

NATIONAL CASE

**ASHP CLINICAL SKILLS COMPETITION 2011  
PHARMACIST'S PATIENT DATA BASE FORM**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|
| <b>Demographic and Administrative Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
| Name: Kira Doering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | Patient ID: 641107                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |
| Address: 12345 Mendota Ave                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 | Room & Bed: DR 2331                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |
| Chicago, IL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 | Physician: Moore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |
| Date of Birth: 3/21/1980                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 | Pharmacy: Walgreens                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |
| Height: 66 in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Weight: 165 lbs | Race: Caucasian                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
| Gender: Female                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 | Religion: Methodist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |
| <b>History of Present Illness</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
| <p>KD presented to the OB clinic two days ago on 12/2/11 for her monthly appointment complaining of headache different from her typical migraine and the feeling that "something isn't right." She also reported a "small fluid gush" that she attributed to loss of bladder control that morning. She is 34 weeks pregnant. She has had routine prenatal care throughout the pregnancy which has been otherwise unremarkable. A 20 week ultrasound showed a normally developed fetus. Due to an elevated blood pressure reading and c/o headache, she was admitted to Labor and Delivery for observation. After two more consecutive elevated blood pressures and documented premature rupture of membranes, she was changed to inpatient status.</p> <p>Admit orders:</p> <ul style="list-style-type: none"> <li>- bedrest</li> <li>- 24-hr urine protein</li> <li>- urinalysis</li> <li>- CBC, Uric Acid, Albumin, AST, ALT, total Bilirubin, glucose, electrolytes, SCr, BUN and coagulation panel every other day</li> <li>- daily weights</li> <li>- daily urine dips for protein</li> <li>- blood pressure every 4 hours</li> <li>- Deep Tendon Reflexes q shift</li> <li>- IV access</li> <li>- medications as listed on Current Drug Therapy</li> </ul> |                 | <b>Vitals &amp; Other Tests</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | 12/2 clinic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12/3 | 12/4 |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Pulse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 85   | 80   | 78   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Temp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 98.8 | 98.7 | 97.9 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Resp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 16   | 15   | 16   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Pain (0-10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7    | 1    | 6    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Weight (kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 75   | 77   | 79   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | <p>Blood Pressures (mmHg):</p> <p>9/2 clinic: 120/70 (22 wks gestation)</p> <p>10/3 clinic: 135/82 (26 wks gestation)</p> <p>11/4 clinic: 140/87 (30 wks gestation)</p> <p>12/2 clinic: 160/90</p> <p>12/2 1200: 155/93</p> <p>12/2 1600: 157/94</p> <p>12/2 2000: 158/95</p> <p>12/2 2400: 161/91</p> <p>12/3 0400: 159/94</p> <p>12/3 0800: 162/95</p> <p>12/3 1200: 163/95</p> <p>12/3 1600: 164/97</p> <p>12/3 2000: 165/100</p> <p>12/3 2400: 164/101</p> <p>12/4 0400: 169/105</p> <p>12/4 0800: 173/112</p> |      |      |      |
| <b>Past Medical History</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |
| <p>Migraine HA since age 13 (4-5 per year)</p> <p>Asthma</p> <p>Heartburn (since 2<sup>nd</sup> trimester)</p> <p>h/o Depression</p> <p><b>OB History</b></p> <p>Gravida 2, Parity 0</p> <p>h/o spontaneous miscarriage at 9 weeks in 2009</p> <p><b>Surgical History</b></p> <p>unremarkable</p> <p><b>Family History</b></p> <p>Father: 57, alive, hypertension, benign prostatic hyperplasia</p> <p>Mother: 57, alive, hypercholesterolemia</p> <p>Sister: 35, alive, no significant history</p> <p>Sister: 28, alive, migraine HA</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 | <b>Labs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |      |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | 12/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 12/3 | 12/4 |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Na (mEq/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 140  | 138  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | K (mEq/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.8  | 4.0  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Cl (mEq/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 101  | 103  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | CO <sub>2</sub> (mEq/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 26   | 25   |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | BUN (mg/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 20   | 35   |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | SCr (mg/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.7  | 1.1  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Glucose (mg/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 80   | 75   |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Calcium (mg/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 9.8  | 9.7  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Magnesium (mEq/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.6  | 2.0  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Albumin (g/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4.1  | 4.0  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | AST (IU/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 34   | 80   |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | ALT (IU/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 40   | 120  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Total bili (mg/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.9  | 1.2  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | WBC (million/mm <sup>3</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9.8  | 10.7 |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Hgb (g/dL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 11.2 | 10.9 |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | Hct (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 28   | 27   |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 | MCV (fL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 90   | 88   |      |

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|                                                                                                                                                                                                                                                                                                                                |  |                            |      |      |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------|------|------|------|
| <b>Social History</b><br>Tobacco: h/o 1 ppd cigarettes – reports that she quit when she discovered she was 6 weeks pregnant<br>ETOH: none<br>Illicit Drugs: none<br>Caffeine: 1 Diet Coke per week<br>Occupation: DEA investigator<br>Status: married<br>Children: none<br>Physical Activity: not specified<br>Diet: pregnancy |  | <b>Labs cont.</b>          | 12/2 | 12/3 | 12/4 |
|                                                                                                                                                                                                                                                                                                                                |  |                            |      |      |      |
|                                                                                                                                                                                                                                                                                                                                |  | MCH (pg)                   | 29   |      | 30   |
|                                                                                                                                                                                                                                                                                                                                |  | RBC (mil/uL)               | 3.4  |      | 3.2  |
|                                                                                                                                                                                                                                                                                                                                |  | Plt (K/mm <sup>3</sup> )   | 155  |      | 95   |
|                                                                                                                                                                                                                                                                                                                                |  | Protime (sec)              | 13   |      | 13.4 |
|                                                                                                                                                                                                                                                                                                                                |  | INR                        | 1.1  |      | 1.2  |
|                                                                                                                                                                                                                                                                                                                                |  | PTT (sec)                  | 33   |      | 34   |
|                                                                                                                                                                                                                                                                                                                                |  | Uric Acid (mg/dL)          | 5.9  |      | 6.1  |
|                                                                                                                                                                                                                                                                                                                                |  | Urine protein:             | 2+   | 2+   | 3+   |
|                                                                                                                                                                                                                                                                                                                                |  | 24 hour urine protein (mg) |      | 1810 |      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vaccination history</b><br>Influenza: has never had<br>Pneumococcal: has never had<br>Tetanus: last booster unknown<br>All childhood immunizations: up to date                                                                                                                                                                                                                                                                                                                                                               | <b>Cultures and pregnancy screens:</b><br>Blood type: A+<br>Rubella: non-immune<br>Varicella Zoster IgG Antibody: positive<br>Hepatitis B Surface Antibody: positive<br>Hepatitis B Surface Antigen: negative<br>Hepatitis C Virus Antibody: negative<br>Gonorrhea/Chlamydia: negative<br>Rapid Plasma Reagin: non-reactive<br>Herpes Simplex Virus: negative<br>HIV1 and 2 Antibody Screen: non-reactive<br>Vaginal cx: Group B Streptococcus positive |
| <b>Physical Exam (12/2/11)</b><br>General: well-nourished pregnant female in some discomfort<br>HEENT – PERRLA, EOMI<br>Chest: CTA bilaterally; no wheezes, crackles<br>CV: RRR; no murmurs, rubs, gallops<br>Abd: gravid, non-tender, bowel sounds present<br>Fetal Heart Tones: 135, moderate, variable, (-) decels<br>Sterile Vaginal Exam: 1/50/-1 (dilation/effacement/station), amniotic fluid present in vaginal vault<br>Ext: 2+ edema in hands,<br>Neuro: A&O x 3, CII-XII intact, DTR 2+ patella/Achilles, (-) clonus | <b>Urinalysis 12/2</b><br>Appearance: yellow<br>Bili: negative<br>Glucose: negative<br>Ketones: negative<br>Hgb: negative<br>LE: negative<br>pH: 6.5<br>Protein: moderate<br>Spec Grav: 1.02                                                                                                                                                                                                                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                              |                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------|--------------------------------------|
| <b>Allergies/Intolerances</b><br>PCN - rash                                                                                                                                                                                                                                                                                                                                                                                                  |                           | <b>Prescription Coverage</b> |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           | Insurance: Cigna             |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           | Copay: \$10 gen, \$25 brand  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           | Cost per month:              |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           | Annual Income: \$80,000      |                                      |
| <b>Current Drug Therapy</b>                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                              |                                      |
| Drug Name/Dose/Strength/Route                                                                                                                                                                                                                                                                                                                                                                                                                | Prescribed Schedule       | Duration Start–Stop Dates    | Compliance/Dosing Issue              |
| 1. Prenatal Vitamin w/ *DHA PO                                                                                                                                                                                                                                                                                                                                                                                                               | 1 tablet/cap daily        | 2009 – present               | none                                 |
| 2. Ferrous Sulfate 325 mg PO                                                                                                                                                                                                                                                                                                                                                                                                                 | 1 tablet daily            | July '11 – present           | none                                 |
| 3. Fluticasone 110 mcg MDI Inh                                                                                                                                                                                                                                                                                                                                                                                                               | 1 puff BID                | 2000 – present               | none                                 |
| 4. Albuterol MDI Inh                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 puffs prn SOB, coughing | 2000 – present               | increased need for use in last month |
| 5. Acetaminophen 500 mg PO                                                                                                                                                                                                                                                                                                                                                                                                                   | 2 tablets x 1             | 12/2/11                      |                                      |
| 6. Famotidine 20 mg PO                                                                                                                                                                                                                                                                                                                                                                                                                       | twice daily as needed     | 12/2/11 - present            |                                      |
| 7. Lactated Ringers                                                                                                                                                                                                                                                                                                                                                                                                                          | 125 ml/hr                 | 12/2/11 - present            |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                              |                                      |
| <b>Medication History</b>                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                              |                                      |
| Prior to pregnancy, patient previously used hydrocodone 7.5 mg/acetaminophen 325 mg PO q4-6h as needed at onset of migraine headache, but has only had one headache early in the pregnancy and took acetaminophen 1000 mg PO x 1 with relief.                                                                                                                                                                                                |                           |                              |                                      |
| <b>Patient Narrative</b>                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                              |                                      |
| On 12/4, 48 hours after admission, her BP has continued to increase and her headache is back. The obstetrician has requested pharmacy's recommendations for medication management with anticipated delivery of the baby by Cesarean section the morning of 12/5. In addition to new therapy recommendations, Dr. Moore requests you look at her current medication profile to determine if changes are needed with any of those medications. |                           |                              |                                      |

\* DHA – docosahexaenoic acid

# ASHP Clinical Skills Competition - Pharmacist's Care Plan – 2011 National Answer Key

Evaluated for  
competition

## Problem Identification and Prioritization with Pharmacist's Care Plan

Team # \_\_\_\_\_

- A. List all health care problems that need to be addressed in this patient using the table below.  
 B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
- 1 = Most urgent problem (Note: There can only be one most urgent problem)
  - 2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
  - 3 = Problems that can be addressed later (e.g. a week or more later)

*\*Please note, there should be only a "1", "2", or "3" listed in the priority column, and the number "1" should only be used once.*

| Health Care Problem                                                                                                                                                                                         | Priority | Therapeutic Goals                                                                                                                                                                    | Recommendations for Therapy                                                                                                                                                                                                                                                                                                                                                                                                                                    | Monitoring Parameters and Endpoints                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Severe pre-eclampsia<br>[due to BP > 160/110<br>and corresponding<br>HELLP(Hemolysis,<br>Elevated Liver<br>enzymes, Low<br>Platelets)]<br><br>BONUS points if<br>corresponding HELLP<br>syndrome identified | 1        | Seizure prophylaxis<br><br>Prevent renal failure, DIC,<br>eclampsia, stroke, death<br><br><br><br><br><br><br><br><br><br>Lower maternal BP to DBP 95-<br>105 mmHg prior to delivery | Magnesium sulfate 4-6 gram IV or IM<br>over 15-20 min followed by 1-3 gram/hr<br>IV continuous infusion using 10%<br>solution<br><i>Phenytoin, fosphenytoin and diazepam<br/>should not be used unless<br/>contraindication to magnesium exists.</i><br><br><br><br><br><br><br>Check BP every 4 hours while awake<br><br><br><br><br><br><br>Nifedipine 10 mg PO every 10 min up<br>to 3 doses, followed by 10 mg q6-8h;<br>Nicardipine 5 mg/hr IV continuous | Check Mg++ level 2 hrs after bolus,<br>then every 6-12 hours<br>Achieve Mg++ level = 4-8 mg/dl<br>Continue x 24-48 hours after<br>delivery.<br>Monitor for s/sx of toxicity:<br>muscular weakness/paralysis, loss of<br>deep tendon reflexes, hypotension,<br>vasodilation, flushing, sweating,<br>cardiac arrhythmias, respiratory<br>depression, chest tightness and<br>pulmonary edema<br>Have calcium gluconate 1gram IV<br>available for administration if mag<br>toxic<br><br>decrease SBP < 150-160, DBP < 95<br>prior to C-section; monitor for<br>hypotension<br><br>Nifedipine/Nicardipine: monitor for<br>flushing, headache, peripheral edema,<br>nausea, dizziness; can potentiate toxic |

| Health Care Problem                 | Priority | Therapeutic Goals                                                                                                    | Recommendations for Therapy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Monitoring Parameters and Endpoints                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |          | Relieve headache pain<br><i>Headache needs to be recognized as a symptom of the pre-eclampsia, not as a migraine</i> | <p>infusion, titrating up to max dose of 15 mg/hr</p> <p>OR</p> <p>Hydralazine 5-10 mg IV/IM every 20-30 min</p> <p>OR</p> <p>Labetalol 20 mg IV, followed by 40 mg IV 10 min later, then 80 mg every 10 min up to 220 mg total dose OR 200-400 mg PO BID</p> <p><i>Methyldopa is not a good choice due to acuity- it takes up to a week to achieve therapeutic effect. ACE inhibitors and ARB's are contraindicated until post-partum due to teratogenicity.</i></p> <p>Acetaminophen 500-1000 mg PO/IV/PR q4-6hrs prn pain<br/><i>no aspirin or NSAIDs to avoid premature closure of the neonate's ductus</i></p> | <p>effects of magnesium</p> <p>Hydralazine: monitor for headache, tachycardia, flushing</p> <p>Labetalol: monitor for bradycardia; not contraindicated, but use with some caution due to asthma diagnosis</p> <p>Continue monitoring CBC, LFT's, electrolytes, SCr, BUN, Uric Acid q48h until discharge</p> <p>Pain score with vitals every 4 hrs with controlled pain.<br/>Limit total daily acetaminophen to 4000mg</p> |
| Group B Strep colonization for PROM | 2        | Eradication of Group B Strep prior to delivery                                                                       | <p>Due to PCN allergy of rash, options for treatment until delivery include:</p> <p>Cefazolin 2 gm IV x 1, then 1 gm IV q8h</p> <p>OR</p> <p>Clindamycin 900 mg IV q8h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>If Cefazolin used, monitor for allergic reaction due to possible cross-sensitivity with PCN.</p> <p>If Vancomycin used, infuse dose over an hour to avoid infusion-related reaction.</p>                                                                                                                                                                                                                               |

| Health Care Problem         | Priority | Therapeutic Goals                                    | Recommendations for Therapy                                                                                                                                                                                                                                             | Monitoring Parameters and Endpoints                                                                                                                                                 |
|-----------------------------|----------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |          |                                                      | <p>OR</p> <p>Vancomycin 1 gm IV q12h (this dose is the standard per GBS guidelines)</p> <p>Discontinue therapy post-partum unless clinical evidence indicates active infection requiring treatment.</p>                                                                 | Monitoring for this problem occurs with the baby. Because neonate is 34 weeks, they need an admit CBC and blood culture with observation for signs of sepsis for at least 48 hours. |
| Post-partum pain management | 3        | relieve pain                                         | <p>Opiod narcotic (oxycodone or hydrocodone) appropriate for moderate pain</p> <p>Ibuprofen 600-800mg PO q6-8h or Naproxen 500mg PO q12h OK appropriate to manage mild pain and uterine tonicity</p>                                                                    | <p>Pain score with vitals q4h.</p> <p>Goal: Score 0-3</p> <p>Monitor frequency pain medication is needed.</p>                                                                       |
| Pregnancy associated anemia | 3        | increase Hgb<br>restore pre-pregnancy blood volume   | <p>Increase FeSO<sub>4</sub> to 325mg po BID or TID (preferred answer).</p> <p>OR</p> <p>Change to different oral iron supplement</p> <p>OR</p> <p>Continue current dose</p> <p>AND/OR</p> <p>Start anemia work-up</p>                                                  | <p>Goal Hgb &gt; 12</p> <p>Monitor for constipation, GI irritation, nausea, epigastric pain caused by iron supplement</p>                                                           |
| Heartburn                   | 3        | prevent pain from reflux<br>decrease gastric acidity | <p>Continue Famotidine 20 mg BID prn heartburn</p> <p>OR</p> <p>Calcium Carbonate (TUMS) 500-1000mg PO TID prn heartburn (<i>bonus point if student states to avoid dosing at same time as iron supplement</i>)</p> <p>OR</p> <p>Antacid (Maalox, Mylanta, etc) prn</p> | <p>Monitor for symptom relief</p> <p>Consider discontinuing therapy post-partum as symptoms typically resolve after delivery of baby.</p>                                           |

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| Health Care Problem | Priority | Therapeutic Goals                                                                                        | Recommendations for Therapy                                                                                                                                                                                                                                                                                                                                                                                                                   | Monitoring Parameters and Endpoints                                                                                                                                                                                                                                                                                                      |
|---------------------|----------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Migraine headaches  | 3        | relieve pain<br>(prophylaxis not warranted due to frequency of 4 per year)                               | Acetaminophen and NSAIDs prn preferred if patient is breast-feeding.<br><br>Fioricet, opioids and triptans prn as alternatives. <i>Avoid codeine due to risk of CYP2D6 ultra rapid-metabolism and conversion to morphine, causing overdose in infant. Same concern may also be considered with possible ultra rapid metabolism of hydrocodone to hydromorphone.</i><br><br><i>Dihydroergotamine contraindicated if she is breast-feeding.</i> | Monitor frequency of headaches and type and whether or not first-line medications are effective.<br><br>If taking opioids for pain relief, monitor for sedation.                                                                                                                                                                         |
| Asthma              | 3        | Prevent bronchospasms and other symptoms<br>Minimize need for short-acting bronchodilator                | Continue Flovent and Albuterol as previously ordered.                                                                                                                                                                                                                                                                                                                                                                                         | Pulmonary Function Tests annually if disease stable<br>Daytime symptoms should occur $\leq 2$ times per week, nighttime awakenings $\leq 1$ time per month<br>PEF should remain in the green zone ( $>80$ personal best) with $<20\%$ variability.<br>Monitor use of short-acting albuterol. SABA should be used $\leq 2$ days per week. |
| Immunizations       | 3        | Rubella immunity<br>Prevent influenza & its complications<br>Boost tetanus-diphtheria-pertussis immunity | Administer MMR vaccine, Influenza vaccine (inactive), pneumococcal-23 (PPSV) vaccine (quit smoking less than 1 yr ago) and Tdap prior to discharge ( <i>deduct points if Flumist recommended due to asthma history</i> )                                                                                                                                                                                                                      | Monitor for local injection site reaction, fever, malaise, arthralgia, dizziness, syncope, etc.                                                                                                                                                                                                                                          |

| Health Care Problem | Priority | Therapeutic Goals                                                                                                     | Recommendations for Therapy                                                                                                                                                                                                                                                                                                                                       | Monitoring Parameters and Endpoints                                                                                                                                                |
|---------------------|----------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smoking Cessation   | 3        | Maintain smoking cessation<br>Decrease nicotine cravings<br>Reduce morbidity/mortality from CV disease and malignancy | 1 <sup>st</sup> option: patient has already been smoke-free during pregnancy, so best option is to continue smoke-free lifestyle. Encourage with counseling.<br>OR<br>2 <sup>nd</sup> option: Nicotine gum or 7 mg/hr patch, but nicotine crosses into breastmilk if breastfeeding                                                                                | Monitor for cravings<br>Monitor for adverse effects of nicotine if gum or patch used: nausea, dry mouth, dizziness, headache                                                       |
| Birth Control       | 3        | Prevent pregnancy                                                                                                     | Initiate/restart birth control 3-6 weeks post-partum (recommendation on time to delay varies among references).<br>Non-hormonal methods of contraception are preferred if she plans to breastfeed.<br>If a hormonal method is used, then progestin-only products are preferred to limit the negative impact on milk production.<br><br>Counseling as appropriate. | If hormonal contraception chosen, monitor for compliance, s/sx of intolerance (nausea, vomiting, headaches, dizziness, thrombosis, visual disturbances) and breakthrough bleeding. |

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