

*Oklahoma Health Care Authority*

**Early Preterm Birth Outcomes Quality  
Assessment and Performance Improvement  
(QAPI) Study**

**Executive Summary**



Report for Fiscal Year 2009

Data Review Period: Calendar Year 2007

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oklahoma health care authority



## Early Preterm Birth Outcomes Quality Improvement and Performance Improvement (QAPI) Study

### Executive Summary

Prematurity is an increasing problem in the United States and is a significant contributor to the nation's infant mortality rate. Advances in medical knowledge and technology have lowered the gestational age of viability over the past several decades, but the survival rates for premature infants has remained relatively unchanged since 2000 (MacDorman & Mathews, 2008). Early preterm births present an elevated risk of adverse outcomes for the baby but also for the mother. Promoting the general good health of women in their reproductive years and encouraging early and consistent prenatal care are important factors in fostering positive birth outcomes for both mother and child.

According to the Oklahoma State Department of Health (OSDH, 2009), there were 54,946 live births in Oklahoma during 2007. Of those, 1.24% (683) were babies born at less than 32 weeks of gestation and weighing less than 1,500 grams. The National Center for Health Statistics (NCHS, 2008) defines preterm as birth at less than 37 completed weeks of gestation, and very preterm as birth at less than 32 completed weeks of gestation. This study focused on extremely early preterm infants to examine patterns of care and birth outcomes. For the purposes of this study, extremely early prematurity was defined as a live birth between 24 and 26 completed weeks of gestation.

In recent years, early prenatal care for SoonerCare members has become an area of focus for the Oklahoma Health Care Authority's (OHCA) quality improvement efforts. Working in cooperation with the OHCA, APS Healthcare (APS) examined patterns of care and outcomes for extremely early premature neonates delivered at an estimated gestational age of less than 26 completed weeks during calendar year 2007. OHCA staff identified eight large hospitals that have Neonatal Intensive Care Unit (NICU) facilities and requested medical records for approximately 140 newborns identified through administrative claims. The requests were

directed to the labor/delivery nurse manager and the NICU manager at each facility. After multiple contact attempts to obtain delivery records data, information for 33 infants born to 29 mothers was acquired from four of the eight hospitals. Due to the small number of records received, observations from this analysis are not reflective of all SoonerCare early preterm births.

For children who were born outside of NICU centers and transferred there after birth, limited perinatal information (place of birth, mode of delivery, gestational age, and birth weight) was obtained. Shown below are demographics of extremely early preterm infants born during calendar year 2007 for whom records were received.

Infant Demographics	Calendar Year 2007	
	N	Percentages
<b>All Early Preterm Births (≤ 26 Completed Weeks of Gestation)</b>	33	
<b>Gender</b>		
Female	16	48.5%
Male	17	51.5%
<b>Race/Ethnicity</b>		
Caucasian	17	51.5%
African American	4	12.1%
American Indian	4	12.1%
Hispanic	8	24.2%
<b>Survived Until Discharge</b>		
Yes	13	39.4%
No	20	60.6%

As demonstrated in the table above, Caucasians represented the majority of the infants reviewed, with slightly more than half. Hispanics followed with 24.2%, and African Americans and American Indians each represented 12.1% of the records reviewed. The gender distribution was nearly equal with 51.5% male and 48.5% female. Observations from the records received indicated that 20 of the 33 (60.6%) of the newborns reviewed did not survive to discharge.

Shown below is the demographic information retrieved from the maternal delivery records received for mothers who delivered live early preterm newborns prior to 26 completed weeks gestation.

Maternal Demographics	Calendar Year 2007	
	N	Percentages
<b>All Early Preterm Deliveries (≤ 26 Completed Weeks of Gestation)</b>	<b>29</b>	
<b>Age Group</b>		
18-20 yrs	5	17.2%
21-23 yrs	7	24.1%
24-29 yrs	9	31.0%
30-39 yrs	8	27.6%
<b>Race/Ethnicity</b>		
Caucasian	13	44.8%
African American	4	13.8%
American Indian	3	10.3%
Hispanic	8	27.6%
Multiracial	1	3.4%
<b>County</b>		
Urban	19	65.5%
Rural	10	34.5%

As demonstrated in the table above, Caucasians made up a little over 44% of the early preterm mothers in this study. Sixty-five percent of the mothers lived in urban counties.

APS conducted an in-depth case study of the care received by two extreme early preterm infants. These cases detailed the most common complications associated with early preterm deliveries and illustrated common medical services used to counteract these complications. According to a review of the current medical literature, appropriate prophylactic and reactive procedures were used for these babies.