North Carolina's Pregnancy Medical Home:
Improving Birth Outcomes by Supporting Providers and Patients

Lessons Learned from the First Six Years

Community Care
OF NORTH CAROLINA

Objectives

- Understand value of key components of Pregnancy Medical Home model
- Describe the logic for moving from “risk” to “impact” for priority population for care management
- Describe potential of Maternal-Infant Impactability Score to improve birth outcomes
- Describe the benefits of embedding care managers within the prenatal care setting

Pregnancy Medical Home

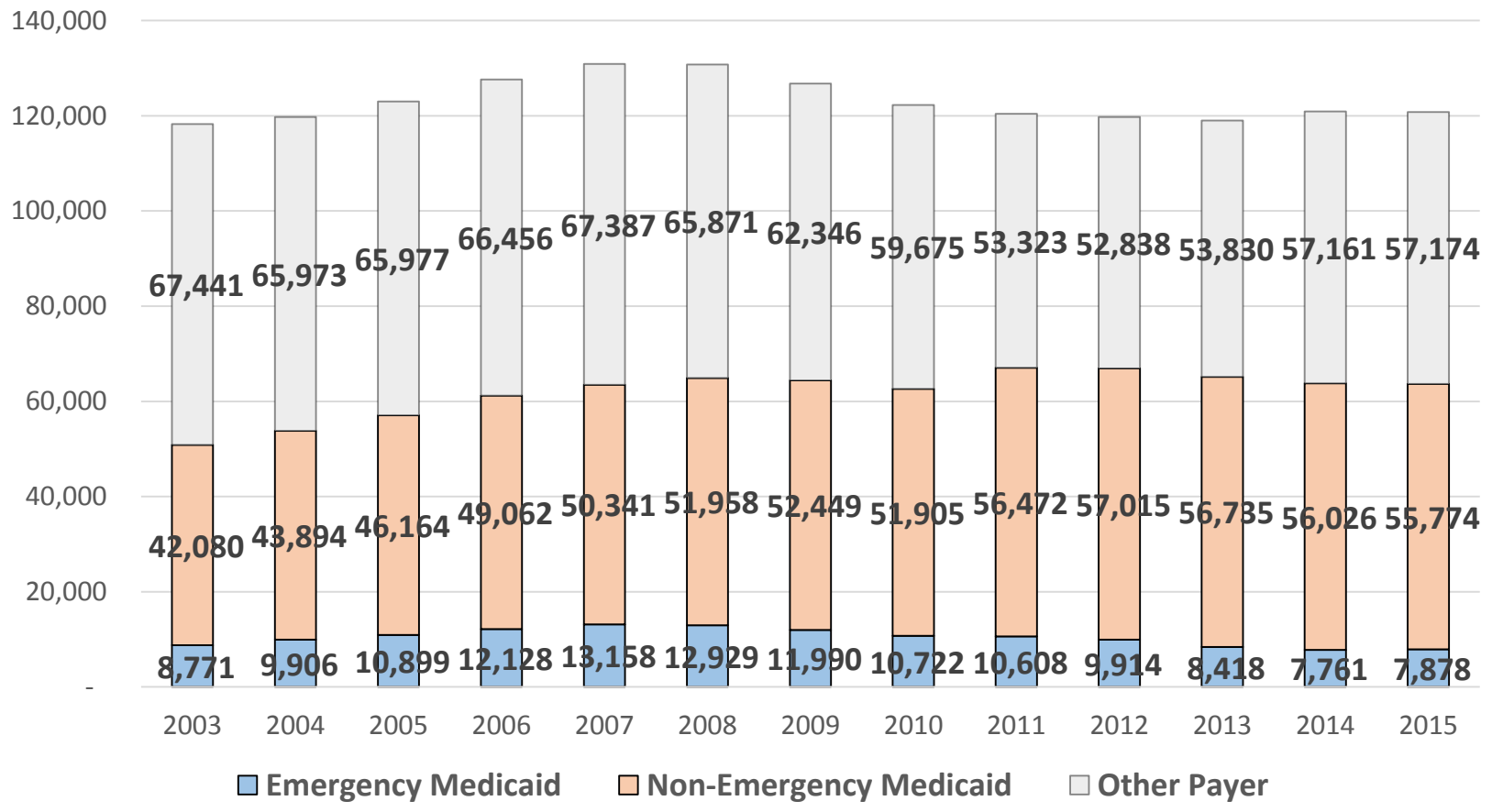
- A triple-aim initiative to improve quality of care, improve birth outcomes and reduce costs in the Medicaid population

- Primary focus is **preterm birth prevention**
  - Engage maternity care providers serving the Medicaid population in quality improvement efforts
  - Care management targeted to those at greatest risk

Community Care of North Carolina

- Provider-driven population management approach to improving quality and reducing costs
  - Contract with NC Medicaid to manage various Medicaid populations
  - Statewide system of 14 local networks, rooted in their communities and led by community stakeholders
  - Longstanding primary care medical home (PCMH) model
- Pregnancy Medical Home adapted from PCMH model and leveraged PCMH infrastructure at NC Medicaid request
  - Launched in April 2011

NC Births, 2003 - 2015



PMH Structure

- CCNC receives a “per member per month” payment from Medicaid to support PMH activities, based on number of Medicaid pregnancies
  - Funds an OB team at each of CCNC’s 14 local networks
- Part of PMPM funding stays at central office to support statewide coordination and informatics infrastructure
  - Central office team works with state-level stakeholders
  - “Reporting and analytics” provides data to drive program activities

PMH Core Components

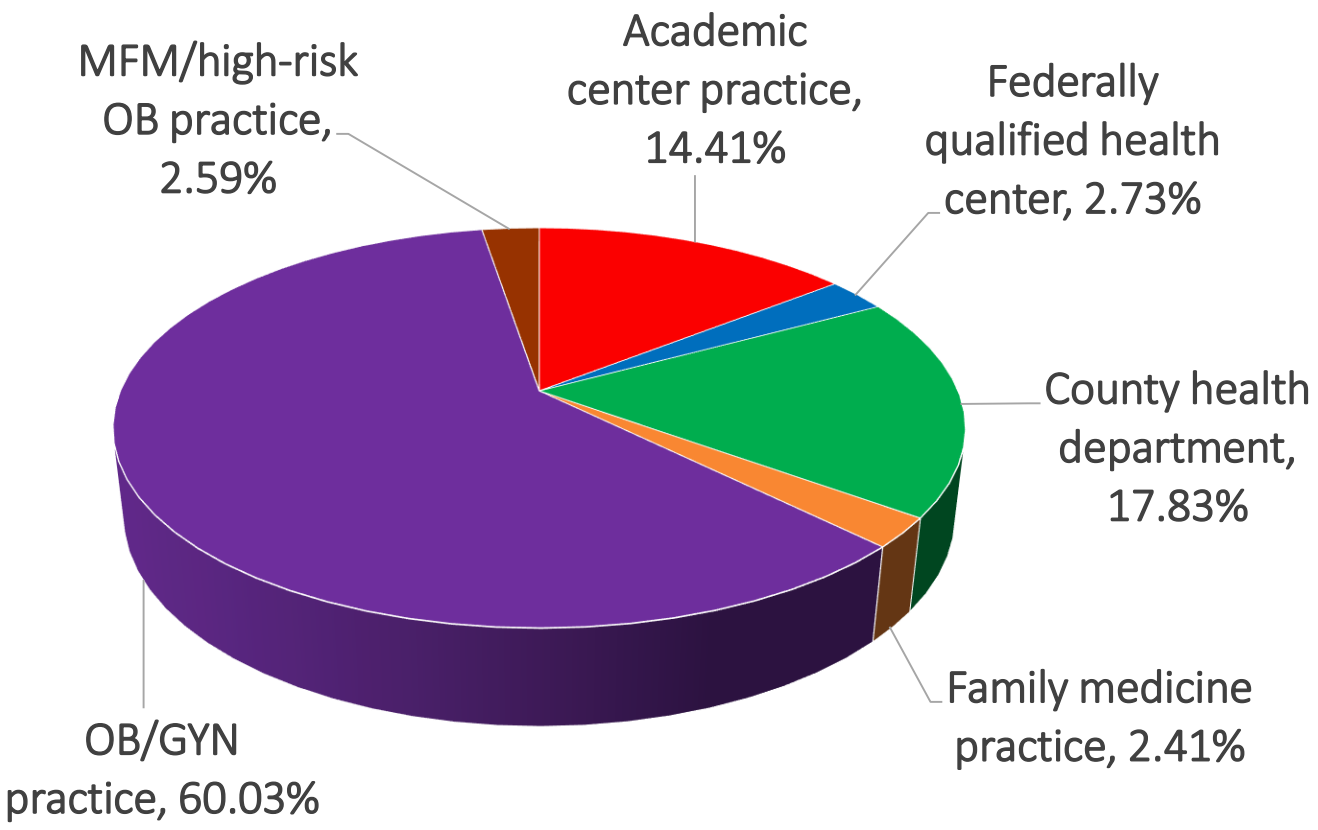
Population-based enhanced prenatal care model:

1. Access: large network of OB providers
2. Risk screening: standardized, statewide
3. Clinical leadership: Local teams offer provider support, education and technical assistance
4. PMH Care Pathways: Clinical best practices that reflect the most current evidence base
5. Data: Informatics at the state, regional, county and practice level
6. Care coordination: community-based care management by nurses/social workers

PMH Provider Network

Provider participation:

- 380 practices participate in the PMH program, representing 2,000 providers
- 90% of maternity care provided to Medicaid patients
- 94 of 100 NC counties have a PMH.



PMH Provider Network: Performance Expectations

- Standardized risk screening on all new OB patients
- Offer/provide 17p to eligible patients
- Avoidance of elective delivery <39 weeks
- Primary c-section rate below benchmark
- Postpartum visit with standardized depression screening, reproductive life planning and referral for ongoing care
- Collaboration with pregnancy care manager

PMH Provider Network: Provider Benefits

- Incentive payments from Medicaid
  - $50 for completing standardized Risk Screening Form
  - $150 for completing postpartum visit
- Enhanced reimbursement for OB package codes associated with vaginal delivery
- Bypass of medical necessity review for OB ultrasound
- Practice-specific data for quality improvement
- Support and T.A. from local CCNC network
- Pregnancy care manager to work with pregnant Medicaid patients

Risk Screening

- Standardized PMH Risk Screening Form completed by PMH providers for all new OB patients
- Provider side: medical and obstetric concerns
  - Chronic disease, mental illness, fetal complications, prior pregnancy complications, hypertensive disorders of pregnancy, multifetal gestation
- Patient side: psychosocial risk factors
  - Tobacco use, substance abuse, food insecurity, unstable housing, unintended pregnancy, domestic violence
- Social determinants:
  - Race/ethnicity, age, education, BMI

Risk Screening

- 80% of patients receiving care in a PMH are screened
  - >40,000 screens/year
- Care managers enter all PMH Risk Screening Forms into CCNC's web-based, centralized documentation system
- 70% of patients have at least one preterm birth risk factor:
  - Tobacco use during pregnancy – 37.8%
  - Chronic disease – 22.0%
  - Previous preterm birth – 6.8%
  - Drug/alcohol use – 6.7%

PMH Clinical Leadership

- CCNC network "OB team"
  - Physician Champion – active OB practice, local opinion leader
  - Nurse Coordinator – dedicated FTE for program support, working with PMH providers and Pregnancy Care Managers
- **OB team provides PMH practices with:**
  - Practice support/technical assistance
  - Education about clinical initiatives and performance expectations
  - Data to engage in quality improvement
- OB team shares information from the state level AND listens to concerns of local providers, brings feedback to state level

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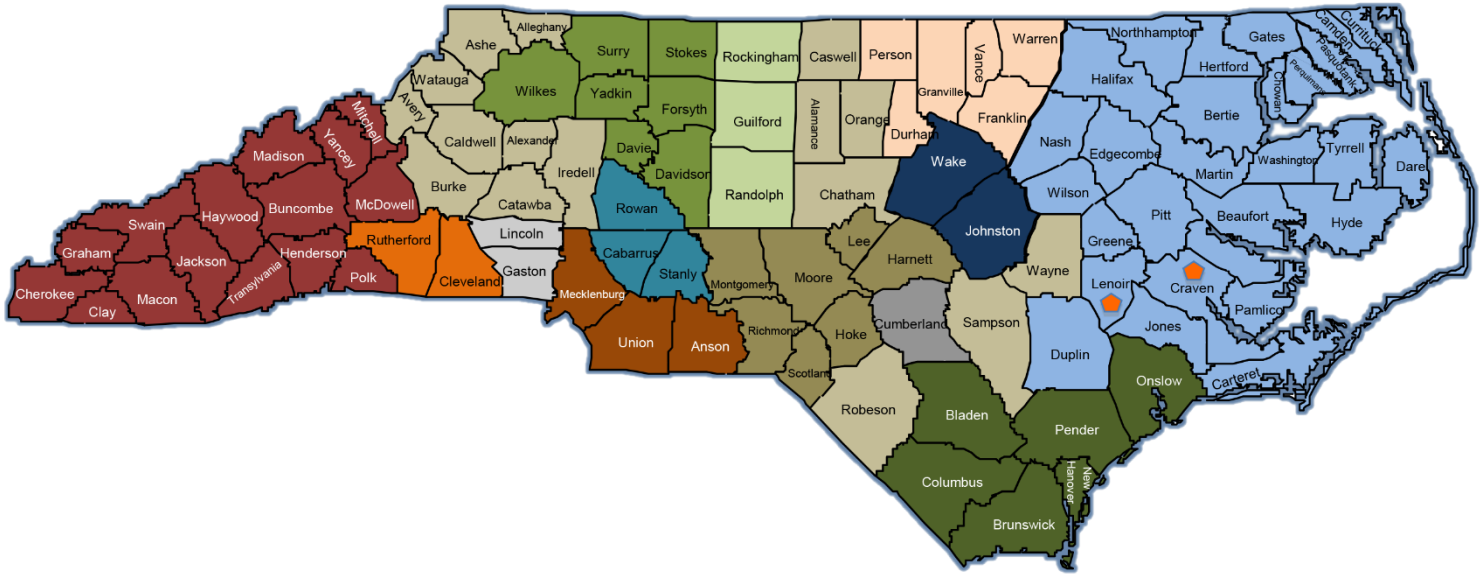
Pregnancy Medical Home Program: OB Physician Champions



AccessCare
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Community Care of the Sandhills
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PMH Care Pathways

- PMH Care Pathways provide evidence-based guidance to PMH providers across the state
- Developed by CCNC OB Physician Champions with input from local PMH providers and state-level experts
- Introduced by webinar
- Pathways and supporting materials available on CCNC website

- Hypertensive Disorders of Pregnancy
- Perinatal Tobacco Use
- Substance Use in Pregnancy
- Induction of Labor in Nulliparous Patients
- Postpartum Care and the Transition to Well Woman Care
- Progesterone Treatment and Cervical Length Screening
- Obesity in Pregnancy
- Reproductive Life Planning/Postpartum LARC
- Multifetal Gestation

Informatics

CCNC uses Medicaid claims, birth certificates, risk screening data, and care management documentation to produce quarterly metrics for:

- NC Medicaid
- CCNC networks
- PMH practices
- Local pregnancy care management programs

Measures include:

- Gestational age at entry to prenatal care
- Pregnancy intendedness
- 17p eligibility/receipt
- Smoking cessation counseling
- Mode of delivery
- Gestational age at delivery
- Birth weight
- Postpartum visit
- Postpartum contraception

Pregnancy Care Management

- Delivered by RNs and social workers in county health departments working by contract with CCNC
  - 84 health departments across 100 counties
- Close collaboration with prenatal care team
- Health department required to serve priority patients and cover all PMH practices in the county
- Population-based, data-driven model, targeted to those who will benefit most from care management

Pregnancy Care Management

- CCNC receives PMPM from Medicaid to contract with local entities for Pregnancy Care Management
  - Payment by county based on size of female Medicaid population of reproductive age
  - Operated in partnership with NC Division of Public Health
- "Standardized Plan" defines Pregnancy Care Management expectations statewide http://whb.ncpublichealth.com/provPart/pubmanbro.htm

Pregnancy Care Management

- Staffing varies by size of county – 0.3 FTE to 25 FTE pregnancy care managers
  - 325 FTE pregnancy care managers statewide
- Local program supervisor utilizes data reports from CCNC and meets other defined expectations
- Challenges in smaller environments where the care manager has multiple roles

"Risk" versus "Impact":

Moving to a more effective prioritization model for pregnancy care management

- NC Pregnancy Medical Home Risk Screening Form identifies women at risk of PTB or LBW using priority risk factors
- Does not predict which women will benefit from care management interventions
  - Care management does not reduce the risk of poor birth outcome for all women
- Impactability focuses on women for whom care management has an impact on birth outcome

"Risk" versus "Impact":

Moving to a more effective prioritization model for pregnancy care management

- 93% of Medicaid pregnancies are served by PMH practices
- 73% had a risk screen
- 70% had at least one priority risk factor
  - More than can be served effectively by existing pregnancy care management capacity
- 53% received care management
  - Over 16,000 engaged in care management at any given time
  - Only 3-4 interventions with the care manager per patient during pregnancy, the majority of which were telephonic
- Risk screen predicts LBW; does not predict which women will benefit most from care management interventions

“Risk” versus “Impact”: A new approach

- CCNC used several years of risk screening and care management data to create an impactability score, based on risk factors on the risk screening form
- The **Maternal-Infant Impactability Score** (MIIS) ranges from 0-1,000, with higher scores indicating women who will benefit more from pregnancy care management.
- “Benefit” is defined as reduced rate of low birth weight

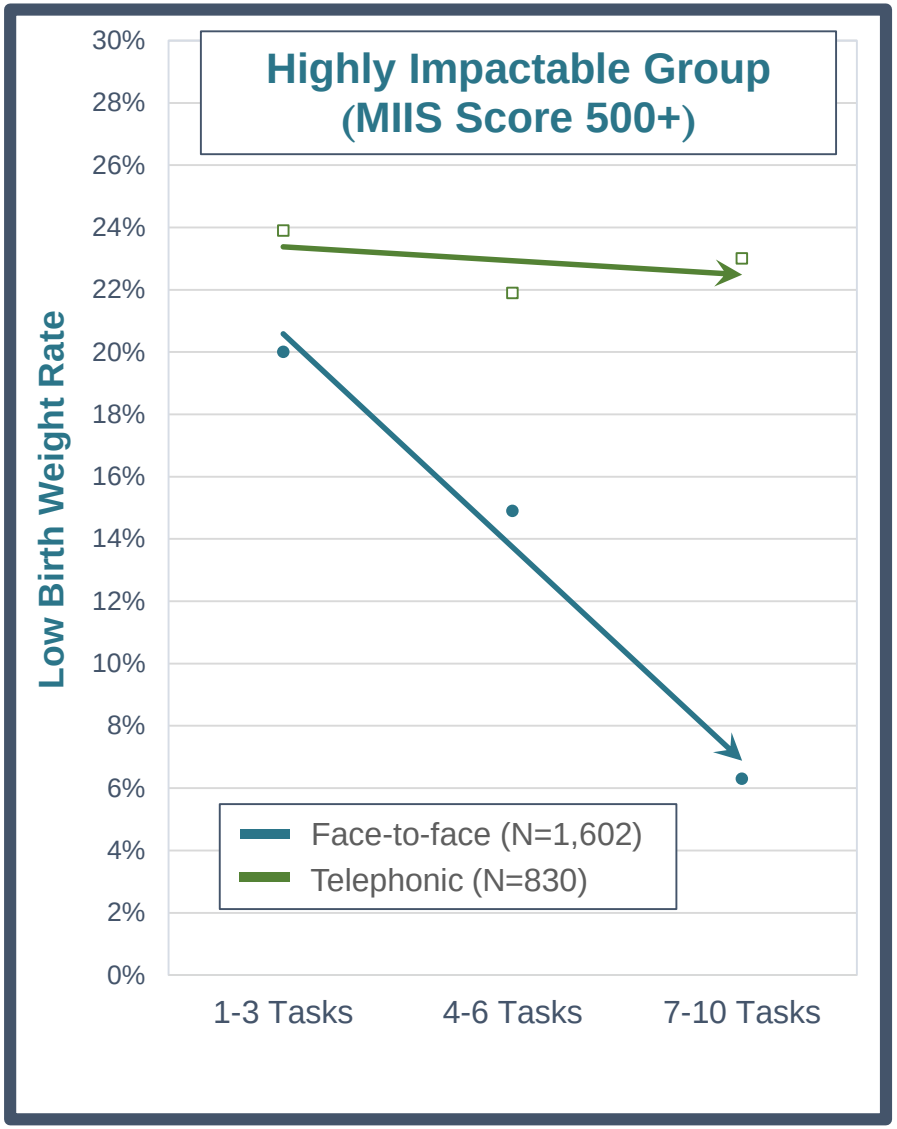
MIIS Score Prioritizes Fewer Women but Will Result in Greater Impact

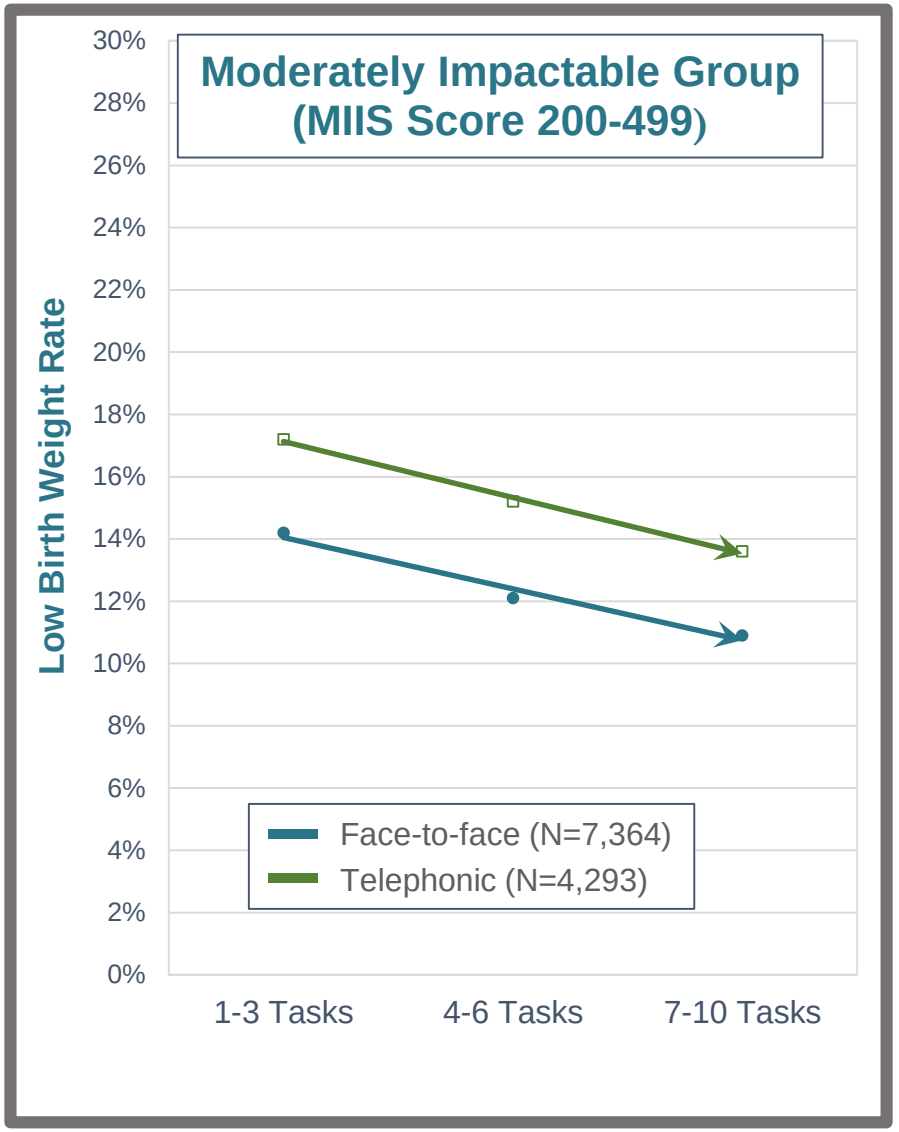
- The association between care management and reduced risk of low birth weight is seen among women with an **MIIS score of 200 or greater**
  - An MIIS score ≥ 500 is associated with a 25% reduction in LBW when sufficient care management intervention is provided during pregnancy
- 28% of the pregnant Medicaid population has a MIIS score of ≥200
  - This approach allows care management resources to be focused where they are most needed

Rate of low birth weight by MIIS score: highly impactable (500+), moderately impactable (200-499), not impactable (0-199)

- **X-axis shows the number of "Patient-centered tasks": phone call or face-to-face encounter with the patient**
- **Y-axis shows rate of low birth weight**
- **Care management should start no later than 30 weeks of gestation, preferably in 1st trimester**
- **For both highly and moderately impactable patients, benefit starts at 5 encounters with the care manager, but full benefit requires 8-10 encounters.**

Benefit of Face-to-Face Care Management Interventions





Benefit of Face-to-Face Care Management Interventions

- For women with a MIIS score of 500+:
  - At least 8-10 face-to-face tasks with the patient are needed to achieve optimal impact
  - Additional telephonic tasks may be needed, such as reminders, transportation arrangements, etc.
- For women with a MIIS score of 200 – 499:
  - 8-10 patient-centered tasks are needed, half of which should be face-to-face
  - 1-3 face-to-face interventions are roughly as impactful as 7-10 phone calls

Patients with MIIS Score <200

- Low potential for impact on risk of low birth weight: may need short-term care management support to address specific needs
  - Examples include:
    - Transportation assistance
    - Advocacy with Medicaid application processing
    - Access to prenatal care or other health services
    - Referral for specific community services
- Rare conditions, such as HIV, cancer or seizure disorder, are not factored into MIIS score
  - These patients may need extensive care management support during pregnancy

Direct Referral to the Pregnancy Care Manager

- PMH providers can make a direct referral to the care manager at any time if they believe their patient is in need of care management support.
- When the PMH provider makes a direct referral, the care manager will assess the patient and develop a care plan to assure needs are met
  - If the patient has an MIIS score of 200+, the care manager will work with her throughout the pregnancy and postpartum period
  - If the score is <200, the care manager will determine the appropriate length and type of care management support, in consultation with the prenatal care team

Embedding Care Managers in PMH Practices

- Care managers who are embedded in PMH practices provide more face-to-face interventions
- Pregnancy care managers are expected to have regular, scheduled presence at all PMH practices
  - Degree of embedding varies by location based on patient volume and impactability
  - A PMH with high patient volume and with higher proportion of impactable patients may require multiple embedded pregnancy care managers.

Embedding Care Managers in PMH Practices

- Embedding in PMH offices is a core expectation, but there are challenges:
  - Space
  - Relationship building with practice staff and clinicians
  - Provider understanding of care manager role/value
- Major increase in PMH practices with embedded care manager in 2017
  - Priority on face-to-face interactions
  - Improved understanding of value of care management
- Embedding 2.0 = integration into prenatal care team

Take Home Messages

- Standardized risk screening is possible and useful
- Providers benefit from local clinical leadership, connected to state policy stakeholders
- Care management focused on impactable vs. at-risk population will have greater effect on birth outcomes
- Embedding care managers within the prenatal care team is complex but beneficial for patients and providers

Questions?

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