UC/TCH Family Medicine

OB Survival Guide

2016-2017

Table of Contents

*Link to Canvas Learning Site

https://canvas.instructure.com/courses/765338/modules

*Ask for log in from Dr Lazaron

OB phone instructions

585-0022 is the single phone which will be used for FM resident on OB call. Will need to forward phone to next person at end of shift.

1.Log into
Citrix: https://citrixportal.thechristhospital.com/Citrix/XenApp/auth/login.aspx
2. Enter personal Citrix username & password
3. https://tchciscocmp/ccmuser
USERNAME: OB.familymed
PASSWORD: #2468med
4. Check box to forward call and enter phone number (9 -1- area code- number if cell phone, just 5- if TCH number)

Useful apps for OB

Free Downloads

- Bishop scores (Steinberg), useful in planning labor inductions
- Prevent GBS (CDC), 2010 CDC GBS guidelines
- GBS guide (Steinberg), quick walk through of antibiotic choices in GBS
- ILITHYIA, Evidence Based Prenatal Care (San Jose FM residency), anticipatory guidance for antepartum care
- EFM guide (Steinberg), free app walks you through NICHD guidelines for FHR interpretation
- OB Wheels (Steinberg), assigning due date based on LMP or sono finding
- CDC Vaccine Schedules (CDC), useful for subsection: Adult Conditions, Pregnancy, with do's and don'ts for vaccination in pregnancy
- LactMed from NIH, for drug suitability for breast-feeding moms
- Pap Guide (Steinberg), Pap frequency with 2012 ASCCP guideline & 2012-13 update

Paid Downloads

- FHR 5-Tier, $2.99 app, analyzing fetal heart rate tracings with advice on management of category 2 or 3 tracings, useful in labor management
- BiliCalc, $1.99, good for calculating bili risk level based on age, useful if do not want to access the online site each time

Prenatal Care Basics

V**isits**: (q 4 weeks until 28 weeks, then q 2 weeks until 36 weeks, q 1 week 36-40, twice weekly 40-42)

First visit:

- **History**
  - Compete medical history
  - Thorough OB history for assessment of risks (get prior operative reports if h/o C/S)
  - General medical history
  - Infection history – varicella, HSV, STIs
  - Family history – genetic disorders
  - Social history – domestic violence, substance abuse, smoking
  - Medications – OTC/prescription/herbals/vitamins
  - Depression screening-PHQ9 and Perceived Stress Scale
  - Employment and occupational/hobby history
- Encourage **MyChart** sign up
- If prior PTD **Precertify** for 17-OH progesterone
- **Labs**: (use preference list)
  - CBC (specifically Hgb/Hct, platelets)
  - ABO blood type, Rh type, Screen for antibodies
  - Syphilis cascade test (FTA reflex to RPR titer), Rubella titer (immune or non-immune), HbsAg (Hepatitis B), HIV
  - HbA1c
  - GC/chlamydia testing
  - Pap if >20, and due
  - Hemoglobin electrophoresis
  - Vitamin D 25OH
  - Urinalysis, Urine culture & sensitivity
  - Urine drug screen (if + repeat in each trimester), Urine pregnancy test
  - CF genetic screening (offer to all) (OB Special does not cover cost, 175$)
  - **Other or Optional tests** for specific groups
    - Specific genetic tests for certain risk groups
      - CF genetic screening (offer to all)

        - Tay-Sachs disease
        - Thalassemia --Hemoglobin electrophoresis (partner testing)
        - Sickle cell disease-- Hemoglobin electrophoresis (partner testing)
    - Hep C (prisoner, IV drug users, HIV + women, multiple sexual partners, tattoos)
    - PPD if high risk population (health care worker, prisoner, institutional living)
    - GCT- if high risk for GDM can do early
    - TSH if obese or score high on depression scores

First visit physical exam (MD/DO/CNM):

- Height, weight (BMI) and Blood pressure
- Set up for physical, including pap (unless performed in past year or under age 21), GC, Chlamydia
- Place Doppler in room

10-16 weeks:

- **Physical exam**
    - Weight, Blood Pressure, EGA/EDD
    - Fetal heart rate (by 10- 12 wks or U/S confirm)
    - Fundal height measurement (after 20 wks)
- **Labs (optional):**
    - Early screen –(offer to all) refer to perinatology if desired by tt after counseling, (PAPP-A + free bHCG) and nuchal translucency U/S;(can be done 11-13 6/7)
    - CVS or amniocentesis—offer to all patients >34, or with abnormal genetic screen; document if patient declines either test
    - Free fetal DNA (MaterniT21 or Harmony screen)- optional test for genetic screen for AMA or abnormal quad (10 0/7 weeks or after)
- **Counseling**
    - substance use
    - nutrition/appropriate weight gain for BMI
    - exercise/appropriate physical activity
    - domestic violence
    - safe medications, herbals, supplements, vitamins
    - Encourage breastfeeding
    - Infant's physician

- Physiologic changes – nausea/vomiting, GERD, constipation
- warning signs – bleeding/cramping
- Flu shot during flu season
- TdaP in each pregnancy (after 28 weeks)
- Referral to Every Child Succeeds, all teen or vulnerable primips
- Referral to Pregnancy Pathways (HCAN) all vulnerable or high risk multips
- Any prenatal patient w/ h/o pre-eclampsia/eclampsia, chronic HTN, Type 1 or 2 DM, renal disease, multiple gestation pregnancy, anticardiolipin antibody, or SLE should be started on 81 mg of aspirin a day from 12 weeks through 28 weeks gestation.
- Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

16-20 weeks

- **Physical exam:**
  - Weight, Blood Pressure, EGA/EDD, Fetal heart rate, Fundal height (accurate after 20 wks)
  - Ask about quickening
- **Labs:** Quad screen – draw if desired by pt after counseling
  - Document if patient declines (16-21 6/7 wks)
  - Obtain anatomy ultrasound, AND cervical length (best time to view approx. 18-20 weeks)
  - Repeat UDS if prior positive (needs 1 each trimester)
- **Counseling**:
  - warning signs – bleeding, cramping
  - Flu shot during flu season
  - Seat belt use, Work modification
  - Sexual activity
  - Appropriate weight gain

20-24 weeks:

- **Physical Exam**
  - Weight, Blood Pressure, EGA/EDD, Fetal heart rate, Ask about quickening, Fundal height
- **Counseling**
  - Seat belt use, Work modification
  - Monitor weight gain/nutrition
  - Sexual activity

- Any prenatal patient w/ h/o pre-eclampsia/eclampsia, chronic HTN, Type 1 or 2 DM, renal disease, multiple gestation pregnancy, anticardiolipin antibody, or SLE should be started on 81 mg of aspirin a day from 12 weeks through 28 weeks gestation.
- Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

24-28 weeks

- **Physical Exam:**
  - Weight, Blood Pressure, EGA/EDD, Fetal heart rate, Fundal height
- **Labs:**
  - 1 hr. Glucola; if abnormal, 3 hr. GTT
  - repeat Hgb/Hct
  - repeat Syphilis cascade test (FTA reflex to RPR titer)
  - If UDS positive on earlier test; repeat UDS (needs 1 each trimester)
  - If Rh negative - recheck antibody screen and if not sensitized, order RhoGAM for 26-28 wks
  - RhoGAM 300 mcg should be administered at **26-28** weeks, to reduce risk of antepartum Rh iso-immunization from 1-2% to <0.2
- **Counseling Second Trimester:**
  - Seat belt use, Work modification
  - Monitor weight gain/nutrition
  - Sexual activity
  - Recommend birthing/parenting/breastfeeding classes
  - Encourage breastfeeding
  - Review infant's physician
  - Birth control; tubal consent paperwork if needed (must be completed 30 days before delivery for Medicaid and valid for 6 months) Scan to EPIC under media.
  - Document prior scar if desires VBAC. Consent form signed. Scan to EPIC chart under Media tab. If desires VBAC, call consultant to discuss.
  - If desires repeat C/S, document prior scar. Call consultant and schedule.
  - Any prenatal patient w/ h/o pre-eclampsia/eclampsia,

chronic HTN, Type 1 or 2 DM, renal disease, multiple gestation pregnancy, anticardiolipin antibody, or SLE should be started on 81 mg of aspirin a day from 12 weeks through 28 weeks gestation.
    - Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

28-36 weeks:

- **Physical Exam:**
    - Weight, Blood Pressure, EGA/EDD, Edema, Fetal heart rate, Fundal height
    - TdaP in pregnancy (patient and partner)
    - Consider starting weekly antenatal testing at 32 weeks if indicated for high risk condition
- **Counseling**:
    - Labor signs/expectations – what to do when your water breaks, When to come to L&D (2 fluids & 2 5's)
    - Awareness of fetal movement
    - Pain control in labor, postpartum care
    - infant care/circumcision – confirm the infant physician
    - birth control, sexuality; tubal consent paperwork if needed and not already completed (must be completed 30 days before delivery for Medicaid)
    - work, support network
    - postpartum depression
    - Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

36 weeks:

- **Physical exam:**
    - Weight, Blood Pressure, EGA/EDD, Edema, Fetal heart rate, Fundal height measurement
    - Fetal position by abdominal exam with Leopold maneuvers; confirm by pelvic exam or U/S if uncertain
    - start HSV prophylaxis (if indicated)
- **Labs:**
    - Group B strep Recto-Vaginal culture for ALL patients (ask for sensitivities if PCN allergic)
    - repeat HIV testing (if high risk)
    - repeat Syphilis test (if high risk)
    - repeat GC/Chlamydia screen (if high-risk)

- repeat Hgb/Hct (if anemic)
- repeat UDS (if any prior positive test; needs 1 each trimester)

- **Counseling**:
  - Labor signs/expectations – what to do when your water breaks, When to come to L and D (5-1-1)
  - Awareness of fetal movement
  - Pain control in labor
  - postpartum care
  - infant care/circumcision – confirm the infant physician
  - birth control, sexuality
  - work
  - postpartum depression
  - TCH labor consent forms signed at 36 weeks (Scan to EPIC chart under Media Tab)
  - Patient birth plans (optional) signed (Scan to EPIC chart under Media Tab)
  - Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

37-40 weeks:

- **Physical Exam:**
  - Weight, Blood Pressure, Edema, Fetal Heart Rate, EGD/EDD, Fundal Height
  - Fetal position by abd exam with Leopold maneuvers; confirm by pelvic exam or U/S if uncertain
  - Offer cervical exam after 36 wks; perform cervical exam at 40 wks
  - Offer membrane sweeping beginning at 39 wks
    ***if patient is a VBAC or GBS+, membrane sweeping is controversial. Discuss with OB MD prior to offering to patient
    At 38 weeks, if Rh neg and received RhoGAM at 26 to 28 weeks, consider repeating the dose of RhoGAM at 300 µg at 38 to 40 weeks. Remember RhoGAM only lasts for 12 weeks in terms of protection
- **Counseling**:
  - Labor signs/expectations – what to do when your water breaks, When to come to L and D (5-1-1)
  - Awareness of fetal movement

- Pain control in labor
- postpartum care
- infant care/circumcision – confirm the infant physician
- birth control, sexuality
- work, support network
- postpartum depression
- Any prenatal patient w/ h/o pre-eclampsia/eclampsia should also be put on calcium carbonate 500 mg a day through her pregnancy.

40+ weeks: see patients biweekly

- **Physical exam:**
  - Weight, Blood Pressure, EGA/EDD, Fetal heart rate, Fundal height measurement, Fetal position by abdominal exam with Leopold maneuvers, Offer sweeping of membranes
    ***if patient is a VBAC or GBS+, membrane sweeping is controversial. Discuss with OB MD prior to offering to patient.
  - Offer induction starting at 41 weeks
- **Labs and tests:**
  - Repeat GBS if > 5 wks since previous GBS
  - Begin antenatal testing with weekly NST and AFI by 41 0/7 weeks at latest
- **Counseling:**
  - IOL – late term gestation Offer at 41+ weeks' gestation
  - Plan induction (IOL) by 41 6/7 at latest

Consider performing a urine drug screen at any visit where you think it is appropriate – due to suspicions about drug use, h/o drug use, etc. Also, order UDS and syphilis screen at delivery in patients on ALL patients – not just those with PTL, PPROM, h/o STDs, placental abruption or any prior drug use in pregnancy.

Vaginitis in pregnancy

- **Trichomonas**; frothy discharge, friable cervix, Wetprep with motile trichomonads.
    - Treat with Flagyl 2gm x1 and treat partner
- **Bacterial vaginosis**: Fishy odor, Wetprep with clue cells, + whiff test with KOH
    - RX: flagyl 500 mg bid x 7d (po); flagyl vaginal 1 appl. bid x 5 dy; clinda 2% cream pv 5g = 1 appl. hs x 7 d
    - in third trimester use clinda instead of flagyl (increased risk of PTL)
- **Yeast**: itching, cottage cheese discharge, Wet prep (+KOH) with budding yeast
    -NO DIFLUCAN
    -Treat with Monistat 7 d
    - Miconazole 1200 mg x 1 per vagina; 200 mg tab or 4% cream x 3 d at night; 100 mg or 2% cream x 7 d at night
    - Terconazole 80 mg or 0.8% 1 appl x 3 day or 0.4% 1 appl x 7 d (pv)
- **Gonorrhea**: Rocephin 125 mg IM (or suprax 400 mg PO)

Also 1 gm azithro for chlamydia should be added; treat partner; test of cure needed at least 4weeks after according to CDC

- **Chlamydia**: treat with Azithro 1 gm x1; treat partner, test of cure needed at least 4weeks after according to CDC

Vitamin D in pregnancy

- Why we check?
    - ACOG does not recommend testing (insufficient evidence)
    - Our Cincinnati African American population has a much higher incidence of deficiency
    - Severe deficiency in mom can lead to problems with bone development in baby, congenital rickets, fractures in newborn
    - if low, associated with increased risk of recurrent bacterial vaginosis, preterm labor for mom (literature still a work in process)
- When to check? initial labs
- Treat: If low, then treat with PO D3. Choose a daily dose to reach a goal of 40-60. For every 1000 units of D3 given, this will increase level by ~ 10. Do not use long acting weekly doses in pregnancy. Up to 5000 daily is believed to be safe in pregnancy.
    - After starting treatment, re check lab level in 8-12 weeks. Coordinate with other lab draws when possible.

UTI and Asymptomatic Bacteruria in Pregnancy

Asymptomatic bacteruria occurs in 2-7% of pregnancies.

- Without treatment, 30-40% will develop UTI or pyelonephritis
- If untreated, Increased risk of preterm birth, low birth weight, perinatal mortality
- Case control associated preelampsia with untreated asymptomatic bacteruria or UTI

Pyelonephritis- associated with untreated asymptomatic bacteruria, age <20, nulliparity, smoking, late care, sickle trait, DM

- Increased risk for preterm birth, sepsis, stillbirth

Screening

- All women once at initial visit (UA and urine cx)
    - If UTI, add to problem list of UTI during current pregnancy
- Rescreen with each trimester if high risk (i.e. DM, hx UTI, sickle trait or disease, preterm labor hx)

Diagnostic criteria

- If asymptomatic→ 2 consecutive voids with the same bacteria with counts >100,000 cfu (or 1 catheter specimen of >100 cfu)
    - In practice, we typically just use 1 specimen for diagnosis

Management of asymptomatic bacteruria

- Beta lactams or nitrofuratoin usually for 7 days
- Follow up culture (test of cure) needed 1 week after treatment
- Repeat Urine cx monthly or at each trimester until
- Recurrent bacteruria with same organism- repeat treatment x 1, if still persists, consider suppressive macrobid (50-100mg daily), Keflex or Bactrim (depending on weeks gestation)

Management of acute cystitis

- >1000 cfu on culture to confirm UTI
- if lactobacillus (or other typical uropathogen) treat as UTI only if >100,00 cfu
- empiric with Beta lactams (Keflex, augmentin, amoxicillin) or nitrofuratoin usually for 7 days
- TOC 1 week after treatment, repeat monthly or each trimester, be sure to add to problem list

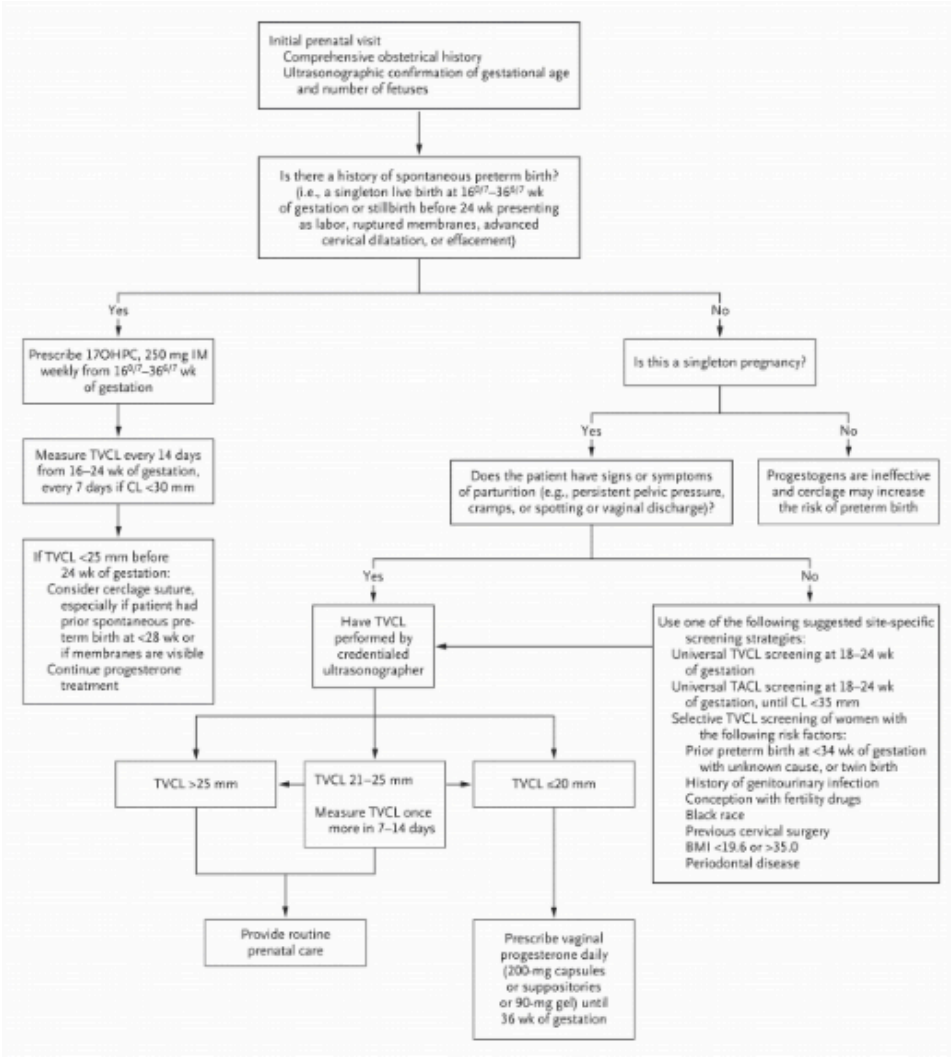
Acute pyelonephritis

- Fever, flank pain, vomiting, CVA tenderness
- Hospital admission for IV antibiotics until afebrile x 24-48 hours
- Antibiotics: cefazolin or ceftriaxone, or IV amp+gent (if ESBL- meropenem or ertapenem preferred)
- Once afebrile x 24-48 hrs, transition to po regimen (beta lactam, or if in second trimester Bactrim ok)
- Usually will use suppressive therapy with macrobif for remainder of pregnancy

Algorithm for preventing preterm labor

In FMC: getting Progesterone

- Anita and any of the MA's have the forms for home health and can help arrange; forms are on the V drive under family medicine



First Trimester Bleeding (<20weeks)

- Bleeding: 25-30% in first trimester; 1/2 have complication
- History: How long, how much, LMP, tissue, fevers, n/v, Pregnancy history

Definitions
- Threatened ab – +VB, viable IUP on US, - cervical dilation
- Inevitable ab – +VB, viable IUP on US, + cervical dilation
- Incomplete ab – +VB, non-viable IUP or retained POC on US
- Missed ab – +/-VB, non-viable IUP on US, cramping likely
- Complete ab – +VB, no IUP on US, pt may report passing POC
- Septic ab – incomplete abortion + sxs of ascending infection

Exam:VS, Abd/Pelvic exam
Speculum - os open?, bleeding?

Work-up:
-FHT is possible
-Quantitative BHCG Doubles q48h
-U/S – bHCG > 2000 to see transvaginally (>3500 transabd)
- If gestational sac >10mm in diameter, yolk sac must be present
- Crown-rump sac >5mm - must have cardiac activity
-CBC, Coags, Type and Screen

Management of spontaneous and threatened abortion
- Transvaginal US now, repeat in 1 week
- CBC and Quantitative hcg (serum) now and again in 48 hours (should double)
- Trend beta hcg until <10 if decreasing to ensure no retained tissue
- If bleeding continues, repeat US in 1 week to assess viability and passage of POC
- If VB stops w/ passing of POC, trend hcg weekly to zero

Management options of missed and incomplete abortion

- "Gentle" Sterile speculum exam to establish source of bleeding
- Expectant management → trend hcg and US as above
- Medical Management (motrin first to decrease cramping)
    - Cytotec per dosing table on next page
    - Uterine aspiration/D&C/D&E
    - Clindamycin and Gentamicin + D&C, if septic abortion

Indication	**Dosage**	**Notes**
Missed abortion (0-12 weeks)	800 µg, PV, q3h **OR** 600 µg, SL, q3h	x2 doses, leave to work for 1-2 wks unless heavy bleeding or infection
Incomplete abortion (0-12 weeks)	600 µg, PO, STAT	Leave to work for 2 weeks unless heavy bleeding or infection
Intrauterine fetal death (>24 weeks)	13-17 wks: 200 µg q6h 18-26 wks: 100 µg q6h 27-43 wks: 25-50 µg q4h	Reduce doses in women with previous c-section
Cervical ripening prior to instrumentation	400 µg PV 3 hours before procedure	Use for insertion of intrauterine device, surgical termination of pregnancy, D&C, hysteroscopy

Vaginal Bleeding after 20 weeks gestation

If patient >20 weeks, may present to triage or clinic

- DO NOT perform STERILE VAGINAL EXAM!!
- Review US if possible to determine if placenta previa
- Ask about amount of bleeding, and precipitating factors (intercourse, infections, etc)
- SSE to establish source of bleeding
    - If bleeding from cervical os → order US
    - FHR monitor
    - Collect GC/Chlam swab, wet prep, rule out ROM
- If large amount of bleeding
    - ASK FOR HELP!
    - Establish IV access → IVFs
    - Start O2
    - CBC, Type and screen / cross match, Coags
        - Don't forget about DIC (order fibrinogen level)
        - Rhogam if Rh negative
    - UDS
    - Consider STAT c-section if worrisome FHR tracing, notify on-call ob
        - THINK PLACENTAL ABRUPTION AND UTERINE RUPTURE!!
- If small amount of bleeding
    - If no previa on US → perform sterile vaginal exam, bleeding may be caused by cervical change

DDx

- Placenta previa – non-painful vaginal bleeding
- Placental abruption – painful vaginal bleeding, firm, tender uterus
- Vasa previa – blood vessels crossing over internal cervical os
- Uterine scar disruption / uterine rupture

Nausea and Vomiting in Pregnancy

Table 1. **Pharmacologic Treatment of Nausea and Vomiting in Pregnancy.***

Agent	Oral Dose	Side Effects	FDA Category†	Comments
Vitamin B_6 (pyridoxine)	10–25 mg every 8 hr		A	Vitamin B_6 or vitamin B_6–antihistamine combination recommended as first-line treatment
Vitamin B_6–doxylamine combination	Pyridoxine, 10–25 mg every 8 hr; doxylamine, 25 mg at bedtime, 12.5 mg in the morning as needed plus 12.5 mg in the afternoon as needed	Sedation	A	
Vitamin B_6–doxylamine combination, delayed-release formulation (Diclectin, Canada)	10 mg pyridoxine and 10 mg doxylamine, extended release; 2 tablets at bedtime, 1 tablet in the morning as needed plus 1 tablet in the afternoon as needed			
Antihistamines		Sedation		
Doxylamine (Unisom SleepTabs)	12.5–25 mg every 8 hr		A	
Diphenhydramine (Benadryl)	25–50 mg every 8 hr		B	
Meclizine (Bonine)	25 mg every 6 hr		B	
Hydroxyzine (Atarax, Vistaril)	50 mg every 4–6 hr		C	
Dimenhydrinate (Dramamine)	50–100 mg every 4–6 hr		B	
Phenothiazines		Extrapyramidal symptoms, sedation		
Promethazine (Phenergan)	25 mg every 4–6 hr		C	Severe tissue injuries with intravenous use (black-box warning); oral, rectal, or intramuscular administration preferred
Prochlorperazine (Compazine)	5–10 mg every 6 hr		C	Also available as buccal tablet
Dopamine antagonists		Sedation, anticholinergic effects		
Trimethobenzamide (Tigan)	300 mg every 6–8 hr		C	
Metoclopramide (Reglan)	10 mg every 6 hr	Tardive dyskinesia (black-box warning)	B	Treatment for more than 12 wk increases risk of tardive dyskinesia
Droperidol (Inapsine)	1.25 mg to 2.5 mg intramuscularly or intravenously only		C	Black-box warning regarding torsades de pointes
5-hydroxytryptamine$_3$–receptor antagonist		Constipation, diarrhea, headache, fatigue		
Ondansetron (Zofran)	4–8 mg every 6 hr		B	Also available as oral disintegrating tablet; more costly than oral ondansetron tablets
Glucocorticoid				
Methylprednisolone (Medrol)	16 mg every 8 hr for 3 days, then taper over 2 wk	Small increased risk of cleft lip if used before 10 wk of gestation	C	Avoid use before 10 wk of gestation; maximum duration of therapy 6 wk to limit serious maternal side effects
Ginger extract	125–250 mg every 6 hr	Reflux, heartburn	C	Available over the counter as food supplement

* This list of agents is not exhaustive. FDA denotes Food and Drug Administration.
† FDA categories are as follows: A, controlled studies show no risk; B, no evidence of risk in humans; C, risk cannot be ruled out; D, positive evidence of risk; and X, contraindicated in pregnancy.

Hyperemesis Gravidum

Definition: persistent vomiting, weight loss of more than 5%, ketonuria, electrolyte abnormalities (hypokalemia), and dehydration

- onset of nausea is usually ~ 4 wks after LMP and peaks at ~ 9 wks
- 60% resolve by the end of the 1st trimester, and 91% resolve by 20 weeks of gestation.
- Nausea and vomiting are associated with a decreased risk of miscarriage.

**Preventable rare maternal complications of hyperemesis gravidarum : peripheral neuropathies due to vitamin B6 and B12 deficiencies and, most serious, Wernicke's encephalopathy due to thiamine (vitamin B1) deficiency.

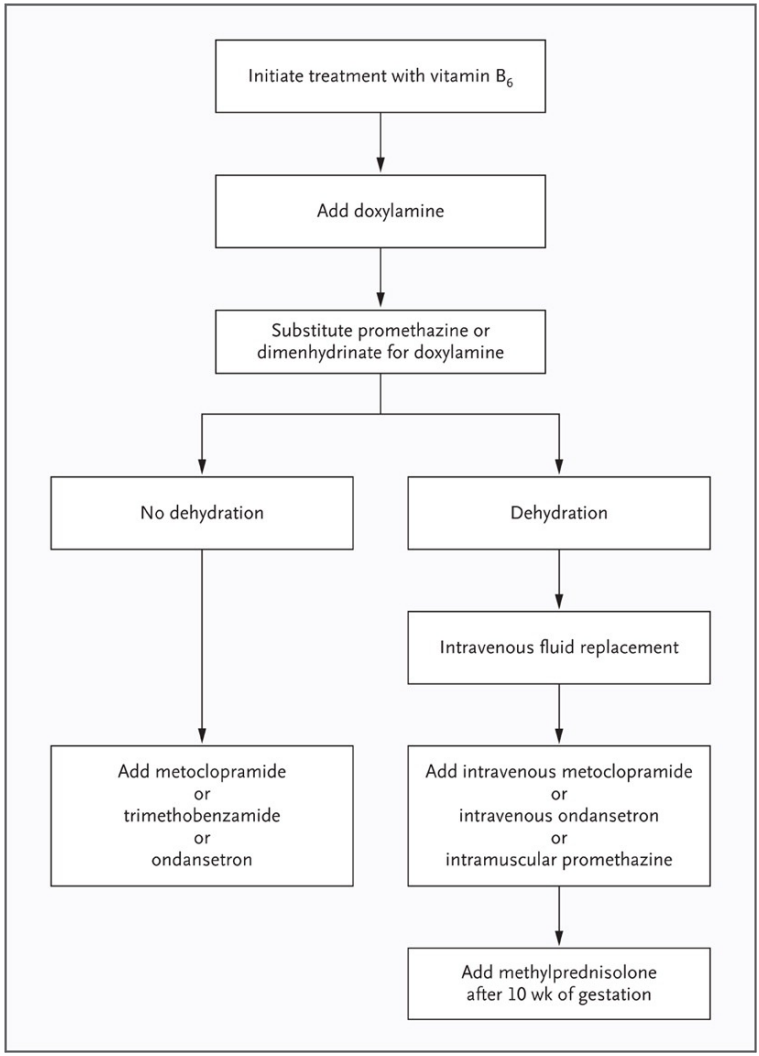
Work up: (Rare to start 8 weeks or later)

- Labs: urinary ketones, BUN/Cr, AST/ALT, electrolytes, amylase, and TSH (as well as free T4).
    * hCG cross-reacts with TSH and stimulates the thyroid gland, so it is typically suppressed. This apparent hyperthyroidism usually resolves spontaneously, & treatment with PTU does not alleviate the N/V, this test should be repeated later in gestation, at ~ 20 weeks, since the level usually normalizes by then

- imaging: u/s to detect multiple gestation or hydatidiform mole

Management

- persistent N/V and high concentrations of ketones —> IVF with MVI, including thiamine, with follow-up measurement of urinary ketones and electrolytes
- Antiemetic agents should be prescribed in these pts (see next page); can also use reglan pump
- IVF and enteral tube feeding may be effective, although some patients continue to have persistent emesis. TPN riskier so used only if severe weight loss (>5% of body weight) and who aren't controlled with enteral feeds and antiemetics


Initiate treatment with vitamin B_6
Add doxylamine
Substitute promethazine or dimenhydrinate for doxylamine
No dehydration
Dehydration
Intravenous fluid replacement
Add metoclopramide or trimethobenzamide or ondansetron
Add intravenous metoclopramide or intravenous ondansetron or intramuscular promethazine
Add methylprednisolone after 10 wk of gestation

HTN in pregnancy

With all initial elevated BPs make sure of right size cuff, right position (not lying on cuff)

- Repeat BP within 15 min, if not elevated 1st measurement can be discarded

Chronic HTN in pregnancy

- Elevated BP > 140 SBP or >90 DBP on at least two occasions 4 hrs apart prior to 20 wks gestation or known hx of chronic HTN
- Helpful to get *baseline PIH labs and 24 hour urine protein and creatinine* so later can determine if superimposed preeclampsia

Gestational HTN

- Onset of elevated BP > 140 SBP or >90 DBP on at least two occasions 4 hrs apart after 20 weeks in absence of proteinuria
- Helpful to get baseline PIH labs so later can determine if with superimposed preeclampsia
- IOL at 37 weeks or later with perinatal or OB consultation

Pre-Eclampsia (mild)

- Onset of elevated BP > 140 SBP or >90 DBP on at least two occasions 4 hours apart after 20 weeks gestation
  AND
- Greater than or equal to 300mg or protein per 24-hr urine collection
  OR
- In the absence of proteinuria, w/ new onset of HTN, any of the following (**signs of HELLP syndrome**)
  - Thrombocytopenia (<100,000/microliter)
  - Renal insufficiency (Cr >1.1 or doubling of serum Cr)
  - Impaired LFTs to twice normal concentration
  - Pulmonary edema
  - Cerebreal or visual symptoms (bright flashing lights)
- If hx of preeclampsia, there is benefit from starting ASA and calcium supplementation to prevent this

Pre-Eclampsia (Severe)

- Criteria of Pre-Eclampsia and BPs >160 SBP or DBP >110 on 2 occasions at least 4 hours apart.

Eclampsia

- Development of maternal seizures with above criteria

HTN in pregnancy (con't)

**Patients with chronic HTN should have baseline HTN labs done as early as possible in pregnancy (same as labs below)

Care in the Hospital: Many patients are sent from clinic due to elevated BP, so the following should be done to evaluate for signs of pre-eclampsia

- NST
- 24 hour protein and creatinine
- Spot protein:creatinine ratio
- LFTs
- CBC (platelets)
- LDH
- Uric Acid

IOL for cHTN, gHTN or Pre-eclampsia in Pregnancy (with perinatal consultation usually)

Chronic HTN – controlled on no medications

- IOL at 38.0 – 39.6 weeks

Chronic HTN – controlled on medications

- IOL at 37.0 – 39.6 weeks

Chronic HTN – Difficulty to control

- IOL at 36.0 – 37.6 weeks

Gestational HTN

- IOL at 37.0 – 38.6 weeks

Preeclampsia, mild

- IOL at diagnosis after 37.0 weeks

Preeclampsia, severe

- IOL at diagnosis after 34.0 weeks after steroids given to accelerate fetal lung maturity if time allows ; if <34 weeks and severe preeclampsia, should be transferred to GSH or UCMC for high risk management and delivery

Gestational Diabetes

a. GCT (50-gram oral GCT) is abnormal if >140
- literature proven alternative is to eat 19 Brach's jellybeans

b. GTT (100-gram oral GTT) is abnormal if 2 or more abnormal values; if >95 (fasting), > 180 (1 hr), > 155 (2 hr), > 140 (3 hr)

Maternal/Fetal Complications

- gestational HTN, pre-eclampsia , section
- increases risk of developing DM later in life (up to 50% risk)
- Babies- at risk of macrosomnia, neonatal hypoglycemia, op delivery, shoulder dystocia, hyperbili

Screening

- 24-28 weeks (or earlier if concern for risk factors, and need to repeat at 24-28 wks)—>1hr GCT & if abnormal, 3 hr GTT
  - risk factors for earlier screen would include: prior hx gest DM, known impaired glucose tolerance, BMI>30

White Classification: ***Gestational Diabetes***

- A1 -diet controlled;
- A2 -more than 2 abnormal readings in a week after diabetic diet and teaching initiated, requires medication for management;

Pregestational Diabetes

- B -pre-existing diabetes onset > 20 yrs old, duration <10 yrs
- C -juvenile onset diabetes onset 10-19, duration 10-19 years
- D -onset <10 years, or duration > 20 years, presence of vascular disease
- F –nephropathy
- R -proliferative retinopathy

Treatment of gestational DM

- recommend blood sugar testing 4 times daily (fasting in am and 1-2 hours postprandial)—> need to keep log to bring to visits

→ post prandial elevations may be more indicative of increased risk for fetal complications

→Treatment Goals for Blood sugar control

1-FSBS goals; fasting 60-95; one-hour postprandial <140; 2 hour postprandial <120

2-consider addition of metformin, insulin and (maybe) glyburide if not at goal

Gestational Diabetes (con't)

- nutrition!!! — referral to DM education
  —> rec diet of 33-40% carbs, 20% protein, 40% fat
  —> high fiber diet
- moderate exercise plan
- Medications: insulin vs oral are equal in efficacy so either first line ok

- Insulin- does not cross to placenta
  start if fasting >95 or 1hr postprandial >140 or 2hr >120
  start with 0.7-1.0 units/kg/day divided
- Oral- glyburide and metformin
  Glyburide- 2.5-20mg daily in divided doses
  ?cross placenta and unknown effects long term on baby
  Metformin- uses in pts with preexisting DM or PCOS or infertility

Antenatal testing

- no consensus guidelines on timing but with inc risk of fetal demise
- ultrasound and quad screen at 16-20 weeks for defects
- fetal echocardiogram at 20-22 wks for Pregestational diabetes class B or higher
- weekly BPP or weekly NST with weekly AFI starting at 32 weeks, for A2 and above
- u/s q.4 to 6 wks starting at 28 wks; consider u/s at 39-40 wks for delivery management risk stratification (growth mostly)

Timing of Induction for diabetes indications

- GDM A1-delivery by 41 6/7 weeks
- GDM A2-delivery by 39 6/7 weeks if good control (increased incidence of shoulder dystocia beyond 40 weekss

Postpartum Management

- 70% risk of diabetes within 5 years and 65% risk of GDM in future pregnancies
- screen for diabetes at 6 week postpartum check with HbA1c or 2 hour GTT with 75 g Glucola
- annual screening for life

Asthma in pregnancy

- 1/3 of asthma gets worse with pregnancy, 1/3 gets better, 1/3 stays the same
(http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3617219/#pone.00060247-Juniper1)
- treat just as you would a non-pregnant patient
(poor oxygenation in asthma attacks leads to poor oxygenation of the baby and placenta)
- Growth scans and antenatal fetal testing for moderate or severe asthma

Guidelines: Level B evidence
(http://www.guideline.gov/content.aspx?id=12630)

- Inh steroids are 1st-line controller for persistent asthma
- *Budesonide* is preferred inh corticosteroid
- *Albuterol* is recommended rescue therapy
- Identifying and controlling or avoiding factors such as allergens and irritants, can lead to less need for meds
- Continuation of immunotherapy is rec in patients who are at or near a maintenance dose, not experiencing adverse reactions to injections, and apparently getting benefit
- Use of prednisone, theophylline, antihistamines, inh corticosteroids, beta2-agonists, & cromolyn is not contraindicated for breastfeeding

Guideline: Level C (We have adopted this at Christ)

- U/s and antenatal fetal testing should be considered for women who have moderate or severe asthma

Oral steroids for exacerbation- slight inc in PTL and low birth weight as well as cleft palate risk in 1st trimester, preecl, gest DM

- If needed for exacerbation, benefit outweigh risk

Step Therapy Medical Management of Asthma During Pregnancy

Mild Intermittent Asthma

- No daily medications, albuterol as needed

Mild Persistent Asthma

- Preferred – Low-dose inhaled corticosteroid
- Alternative – Cromolyn, leukotriene receptor antagonist, or theophylline (serum level 5 to 12 mcg/mL)

Moderate Persistent Asthma

- Preferred – Low-dose inhaled corticosteroid and salmeterol or medium-dose inhaled corticosteroid or (if needed) medium-dose inhaled corticosteroid and salmeterol
- Alternative – Low-dose or (if needed) medium-dose inhaled corticosteroid and either leukotriene receptor antagonist or theophylline (serum level 5 to 12 mcg/mL)

Severe Persistent Asthma

- Preferred – High-dose inhaled corticosteroid and salmeterol and (if needed) oral corticosteroid
- Alternative – High-dose inhaled corticosteroid and theophylline (serum level 5 to 12 mcg/mL) and oral corticosteroid if needed

Recognizing Depression in Pregnant Patients

- PHQ9, follow through pregnancy (have been validated in pregnancy). Cut off is 10, sense 85%, 84% spec
- Edinburgh- we give at visit 1, 4, and postpartum

Depression during pregnancy:

- Increased risk of mental health issues in child, decreased birth weight, preterm labor, decreased fetal growth, preeclampsia, worsening psychiatric conditions after birth
- Recurrence greater if going off meds during pregnancy. Lowest risk for recurrence w/ maintaining current doses

SSRI use during pregnancy leads to:

- preterm labor, low birth weight, decreased apgar scores
- paxil - risk of cardiovascular malformations, especially in 1st trimester (Category D - would switch to another SSRI)
- SSRI use in 2nd trimester increased risk of neonatal pulmonary HTN
- could lead to withdrawal syndrome (paxil, TCA's)

***zoloft recommended.

NEJM 2007- no significant increased risk of heart defects, craniosynostosis, omphalocele

- Elavil, nortriptyline are safe but watch for WD syndrome after birth. May need to decrease late in pregnancy

Which med to choose?

- No good medication algorithms
- Zoloft: good choice due to less withdrawal and lower amounts in breastmilk and less effect on production ("with clinical considerations")
- Fluoxetine: also good, $4 ("with clinical considerations")
- wellbutrin
- elavil ok to continue for watch out for withdrawal

Monitoring:

- In 3rd trimester you need to watch depressive symptoms closely and may need to INCREASE doses (due to increased vascular space)

Approaching counseling: explain what "with clinical considerations" means, show that possible outcomes are related both to drugs and untreated depression, also discuss the postpartum time period -

importance of bonding and effect of depression on that. Overall risks of not treating outweigh risks of most meds.
- Counseling remains important, same resources as usual
    - Resident psychotherapy clinic
    - Mental Health Access Point, Greater Cincinnati Behavioral Health Services
    - Every child succeeds for first pregnancy (only post-partum depression in home therapy)

Postpartum Visit

Post-Partum 4-6 weeks after delivery; (also 1 week after C/S for incision check)

- Delivery history
    - Gestational age
    - Type of delivery
    - Complications
    - Infant care
    - Breastfeeding
- Exam; remember to include breast exam, thyroid & pelvic exam
  with Pap if > 1year and over 21 at 4-6 week check
- **Labs:**
    - GC/chlamydia and uterine position if planning Mirena at 8 weeks
    - Hgb/Hct if anemic
- Repeat Colposcopy **with ECC** if colposcopy done antepartum
- Edinburgh Post-partum Depression Scale
- CONTRACEPTION
    - Pre-authorize Nexplanon or Mirena insertion, if so desired
- Risk review and future plans/modification
    - Gestational diabetes
    - Hypertension
    - Substance abuse/tobacco
    - Depression
    - Domestic violence
    - Healthy weight

Indications for Antenatal Testing

1-insulin or medication dependent diabetes (GDMa2 or greater)
2-chronic hypertension or hypertensive disorders of pregnancy
3-fetal growth restriction
4-late term pregnancy 41 0/7 weeks &beyond
5-maternal substance abuse including greater than one pack per day smoking, cocaine, amphetamines, opioids
6-third trimester bleeding
7-history of previous stillbirth
8-unexplained elevated quad screen
9-decreased fetal movement
10-maternal chronic disease (cardiac, pulmonary, renal, collagen vascular)
11-multiple gestation
12-isoimmunization
13-known fetal anomaly
14-AMA age 40 at time of delivery
15-morbid obesity BMI = 40
16-oligohydramnios
17-moderate to severe asthma

AFI

Ultrasound in all 4 abdominal quadrants. Hold the probe parallel to the floor and perpendicular to the spine. Freeze the image when you see the largest pocket of fluid in each quadrant (must not contain cord or extremities!). Measure the pocket vertically (straight up and down). Add the values up when completed.

- Total ≤ 5cm= Oligohydramnios
- Total >5cm and <20 cm = Normal
- Total ≥ 20 cm = Polyhydramnios

Modified BPP= AFI +NST

BPP

8 points possible each test gets a score of 2 or zero

1. amniotic fluid single pocket 2 cm x 2 cm gets a score of 2
2. fetal breathing one event lasting 30 secs and a period of 30 min
3. fetal tone one active extension & return to flexion
4. gross motion 3 discrete movements in 30 minutes

General Interventions:

- BPP > 8 → home
- BPP = 6 → in hospital monitoring and reevaluate
- BPP < or = 4 → delivery

Induction of Labor

Indications
- Abruptio placentae
- Chorioamnionitis
- Fetal demise
- Gestational HTN, Preeclampsia, eclampsia
- PROM
- Post-term pregnancy
- Maternal medical conditions
    - Diabetes mellitus, renal disease, chronic pulmonary disease, chronic HTN, antiphospholipid syndrome
- Fetal compromise
    - Severe fetal growth restriction, isoimmunization, oligohydramnios

Criteria that must be met prior to IOL (not necessary for emergent reasons, eg eclampsia, severe preeclampsia, etc)
- US measurement at less than 20 weeks of gestation supports gestational age of 39 weeks or greater
- FHTs have been documented as present for 30 weeks by Doppler ultrasonography
- If it has been 36 weeks since a positive serum or urine hcg

Cervical Ripening
- Cervidil (dinoprostone)
    - 10mg, PV→Remove at 12h, at onset of active labor or if uterine hyperstimulation
- Foley Bulb→Mechanical dilation → puts pressure on cervix to cause dilation
    - May be combined with Pitocin
    - Can be left in as long as necessary, usually no longer than 24 hours is necessary
- Pitocin
    - 2 x 2 x 15
        - Start at 2 units, increase by 2 units every 30 minutes
    - Place internal monitors if necessary to monitor contraction pattern and MVUs

Steps to Schedule an Induction

* Confirm dates!!!!

Phone Calls:
- Call L&D desk to ask for availability
- Consult FM faculty for intended induction date and confirm approval (also notify FM OB on next day)
- Consult OB backups for intended induction date and confirm their approval (also consult OB backup on the next day)

Short presentation: Pt's name, age, G's and P's, EGA by ___ method (6 week us, lmp, etc), any pregnacy complications & indications for induction (post-dates, size, gest DM, MFM consult recs, etc) along with date & time of induction.

**Must call (not text) OB faculty and OB backups→ sample script below:

I would like to tell you about an induction I'd like to schedule. Do you have a minute to hear about that now? This is a G_P_ at _weeks confirmed by (LMP/__weeks US) who will be __weeks on this date of induction. We would like to induce her for (indication- late term, past 41, HTN, etc) . She has a Bishops score of __.We will do (cervical ripening/pit). Are you OK with us proceeding?

- Confirm date with L&D front desk- they will need patient's demographic data (MRN and phone number), type of induction (i.e. pitocin vs cervidil)
- Call patient their arrival time and date for induction
  - make sure time and date are ok
  - inform them to present to L&D front desk at time of induction and review process with patient
  - also review the potential that the pt may be called by L&D to move time to later or reschedule for next day if staffing issues/busy floor
- Call patient's primary MD/DO/CNM if they are not the one on call so they can be a part of it if they would like
- notify resident on OB & continuity resident if applies

(cont on next page)

Steps to Schedule an Induction (con't)

To do:

- Go to future encounter in EPIC under the 9 west context
- Complete the tab that says "scheduled delivery"— patient info (GsPs, etc, weeks determined by LMP vs US at **weeks, etc), EFW by Leopold's, bishop score info (WILL NEED CERVICAL EXAM— position, consistency, effacement, dilation, station), rationale for induction
  ** if not done, they will not start the induction or order meds from pharmacy and it will significantly delay the process (SEE BELOW)
- Pend orders for induction in the future encounter (order sets for pitocin and cervidil inductions to walk you through), reason is "preprocedure"
- You can start and pend the H&P (inpatient environment) if seen within a 3 days.

Scheduling tips:

- Do not schedule elective inductions on weekends including Friday night if can be avoided. Same for holidays. This is a staffing issue on the floor.
- Cervidil is scheduled for night slot. Pitocin is am slot. If unsure, go with night slot (can always be pushed forward)

Bishop Score

****must do prior to setting up induction to determine type of induction**

Bishop Score					
Score	Dilation	Cervical position	Effacement	Station	Cervical consistency
0	Closed	Posterior	0-30%	-3	Firm
1	1-2cm	Midpositi on	40-50%	-2	Medium
2	3-4cm	Anterior	60-70%	-1,0	Soft
3	5-6cm	--	80%+	+1,+2	--

Steps to arrange for a tubal ligation

1. Patient needs to complete **Medicaid sterilization form** (attached below and on V-drive under TCHMA, pregnancy, forms). This should be scanned into chart once completed and document in one of your notes that you reviewed the letter with the patient and that is was scanned into chart so that if the patient needs an unscheduled c-section this can be accessed on L&D.

2. Complete a referral for one of the OB's. See below for more information regarding coverage. Then call the OB directly to present the patient.

***Must be completed at least 30 days before procedure & only valid for 6 months. Don't do until at least 20 wks

3/2012 Survey Done of OB Back-up's Regarding Sterilization (BTL's):

The following docs are credentialed with these (Medicaid type) insurances Medicaid Ohio - BA, HG, DB, IW CareSource - BA, DB, IW Amerigroup - BA, DB, IW Buckeye - BA Molina - BA, DB, IW KY Medicaid - BA, DB, IW

Each Doctor has preferences for pre-procedure consultation and referral for patients with VALID, SIGNED MEDICAID BTL CONSENT FORMS. Please see below for which works best for your patient:

- Prefers Pre-BTL Counseling in Their Own Office : BA, DB, IW
- Prefers Pre-BTL Counseling in Their Own Office BEFORE delivery: DB, IW
- OK For Referral for Pre-BTL Counseling in Post-partum @ TCH: BA, IW

Steps to schedule a repeat or primary c-section

Confirm dating first!

People to talk to regarding scheduled c-section: OB, FM OB on the day it is scheduled, resident on FM OB the day it is scheduled, L&D front desk, and any resident for whom the pt is continuity… recommended call order:

- Call OB who did her last c-section or choose your OB of choice about the need for her c-section and for intended date. Obtain a few dates to prevent multiple phone calls. The choice of OB is based on previous c-section or your preference. You can discuss with FM attending if you have questions
    - Short presentation: Patient's name, age, Gs and Ps, EGA by _____ (method for dating), indication for c-section, previous indication (failure to progress, CPD, etc), type of incision. Offer to fax a copy of pt's records to OB.
    - if patient wants a tubal make sure to let the OB know! (see other evernote)
- Call L&D front desk to inquire about the date based on the OB's preference
- Once date is set call the FM faculty on that day, as they will need to enter delivery data and round on mom (socially) and baby if coming to family doc. Let them know who will be primary on baby.
- Call any residents who may be involved so there is no surprises when triage calls 😃
    - some OBs allow 2 residents to scrub and others only 1
- Call the L&D front desk back to confirm date and schedule!

Complete c-section teaching with pt (do NOT assume this is done by OB, these are our patients…)

- npo 8 hours before scheduled time (including water, gum, candy, etc)
- when to arrive at L&D—> 2 hours prior to scheduled time
- it helps to explain why: need IV and labs back beforehand, H&P, anesthesia...
- risk/benefit discussion

Steps to schedule a repeat or primary c-section (con't)

- explain that c/s may be postponed if L&D is too busy to safely start her c/s
- confirm who will be baby's doctor

If pt also wants tubal, make sure papers are completed and scanned into chart (see separate evernote for tips), give pt a copy to keep with her, and fax a copy to the OB.

For efficiency: once c-section is scheduled, you can open the future encounter through EPIC and pend the H&P (must be within 1 week of the c-section)

*** if you are going to be the doc in the c-section, arrive 2 hours prior to scheduled time to complete H&P

FHR Tracing Interpretation

Category I FHR tracing

- Strongly predictive of normal acid-base status
- FHR tracing shows ALL of the following
    - Baseline FHR 110-160 bpm
    - Moderate variability (6-25 bpm above baseline)
    - Accelerations may be present or absent
    - Must not have late or variable decelerations, may have early decelerations

Category II FHR tracing

- Not predictive of abnormal fetal acid-base status, but requires continued surveillance and reevaluation
- FHR tracing shows ANY of the following
    - Tachycardia
    - Bradycardia without absent variability
    - Minimal variability
    - Absent variability without recurrent decelerations
    - Marked variability
    - Absence of accelerations after stimulation
    - Recurrent variable decelerations with minimal or moderate variability
    - Prolonged deceleration >2 min but less than 10 min
    - Recurrent late decelerations with moderate variability
    - Variable decelerations with other characteristics such as slow return to baseline and “overshoot”

Category III FHR tracing

- Predictive of abnormal fetal acid-base status at time of observation. Depending on clinical situation, efforts to expeditiously resolve the underlying cause of the abnormal FHR pattern should be made.
- FHR tracing shows EITHER of the following
    - Sinusoidal pattern OR
    - Absent variability with recurrent late decelerations, recurrent variable decelerations or bradycardia.

FHR Tracing Interpretation (con't)

Abnormal FHR Tracing Interventions

- Maternal positional changes (ie. Left lateral, hands and knees, etc)
- Oxygen
- Fluid bolus
- Amnioinfusion, if ruptured (mainly for recurrent variable decelerations)

NST Criteria

≥ 32 weeks gestational age

- Moderate variability
- At least two accelerations in a 20 minute period at least 15 beats above baseline for 15 seconds
- No variable or late decelerations

28-32 weeks gestational age

- Moderate variability
- At least two accelerations in a 20 minute period at least 10 beats above baseline for 10 minutes
- No variable or late decelerations

< 28 weeks gestational age

- Verify presence of FHR and no prolonged or late decelerations
-
- If reactive, repeat in 7 days

-variable decelerations are common, but if repetitive or lasting > 60 sec, obtain BPP

-if nonreactive: options for further testing include BPP, CST or admit patient for extended monitoring

Phone Call Triage Guide

Problem	1st trimester	2nd trimester	3rd trimester
Vaginal bleeding- heavy bleeding like a period	needs eval- goes to ED	Needs eval- goes to ED or OB triage	Needs eval- goes to triage
Vaginal spotting- small amt seen on tissue or in underwear	If no ass'd symptoms (dizziness, cramping), monitor and see in AM, esp if ass'd with sex	Same, eval for PTL symptoms	Same, eval for labor sx and fetal movement, if both normal can be seen in AM
Vaginal discharge	Unless ass'd with dysuria or sig cramping/ctx can be seen next day	Same	Same
Contractions	Needs eval	Eval for B-H ctx. If not B-H, needs eval (contractions usually more of a tightening, <60sec, do not have to stop activity, irregular, goes away with fluids or change in activity/position)	Eval for B-H ctx. If <37 wks, needs eval for reg ctx (PTL). If >37 weeks, send in if ctx every 5 min or less for an hour or more, cant breathe through them, last 60-90sec
Decreased fetal movement	Usually quickening 19 weeks, not reliable in 1st trimester	Not reliable movement less than 28 weeks. Ok to send in for eval if mom concerned or prolonged time without movement	If >28 weeks, kick counts (>10 in 1 hour). If less than 10, drink juice and do again. If still < 10, come to triage). If no movement or prolonged time, needs eval
Loss of Fluid	Needs eval	Needs eval	Needs eval

URI symptoms	If flu sx, needs eval. If no concern for flu or high fevers, supportive care. No pseudoephedrine in 1st trimester. Afrin ok if bp nml. Breath right strips, nasal saline, nasal sprays ok. Honey, lemon, peppermint tea, humidifier, fluids.	Same. Ok to use pseudoephedrine with caution. Benadryl ok	Same as 2nd trimester
Cramping	Isolated without fever, vomiting, vaginal bleeding can be seen in clinic next AM. Tylenol prn, warm bath. Severe or with bleeding needs eval	Same. r/o PTL	Same. R/o PTL
Vomiting	If intractable, sudden onset or with associated sx, needs eval. If intermittent ok to eval in AM. Supportive care: peppermint, sea bands, crackers, small freq meals, lemon/sour candies, b6, ginger	Same	same

If sending in…now what?

1. Direct pt to ED (<20wks) or triage on 9th floor (if >20wks)
2. Call maternity faculty on call. If unsure can call L&D (585-2336) and they can direct you
3. Determine who will call L&D charge RN and FM resident on call. If cannot reach maternity faculty, still call L&D to let them know pt coming (585-2336).

If unsure what to do, call Maternity Faculty on call.

Triage – Labor Rule Out

DO NOT: Perform cervical check prior to STERILE SPECULUM EXAM

TO DO:

- FHR monitor
  - Category of FHR tracing
  - Contraction pattern
- Sterile speculum exam
  - Rule out ROM (see section on r/o ROM)
  - Wet prep and Gonorrhea/Chlamydia if abnormal discharge
- Steile vaginal exam (cervical check)
  - Dilatation
  - Effacement
  - Station
  - Cervical consistency (soft, medium, firm)
  - Cervical position (posterior, mid-plane, anterior)
- Rule out other causes the may precipitate contractions
  - UA – look for UTI and dehydration (specific gravity)
    - IVFs with high sp. Gravity
    - Abx for UTI
  - Intercourse

If STERILE VAGINAL EXAM is 0-4cm, allow patient to labor in triage for 1-2 hours and recheck sterile vaginal exam, if actively changing, may admit for labor or continue to monitor in triage if <4cm.

Patient may desire to get up and walk or utilize the Jacuzzi tub if they choose.

If latent labor (not dilating), may give:

- Tylenol 1g, PO
- Vistaril 25-50mg, PO
- Flexeril 5-10mg, PO (if not driving self)

Triage – Rule out Rupture of Membranes

DO NOT: Perform cervical check prior to STERILE SPECULUM EXAM

TO DO:

- Verify time of perceived ROM by patient
- Ask about intercourse (semen can cause false + nitrazine and ferning)
- Sterile speculum exam without gel
  - Wet prep
  - Gonorrhea/Chlamydia swab?
  - Is there pooling in the posterior vaginal vault?
  - Ferning slide- by taking sterile qtip, obtain fluid and spread onto slide. Allow this to dry completely (usually 2 minutes) then examine under microscope to look for ferning. Look at entire slide - not just one section.
  - ROM+ if other tests inconclusive
- If positive ROM, is it premature ROM (PROM)? Did contractions start prior to ROM?

Explanations:

- PROM – Premature rupture of membranes
  - ROM prior to onset of contractions
- PPROM – Preterm, premature rupture of membranes
  - ROM prior to onset of contractions <37 weeks
- Risks
  - increased risk of infection (chorioamnionitis) → limit steile vaginal exams
  - increased risk of cord prolapse if head not engaged
- See management of PROM

Triage- Trauma

- Place on monitor, at least 4 hrs depending on type of injury. Make sure tracing is Category I, no contractions
- History: Get specifics of injury. For example with MVA, how fast were they going? Head on vs side swiped, wearing seatbelt and where seatbelt was placed. Any LOC? Any contractions, LOF, VB?
- Exam: look for bruising, petechiae especially in abdominal history
- Work-up: Depending on mechanism of injury, may obtain Kleihauer–Betke test to look for maternal fetal hemorrhage. Send this as STAT. Then based on mom's blood type, need for Rhogam will be determined.
- Reassuruance goes a long way, as well as return precautions!!!

Triage – Rule out Preterm Labor (PTL)

DO NOT: Delay treatment if there is evidence that the pt is truly in labor

TO DO:

- Examine the patient ASAP!!
- FHR monitor and tocometer
- STERILE SPECULUM EXAM first
  - Check for infections
    - UTI, GC/CT, CBC, uterine tenderness, wet prep
  - Rule out ROM
    - If ruptured, DO NOT perform STERILE VAGINAL EXAM
  - Fetal fibronectin (22-34.6 wks)
    - Not valid if ROM or intercourse in past 24 hr, recent cervical exam, or bleeding
    - Ie use a DRY SPECULUM
  - Visualize if cervix dilating
    - If dilating and not ROM → perform STERILE VAGINAL EXAM
- Other causes of preterm contractions
  - UDS Legal for illicit drug use
  - UA for eval of sp. gravity if dry → IVFs
- Consider US for cervical length
  - If <2cm, plan for stabilization and transfer

If cervical length <2cm or STERILE VAGINAL EXAM dilating → Consult OB/Gyn

- KNOW THE PATIENT!!
  - Review medical records and dating
- If <34 weeks, prepare for transfer
  - Give betamethasone 12mg, IM, q24h x 2 doses
  - check STERILE VAGINAL EXAM immediately prior to transfer if not ROM
- If cervix dilated and effaced, begin tx
  - **Terbutaline** – 0.25mg SQ, q20min, hold for HR>120
  - **Procardia** 30mg loading dose, then 10-20mg, q4-6hr
  - **Mg sulfate** – 4-6gm for 20min, 2-3 g/hr
  - **Indomethacin** – 50mg PR or 100mg PO then 25-50mg PO q6hr

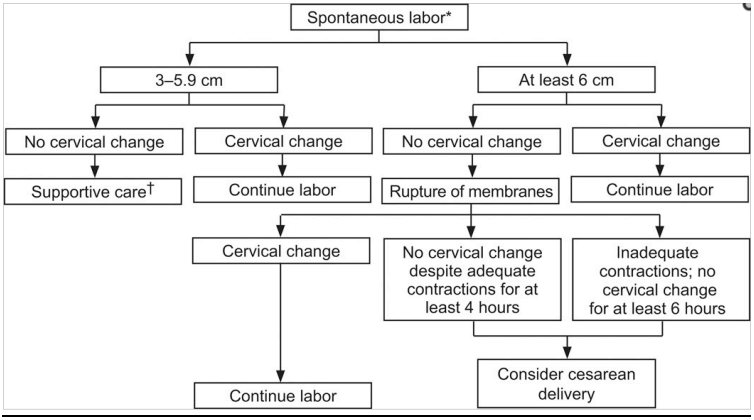
Labor- Normal Labor Management

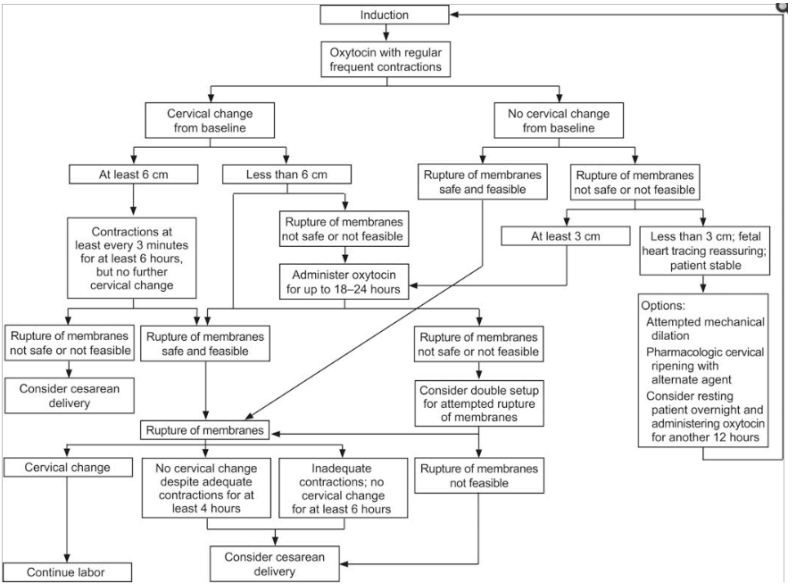
Be active, not reactive!

TO DO:
- Use labor curve (partogram) on all labors
  - Needs to progress >1cm/hr if in active labor with adequate contractions
- STERILE VAGINAL EXAM q2 hours, or more often as clinically indicated (ie, abnormal FHR tracing, maternal symptoms, etc)

Interventions:
- Take interventions if patient falls off labor curve
  - AROM (amniohook)
  - Pitocin
    - Use orderset
    - Can be on Pitocin without IUPC up to 20 units
  - Indications for internal monitors (FSE and IUPC)
    - Difficulty monitoring FHR
    - Difficulty monitoring contraction pattern
    - Pitocin rate 20 units/min or more
    - Difficulty correlating FHR abnormalities with contractions

Preventing the first Cesarean Delivery by Spong et al. Obstet Gynecol. 2012 Nov; 120(5): 1181–1193.





Labor – Failure to progress/descend

Prolonged latent phase- >20hrs in nulliparous or >14 h in multip

Failure to progress (arrest of active phase) – absence of cervical change for 2 hours or more in the presence of adequate uterine contractions and cervical dilation of at least 4cm.

- Average change is 1.2cm/hr in nullip and 1.5cm in multip
- Take all labor interventions and monitor MVUs with IUPC
  - Want MVUs >200 over 10 minute period
- Treatment
  - Stop Pitocin
  - Cesarean delivery

Failure to descend (arrest of second stage) – lack of fetal vertex descent through the birth canal

*second stage starts when completely dilated

*Average is 50min in nullip and 20 min in multip

- At least 2 hours of pushing in multiparous women
- At least 3 hours of pushing in nulliparous women
- May allow for longer durations on case by case basis as along as progress is being made
  - Use of epidural analgesia
  - Fetal malposition (OP presentation)

- Treatment
    - Consider operative vaginal delivery if appropriate (see operative vaginal delivery on next page)
    - If operative vaginal delivery not appropriate
        - Stop Pitocin
        - Cesarean delivery

Prolonged 3rd stage- if placenta is retained > 30 min

Labor – Abnormal FHR Tracing

TO DO:
- Know what pattern you are looking at!
- Interpret FHR tracing quickly – baseline, variability, type of decels

Interventions
- IVF bolus
- Oxygen
- Maternal position changes
- Stop Pitocin
- Perform STERILE VAGINAL EXAM → don't forget scalp stimulation!! Acidotic babies are not able to have accelerations!
    - If variable decels → make sure there is not a cord prolapse!!
        - If there is a cord prolapse, PUSH FETAL HEAD UP AND DON'T MOVE, YOU'RE GOING FOR A RIDE WITH THE PATIENT TO THE OR!!!

** Abnormal FHR or low apgars, send placenta to pathology!!
** Abnormal FHR, send cord blood gases!!

Labor- GBS

TABLE 3. Indications and nonindications for intrapartum antibiotic prophylaxis to prevent early-onset group B streptococcal (GBS) disease

Intrapartum GBS prophylaxis indicated	Intrapartum GBS prophylaxis not indicated
• Previous infant with invasive GBS disease	• Colonization with GBS during a previous pregnancy (unless an indication for GBS prophylaxis is present for current pregnancy)
• GBS bacteriuria during any trimester of the current pregnancy*	• GBS bacteriuria during previous pregnancy (unless an indication for GBS prophylaxis is present for current pregnancy)
• Positive GBS vaginal-rectal screening culture in late gestation† during current pregnancy*	• Negative vaginal and rectal GBS screening culture in late gestation† during the current pregnancy, regardless of intrapartum risk factors
• Unknown GBS status at the onset of labor (culture not done, incomplete, or results unknown) and any of the following: – Delivery at <37 weeks' gestation§ – Amniotic membrane rupture ≥18 hours – Intrapartum temperature ≥100.4°F (≥38.0°C)¶ – Intrapartum NAAT** positive for GBS	• Cesarean delivery performed before onset of labor on a woman with intact amniotic membranes, regardless of GBS colonization status or gestational age

Abbreviation: NAAT = Nucleic acid amplification tests

* Intrapartum antibiotic prophylaxis is not indicated in this circumstance if a cesarean delivery is performed before onset of labor on a woman with intact amniotic membranes.

† Optimal timing for prenatal GBS screening is at 35–37 weeks' gestation.

§ Recommendations for the use of intrapartum antibiotics for prevention of early-onset GBS disease in the setting of threatened preterm delivery are presented in Figures 5 and 6.

¶ If amnionitis is suspected, broad-spectrum antibiotic therapy that includes an agent known to be active against GBS should replace GBS prophylaxis.

** NAAT testing for GBS is optional and might not be available in all settings. If intrapartum NAAT is negative for GBS but any other intrapartum risk factor (delivery at <37 weeks' gestation, amniotic membrane rupture at ≥18 hours, or temperature ≥100.4°F [≥38.0°C]) is present, then intrapartum antibiotic prophylaxis is indicated.

-GBS app is very helpful!

Labor – Shoulder Dystocia

REMEMBER YOUR ALSO TRAINING!!!

Recognize risk factors and warning signs forshoulder dystocia BEFORE it happens, and be prepared!!

- Have step stool ready for nurse to provide suprapubic pressure
- Perform Leopold's maneuvers on EVERY patient, try to guestimate EFW based on exam, this will improve with exerience
- Offer primary c-section with EFW of at least 5,000 gm in women without diabetes and at least 4,500 gm in women with diabetes (by US)

HELPERR (from ALSO)

1. Call for HELP!!
2. Evaluate for episiotomy
3. Legs and McRoberts Maneuver
4. Suprapubic Pressure (not fundal)
5. Enter internal maneuvers
    a. Rubins (rotate anterior shoulder)
    b. Woods Screw (Rubins + posterior shoulder)
    c. Reverse Woods Screw (opposite rotation)
6. Remove posterior arm
7. Roll the patient onto all fours, deliver posterior shoulder first
8. Last Resort
    a. Clavicle fracture
    b. Zavanelli (c-section after pushing head back in)
    c. Symphysiotomy
    d. Abdominal surgery/hysterotomy assisted vaginal delivery

**send cord blood gases!

Keep a mental note of time!! Let your nurses help by telling them you have a dystocia and to mark the time

Labor – Management of HTN/Preeclampsia

Monitor VS continuously!!!

If BP > 160 SBP or > 110 DBP, check cuff and patient position, and recheck, if still elevated DO NOT WAIT TO TREAT!!!

Can treat with labetalol or hydralazine

- Labetalol
  - First dose 20mg IV over 2 minutes
  - Repeat BP 10 min after each dose, and double the dose each time
    - Eg, if still elevated 10 min after first dose give 40mg IV over 2 minutes
  - If still elevated after 10 min, give 80mg IV over 2 min (max dose)
  - If still elevated 10 min after the 80mg dose, give **hydralazine** 10mg IV over 2 min
  - If still elevated → consult maternal-fetal medicine (High Risk OB)

- Hydralazine
  - Start with 5mg IV over 2 min and recheck BP in 20 min
  - If still elevated double dose to 10mg IV over 2 min and recheck in 20 min
  - If still elevated double dose to 20mg IV over 2 min and recheck in 20 min
  - If still elevated give labetalol 40mg IV over 2 min and consult MFM

If BP become within range monitor closely

- Repeat BP q10min for 1 hr, then q15min for 1 hr, then q30min for 1 hr then hourly for 4 hours.

Should also start Magnesium Sulfate as soon as possible for neuroprophylaxis!!! (see next page)

Labor – Magnesium Sulfate

Used for neuroprophylaxis if BP in severe range (>160 SBP or >110 DBP)

Dosing
- 6g loading dose over 20 min, then drip rate of 2 g/hr (the bigger the patient the higher the drip rate)

Monitoring (signs of mag toxicity)
- Mag levels not necessary unless develops signs of toxicity
- Signs of toxicity (get a Mg level if develops any of the following, then decrease rate to stay below this level)
    - Pulmonary edema (get CXR if lungs sound wet or pt complaining of SOA)
    - Decreased UOP to <25 ml/hr
    - Hyporeflexia (baseline DTRs prior to starting Mg)

Continue Magnesium until 24 hours postpartum.

Labor – Eclampsia

DON'T PANIC!! Call for help!
- Oxygen
- Initiate and maintain magnesium therapy- see dosing above
- If second convulsion occurs after initiating mag give another 2g IV bolus of mag
- If seizures persistent
    - Lorazepam 0.02-0.03 mg/kg IV per occurrence up to a cumulative dose of 0.1 mg/kg at a max rate of 2mg/min
- If seizures still continue despite mag and lorazepam
    - Paralyze and intubate
- Once mom is stabilized, get the baby out!!

Labor – Gestational Diabetes Intrapartum

Test BS q2hr while not in active labor, then q1hr when active

If BS 101-140, normal IVFs → LR at 125 ml/hr

If BS <100, start D5LR at 125 ml/hr

If BS >140, start insulin drip 100 units/100 mL per "OB Insulin Drip for Laboring Patients" protocol in addition to D5LR at 125 ml/hr

Labor - Chorioamnionitis

Clinical Findings
- Fever >100.4
- Uterine tenderness
- Maternal tachycardia (>100bpm)
- Fetal tachycardia (>160/min)
- Purulent or foul amniotic fluid
- Maternal leukocytosis >15,000

Standard Treatment
- Ampicillin 2g, IV, q6h

  AND
- Gentamicin 1.5mg/kg, IV, q8h
- ** Send placenta to pathology!

Alternative treatments
- Ampicillin-sulbactam 3g, IV, q6h
- Ticarcillin-clavulanate 3.1g, IV, q4h
- Cefoxitin 2g, IV, q6h

Penicillin Allergic Patients
- Substitute Vancomycin 1g, IV, q12h in place of ampicillin

Postpartum hemorrhage

Causes	Risk Factors
Uterine atony (70%) Retained placenta (10%) Defects in coagulation Uterine inversion Subinvolution of placental site Infection	Prolonged labor Augmented labor Rapid labor h/o PP hemorrhage Preeclampsia Over-distended uterus (macrosomia, multiples, polyhydramnios) Operative delivery Asian or Hispanic ethnicity Chorioamnionitis

EXAMINE THE PLACENTA!!

- If obvious piece missing → manual extraction with proper pain control (morphine if no epidural) may be necessary, consider getting US if not sure

**send placenta to pathology!!

Medical Management

- Oxytocin (Pitocin)
  - 30 units in 1L LR IV or 10 units IM
- Methergine **(avoid in in HTN)**
  - 0.2mg IM, q2-4h
- Hemabate **(avoid in asthma)**
  - 0.25mg IM, q15-90min, 8 dose max
- Cytotec
  - 800mcg, PR

Uterine Tamponade

- Bimanual compression
- Packing – 4-inch gauze, can soak with 5,000 units of thrombin in 5mL of sterile saline
- Foley catheter – 1 or more filled with 60-80 mL of saline
- Bakri Balloon Tamponade

Postpartum Rounds Tips

1) Jot down a list of patients that need to be seen and room numbers. Make sure to note what postpartum day # each mom is and whether or not they were a SVD or C/S.

2) While seeing each mom, note the following

- Any bleeding and if so how much? What color and consistency is the lochia?
- Bowel mvmt? Flatus? (esp important for C-sections)
- Tolerating PO?
- Ambulating?
- Breast or bottle feeding?
- Plan for birth control?

3) Physical exam: pay attention to heart, lungs, abdomen, legs & incision site, if applicable.

4) Write progress note: .maternityservicespostpartumintervalday

Note: Michelle likes to see the following on her PN's & D/C summaries: Mother comfortable with care of self and baby. Uterus size * cm below the umbilicus. Perineum without edema or hematoma, intact, episiotomy well-approximated (if applicable).

5) Sample orders for postpartum day #1 (C-section)—> order set:

- Discontinue Foley if not already done
- Hep lock IV
- Advance diet as tolerated
- Ambulate TID
- Percocet 5/325 1-2 mg PO Q6H PRN pain
- Motrin 800 mg PO Q8H PRN pain
- Colace 100 mg PO BID PRN constipation
- Simethicone 80 mg PO TID PRN gas
- FeSO4 325 mg PO daily (if anemic)

6) Discharging a patient:

- SVD can be discharged on PPD #1 90% of the time
- C-section usually discharged no sooner than PPD #3
- Discharge summary: .fmobpostpartumdischargesummary
- Prescriptions to consider at discharge: PNV's, FeSO4, Motrin, Colace, Percocet if C/S
- Follow-up : 6 week postpartum check for Mom + baby ----- follow-up within 1 week—> need to sent note to barb or anita prior to discharge to let them know to call the patient and schedule

Baby Basics

Jaundice: Online bili tool→ bilitool.org
- Input hours of life and bili level to obtain risk level

Physiologic: T bili peaks at 3-5 days in term, 5-7 days in preterm, resolves by 2 wks in breastfed, 1 week in formula-fed
- no direct bilirubinemia
- T. bili increases < 5 mg/dl/day

Pathologic:
- Onset < 24 HOL
- T. bili increases > 5 mg/dl/day
- T. bili > 15 in term, >12 in preterm
- Workup: Fractionated bili, CBC, Type and DAT; in anemic retic count and PBS
- Management: Feeds regularly at q 2-3 hr intervals. Continue breastfeeding, supplement if needed. Lights as indicated by phototherapy chart

Weight gain:

-20 to 30 g (0.07 to 1.05 oz) per day, 150 to 200 g (5.3 to 7.0 oz) per week.
-Term neonates may lose up to 10 percent of their birth weight in the first few days of life and typically regain their birth weight by 10 to 14 days.
-Newborns gain approximately 30 g/day (1 oz/day) until three months of age
-Infants gain approximately 20 g/day (0.67 oz/day) between three and six months of age and approximately 10 g/day between 6 and 12 months.
-Infants double their birth weight by four months of age and triple their birth weight by one year
-Children gain 2 kg/year (4.4 lbs/year) between two years and puberty

Discharge counseling for Parents: ("Mom talk")
- Sleeping: own bed, on back, one layer more than what parents are comfortable with, no stuffed animals/pillows/extra blankets
- Eating:
    - Instruction on proper breastfeeding position, attachment, and adequacy of swallowing; offer outpatient lactation follow-up

- Breastfeeding mothers should consult their physicians before taking any new medications.
- Parents should not give their infant supplemental water or honey.
- Breastfed and bottle-fed infants receiving less than 1000 mL of formula per day should receive 400 IU of a vitamin D supplement per day.

- Peeing and pooping: 6 or more wet diapers per day for breast and bottle fed
    - More than 3 BM's per day for breastfed, bottle- fed 1-2 BM's
- Umbilical cord care
- Signs of illness
- Car seat use
- Avoiding smoking exposure
- Follow-up appt

Breastfeeding contraindications:

- classic galactosemia (galactose 1-phosphate uridyltransferase deficiency)
- mothers with active untreated TB disease or are human T-cell lymphotropic virus type I–or II–pos
- mothers receiving diagnostic or therapeutic radioactive isotopes or have had exposure to radioactive materials (for as long as there is radioactivity in the milk)
- mothers who are receiving antimetabolites or chemotherapeutic agents
- mothers who are using drugs of abuse
- mothers who have HSV lesions on a breast (infant may feed from other breast if no lesion)

Smart phrases:

Inpatient: All begin with .fmob

.fmobnewborninitialhospital (baby H&P)

.fmobnewbornintervalhospital (baby progress note)

.fmobpostpartumintervalday (mom progress note)

.fmoblaboradmit (admission h&P)

.fmoblaborprogressnote (labor progress note)

.fmobnewborndischargehospital (baby d/c summary)

.fmobpostpartumdischargesummary (mom d/c summary)

.fmobtriagenote (triage note)

.fmobdeliverynote (delivery) — procedure note title

.fmobvacuumdelivery (vacuum delivery)

Discharge instructions (hospital)

.fmobinfantdischargeinstructions (baby d/c instruct)

.fmobmaternaldischargeinstructions (mom d/c instruct)

.fmobapptafterhospital (d/c instr for patient to schedule)

.fmobappointmentafterhospital (note to route to RN or PNC to help schedule patient)

Procedures:

.fmobrisksandbenefitsofinduction

.fmobcircumcisiongomco

.fmobcircumcisionmogen

.arom

.csectionrisksandbenefits - can put into progress note to document counseling

Clinic procedures:

.afi

.nst

.bpp

.fmobfrenulotomy

Problem List

.obproblist - use for all obs

.cradlecincitobaccoproblemlist - use in all smokers under separate problem of “tobacco abuse"

.cradleformersmoker- use in all former smokers under separate problems of “former smoker"

TCHMA patients:

all start with .fmcob… pick the right one based on the weeks gestation

Centering and PNC:

.cradlecincitobaccoquestionaire- done at 1st ob visit by MA

.obsoap: Update the prob list during session, then use .obsoap. If the problem list wasn't completely update or changed, just hit "refresh" and it will bring those changes.

.cradlecinti28weekcounseling- document this counseling at 28 week visit!

.postpartumhistory, .ppexam: use both for HPI and exam, Then you just need to do a free text a/p or you can use .problemlist or .assessplan

.fmobedinburghnewborn
.fmobedinburghpregnancy

Patient instructions (office visits):

.childbirthclasses: gives the 585-HUGS number to schedule child birth classes and tours
.2fluids2fives
.cradlecincitobaccocessationsupport
.preginstr1- 1st trimester patient instructions
.preginstr2 - 2nd trimester patient instructions
.preginstr3- 3rd trimester patient instructions
.preginstreating
.preginstrexercise
.preginstrsleep
.dentistpregnancyletter

Result phone notes:

.pnclabinitialnormal
.pnclabanemia
.pnclabuti
.pnclabpap
.pnclab2ndtrimesteranemia
.pnclabgctfail
.gbsneg
.gbspenallergic
.gbspositive

Send completed result message to "P OPD TCH nurse " (PNC) or your MA (TCHMA) who will then call the patient for you

Ordersets:

- Vaginal delivery intrapartum (admission orders)
- Cervidil induction
- Postpartum orders (complete after delivery, then "sign and hold" to release on transfer)
- Newborn admission orders
- C-section (offer to order these for the OB on call)

Phone numbers: Our OB phone 5-0022
OB numbers: PNC 5-2595, 5-2472
Special Care Nursery 5-2321
Social Work 5-2983
Lactation: 5-0597, 5-2213, 5-2261
OB Resident Phone 5-2786
L&D Front Desk (for sch inductions) - 5-2336
Triage 5-1741
Charge RN 5-1740 (call when you send someone to L&D)
*Routing charts in clinic to RN (Judy, Barb): P TCH OPD NURSES

Codes:
5-4-2 Triage
5-4-2-* 9th floor nurses station by triage. Room 9009
2-4-3-5 Nursery on 8
5-4-2 Women's Locker Room
2&4 -3 women's doctors locker room
1-4-5 male locker room
1-7-1 L&D Break Room
2-5-2-0 * PNC code

During the day, most attendings are best reached by cell and most text. In the evenings & nights go to pager first.

Attendings:
Dr Rosenthal: P 513-249-0679, C 513-218-0913
Dr Lazaron: P 513-971-9041, C 513-460-4634
Dr Spata: P 513-209-0431, C 425-591-6008
Michelle Zamudio: P 513-343-2235, C 513-225-1709
Dr. Girard C 513-325-8337, P 513-577-0144

Back-ups:
Dr Allen: C 310-1104, Office 871-0290
Dr Washington: C 305-1741, Office 699-2810
Dr Barrere: c 513-543-1483, office 513-784-1201
Dr. Grim: p 513-554-7211, office 513-931-3400
Dr. Heidi: c 513-325-3250, office 513-564-6644
Dr. Weisberger: c 513-460-8359, office 859-341-5550

Friday newborn rounds:
Dr. Bernheisel: P 513-577-5183, C 513-377-7828
Dr. Glass: P 513-820-0234, C 513-607-3433