PQCNC CUB Bundle

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For the Perinatal Quality Collaborative of North Carolina

The CUB Bundle

- Current PQCNC initiatives
  - Antibiotic Stewardship in 58 hospitals
  - AIM Obstetrical Hemorrhage Initiative in 55 hospitals
- Unfunded but necessary work
  - Birth Certificate Accuracy
  - CCHD Screening
- Opportunity
  - Incorporate You Quit Two Quit and maternal anti-smoking elements and metrics into all maternal projects
- = CUB

Why The Birth Certificate Data Matters

What Birth Certificate Data Is Used For

- Vital Statistics Data
  - Health research and epidemiology
  - Identifying important health issues and targeting problem areas
  - Planning and evaluating new types of health services
  - Making funding decisions and prioritizing the allocation of resources
  - Supporting and passing new legislation
  - Obtaining government grants and funding from private foundations
  - Reducing fraud in pension and benefit programs

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Why The Birth Certificate Data Matters

What Birth Certificate Data Is Used For

- Public Health Data
  - Evaluating prenatal care
  - Immunizing children
  - Caring for children with congenital anomalies
  - Monitoring risk factors causing poor pregnancy outcomes
  - Evaluating the need for health facilities
  - Estimating school enrollment and planning new schools
  - Planning and evaluating effectiveness of family planning programs

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Electronic Birth Certificate

- 58 fields with multiple sub-fields
- Clinical elements:
  - Date first prenatal care, last prenatal care
  - Payer
  - Smoking including number of cigarettes and trimester
  - Cerclage, tocolysis, version
  - Onset of labor, characteristics of labor
  - Induction, augmentation, steroids, antibiotics during labor, chorio, meconium
  - Infections during pregnancy
  - Apgar scores
  - Obstetric estimate GA
  - Abnormal newborn condition (ventilation, NICU admit, surfactant, antibiotics to newborn, seizures, birth injury
  - Congential anomalies (anencephaly, cyanotic heart disease, CDH, cleft palate…)
  - Breastfeeding at discharge?

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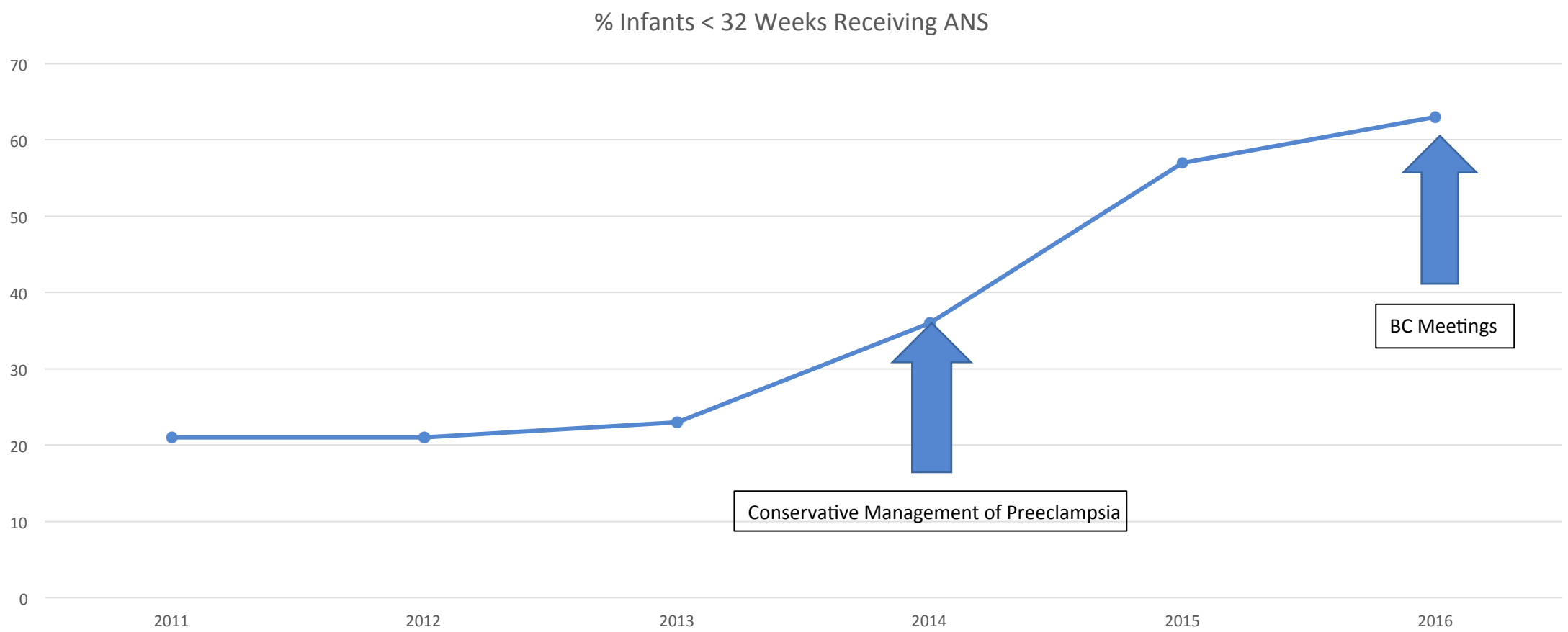
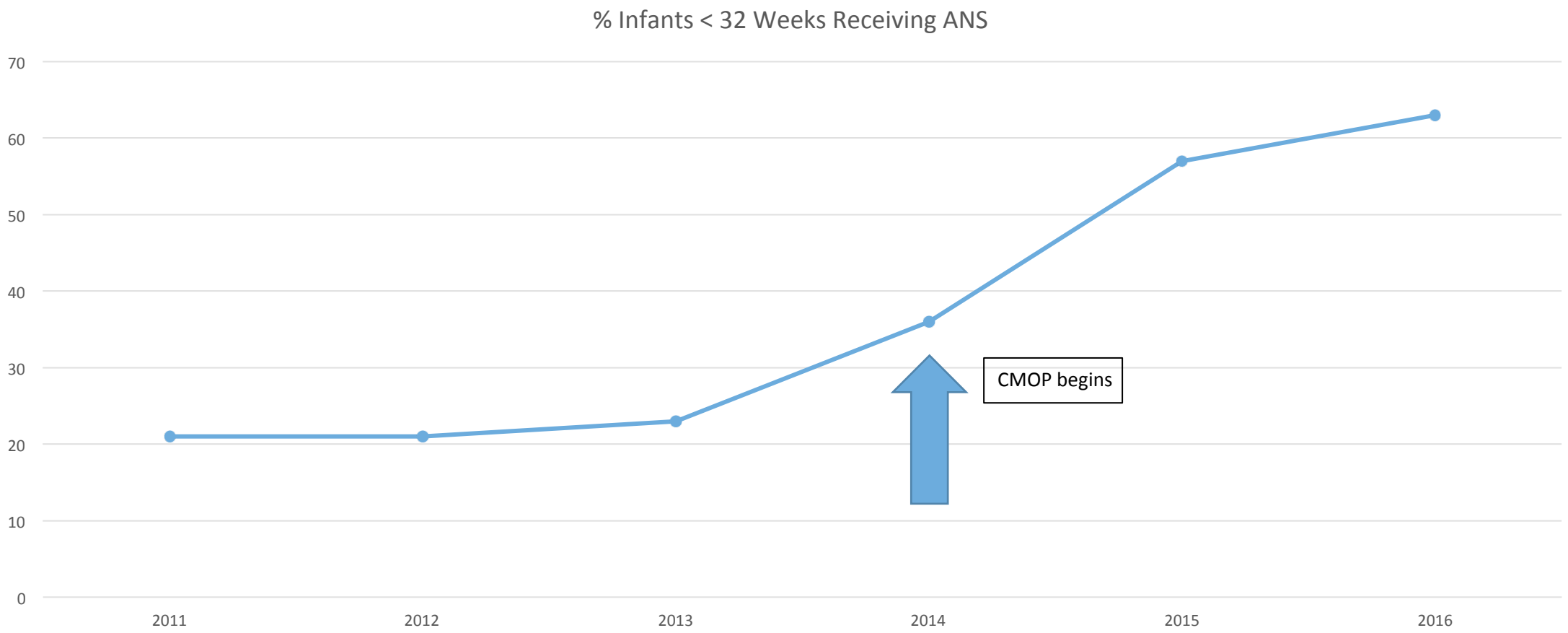
Challenges in BC Reporting: Administration of Antenatal Steroids



Administration of ANS to Mothers < 32 Weeks EGA With Gestational HTN



Other Challenges in Birth Certificate Reporting

	TOTAL	PRENATAL SMOKING STATUS RECORDED ON BIRTH CERTIFICATE					
		Yes		No		Unknown	
	#	#	%	#	%	#	%
FACILITY							
Other NC Hospitals	82,642	7,512	9.1	75,119	90.9	11	0.0

	TOTAL	ANTIOBIOTICS FOR NEWBORN SEPSIS RECORDED ON BIRTH CERTIFICATE			
		No		Yes	
	#	#	%	#	%
FACILITY					
Other NC Hospitals	82,642	81,624	98.8	1,018	1.2

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Other Challenges in Birth Certificate Reporting

Sample Question

Mary is using the Newborn records to complete information on NICU admission for the birth certificate. She sees that Baby Boy Wilson was transported to the special care nursery/Level II nursery for observation. After an hour, he was transferred to the well-baby nursery. What does the "Guide" state as the definition for NICU admission on the birth certificate?

Should Mary check YES or NO for NICU admission when completing the birth certificate on Baby Boy Wilson?

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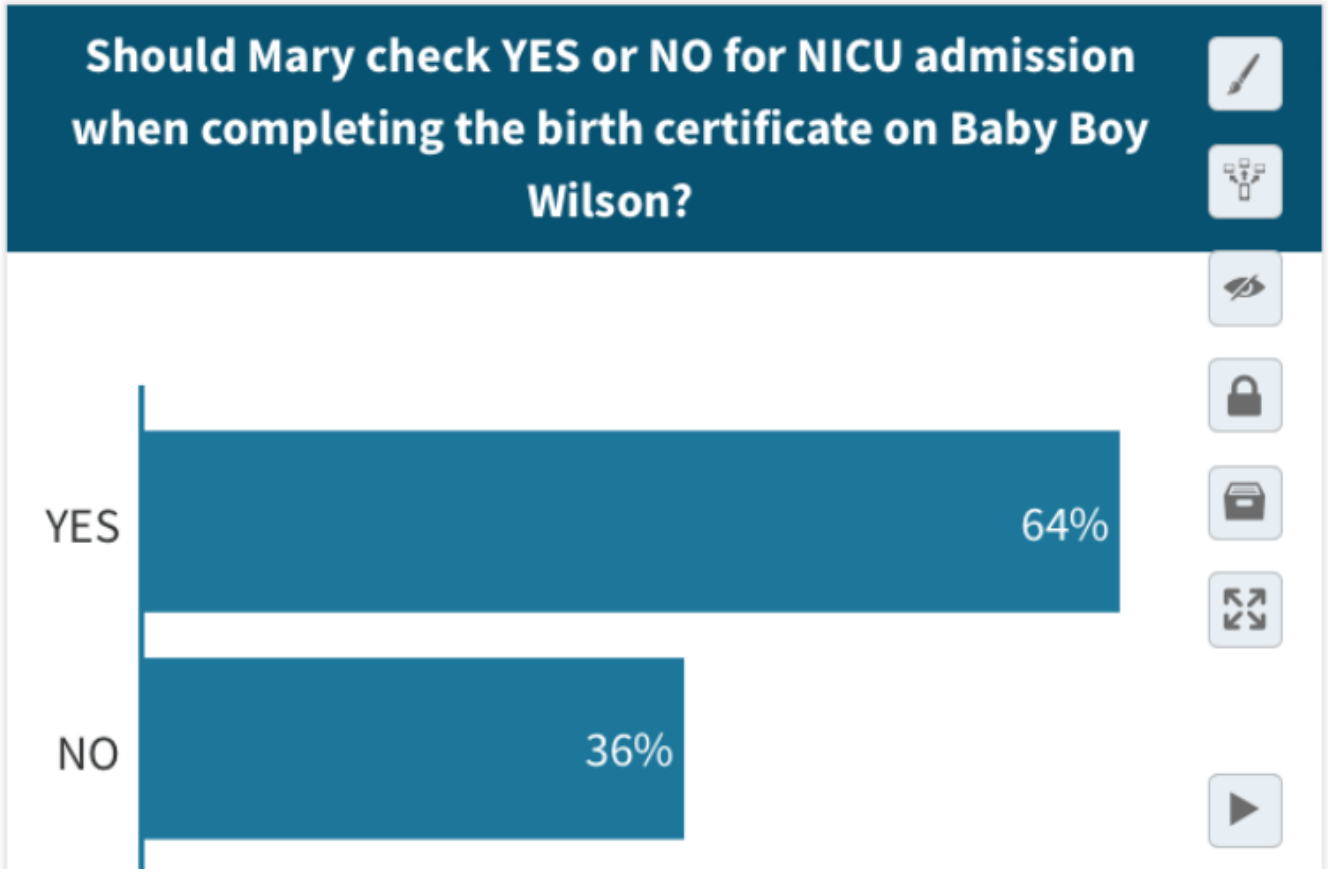
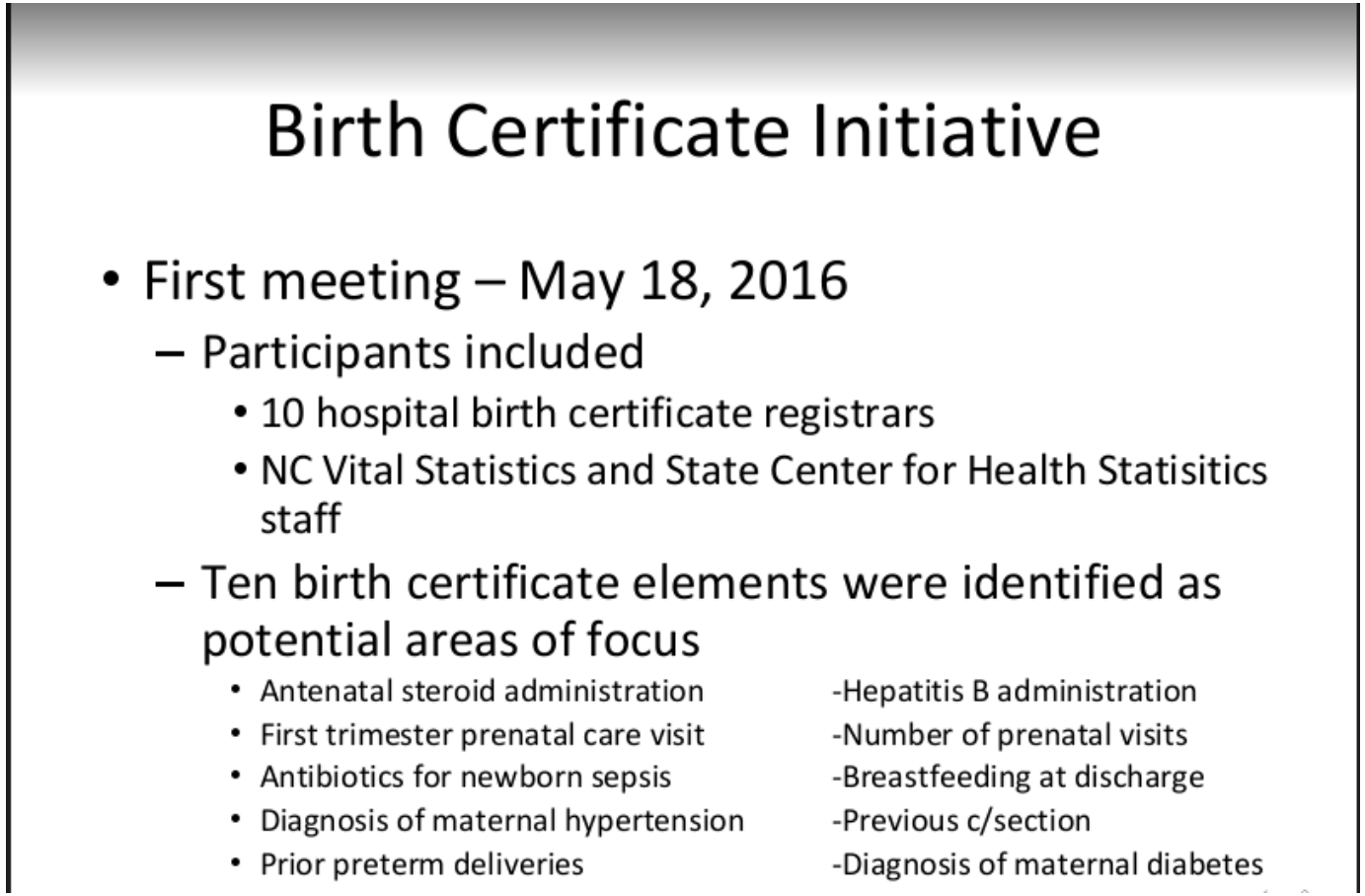
Other Challenges in Birth Certificate Reporting



Birth Certificate Activities to Date: VR, SCHS and PQCNC



Birth Certificate Activities to Date: VR, SCHS and PQCNC

Birth Certificate Initiative

- Second Meeting – October 5, 2016
  - 26 hospitals participated
  - Keynote speaker from CDC
  - Provided hospital-level data to each participant to help identify opportunities to improve
  - Identified low-hanging fruit
    - Not entering "unknown"
    - Looking for "weird data anomalies"
    - Extreme LBW births with no death certificates
    - Looking for sudden change in data trends at a hospital

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PQCNC BC Dashboard

- Number births
- Number and % CS
- Number and % of preterm births
- Number of infants and % admitted or transferred to NICU

PQCNC Dashboard Tool

Birth Certificate Audit Sheet

Audit Item	Did the information match between the facility worksheet and the patient chart?
Antenatal steroids	☐ Yes ☐ No
Hepatitis B given in hospital	☐ Yes ☐ No
Number of prenatal visits	☐ Yes ☐ No
Prenatal care in first trimester	☐ Yes ☐ No
Breastfeeding at discharge	☐ Yes ☐ No
Antibiotics for newborn sepsis	☐ Yes ☐ No
Previous c/section	☐ Yes ☐ No
Diagnosis of maternal hypertension	☐ Yes ☐ No
Prior preterm delivery	☐ Yes ☐ No
Diagnosis of maternal diabetes	☐ Yes ☐ No

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PQCNC BC Project

- Develop dashboard for at least annual review by hospital teams to validate BC data
- Conduct regional training meetings in collaboration with Vital Records and SCHS to support facilities in optimizing data entry
- Identify methods to bridge access to data across a variety of systems
- Promote methods to develop EHR extraction for reporting of BC data

SB 98: CCHD Screening

- Screening for Critical Congenital Heart Disease mandated in 2013
- All newborns not on oxygen therapy screened at least by 6-48 hours of age using pulse oximetry to determine oxygen saturation levels.
- Evaluation and follow up of a positive screening for all neonates shall occur as soon as possible but no later than 24 hours of obtaining a positive screening result.
- All medical facilities shall report positive screenings to a statewide CCHD database maintained by the Perinatal Quality Collaborative of North Carolina (PQCNC)
- Within two weeks of receiving a positive screening, PQCNC shall report the above information from the CCHD database to the NC Birth Defects Monitoring Program using a unique identifier generated by the CCHD database for the neonate or infant.
- The BDMP will follow up all positive screens

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Current Requirements for PQCNC CCHD Reporting

- The required quarterly aggregate information from medical facilities and attending providers of neonates or infants reported to PQCNC and that PQCNC reports to the NC Birth Defects Monitoring Program shall include
  - Live births
  - Neonates and infants who were screened
  - Negative screenings;
  - Positive screenings;
  - Neonates or infants whose parents or guardians objected to the critical congenital heart defect screenings
  - Transfers into the medical facility, not previously screened

Results of Current Positive Screens Based on Birth Defects Monitoring Follow Up

- Heart Defect

Critical		
Non-Critical	8	10.7%
Physiologic Heart Abnormality	6	8%
Transitional Circulation	3	4%
Transient Medical Condition	12	16%
In field for abstraction	38	50.7%
Other*	1	1.3%
Total	75	

*False negative screen reported by hospital; Baby readmitted for repair of CCHD

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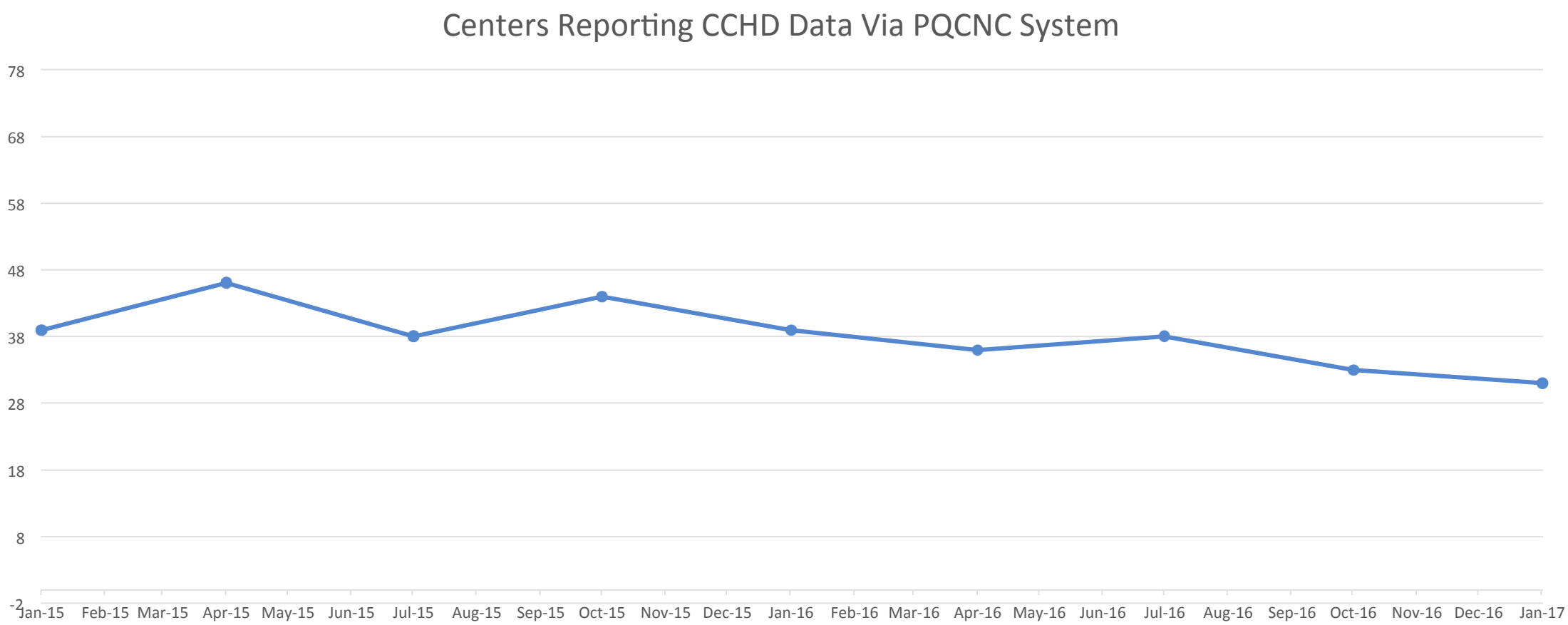
CCHD Reporting



Support for CCHD Screening

- Continue to maintain reporting system
- Improve reporting to 100% of birth hospitals
- Review screening with facilities and develop tools to support proper screening
  - Webinars
  - Regional Meetings
  - Support Visits

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Deliverables for PQCNC Bundle

- CCHD
  - Identifying ways to improve reporting of CCHD screening to 100%
    - Improve screening participation to 100%
  - Support BDM efforts to review all positive screens and delineate the impact of CCHD screening on infant morbidity and mortality in North Carolina
  - Offer support to facilities to optimize their current CCHD screening programs
  - Develop annual reports on the effectiveness of the screening program to include centers reporting, true positives identified and outcomes
- Further Improving the Accuracy of NC Birth Certificate Data
  - Develop a dashboard report for hospitals that will allow them to validate their BC data against their own internal data on key measures
  - Work with hospitals and Vital Records to improve the accuracy of reporting for key measures that might allow BC data to be used to support QI work
    - Improve the accuracy of this reporting by 50%
  - Ultimately integration of BC data with hospital discharge abstract data and possibly EHR…a perinatal data warehouse.

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Cost of PQCNC Bundle

- CCHD
  - Security, Monitoring, Maintenance, Hosting, Updates, Reporting
    - $25,000
  - Personnel to support recruitment of 40 hospitals in CCHD reporting:
    - 0.25 FTE: $20,000
  - Conduct two state regional learning sessions to support CCHD
    - $6,000
  - Total: $51,000
- Birth Certificate Initiative
  - Develop BC dashboard and reporting for hospitals: $25,000
  - State meeting of key stakeholders and registrars: $5,000
  - Support regional training meetings: $10,000
  - Personnel to facilitate all hospital activity in the BC project
    - 0.5 FTE: $40,000
  - Total: $80,000
- Total Bundle Cost: $131,000

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the best place
to give birth and be born
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