

LATE PRETERM AND EARLY TERM DELIVERIES

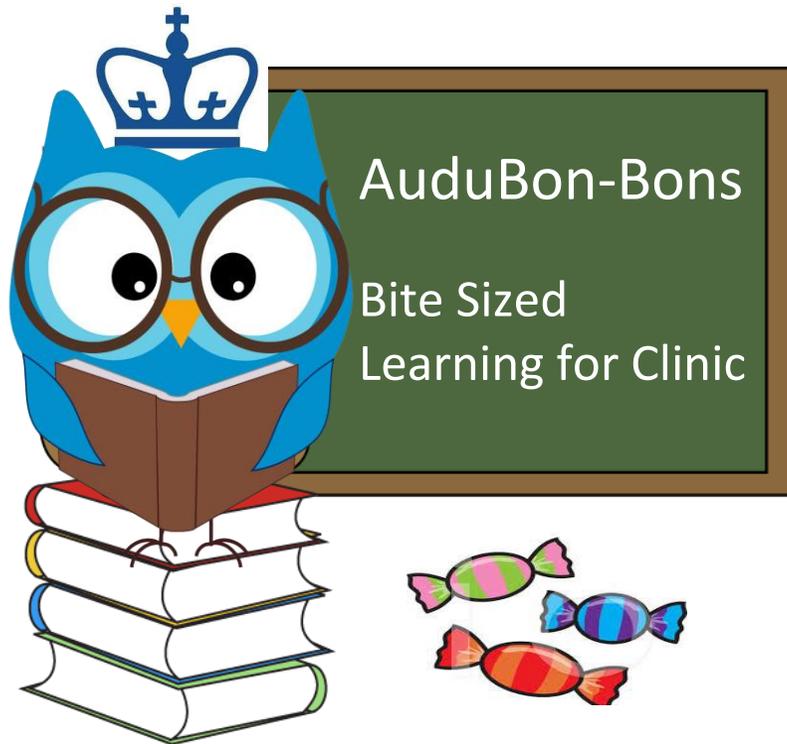
Week 94

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With SDH and .phrase slides by Chloé Altchek, MS4

Reading Assignment:

ACOG Committee Opinion 764: *Medically Indicated Late-Preterm and Early-Term Deliveries*
(April 2013)



LEARNING OBJECTIVES



- Review common indications for late preterm/ early term deliveries
- Review what resources to use to determine appropriate timing of delivery
- Understand how to counsel patients on the risks and benefits of late-preterm/ early term deliveries



CASE VIGNETTE

- A 37 yo G2 P0010 woman at 35 weeks 3 days EGA presents for follow up OB visit. She is doing well with pregnancy notable for obesity with BMI 36.
- She has no complaints today and denies LOF, BPV, CTX, or decreased FM. She has a follow up appointment in 1 week.
- Given her obesity, she is starting weekly BPPs at 36 weeks EGA.



FOCUSED HISTORY

- **What elements of the patient's history are most relevant?**
 - **PMH:** Obesity
 - **PSH:** LSC appy 12 years ago
 - **OBHx:** 8 wk sab
 - **GynHx:** Denies
 - **FH:** DM in father
 - **SH:** No toxic habits
 - **Meds:** Multivitamin
 - **All:** NKDA



PERTINENT PHYSICAL EXAM FINDINGS

- **What elements of the patient's physical exam are most relevant?**

VS: Wt 98 kg, Ht 165 cm, BMI 36.0 • BP 120/80, P 90, T 37.0

Gen: NAD, pale

HEENT: WNL

Chest: CTAB

CVS: RRR

Abd: Gravid, Soft, NT, obese

GU: WNL



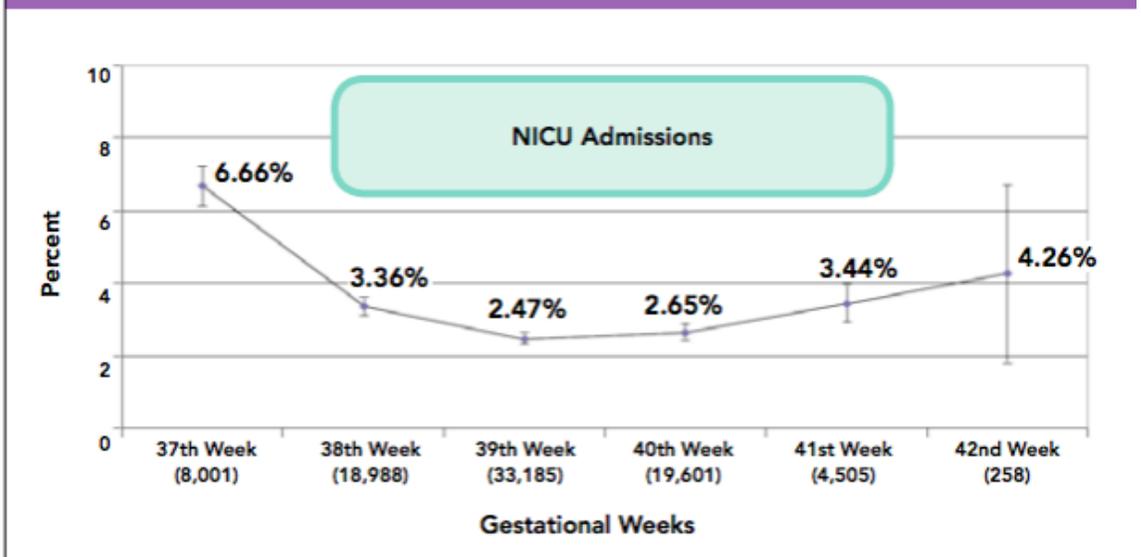
DELIVERIES BEFORE 39 WEEKS

The patient tells you she is miserable. She begs you to deliver her today. How will you counsel her about the risks of delivery <39 wks?

- Increased NICU admission
- Increased TTN
- Increased RDS
- Increased need for ventilator support
- Increased rates of sepsis
- Increased feeding issues

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Figure 5: Increased NICU Admissions Among Infants Delivered at 37 Weeks Gestation



Figures 4 and 5: Oshiro, B. et al. Decreasing elective deliveries before 39 weeks of gestation in an integrated health care system. *Obstet Gynecol*, 2009. 113: p. 804-811. Permission to adapt and use granted.

NOMENCLATURE REVIEW

- **Late preterm:**
 - **34+0 - 36+6 wks**
- **Early term:**
 - **37+0 - 38+6 wks**
- **Elective IOL:**
 - IOL without an accepted medical or obstetrical indication for delivery
- **Timing of delivery is a balance of risk and benefit of delivery for infant and mother**



Summary: Non-indicated deliveries prior to 39 weeks EGA carry significant risk to the infant, with no known maternal benefit.

PATIENT FOLLOW UP



The next week, you receive a call from the ultrasound unit that your patient, who is currently at 36+3 weeks EGA, has an MVP of 1.9 NST was reactive.

- What is the diagnosis?
 - **OLIGOHYDRAMNIOS**
- When should the patient be delivered?
 - **Late pre-term/ early term: 36+0/7 - 37+6/7 wks**
- What else might you consider?
 - BMZ for fetal lung maturity
 - Rule out for rupture



MEDICALLY INDICATED LATE PRETERM/ EARLY TERM DELIVERIES

- What are other reasons for delivery prior to 39 weeks?

Table 1. Recommendations for the Timing of Delivery When Conditions Complicate Pregnancy*

Condition	General Timing	Suggested Specific Timing
Placental/Uterine Conditions		
Placenta previa [†]	Late preterm/early term	36 0/7–37 6/7 weeks of gestation
Suspected accreta, increta, or percreta [†]	Late preterm	34 0/7–35 6/7 weeks of gestation
Vasa previa	Late preterm/early term	34 0/7–37 0/7 weeks of gestation
Prior classical cesarean	Late preterm/early term	36 0/7–37 0/7 weeks of gestation
Prior myomectomy requiring cesarean delivery [‡]	Early term (individualize)	37 0/7–38 6/7 weeks of gestation
Previous uterine rupture	Late preterm/early term	36 0/7–37 0/7 weeks gestation



Fetal Conditions

Wt

Oligohydramnios (isolated or otherwise uncomplicated [deepest vertical pocket less than 2 cm])	Late preterm/early term	36 0/7–37 6/7 weeks of gestation or at diagnosis if diagnosed later
Polyhydramnios [†]	Full term	39 0/7–39 6/7 weeks of gestation
Growth restriction (singleton)		
Otherwise uncomplicated, no concurrent findings	Early term/full term	38 0/7–39 6/7 weeks of gestation
Abnormal umbilical artery dopplers: elevated S/D ratio with diastolic flow	Early term	Consider at 37 0/7 weeks of gestation or at diagnosis if diagnosed later
Abnormal umbilical artery dopplers: absent end diastolic flow	Late preterm	Consider at 34 0/7 weeks of gestation or at diagnosis if diagnosed later
Abnormal umbilical artery dopplers: reversed end diastolic flow	Preterm	Consider at 32 0/7 weeks of gestation or at diagnosis if diagnosed later
Concurrent conditions (oligohydramnios, maternal comorbidity [eg, preeclampsia, chronic hypertension])	Late preterm/early term	34 0/7–37 6/7 weeks of gestation
Multiple gestations—uncomplicated		
Dichorionic-diamniotic twins	Early term	38 0/7–38 6/7 weeks of gestation
Monochorionic-diamniotic twins	Late preterm/early term	34 0/7–37 6/7 weeks of gestation
Monochorionic-monoamniotic twins	Preterm/late preterm	32 0/7–34 0/7 weeks of gestation
Triplet and higher order	Preterm/late preterm	Individualized
Multiple gestations—complicated		
Dichorionic-diamniotic twins with isolated fetal growth restriction	Late preterm/early term	36 0/7–37 6/7 weeks of gestation
Dichorionic-diamniotic twins with concurrent condition	Late preterm	Individualized
Monochorionic-diamniotic twins with isolated fetal growth restriction	Preterm/late preterm	32 0/7–34 6/7 weeks of gestation
Alloimmunization		
At-risk pregnancy not requiring intrauterine transfusion	Early term	37 0/7–38 6/7 weeks of gestation
Requiring intrauterine transfusion	Late preterm or early term	Individualized



What



Maternal Conditions

Hypertensive disorders of pregnancy		
Chronic hypertension: isolated, uncomplicated, controlled, not requiring medications	Early term/full term	38 0/7–39 6/7 weeks of gestation [§]
Chronic hypertension: isolated, uncomplicated, controlled on medications	Early term/full term	37 0/7–39 6/7 weeks of gestation [§]
Chronic hypertension: difficult to control (requiring frequent medication adjustments)	Late preterm/early term	36 0/7–37 6/7 weeks of gestation
Gestational hypertension, without severe-range blood pressure	Early term	37 0/7 weeks or at diagnosis if diagnosed later
Gestational hypertension with severe-range blood pressures	Late preterm	34 0/7 weeks of gestation or at diagnosis if diagnosed later
Preeclampsia without severe features	Early term	37 0/7 weeks of gestation or at diagnosis if diagnosed later
Preeclampsia with severe features, stable maternal and fetal conditions, after fetal viability (includes superimposed)	Late preterm	34 0/7 weeks of gestation or at diagnosis if diagnosed later
Preeclampsia with severe features, unstable or complicated, after fetal viability (includes superimposed and HELLP)	Soon after maternal stabilization	Soon after maternal stabilization
Preeclampsia with severe features, before viability	Soon after maternal stabilization	Soon after maternal stabilization
Diabetes		
Pregestational diabetes well-controlled [†]	Full term	39 0/7–39 6/7 weeks of gestation
Pregestational diabetes with vascular complications, poor glucose control, or prior stillbirth	Late preterm/early term	36 0/7–38 6/7 weeks of gestation
Gestational: well controlled on diet and exercise	Full term	39 0/7–40 6/7 weeks of gestation
Gestational: well controlled on medications	Full term	39 0/7–39 6/7 weeks of gestation
Gestational: poorly controlled	Late preterm/early term	Individualized
HIV		
Intact membranes and viral load >1,000 copies/mL	Early-term cesarean delivery	38 0/7 weeks of gestation
Viral load ≤1,000 copies/ml with antiretroviral therapy	Full term (early term birth not indicated)	39 0/7 weeks of gestation or later
Intrahepatic cholestasis of pregnancy	Late preterm/early term	36 0/7–37 0/7 weeks of gestation or at diagnosis if diagnosed later [¶]

M/



MEDICALLY INDICATED LATE PRETERM/ EARLY TERM DELIVERIES

- What are **other obstetric reasons** for delivery prior to 39 weeks EGA?

Obstetric Conditions

Preterm PROM

PROM (37 0/7 weeks of gestation and beyond)

Previous stillbirth

Late preterm

Generally, at diagnosis

Full term (early term birth
not routinely
recommended)

34 0/7 weeks of gestation or at
diagnosis if diagnosed later

Generally, at diagnosis

Individualized



MEDICALLY INDICATED LATE PRETERM/ EARLY TERM DELIVERIES

Where can you find the recommendations for delivery timing?

- ACOG Committee Opinion #764: Medically indicated late preterm and early term deliveries
- ACOG Applet
- Consultation with a MFM



SOCIAL DETERMINANTS OF HEALTH

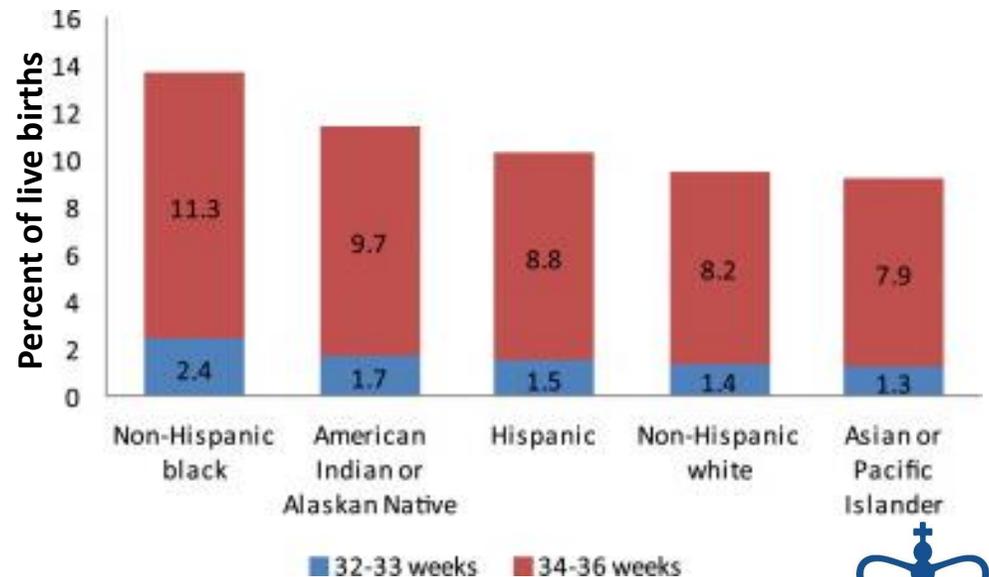
Infants of Black mothers have **1.5 times the risk of preterm birth** and **3.4 times the risk of preterm-related mortality**

Preterm birth is the most frequent cause of infant mortality and neurologic disabilities in children, including cerebral palsy and developmental delays

Recent increase in rate of late preterm births thought to be due to:

- improved risk assessment and timing for maternal and fetal disorders
- more elective inductions and caesarean sections to reduce adverse fetal outcomes
- increasing maternal age (>35 years), and increasing rates of multiple gestations

Percent of live births born moderate and late preterm by maternal race and Hispanic origin: United States, 2008.



Epic .phrase

.BBonLatePretermEarlyTermDelivery

Description: Indications and counseling on late preterm/early term delivery

Given history of ***[placenta previa/ vasa previa/ prior classic cesarean/ previous uterine rupture/ oligohydramnios/ uncomplicated IUGR/ mono-di twins with IUGR/ alloimmunization requiring intrauterine transfusion/ poorly controlled GDM, poorly controlled HTN] patient was counseled on timing and MOD to be determined by multiple factors but general recommendation for delivery within 36+0*** and 37+6*** given increased risk of adverse outcomes thereafter.



BILLING AND CODING

- Depends on indication for delivery. Examples include:
 - O24.41: Gestational diabetes mellitus in pregnancy
 - O11.9: Pre-existing hypertension with pre-eclampsia
 - O30.049: Twin pregnancy, dichorionic/diamniotic
 - O36.5990: Maternal care for other known or suspected poor fetal growth
 - O41.0: Oligohydramnios
 - O44.0: Complete placenta previa NOS or without hemorrhage



EVIDENCE

- Medically Indicated Late-Preterm and Early-Term Deliveries. ACOG Committee Opinion No. 764. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2019;133:e151–55.
- Spong CY, Mercer BM, D’Alton M, Kilpatrick S, Blackwell S, Saade G. Timing of indicated late-preterm and early-term birth. *Obstet Gynecol* 2011;118:323–33.
- Elimination of non-medically indicated (Elective) deliveries before 39 weeks gestational age. California Maternal Quality Care Collaborative. <https://www.cmqcc.org/node/1662>. Accessed on Feb 25, 2020.

