



**Department of
Medicaid**

John R. Kasich, Governor
Barbara R. Sears, Director

Medicaid's Role in Addressing Infant Mortality

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May 16, 2018

Ohio Medicaid's Transformational Quality Strategy

Better Health Outcomes Through Innovation

Focus
Populations

Design & Implement "Pay for Value"

Desired Health Improvements:
Health Equity

Healthy
Children &
Adults

Women's
Health

Behavioral
Health

Chronic
Conditions



Preventative
Screenings

Improved pre-term
birth & infant
mortality rates

Integrated Behavioral &
Physical Health Care
Appropriate Prescribing

Well Managed
Asthma, Diabetes &
Hypertension

SPECIAL INITIATIVES

Infant Mortality Reduction
Opioid Abuse Prevention and Treatment
Behavioral Health Redesign

Overview

- Infant mortality is considered the mark of the overall health of a city, state or nation
 - » Across the country, preterm births account for almost half of the deaths of infants before their first birthday
 - » Birth defects and sleep-related deaths are also significant contributors
- Ohio's infant mortality rate is worse than the national average
- Ohio's African American community is disproportionately affected
- Initiatives include in the Fiscal Years 2018 and 2019 Budget will make ODM a leader in fighting this issue, focusing on the community level

Snapshot: Ohio's efforts to reduce infant mortality

Ohio Department of Medicaid

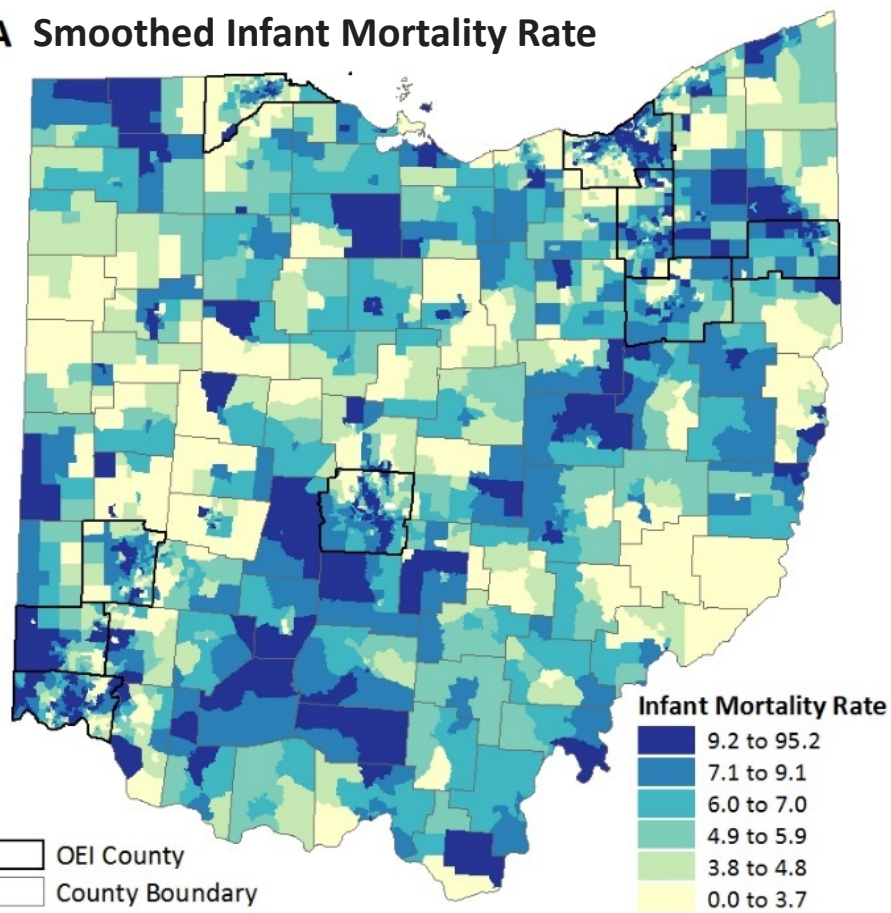
- Vital statistics and data transparency
- Standardized pregnancy notification form
- Remove prior authorization for first dose of progesterone
- Improved managed care activation
- Infant Mortality Research Partnership
- Peri-natal and neo-natal episodes through SIM value based purchasing

Ohio Department of Health

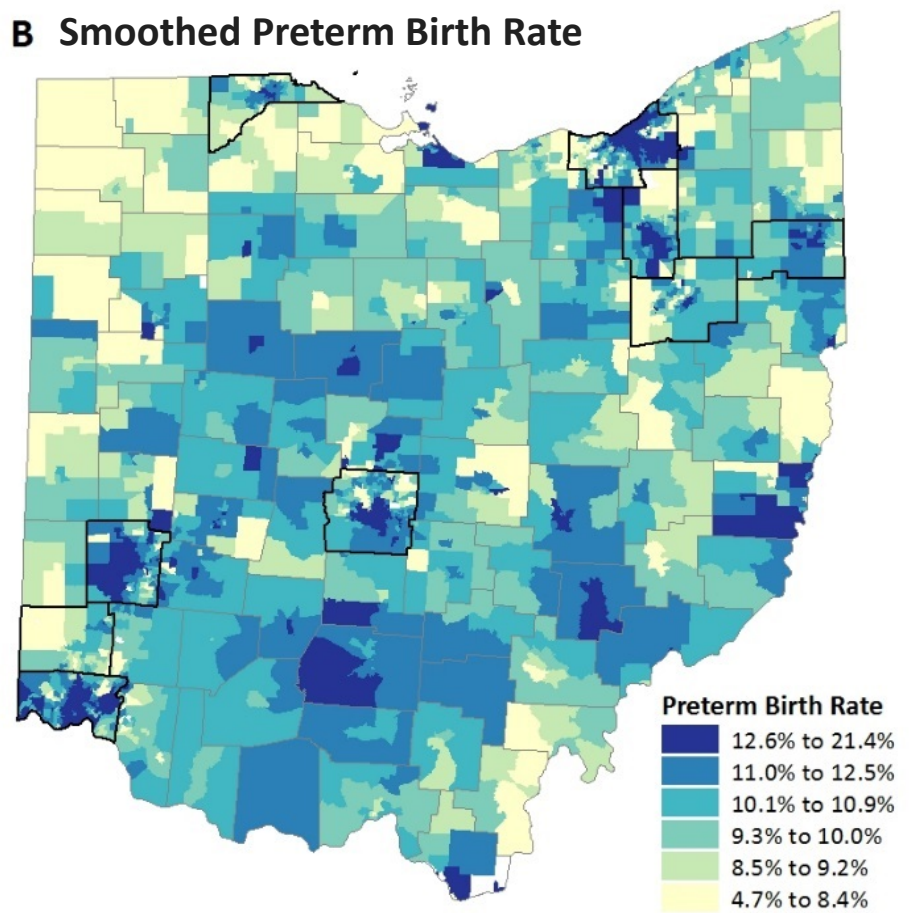
- Ohio Equity Institutes (OEI)
- Evidence based home visiting system redesign and data system
- Safe sleep
- Smoking cessation
- Big Data Analytics Project
- Community Intensive Pilot

Infant Mortality Research Partnership (IMRP) Descriptive Maps

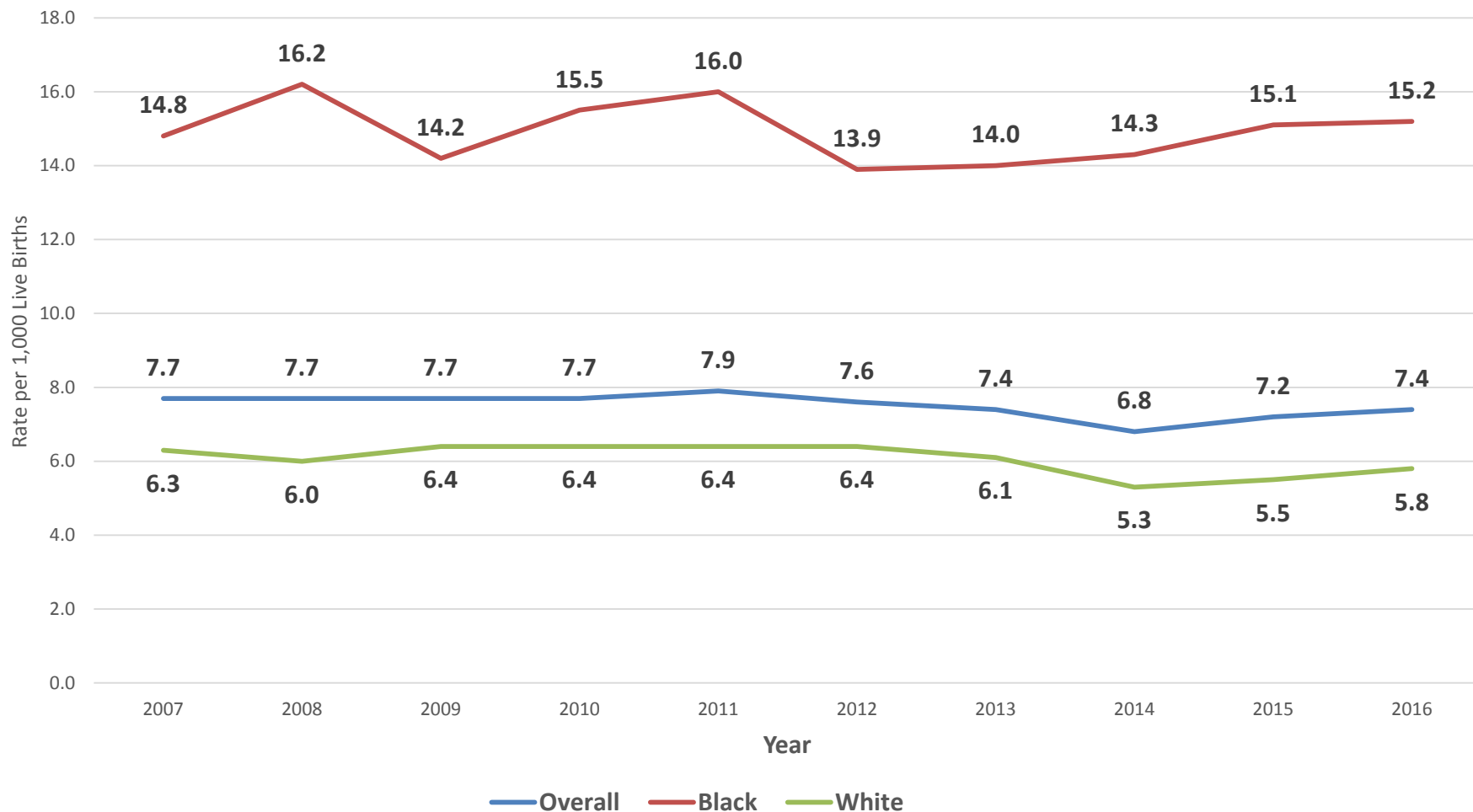
A Smoothed Infant Mortality Rate



B Smoothed Preterm Birth Rate

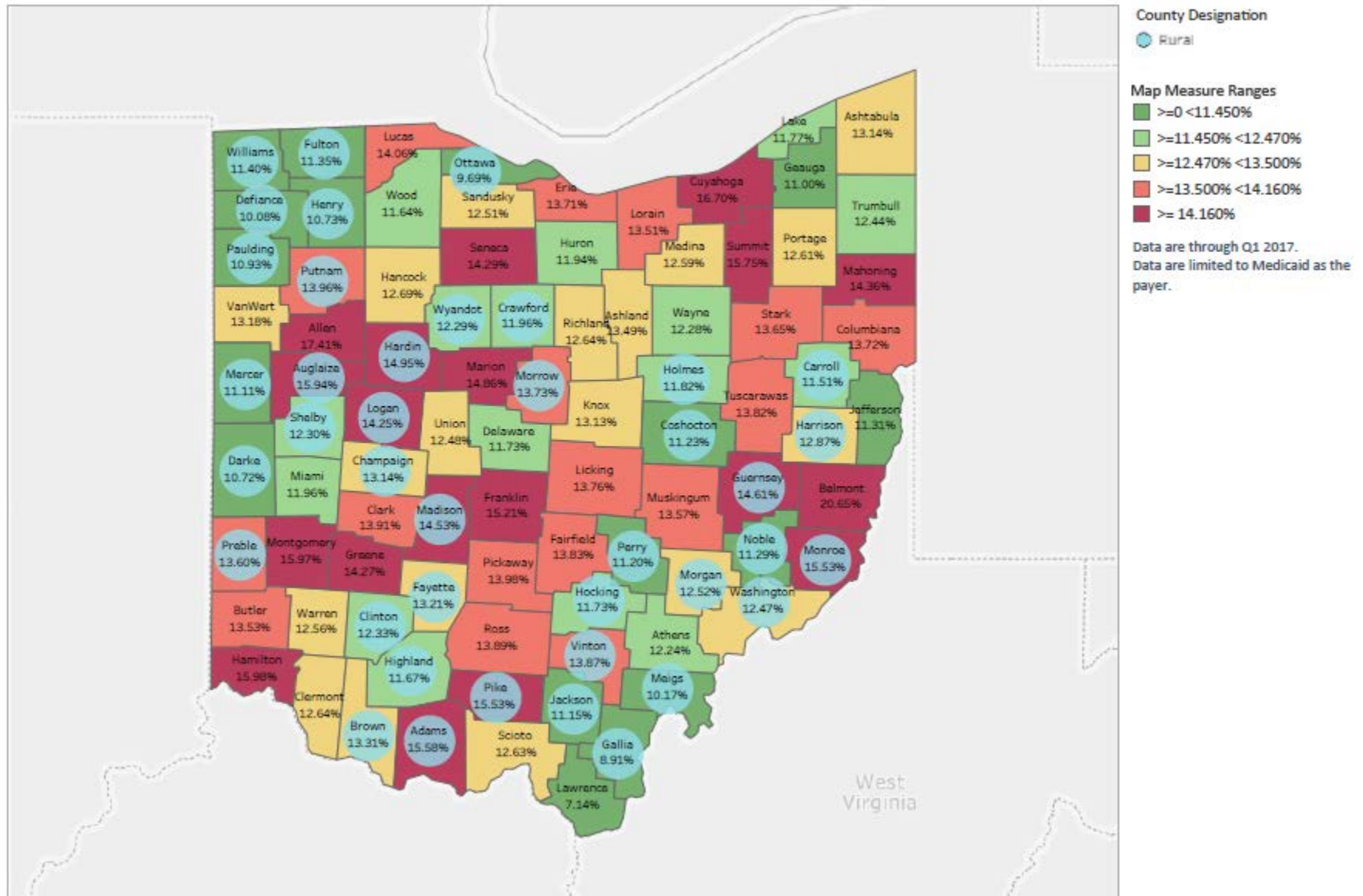


Ohio Infant Mortality Rate by Race



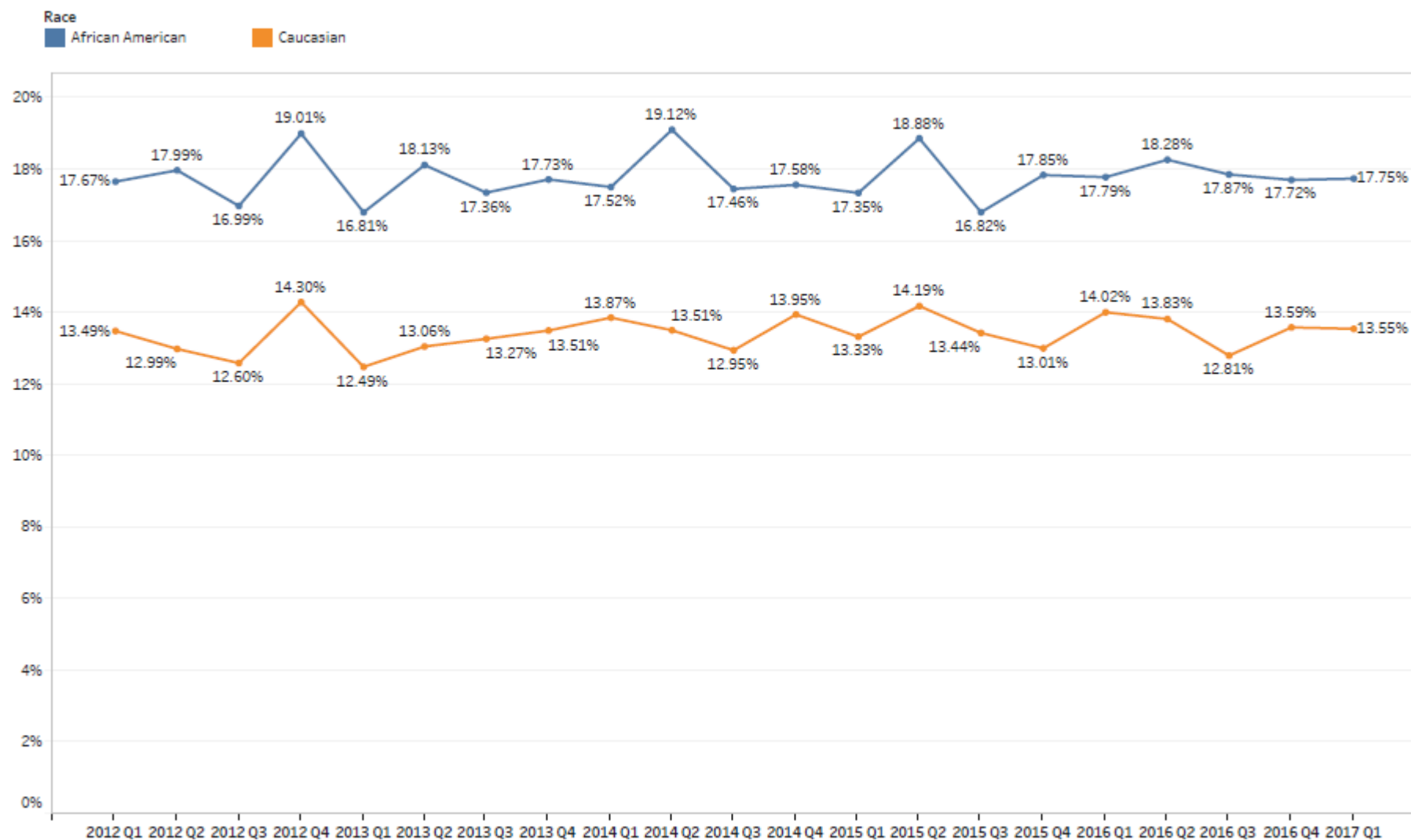
Statewide - Preterm Birth (%)

Overall Quintiles by County | CY 2012 - 2017



Quarterly Trends by Race - Preterm Birth (%)

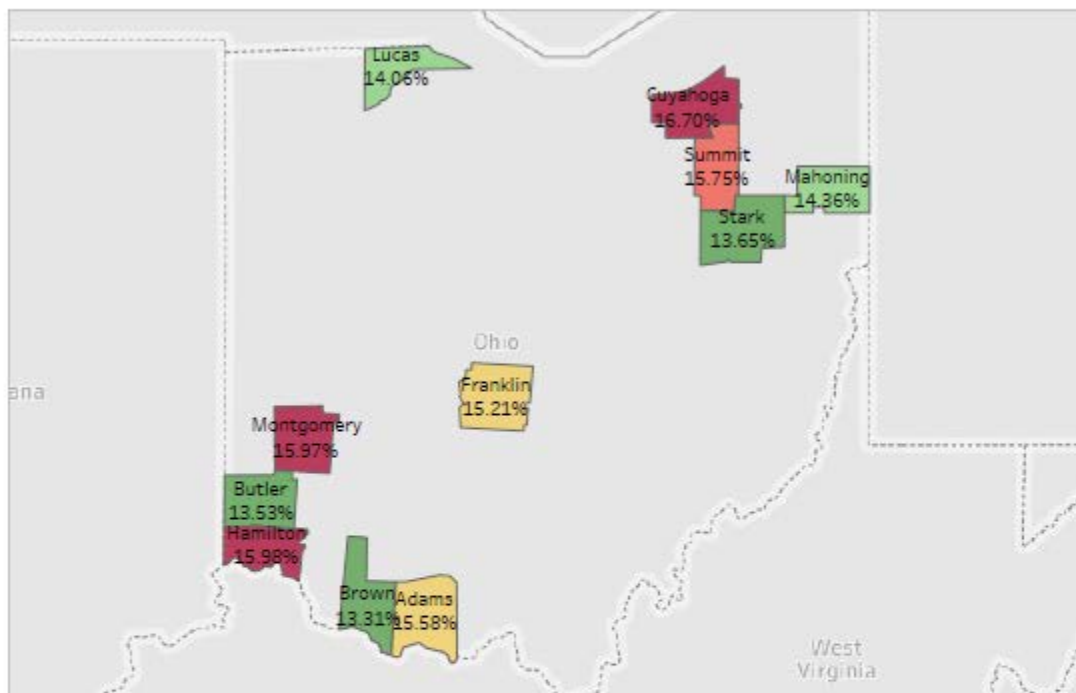
All OEI Counties | CY 2012-2017



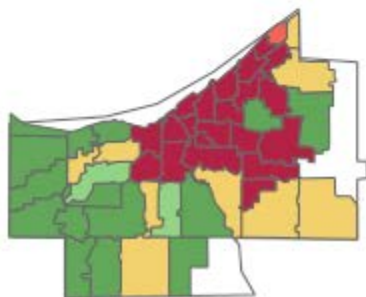
Data are limited to Medicaid as the payer.

Cuyahoga, Franklin, Hamilton Counties - Preterm Birth (%)

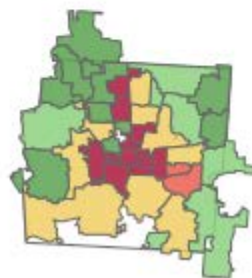
OEI County Quintiles | CY 2012-2017



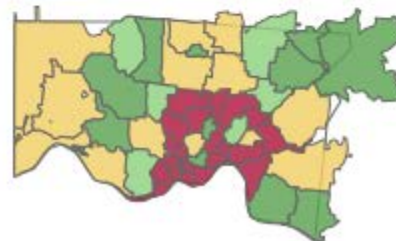
Cuyahoga



Franklin

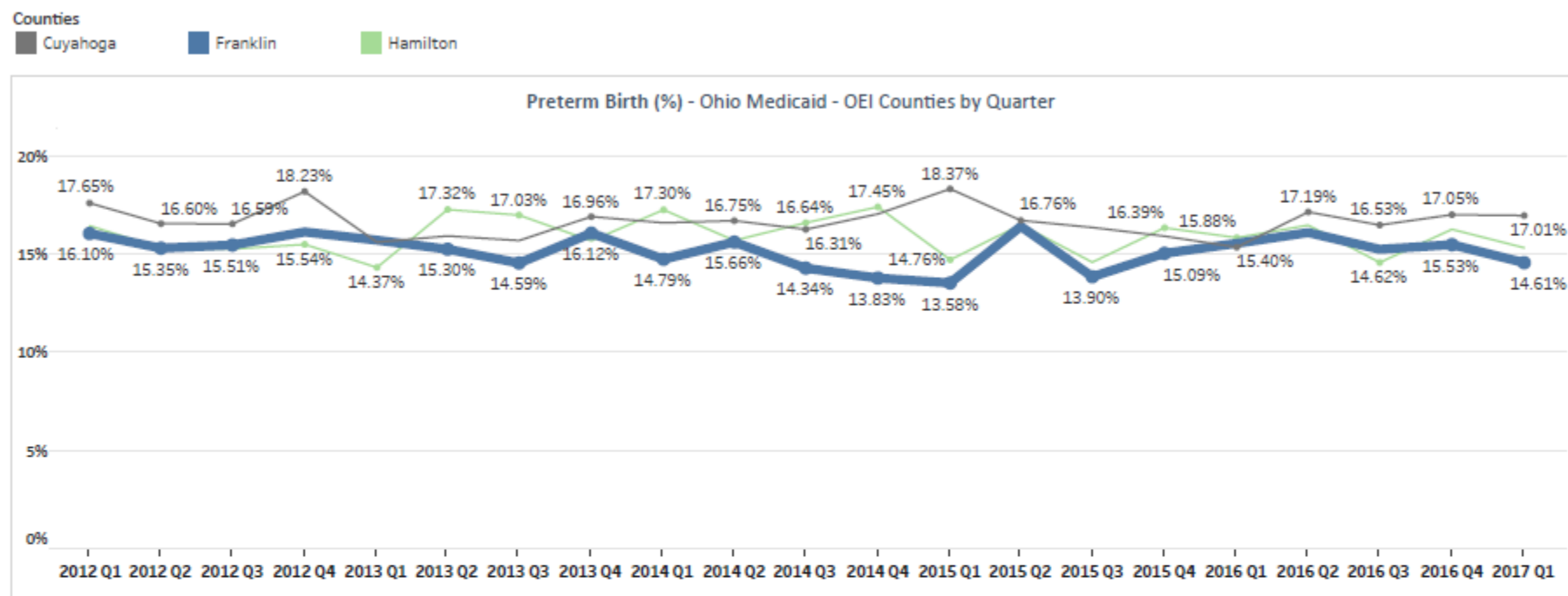


Hamilton



Cuyahoga, Franklin, Hamilton Counties - Preterm Birth (%)

Trends by Quarter | CY 2012-2017

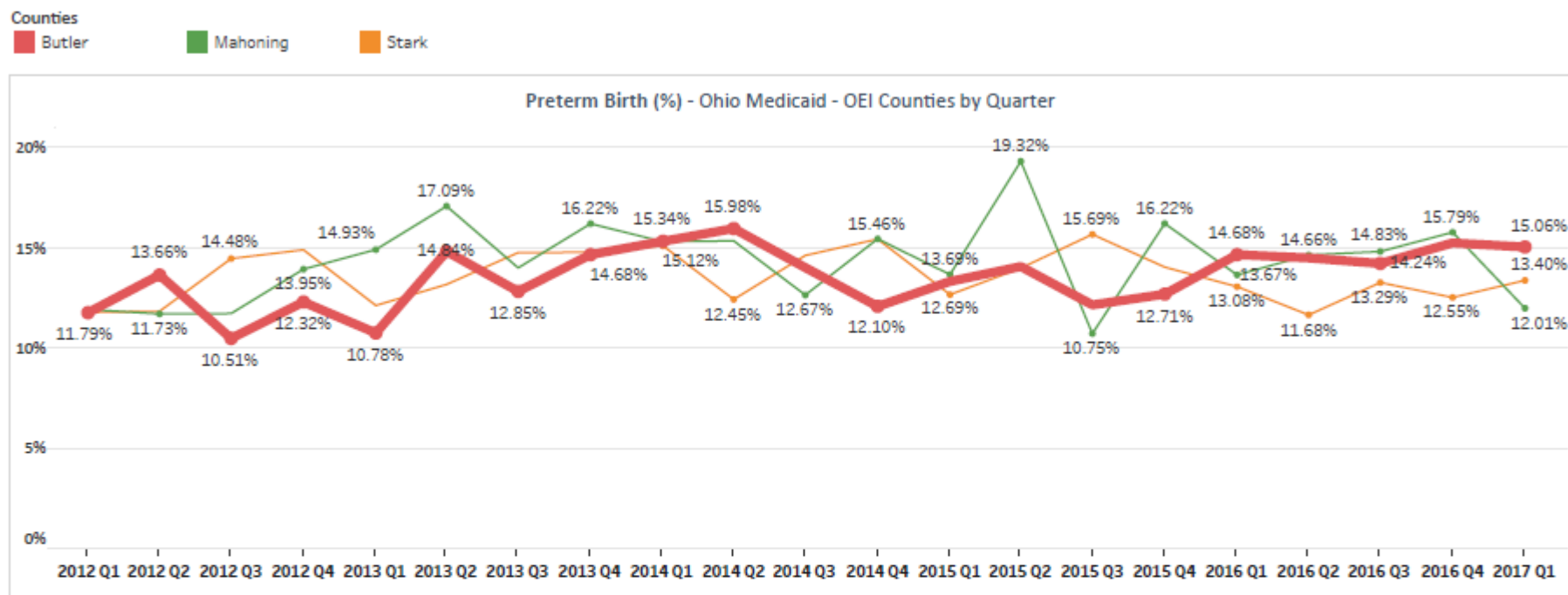


County	PTB Aggregate Rate Q1 2012 - Q1 2017	PTB Current Rate Q2 2016 - Q1 2017	Annual Target for Real Impact*
Cuyahoga	16.70%	16.94%	From 1385 to 1329 PTB Infants
Franklin	15.21%	15.40%	From 1452 to 1394 PTB Infants
Hamilton	15.98%	15.70%	From 905 to 860 PTB Infants

Note: Statistical significance test is based off of a 95% confidence level using the binomial test of proportions. The baseline rate (a rate for the entire time period from Q1 2012 – Q1 2017) is compared to the annual target numerator, denominator, and rate for future data to determine a change that would result in p-value less than 0.05, resulting in statistical significance at a 95% confidence level. In order to normalize and account for any quarterly variation, the size of the denominator for the target measure is based off of an average quarterly calculation of the denominators from Q1 2012 through Q1 2017. The calculation to determine the annual target therefore assumes an average size in the denominator for upcoming four quarters of data.

Butler, Mahoning, Stark Counties - Preterm Birth (%)

Trends by Quarter | CY 2012-2017

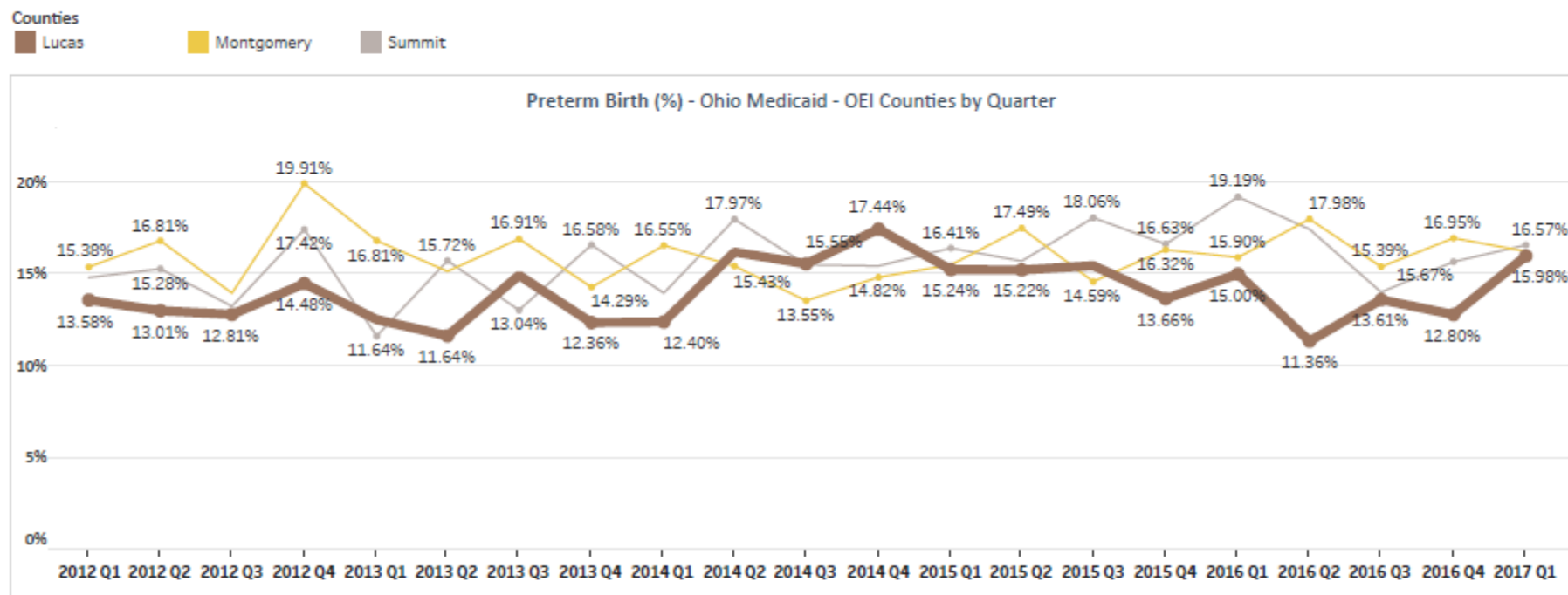


County	PTB Aggregate Rate Q1 2012 - Q1 2017	PTB Current Rate Q2 2016 - Q1 2017	Annual Target for Real Impact*
Butler	13.53%	14.75%	From 300 to 274 PTB Infants
Mahoning	14.36%	14.42%	From 215 to 193 PTB Infants
Stark	13.65%	12.74%	From 306 to 279 PTB Infants

Note: Statistical significance test is based off of a 95% confidence level using the binomial test of proportions. The baseline rate (a rate for the entire time period from Q1 2012 – Q1 2017) is compared to the annual target numerator, denominator, and rate for future data to determine a change that would result in p-value less than 0.05, resulting in statistical significance at a 95% confidence level. In order to normalize and account for any quarterly variation, the size of the denominator for the target measure is based off of an average quarterly calculation of the denominators from Q1 2012 through Q1 2017. The calculation to determine the annual target therefore assumes an average size in the denominator for upcoming four quarters of data.

Lucas, Montgomery, Summit Counties - Preterm Birth (%)

Trends by Quarter | CY 2012-2017



County	PTB Aggregate Rate Q1 2012 - Q1 2017	PTB Current Rate Q2 2016 - Q1 2017	Annual Target for Real Impact*
Lucas	14.06%	13.45%	From 494 to 460 PTB Infants
Montgomery	15.97%	16.62%	From 593 to 556 PTB Infants
Summit	15.75%	15.89%	From 483 to 450 PTB Infants

Note: Statistical significance test is based off of a 95% confidence level using the binomial test of proportions. The baseline rate (a rate for the entire time period from Q1 2012 – Q1 2017) is compared to the annual target numerator, denominator, and rate for future data to determine a change that would result in p-value less than 0.05, resulting in statistical significance at a 95% confidence level. In order to normalize and account for any quarterly variation, the size of the denominator for the target measure is based off of an average quarterly calculation of the denominators from Q1 2012 through Q1 2017. The calculation to determine the annual target therefore assumes an average size in the denominator for upcoming four quarters of data.

Ohio: Delivering the best baby equity bundle

Develop system

- Affordable Care Act and insurance coverage
- Culture of caring
- Dedicated personnel

Get everyone in the system

- Enrollment
- Outreach
- Retention

Identify risk

- Timely identification of priority populations
- Targeted efforts by geography
- Targeted by issue (e.g. transportation)

Provide enhanced services

- Care management (tiered)
- Comprehensive Primary Care
- Re-designed systems (behavioral health, schools)

Maintain and support life course

- Community and non-traditional health workers
- Policy and value-based purchasing
- Quality improvement and community efforts to support population health management

Continuous Improvement Platform

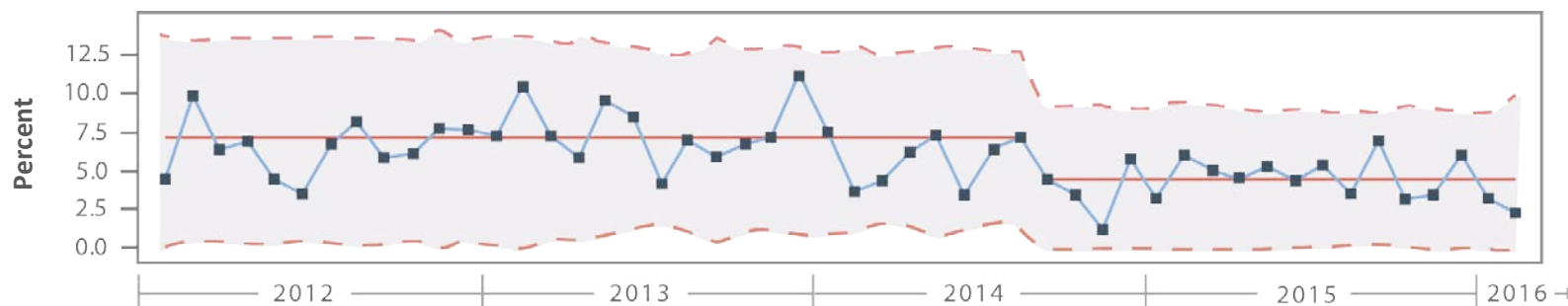
Results with the collaborative OPQC Progesterone Project 2014 - 2016

Reductions in % of Births < 32 Weeks to Mothers with Hx of Previous PTB

Lag in Improvement for Medicaid v. Not on Medicaid in Participating Hospitals



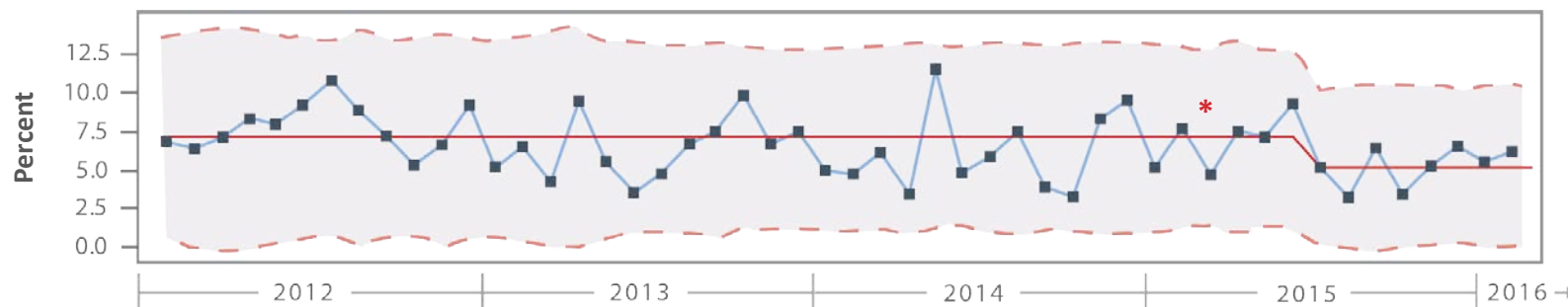
Previous Preterm Birth Not on Medicaid



Non-Medicaid
September 2014



Previous Preterm Birth on Medicaid



Medicaid
July 2015

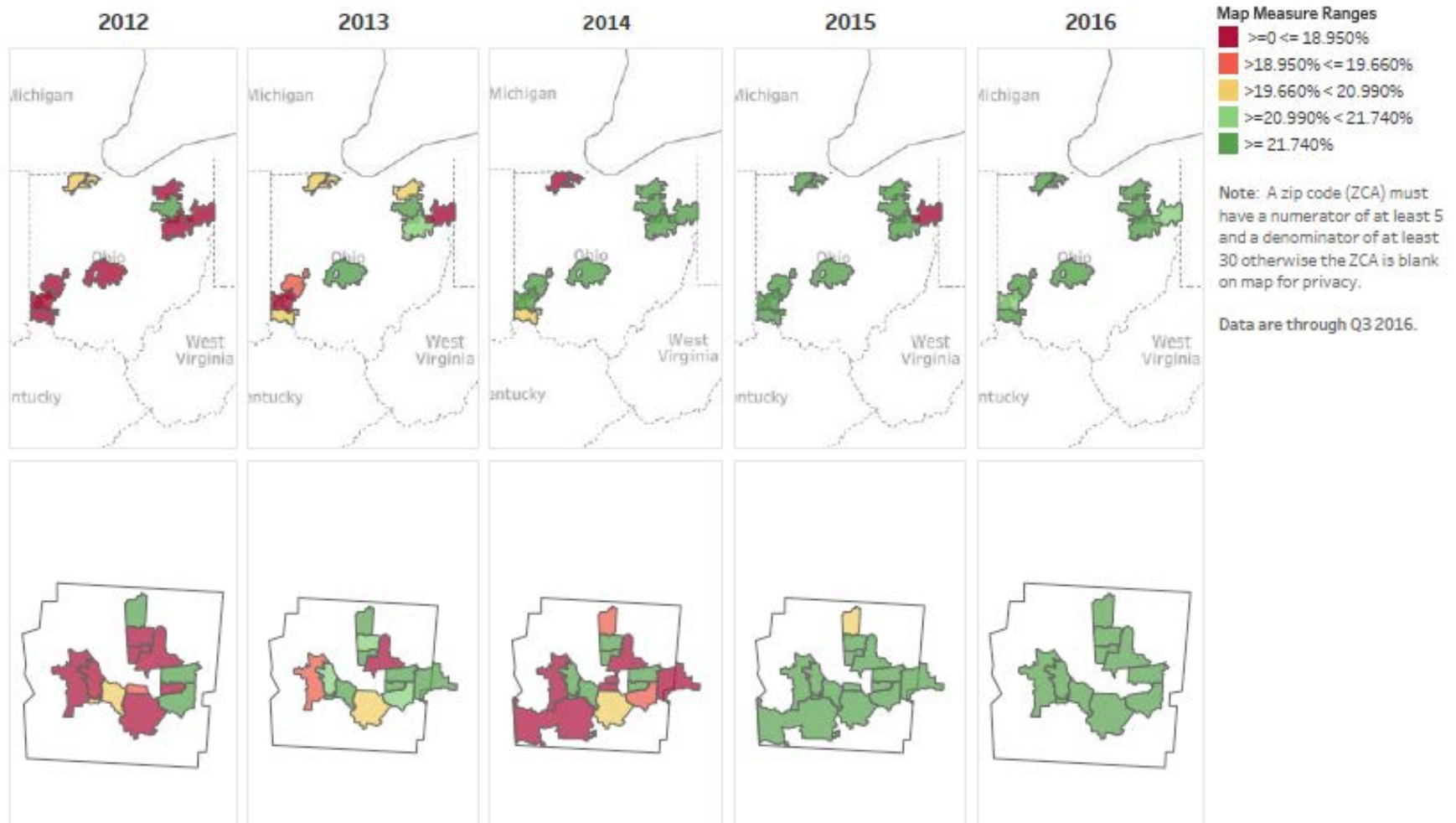


* Formal Medicaid QI effort with OPQC and MCPs began Spring 2015

Source: Ohio Department of Health Birth Registry
Monthly Data January 2012 – February 2016

Franklin County

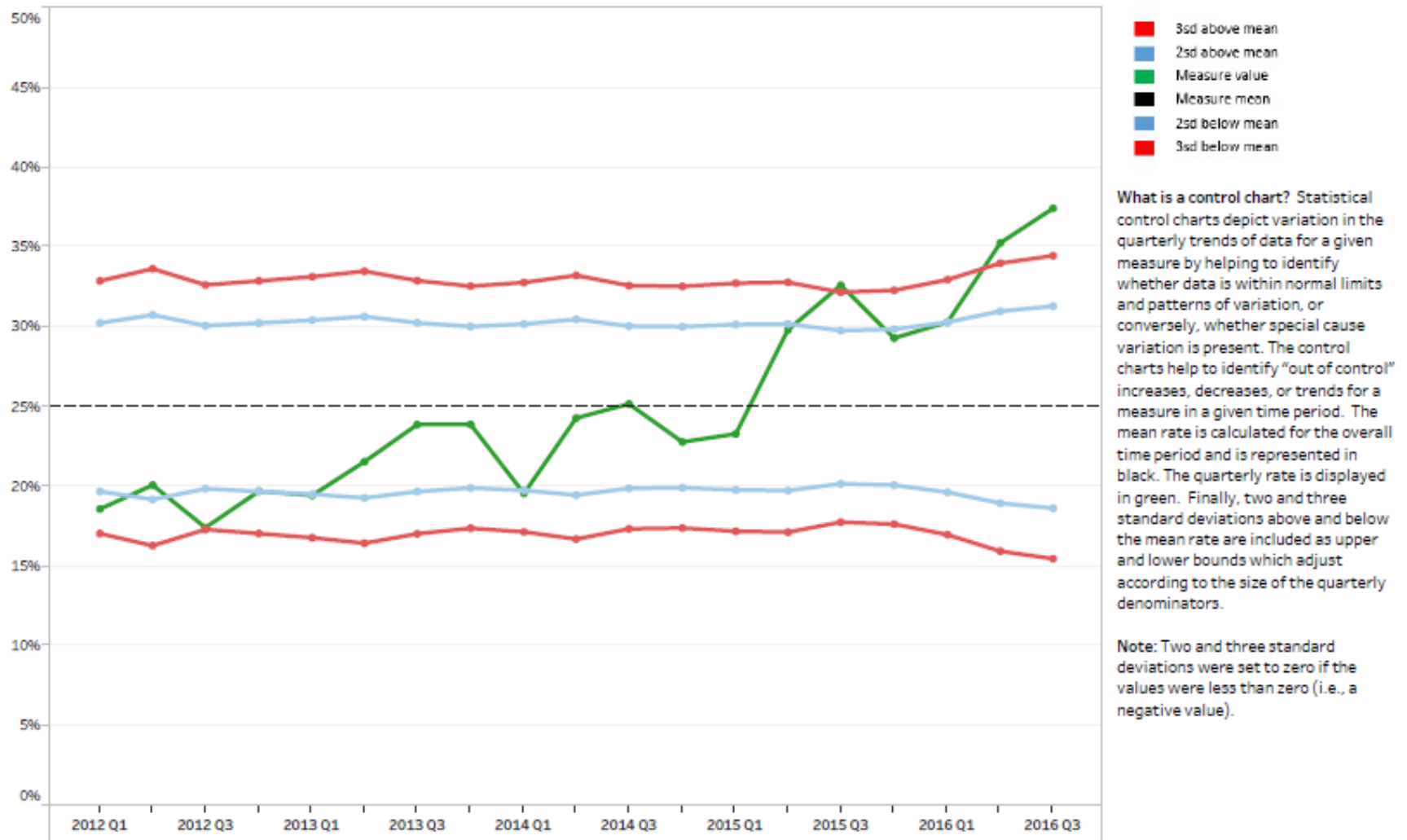
Progesterone Use in High Risk Women



Data are limited to Medicaid as the payer.

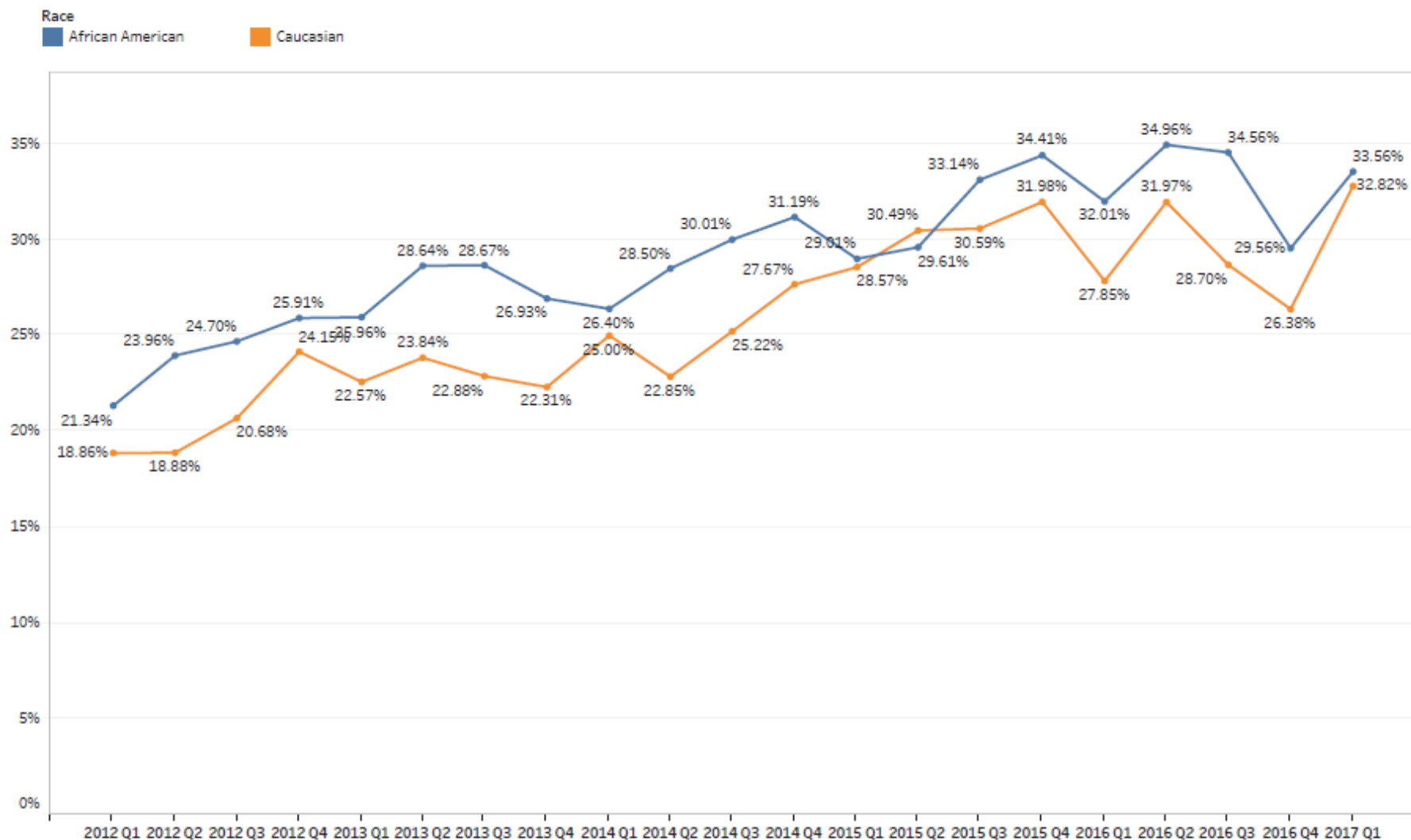
Franklin County

Progesterone Use in High Risk Women



All OEI Counties

Progesterone Use in High Risk Women by Race



Infant Mortality Research Partnership Predictive Modeling

Estimating probabilities of infant mortality

From the clinical
record

The patient is a 19 year old NHB woman presenting for prenatal care at 18 weeks gestation. This is her second pregnancy. Ten months ago, her first pregnancy, resulted in a vaginal delivery at 26 weeks gestation after the onset of spontaneous preterm labor. That infant, a boy, weighed 800 grams and spent 3 months in the NICU before being discharged home. The infant was found dead in his mother's bed at 4 months of age. The patient reports she was seriously depressed after that loss. She was told to see someone for this, but did not. The patient explains that she left school in 10th grade. She has smoked since high school and continues to smoke. She denies substance abuse. The patient lives with her mother but reports that she has to move in with friends every few months. She is also followed by a Maternal-Fetal Medicine specialist for her high risk pregnancy. However she fails to attend clinic regularly because she is working and lacks transportation and receives only 2 progesterone injections. She is hospitalized for severe depression at 22 weeks, but misses her follow-up counseling appointment. At 28 weeks gestation, she delivers a 1000 gram female infant vaginally after the onset of spontaneous preterm labor. She did receive corticosteroids 48 hours before birth.

$$\text{Prob}(\text{infant mortality}) = \frac{e^{\text{logit}}}{1 + e^{\text{logit}}} = \frac{e^{-1.529}}{1 + e^{-1.529}} = 0.178$$

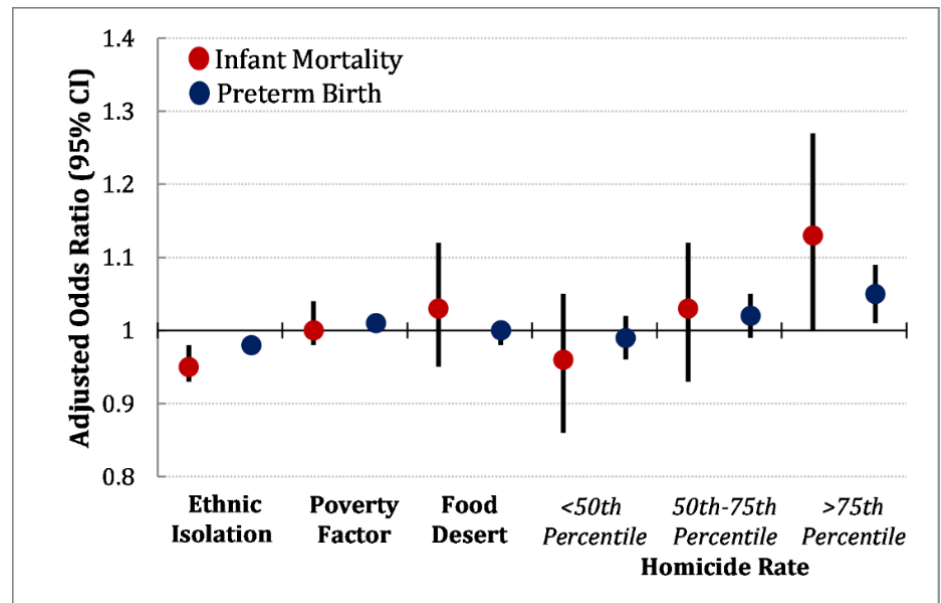
The estimated probability of infant mortality for this patient is 17.8%

Infant Mortality Research Partnership Results

Multilevel Predictive Models

High homicide rates increase the risk for infant mortality and preterm birth

- Multi-Level Predictive Models suggest that racial composition *per se* is not likely the cause of increased infant mortality risk.
- The social, economic, and structural environment, including homicide rate, income, food availability must be addressed



Odds ratios adjusted for individual demographics, neighborhood racial composition, socioeconomic and structural variables.

Data and Accountability

ODH and ODM Alignment in OEI Community Efforts

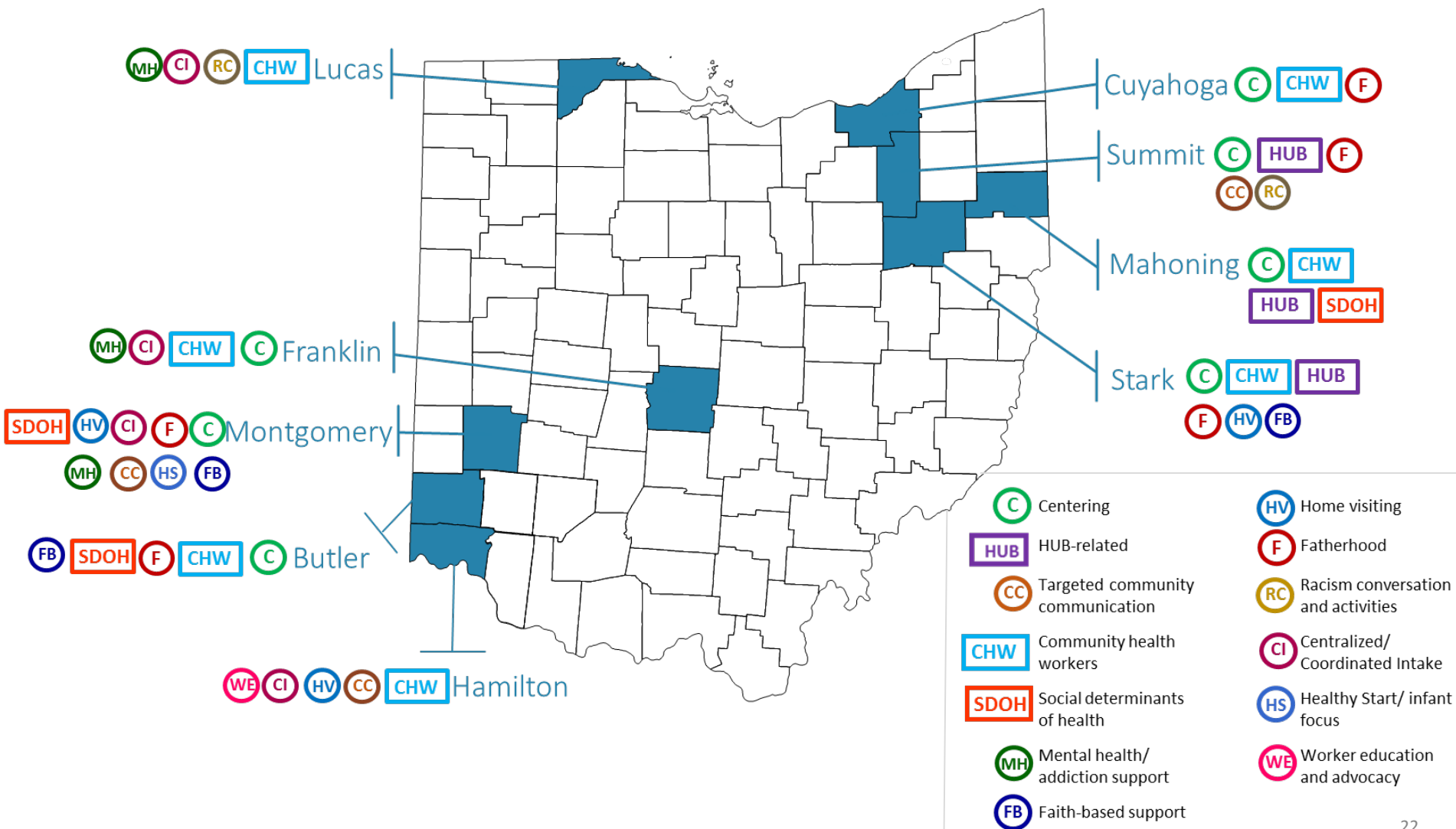
- ODM awarded evidence-based program grants
 - » CenteringPregnancy®
 - » Home visiting
 - » Community health workers
- OEI communities will have an increased focus on measuring and impacting health outcomes.
- By aligning reporting requirements at the state level, ODH and ODM will be able to more effectively evaluate the State's investment in infant mortality.

Statewide Funding Awards

County	Centering	Home Visiting	Community Health Workers	TOTAL
Butler	\$787,669.00	\$629,869.00	\$56,000.00	\$1,473,538.00
Cuyahoga	\$1,409,068.00	\$1,688,801.50	-	\$3,097,869.50
Franklin	\$169,041.00	\$1,327,715.00	\$2,069,708.24	\$3,616,464.24
Hamilton	\$375,000.00	\$150,000.00	\$1,525,000.00	\$2,050,000.00
Lucas	\$269,500.00	-	\$1,937,145.00	\$2,206,645.00
Mahoning	\$358,429.00	\$639,260.00	\$522,265.00	\$1,561,338.00
Montgomery	\$457,260.00	\$2,173,940.00	\$652,545.00	\$3,283,745.00
Stark	\$208,589.00	-	\$1,064,923.00	\$1,323,512.00
Summit	\$466,907.00	\$51,785.65	\$1,219,508.00	\$1,738,200.65
STATEWIDE TOTAL	\$4,501,463.00	\$6,661,371.15	\$9,047,094.24	\$20,351,312.39

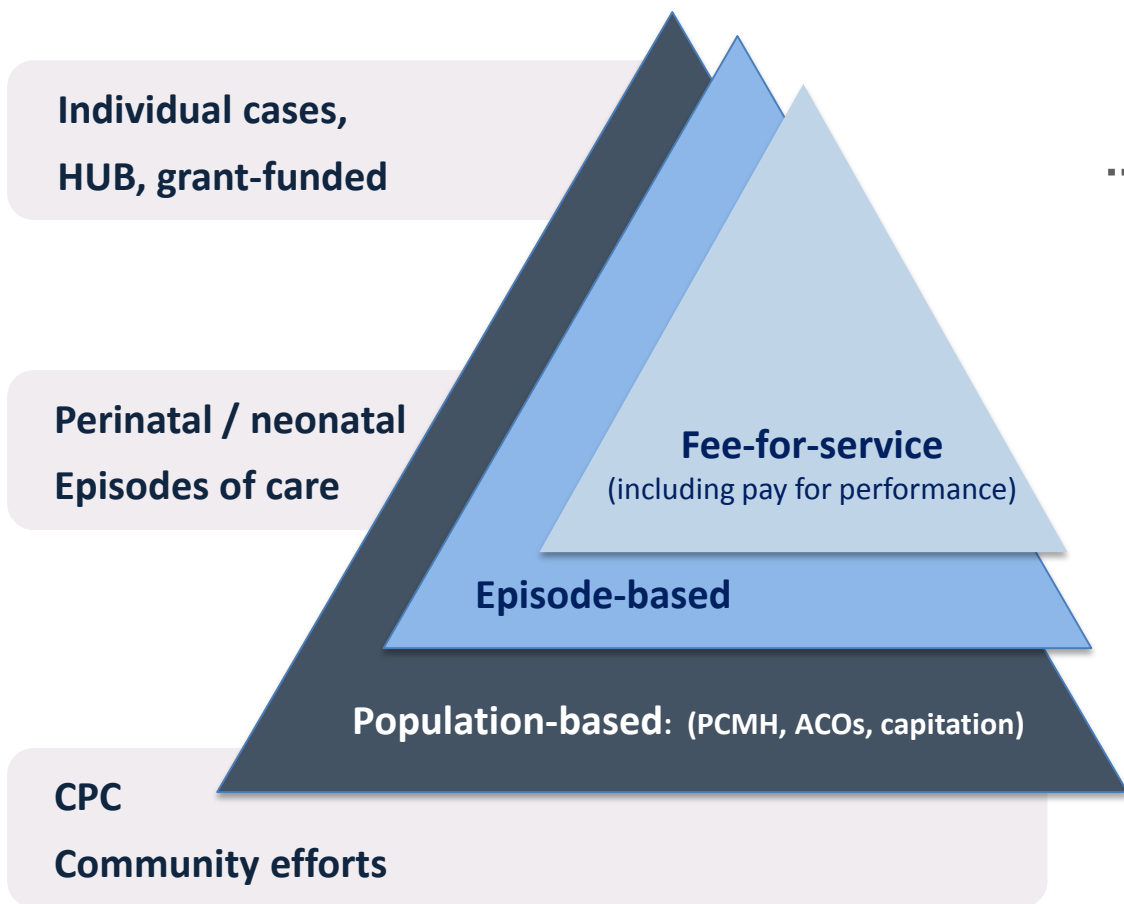
2016: Focus on populations with widely disparate outcomes

Partnership with Ohio Equity Institute Communities to Address Infant Mortality



Shift to population and episode-based payment

Payment approach



Most applicable for

- Discrete services correlated with favorable outcomes or lower cost
- Acute procedures (e.g., CABG, hips, stent)
- Most inpatient stays including newborn deliveries, readmissions
- Acute outpatient care (e.g., broken arm)
- Primary prevention for healthy population
- Care for chronically ill (e.g., managing obesity, CHF)

Note: Health care not prioritized by high risk women