# North Carolina Pregnancy Medical Home

In 2011, North Carolina Medicaid established the pregnancy medical home (PMH) program to enhance access to comprehensive care for pregnant Medicaid enrollees and to improve birth outcomes by promoting evidence-based, high-quality maternity care across North Carolina (CCNC 2020). Participating PMH providers agree to provide coordinated and comprehensive care during pregnancy to improve both maternal and birth outcomes. In return, providers receive one-time payments for certain activities and enhanced payment rates for sets of related services (referred to as service packages).

Under contract with MACPAC, RTI International conducted interviews and examined five states (Arkansas, Connecticut, Colorado, North Carolina, and Tennessee) implementing value-based payment initiatives to improve maternity care in Medicaid. This case study includes an overview of the North Carolina PMH model, details how the model is defined, describes the payment methodology, and summarizes the available research on the model's effects on cost and quality.[1] MACPAC has also published case studies for the other study states, as well as an issue brief summarizing the key findings (MACPAC 2021a–e).

## Overview

The PMH model was launched by North Carolina Medicaid through a contract with Community Care of North Carolina (CCNC), a primary care case management entity. CCNC facilitates patient-centered medical homes and case management for Medicaid and Health Choice (State Children's Health Insurance Program or CHIP) enrollees throughout the state (CCNC n.d.). In the PMH model, CCNC receives a per member per month (PMPM) payment from Medicaid to provide care management services through local health departments in collaboration with PMH providers.

Providers enrolling in the PMH program agree to provide patient-centered care, screen patients using a standardized assessment, and refer patients to local health departments for case management. They also agree to meet other requirements and practice guidelines, including keeping a primary cesarean section rate at or below 20 percent.[2] In return for serving as a medical home, PMH providers receive one-time payments for certain activities and receive an increased payment for most service packages (NC Medicaid Division 2019).

## Design Parameters

**Market participation.** North Carolina Medicaid is the sole payer in this model. Commercial payers are not eligible to participate (NC Medicaid Division 2019).

**Provider participation.** Provider participation is voluntary. Participating providers must be licensed qualified private physicians or public or private clinics organized for the delivery of obstetrical care. To qualify as a PMH, the provider must be enrolled with Medicaid as general or family practice, obstetrics and gynecology provider, or multi-specialty practice (NCDMA 2015, NCDHB 2011). Providers must also commit to:

- ensuring that no elective deliveries (induction and cesarean section) are performed before 39 weeks of gestation;
- offering and providing 17alpha hydroxyprogesterone (17p) to eligible patients;

- maintaining a primary cesarean section rate at or below 20 percent;
- completing a standardized risk screening on each pregnant Medicaid enrollee in their practice at the first prenatal appointment;
- integrating the plan of care with the local pregnancy care management program; and
- participating in chart reviews to evaluate progress on the PMH performance measures.

As of March 2020, more than 450 practices and 2,500 individual providers participated in the PMH model across 95 of 100 counties in the state. This represents approximately 95 percent of practices that serve Medicaid-enrolled pregnant women.[3]

**Patient population and attribution.** All pregnant women and women up to 60 days postpartum enrolled in North Carolina Medicaid are eligible to participate in the PMH program. However, to be covered by the program, the patient must receive care from a participating provider.

**Exclusions.** Patients are not excluded from the model due to health conditions or other reasons.

# Payment Methodology

North Carolina Medicaid generally bundles payments for maternity services into payments for service packages. [4,5] For PMH providers, North Carolina provides enhanced payment rates for most service packages and lump sum payments for completing a risk assessment screening and a postpartum visit.

## Service packages for maternity services

Since 1985, North Carolina Medicaid has paid for maternity services through three obstetrics service packages, which are paid after delivery.

- Antepartum services include antepartum visits, individual antepartum services, counseling, fetal surveillance testing, including amniocentesis and chorionic villus sampling (CCP 1E-4), and genetic testing (CCP 1S-4) case management.
- Postpartum services include postpartum exams, contraceptive counseling, contraceptives, and vaccinations.
- Global obstetrics service includes antepartum, labor and delivery (including anesthesia, services for complications related to delivery, and stand-by services), and postpartum care.[6]

The same provider or provider practice generally must render all services delivered under each package. Providers may choose to bill for a global bundle that includes all three packages spanning from initial prenatal care to the final postpartum visit (NC Medicaid Division 2019, NCDMA 2016).

The packages are intended to incentivize care coordination and reduce unnecessary services (NC Medicaid Division 2019, NCDHB n.d.). Unlike episode of care payments used by other states, these payments are not retrospectively adjusted based on cost or performance measures, nor are they risk adjusted (MACPAC 2013).

Since the program's inception, service packages have changed to expand prenatal services to include prepared childbirth education and parenting classes, specialized in-home nursing care for medically complex pregnancies, and payment for care coordination services (CCNC 2020).

## Payment for PMH providers

The PMH program uses a value-based payment arrangement for participating providers serving pregnant Medicaid patients to incentivize certain practices and outcomes. PMH practices are eligible to receive separate lump sum incentive payments for completing a risk assessment screening and a postpartum visit. PMH providers also receive higher payment rates than non-PMH providers for most service packages (Table 1). Specifically, North Carolina Medicaid uses the PMH model to incentivize vaginal deliveries. Medicaid offers PMH providers higher payment rates than non-PMH providers for most service packages with the exception of cesarean deliveries (and global service packages that include cesarean deliveries).

**TABLE 1.** Medicaid Payment Rates for Maternity Services by Pregnancy Medical Home Participation Status

| Procedure code | Description | Non-PMH facility fee | Non-PMH non-facility fee | PMH facility fee | PMH non-facility fee |
|---|---|---|---|---|---|
| **PMH incentive activities** | | | | | |
| S0280 | Risk assessment | n/a | n/a | n/a | $52.50 |
| S0281 | Postpartum visit | n/a | n/a | n/a | 157.50 |
| **Vaginal deliveries** | | | | | |
| 59400 | Global | $1,393.91 | $1,393.91 | $1,627.24 | 1,627.24 |
| 59425 | Antepartum care 4—6 visits | 273.93 | 346.49 | 319.68 | 404.37 |
| 59426 | Antepartum care 7+ visits | 484.74 | 619.88 | 565.7 | 723.41 |
| 59409 | Delivery only | 618.92 | 618.92 | 722.28 | 722.28 |
| 59430 | Postpartum care only | 100.92 | 111.18 | 117.77 | 129.76 |
| 59410 | Vaginal delivery with postpartum care | 717.2 | 717.2 | 837.56 | 837.56 |
| **Cesarean deliveries** | | | | | |
| 59510 | Global | 1,578.42 | 1,578.42 | 1,578.42 | 1,578.42 |
| 59425 | Antepartum care 4—6 visits | 273.93 | 346.49 | 319.68 | 404.37 |
| 59426 | Antepartum care 7+ visits | 484.74 | 619.88 | 565.7 | 723.41 |
| 59409 | Delivery only | 732.83 | 732.83 | 732.83 | 732.83 |
| 59430 | Postpartum care only | 100.92 | 111.18 | 117.77 | 129.76 |
| 59410 | Cesarean delivery with postpartum care | 863.95 | 863.95 | 863.95 | 863.95 |

**Note:** PMH is pregnancy medical home. n/a is not applicable.
**Source:** NCDHB 2020a, NCDHB 2020b.

## Quality measures

As noted above, PMH providers receive lump sum payments for completing standardized risk screening and providing comprehensive postpartum visits for patients (CCNC n.d.) In addition, PMH providers report on five measures for quality improvement purposes, but these measures do not affect payment (Table 2).

Separately, PMH providers and care coordinators have established statewide standards to reduce unnecessary care variation around pregnancy hypertension, preterm labor prevention, induction standards for first-time moms, perinatal tobacco use, substance use in pregnancy, multi-fetal pregnancy, postpartum well care, and reproductive life planning (Dowler 2020).

**TABLE 2.** Pregnancy Medical Home Performance Measures

| Measure | Measure type | Payment |
|---|---|---|
| Measures Tied to Payment | | |
| Pregnant patients receiving care in a PMH who received standardized risk screening | Process | $52.50 |
| Patients who received a comprehensive postpartum visit 14-60 day after giving birth | Outcome | $157.50 |
| Measures for Reporting Only | | |
| Pregnant patients who initiated prenatal care in the first trimester | Outcome | n/a |
| Patients who received tobacco cessation counseling during pregnancy among patients who reported current tobacco use on risk screening | Process | n/a |
| Live births where the infant weighed less than 2,500 grams at birth | Outcome | n/a |
| Live births where the infant weighed less than 1,500 grams at birth | Outcome | n/a |
| Patients who had a paid claim for a contraceptive method within 60 days of giving birth | Outcome | n/a |

**Note:** PMH is pregnancy medical home.
**Source:** RTI 2021.

# Model Effects

North Carolina's PMH model has not been formally evaluated. North Carolina and CCNC have reported improvements on some measures.

## Cost savings

Costs are not included in this model.

## Changes in quality measures

CCNC produces annual reports on select maternity measures. Statewide performance across all enrollees receiving care from a PMH has remained relatively constant (Table 3). An exception was an increase in the percentage of patients who received tobacco cessation counseling and comprehensive postpartum visits, which increased between fiscal year (FY) 2015 and FY 2019. However, the cohort of providers who participate in the program has changed over time, and changes in performance may reflect differences in the pool of providers.

**TABLE 3.** Performance Measures among Enrollees Receiving Care from a Pregnancy Medical Home, 2015 - 2019

| Measure | FY 15 | FY 16 | FY 17 | FY 18 | FY 19 |
|---|---|---|---|---|---|
| Pregnant patients who initiated prenatal care in the first trimester | 63.4% | 65.5% | 66.0% | 65.9% | 66.4% |
| Pregnant patients receiving care in a PMH who received standardized risk screening | 76.8 | 78.2 | 78 | 77.9 | 77.5 |
| Patients who received tobacco cessation counseling during pregnancy among patients who reported current tobacco use on risk screening | 14.2 | 15.6 | 15.6 | 17.2 | 17.4 |
| Live births where the infant weighed less than 2,500 grams or 5.5 pounds at birth | 10.7 | 10.4 | 10.9 | 10.8 | 11.0 |
| Live births where the infant weighed less than 1,500 grams or 3.3 pounds at birth | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 |
| Patients who received a comprehensive postpartum visit 14-60 day after giving birth | 41.1 | 43.8 | 48.2 | 48.6 | 51.2 |
| Patients who had a paid claim for a contraceptive method within 60 days of giving birth | 34.9 | 33.6 | 34.6 | 35.0 | 34.1 |

**Notes:** FY is fiscal year. PMH is Pregnancy Medical Home.
**Source:** RTI 2021

## Maternal health outcomes

As noted, there has not been a formal evaluation of the program's effect on outcomes; however, the state has reported improvements in some key outcomes.

- Women in a PMH have a 20 percent lower rate of low-birthweight infants than women covered by Medicaid that are not in a PMH (Dowler 2020).
- Almost 70 percent of women whose providers are enrolled in the PMH program are receiving prenatal care in the first trimester compared to under 40 percent of women statewide (Dowler 2020).

## Birth outcomes

Between the PMH program's inception in 2011 and 2014, the incidence of low birthweight infants covered by North Carolina Medicaid decreased by 6.7 percent (Berrien et al. 2015). This reduction was seen across all Medicaid-covered births and was not specifically attributed to those served by the PMH program.

## Endnotes

[1] MACPAC developed this case study based on the results from RTI International's interviews and unpublished state profiles. North Carolina Medicaid reviewed the unpublished profile for accuracy.

[2] A primary cesarean section is when the pregnant women is receiving the cesarean section for the first time.

[3] MACPAC uses the terms pregnant and postpartum women because these are the terms used in Medicaid statute and regulations. However, other more inclusive terms are increasingly being used in recognition that not all individuals who become pregnant and give birth identify as women.

[4] North Carolina also refers to service packages as bundled payments. Bundled payments and episodes of care can be used interchangeably, but in this case they are different. North Carolina does not have an episode of care model for maternity payment, which provide a retrospective adjustment to payment based on quality and cost thresholds.

[5] Organizations billing professional services under prospective payment systems such as federally qualified health centers (FQHCs) and rural health clinics (RHCs) may continue to bill maternity services under existing arrangements.

[6] A standby service is prolonged attendance without direct (face-to-face) patient contact.

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