North Carolina Strategies for Preterm Birth Prevention: Alignment with National Priorities

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NORTH CAROLINA Preterm Birth Prevention SYMPOSIUM

MAY 23, 2016 • CHAPEL HILL

UNC Center for Maternal & Infant Health

UNC SCHOOL OF MEDICINE

Community Care of North Carolina

Funding for this project is provided in part by The Duke Endowment

Objectives

- Provide overview of some national initiatives focused on preterm birth prevention
  - March of Dimes prematurity Campaign
  - Society for Maternal Fetal Medicine prematurity bundle
  - Maternal Child Health Bureau: CoIIN prevention of preterm birth project
- Strategy, accomplishments and resources of CCNC Pregnancy Medical Home program
- Opportunities to build on our strengths

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A FIGHTING CHANCE FOR EVERY BABY℠

Prematurity Campaign Roadmap

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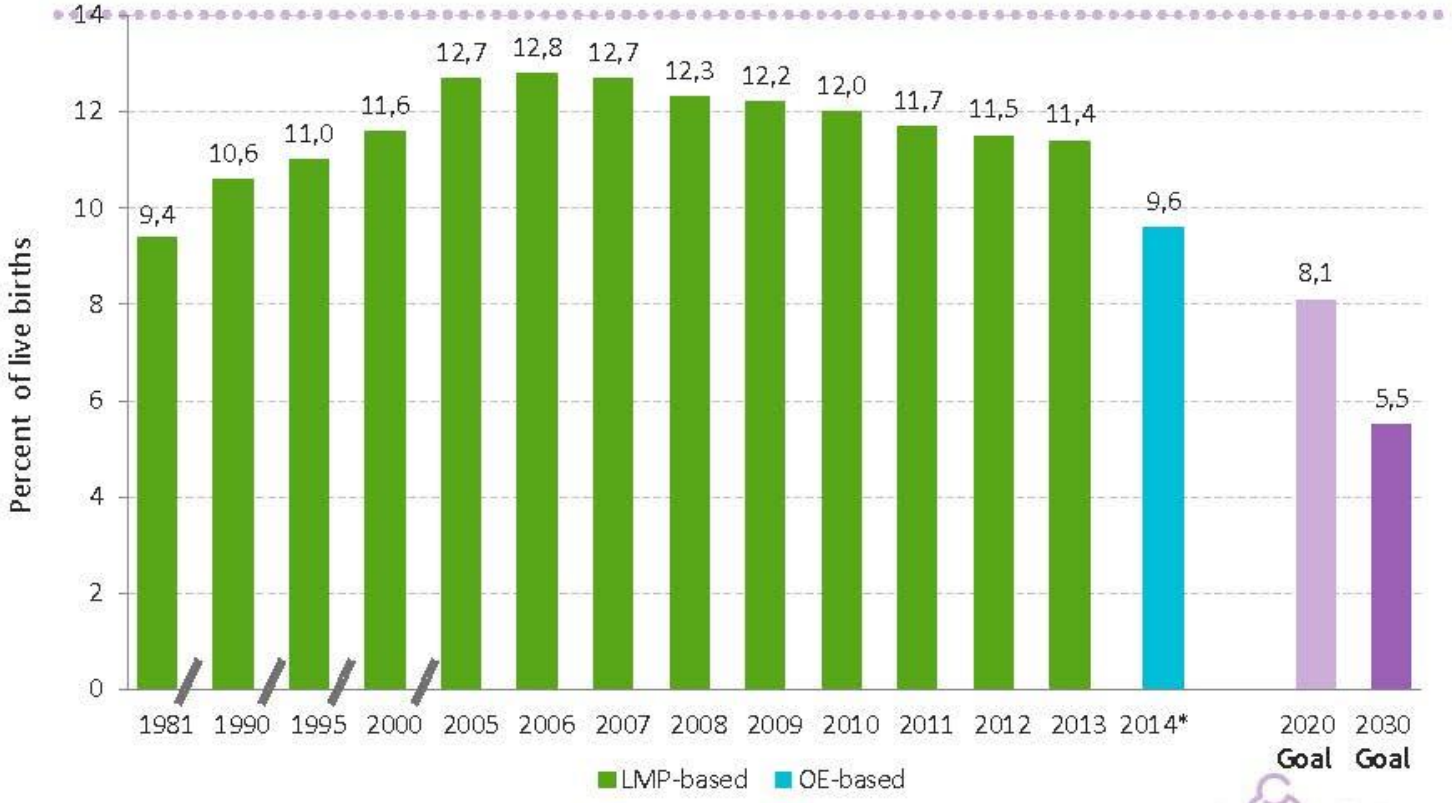
Preterm birth rates

*United States, 1981, 1990, 1995, 2000, 2005-2014**



*2014 data based on obstetric estimate (OE) of gestational age; all previous years based on last menstrual period (LMP).
Preterm is less than 37 weeks gestation.
Source: National Center for Health Statistics, 1990-2013 final and 2014 preliminary natality data.

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Fighting for the Next Generation

We owe it to the next generations of U.S. babies to prevent the "preventable" preterm births

- We must fully implement what we already know
- We need to translate discovery research to increase the preventable PTBs

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March of Dimes Roadmap Interventions, 2016

- **Reduce non-medically indicated deliveries <39 weeks**
- **Increase use of progesterone for women with a history of prior preterm birth**
- **Reduce tobacco use among pregnant women**
- **Encourage women to space pregnancies at least 18 months apart**
- **Increase use of low-dose aspirin to prevent preeclampsia**
- **Advance interventions for women diagnosed with a short cervix**
- Reduce multiple births conceived through Assisted Reproductive Technology

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Roadmap: Target 15 States and Puerto Rico

Phase I: 6 states/territories in 2017

- ✓Alabama, Louisiana, Mississippi, Puerto Rico - Highest rates.
- ✓Florida, Texas - Most populous high rate states.

Phase II: 10 additional states with births >100,000

- ✓California, Georgia, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Virginia.

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Next Steps

- ✓ Planning is underway to activate the Roadmap in 16 high burden and high volume states and territory beginning in 2017
- ✓ March of Dimes will continue to focus on prevention of prematurity by
  - Implementing what is known
  - Translating discovery research into new interventions

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❑ Preterm Birth Bundle:

Set of evidenced based practices, when implemented, are designed to achieve best outcomes

- Singletons w/o prior SPTB
- Bacteruria
- Smoking
- Medical complications
- Singleton with prior PTB
- Preterm Labor
- Preterm premature rupture of membranes
- Antenatal steroid
- Delivery issues
- Pre- and Interconception care

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U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration
Maternal and Child Health Bureau

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CoIIN: Collaborative Innovation Network to Reduce Infant Mortality

By July 2016, reduce prevalence of preterm and early term singleton births. States will:

- 1. Decrease non-medically indicated births between 37 0/7 weeks of gestation through 38 6/7 weeks of gestation by 20%
- 2.Increase the percent of pregnant women on Medicaid with a previous preterm birth who receive progesterone to 40%
- 3.Achieve or maintain equity in utilization of progesterone by race/ethnicity

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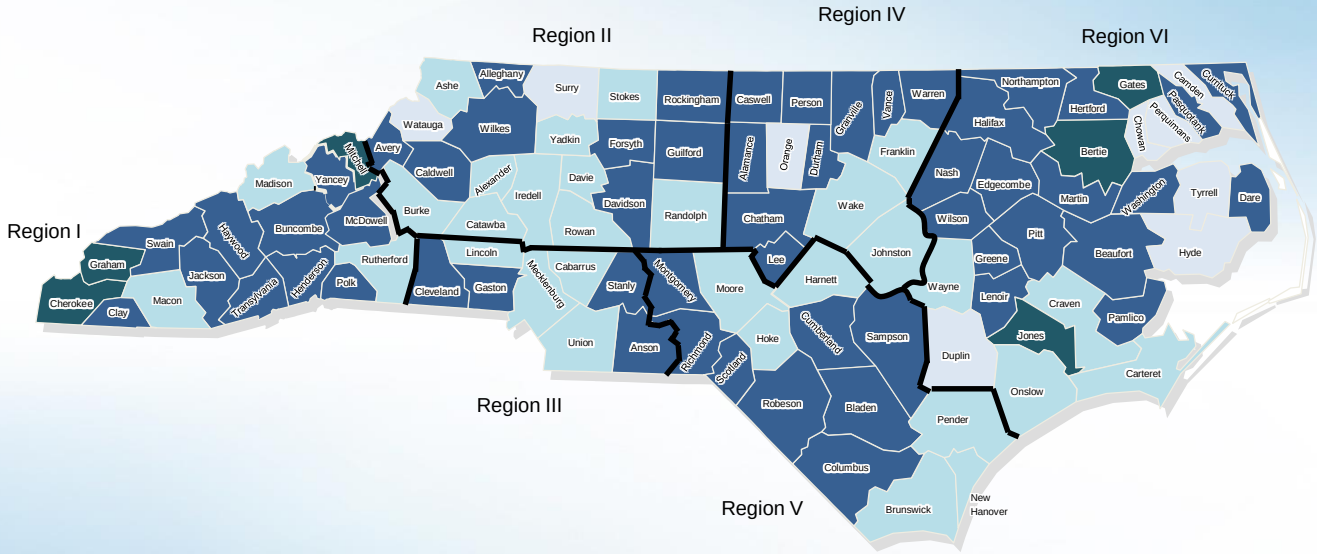
Percentage of Preterm Births: 2014 North Carolina Resident Births
(NC Statewide Average = 9.7%)



Legend	
≥ 14.6%	(6 Counties)
9.7 - 14.5%	(55 Counties)
8.2 – 9.6%	(30 Counties)
≤ 8.1%	(9 Counties)

Source: NC Department of Health and Human Services State Center for Health Statistics – 2014 North Carolina Resident Births by Obstetric Estimate of Gestational Age – April 13, 2016

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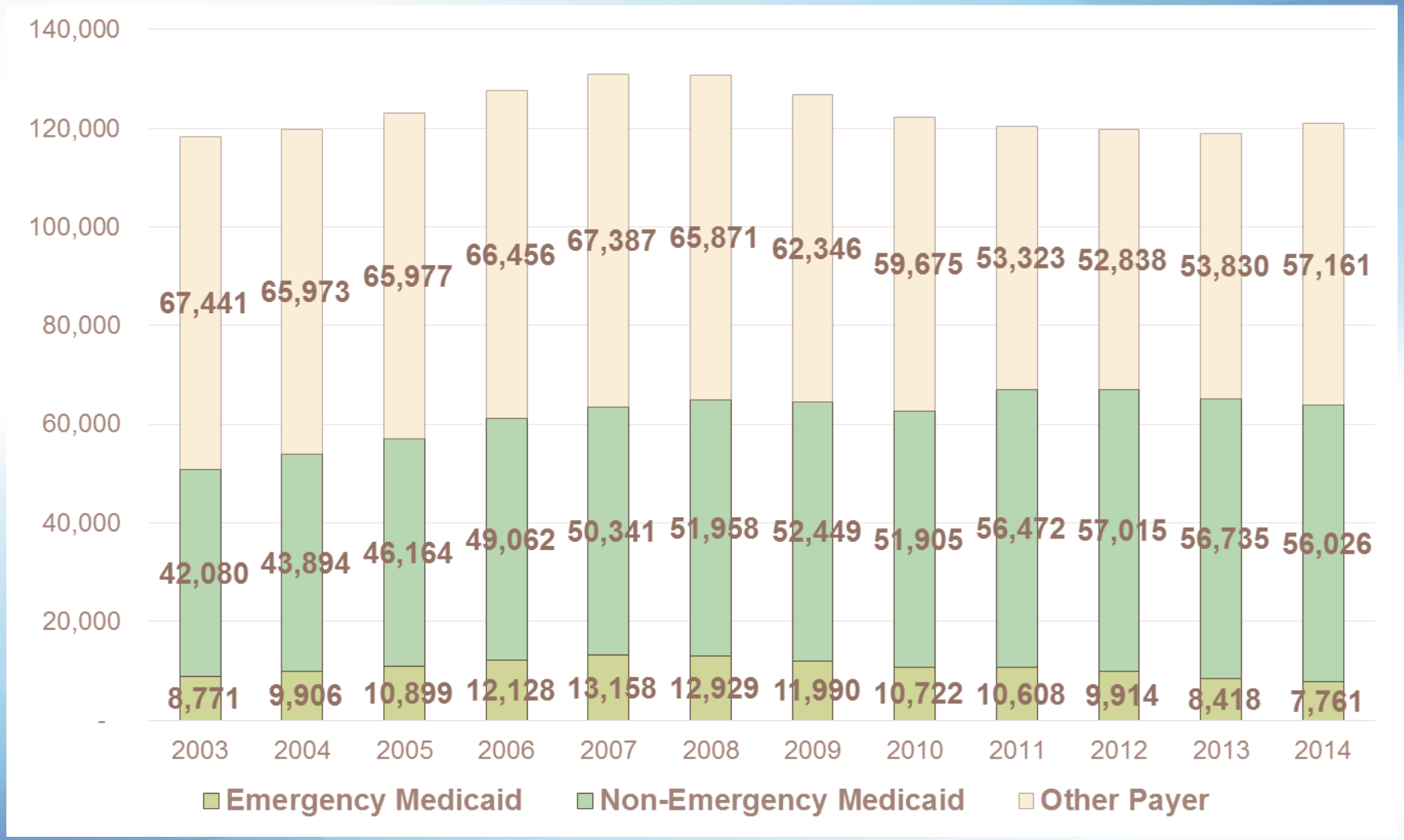
North Carolina Births, 2003 - 2014



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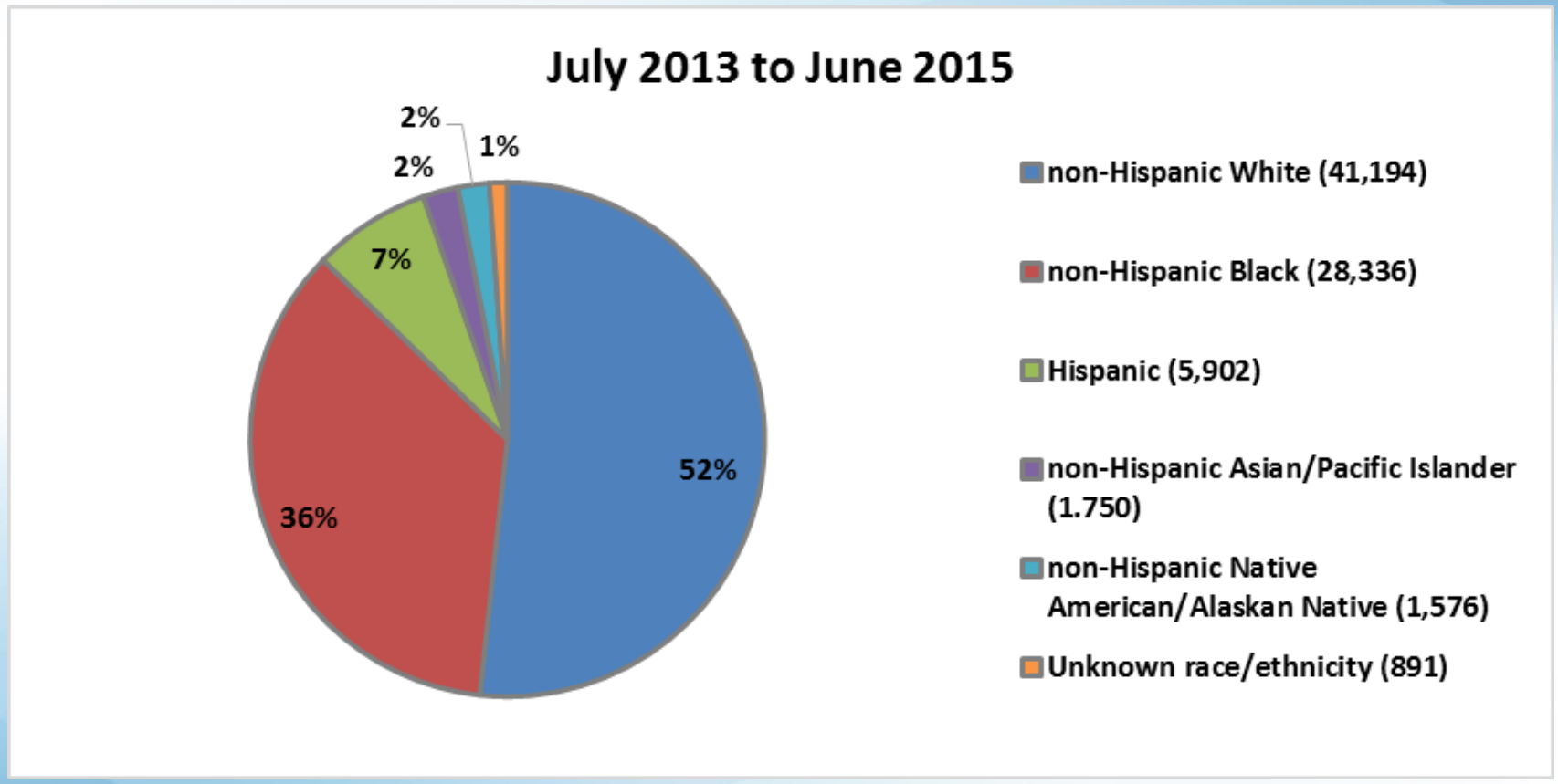
Race/ethnicity of North Carolina births funded by Medicaid attributed to PMH practices*



*does not include emergency Medicaid

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Preterm Births: Disparity Ratio of North Carolina births funded by Medicaid attributed to PMH practices, July 2013 to June 2015

	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian/Pacific Islander*	Non-Hispanic Native American/ Alaskan Native*
Disparity ratio: preterm birth < 28 weeks	1.0 (n= 266)	1.97 (n=361)	1.10 (n=42)*	0.71 (n=8)*	1.96 (n=20)*
Disparity ratio: preterm births 28 to <37 weeks	1.0 (n=3,571)	1.22 (n=2,999)	0.90 (n=460)	0.79 (n=120)	0.96 (n=131)

*rates are based on small numbers and should be interpreted with caution

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NC PMH Preterm Birth Prevention Strategy

- Statewide network of maternity care providers
  - Alignment of incentives with clinical priorities
- Population-based, standardized risk screening
  - Incorporation of evidence-based screening tools
- Community-based care management
  - Integration with prenatal care team
- Informatics
  - Data at the state, network and practice/county level
- Local clinical leadership
  - Dissemination and application of best practice management of preterm birth risk factors

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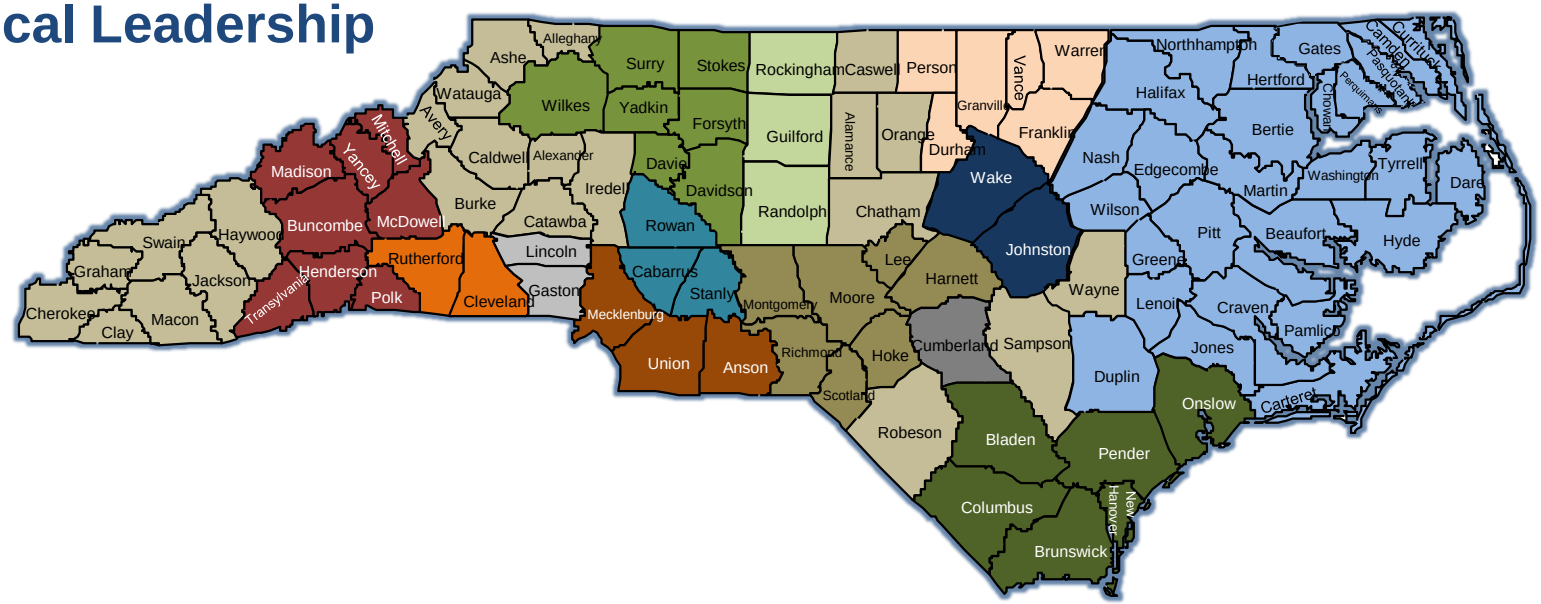
Clinical Leadership



AccessCare
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Dr. Lies – Wayne Women's Care
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PMH Provider Network

Performance Expectations:

- Use of standardized preterm birth risk screening tool
- No elective deliveries <39 weeks
- Provide 17p to prevent recurrent preterm birth
- Maintain primary term, singleton, vertex c-section rate <16%
- Postpartum visit with standardized depression screen, reproductive life planning, transition to primary care
- Collaboration with pregnancy care manager(s)
- Participation with local CCNC network

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Risk Screening

- 77% of PMH patients are screened
  - **>40,000 screens annually**

- 70% of patients have at least one risk factor:
  - Tobacco use during pregnancy – 37.8%
  - Chronic disease – 22.0%
  - Previous preterm birth – 6.8%
  - Drug/alcohol use – 6.7%
  - Hospital admission/ED use – 5.8%

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Receipt of pregnancy care management:

- 87% of high-risk pregnancies
- >50% of all Medicaid pregnancies
  - 17,000 women in care management at any moment

RNs and social workers from local health departments, embedded in OB practices, provide:

- Assessment
- Education
- Advocacy
- Referral
- Monitoring

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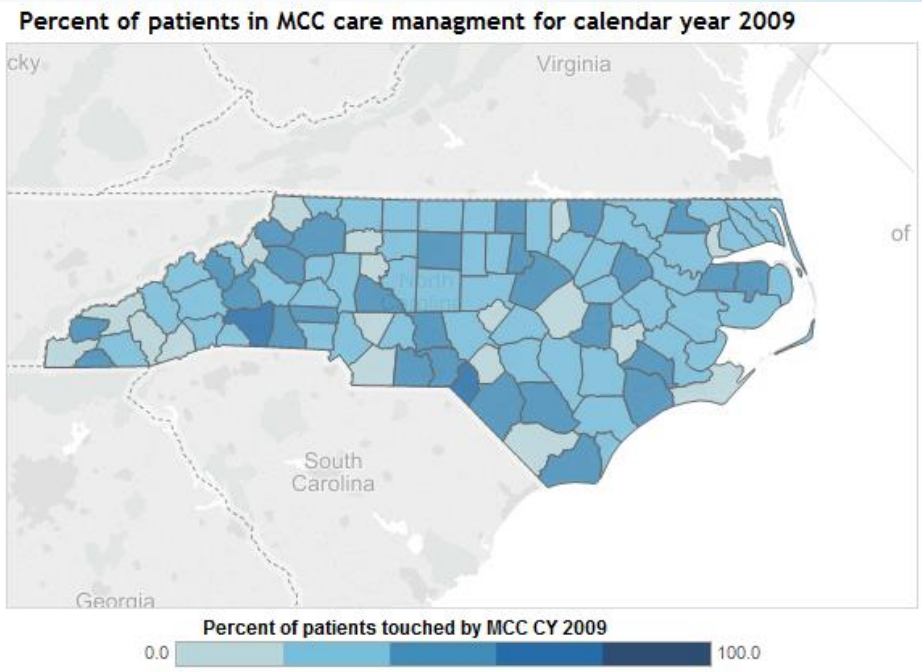
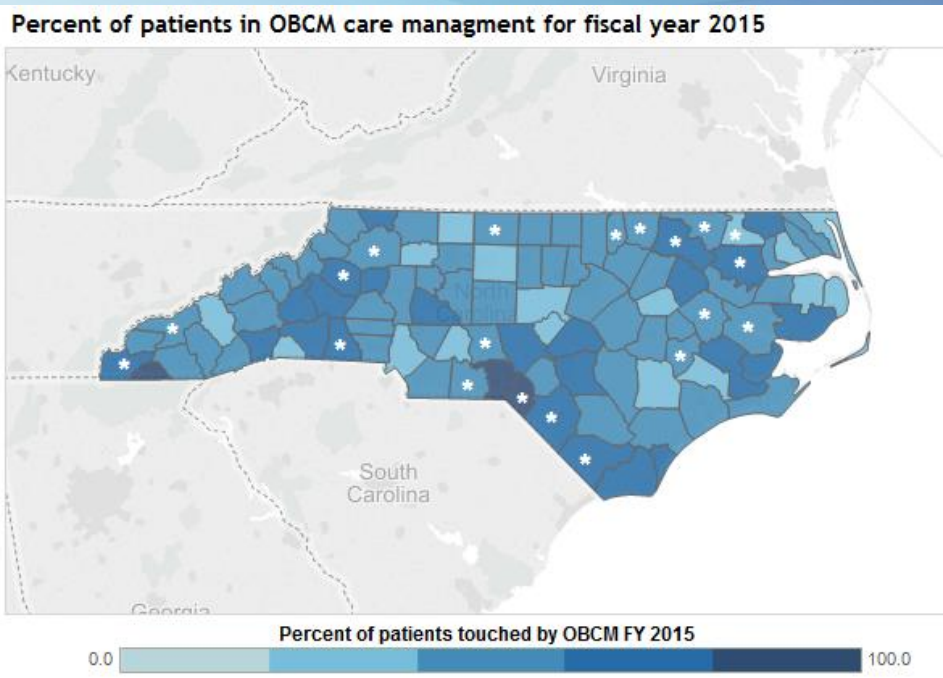
Pregnancy Care Management





Increase proportion of pregnant Medicaid patients served in almost every county, with services now focused on those at greatest risk.

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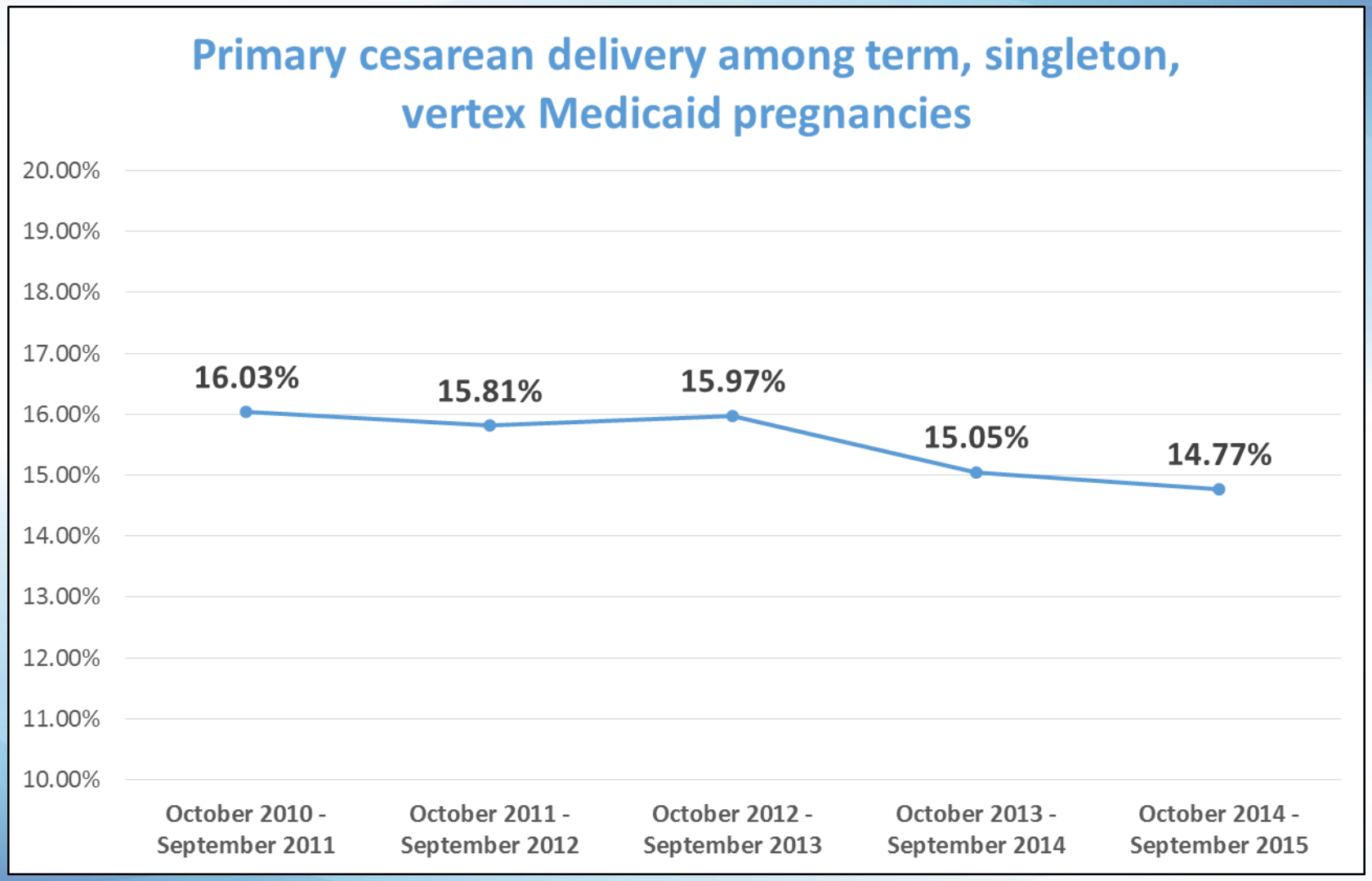
QI Informatics: Measure what matters



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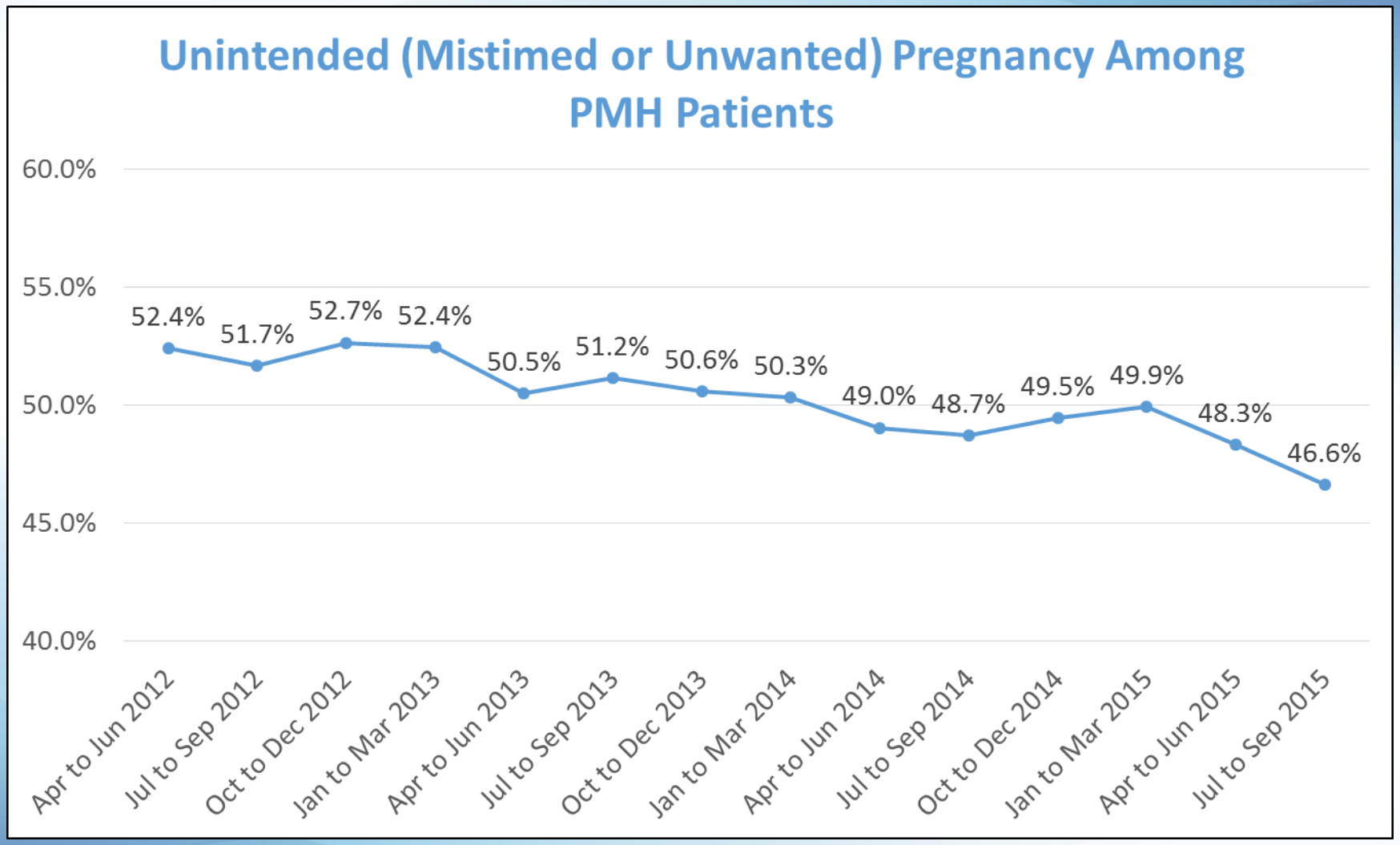
Informatics



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Clinical Leadership

PMH Care Pathways establish statewide, evidence-based best practices.

https://www.communitycarenc.org/population-management/pregnancy-home/pmh-pathways/

About Us | Our Networks | New Services | Informatics Center | Population Management | Special Projects | Provider Tools

Home > Population Management > Pregnancy Medical Home > PMH Care Pathways

PMH Care Pathways

Clinical pathways are developed through the Pregnancy Medical Home Program to promote evidence-based, best practice care statewide. PMH Care Pathways are developed by the OB physician leadership of all 14 CCNC networks through a collaborative process. Pathways will be revised periodically to incorporate emerging evidence.

If you are a Pregnancy Medical Home provider with questions or comments about a PMH Care Pathway, or want to suggest a topic for future pathway development, please contact your local CCNC network OB team. For general information about the PMH program, contact Program Manager Kate Berrien.

- **Hypertensive Disorders of Pregnancy**
  - Updated March 2014 (originally published August 2012)
- **Induction of Labor in Nulliparous Patients**
  - February 2013
- **Perinatal Tobacco Use**
  - January 2015
- **Postpartum Care and the Transition to Well Woman Care**
  - February 2015

Medical Home ▼
Call Center
Behavioral Health Integration ▼
Quality Improvement
Care Management ▼
Disease Specific Initiatives ▼
Pharmacy ▼
Transitional Support
Project Lazarus ▼
Motivational Interviewing
CCNC Pediatrics ▼
Pregnancy Medical Home ▼

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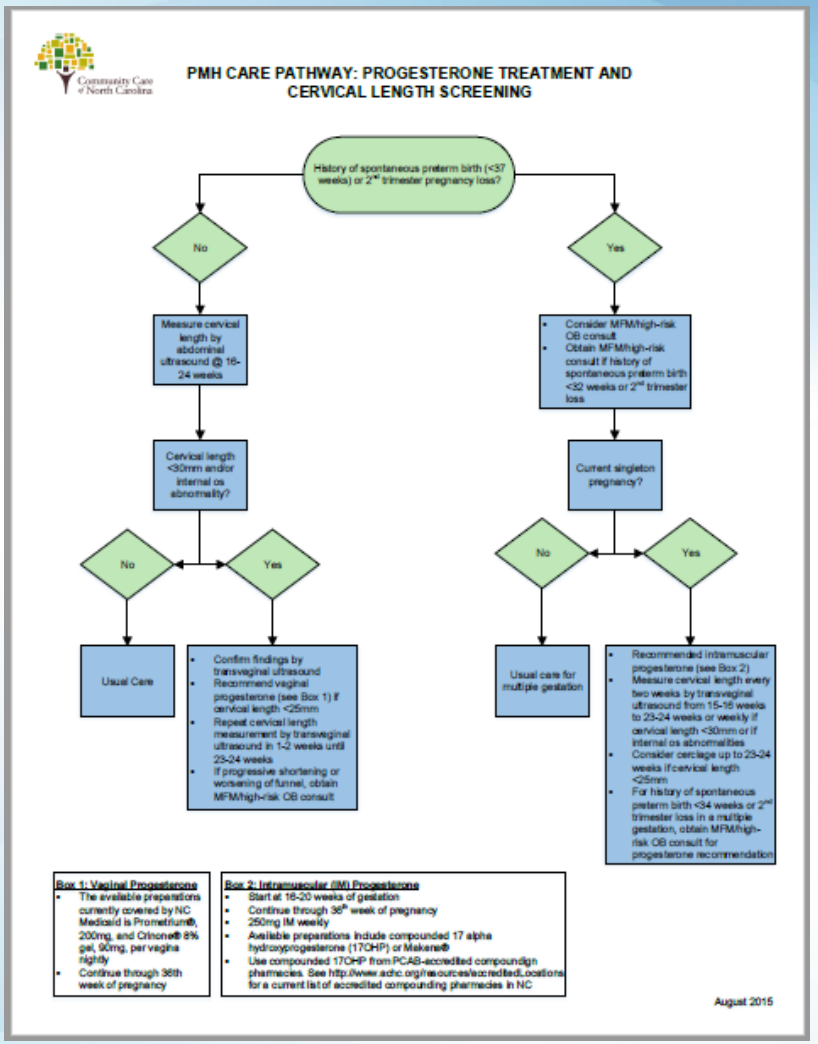
Progesterone Treatment and Cervical Length Screening



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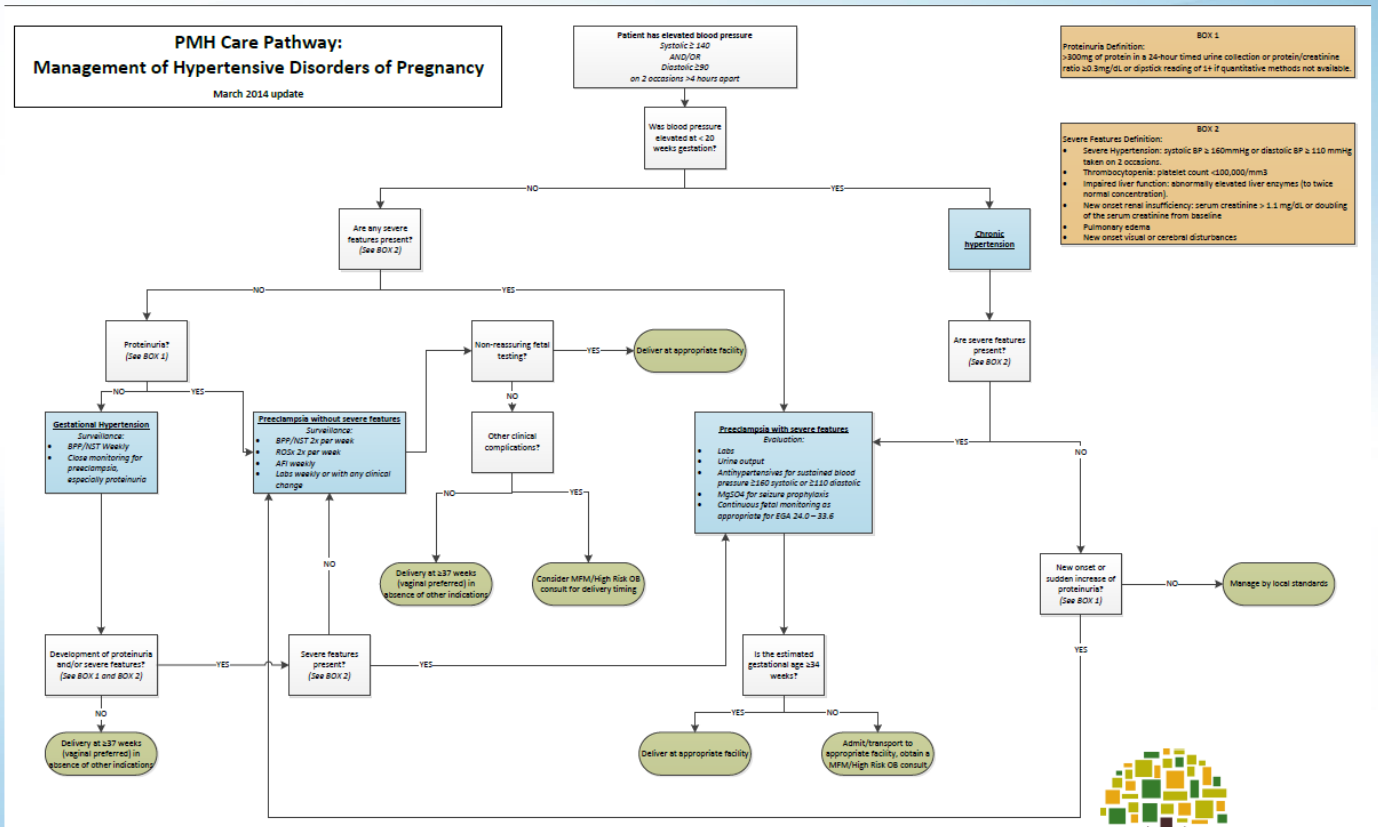
Hypertensive Disorders of Pregnancy



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Appendix A. Low-Dose Aspirin for the Prevention of Morbidity and Mortality from Preeclampsia

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Management of Obesity in Pregnancy

Pregnancy Medical Home Care Pathway: Management of Obesity in Pregnancy

Timing	BMI 30- 40	BMI >40	Prior Bariatric Surgery
Preconception	• Weight loss to normal BMI • Review perinatal risks • 400 mcg - 1 mg of folic acid • Sleep apnea screening -Refer for sleep study if positive • Metabolic syndrome screening -Diabetes/hypothyroid -Lipids -Hypertension -NASH syndrome • Nutritional consultation	• Weight loss to normal BMI • Review perinatal risks • 400 mcg - 1 mg of folic acid • Sleep apnea screening -Refer for sleep study if positive • Metabolic syndrome screening -Diabetes/Hypothyroid -Lipids -Hypertension -NASH syndrome • Nutritional consultation • Consider HROB/MFM referral for BMI > 50	• Document operative type • 400mcg - 1 mg folic acid • Advise delaying pregnancy 18 months following bariatric surgery
1st trimester	• Gestational diabetes screening • CMP,TSH, Hgb A1c & Urine p/c ratio • 400 mcg - 1 mg folic acid • Nutritional consultation • Gestational weight gain goal 11-20 lbs per IOM • Discuss perinatal risks • 1st trimester dating US • Sleep apnea screening -Refer for sleep study if positive • 81 mg ASA beginning at 12-16 weeks with additional risk factor	• Gestational diabetes screening • CMP, TSH, Hgb A1c,Urine p/c ratio • 400mcg - 1 mg folic acid • Nutrition consultation • Gestational weight gain goal 11-20 lbs per IOM • Discuss perinatal risks • 1st trimester dating US • Sleep apnea screening -Refer for sleep study if positive • Maternal EKG • Consider HROB/MFM referral for BMI > 50 or per local policy • 81 mg ASA beginning at 11-14 weeks	• Review operative report • 400mcg - 1 mg folic acid • Nutritional consult • Review additional vitamin supplementation • Surgical consult for GI symptoms or lap band adjustment • Screen for: “dumping syndrome” before glucola* • HgbA1c (screen for type 2 diabetes) • CBC, iron, ferritin, RBC folate, vitamin D, calcium, vitamin B12 level • Drug levels as needed • ASA 81 mg ASA ok with Roux en Y

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Tobacco Use Reported at Entry to Prenatal Care

- From July 2013 to June 2015, an average of 38.7% of PMH-attributed Medicaid births used tobacco at the time the patient became pregnant as identified on the PMH risk screening form
- Approximately 20% of women with PMH-attributed Medicaid births continue to smoke throughout pregnancy
- Average PMH-attributed Medicaid births tobacco use by race/ethnicity identified on the PMH risk screening form from July 2013 to June 2015:

Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian/Pacific Islander*	Non-Hispanic Native American/Alaskan Native*
46.71%	33.96%	12.04%	8.98%	45.67%

*rates are based on small numbers and should be interpreted with caution

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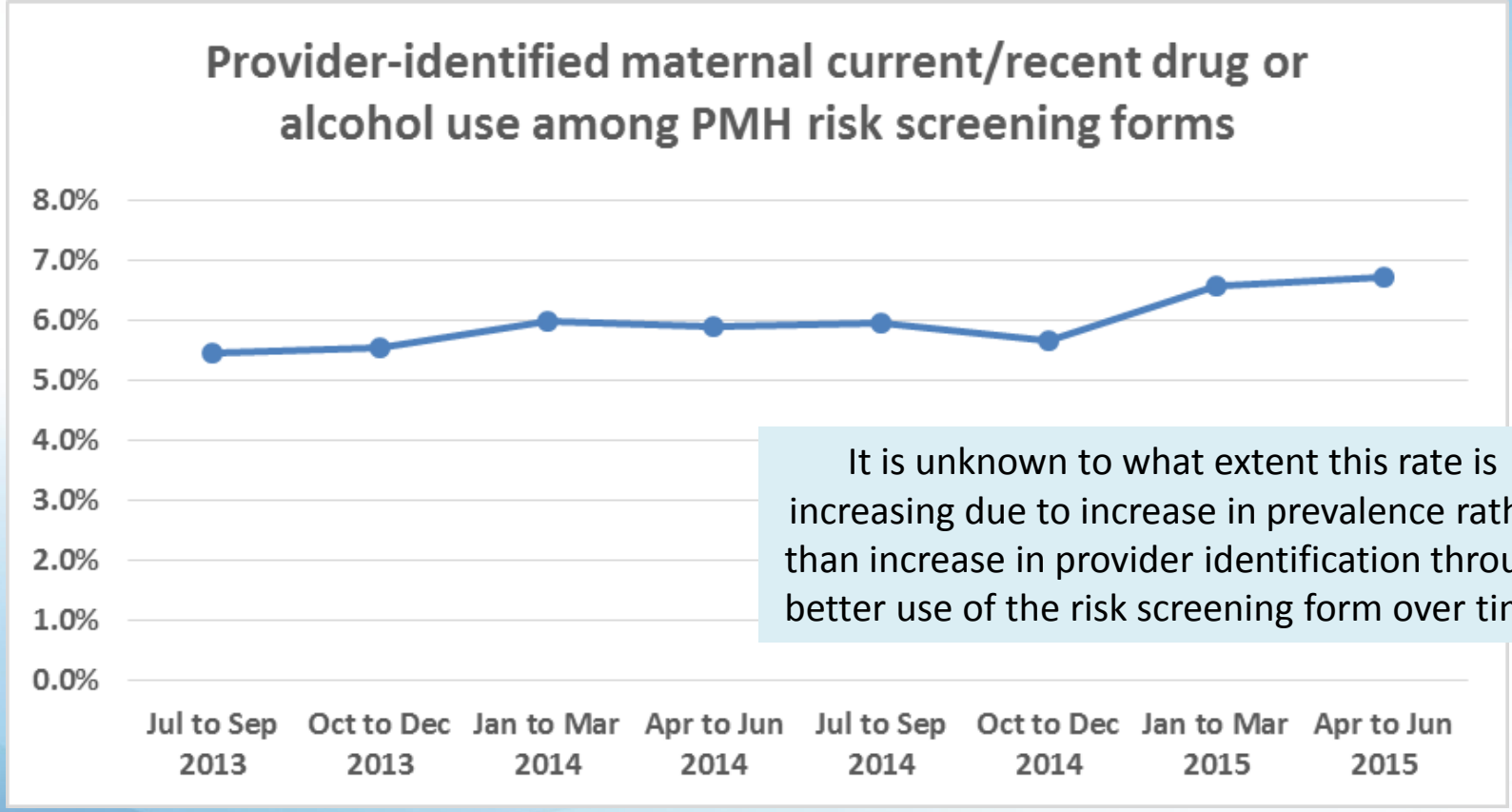
Substance Use in Pregnancy



It is unknown to what extent this rate is increasing due to increase in prevalence rather than increase in provider identification through better use of the risk screening form over time.

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Application of PMH Model: Postpartum Care

- 2016 statewide PMH quality improvement project
- Person-centered goal: increase the number of women who receive postpartum care and transition to well woman care
- Evidence-based: pregnancy spacing, chronic disease management, behavioral health, breastfeeding
- Data-driven: use of PMH data structure to promote practice- and population-level quality improvement
- Use of PMH infrastructure to drive innovation:
  - 45 sites across NC representing all practice types
  - CCNC network OB team supports practice

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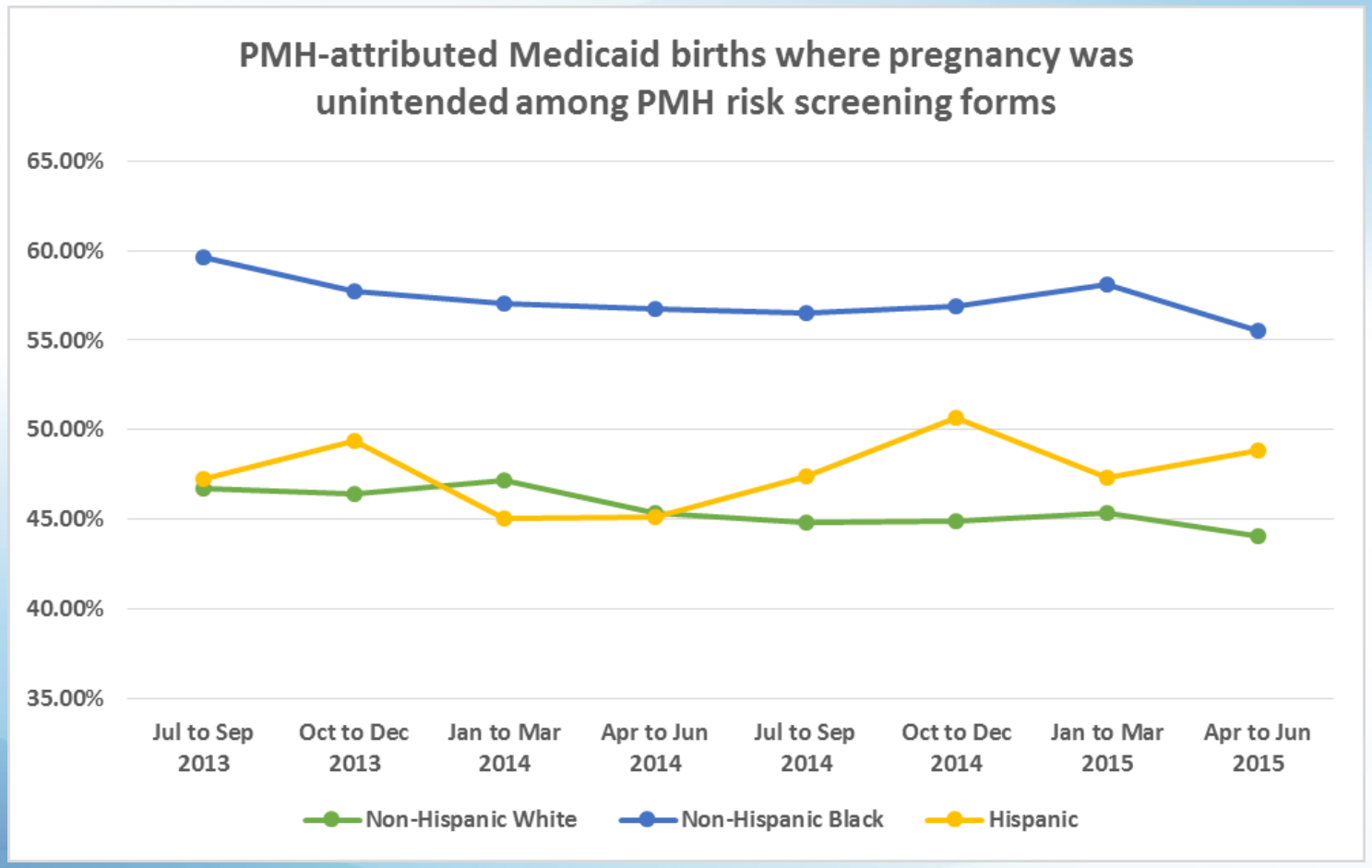
Reproductive Life Planning: Access to choice of contraception



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Multifetal Gestation

1.23% of pregnancies

of PMH-attributed population from July 2013 to June 2015 based on the birth certificate.

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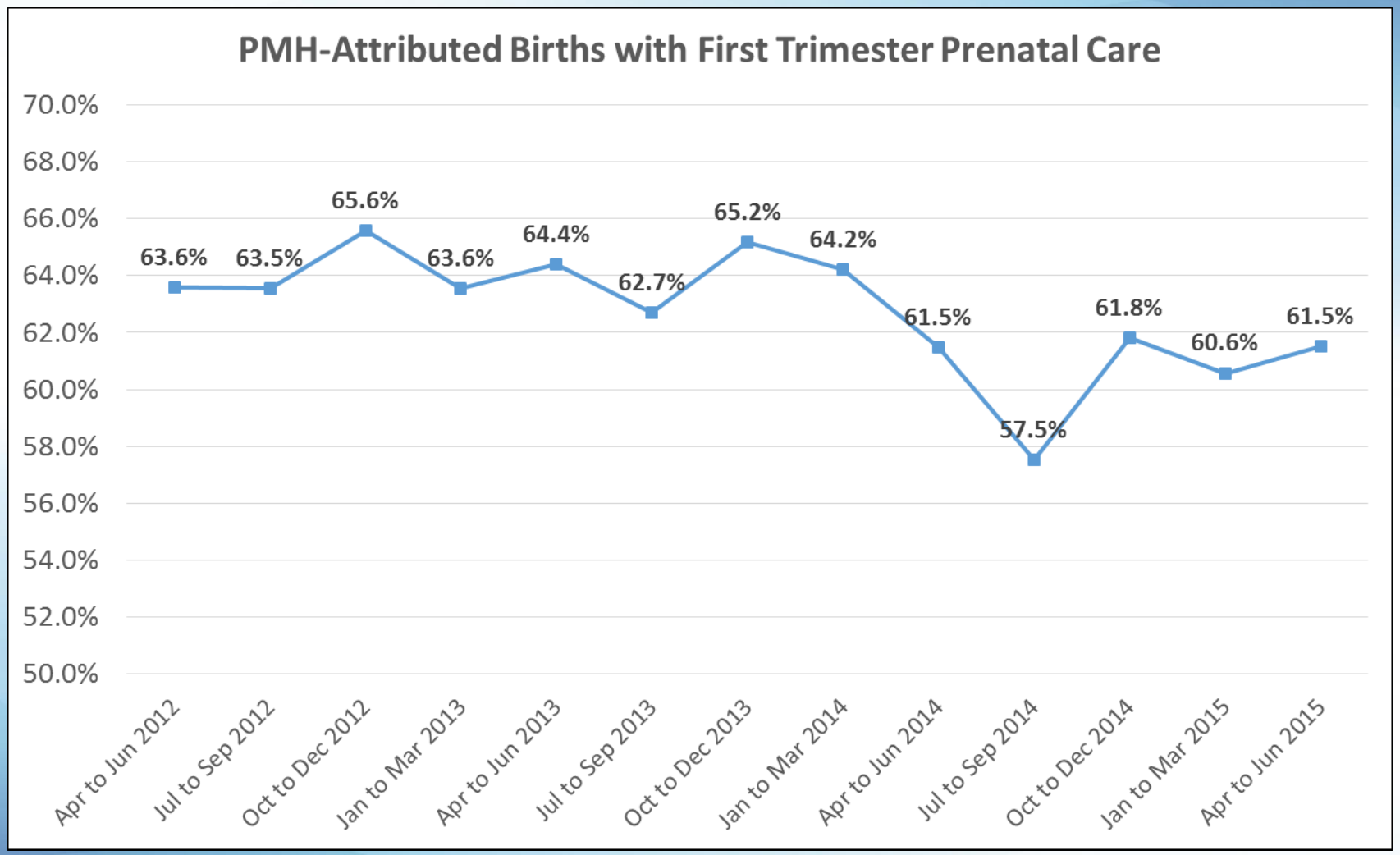
First Trimester Prenatal Care



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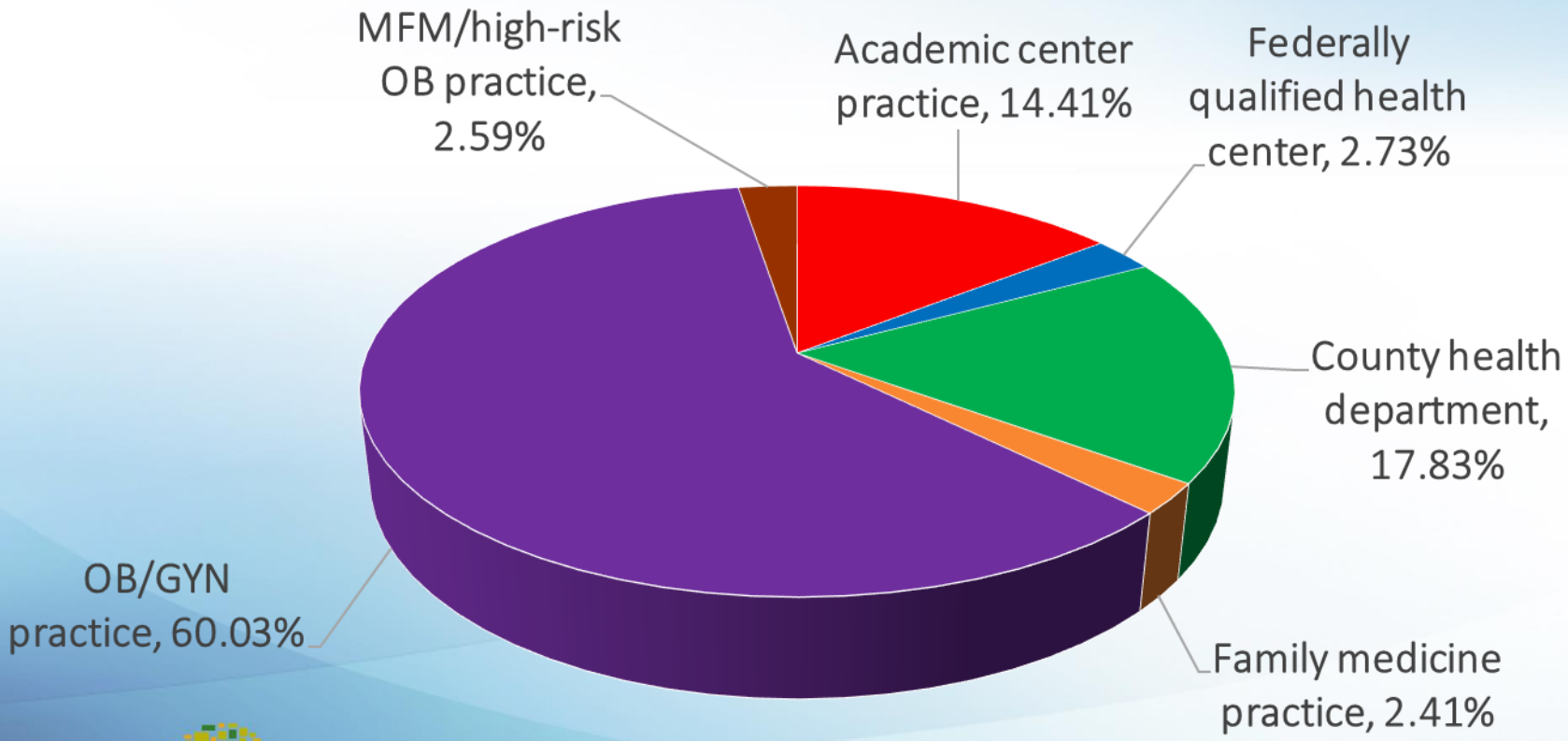
PMH Provider Network

Provider participation: 380 practices participate in the PMH program, representing >1,700 providers and more than 90% of maternity care provided to Medicaid patients.



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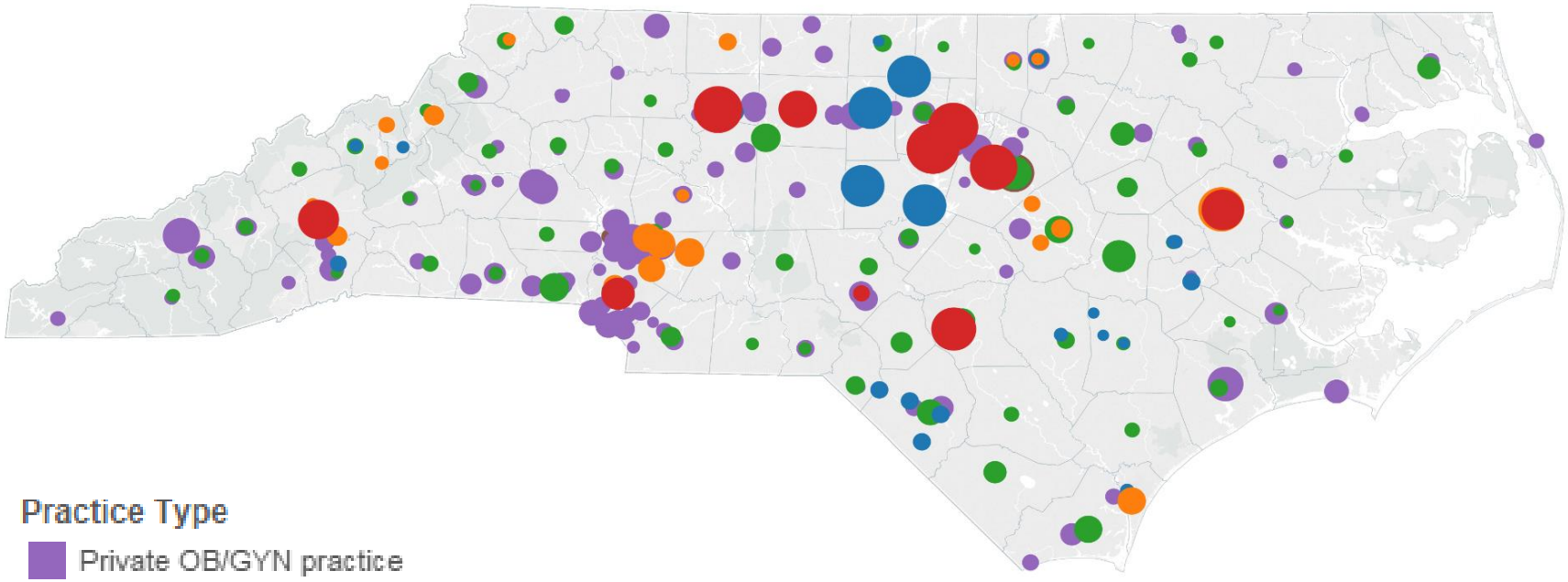
PMH Provider Network



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Opportunities for NC

- Early access to prenatal care
  - Enable early risk screening
  - Appropriate use if aspirin, progesterone, smoking cessation, management of chronic disease
- Preconception and Interconception care
  - Improve preconception wellness, pregnancy intendedness, birth spacing
- Address health equity
  - Study outcomes and provision of care by race and ethnicity
  - Provide additional resources for those with greatest need
- When preterm birth is inevitable
  - Strengthen system for risk appropriate care

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