Family Medicine Clinical Card A16 2011
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Routine Prenatal Care

INITIAL VISIT – CORE ELEMENTS

History & Physical

- ☐ Estimated date of delivery: 1st day of LMP + 7d - 3 mo, adjust for cycle length
- ☐ *Is this pregnancy planned or unplanned?*
- ☐ *Are there any safety concerns? Are there any significant health issues?*
- ☐ BP, maternal weight and height

Investigations

- ☐ Consider U/S for EDD, if uncertain LMP
- ☐ Baseline labs:
  - ABO/Rh and antibody screen
  - Hgb, urine R&M + C&S
  - varicella, rubella, syphilis, Hep B, HIV
  - gonorrhea + chlamydia (swab/urine)
- ☐ Pap test:
  - if (+) hx of abnormal results, do test if not done in past 6-12 m
  - if (-) hx, do test if last done ≥ 3 y
- ☐ Consider extra screening for STIs and heritable disorders

Patient Counseling

- ☐ Advise about ongoing prenatal care (visit frequency, routine monitoring)
- ☐ Prenatal multivitamin with:
  - Fe 27-30 mg/day, stop if nausea
- ☐ Dietary Ca 1000-1300 mg/day
- ☐ Vit D supp 2000 IU/day
- ☐ Folate supp, low risk 0.4 mg/day
- ☐ Avoid: tobacco, alcohol, illicit drugs
  - raw: meats/eggs/fish
  - deli meats, unpasteurized products
- ☐ Medication use (motherisk.org)
- ☐ Discuss non-invasive genetic screening, offer if results are desired

FIRST COUPLE OF VISITS – CORE ELEMENTS

Complete History, including:

- ☐ Obstetrical hx (GPTAL)
- ☐ STI hx
- ☐ Depression hx
- ☐ Psychosocial risk factors, e.g. ALPHA form (PMID: 16076821) www.dfcm.utoronto.ca/Assets/DFCM+Digital+Assets/alpha_form_english.pdf

Complete Exam, including:

- ☐ Breast
- ☐ Uterus, adnexae
- ☐ Thyroid
- ☐ Lower back tattoos: epidural may be contraindicated

Patient Counseling

- ☐ Physiological Δs in pregnancy, including:
  - weight gain (normal prepregnant BMI = 25-35 lbs; overweight = 15-25 lbs; obese = 11-20 lbs)
  - blurry long distance vision (reversible)
  - skin moles darkening (reversible)
- ☐ Diet: well-balanced and varied
- ☐ Work: avoid rotating shift work at ≥ 23 wk
- ☐ Exercise: avoid high impact activity
- ☐ Sex: is generally safe
- ☐ Wear seat belt with lap belt snug across hips
- ☐ Avoid hot tubs and saunas
- ☐ Air travel: avoid at ≥ 36 wk, consult airlines
- ☐ Influenza vaccine, for all women who will be pregnant during flu season

FOLLOW-UP VISITS -

FREQUENCY: ≤ 30 wk = q4weeks, 30-36 wk = q2weeks, ≥ 36 wk = weekly

ASK: "ABCD" = fetal activity, vaginal bleeding, contractions & discharge. **Any abnormalities → refer to L&D.**

MONITOR: - BP, maternal weight, SFH
- Fetal heart auscultation (≥ 9-12 wk)
- Fetal presentation (≥ 30-32 wk)

TEACH: fetal movement counts (≥ 30 wk), if indicated. Count in early evening and in reclined position (not supine). **If < 6 movements in 2 h → NST.**

STANDARD INVESTIGATIONS

GA (wks)	Investigations
12-16	Urine R&M + C&S
18-20	U/S for structural assessment
26-28	GDM screen (1h 50g OGCT), HgB, Rh antibodies
28	RhIG for all Rh-ve women
36-37	GBS screen (vaginal & rectal swabs)
41-42	Offer labour induction

ELECTIVE INVESTIGATIONS Offer CVS or amniocentesis, if (+) genetic screening or women at increased risk based on hx

Key References: Kirkham C, Harris S, and Grzybowski S. Evidence-Based Prenatal Care: Part I. General Prenatal Care and Counseling Issues. *Am Fam Physician* 2005, 71(7): 1307-16; Kirkham C, Harris S, and Grzybowski S. Evidence-Based Prenatal Care: Part II. Third-Trimester Care and Prevention of Infectious Diseases. *Am Fam Physician* 2005, 71(8): 1555-60

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Common Prenatal Problems

NAUSEA AND VOMITING

- begins @ 6 wks, peaks @ 9 wks; 60% resolve by 12 wks, 91% by 20 wks, 5% entire preg
- women with N&V have fewer spont. abortions and stillbirths vs. women without N&V
- hyperemesis gravidarum = most severe form of NV occurs in < 1%

1st line treatment

Start Diclectin (combo of 10 mg doxylamine + 10 mg pyridoxine)
- recommended dose = 4 tabs daily (2 qhs + 1 qam + 1 qafternoon)
- up to 8 tabs daily, adjust prn, delayed action (takes 8 h to work)

2nd line treatment

Add or switch to a substitute: antihistamines, e.g. dimenhydrinate, diphenhydramine
- for acute or breakthrough NV, use IV and PR formulation

3rd line treatment

If *dehydrated*:
- **warning signs: wt loss, oliguria**
- hospitalize with IV fluid replacement, multivitamin IV, antiemetic IV

If *well-hydrated*, add or switch to a substitute (in order of fetal safety):
- phenothiazines, e.g. chlorpromazine; metoclopromide; ondansetron

4th line treatment

Corticosteroids, e.g. methylprednisolone, consider only in refractory cases
- avoid corticosteroids at ≤ 10 wks because of higher risk of oral clefting

Consider other causes or exacerbating factors, test:
- electrolytes, Cr, Bun, liver function, TSH, drug levels, U/S and *H. pylori* testing

Notes

Diet and lifestyle Δs, including:
- eat what appeals, avoid triggers, smaller frequent meals, rest plenty
- stop prenatal multivitamin with Fe (Fe causes gastric irritation/ N&V)

Adjuvant treatment can be added at any time, including:
- ginger supp (in any form, maximum dose = < 1 g per day)
- pyridoxine, acupressure, acupuncture

HEARTBURN AND ACID REFLUX

1st line	Antacids (avoid Mg triscilicate and bicarbonate-containing antacids)
2nd line	- H2 antagonists, e.g. ranitidine - PPIs, e.g. omeprazole, pantoprazole
AVOID	Pepto Bismol because of salicylate absorption
Notes	Lifestyle modifications, including: eat smaller and more frequent meals, avoid eating near bedtime, elevate head of bed

URINARY TRACT INFECTION

-treat asympt. bacteriuria; if not, ↑ risk of cystitis, pyelonephritis & preterm labour

1st line	Penicillins, cephalosporins, fluoroquinolones, nitrofurantoin, phenazopyridine
AVOID	- nitrofurantoin ≥ 38 wks → hemolytic anemia in fetus or newborn - TMP-SMX in first trimester → neural tube defects - TMP-SMX ≥ 32 wks → increased kernicterus in newborn - tetracycline / doxycycline → deposition on bones and teeth
Notes	Prophylactic treatment (if desired): vit C 500 mg daily, cranberry juice

HEADACHE

- **warning signs of severe preeclampsia: sudden onset in 3rd trimester with vision changes, RUQ pain, facial edema +/- ↑ BP**
- treatment: increase sleep & fluid intake, acetaminophen
- **avoid** NSAIDS → teratogenic < 12 wks, ↓ amniotic fluid ≥ 12 wks

LOW BACK PAIN

treatment:
- back exercises
- chiropractic
- physiotherapy

Key References: Arsenault M, and Lane CA. The Management of Nausea and Vomiting in Pregnancy. *SOGC Clinical Practice Guidelines Number 102*. Ottawa: SOGC, 2002; Lavy R, Maltepe C, Bozzo P, and Einarson A. Treatment of Heartburn and Acid Reflux Associated with Nausea and Vomiting During Pregnancy. *Can Fam Physician* 2010, 56(2): 143-4; Lee M, Bozzo P, Einarson A, and Koren G. Urinary Tract Infections in Pregnancy. *Can Fam Physician* 2008, 54(6): 853-4.

Initial Encounter

Establishing rapport is the single most important aspect of the initial encounter.

- Several visits may be required to complete all sections of the assessment
- Complete sections as indicated by the presentation and circumstances of the woman
- Address the woman's needs and withdrawal symptoms before moving on to next sections
- Address the woman in a culturally-appropriate, non-judgemental manner
- Offer help as needed or wanted
- Refrain from trying to "cure" the woman

Screening and Assessment

History*

Medical	• Chronic and acute medical concerns • Medications, allergies • Gynecological and obstetrical history (GTPAL, last menstrual period) • HIV, Hepatitis A, B, C (HAV, HBV, HCV), sexually transmitted diseases (STDs) • Family history of substance dependence and psychiatric conditions • Psychiatric history (diagnosis, previous treatment, abuse history, eating disorders) • Previous emergency visits, hospitalizations
Drug Use	• How much alcohol do you drink? (See page 19 for T-ACE) • Do you smoke? If yes, how many cigarettes per day? • Have you ever used cocaine, marijuana or any other recreational drug? (Modify based on drugs used in your community)
Drug Use (Cont.)	• What's your drug of choice? Route(s) of use? • Have you ever used drugs by injection? (See page 12 for infectious disease concerns with injection drug use)
Mood	• How has your mood been during this pregnancy? (See page 37 for PPD)
Woman and Child Safety	A woman may not readily admit to violence. Disclosure is a voluntary act. If you have any suspicion about woman abuse, consider using the following questions: • Have you been hit, kicked, punched or otherwise hurt by someone within the past year? If so, by whom? • Do you feel safe in your current relationship? • Is there a partner from a previous relationship who is making you feel unsafe now? You may also wish to ask about relational aspects of a woman's substance use: • Do you ever use alcohol or drugs in response to your partner's treatment of you? • Do you ever use alcohol or drugs to help cope with fear? • Do you ever feel pressured or manipulated by your partner to use alcohol or drugs? • If you quit using, what would your partner do? Would you be supported? Child safety: (See page 11 for child protection) • Do you have any children living with you? • Where is/are your child(ren) now? • When you are using, who is usually with your child(ren)? • Has anyone ever threatened or abused your child(ren)?

*** Consider using the ALPHA (Antenatal Psychosocial Health Assessment) Form: http://dfcm19.med.utoronto.ca/research/alpha**

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Physical Exam

Ask for permission to examine her and explain what you are doing. Ensure safety, privacy, confidentiality.

- Vital signs, weight, fetal heart rate (gestational age dependent)
- Skin: needlemarks, cellulitis/abscesses, bruises/cuts/burns
- Abdominal exam: tenderness, symphysis fundal height (if uterus palpable), hepatosplenomegaly
- Gynecological exam can be deferred until second visit unless patient amenable or if urgently needed

Investigations

- Bloodwork: Quantitative serum β-HCG, routine prenatal bloodwork, (hepatitis B, syphilis, rubella), hepatitis C antibody, liver enzymes (AST, ALT), HIV serology
- Recommend genetic screening: biomarker may be used to predict poor pregnancy outcome
- Urine: routine and microscopy (protein), culture and sensitivity
- Ultrasound: for dates (if uncertain) and morphology (if appropriate gestational age)
- Consider utility of voluntary urine drug screening (UDS) (with consent) (See page 16)
  - Pro: Can help clarify an unclear drug history; necessary if considering methadone maintenance therapy
  - Con: If framed poorly, can create an adversarial relationship from the first meeting

Intervention

- Deal with immediate needs and issues (See page 3)
- Treat intoxication and withdrawal promptly
  (See appropriate protocols with different substances)
  - Consider admission for management of alcohol, opiate and high-dose benzodiazepine withdrawal
- Plan for follow-up soon after initial encounter
- Be honest and open about any child protection responsibilities (See page 11)
  - No legal requirement to report the unborn fetus to child protection agencies – consider earlier referral if children in her care and encourage self-referral
- Consider transfer of care to level II/III centre and experienced caregiver according to clinical needs
- If abstinence not achievable at present, focus on harm reduction

When Interviewing Remember:

- Watch for non-verbal cues
- Be woman-centred
  - Explain alternatives and offer choices
  - Obtain consent for all procedures
  - Honour her decisions
- Appearance of belligerence or anger may signify:
  - Previous negative health care experience
  - Illiteracy/limited intellectual functioning
  - Intoxication/withdrawal/fear/pain
  - Vulnerability/abuse/mental health problems

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Management of Medical Emergency

Physical Exam

- **Pay attention to ABCs:**
  - **A**irway maintenance and C-spine control
  - **B**reathing and ventilation
  - **C**irculation (blood pressure, pulse, need for IV fluids?)

!! Focus on BP, pulse, level of consciousness, size and reactivity of pupils

- General Appearance:
  - Hygiene
  - Fatigue
  - Weight
  - Signs of overdose or withdrawal
  - Needle marks, nasal septum erosions
  - Mucous membranes
  - Odours
  - Signs of trauma, seizures
- Vital signs: temperature, blood pressure, pulse, respirations
- Assess fetal heart rate and pattern (if third trimester suspected, assess with continuous electronic fetal monitoring)
- Neurological: size and dilation of pupils, mental status
- Abdomen: palpate for tenderness, rebound, and guarding; measure symphysis fundal height; assess for contractions by palpation or with tocometer
- Pelvic: digital exam of cervix (if history of abdominal pain or contractions); perform sterile speculum exam, if placental location unknown and assess for bleeding

Needs

- Ask to identify her most pressing needs: "Right now, how can I help you most?"

Health:	How do you feel? Do you have pain, vaginal bleeding or urinary symptoms?
Food:	Are you hungry? Do you need something to eat and drink?
Clothing:	Do you have other clothes? Can I get you a change of clothes?
Housing:	Where are you staying? How long can you stay there? Who lives with you?
Safety:	Do you feel safe there?
Family:	What help do you have in this pregnancy? Any children? Others?
Partner:	Do you have a partner? What is your relationship like?
Referrals:	Do you want to talk with Social Work? Legal Aid? Public Health?

Explore the Pregnancy: Patient-centred Model (FIFE)

Feelings:	How do you feel about being pregnant? How do you feel about the new baby?
Impressions/Ideas:	How do you think you got to this place in your life? What are your ideas about where to go from here?
Functioning:	How does the pregnancy affect your everyday life? How will it affect your life later or after the birth?
Expectations:	How can I help? How can we work together?

The overlap of violence, mental health problems and problematic substance use in pregnancy (PSUP) must be recognized. As many as 2/3 of women with PSUP have concurrent mental health problems. In addition, many women with PSUP are victims of physical and sexual abuse either as children or adults. Establishing a therapeutic relationship and sensitive interviewing techniques are required before screening for these co-morbid conditions.

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Investigations

- Urine drug screen with consent (consent not needed if emergency situation) (See pages 16 and 17 for urine drug screening)
- Prenatal bloodwork, hepatitis C antibody, HIV (obtain informed consent)
- Ultrasound (to assess dates and fetal well-being, and to note any other concerns such as placental problems)

Management

- Treat the intoxication
- Consider management of withdrawal
- Consider child protection concerns (no legal duty to report unborn infant; presence of other children in woman's custody may require earlier referral) - encourage self-referral. (See page 11)
- Ensure obstetrical follow-up (improved outcomes with prenatal care alone)
- Refer to shelter if social instability or domestic violence

!! Indications for Inpatient Management

- Suicidal ideation
- Acute psychosis
- Alcohol withdrawal
- Opiate withdrawal
- Benzodiazepine withdrawal
- Desire to undergo detoxification

Approach to Care

Motivational Interviewing: Stage of Change

Stage	Readiness for Change	Strategies
Precontemplation	May or may not be aware of reasons for change May not be ready or interested	• Declare openness to discuss substance use at any time • Provide pregnancy care within a harm-reduction framework
Contemplation	Considering change	• Discuss health risks, give information • Roll with resistance
Preparation	Ready to plan change	• Determine start date, validate reasons for change, complete decisional balance (see page 9) • Make concrete plans for change
Action	Change is happening	• Support efforts • Anticipate and normalize relapse
Maintenance	Change has occurred	• Show support and admiration • Help strategize how to handle relapses or slips

Decisional Balance

Work with the woman to complete each cell of the table. The woman discusses first the pros and cons of not changing followed by the pros and cons of changing.

Decisional Balance	Benefits/Pros	Costs/Cons
Current Behaviour (not changing)		
Changed Behaviour (changing)		

Woman-Centred Childbirth Care

Concept	Overview	Strategy
Woman as Principal	She is the centre of the birth experience	• Encourage her to make decisions and support her choices • Ensure that she has control over her care
Family as Context	She defines "family"	• May be friends, relatives, parents, coworkers, neighbours, church group, self-help group, etc., or clinic staff • Help her establish a support base for the future
Birth as a Process	Birth is part of her "life story"	• Not just a biomedical event • Process does not end at delivery
Caregiver as Facilitator	Assist her birth process	• Make her birth as positive as possible • Success at birth can increase her self-esteem and confidence

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Follow-up Visits

Monitoring

Manoeuvre	Time, Frequency
Prenatal Visits	• Weekly (if needed)
Routine Prenatal Bloodwork	• Baseline, repeat at discretion of clinician
AST, ALT	• Baseline, repeat at discretion of clinician
HBV, HCV, HIV, VDRL, Mantoux	• Baseline, repeat every 3 months if negative and at high-risk
Pap smear	• Baseline
Chlamydia, Gonorrhea	• Baseline, repeat in third trimester (if at continued risk) • Consider urine testing, if pelvic exam is problematic
Ultrasound	• Baseline for dates (if needed) • 18-20 weeks anatomic scan • As clinically indicated to monitor for interval growth and fetal well-being (biophysical profile)
Non-stress Test (NST)	• As clinically indicated for monitoring fetal well-being
Drug Toxicology Testing	• Discuss rationale for testing and obtain informed consent (See pages 16-18 for drug toxicology testing)

Child Protection

- Anyone who has reasonable grounds to suspect that a child is or may be in need of protection must make the report directly to child protection services. **Inform women of your responsibility.**
- The definition of need for protection or at-risk varies by province and territory. Please contact your local authorities to clarify specific responsibilities regarding the definition of risk as it applies to substance-using parents.
- In Canada, a fetus is not recognized legally as a person for any reason, including child protection; however, **there is a legal obligation to report once the child is born.**
- **Do not call protective services prenatally without prior discussion and consent from the woman.**
- Encouraging women to self-report prenatally can increase self-efficacy, dignity and stability, while promoting open and informed decision-making by child protection authorities. If a patient chooses not to self-report, **speak to child protection services after the child is born and in the presence of the woman, if you have concerns.**
- Consider earlier referral if woman has children in her care.

Management of Substance Use

- Discuss and encourage substance use treatment for support and safety - many facilities will give expedited entry to pregnant women
- Discuss harm reduction and/or relapse prevention at every visit
- Educate about maternal and fetal effects
- Offer supervised urine drug screens, if acceptable to patient (reduces confusion or surprises around delivery and provides support for women around future child protection issues)
- Offer continued assistance with basic needs - food, housing, transportation, etc.

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Infectious Disease

General screening	• Offer screening to all pregnant substance users at first visit • For high-risk women, repeat testing q 3 months and/or in third trimester • Screen for Hepatitis A Ab, Hepatitis Bs Ag and Ab, Hepatitis C Ab, HIV, VDRL with consent and follow pre- and post-test counselling guidelines
General Prevention	• Advise women about the risks of sharing needles and drug paraphernalia and the benefits of using needle exchanges • Advise women with multiple sexual partners about safer sex practices • Refer women for substance use treatment services • Refer women with opioid dependence for opioid replacement therapy
Hepatitis C	
Screening	• Hepatitis C antibody (HCV Ab) does not distinguish between acute, chronic or resolved infection • If HCV Ab positive, monitor AST and ALT at least once annually • Order HCV RNA to confirm active infection; If HCV RNA is negative, repeat at least once more to confirm spontaneous clearance of virus • For chronic hepatitis C positive patients, recommend hepatitis A and B vaccines to prevent progression to cirrhosis with co-infection
Prevention of Vertical Transmission	• No known way to prevent vertical transmission • Limit use of fetal scalp clips and other manoeuvres (e.g., artificial rupture of membranes) that may place baby in contact with mother's blood in labour
Transmission	• Long-term sexual partners of carriers have a low risk of infection (1-4%) • Infection rate is ~3-5% for infants born to hepatitis C positive mothers, regardless of vaginal or caesarean delivery
Breastfeeding	• No evidence of transmission through breast milk - woman has choice to breastfeed
Treatment	• All patients with chronic HCV should be assessed to determine if may benefit from therapy; treatment is contraindicated during pregnancy • Offer treatment after breastfeeding finished
Neonatal Testing	• HCV antibody transferred from mother to infant can last up to 18 months and does not indicate neonatal infection; if infection has occurred, RNA can be detected at 1-2 months of age • Test for antibody in infant at 18 months, or RNA at 2 months
Hepatitis B	
Screening	• Screen all pregnant women routinely; check for both HBsAg (indicates infection) and anti-HBs (immunity) • Repeat testing before delivery in women with continuing high-risk behaviours
Immunization	• Canadian Immunization Guide recommends offering Hepatitis B vaccine to all high-risk women during pregnancy • Immunize all susceptible pregnant women (HBsAg and anti-HBs negative) who are at increased risk (injection drug use, high-risk sexual practices) with hepatitis B vaccine (0,1 and 6 months schedule preferred); an accelerated schedule is also approved (0,1 and >2months) For alcohol-dependent and chronic liver disease patients (e.g., persons infected with hepatitis C), higher concentration vaccine and periodic monitoring of anti-HBs titres recommended; booster doses should be given followed by re-checking anti-HBs titre • Refer to Canadian Immunization Guide, 7th edition, 2006 for further details (www.naci.gc.ca)

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Prevention of Vertical Transmission	If mother is Hepatitis B surface antigen (HBsAg) positive, treat newborn with: · Immunoglobulin + vaccine within 12 hours of birth · Booster vaccinations at 1 and 6 months · Test for hepatitis B one month after last vaccination · Order the following markers: HBsAg, HBeAg, anti-HBs, anti-Hbe
Hepatitis A	
Immunization	· Safety in pregnancy unknown; Canadian Immunization Guide recommendation is to offer women immunization in pregnancy · Immunization recommended for injection drug users and hepatitis C positive women: drugs and paraphernalia may be contaminated with hepatitis A (via fecal-oral route)
HIV	
Screening	· Offer screening to all pregnant women
Prevention of Vertical Transmission	· HIV medicine is evolving quickly, please contact local ID expert about appropriate prophylactic antiretroval therapy for HIV infected pregnant women to decrease perinatal transmission
Antenatal Treatment	· Management of HIV-positive pregnant woman is complex and should occur in centre that offers obstetrics, addiction and HIV treatment · Delay treatment until after first trimester to avoid teratogenic effects
Intrapartum Treatment	· HIV positive women who received no treatment or had inadequate suppression of viral load should receive prophylactic antiretroviral therapy prior to delivery and should be offered a C-Section to decrease risk of perinatal transmission · No evidence for elective C-section for HIV positive women who have received adequate multiple therapy with significant viral load reduction · Women who tested negative in the past or have unknown HIV status in pregnancy, but continue with high-risk behaviours (e.g., injection drug use, sharing needles, unprotected intercourse with high-risk partner) should be retested and offered perinatal prophylaxis · Contact local ID expert for advice about management - Refer to guideline in *CMAJ* 2003; 168(13): 1671-1674 and 1683-1688 (www.cmaj.ca)
Postpartum Treatment	· Neonate: offer antiretroviral treatment according to the protocol for perinatal prophylaxis · Mother: resume combination antiretroviral therapy based on immunologic and virologic status Breastfeeding: contraindicated if HIV positive status · Contact local ID expert for advice about management - Refer to guideline in CMAJ 2003; 168(13): 1671-1674 (www.cmaj.ca)
Tuberculosis	
Screening	· Mantoux testing recommended for all patients who use injection drugs, are HIV positive, homeless or imprisoned within the last 12 months
INH Prophylaxis	INH prophylaxis recommended if tuberculin positive on Mantoux screening with no evidence of active tuberculosis (Tb) · Can wait until 2-3 months postpartum to treat latent tuberculosis due to increased risk of INH-induced hepatitis in pregnancy (INH not teratogenic) · Breastfeeding should be encouraged (low concentrations in breast milk) · For adults, order baseline liver enzymes (AST, ALT and bilirubin) and monitor ALT, AST for patients with a history of alcohol abuse, age ≥35 or pre-existing liver disease · Monthly clinical monitoring is recommended · INH should be given for 9 months at a dose of 300 mg daily Vitamin B_6 (pyridoxine) should be added during pregnancy (dose: 25 mg daily) · Administer under direct observation if woman is highly unstable

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