Rates of Late Preterm Birth in Ohio During an Initiative to Limit Inappropriate Deliveries Prior to 39 Weeks
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Background
- In 2008, OPQC successfully conducted a 39-Week Initiative which reduced inappropriately scheduled births between 360/7 and 386/7 weeks in Ohio’s 20 largest maternity hospitals
- Late preterm births between 340/7 and 356/7 weeks (LPTB) increased in Ohio and nationally between 1990 and 2006
- There have been no reports of quality improvement projects directed at LPTB, but rates have declined nationally for unknown reasons.
- We assessed rates of LPTB in Ohio during and after the OPQC 39 week project

Methods
- We used data from Ohio Vital Statistics and OPQC (2006-2012) to track number and rates of births between 340/7, 356/7 weeks in OPQC and non-OPQC hospitals
- Rates before, during (2008-2010) and after the OPQC initiative were compared in P charts to determine the significance of observed trends
- Because the project has an interrupted time series design, we used statistical process control methodology to detect change in processes of care and outcomes in birth certificate data
- January 2006 → December 2007 data was used as a pre-intervention reference baseline to calculate a center line and control limits
- A run of 28 consecutive values below the center line or a point outside one of the control limits would be identified as a significant change

Results
- The OPQC 39 Week Initiative was introduced in September 2008
- Because all OPQC sites have Level 3 neonatal intensive care units, rates of LPTB are higher than in non-OPQC sites
- LPTB rates in OPQC sites began to decline five months before the 39 week project was initiated (Figure 1)
- A significant decline in LPTB occurred 15 months after initiation in non-OPQC hospitals (Figure 2)
- The decline in LPTB in OPQC and non-OPQC hospitals was large enough and persisted long enough (> 8 consecutive months) to indicate a significant change in each group (Figure 3)

Conclusions
- Although a causal relationship cannot be confirmed, our data demonstrate a decline in the rate of LPTB that coincides with the implementation of the OPQC 39 Week Initiative
- Implications of decline suggest that, before 2008, LPTB births were being scheduled for marginal indications
- Implementation of quality improvement initiatives may influence clinical decision-making beyond the original intent
- Data from CDC has also demonstrated a decline in LPTB in Ohio and nationwide (Figure 4)
- We encourage states with similar initiatives to compare their rates of LPTB before and after implementation to look for similar trends

Figure 1
- OPQC births at 34-35 completed weeks of gestation, by month, 2006-2012

Figure 2
- Non-OPQC births at 34-35 completed weeks of gestation, by month, 2006-2012

Figure 3
- Ohio births at 34-35 completed weeks of gestation, by month, 2006-2012

Figure 4
- Late preterm birth rate (34-35 weeks), U.S. and Ohio: 2003-2010

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