

COMMONWEALTH HEALTHCARE CORPORATION



COMMONWEALTH OF THE NORTHERN MARIANAS ISLANDS
**PREGNANCY RISK ASSESSMENT
MONITORING SYSTEM
2022-2023 REPORT**

Understanding and improving maternal and child health in the CNMI.

Acknowledgements

The Commonwealth of the Northern Mariana Islands (CNMI) Pregnancy Risk Assessment Monitoring System (PRAMS) is a collaborative project between the CNMI Commonwealth Healthcare Corporation (CHCC) Division of Public Health Services and the Centers for Disease Control and Prevention (CDC), Division of Reproductive Health. We extend our sincere appreciation to the women of the CNMI who voluntarily participated in PRAMS and shared their experiences; their responses are vital to understanding and improving maternal and child health in the CNMI. We gratefully acknowledge the guidance and support of the CNMI PRAMS Steering Committee, whose expertise and commitment have helped inform program direction and priorities. Special recognition is extended to the State of Hawaii Department of Health Institutional Review Board (IRB) and to Dr. Haley McGinley, of LuGu Consulting, LLC, for her leadership, technical expertise, and contributions towards developing and finalizing the enclosed report. Appreciation is also extended to CHCC staff and partners for their contributions to survey implementation, data management, analysis, and dissemination. The success of CNMI PRAMS reflects the collective efforts of all who are dedicated to improving health outcomes for mothers, infants, and families across the Commonwealth.





Commonwealth Healthcare Corporation

Commonwealth of the Northern Mariana Islands

1178 Hinemlu' St. Garapan, Saipan, MP 96950



CEO-L26-215

January 12, 2026

The Commonwealth Healthcare Corporation is pleased to present the 2022–2023 CNMI Pregnancy Risk Assessment Monitoring System (PRAMS) Report, which reflects the experiences, voices, and health of mothers and families across the CNMI.

I would like to express sincere appreciation to the mothers who participated in PRAMS, as well as to the community members, local and national partners, and stakeholders whose collaboration made this data collection possible. Their willingness to share their experiences ensures that the voices of CNMI families are reflected in our public health efforts.

This report is the result of dedicated work by our team, who have operated diligently to provide accurate and meaningful information. The findings will guide evidence-based initiatives that strengthen maternal and child health, promote safe and healthy pregnancies, and support thriving families throughout our community.

By working together—mothers, families, communities, and public health professionals—we continue to build a healthier CNMI for all.

Sincerely,

A handwritten signature in blue ink that reads "Esther L. Muña".

Esther Lizama Muña, PhD, MHA, FACHE
Chief Executive Officer
State/Territorial Health Official

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Introduction

The Commonwealth of the Northern Mariana Islands (CNMI) Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey of all women who recently gave birth in the CNMI. This is a joint effort between the Commonwealth Healthcare Corporation (CHCC) and the U.S. Centers for Disease Control and Prevention (CDC). This survey collects data specific to the CNMI about maternal attitudes and experience before, during, and after pregnancy. The purpose of this data collection system is to better understand the health of new mothers in the CNMI in order to improve existing programs and policies.

This survey can be completed using a mailed in paper survey, over the phone, or online. Mothers who complete the survey are given a small token of appreciation.

PRAMS was first implemented in 2022 and is ongoing. This report presents data from 2022 (Phase 8 version of PRAMS) and 2023 (Phase 9 version of PRAMS). Due to the variations in the survey instrument used during Phase 8 and Phase 9, the two years of data could not be aggregated. Therefore, both 2022 and 2023 data are presented in this report based on the indicator being presented. When possible and when there were significant changes, these trends are shown for 2022 versus 2023 data.

All questions asked are based on the mother's most recent pregnancy. Some indicators in this report are stratified by population characteristics such as age, education, race, marital status, income, health insurance status, and parity and significant differences are highlighted. These differences help us to understand how to tailor interventions.

**CNMI
PRAMS**

Pregnancy Risk Assessment
Monitoring System

A survey on
the health
of mothers
and babies
in the CNMI



For more information about CNMI PRAMS,
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Email: cnmiprams@chcc.health

Pre-Pregnancy Health

Pre-pregnancy health conditions can put a woman at risk for pregnancy complications¹. There are many conditions which affect women in the CNMI, and certain sub-populations are more affected than others. Although some of these conditions cannot be eliminated prior to pregnancy, early, regular, and adequate care during pregnancy can help to manage these conditions.



17.0% of CNMI mothers self-reported having anxiety prior to pregnancy. This was higher among younger mothers **<25 years old** (20.2%) and **25-34 years old** (20.9%).



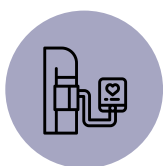
15.7% of CNMI mothers self-reported having anemia prior to pregnancy which increased from 11.8% in 2022. Anemia was highest among **Carolinian** (38.9%) and **other Pacific Islander** mothers (23.6%).



9.5% of CNMI mothers self-reported having depression prior to pregnancy. Depression was highest among younger mothers **<25 years old** (16.7%) and **Carolinian** (22.2%), **other Pacific Islander** (14.9%), and **Chamorro** (11.0%) mothers.



5.6% of CNMI mothers self-reported having Type 1 or Type 2 diabetes prior to pregnancy. Diabetes was highest among **Carolinian** (11.1%) and **other Pacific Islander** mothers (8.4%).



5.4% of CNMI mothers self-reported having high blood pressure (hypertension) prior to pregnancy which decreased from 9.0% in 2022. High blood pressure was highest among mothers **35 years and older** (9.6%) and **Carolinian** mothers (16.7%).



4.7% of CNMI mothers self-reported having Polycystic Ovarian Syndrome (PCOS) prior to pregnancy. PCOS was highest among **Filipino** (7.0%) and **multiple race** (7.9%) mothers.



4.1% of CNMI mothers self-reported having asthma prior to pregnancy.



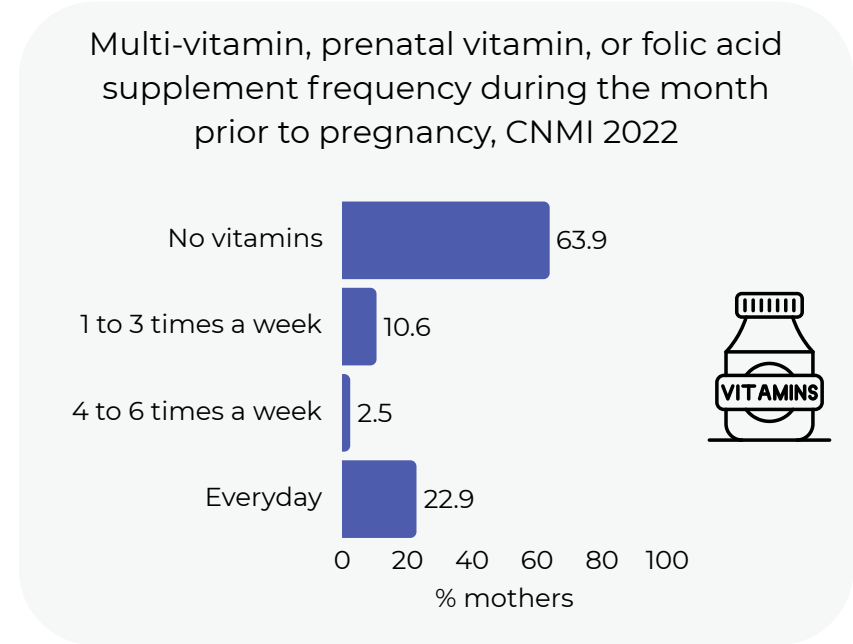
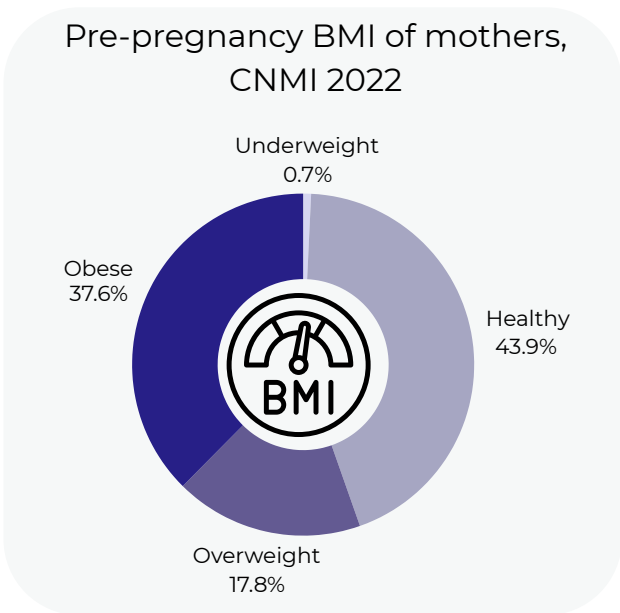
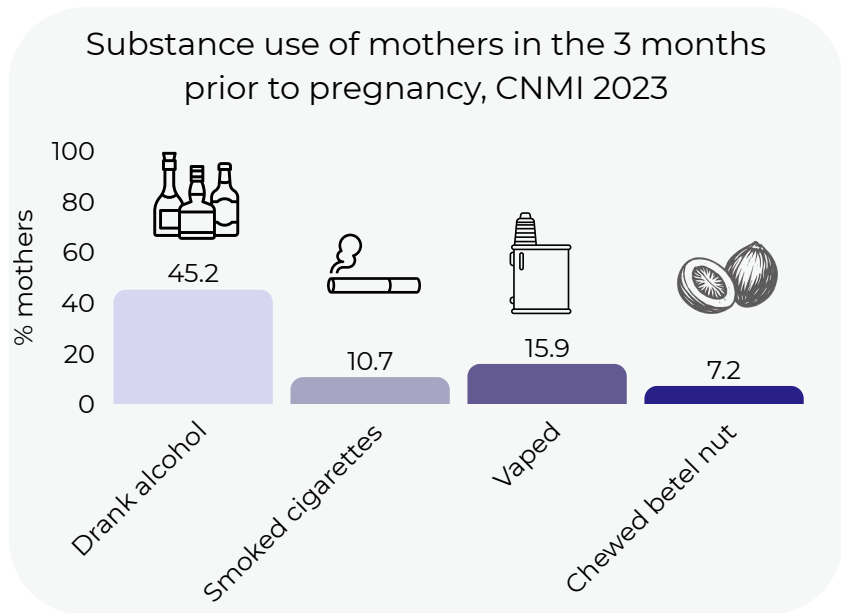
1.4% of CNMI mothers self-reported having thyroid problems prior to pregnancy. Thyroid problems were highest among **Carolinian** mothers (5.9%).

Pre-Pregnancy Health

Pre-pregnancy body mass index (BMI) can impact the likelihood of certain adverse events during pregnancy and postpartum and impact infant health. For example, obesity during pregnancy is linked to high blood pressure and gestational diabetes in mothers, as well as stillborn and preterm birth in infants². In the CNMI, **over half (55.4%) of mothers are overweight or obese prior to getting pregnant**. Obesity was highest among mothers aged 25-34 years at 40.8%, followed by mothers aged 35+ years (32.2%) and <25 years (28.0%).

Prenatal vitamins contain folic acid which protects unborn babies from serious birth defects called neural tube defects. Due to the fact that many pregnancies are unplanned, it is recommended that women get enough folic acid before becoming pregnant.³ In the CNMI, **63.9% of mothers did not take any vitamins in the month prior to pregnancy**.

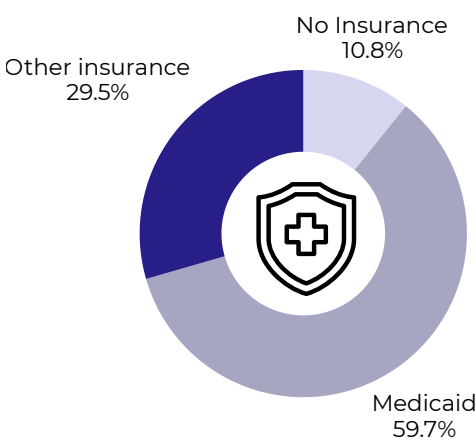
Substances such as alcohol, smoking cigarettes, vaping, and chewing betel nut can harm unborn babies. Using these substances can cause a baby to be born too early or too small, can cause birth defects, or cause death of the fetus^{4,5,6,7}. In the CNMI during the three months prior to pregnancy, **45.2% of mothers reported drinking alcohol, 10.7% reported smoking cigarettes, 15.9% reported vaping, and 7.2% reported chewing betel nut**.



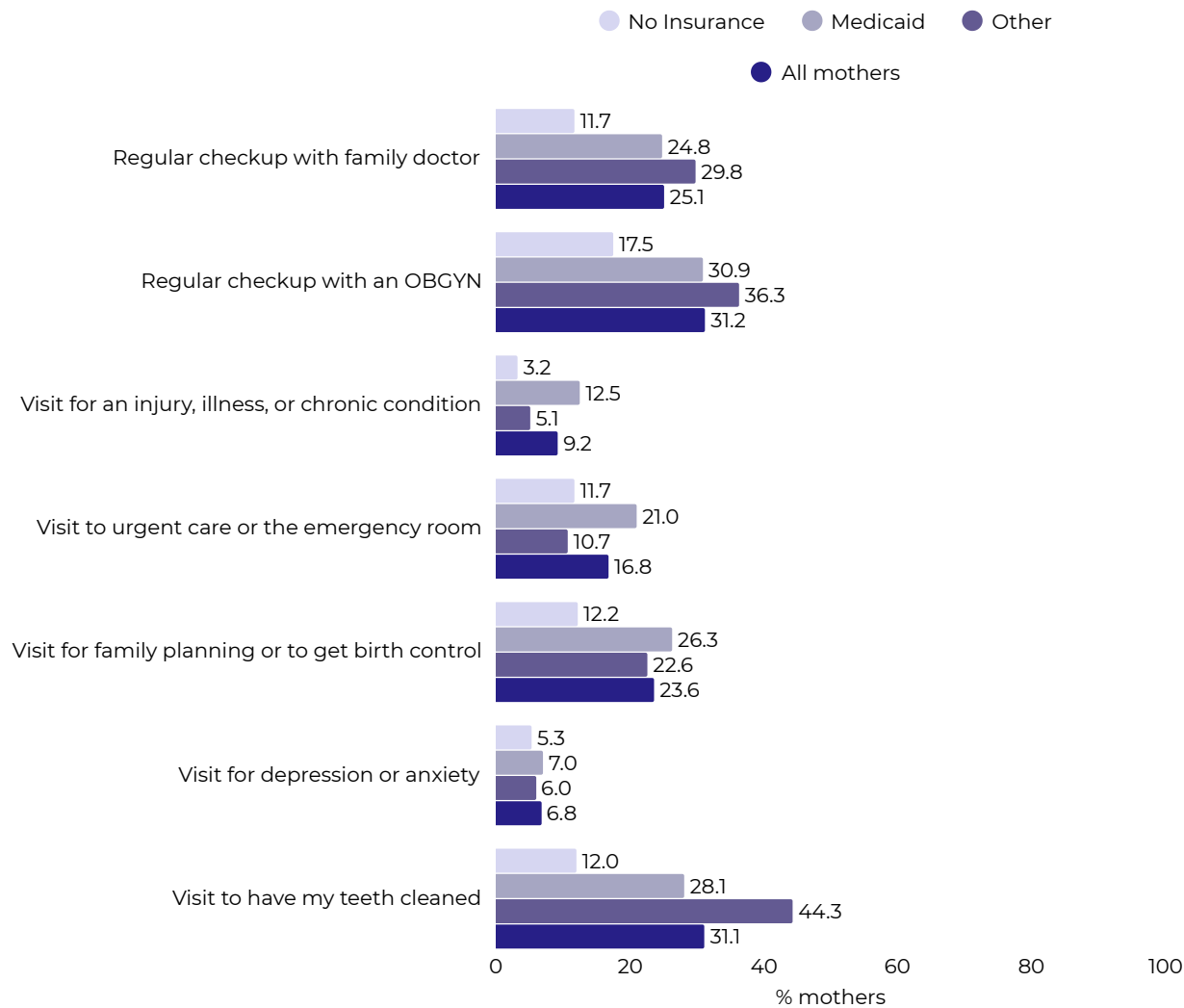
Pre-Pregnancy Health Care

Uninsured adults are less likely to receive preventative services¹. Prior to pregnancy, **10.8% of mothers did not have health insurance**. Overall, use of preventative services in the CNMI is low with only **25.1% of mothers having a preventative checkup and 31.2% having an OBGYN visit in the year before becoming pregnant**. A smaller proportion of mothers without insurance had preventative medical visits in the past year compared to those with insurance.

Insurance type of mothers prior to pregnancy, CNMI 2023



Medical visits in the 12 months prior to pregnancy among mothers by Insurance Type, CNMI 2023



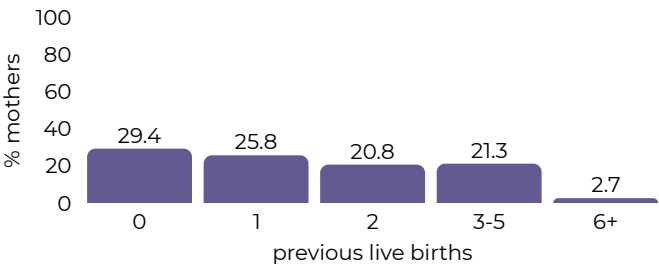
Pregnancy Intention



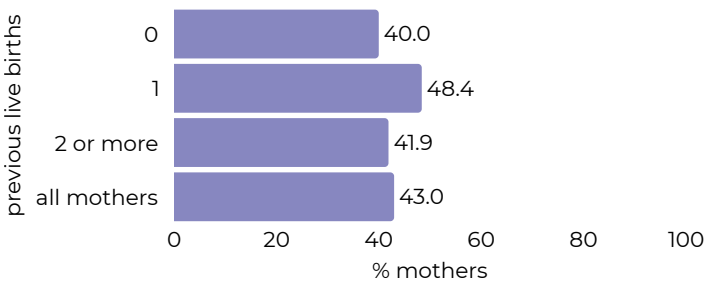
Women who have unintended pregnancies are more likely to delay prenatal care, experience violence, and have mental health problems¹. Children of women who have unintended pregnancies are at increased risk for mental and physical health problems¹. In the CNMI, **57.0% of pregnancies in 2023 were unintended**.

Parity is the number of previous live births a woman has had. In 2023, 29.4% of births were to first-time mothers, 25.8% of births were to second time mothers, and 44.8% of births were to women who already had two or more children. Among women with two or more children already, 19.5% reported that they “didn’t want to be pregnant then or any time in the future”. Among first-time mothers, 26.7% reported that they “wanted to get pregnant later”.

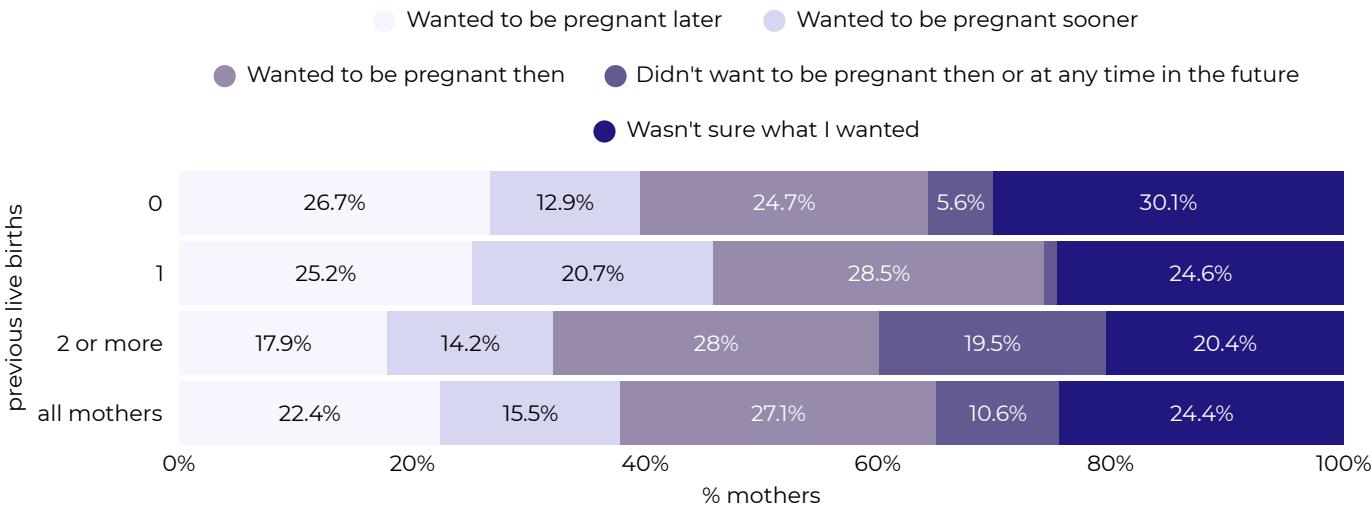
Parity (number of previous live births) of mothers, CNMI 2023



% mothers who intended to get pregnant by parity, CNMI 2023



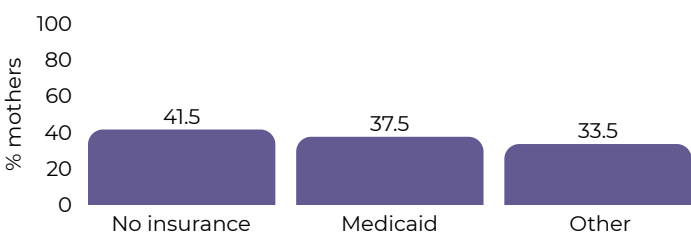
Feelings towards recent pregnancy among mothers by parity, CNMI 2023



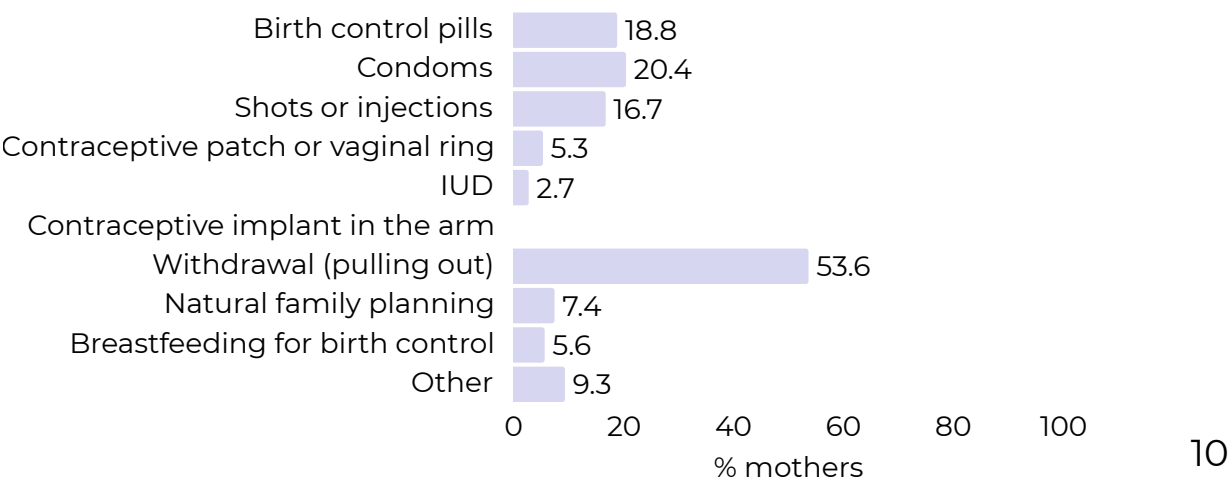
Pregnancy Intention

Among women in the CNMI with unintended pregnancies, 37.0% reported using some method to prevent pregnancy. This was highest among women without health insurance, at 41.5%. Among those attempting to prevent pregnancy, over half (53.6%) relied on withdrawal. Other commonly used methods included condoms (20.4%) and birth control pills (18.8%)

Doing anything to prevent pregnancy among mothers with unintended pregnancies by insurance status, CNMI 2023



Birth control used among mothers with unintended pregnancies who were trying to prevent pregnancy, CNMI 2023



Pregnancy Health



4.8% of mothers in the CNMI were heavy alcohol drinkers (8 or more drinks per week) during the 3 months prior to pregnancy. Heavy drinking was more common among mothers with **less than a high school education** (12.3%) and **Carolinian** mothers (22.2%)



24.4% of mothers in the CNMI reported drinking any alcohol during their pregnancy with 23.6% reporting consumption during their first trimester, 2.0% in their second trimester, and 1.1% in their third trimester. Alcohol consumption during pregnancy was highest among **Chamorro** (34.1%), **Carolinian** (38.9%), and **other Pacific Islander** (31.0%) mothers.



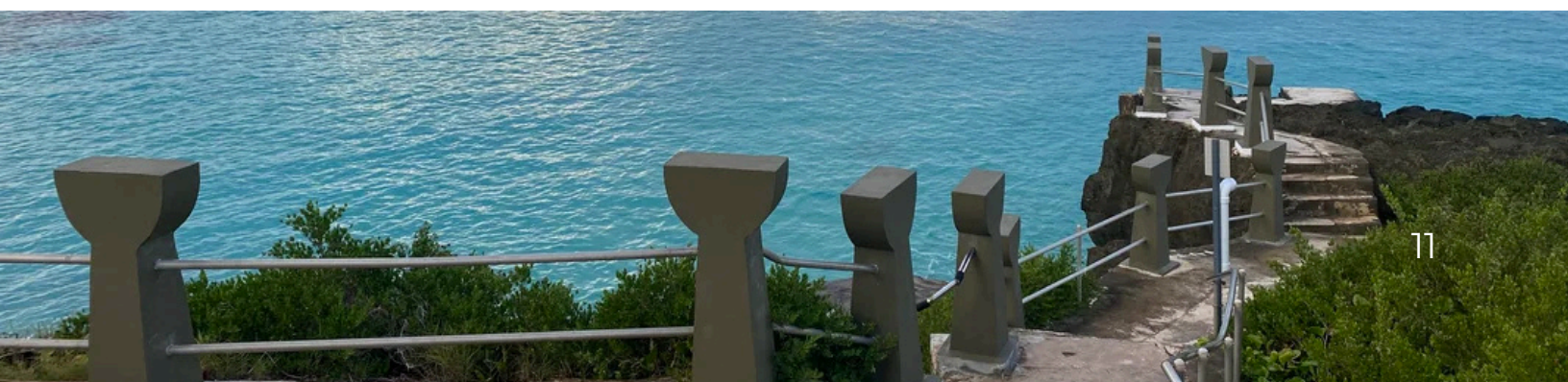
8.1% of mothers in the CNMI reported using marijuana during their pregnancy. Marijuana use during pregnancy was highest among those with **less than a college education** (9.8%), **Chamorro** (10.5%), **Carolinian** (11.8%), and **other Pacific Islander** (10.4%) mothers.



0.8% of mothers in the CNMI reported using illicit drugs such as fentanyl, heroin, amphetamines, cocaine, or hallucinogens during their pregnancy.



2.0% of mothers in the CNMI reported using prescription pain relievers such as hydrocodone, oxycodone, or codeine during their pregnancy.



Pregnancy Health

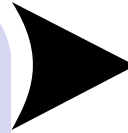
Intimate partner violence (IPV) during pregnancy can have significant negative impacts on the health of mothers and their babies⁸. It is important to understand IPV in the CNMI in order to ensure that women who experience IPV can access appropriate resources and support. In the CNMI, **4.7% of mothers reported physical abuse before or during pregnancy**.



4.1% of mothers in the CNMI reported physical abuse in the 12 months before pregnancy.

2.0% of mothers in the CNMI reported physical abuse during pregnancy.

Most physical abuse reported was from a **spouse/partner** of ex-spouse/partner.



4.7% of mothers in the CNMI reported physical abuse before or during pregnancy.

Physical abuse before or during pregnancy was more common among **not married mothers** (6.5%) and mothers with an **annual household income <\$18,000** (6.7%).



4.1% of mothers in the CNMI reported that their husband or partner threatened them or made them feel unsafe in some way during their most recent pregnancy.

2.5% of mothers in the CNMI reported they were frightened for their or their family's safety because of the anger or threats from their husband or partner during their most recent pregnancy.

3.7% of mothers in the CNMI reported that their husband or partner tried to control their daily activities during their most recent pregnancy.

0.6% of mothers in the CNMI reported that their husband or partner forced them to take part in touching or any sexual activity that was unwanted during their most recent pregnancy.

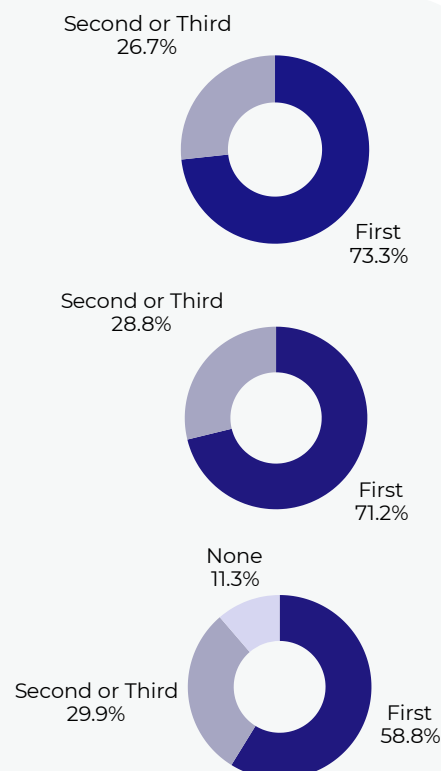
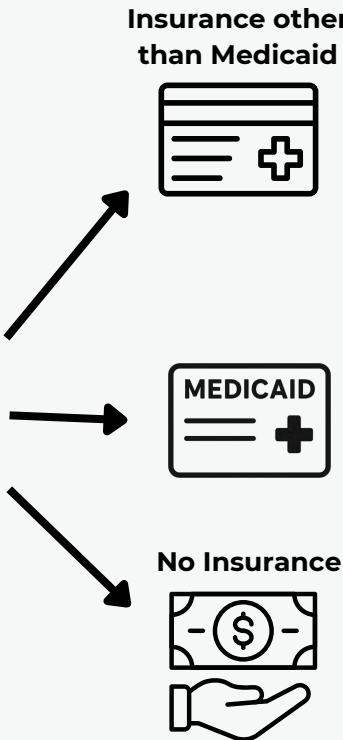


Pregnancy Health

Prenatal care (PNC) can help to keep mothers and their babies healthy and prevent adverse outcomes including maternal and infant death⁹. It is important that women receive prenatal care **early** in their pregnancy (ideally first trimester) and receive **regular** prenatal care throughout their pregnancy.

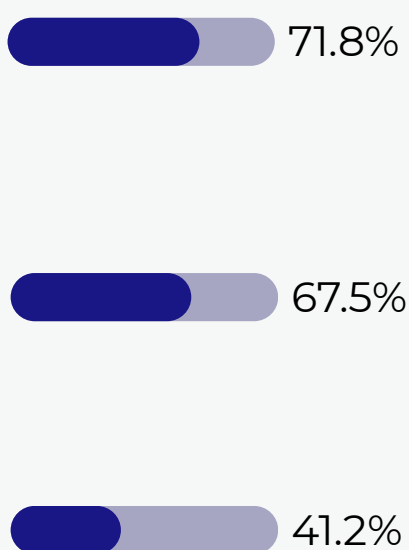
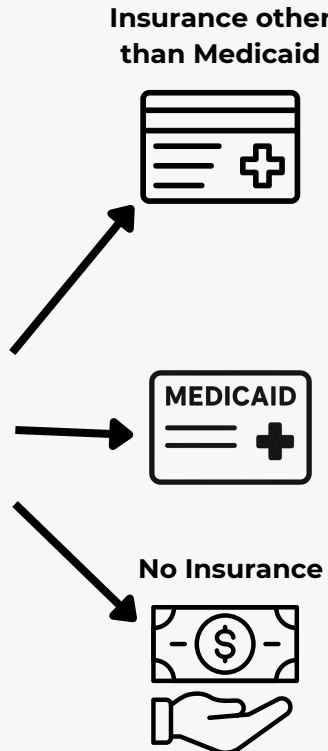
EARLY PNC

71.0% of mothers in the CNMI had their first prenatal care visit in the first trimester, **28.4%** had their first visit in the second or third trimester, and **0.6%** did not receive any prenatal care. Only 58.8% of mothers with no health insurance accessed prenatal care in their first trimester and 11.3% received no prenatal care.



REGULAR PNC

67.0% of mothers had adequate prenatal care according to the Kotelchuck Index that examines when a mother first initiates prenatal care and how often she receives care¹⁰. Only 41.2% of mothers without health insurance had adequate prenatal care.



Pregnancy Health

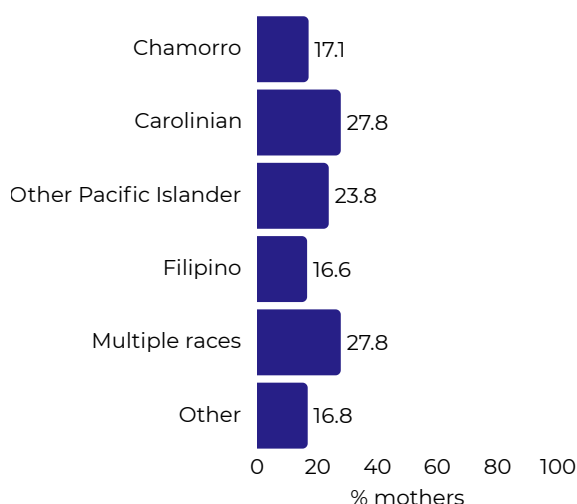
The most common health conditions during pregnancy in the CNMI include gestational diabetes and high blood pressure (hypertension). Gestational diabetes can put a baby at higher risk for being larger at birth (macrosomia), low blood glucose levels (hypoglycemia) at birth, breathing problems at birth, being born early or stillborn, and having obesity and type 2 diabetes later in life¹¹. Hypertension during pregnancy can result in life-threatening complications for the mother, and put the baby at higher risk for being born too early or being born too small¹².



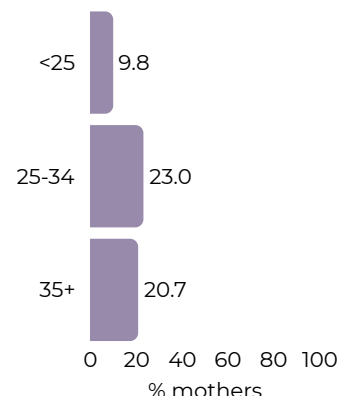
19.4% of mothers in the CNMI reported that they had gestational diabetes while pregnant.

Gestational diabetes was more common among mothers aged 25 and older and Chamorro, Carolinian, other Pacific Islander, and multiple race mothers.

Gestational diabetes among mothers by race, CNMI 2023



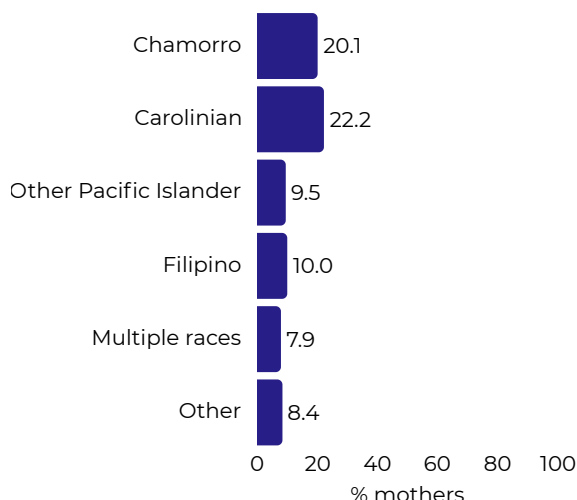
Gestational diabetes among mothers by age group, CNMI 2023



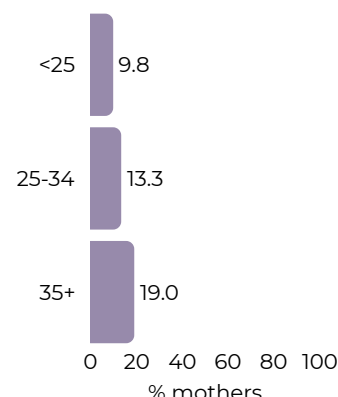
13.8% of mothers in the CNMI reported that they had hypertension while pregnant.

Hypertension prevalence increased with age and was higher among Chamorro and Carolinian mothers.

Hypertension among mothers by race, CNMI 2023



Hypertension among mothers by age group, CNMI 2023



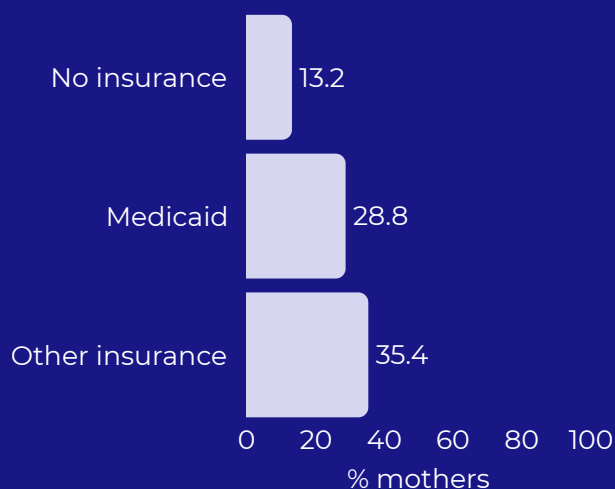
Pregnancy Health

Pregnancy can boost levels of bacteria and inflammation in the mouth that can increase the risk of tooth decay, gum disease, and tooth loss. There is a link between poor oral health during pregnancy and adverse pregnancy outcomes such as preterm birth, low birthweight babies, preeclampsia, and gestational diabetes. Pregnant women should receive preventative dental cleanings during pregnancy and practice dental hygiene at home¹³.



Fewer than one in three mothers (29.5%) in the CNMI had their teeth cleaned by a dentist or dental hygienist during their recent pregnancy. Only 13.2% of uninsured mothers received a dental cleaning during their pregnancy.

Dental cleaning during pregnancy among mothers by insurance type, CNMI 2023



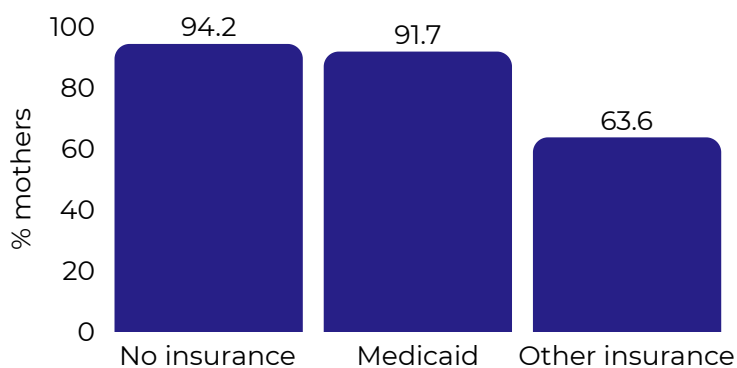
Pregnancy Health

The CNMI Supplemental Nutrition Program for Women, Infants, and Children (CNMI WIC Program) promotes the health and well-being of the women, infants, and children of the CNMI through education and support for nutrition, breastfeeding, and health services¹⁴. WIC is available to CNMI's pregnant, breastfeeding, and postpartum women, infants, and children under the age of five who are at nutritional risk and who are at or below 185% the federal poverty level. Being on WIC can improve birth outcomes, cut healthcare costs, improve diet and diet-related outcomes, improve infant feeding practices, and improve cognitive development of children¹⁵.

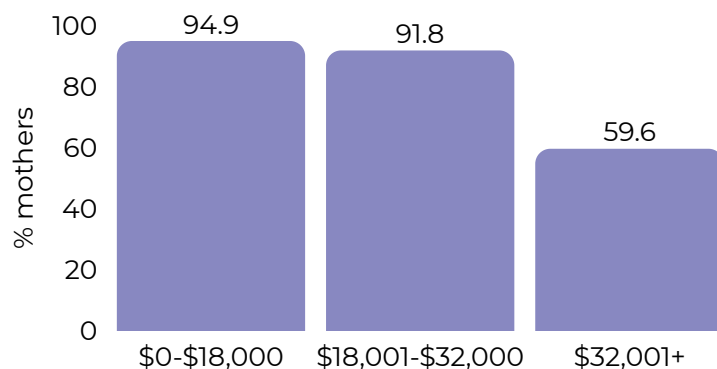
85.5% of mothers in the CNMI were on WIC during their most recent pregnancy. Being on WIC was more common among mothers without health insurance (94.2%) and on Medicaid (91.7%). Being on WIC was more common among mothers with a household income of \$18,000 or less (94.9%) or \$18,001-\$32,000 (91.8%).



WIC during pregnancy among mothers by insurance status, CNMI 2023



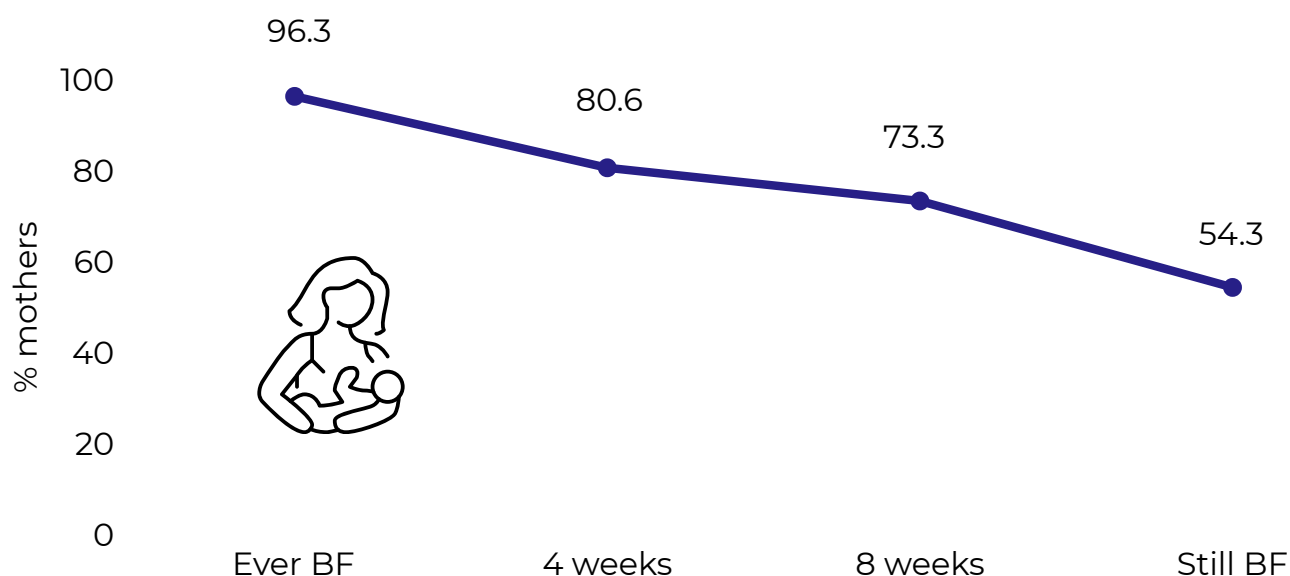
WIC during pregnancy among mothers by household income, CNMI 2023



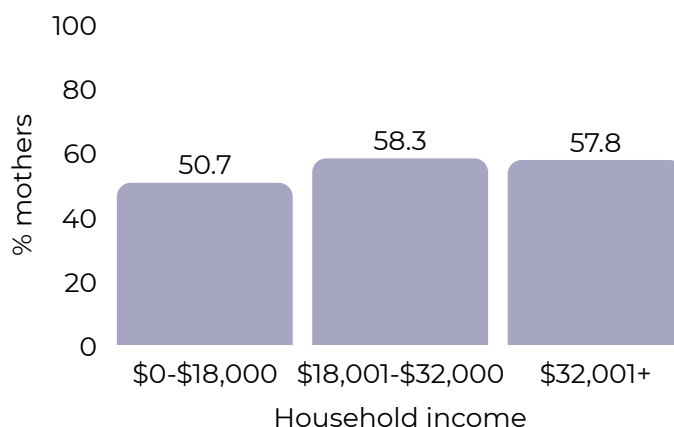
Post-Pregnancy

Breastfeeding is the best source of nutrition for most babies and has benefits for mother and baby. Breastfeeding can help protect babies from short and long-term illnesses and reduce mother's risk of certain conditions later in life¹⁶. Exclusive breastfeeding is recommended for baby's first six months, followed by continued breastfeeding while introducing supplemental foods until children are 12 months or older. In the CNMI, most mothers (96.3%) try breastfeeding, though only 54.3% were still breastfeeding at the time of the survey (when all infants were under 9 months old). Current breastfeeding was lowest among women with an annual household income <\$18,000.

% mothers breastfeeding over time, CNMI 2023



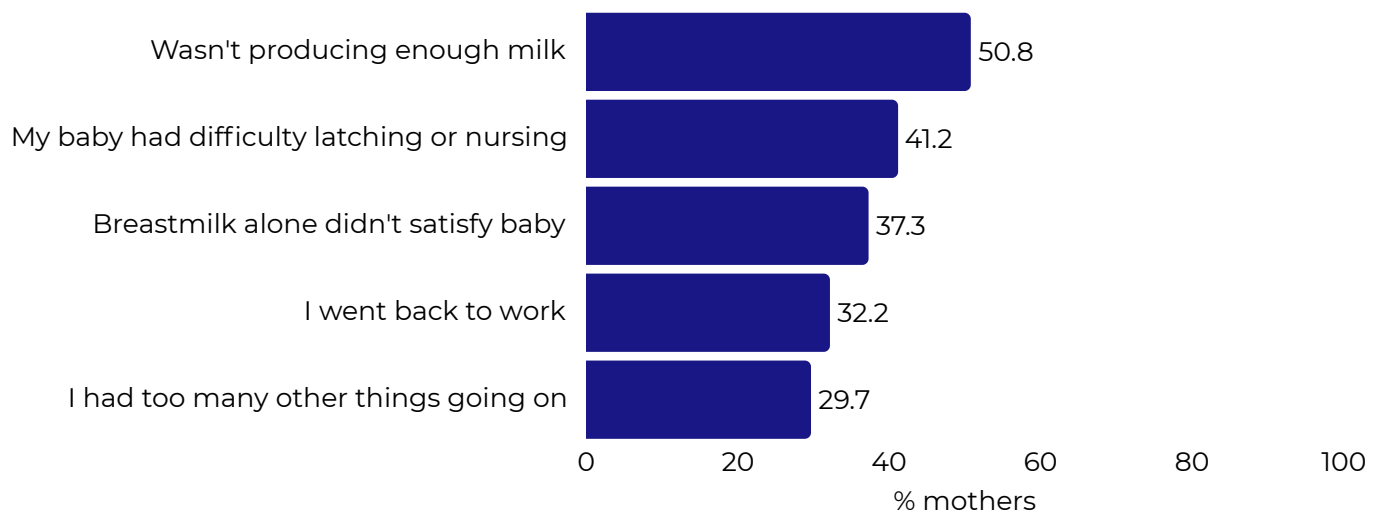
% mothers still breastfeeding by household income, CNMI 2023



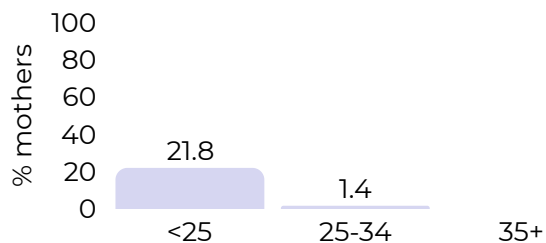
Post-Pregnancy

The most common reasons mothers stopped breastfeeding in the CNMI included not producing enough milk, difficulty latching, breastmilk alone didn't satisfy baby, going back to work, and too many other things going on. Among mothers <25 years old, 21.8% reported that they stopped breastfeeding because they had to go back to school. About half of women from higher earning households stopped breastfeeding because they had to go back to work.

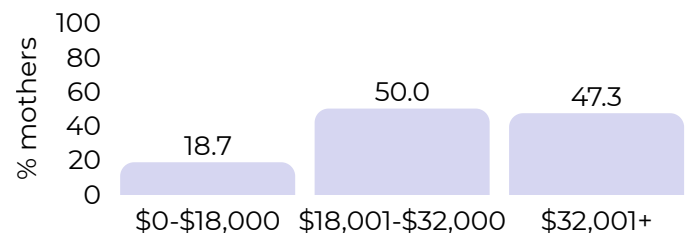
Most common reasons that mothers stopped breastfeeding, CNMI 2023



Stopped breastfeeding because mother had to go back to school by age, CNMI 2023



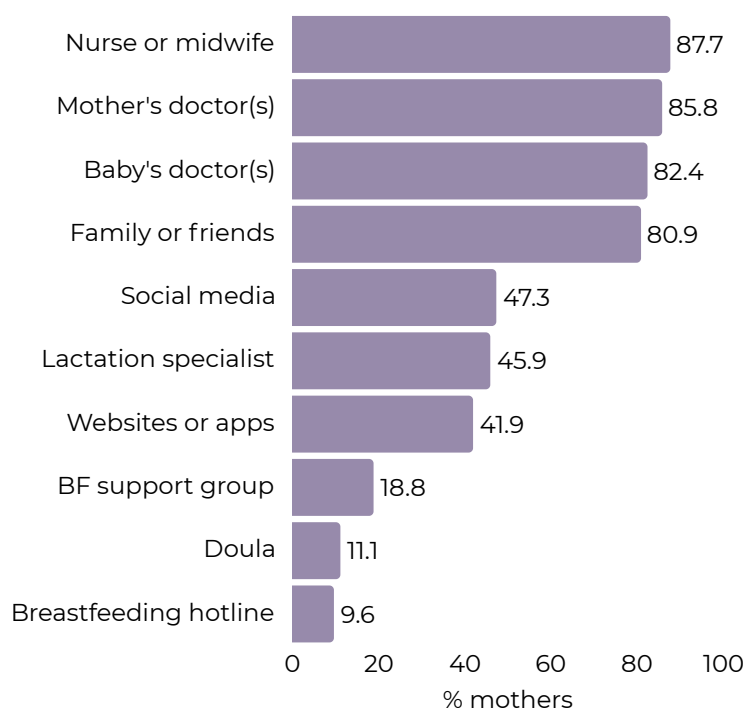
Stopped breastfeeding because mother had to go back to work by annual HH income, CNMI 2023



Post-Pregnancy

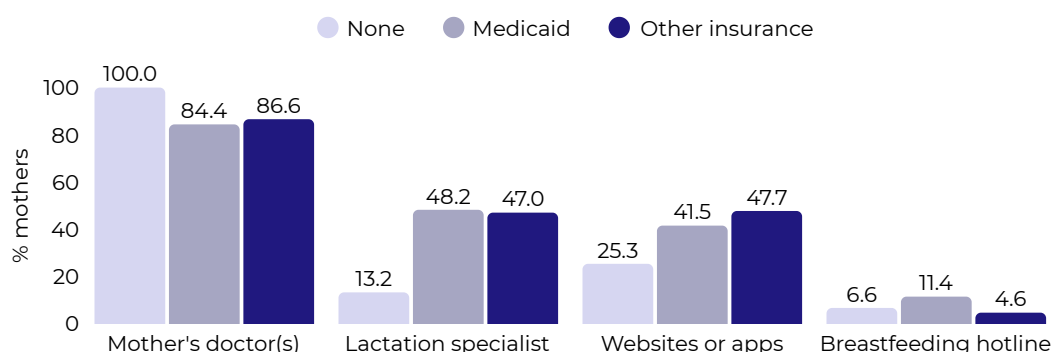
The most common sources of breastfeeding information reported in the CNMI were from nurses/midwives, doctors, and family/friends. Fewer than half (45.9%) of mothers in the CNMI reported that they received information from a lactation specialist, although access to lactation specialists can improve breastfeeding outcomes¹⁷. Other common sources included social media and websites/apps.

Where mothers received information about breastfeeding, CNMI 2023



A lower proportion of mothers without health insurance received information from a lactation specialist or websites/apps compared to those with insurance. A higher proportion of mothers on Medicaid used a breastfeeding hotline for breastfeeding information compared to those not on Medicaid.

Where mothers received information about breastfeeding by insurance status, CNMI 2023

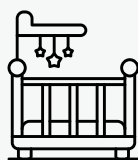


Post-Pregnancy

According to the American Academy of Pediatrics, babies should always be placed to sleep on their back in their own sleep space (no other people) on a firm, flat sleep area without bedding (such as blankets, pillow, bumper pads, and soft toys)¹⁸. 61.7% of mothers in the CNMI reported placing their babies to sleep on their sides or stomach and 63.4% reported not always placing their baby alone in their own crib or bed while sleeping. Many mothers also reported placing unsafe items in their baby's sleeping area, and placing their baby to sleep in unsafe areas.

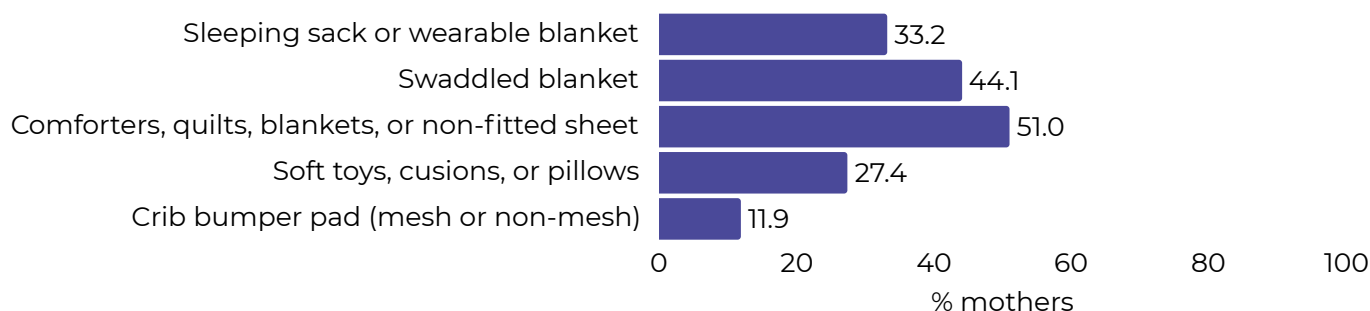


92.1% of mothers in the CNMI reported putting their baby to sleep on their back in the past 2 weeks. **61.7%** of mothers reported putting their baby to sleep on their side or stomach (unsafe sleep positions) in the past 2 weeks. Unsafe sleep positions were lower among women with a bachelors degree or higher education (48.0%) and mothers 35 years or older (54.2%). Unsafe sleep positions were highest among other Pacific Islander mothers (81.6%).

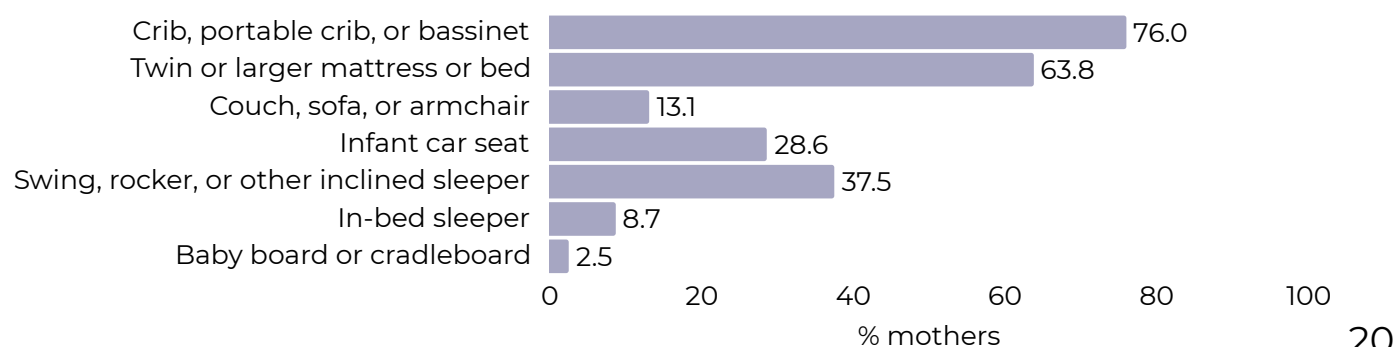


63.4% of mothers in the CNMI reported that they did not always put their baby alone in their own crib or bed then they were sleeping. Unsafe sleep practices were lower among mothers with a bachelors degree or higher education (50.9%) and mothers 35 years or older (57.9%). Unsafe sleep practices were highest among Chamorro (68.7%) and other Pacific Islander (64.6%) mothers.

Items placed with sleeping baby in past 2 weeks, CNMI 2023

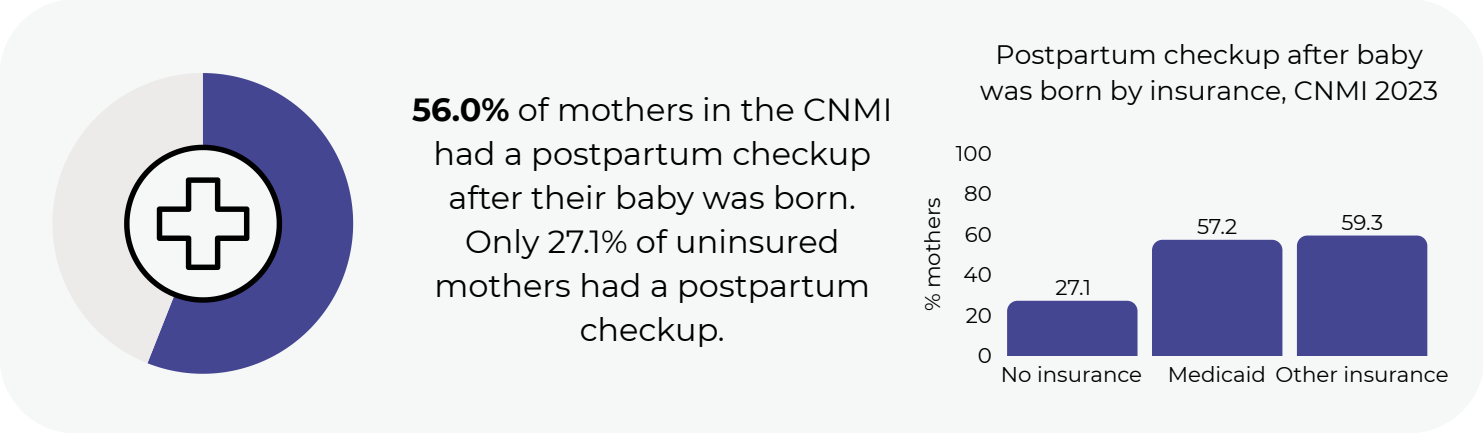


Where baby placed to sleep in past 2 weeks, CNMI 2023

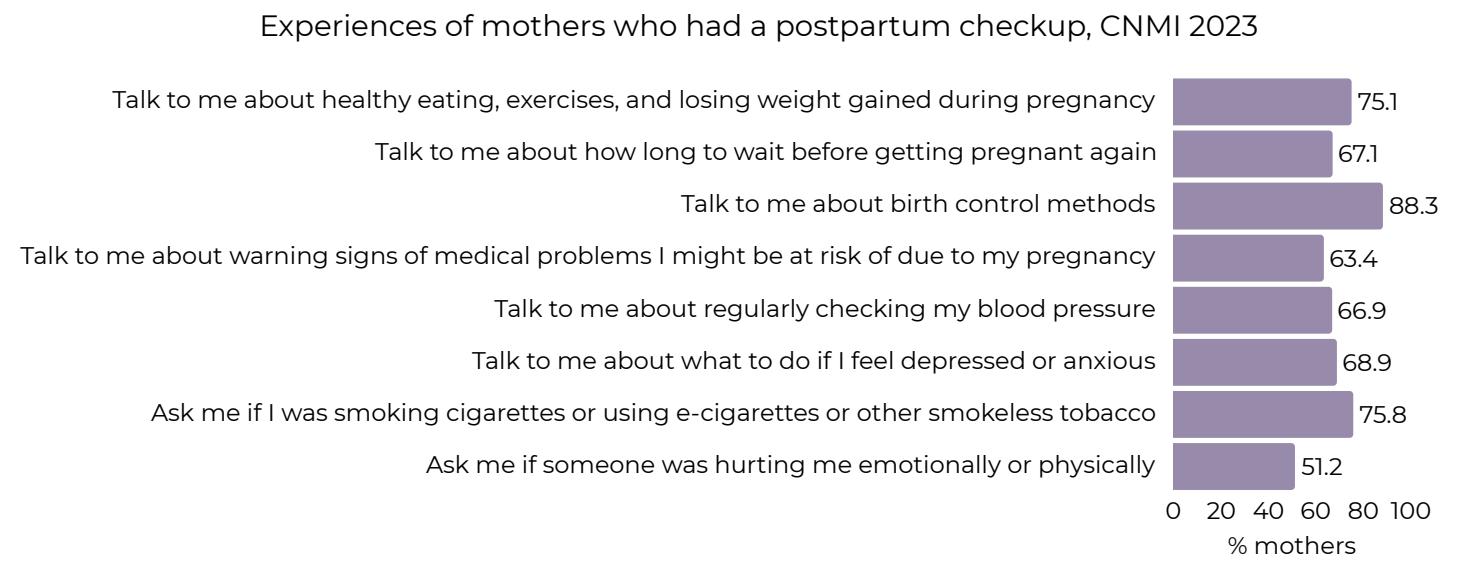


Post-Pregnancy

The American College of Obstetricians & Gynecologists advises that new mothers connect with their obstetrician-gynecologist (ob-gyn) several times within the 12 weeks after giving birth. The first checkup should be within three weeks unless the mother had high blood pressure during pregnancy, in which case she should receive a checkup three to ten days after birth. Additional visits should be scheduled as needed before a final checkup around 12 weeks after birth¹⁹.



Mothers in the CNMI who attended a postpartum checkup were asked about their experience at their appointment. Topics discussed and questions asked varied among mothers.

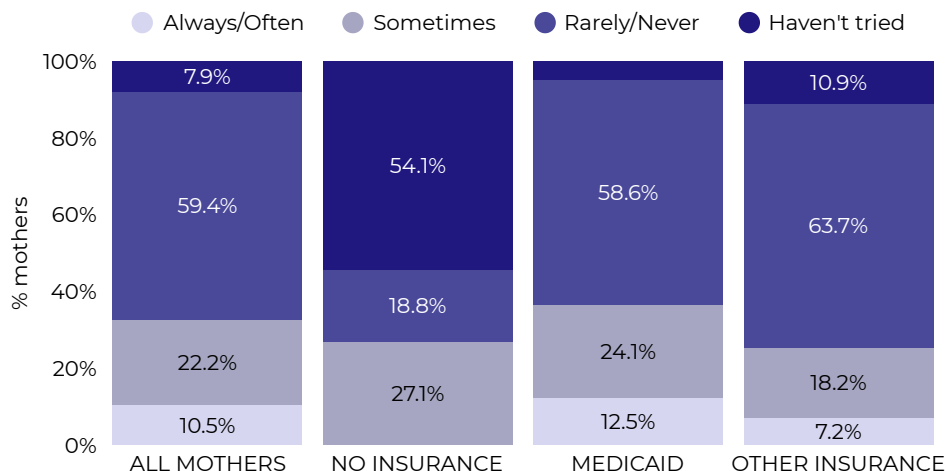


Post-Pregnancy

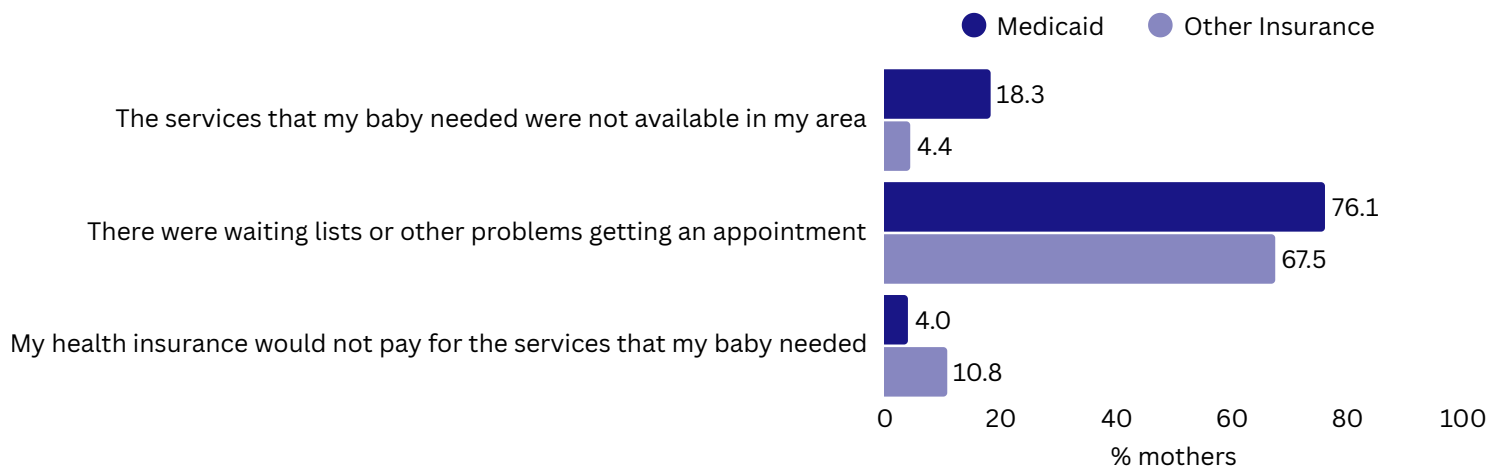
The American Academy of Pediatrics (AAP) recommends a newborn visit with a pediatrician within 24 hours after birth, a first office visit 3-5 days after birth, and well baby visits at one, two, four, six, nine, and 12 months in the first year of life²⁰.

Majority of mothers in the CNMI reported that they were rarely or never frustrated getting healthcare for their baby. Among mothers on Medicaid, 12.5% reported being always or often frustrated. **Among mothers with no insurance, 54.1% reported that they haven't tried to get healthcare for their baby.**

How often mothers were frustrated when they tried to get healthcare for their baby after giving birth by insurance, CNMI 2022



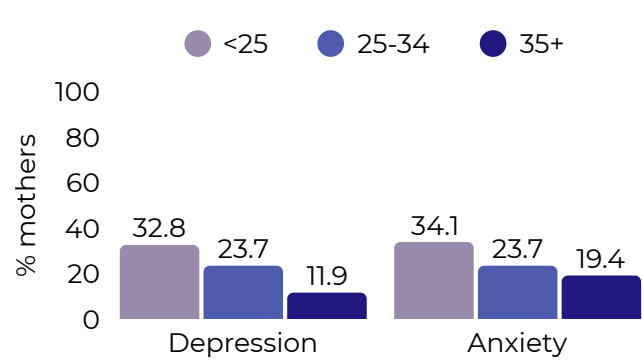
Reasons that mothers felt frustrated when they tried to get healthcare services for their baby after giving birth by insurance type, CNMI 2022



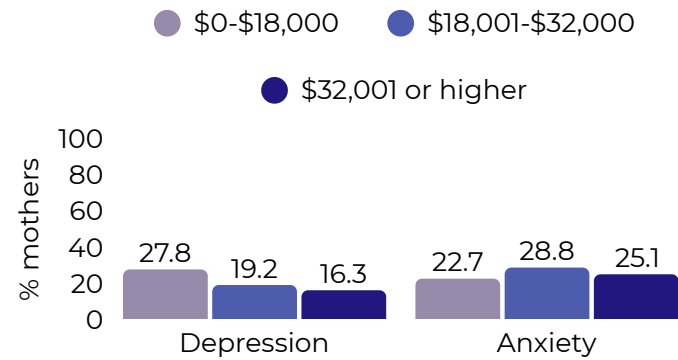
Post-Pregnancy

Among mothers in the CNMI, **23.1% had symptoms of postpartum depression**. Depression was highest among younger mothers, those with lower annual household income, not married mothers, and those with lower education. Additionally, **25.1% of mothers had symptoms of postpartum anxiety**. Anxiety was highest among younger mothers and not married mothers.

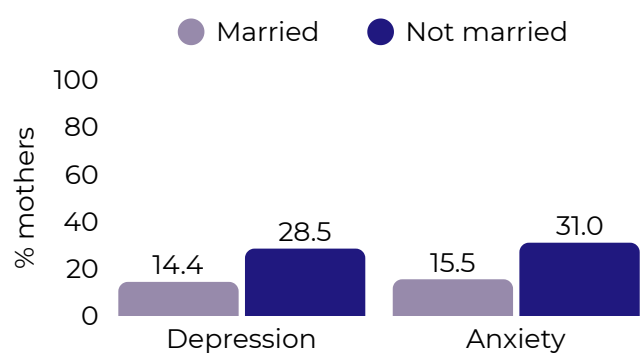
Depression and Anxiety among postpartum mothers by age, CNMI 2023



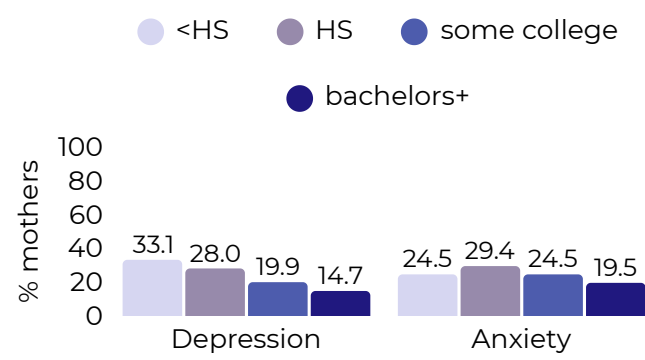
Depression and Anxiety among postpartum mothers by annual household income, CNMI 2023



Depression and Anxiety among postpartum mothers by marital status, CNMI 2023



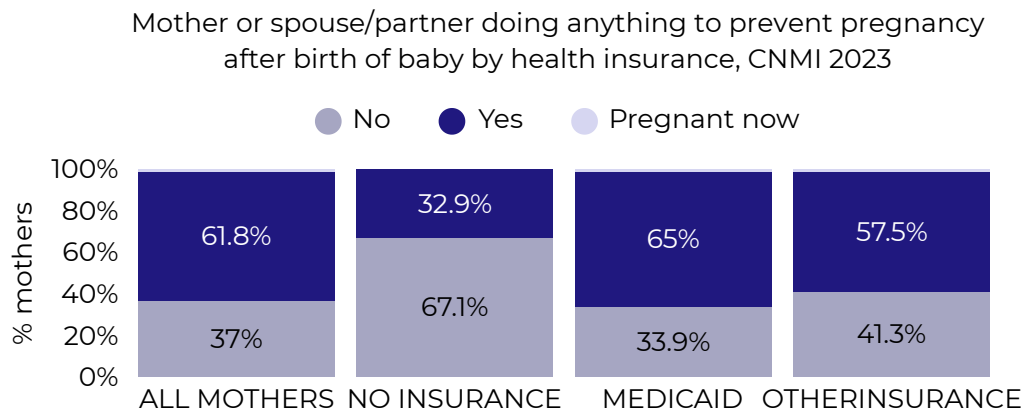
Depression and Anxiety among postpartum mothers by education, CNMI 2023



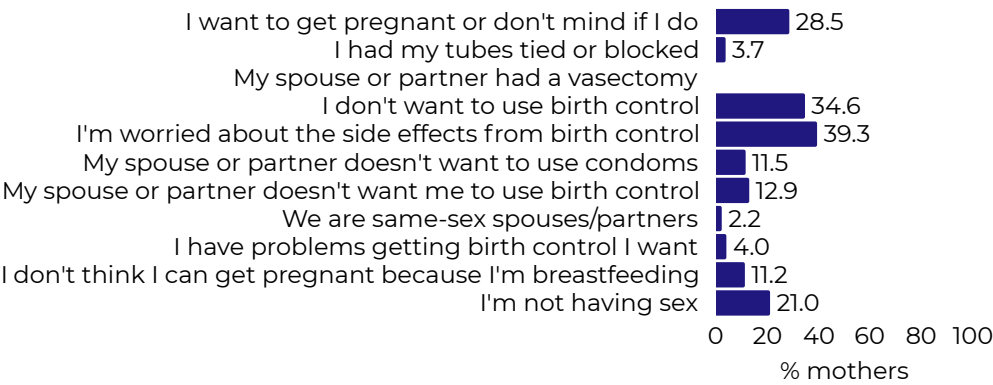
Post-Pregnancy

It is recommended that most women wait 18 months to get pregnant again after giving birth to allow for recovery²¹. Getting pregnant again before 18 months can increase the risk of preterm birth and low birth weight. In order to space pregnancies, effective birth control methods can be used until a woman is ready to be pregnant again.

61.8% of mothers in the CNMI reported that they were doing anything to prevent pregnancy after the birth of their baby. Only **32.9%** of mothers with no health insurance were doing anything to prevent pregnancy.

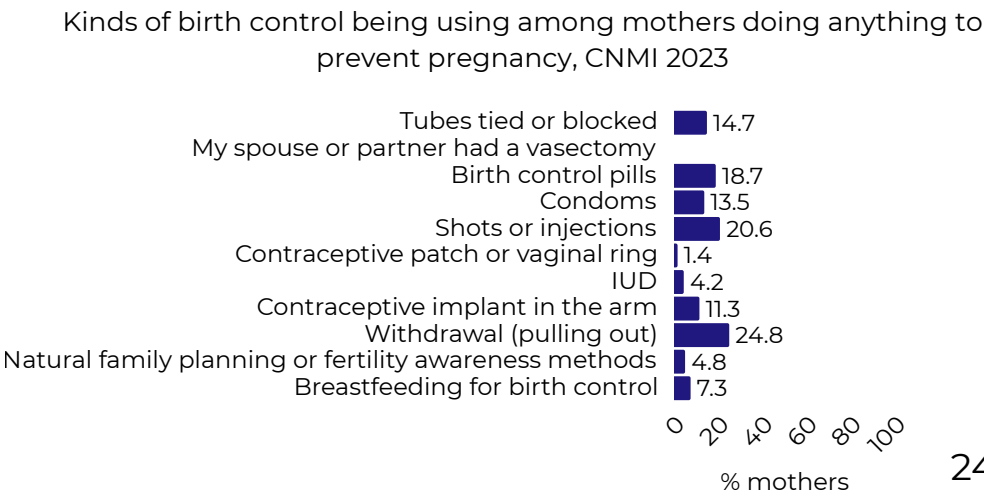


Reasons not doing anything to prevent pregnancy among mothers not preventing pregnancy, CNMI 2023



Common reasons that mothers reported for not doing anything to prevent pregnancy include being worried about the side effects of birth control (39.3%), not wanting to use birth control (34.6%), and wanting another pregnancy (28.5%).

The most common types of birth control that mothers reported using to prevent pregnancy include withdrawal (24.8%), shots (20.6%), birth control pills (18.7%), having tubes tied (14.7%), condoms (13.5%), and contraceptive implant in the arm (11.3%).

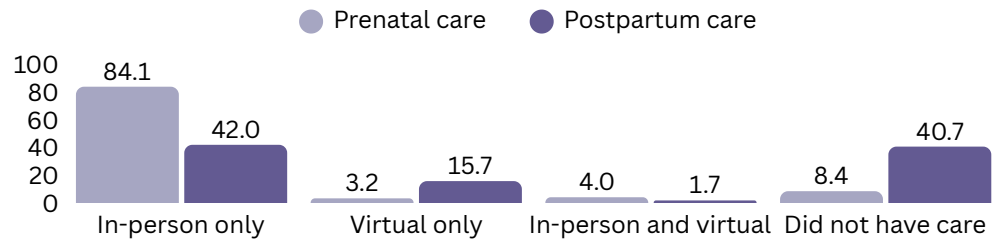


COVID-19 Experiences

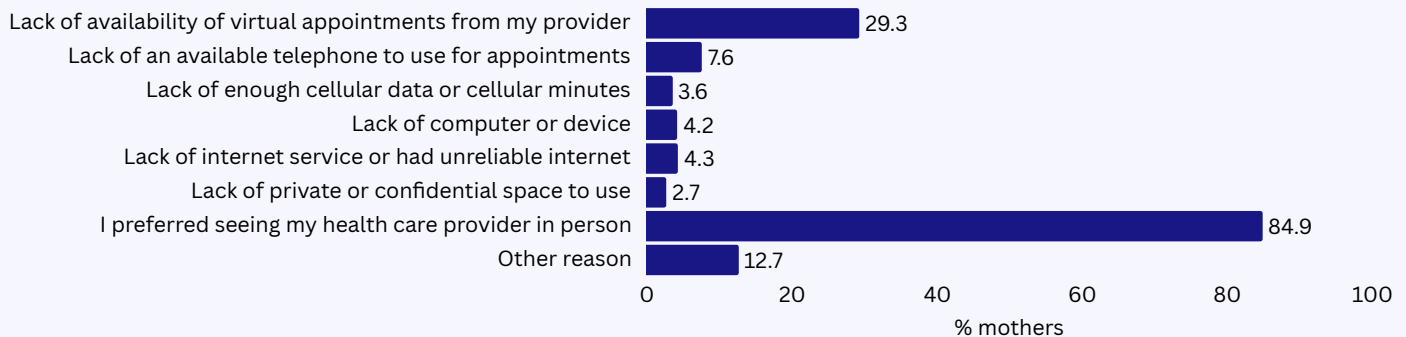
The COVID-19 pandemic disrupted healthcare delivery around the world. The 2022 CNMI PRAMS survey included questions to gather information about the experiences of CNMI mothers seeking healthcare during the COVID-19 pandemic.

Most mothers in the CNMI were still able to receive in-person prenatal care and postpartum care during the COVID-19 pandemic, however virtual care was also used.

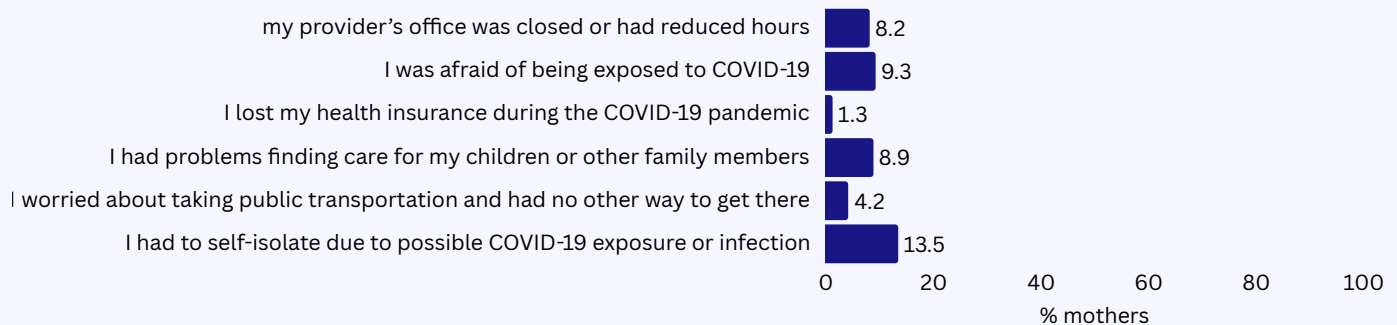
Type of prenatal and postpartum care received by mothers during the COVID-19 pandemic, CNMI 2022



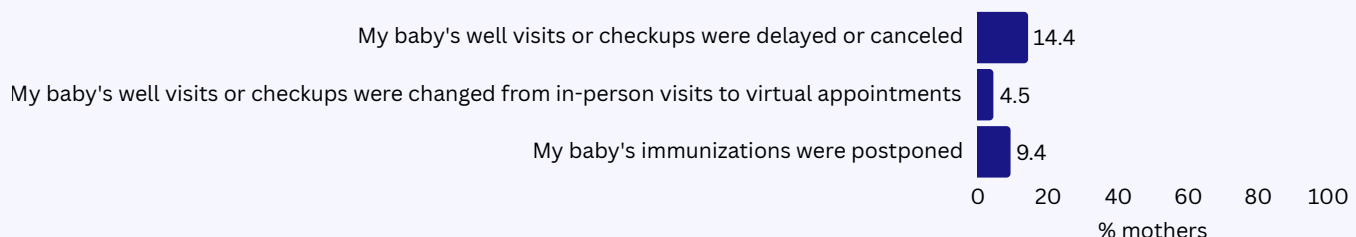
Reasons that mothers did not attend virtual care during the pandemic, CNMI 2022



Prenatal care of mothers canceled or delayed for the following reasons during the pandemic, CNMI 2022



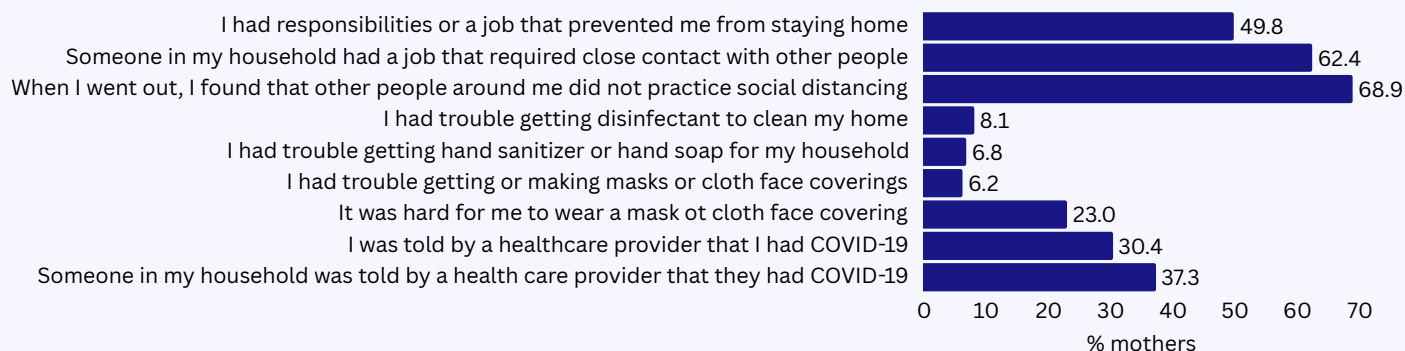
Mothers who reported baby's healthcare was impacted for the following reasons, CNMI 2022



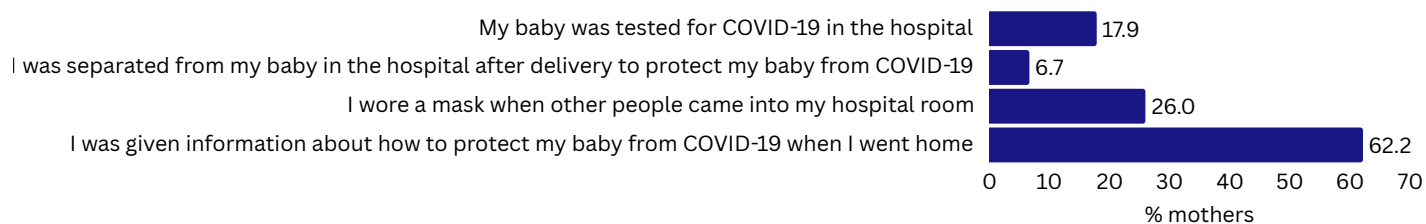
COVID-19 Experiences

The 2022 CNMI PRAMS survey included questions to gather information about the experiences of CNMI mothers during the COVID-19 pandemic.

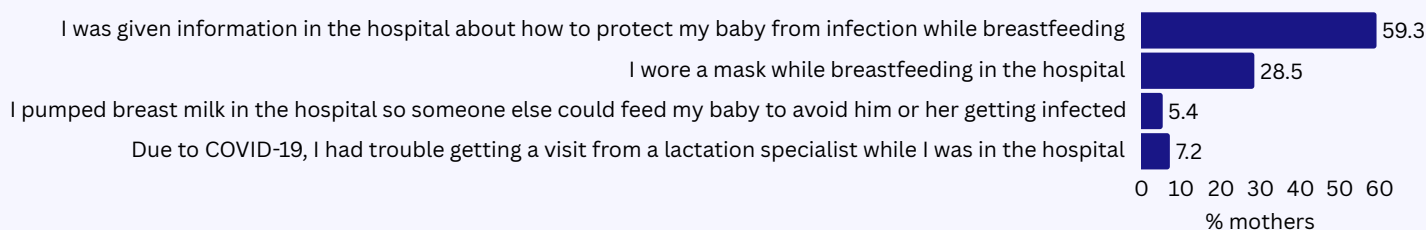
Household experiences among mothers due to the pandemic, CNMI 2022



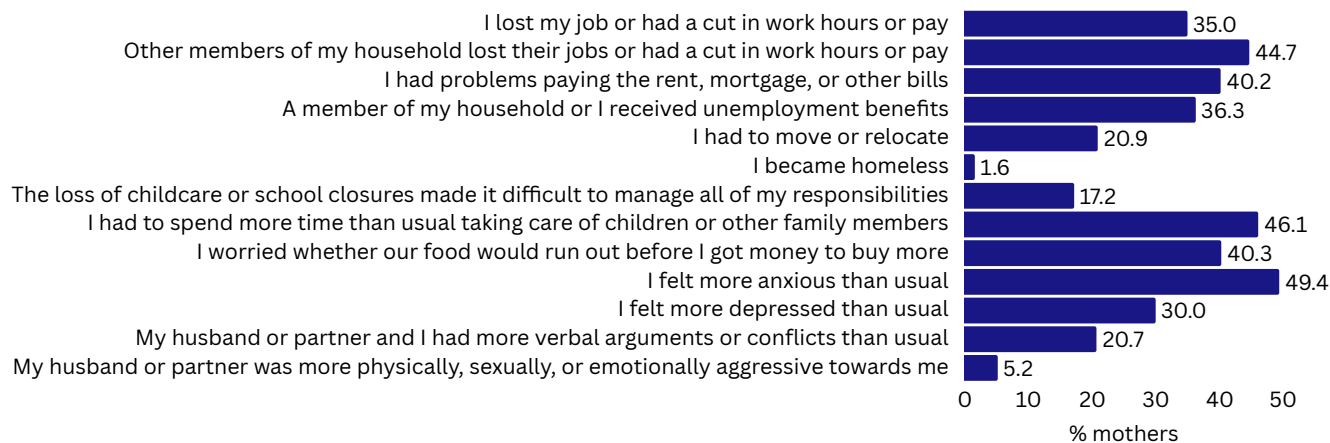
Hospital birthing experiences among mothers due to the pandemic, CNMI 2022



Breastfeeding experiences among mothers due to the pandemic, CNMI 2022



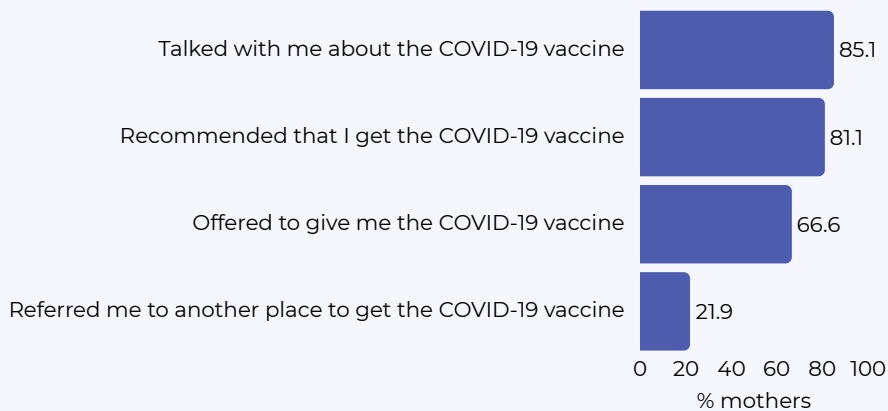
Negative life experiences among mothers due to the pandemic, CNMI 2022



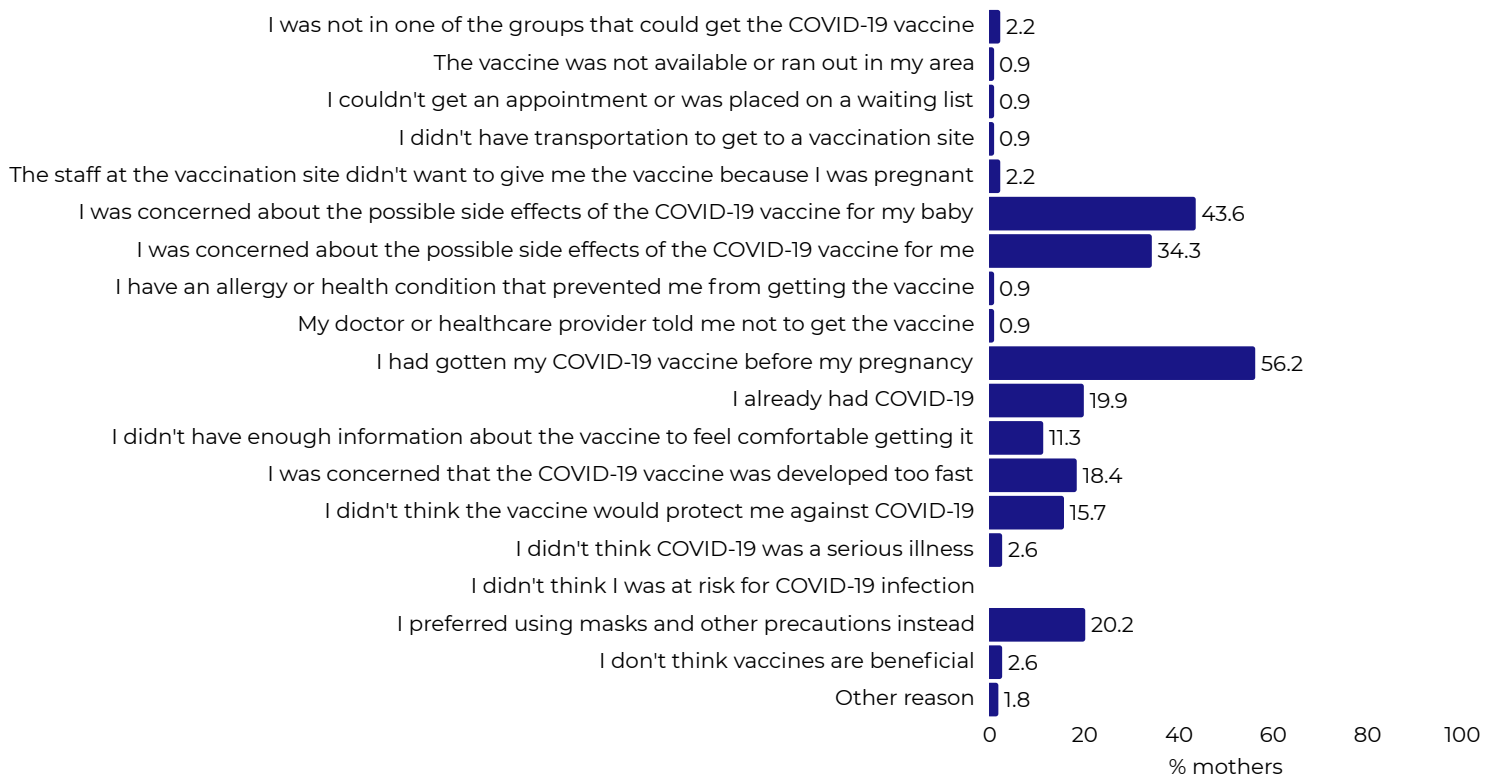
COVID-19 Vaccine

The 2022 CNMI PRAMS survey included questions to gather information about the experiences of CNMI mothers during the COVID-19 pandemic including experiences with COVID-19 vaccination during and after pregnancy. Overall, 58.0% of mothers reported that they received a COVID-19 vaccine during pregnancy and 20.9% reported that they received a COVID-19 vaccine after their baby was born.

Topics discussed with mothers by a doctor, nurse, or healthcare provider, CNMI 2022



Reasons for not getting the COVID-19 vaccine during pregnancy among mothers who did not receive a vaccine, CNMI 2022



Additional Information on PRAMS



To learn more information about CNMI PRAMS, please visit the Commonwealth Healthcare Corporation website:
<https://www.chcc.health/cnmiprams.php>



To learn more information about PRAMS, please visit the Centers for Disease Control and Prevention website:
<https://www.cdc.gov/prams/>



Appendix A: Methodology

CNMI PRAMS is a population-based survey that uses a mixed-mode approach. It collects data by mail, phone, or web from all CNMI mothers who have recently given birth.

A sample is drawn on the first of every month by the Health Vital Statistics Office which is processed through the Statistical Analysis System (SAS) by PRAMS staff. The sample is cleaned and uploaded into the PRAMS Integrated Data Collection System (PIDS) on the 15th of every month. The infant is approximately two to three months old upon first contact with the mother.

Data collection takes place over a maximum of 95 days with a structured schedule for mailing and phone calls. The web option is introduced in the pre-letter and allows the mother to complete the survey at her convenience. Mothers receive two mailing packets with opportunities to mail back responses or drop them at designated drop boxes. Additionally, PRAMS staff are trained to conduct telephone interviews with mothers using a standardized script. Telephone interviews are offered and can be scheduled at convenient times including evenings and weekends.

Mothers who participate in PRAMS receive a small reward as a token of appreciation. All responses are confidential and are aggregated to provide summary results on the CNMI.



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