Michael Krew, MD, MS

OPQC Clinical Advisor

Ohio Department of Medicaid

John R. Kasich, Governor

John B. McCarthy, Director

OPQC

It takes a village…

OPQC Mission

Through collaborative use of improvement science methods, reduce preterm births & improve perinatal and preterm newborn outcomes in Ohio as quickly as possible.

Obstetric **and** *Neonatal Focus*

The Ohio Perinatal Quality Collaborative

Obstetrics

- 39-Week Scheduled Deliveries without medical indication
  - Increase Birth Data Accuracy & Online modules
  - Spread to all maternity hospitals in Ohio
- Steroids for women at risk for preterm birth ($24^{0/7}$ - $33^{6/7}$)
  - Done → Transition to BC Surveillance
- Progesterone to Reduce Preterm Birth Risk

Neonatal

- Blood Stream Infections:
  - High reliability of line maintenance bundle
    - OCHA NAS in 6 CH's
    - Use of human milk in infants 22-29 weeks GA
- Neonatal Abstinence

OPQC = Population Health

105 (of 107)
Maternity Hospitals

54 (of 54)
Level II and III Nurseries

Pilot: 25
Outpatient OB Clinics

Cincinnati Children's

ANTENATAL CORTICOSTEROIDS

ANCS Project

ANCS Baseline Ohio

- Ohio Birth Certificate : 66%
- Vermont Oxford Hospitals : 80 -84%

Births 24 0/7 – 34 0/7 weeks

ANCS Retrospective Chart Review

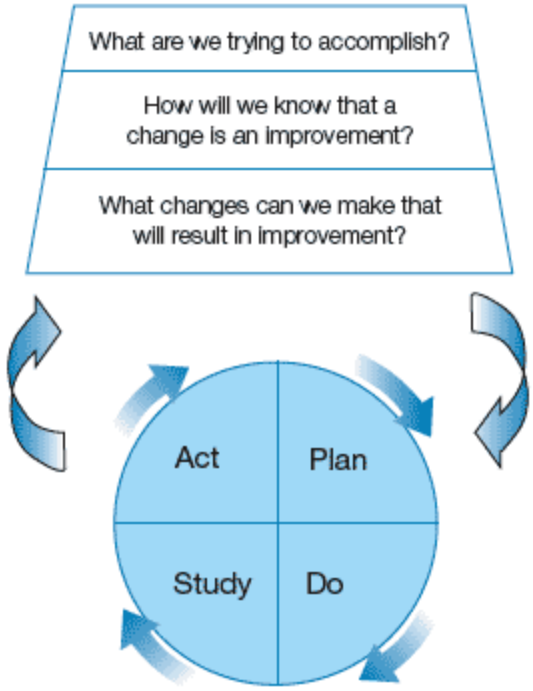
- 15 Hospitals 8/5/10 -1/6/11
- 473 deliveries 24 0/7 – 34 0/7
  - 19 inadequate data
  - 5 fetal death before admission
  - 2 lethal anomalies
  - 1 delivered before arrival
- 446 deliveries analyzed
  - 399 (89.5%) received at least one dose
  - 47 (10.5%) received none
    - 50% delivered within 2 hours
    - 65% within 4 hours

Abstractor Challenges

- Variation in location of ANCS documentation
  - Outpatient chart
  - Inpatient chart
  - Referring hospital chart
- ANCS nomenclature
  - Generic
  - Brand names
  - Unique abbreviations

Prospective ANCS

- 19 of 20 OPQC Charter members 11/11 – 6/13
- Monthly webinars
- Hand collected data



Global Aim: Assure that all infants born between 24 $^{0/7}$ and 33 $^{6/7}$ weeks' gestation receive appropriate antenatal corticosteroid treatment to reduce perinatal morbidity and mortality.

SMART AIM

To increase the percentage of infants born in Ohio at 24 $^{0/7}$ to 33 $^{6/7}$ weeks' gestation who receive pre-delivery ANCS to > 90%, by June 2013

Key Drivers

Interventions

Documentation System

- Create an integrated system of recording ANCS administration among prenatal care sites and delivery sites encompassing all levels and acuity of care.
- Standardize birth certificate documentation of ANCS administration

Identification of Appropriate ANCS Candidate

- CHOOSE an ANCS Strategy or Guideline for your site

Identification of Appropriate Time for ANCS Administration

Optimal and Efficient Administration of ANCS

- Promote consistent use of common algorithm of ANCS administration for Betamethasone & Dexamethasone
  - Practitioners
    - Prescribing
    - Care Giving / Administering
  - Hospitals
    - Link to maternal transfer & tocolysis
  - Pharmacies
  - Distributors
  - Pharmaceutical Manufacturers

Awareness of Benefits and Risks

- Promote public awareness of benefits of ANCS
- Education of parents & non-perinatal providers
- Link to maternal transfer & tocolysis
- General risks and benefits

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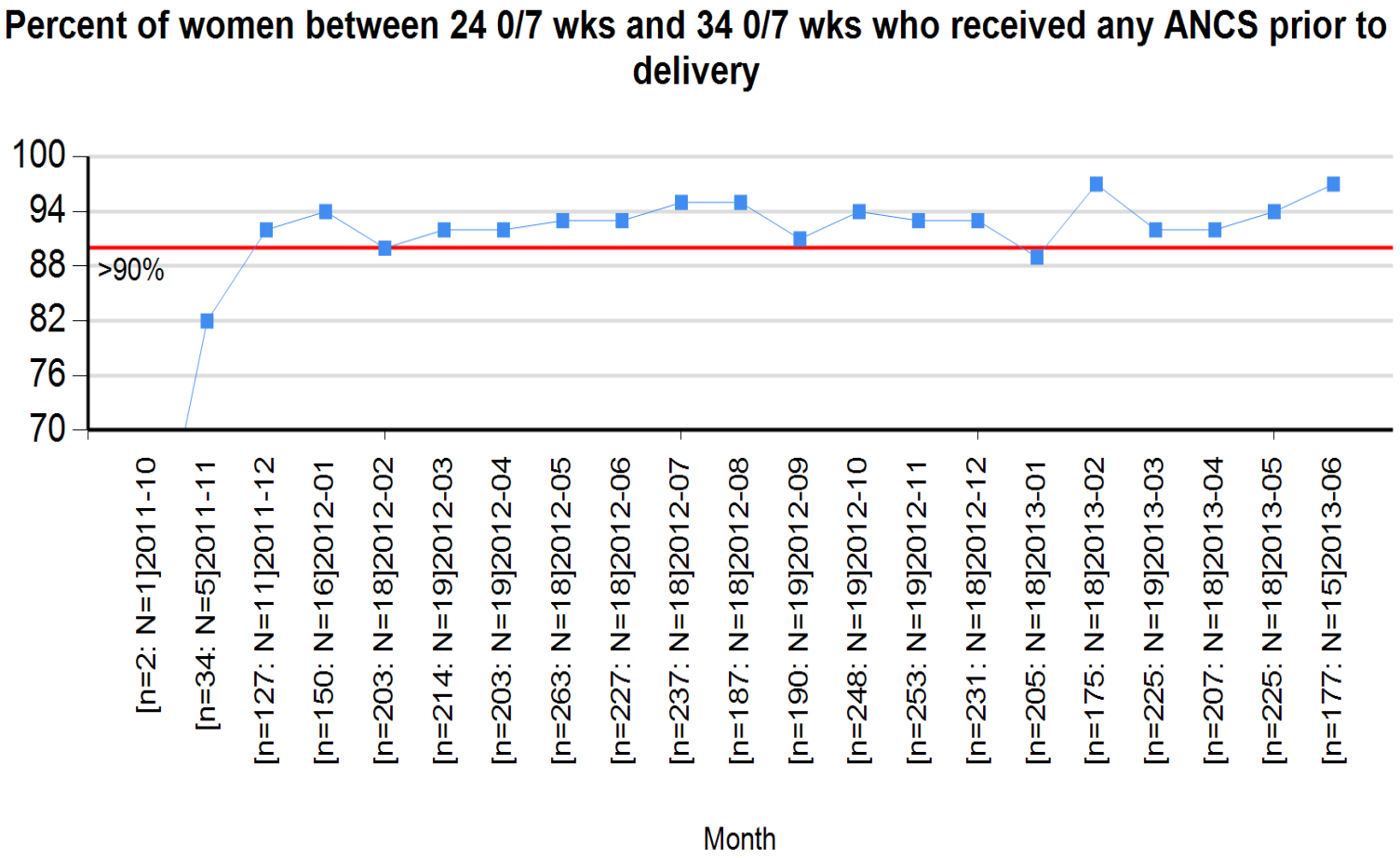
ANCS Hand Collected 19 Sites



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CSI: Corticosteroid Investigation

# of patients who did not get ANCS	170 (April through March)
# of patients with "CSI"	149
Reasons for not receiving ANCS prior to delivery	**108 =** Short Interval from Presentation to Delivery – interval < 2 hrs **2** = ANCS not given at referring hospital **15** = Admit Dx not expected to deliver but condition rapidly changed **6 =** Not ordered, or ordered but not given (Systems Failure) **7** = Infant delivered at 32-34 wks and mom with PROM **8 =** Prenatal Dx of lethal anomaly **3**= ANCS held for Medical reasons
# of patients with missing Information	21

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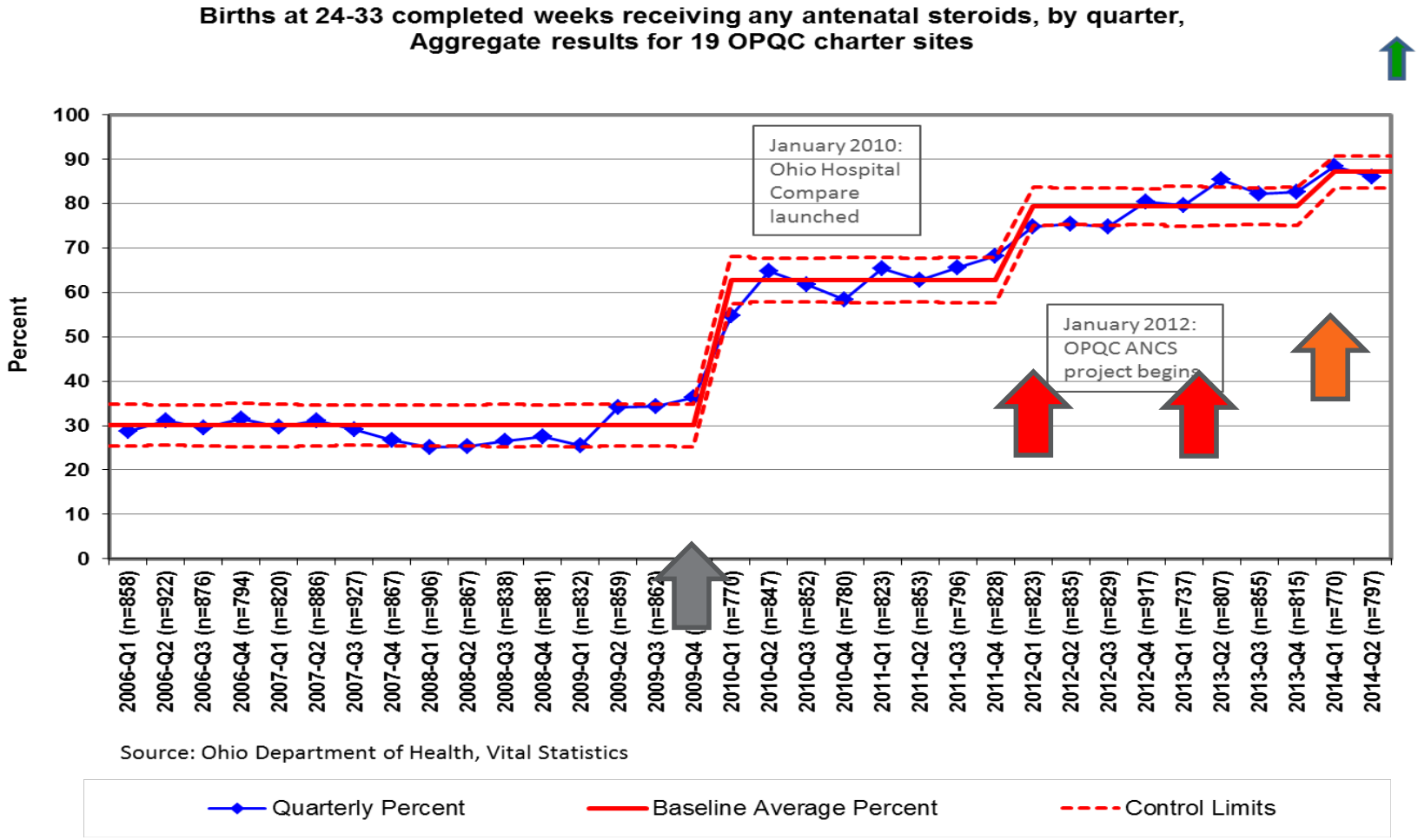
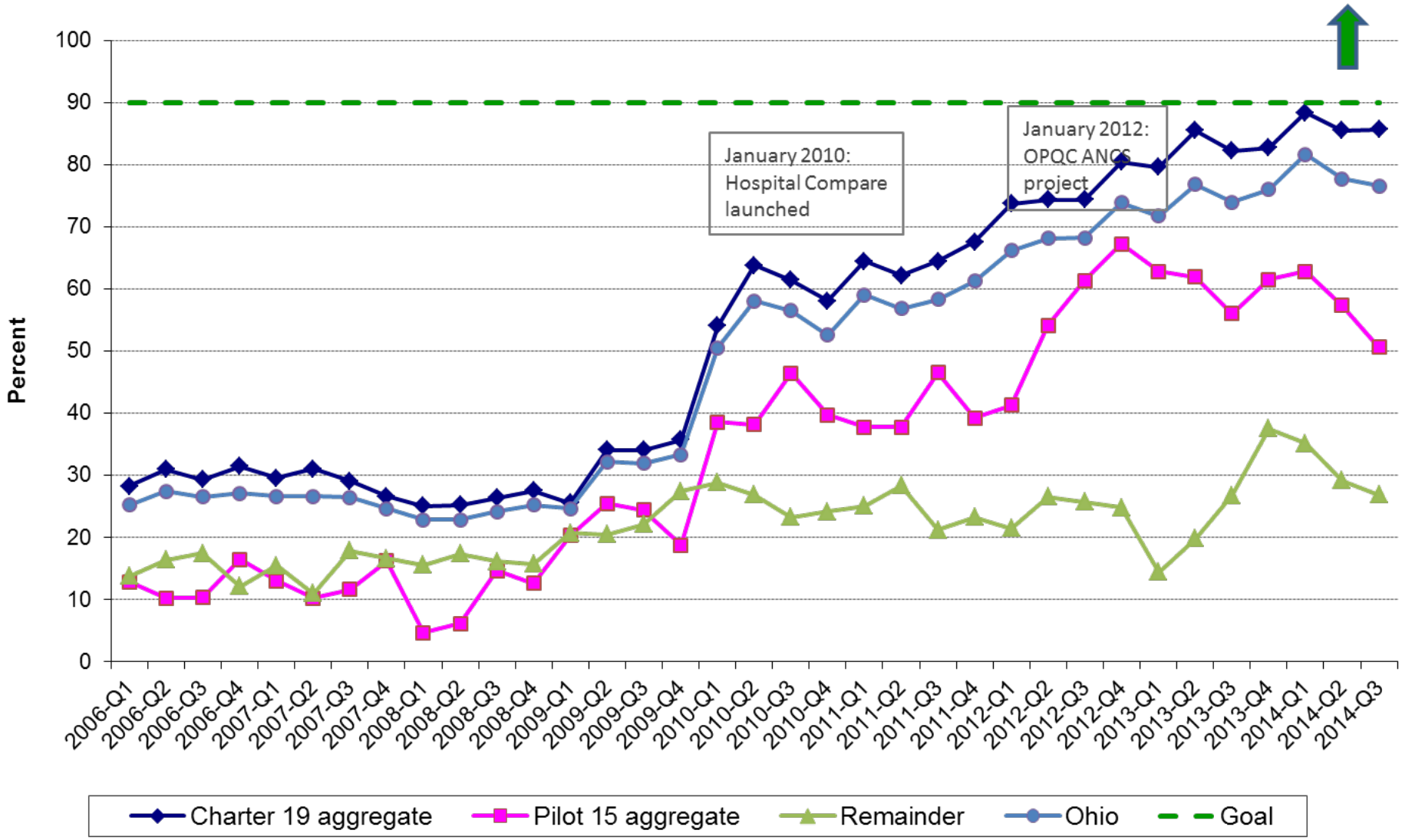
IPHIS (Birth Certificate) Data



Births at 24-33 completed weeks receiving any antenatal steroids, by quarter
Ohio
Source: Ohio Department of Health birth certificate file..



EARLY ELECTIVE DELIVERY

OPQC 39 Week Project Expansion.

Bill Callaghan, MD MPH
Centers for Disease Control and Prevention
December 1, 2011

"The focus of healthcare for women and infants over the next century depends on the quality of the data collected by those who fill out the birth certificates."

OPQC OB 39 week Project

20 Charter Hospitals

49% of Ohio Births

39-Weeks Charter Project

Kick-off: September 2008

15 Pilot Sites

17% of Ohio Births

39-Weeks Pilot Dissemination and Birth Certificate Accuracy Project

Kick-off: March 2012

~80 Remaining Maternity Hospitals

32% of Ohio Births

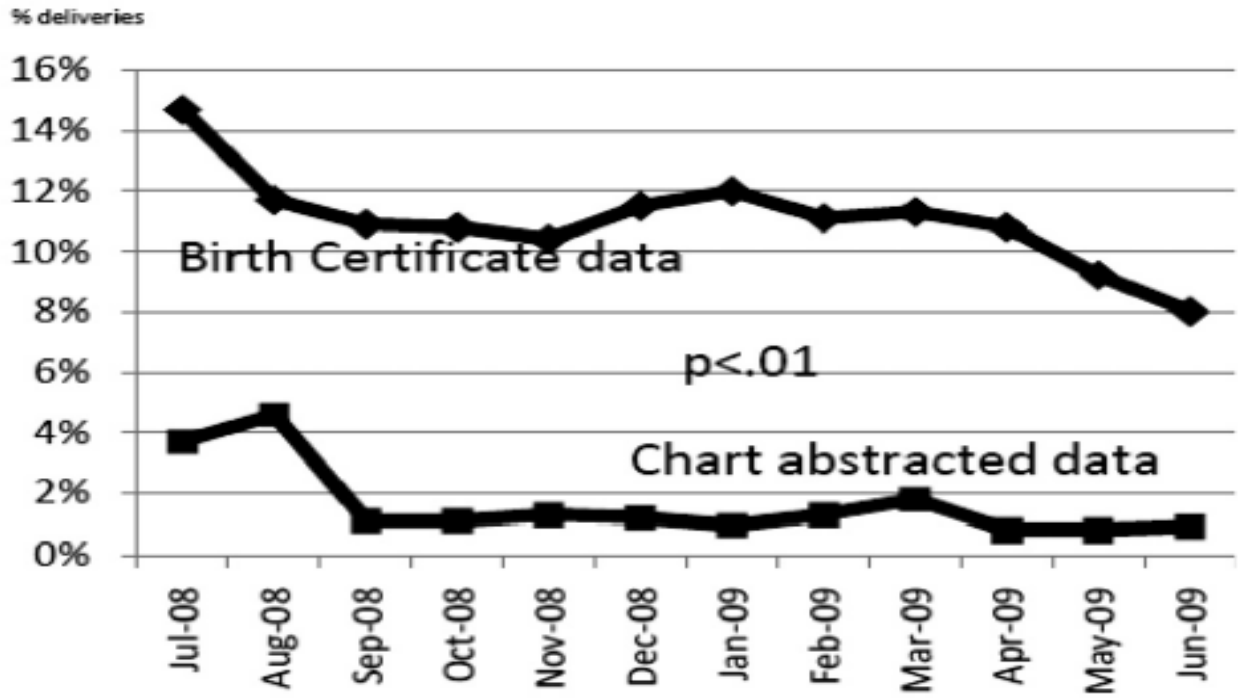
39-Weeks Dissemination and Birth Certificate Accuracy Project

Kick-off:
Wave 1: February 2013
Wave 2: May 2013
Wave 3: July 2013

Rates of labor induction without medical indication are overestimated when derived from birth certificate data

Jennifer L. Bailit, MD, MPH; for the Ohio Perinatal Quality Collaborative

FIGURE
Rates of nonmedically indicated induction of labor that were calculated by birth certificate data vs chart abstracted data



Bailit. Induction rates derived from birth certificate data. Am J Obstet Gynecol 2010.

OPQC: Decreasing births < 39 weeks gestation without medical indication and improving birth registry accuracy project

Aim

In 9 months, improve birth registry accuracy so that focused variables** will be transmitted accurately in 95% of records

(** Pre-pregnancy and Gestational Diabetes; Pre-pregnancy and Gestational hypertension; Induction of Labor; ANCS; OB estimate of GA)

Key Drivers

- Strong communication between clinical team and birth data staff
- Trained clinical and birth data teams
- Audit Process for data verification
- Appreciation of the Importance of the Birth Registry information
- IPHIS (BR) fields include essential and specific information/definitions
- Identification and spread of best practices for data entry and verification

Interventions

- Identify a key clinical contact for birth data team
- Identify all sources of birth data
- Identify process for flow of data into the birth registry (IPHIS) system
- Ensure birth data team has access to necessary clinical data

- Utilize ODH and OPQC online education modules for training of birth data and nursing staff
- Ensure clear understanding of birth registry variables
- Ensure clear understanding by birth data team of medical terminology related to birth registry variables

- Coaching/reinforcement by OPQC and state quality coordinators

- Use medical record to IPHIS quality review feedback to identify gaps
- Continuous monitoring of Birth Registry data reports

- Clarify IPHIS definitions and instructions

- Group and individual webinars and 1:1 support by state quality coordinators to identify key changes

Revised: 1.31.13

OPQC: Decreasing births < 39 weeks gestation without medical indication

Goal: *Assure that all initiation of labor or caesarean sections on women who are not in labor occur only when obstetrically or medically indicated*

Aim

In 9 months, reduce *to 5% or less, the number of women in Ohio of 37.0 to 38.6 weeks gestation for whom delivery is scheduled in the absence of appropriate medical indication*

Key Drivers

- **Awareness of risks & expected benefit of scheduled delivery prior to 39.0 weeks by patients and other consumers**
- **Dating criteria: optimal estimation of gestational age**
- **Hospital and physician practice policies that facilitate ACOG criteria**
- **Awareness of risks & expected benefit of near-term delivery by clinician**
- **Culture of safety and improvement**

Interventions

- Inform consumers of risk/benefits of deliveries < 39 weeks
- Communicate to patient/clinic/hospital ultrasound results
- Promote need for early dating to practitioners and consumers
- Public awareness campaign

- Promote need for early dating to practitioners and consumers
- Promote sonography < 20 weeks to establish dates
- Document criteria used to establish EDC
- Appropriate use of fetal maturity testing
- Empower nurses /schedulers to require dating criteria
- Identify a specific contact for authorization dispute re: dating
- Provide patient with hard copy results of ultrasound

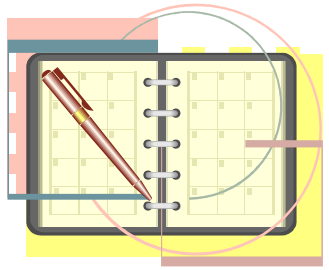
- Empower nurses /schedulers to require dating criteria
- Document rationale and risk/benefit for scheduled deliveries at 37.0 to 38.6 weeks gestation
- Document discussion with patient about the above
- Both patient and MD sign consent statement for scheduled delivery between 37.0 and 38.6 weeks
- Physician awareness campaign: what are the reason(s) for scheduled delivery?
- Maximize access to Delivery and OR for optimal scheduling
- Facilitate scheduling policies that respect ACOG criteria

- Prenatal caregivers receive feedback from postnatal caregivers about neonatal outcomes of scheduled deliveries
- Ensure complete and accurate handoffs OB/OB and OB/Peds
- Document discussion with patient about risk/benefits of near-term delivery
- Promote need for early dating to practitioners and consumers

- Continuous monitoring of data & discussion of this effort in staff/division meetings.
- Project outcomes posted on units and websites.
- Develop ways to include staff and physician input about communications and handoffs
- Connect with organizational initiatives on safety and use existing approaches as possible
- Empower nurses/schedulers to require data criteria

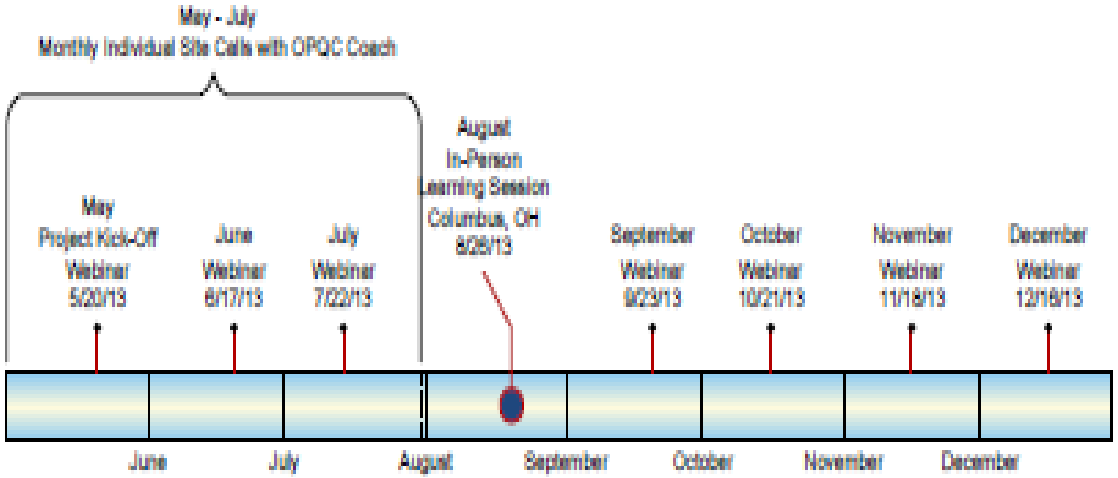
Revised: 1.31.13

Project Details: Wave 1, 2013



Monthly Action Period Calls from 12 noon - 1pm

- May 20th Kick Off Webinar/Action Period Call
- June 17th and individual hospital call
- July 22nd and individual hospital call
- August – individual hospital call and August 26 Learning Session in Columbus
- September 23rd
- October 21st
- November 18th
- December 16th



Bakers Dozen

Variable	IPHIS Tab
1. Total number of Prenatal visits	Prenatal
2. Pregnancy Risk Factors: pre-pregnancy and gestational diabetes	Pregnancy
3. Pregnancy Risk Factors: pre-pregnancy and gestational hypertension	Pregnancy
4. History of prior preterm birth	Pregnancy
5. Induction of Labor	Labor & Delivery
6. Augmentation of Labor	Labor & Delivery
7. Antenatal corticosteroids (ANCS)	Labor & Delivery
8. Antibiotics received by the mother during delivery	Labor & Delivery
9. Birth weight	Newborn
10. Obstetrical estimate of gestational age	Newborn
11. Abnormal conditions of the newborn: Assisted ventilation after delivery and NICU admission	Newborn
12. Congenital abnormalities of the Newborn	Newborn
13. Breast feeding at discharge	Newborn

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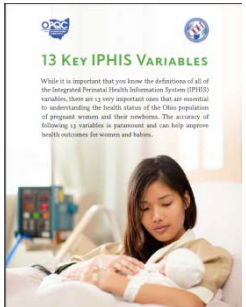
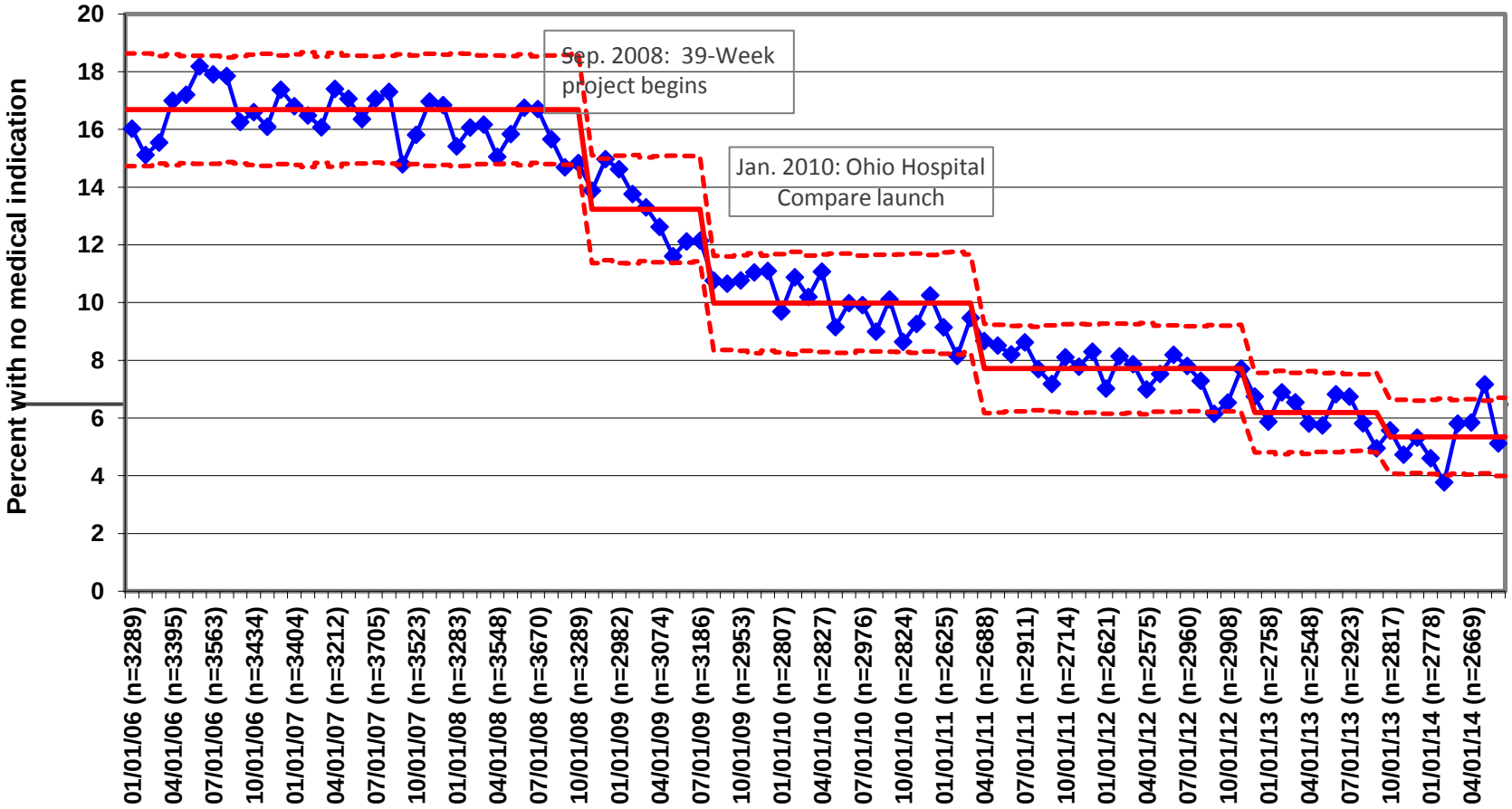
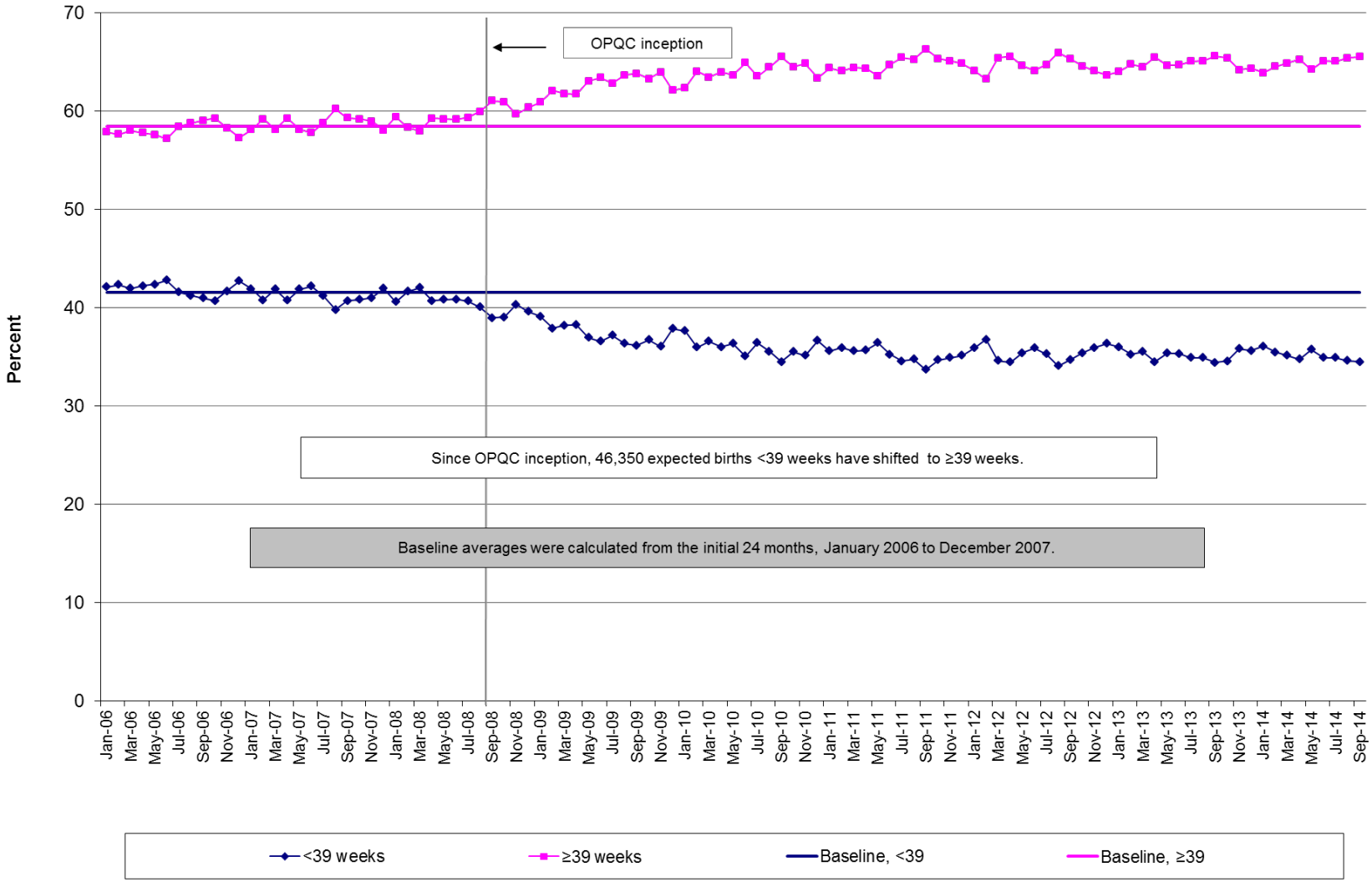


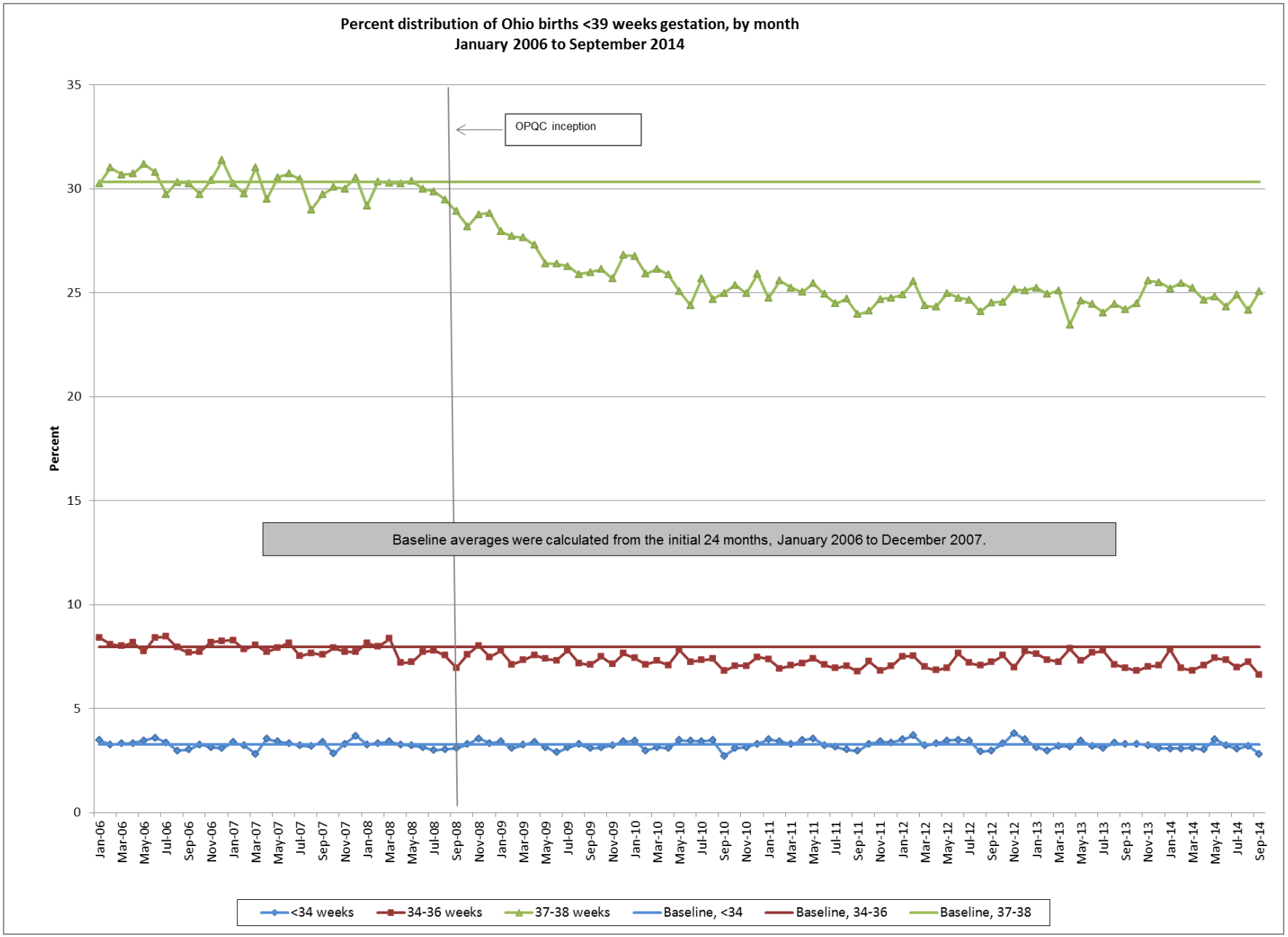
Births induced at 37-38 weeks with no apparent medical indication for early delivery, by month, 2006-2014
Aggregate of Ohio maternity hospitals



Source: Ohio Department of Health, Vital Statistics

Percent distribution of Ohio births, by gestational age and month
January 2006 to September 2014




Percent distribution of Ohio births <39 weeks gestation, by month
January 2006 to September 2014
Percent
35
30
25
20
15
10
5
0
OPQC inception
Baseline averages were calculated from the initial 24 months, January 2006 to December 2007.
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08
May-08
Jul-08
Sep-08
Nov-08
Jan-09
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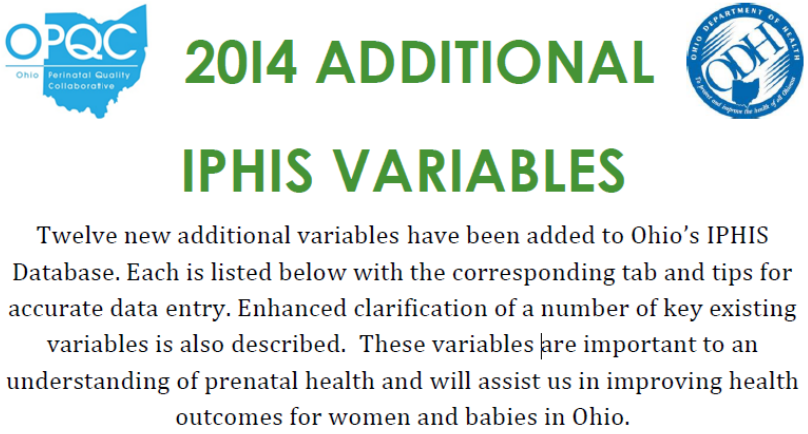
Sep-11
Nov-11
Jan-12
Mar-12
May-12
Jul-12
Sep-12
Nov-12
Jan-13
Mar-13
May-13
Jul-13
Sep-13
Nov-13
Jan-14
Mar-14
May-14
Jul-14
Sep-14
<34 weeks
34-36 weeks
37-38 weeks
Baseline, <34
Baseline, 34-36
Baseline, 37-38

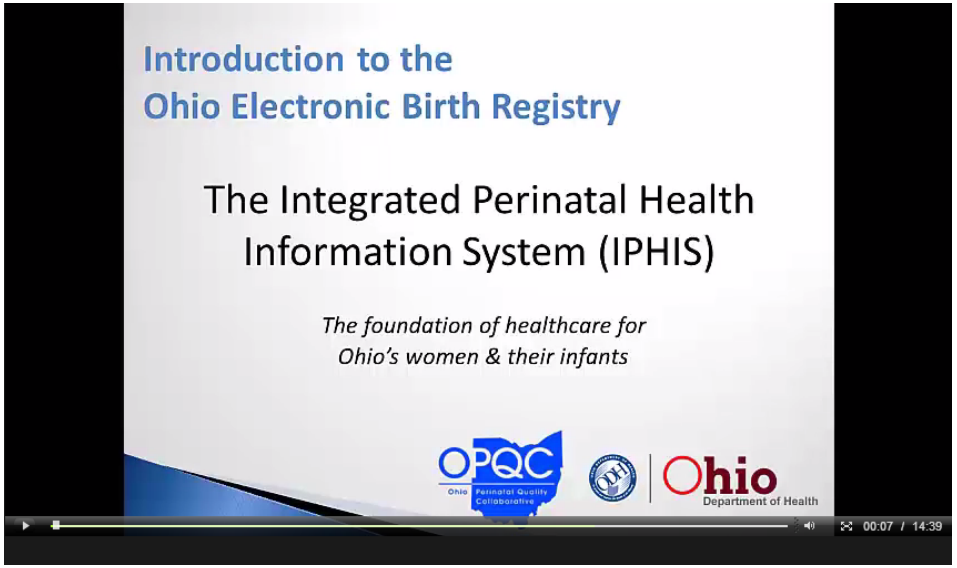
IPHIS (Birth Certificate) Updates 2015

- 12 New Variables Including
  - Gestational Age
    - Ultrasound before or after 20 weeks or none
  - Previous cesarean
    - Incision type
  - IUGR (by ultrasound)
  - Renal disease (maternal)
  - Cholestasis
  - Blood group alloimmunization
  - Non pregnant uterine surgery
  - HIV



Resources

- www.opqc.net
- ANCS Tool Kit coming soon
- IPHIS (Birth Certificate) Video Modules
- Key Driver Diagrams



STEAL SHAMELESSLY
SHARE SEAMLESSLY