancy outcomes possible and improve maternal wellbeing before, during, and after delivery.

⁴⁵See GAO, *Managing For Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005).

⁴⁶See Combellick et al., “Severe Maternal Morbidity Among a Cohort of Post-9/11 Women Veterans.”

⁴⁷As previously noted, see Fingar et al., *Trends and Disparities in Delivery Hospitalizations Involving Severe Maternal Morbidity*. In addition to our analysis of VA data on SMM rates by the urban or rural location of veterans' residences, we previously reported that nationally, estimated SMM rates were higher in metropolitan areas from 2016 through 2018. However, in selected states, SMM rates were higher in areas that were rural or underserved for the same period. See GAO, *Maternal Mortality and Morbidity: Additional Efforts Needed to Assess Program Data for Rural and Underserved Areas*, [GAO-21-283](#) (Washington, D.C.: Apr. 8, 2021).

VA Requires that Maternity Care Coordinators Conduct Mental Health Screenings, but Does Not Monitor their Occurrence or Results

Maternity Care Coordinators are Required to Screen Pregnant and Postpartum Veterans for Depression, Suicide Risk, and Anxiety

According to VA officials, MCCs are the providers primarily responsible for implementing the VA directive on maternity care and coordination's requirement to screen pregnant and postpartum veterans for mental health conditions, such as depression, suicide risk, and anxiety.⁴⁸ If a veteran has an appointment with a VA primary care provider during pregnancy or postpartum, VA officials told us the provider may screen the veteran for mental health conditions as well.⁴⁹ The officials noted that not all veterans have an appointment with a primary care provider while pregnant, so MCCs are the VA staff with primary responsibility for screening veterans during this period.

To implement the directive, VA incorporated certain mental health screenings into the Telephone Care Program manual that guides MCCs' contacts with pregnant and postpartum veterans.⁵⁰ Specifically, the 2021 and October 2023 versions of the manual include screenings for depression and suicide risk; VA added screenings for anxiety and PTSD

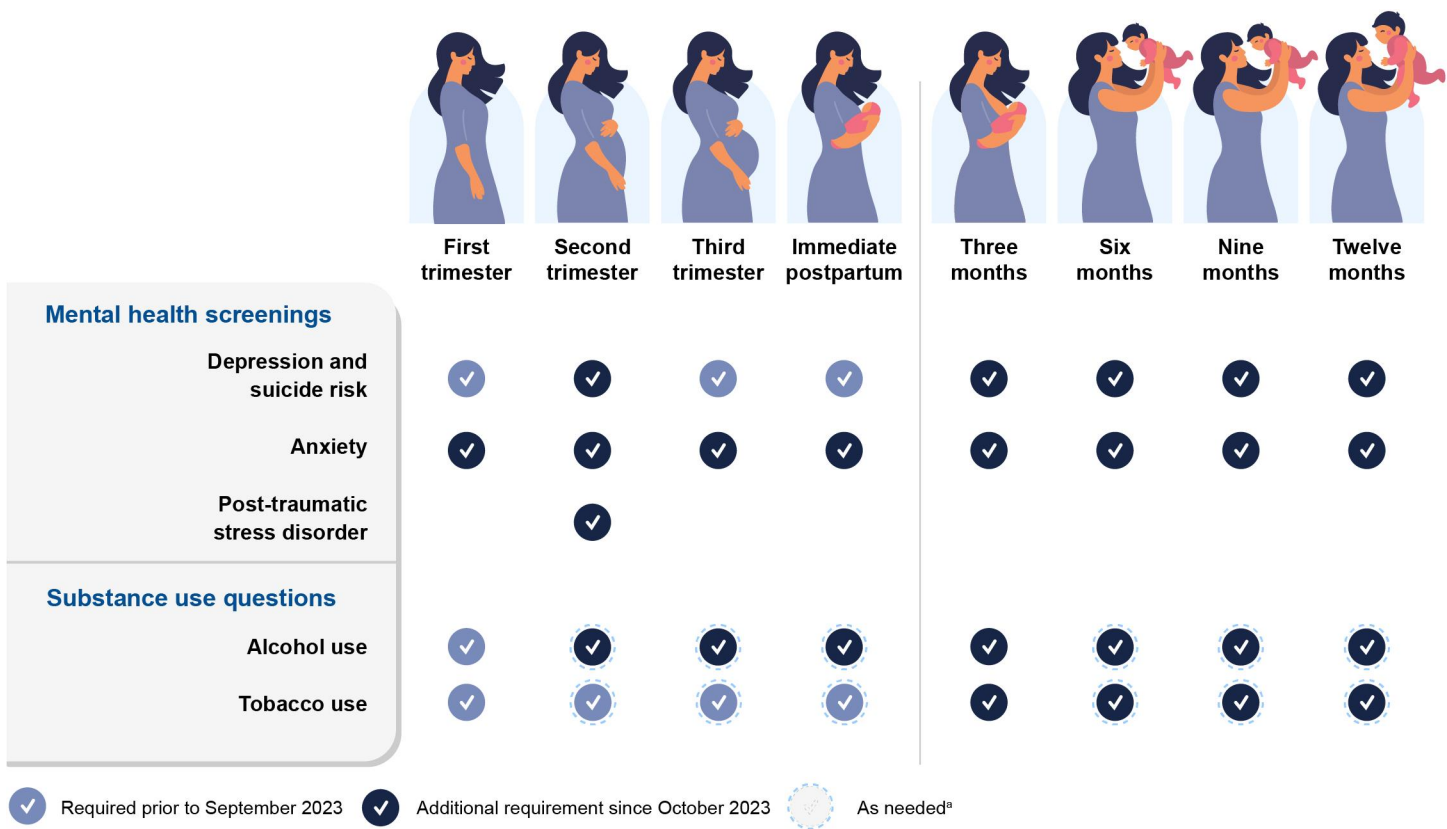
⁴⁸See Department of Veterans Affairs, *Veterans Health Administration Directive 1330.03*. The directive requires that VA providers conduct such mental health screenings. VA officials told us that the definition of "VA providers" includes MCCs.

⁴⁹According to VA officials, VA primary care providers primarily screen these veterans as part of required periodic screening of all veterans for certain mental health conditions, although a veteran may not be due for such a screening during pregnancy or postpartum; based on veterans' symptoms or concerns; or as follow-up to screenings conducted by MCCs.

⁵⁰The Telephone Care Program manual directs MCCs to obtain veterans' permission to be screened. Veterans who do not give their consent would not be screened, but can still participate in maternity care coordination.

to the October 2023 manual.⁵¹ The frequency with which MCCs are expected to conduct these screenings, such as the Edinburgh Postnatal Depression Scale for depression, suicide risk, and anxiety and the PTSD Screen, varies. (See fig. 4.)

Figure 4: Department of Veterans Affairs Maternity Care Coordinator (MCC) Telephone Care Program Requirements on Veterans Mental Health Screenings and Questions Related to Substance Use



Source: GAO analysis of Department of Veterans Affairs (VA) documentation; Tanya/stock.adobe.com (illustrations). | GAO-24-106209

Note: MCCs serve as a liaison among pregnant and postpartum veterans; VA providers, who may treat these veterans for co-existing conditions; and VA-paid community providers, from whom veterans receive maternity care. VA developed a Telephone Care Program manual to guide MCCs’

⁵¹Under the 2021 version of the Telephone Care Program manual, MCCs were required to screen veterans for depression using the Patient Health Questionnaire-2. Under the October 2023 version of the manual, MCCs are required to screen veterans for depression using the Edinburgh Postnatal Depression Scale instead of the Patient Health Questionnaire-2. According to researchers, as well as public health and health professional membership organizations, the Edinburgh Postnatal Depression Scale is also a validated screening instrument for anxiety. The Edinburgh Postnatal Depression Scale also includes a question on self-harm related to suicide risk.

contact with veterans. Specifically, the manual includes topics and conversation-based scripts for each contact. These scripts include screenings or questions to assess veterans' mental health needs. Prior to October 2023, MCCs were required to make a minimum of four contacts with veterans: one during each trimester of pregnancy and immediately post-delivery, or postpartum. In October 2023, VA officials increased the minimum number of contacts to eight, with an expectation that MCCs make an additional four additional quarterly postpartum contacts with veterans in the 12 months following delivery.

^aThe Telephone Care Program manual directs MCCs to ask veterans' about their use of these substances "as needed," or if veterans' previously indicated they were actively using, or contemplating quitting, either such substance.

VA officials said they added screening for anxiety after multidisciplinary subject matter experts and stakeholders recommended it as part of the process of updating the Telephone Care Program manual.⁵² Staff we interviewed from the four selected VA medical centers agreed that pregnant veterans should be screened for anxiety. Staff from one VA medical center noted that if a pregnant or postpartum veteran had issues associated with anxiety, the screening would allow an MCC to connect the veteran to needed treatment more quickly. VA officials also told us they added the requirement to screen for PTSD in light of evidence that this condition is a risk factor for adverse maternal health outcomes.⁵³

The Telephone Care Program manual also directs MCCs to ask pregnant or postpartum veterans about alcohol and tobacco use. However, the manual does not include screening for other forms of substance use disorder, such as illicit drug use. VA officials said they do not ask about

⁵²VA officials told us they did not include anxiety in the 2021 version of the manual because there were limited evidence-based recommendations or clinical guidelines to support screening veterans, regardless of pregnancy status, for anxiety on a routine basis. For example, officials noted that previously the U.S. Preventive Services Task Force did not recommend screening adults for anxiety. However, the task force issued a draft recommendation on screening adults age 64 or younger for anxiety, including pregnant and postpartum persons, in September 2022 and the final recommendation in June 2023. According to the officials, the decision to screen veterans for anxiety previously was up to providers' clinical judgement, with these screenings conducted on an as-needed basis and mostly in the mental health clinic setting.

⁵³See, for example of such evidence, Combellick et al., "Severe Maternal Morbidity Among a Cohort of Post-9/11 Women Veterans," and Shaw et al., "Post-traumatic Stress Disorder and Antepartum Complications: A Novel Risk Factor for Gestational Diabetes and Preeclampsia." VA officials told us they did not include PTSD screenings in the 2021 version of the manual because there were limited evidence-based recommendations or clinical guidelines to support screening pregnant veterans for PTSD other than as part of VA's routine screening of all veterans for this condition; however, this may not coincide with a veteran's pregnancy. VA's clinical practice guideline on PTSD recommends that all veterans, regardless of pregnancy status, be screened for PTSD for the first 5 years following separation from the military and then every 5 years thereafter. See Department of Veterans Affairs and Department of Defense, *VA/DOD Clinical Practice Guideline for the Management of Posttraumatic Stress Disorder and Acute Stress Reaction*, version 3.0 (June 2017).

illicit drug use due, in part, to laws in some states that make substance use after a positive pregnancy test a criminal offense.⁵⁴ Therefore, officials said documenting the screening and management of a positive result of substance use during pregnancy while maintaining the safety and trust of veterans would be challenging if, in some states, officials were compelled to provide related information to law enforcement.

If MCCs have questions about mental health screenings, VA officials told us the MCCs can consult a variety of VA and VA medical center resources. For example, VA officials told us that MCCs are introduced to VA's Reproductive Mental Health Consultation Program during MCC orientation and related materials are posted on VA's intranet platform for MCCs. In addition, MCCs we interviewed from the four selected VA medical centers told us they were able to reach out to VA mental health providers—specifically, mental health providers who are part of VA's Primary Care Mental Health Integration model—in real time to ask questions as needed or to quickly connect pregnant and postpartum veterans to mental health services. For example, when pregnant and postpartum veterans had urgent mental health concerns, staff from one VA medical center said the MCC collaborated with the facility's mental health providers to connect the veterans to additional care as quickly as possible.

VA Does Not Monitor the Occurrence or Results of Mental Health Screenings Conducted by Maternity Care Coordinators, but Has Taken Initial Steps to Do So

According to VA OWH officials, OWH does not monitor the occurrence or results of mental health screenings conducted by MCCs to identify and make any needed improvements, but they have taken initial steps to do so. MCCs are required to use the electronic health record MCC template to document that they have conducted the required screenings, as well as veterans' responses to screening questions. However, OWH officials told us they cannot directly monitor this information through the template. Rather, the officials said they first had to confirm they could access this

⁵⁴According to the Guttmacher Institute, 25 states and the District of Columbia consider substance use during pregnancy to be child abuse under civil child-welfare statutes. See Guttmacher Institute, *Substance Use During Pregnancy* (Washington, D.C.: July 1, 2023), accessed August 1, 2023, <https://www.guttmacher.org/state-policy/explore/substance-use-during-pregnancy>.

information through a central VA database that allows for this type of monitoring.

As of September 2023, OWH officials told us they had hired a data programmer to conduct a database query to identify this information. OWH officials said the data programmer would start conducting queries after the screening template is revised and in use for a period of time.⁵⁵ However, the officials have not determined when they will start compiling and reviewing screening information, including the occurrence or results of mental health screenings conducted by MCCs, or how often they will do so.

OWH officials told us that, to date, such monitoring has been the responsibility of the Veterans Integrated Services Networks and VA medical centers. Specifically, the officials told us that although OWH is responsible for VA's directive on maternity care and coordination, the directive assigns the Veterans Integrated Services Networks responsibility for ensuring its implementation generally. Further, the officials stated that VA medical centers are responsible for supervising or monitoring MCCs, including their efforts to implement the directive requirement that pregnant and postpartum veterans be screened for mental health conditions through the Telephone Care Program.

Officials we interviewed from two of the four Veterans Integrated Services Networks told us they monitored mental health screenings by reviewing certain OWH maternity care-related data dashboards.⁵⁶ However, OWH officials said these dashboards are not designed to monitor mental health screenings conducted by MCCs.⁵⁷ Further, OWH officials stated that

⁵⁵OWH officials told us they revised the electronic health record MCC template to capture the additional contacts that MCCs are required to have and topics they are required to discuss with veterans under the October 2023 version of the Telephone Care Manual.

⁵⁶OWH officials said they collaborated with other agency staff to develop three maternity care-related dashboards on veteran's health conditions, community care births, and community care outcomes for the Veterans Integrated Service Networks and VA medical centers to use. We did not specifically ask Veterans Integrated Service Networks officials whether they used these dashboards to monitor mental health screenings. Rather, officials from these two networks mentioned their use of these dashboards for this purpose in response to other questions. Thus, officials from the other two networks may use these dashboards for this purpose as well, but did not comment on this.

⁵⁷The dashboard on health conditions includes data on the percentage of pregnant veterans with a pre-existing or new diagnosis of certain mental health conditions. However, VA officials told us these data do not capture diagnoses made through mental health screenings conducted by MCCs.

Veterans Integrated Service Networks should rely on the monitoring guidance included in VA's directive on maternity care and coordination.⁵⁸

In addition, OWH officials told us each VA medical center determines its own process for supervising or monitoring the facility's MCC. For example, VA medical center staff may review spreadsheets that MCCs create and use to track their contacts with veterans or review the electronic health record MCC template to ensure MCCs are using it, according to the officials. Thus, these processes may not be consistent across facilities. Further, the officials stated that VA medical centers are not required to share resulting information with OWH.

VA's directive on policy management requires that VA program offices have a role in overseeing the implementation of policies, or other directives, for which these offices are responsible.⁵⁹ This includes implementation of the directive on maternity care and coordination, for which OWH is the responsible program office. Specifically, the directive on policy management states that this oversight responsibility must be written into each VA policy at multiple agency levels, including the relevant program office level, and defines oversight to include monitoring or evaluation. Notably, VA updated the directive on policy management in March 2022 to, in part, help address concerns about inadequate oversight and accountability that placed VA Health Care on GAO's High Risk List in 2015.⁶⁰ Updating the directive on policy management is one step VA identified for addressing these concerns by, for example, having oversight

⁵⁸VA officials told us that the directive on maternity care and coordination includes guidance for Veterans Integrated Service Networks related to such monitoring. However, in reviewing the directive, we found that it requires that each Veterans Integrated Services Network Director support the fulfillment of the directive in all VA medical centers within the network, but otherwise does not provide guidance on such monitoring. See Department of Veterans Affairs, *Veterans Health Administration Directive 1330.03, Maternity Health Care and Coordination* (Washington, D.C.: Nov. 3, 2020).

⁵⁹See Department of Veterans Affairs, *Veterans Health Administration Directive 0999*.

⁶⁰See GAO, *High-Risk Series: Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas*, [GAO-23-106203](#) (Washington, D.C.: Apr. 20, 2023).

efforts be informed by reliable data at the appropriate levels of the organization, including VA program offices such as OWH.⁶¹

By finalizing and implementing a systematic process to monitor the occurrence and results of mental health screenings, OWH will have the information necessary to ensure their completion, as well as identify improvements. For example, such monitoring could help OWH improve maternity care coordination such as by identifying additional trainings or resources for MCCs based on any trends in screening results. This may be particularly important as VA implements its planned expansion of the Telephone Care Program. For example, OWH officials said information on MCC-conducted mental health screenings could help them assess the degree to which the planned Telephone Care Program expansion, which includes the addition of screenings for anxiety and PTSD, has been implemented across VA medical centers. OWH officials agreed that monitoring this type of information could help them to identify inconsistencies, make any needed changes to the Telephone Care Program manual, and develop additional education or training for MCCs.

Monitoring could also help OWH respond to the risk mental health conditions pose for adverse maternal health outcomes and help achieve the OWH Maternal Health Strategic Plan goal of reducing maternal mortality and maternal morbidity. According to the preliminary findings of a VA research study on maternal mortality, mental health conditions affected a large majority of veterans who died in pregnancy-associated events from 2010 through 2019.

Additional research has noted that mental health conditions among pregnant and postpartum women, including veterans, are associated with a 50 percent increase in severe maternal morbidity, among other negative health consequences.⁶² Further, a focus of the Protecting Moms Who Served Act of 2021 was to increase access to mental and behavioral health care for pregnant and postpartum veterans, as well as provide

⁶¹Federal standards for internal control also require that agencies design control activities, such as monitoring, to achieve their objectives and respond to risks, such as the increased risk of adverse maternal health outcomes among veterans with mental health conditions. See [GAO-14-704G](#).

⁶²See, for example, Clare C. Brown et al., "Mental Health Conditions Increase Severe Maternal Morbidity by 50 Percent and Cost \$102 Million in the United States," *Health Affairs*, vol. 40, no. 10 (2021), 1575-1584; Joan L. Combellick et al., "Postpartum Depression in a Cohort of Post-9/11 Women Veterans: The Role of Military Stress and Trauma," *Military Behavioral Health*, vol. 8, no. 3 (2020), 345-352; and Shaw et al., "Post-Traumatic Stress Disorder and Antepartum Complications."

training and support on these conditions for their providers. Monitoring mental health screenings conducted by MCCs, including the types of concerns such screenings identify, would be one important step in improving care for pregnant and postpartum veterans. OWH officials agreed that this type of monitoring information could help them develop needed interventions for improving maternity care coordination—and ultimately veterans—in a timely and systematic manner.

Maternity Care Coordinators Are Required to Obtain Health Information from Pregnant Veterans, and Communicate Information Based on Need

Maternity Care Coordinators are Required to Ask Veterans about Existing and New Health Conditions during Each Trimester and Postpartum

According to VA's Telephone Care Program manual, MCCs are required to obtain information directly from veterans by asking them about their health generally throughout pregnancy and postpartum. Specifically, the manual instructs MCCs to (1) ask veterans about any existing health conditions, (2) inquire about any new condition or symptoms they may have, and (3) review their prescription and over-the-counter medication use to ensure it is up to date. MCCs are instructed to discuss this information during each contact with veterans—that is, as previously noted, once during each trimester of pregnancy and postpartum.⁶³

To inform these contacts, the Telephone Care Program manual instructs MCCs to review veterans' VA medical records to identify any documented existing health conditions and information about current medication use. Further, the manual instructs MCCs to tailor their conversations with veterans based upon veterans' responses to these questions, as well as

⁶³The Telephone Care Program manual also instructs MCCs to make interim contacts based on veterans' health conditions, if needed. An MCC we interviewed from one VA medical center said that she makes additional contacts with veterans who have high-risk pregnancies. As previously noted, prior to October 2023, MCCs were expected to contact veterans once immediately postpartum. However, since October 2023, MCCs are expected to contact veterans an additional four times during this period and after veterans' last community maternity care visit. According to VA officials, VA primary or specialty care providers typically manage health problems that occur after the end of pregnancy.

veterans' life experiences and circumstances that put them at risk for adverse outcomes. MCCs we interviewed from the four selected VA medical centers told us that this approach considers the uniqueness of each veteran's pregnancy and helps with effective maternity care coordination.

The Telephone Care Program manual also instructs MCCs to ask pregnant and postpartum veterans about certain health conditions that may be indicative of or lead to a severe maternal morbidity or maternal mortality. For example, the manual instructs MCCs to ask veterans about high blood pressure and high blood sugar, which are associated with eclampsia and gestational diabetes, respectively, during each contact after the first trimester.⁶⁴ Under the October 2023 version of the manual, MCCs also are required to ask veterans about symptoms of preeclampsia, a precursor to eclampsia, and their heart health during the second and third trimesters, as well as the first contact postpartum.⁶⁵ VA officials said that veterans with some of these conditions may need medical supplies—such as home blood pressure cuffs or diabetes testing strips—to help manage symptoms. According to the officials, if MCCs are aware of pregnant and postpartum veterans with these conditions, they

⁶⁴Eclampsia is the new onset of seizures or coma during pregnancy caused by high blood pressure and one of the 21 CDC defined indicators of SMM. Gestational diabetes is a condition caused by pregnancy-related hormones that make insulin ineffective for managing blood sugar levels. According to the National Institutes of Health, eclampsia is a cause and gestational diabetes is a risk factor for maternal mortality. Researchers have found that veterans with a history of deployment to Afghanistan and Iraq who used VA maternity benefits had a higher risk of developing gestational diabetes and hypertensive disorder (or high blood pressure) compared to other women who give birth in the United States. See Jodie Katon et al., "Gestational Diabetes and Hypertensive Disorders of Pregnancy among Women Veterans Deployed in Service of Operations in Afghanistan and Iraq."

⁶⁵Researchers have found that non-Hispanic Black women's risk for eclampsia and preeclampsia is five times higher than for non-Hispanic White women. Further, data suggest that 60 percent of deaths related to preeclampsia are preventable, making it a critical area of intervention. See Marian F. MacDorman et al., "Racial and Ethnic Disparities in Maternal Mortality in the United States Using Enhanced Vital Records, 2016–2017," *AJPH*, vol. 111, no.9 (2021), 1673-1681. The October 2023 version of the Telephone Care Program manual also instructs MCCs to ask about heart health because of its association with preeclampsia, according to VA officials. In addition, the electronic health record MCC template includes a list of specific health conditions—such as high blood pressure, renal disease, and seizures—that are associated with preeclampsia and that, according to VA officials, MCCs ask veterans about during each contact when discussing veterans' medical history.

are able to help the veterans obtain these supplies.⁶⁶ In addition, VA officials said that MCCs may share veterans' health conditions with the affected veterans' primary care providers to inform postpartum care.

MCCs may also obtain veterans' health information from community maternity care records, if needed, according to VA officials.⁶⁷ MCCs can search for these medical records in VA's electronic health record system if they are available electronically, or request them from VA medical center Office of Community Care staff. As an example, VA officials said that an MCC may review a veteran's community maternity care record to obtain additional information related to ultrasounds or other tests ordered by community maternity care providers that were paid for by VA. MCCs we interviewed from the four VA medical centers stated they found it helpful to review community maternity care records for additional information about veterans' health and coordinate postpartum care.

Maternity Care Coordinators from Selected VA Medical Centers Communicate with VA Providers and Community Maternity Care Providers Based on Veterans' Health Needs

MCCs from the four selected VA medical centers told us they directly communicated with VA providers and community maternity care providers based on veterans' health needs and their clinical judgment.

⁶⁶The *White House Blueprint for Addressing the Maternal Health Crisis* included an action item to reduce uncontrolled hypertension and other risk factors for preeclampsia through targeted VA interventions, such as by making blood pressure monitoring tools available to pregnant and postpartum veterans.

⁶⁷GAO previously reported that VA medical center staff typically rely on manual document exchange with VA Community Care Program providers, which can lead to scanning backlogs and, in turn, delays in VA providers' review of VA Community Care Program provider notes. VA developed a software system, HealthShare Referral Manager, for VA Community Care Program providers to use as an option to exchange electronic medical documentation with VA providers, among other uses. As such, GAO recommended that VA review the use of HealthShare Referral Manager to identify and remove any challenges and, if appropriate, require its use. In January 2023, VA implemented our recommendation by providing updated numbers that show an increasing number of community providers are utilizing the HealthShare Referral Manager to receive referrals electronically and stating that its officials would focus on the use of this system by community providers who receive a high volume of referrals and providers in high-risk specialties. See GAO, *Veterans Community Care Program: Improvements Needed to Help Ensure Timely Access to Care*, [GAO-20-643](#) (Washington, D.C.: Sept. 28, 2020).

VA providers. MCCs we interviewed from the four selected VA medical centers told us they use the electronic health record MCC template to communicate with other VA providers when veterans report health problems or need primary care or specialty health services, as instructed by their local processes and in accordance with the Telephone Care Program manual. Specifically, the manual instructs MCCs to follow local VA medical center policies and processes and use their clinical judgment as to how and when to communicate veterans' health problems with other VA providers—including to make needed referrals for services.

According to VA officials, MCCs can electronically alert other VA providers—including primary or specialty care providers—when the electronic health record MCC template has been updated with mental health screening results or other information about veterans' health conditions or symptoms. MCCs can also use the template to initiate referrals for needed health care or services, such as mental health care or medical equipment, based on these results, conditions, or symptoms. The officials said other VA providers are required to review and electronically sign the updated electronic health record MCC template if requested to do so, and typically review and sign referrals as well. For example, an MCC from one VA medical center described a case of a pregnant veteran who was experiencing back pain and requested to be seen by a chiropractor. The MCC used the template to notify the veteran's primary care provider of the veteran's symptoms, request that the provider review and sign the template, as well as make the referral for chiropractic services.

MCCs from the four VA medical centers also reported communicating with other VA providers in real time based on the veteran's needs, such as in cases where a veteran had symptoms of a severe maternal morbidity, an urgent mental health need, or needed the VA medical center to provide an ancillary service or medical equipment. For example, one MCC stated that if a veteran reported experiencing headaches later in pregnancy, which can be indicative of preeclampsia, the MCC would communicate with the veteran's VA primary care provider using an instant messaging application while on the phone with the veteran. Another MCC reported communicating with the VA medical center's mental health providers using the instant messaging application if a veteran needed immediate support. Further, the same MCC explained that if a veteran needed nutritionist services or a blood pressure monitoring cuff due to symptoms or a diagnosis of gestational diabetes, the MCC would immediately communicate those needs to a VA primary care provider.

Community maternity care providers. The Telephone Care Program manual does not require MCCs to communicate with community maternity care providers. However, MCCs we interviewed from three VA medical centers said they have done so if they become aware of an issue that immediately affects a veteran's health, because they consider themselves advocates for these veterans.⁶⁸ According to the three MCCs, they use their clinical judgement to determine when to initiate such communication. For example, one MCC said she initiated a three-way call with a pregnant veteran and the veteran's community maternity care provider to discuss follow-up matters related to the veteran's abnormal fetal genetic test result.

In addition, the Telephone Care Program manual provides MCCs guidance on how to help prepare and encourage veterans to discuss their health conditions and symptoms with community maternity care providers, with whom veterans meet more often than with MCCs, according to VA officials. For example, during the first contact with veterans, MCCs are instructed to ensure veterans have received the Pregnancy and Childbirth Handbook, known as the "Purple Book," which is intended to guide veterans' conversations with their community maternity care providers about their health problems.

The handbook identifies symptoms of preeclampsia by week of pregnancy that veterans should report immediately to their community maternity care provider.⁶⁹ The handbook also includes instructions for veterans to bring the handbook to each community maternity care appointment to help veterans remember what health and medication information to communicate with these providers. In addition, the manual instructs MCCs to encourage veterans to report any health problems to their community maternity care providers during each of the veterans' contacts with such providers.⁷⁰

⁶⁸The MCC from the remaining VA medical center said the facility's other providers, rather than the MCC, would typically communicate with community maternity care providers, but the MCC would do so if needed.

⁶⁹See Department of Veterans Affairs and Department of Defense, *Pregnancy and Child Birth: A Goal Oriented Guide to Prenatal Care* (Washington D.C.: March 2019).

⁷⁰According to VA officials, MCCs instruct veterans to communicate with community maternity care providers related to any health problems that occur after the first trimester, as VA providers typically manage problems that occur prior to that time.

Conclusions

It is imperative that VA help ensure veterans have the healthiest pregnancy outcomes possible, especially in light of the increasing number of veterans using VA maternity benefits and increasing maternal morbidity rates, especially for Black women. Recognizing this, VA's Maternal Mortality Review Committee has started monitoring pregnancy-associated deaths among veterans to identify and inform needed improvements. Importantly, VA also has plans to review cases of severe maternal morbidity among veterans, as well as trends in such morbidity rates. By monitoring these trends disaggregated by veteran characteristics, such as race and ethnicity, VA can better identify and understand any related disparities. This may be particularly important given disparities we and others have found, especially for Black women. Such monitoring would better position VA to identify needed medical interventions or care coordination improvements for particular populations, and ultimately, improve maternal wellbeing.

Additionally, VA has taken initial steps to be able to monitor the occurrence and results of mental health screenings for pregnant and postpartum veterans, but officials have yet to finalize or implement a process to conduct such monitoring. By monitoring the occurrence and results of such screenings, VA would be better positioned to ensure their completion, as well as to identify any additional trainings or resources that MCCs may need based on any trends in screening results. Such monitoring may be particularly important as VA prepares to screen pregnant and postpartum veterans for additional mental health conditions. Moreover, in monitoring the results, VA may be able to better identify additional care improvements, ultimately leading to better outcomes for pregnant and postpartum veterans.

Recommendations for Executive Action

We are making the following two recommendations to VA:

The Secretary of Veterans Affairs should ensure that as OWH begins monitoring SMM on an ongoing basis, it disaggregates and reviews data on trends in SMM by veteran characteristics, such as race and ethnicity, age, or whether veterans lived in a rural area. (Recommendation 1)

The Secretary of Veterans Affairs should ensure that OWH finalizes the development of and implements a systematic process to compile and review data on MCC screening of veterans for mental health conditions on an ongoing basis. This process should include data on MCCs' completion of required mental health screenings, as well as screening results. (Recommendation 2)

Agency Comments

We provided a draft of this report to VA for review and comment. VA provided written comments, which are reproduced in appendix V, and technical comments, which we incorporated as appropriate. In its written comments, VA concurred with our recommendations.

In concurring with our first recommendation, VA stated that a data analysis team will disaggregate data on SMM by veterans' race and ethnicity, age, and whether veterans lived in an urban or rural area on a quarterly basis. According to VA, the relatively small number of SMM cases may limit its ability to evaluate annual trends, but will evaluate trends over time. VA indicated it expects the first quarterly data report to be available for review in February 2024.

Regarding our second recommendation, VA stated that it will develop and implement a systematic process to compile and review data on MCCs' required completion of mental health screening and screening results, with a target completion date of March 2024.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Veterans Affairs, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7114 or at hundrupa@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VI.



Letter

Alyssa M. Hundrup
Director, Health Care

Appendix I: Additional Information on Scope and Methodology

This appendix provides additional information on our analysis of Department of Veterans Affairs (VA) data on maternal health outcomes, selection of VA medical centers, and selection of stakeholder organizations we interviewed.

Analysis of VA Data on Maternal Health Outcomes

To examine available VA data on maternal health outcomes among pregnant and postpartum veterans, we analyzed data on deaths and severe maternal morbidity (SMM) among pregnant and postpartum veterans from fiscal years 2011 through 2020, the most recent years for which data were available at the time of our review. For such deaths, we analyzed data on pregnancy-associated and pregnancy-related deaths among veterans who used VA maternity benefits by three maternal health stages that we defined for purposes of our reporting.¹ These three maternal health stages are (1) delivery, defined as a veteran's VA-paid delivery hospitalization through discharge; (2) postpartum, defined as the period within 42 days of the last day of a veteran's VA-paid delivery hospitalization; and (3) late postpartum, defined as the period within 43 to 365 days of the last day of a veteran's VA-paid delivery hospitalization, also referred to as the late maternal period.² According to VA officials, they collected these data for research purposes using various sources,

¹The Protecting Moms Who Served Act of 2021 defines pregnancy-associated death as the death of a pregnant or postpartum individual, by any cause, that occurs during pregnancy or within one year following pregnancy, regardless of the outcomes, duration, or site of the pregnancy. A subset of pregnancy-associated deaths are pregnancy-related deaths, defined by the act as the death of a pregnant or postpartum individual that occurs during pregnancy or within one year following a pregnancy from a pregnancy complication, a chain of events initiated by a pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. See Pub. L. No. 117-69, § 2, 135 Stat. 1495.

²For the purposes of this report, we use the term "VA-paid delivery hospitalization" to refer to what VA officials told us were inpatient hospital encounters at full pregnancy term, due to pre-term labor, or in cases where a veteran was admitted to the hospital for life-threatening issues, all of which resulted in a live birth or other pregnancy outcome (such as a stillbirth or spontaneous abortion). VA officials told us that these include encounters that occurred in an acute care hospital, birth center, or in transit to a birthing location that was paid for by VA.

such as data from VA vital status and death files, as well as inpatient billing data, to identify veteran deaths and veterans who had a VA-paid delivery hospitalization.

We analyzed these data by veterans' race and ethnicity, veterans' age, and the urban or rural location of veterans' residences for each of these three maternal health stages.

- **Race and ethnicity.** According to VA officials, veterans' race and ethnicity were self-identified using categories established by the Office of Management and Budget as American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White (for race), as well as Hispanic or Latino or non-Hispanic or Latino (for ethnicity). These categories are independent of each other such that individuals identifying as a certain ethnicity may be of any race.
- **Age.** VA officials told us that a veteran's age is defined as her age at the point of her VA-paid delivery hospitalization. We grouped veterans' ages into six categories we defined for purposes of reporting—under 20 years, 21-25 years, 26-29 years, 30-34 years, 35-39 years, 40-44 years, and over 45 years.
- **Urban or rural location of veterans' residences.** VA officials stated that this is an indicator of whether a veteran resided in a rural or urban area as of the veteran's VA-paid delivery hospitalization. These classifications are derived from the Veterans Health Administration Support Service Center Capital Assets database, which assigns each enrolled veteran to a location. VA's definition of rural is based on the Rural-Urban Commuting Area methodology and combines codes related to (1) highly rural, (2) rural, and (3) insular island locations to identify veterans who reside in a rural area. Values for rural locations are populated based on prior end of year values for census tracts using exact patient addresses.

Due to the small number of deaths among pregnant and postpartum veterans, we report on total deaths for the 10-year period, rather than annually. In addition, we calculated and report what we defined as the rate of pregnancy-related deaths per 100,000 VA-paid delivery hospitalizations for the 10-year period rather than the maternal mortality ratio or pregnancy-related mortality ratio, because the data VA captures differs from the World Health Organization's and Centers for Disease Control and Prevention's (CDC) definition of these ratios, respectively. Specifically, the World Health Organization defines the maternal mortality ratio as the number of maternal deaths that occurred per 100,000 live

births.³ Similarly, CDC defines the pregnancy-related mortality ratio as the number of pregnancy-related deaths that occurred per 100,000 live births.⁴ In comparison, the available VA data capture the number of pregnancy-related deaths, as defined by the Protecting Moms Who Served Act of 2021, per 100,000 VA-paid delivery hospitalizations, which may differ from the number of live births. For example, VA officials stated if a veteran had a VA-paid delivery hospitalization and gave live birth to twins, they counted this as one such hospitalization. Further, according to the officials, not all such hospitalizations resulted in a live birth. Thus, we were unable to make comparisons between deaths among pregnant and postpartum veterans to deaths among such women in the general population.

For SMM, we calculated the annual SMM rate for veterans who had a VA-paid delivery hospitalization from fiscal years 2011 through 2020 by the three maternal health stages we defined. We calculated the SMM rate per 10,000 VA-paid delivery hospitalizations. According to VA officials, SMM data were derived using hospital discharge data based on the CDC's definition of SMM. Specifically, CDC has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion.⁵ However, the SMM rates we report do not result solely from receipt of a blood products transfusion, based on methods recommended by the Department of Health and Human Services. Rather, the rates we report reflect veterans who had at least one SMM indicator that was not a blood products transfusion.

We also calculated SMM rates by veterans' race and ethnicity, veterans' age, and the urban or rural location of veterans' residences for each of

³The World Health Organization defines the maternal mortality ratio as the number of female deaths from any cause related to or aggravated by pregnancy or its management—excluding accidental or incidental causes—while pregnant or within 42 days of the end of pregnancy irrespective of the duration and site of the pregnancy (defined as a maternal death), per 100,000 live births.

⁴CDC's Pregnancy Mortality Surveillance System defines pregnancy-related deaths as deaths that occur from any cause related to or aggravated by the pregnancy or its management while pregnant or within one year of the end of pregnancy. CDC uses this surveillance system to measure the pregnancy-related mortality ratio.

⁵For more information on these indicators see <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm>.

these three maternal health stages.⁶ Due to the small number of veterans with certain of these characteristics, such as certain races or age categories, we calculated these rates for the 10-year period, rather than annually. American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander veterans, as well as veterans of unknown ethnicity, under 20 years old, 45 and older, or whose residences were in an unknown location had fewer than 1,000 VA-paid delivery hospitalizations each from fiscal years 2011 through 2020; thus, rates for these groups may be subject to fluctuations if calculated for different periods.

We did not compare SMM rates among veterans to such rates among the general population due to the risk profile of the veteran population. Specifically, certain risk factors that previously have been associated with SMM are more common among veterans, according to literature we reviewed. For example, veterans are more likely to suffer from conditions that may increase the risk of delivery complications, such as hypertensive disorders, gestational diabetes, and obesity.⁷ As such, according to VA officials, veterans' SMM rates need to be risk adjusted to account for these differences and make them comparable to such rates among the general population. However, relevant data and information were not available to do so.

We assessed the reliability of VA data on deaths among pregnant and postpartum veterans by reviewing an unpublished version of a VA article on maternal mortality that described officials' methods for collecting related data. We also interviewed knowledgeable officials about VA data on deaths and SMM among pregnant and postpartum veterans. Based on these steps, we found the data were sufficiently reliable for the purposes of our reporting objective.

⁶The postpartum and late postpartum SMM rates were calculated based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

⁷See, for example, Joan L. Combellick et al., "Severe Maternal Morbidity Among a Cohort of Post-9/11 Women Veterans," *Journal of Women's Health*, vol. 29, no. 4 (2020), 577-584. Further, research indicates that pregnant veterans are more likely to have experienced post-traumatic stress disorder or military sexual trauma, which can lead to adverse pregnancy outcomes. See, for example, Yael I. Nillni et al., "The Impact of Posttraumatic Stress Disorder and Moral Injury on Women Veterans' Perinatal Outcomes Following Separation from Military Service," *J Trauma Stress*, vol. 33, no. 3 (2020), 1-17.

VA Medical Center Interviews and Site Selection

We interviewed staff from four selected VA medical centers and their associated Veterans Integrated Service Networks.⁸ Specifically, we interviewed staff—including maternity care coordinators (MCC); mental health providers; and Women Veterans Program managers, who are responsible for the facility’s women’s health services in general—to understand how they conduct mental health screenings and access available mental health resources. Further, we interviewed these staff, as well as staff from VA medical center Offices of Community Care, who are responsible for obtaining veterans’ medical records from community maternity care providers, to understand how they obtain and communicate information about pregnant and postpartum veterans’ health.

We selected the four VA medical centers for variation in the (1) average number of veterans who received care at each VA medical center who also who had a VA-paid delivery hospitalization from fiscal years 2018 through 2020; (2) percentage of these deliveries among non-White veterans and veterans who resided in rural areas; (3) facility complexity level; and (4) geographic location.⁹ Our results from the four selected VA medical centers are not generalizable to all VA medical centers. However, this information provides illustrative examples of VA medical center staff experiences.

Stakeholder Interviews

To obtain additional context, we interviewed a sample of seven knowledgeable stakeholders. These include officials from the American College of Obstetricians and Gynecologists, the American College of

⁸VA provides enrolled veterans with a wide range of inpatient and outpatient services through VA medical centers, including primary care and some specialty care services. Veterans Integrated Service Networks are regional health care networks that manage the day-to-day functions of VA medical centers within their networks through, for example, administrative and clinical oversight.

⁹The four selected VA medical centers were located in San Diego, Calif.; Washington, D.C.; Fargo, N.D.; and Erie, Pa. VA categorizes VA medical centers according to complexity level, which is determined on the basis of the characteristics of the patient populations served, clinical services offered, educational and research missions, and administrative complexity. As such, we selected one VA medical center from four of the five different complexity levels. We also selected VA medical centers to ensure variation in geographic location as identified by the location of the associated Veterans Integrated Service Network.

**Appendix I: Additional Information on Scope
and Methodology**

Nurse-Midwives, the National Birth Equity Collaborative, and four veterans service organizations. We selected these entities based on them (1) publicly supporting the Protecting Moms Who Served Act of 2021, (2) issuing information on veterans' maternal health, or (3) having been identified as a relevant stakeholder related to prior GAO work on maternal health among the general population.

Appendix II: Severe Maternal Morbidity Rates among Veterans, Fiscal Years 2011 through 2020

Appendix II: Severe Maternal Morbidity Rates among Veterans, Fiscal Years 2011 through 2020

Table 2: Severe Maternal Morbidity Rates among Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020

Fiscal year	As of delivery hospitalization (through discharge)		Postpartum		Late postpartum	
	SMM rate	Percent change in rate from prior year	SMM rate	Percent change in rate from prior year	SMM rate	Percent change in rate from prior year
2011	93.5	—	15.6	—	27.3	—
2012	113.6	21.5%	24.1	54.7%	34.4	26.3%
2013	116.8	2.8%	34.2	41.8%	45.6	32.4%
2014	123.0	5.3%	50.2	46.9%	40.2	(11.9%)
2015	125.7	2.2%	80.7	60.6%	26.1	(35.0%)
2016	159.4	26.7%	152.0	88.4%	56.4	116.1%
2017	179.1	12.4%	167.0	9.9%	65.4	15.9%
2018	165.2	(7.8%)	104.6	(37.4%)	64.8	(0.8%)
2019	161.0	(2.6%)	94.1	(10.1%)	50.2	(22.6%)
2020	184.6	14.7%	96.5	2.6%	71.3	42.2%
Cumulative fiscal years						
	Cumulative SMM rate	Cumulative percent change in rate	Cumulative SMM rate	Cumulative percent change in rate	Cumulative SMM rate	Cumulative percent change in rate
2011-2020	146.8	97.5%	87.9	519.4%	50.1	161.6%

Legend: We use “()” to indicate a negative percent change.

Source: GAO Analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Note: The severe maternal morbidity (SMM) rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services.

The VA data we used to calculate the postpartum and late postpartum SMM rates capture veterans who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

**Appendix II: Severe Maternal Morbidity Rates
among Veterans, Fiscal Years 2011 through
2020**

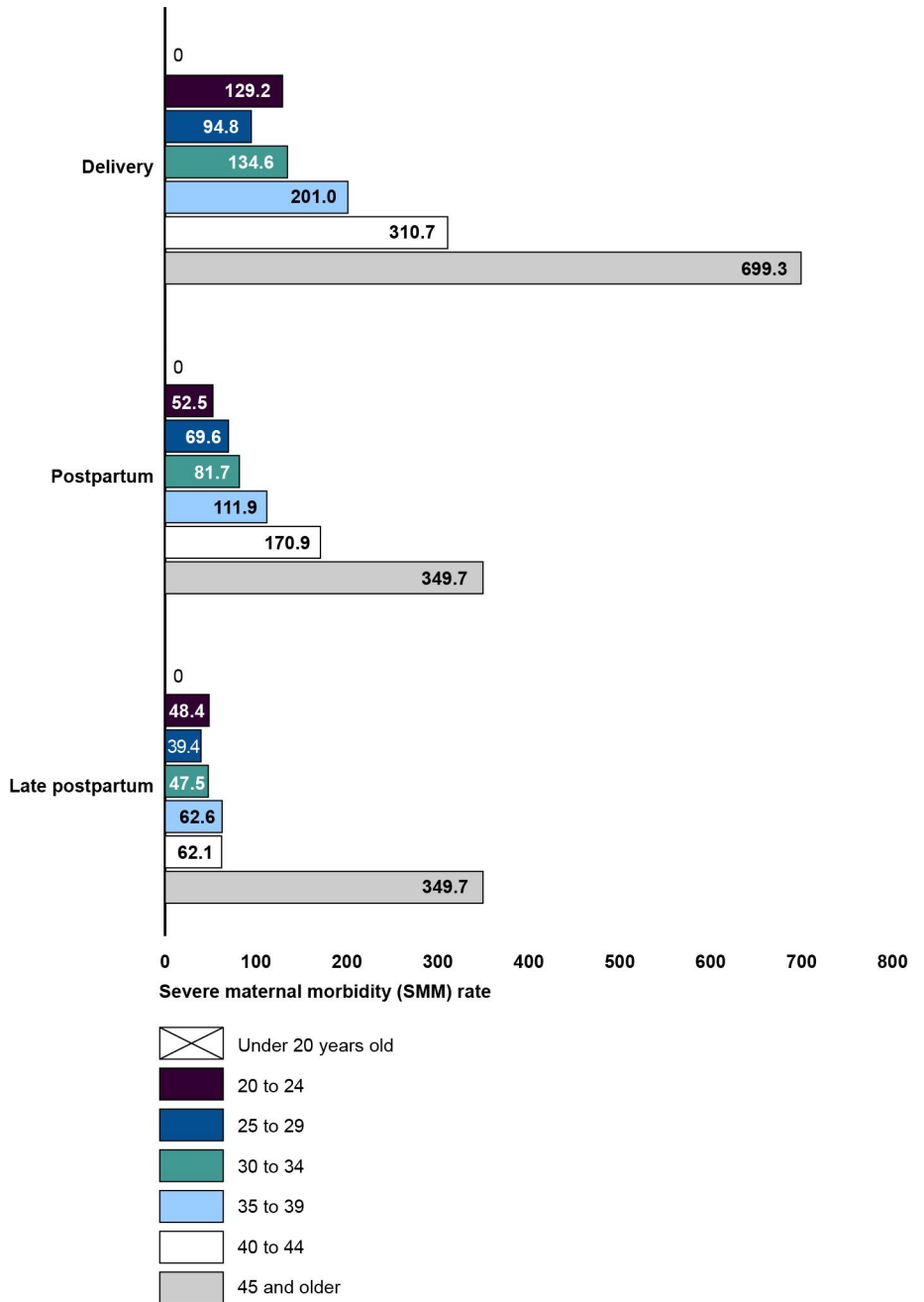
We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

Appendix III: Severe Maternal Morbidity Rates by Veterans' Age, Fiscal Years 2011 through 2020

Severe maternal morbidity is an unexpected outcome of labor and delivery resulting in significant short- or long-term health consequences. Our analysis of Department of Veterans Affairs (VA) data on severe maternal morbidity cases among veterans who had a VA-paid delivery hospitalization indicate differences in this outcome by veterans' age from fiscal years 2011 through 2020. (See fig. 5.)

Appendix III: Severe Maternal Morbidity Rates
by Veterans' Age, Fiscal Years 2011 through
2020

Figure 5: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by Age of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

**Appendix III: Severe Maternal Morbidity Rates
by Veterans' Age, Fiscal Years 2011 through
2020**

Accessible Data Table for Figure 5

		Under 20 years old	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 and older
Severe maternal morbidity (SMM) rate	Delivery	0	129.2	94.8	134.6	201	310.7	699.3
	Postpartum	0	52.5	69.6	81.7	111.9	170.9	349.7
	Late postpartum	0	48.4	39.4	47.5	62.6	62.1	349.7

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Note: The SMM rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services. Veterans under 20 years old and 45 and older had fewer than 1,000 VA-paid delivery hospitalizations each from fiscal years 2011 through 2020; thus, rates for these groups may be subject to fluctuations if calculated for different periods.

The VA data we used to calculate the SMM rate as of delivery captures veterans' who had at least one SMM indicator at the time of a VA-paid delivery hospitalization through discharge. The postpartum and late postpartum SMM rates capture veterans' who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

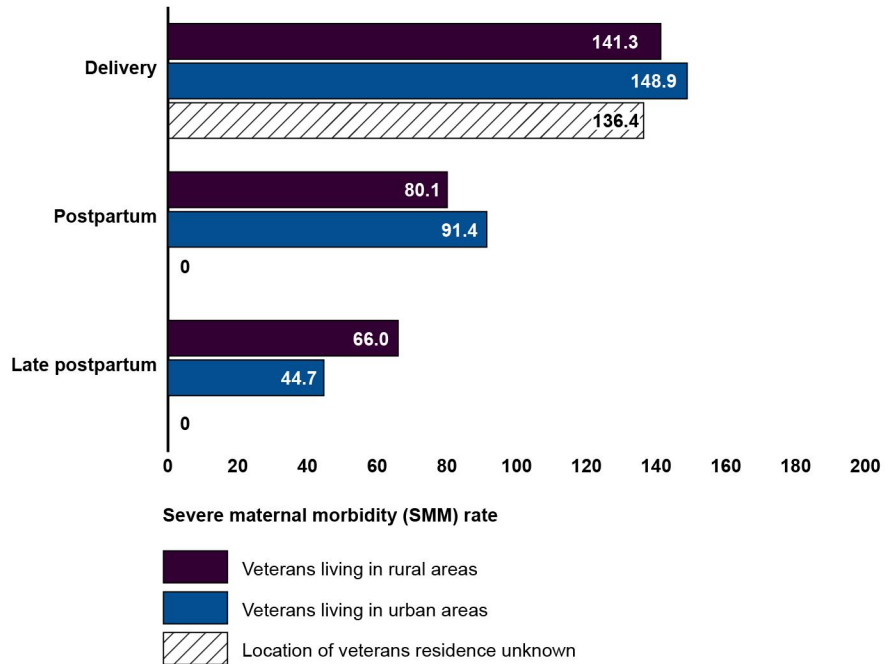
We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

Appendix IV: Severe Maternal Morbidity Rates by the Location of Veterans' Residences, Fiscal Years 2011 through 2020

Severe maternal morbidity is an unexpected outcome of labor and delivery resulting in significant short-or long-term health consequences. Our analysis of Department of Veterans Affairs (VA) data on severe maternal morbidity cases among veterans who had a VA-paid delivery hospitalization indicate disparities in this outcome by the urban or rural location of veterans' residences from fiscal years 2011 through 2020. (See fig. 6.)

**Appendix IV: Severe Maternal Morbidity Rates
by the Location of Veterans' Residences,
Fiscal Years 2011 through 2020**

Figure 6: Severe Maternal Morbidity Rates as of Delivery, Postpartum, and Late Postpartum by the Location of the Residences of Veterans with a VA-Paid Delivery Hospitalization, Fiscal Years 2011—2020



Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Accessible Data Table for Figure 6

		Veterans living in rural areas	Veterans living in urban areas
Severe maternal morbidity (SMM) rate	Delivery	141.3	148.9
	Postpartum	80.1	91.4
	Late postpartum	66	44.7

Source: GAO analysis of Department of Veterans Affairs (VA) data. | GAO-24-106209

Note: The SMM rate represents the rate per 10,000 VA-paid delivery hospitalizations. The Centers for Disease Control and Prevention has developed a list of 21 SMM indicators based on International Classification of Diseases diagnosis and procedure codes, including receipt of a blood products transfusion. We calculated the SMM rate among veterans who had at least one SMM indicator that was not a blood products transfusion based on methods recommended by the Department of Health and Human Services. Veterans whose residences were in an unknown location had fewer than 1,000 VA-paid delivery hospitalizations from fiscal years 2011 through 2020; thus, rates for this group may be subject to fluctuations if calculated for different periods.

The VA data we used to calculate the SMM rate as of delivery captures veterans' who had at least one SMM indicator at the time of a VA-paid delivery hospitalization through discharge. The postpartum and late postpartum SMM rates capture veterans' who had at least one SMM indicator during a VA-paid hospital readmission that occurred within 42 days (postpartum) or 43-365 days (late

**Appendix IV: Severe Maternal Morbidity Rates
by the Location of Veterans' Residences,
Fiscal Years 2011 through 2020**

postpartum) of the last day of their VA-paid delivery hospitalizations. These data are not mutually exclusive, such that the postpartum and late postpartum SMM rates may capture veterans who had a new SMM indicator that was not previously present, as well as an SMM indicator that was present during, and carried over from, the previous period.

We calculated the postpartum and late postpartum SMM rates based on the year in which the VA-paid delivery hospitalization occurred, not the year in which the VA-paid hospital readmission occurred.

Appendix V: Comments from the Department of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON

December 14, 2023

Ms. Alyssa M. Hundrup
Director
Health Care
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Hundrup:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: ***VETERANS HEALTH: VA Should Improve Its Monitoring of Severe Maternal Complications and Mental Health Screenings*** (GAO-24-106209).

The enclosure contains general and technical comments, and the action plan to implement the draft report recommendations. VA appreciates the opportunity to comment on the draft report.

Sincerely,

A handwritten signature in black ink, appearing to read "Kimberly Jackson".

Kimberly Jackson
Chief of Staff

Enclosure

**Appendix V: Comments from the Department
of Veterans Affairs**

Enclosure

The Department of Veterans Affairs (VA) Comments to the
Government Accountability Office (GAO) Draft Report
***VETERANS HEALTH: VA Should Improve Its Monitoring of Severe Maternal
Complications and Mental Health Screenings***
(GAO-24-106209)

Recommendation 1: The Secretary of Veterans Affairs should ensure that as OWH begins monitoring SMM on an ongoing basis, it disaggregates and reviews data on trends in SMM by veteran characteristics, such as race and ethnicity, age or whether veterans lived in a rural area.

VA Response: Concur. The Department of Veterans Affairs' (VA) Office of Women's Health (OWH) has begun monitoring individual cases of severe maternal morbidity (SMM) annually, including both non-transfusion SMM and transfusion inclusive SMM. The data analysis team will disaggregate and review data on trends in SMM on a quarterly basis by Veteran characteristics, including race and ethnicity, age, and urban versus rural residence. While the relatively small number of SMM cases limits OWH's ability to evaluate trends from year to year, VA will be able to evaluate trends over time. VA anticipates the first quarterly report will be available in early February 2024.

Target Completion Date: February 2024

Recommendation 2: The Secretary of Veterans Affairs should ensure that OWH finalizes the development of and implements a systematic process to compile and review data on MCC screening of veterans for mental health conditions on an ongoing basis. This process should include data on MCCs' completion of required mental health screenings, as well as screening results.

VA Response: Concur. OWH will develop and implement a systematic process to compile and review data on maternity care coordinator (MCC) screening of Veterans for mental health conditions. This process will include data on MCC's completion of required mental health screenings as well as the results of those screenings.

Target Completion Date: March 2024

**Appendix V: Comments from the Department
of Veterans Affairs**

Enclosure

The Department of Veterans Affairs (VA) Comments to the
Government Accountability Office (GAO) Draft Report
***VETERANS HEALTH: VA Should Improve Its Monitoring of Severe Maternal
Complications and Mental Health Screenings***
(GAO-24-106209)

General Comment

VA appreciates GAO's attention to this performance audit and the thorough resulting report that highlights the Veterans Health Administration's (VHA) existing efforts directed at maternal health, including the newly expanded Maternity Care Coordination program with 12 months postpartum, VHA national maternal mortality review committee, VHA maternal health strategic plan, and data analysis of VA-paid obstetric deliveries. VHA is committed to identifying severe maternal morbidity and pregnancy-associated death in VA and assessing and developing interventions to address preventable causes of these outcomes. VHA is also committed to strengthening our services for Veterans experiencing pregnancy or postpartum and mental health issues, and we appreciate GAO's note of our critical existing resources for clinicians and patients, including the national reproductive mental health consultation program, and the primary care-mental health integrations across VA. VHA appreciates GAO's recommendations resulting from this audit and looks forward to continuing to integrate data analysis and service delivery to enhance the care for pregnant and postpartum Veterans.

Accessible Text for Appendix V: Comments from the Department of Veterans Affairs

December 14, 2023

Ms. Alyssa M. Hundrup
Director
Health Care
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Hundrup:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: VETERANS HEALTH: VA Should Improve Its Monitoring of Severe Maternal Complications and Mental Health Screenings (GAO-24-106209).

The enclosure contains general and technical comments, and the action plan to implement the draft report recommendations. VA appreciates the opportunity to comment on the draft report.

Sincerely,

Kimberly Jackson
Chief of Staff

Enclosure

The Department of Veterans Affairs (VA) Comments to the Government Accountability Office (GAO) Draft Report VETERANS HEALTH: VA Should Improve Its Monitoring of Severe Maternal Complications and Mental Health Screenings (GAO-24-106209)

Recommendation 1: The Secretary of Veterans Affairs should ensure that as OWH begins monitoring SMM on an ongoing basis, it disaggregates and reviews data on trends in SMM by veteran characteristics, such as race and ethnicity, age or whether veterans lived in a rural area.

VA Response: Concur. The Department of Veterans Affairs' (VA) Office of Women's Health (OWH) has begun monitoring individual cases of severe maternal morbidity (SMM) annually, including both non-transfusion SMM and transfusion inclusive SMM. The data analysis team will disaggregate and review data on trends in SMM on a quarterly basis by Veteran characteristics, including race and ethnicity, age, and urban versus rural residence. While the relatively small number of SMM cases limits

OWH's ability to evaluate trends from year to year, VA will be able to evaluate trends over time. VA anticipates the first quarterly report will be available in early February 2024.

Target Completion Date: February 2024

Recommendation 2: The Secretary of Veterans Affairs should ensure that OWH finalizes the development of and implements a systematic process to compile and review data on MCC screening of veterans for mental health conditions on an ongoing basis. This process should include data on MCCs' completion of required mental health screenings, as well as screening results.

VA Response: Concur. OWH will develop and implement a systematic process to compile and review data on maternity care coordinator (MCC) screening of Veterans for mental health conditions. This process will include data on MCC's completion of required mental health screenings as well as the results of those screenings.

Target Completion Date: March 2024

General Comment

VA appreciates GAO's attention to this performance audit and the thorough resulting report that highlights the Veterans Health Administration's (VHA) existing efforts directed at maternal health, including the newly expanded Maternity Care Coordination program with 12 months postpartum, VHA national maternal mortality review committee, VHA maternal health strategic plan, and data analysis of VA-paid obstetric deliveries.

VHA is committed to identifying severe maternal morbidity and pregnancy-associated death in VA and assessing and developing interventions to address preventable causes of these outcomes. VHA is also committed to strengthening our services for Veterans experiencing pregnancy or postpartum and mental health issues, and we appreciate GAO's note of our critical existing resources for clinicians and patients, including the national reproductive mental health consultation program, and the primary care-mental health integrations across VA. VHA appreciates GAO's recommendations resulting from this audit and looks forward to continuing to integrate data analysis and service delivery to enhance the care for pregnant and postpartum Veterans.

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

Alyssa M. Hundrup, (202) 512-7114 or hundrupa@gao.gov.

Staff Acknowledgments

In addition to the contact named above, Raymond Sendejas (Assistant Director), Karen Belli (Analyst-in-Charge), Bianca Eugene, Amy Leone, Drew Long, Nicholas Ordieres, Fatima Sharif, Jeanne Murphy Stone, Jeffrey Tamburello, and Sirin Yaemsiri made key contributions to this report. Also contributing were Ethiene Salgado-Rodriguez, Emily Wilson Schwark, Jennifer Spiegel, and Roxanna Sun.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its [website](#) newly released reports, testimony, and correspondence. You can also [subscribe](#) to GAO's email updates to receive notification of newly posted products.

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).
Subscribe to our [RSS Feeds](#) or [Email Updates](#). Listen to our [Podcasts](#).
Visit GAO on the web at <https://www.gao.gov>.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: <https://www.gao.gov/about/what-gao-does/fraudnet>

Automated answering system: (800) 424-5454 or (202) 512-7700

Congressional Relations

A. Nicole Clowers, Managing Director, ClowersA@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548



Please Print on Recycled Paper.