Medicaid’s Role in Addressing Infant Mortality

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Ohio Medicaid’s Transformational Quality Strategy

Better Health Outcomes Through Innovation

Focus Populations
- Healthy Children & Adults
- Women’s Health
- Behavioral Health
- Chronic Conditions

Design & Implement “Pay for Value”
- Social Determinants of Health
- Actionable Data
- Community Engagement
- Patient-Centered Medical Homes
- Episodes of Care

Desired Health Improvements: Health Equity
- 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
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

Snapshot: Ohio’s efforts to reduce infant mortality
Infant Mortality Research Partnership (IMRP) Descriptive Maps

A Smoothed Infant Mortality Rate

B Smoothed Preterm Birth Rate

Source: The Ohio Colleges of Medicine Government Resource Center
Ohio Infant Mortality Rate by Race

Source: Ohio Department of Health
Quarterly Trends by Race - Preterm Birth (%)
All OEI Counties | CY 2012-2017

Race
- African American
- Caucasian

Source: Ohio Department of Medicaid Infant Mortality Dashboard
Cuyahoga, Franklin, Hamilton Counties - Preterm Birth (%)
Trends by Quarter | CY 2012-2017

Preterm Birth (%) - Ohio Medicaid - OEI Counties by Quarter

<table>
<thead>
<tr>
<th>County</th>
<th>PTB Aggregate Rate Q1 2012 - Q1 2017</th>
<th>PTB Current Rate Q2 2016 - Q1 2017</th>
<th>Annual Target for Real Impact*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuyahoga</td>
<td>16.70%</td>
<td>16.94%</td>
<td>From 1385 to 1329 PTB infants</td>
</tr>
<tr>
<td>Franklin</td>
<td>15.21%</td>
<td>15.40%</td>
<td>From 1452 to 1394 PTB infants</td>
</tr>
<tr>
<td>Hamilton</td>
<td>15.98%</td>
<td>15.70%</td>
<td>From 905 to 860 PTB infants</td>
</tr>
</tbody>
</table>

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.

Source: Ohio Department of Medicaid Infant Mortality Dashboard
Butler, Mahoning, Stark Counties - Preterm Birth (%)  
Trends by Quarter | CY 2012-2017

Preterm Birth (%) - Ohio Medicaid - OEI Counties by Quarter

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<tr>
<th>County</th>
<th>PTB Aggregate Rate Q1 2012 - Q1 2017</th>
<th>PTB Current Rate Q2 2016 - Q1 2017</th>
<th>Annual Target for Real Impact*</th>
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</thead>
<tbody>
<tr>
<td>Butler</td>
<td>13.53%</td>
<td>14.75%</td>
<td>From 300 to 274 PTB Infants</td>
</tr>
<tr>
<td>Mahoning</td>
<td>14.36%</td>
<td>14.42%</td>
<td>From 215 to 193 PTB Infants</td>
</tr>
<tr>
<td>Stark</td>
<td>13.65%</td>
<td>12.74%</td>
<td>From 306 to 279 PTB Infants</td>
</tr>
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Source: Ohio Department of Medicaid Infant Mortality Dashboard
Lucas, Montgomery, Summit Counties - Preterm Birth (%) 
Trends by Quarter | CY 2012-2017

Preterm Birth (%) - Ohio Medicaid - OEI Counties by Quarter

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

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.

Source: Ohio Department of Medicaid Infant Mortality Dashboard
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

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

*Formal Medicaid QI effort with OPQC and MCPs began Spring 2015
Franklin County
Progesterone Use in High Risk Women

Data are limited to Medicaid as the payer.
Franklin County
Progesterone Use in High Risk Women

Data are limited to Medicaid as the payer.
All OEI Counties

Progesterone Use in High Risk Women by Race

Race
- African American
- Caucasian

Data are limited to Medicaid as the payer.
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.

\[
\text{Prob(Infant mortality)} = \frac{e^{\logit}}{1 + e^{\logit}} = \frac{e^{-1.529}}{1 + e^{-1.529}} = 0.178
\]

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 focused 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

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

**Individual cases, HUB, grant-funded**

**Perinatal / neonatal Episodes of care**

**Fee-for-service** (including pay for performance)

**Episode-based**

**Population-based**: (PCMH, ACOs, capitation)

**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*