Improving Care of High Risk Obstetrics Patients by Creating an Evidence Based Nurse Driven Process

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Disclosures

• Ms. McFadden, Mr. Walter and Ms. Barbella have nothing to disclose nor conflicts of interest.
• The authors are employed through Geisinger Health System, Danville, Pennsylvania, USA
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Objectives

- The learner will be able to identify the process from idea to EBP project, to process change and evaluation.
- The learner will understand the significance of early identification of women at risk for recurrent preterm delivery.
- The learner will comprehend how nurses can improve practice and patient outcomes for the vulnerable obstetric patient and family.
Background

- Preterm birth complications 1 out of 8 pregnancies in the US.
- A Women’s Health team from Pennsylvania struggled to comprehend:
  - How effective is a current treatment modality?
  - How are high risk patients eligible for treatment identified?
  - How can treatment be initiated without delay?
Reviewing the Literature

- An evidence based practice project was initiated by a nurse led group to evaluate 17-P (Makena)
- Literature was evaluated using the Johns Hopkins Evidence Based Guidelines

Table Summarizing Application of the John’s Hopkins Model of EBP

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<th>Level of Evidential Strength</th>
<th>Number of Studies</th>
<th>Overall Quality</th>
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Results of the EBP Project

• Use of 17-P reduces preterm deliveries
• Patient eligibility criteria was confirmed
• Next steps
  • Nurses led a process improvement project with the following goals:
    • Administer 17-P to eligible patients consistently before 21 weeks
    • Educate staff and patients as to the benefits of 17-P
    • Streamline a nurse driven process utilizing the EMR
Application of the EBP project

Process begins at the New prenatal appointment

1. Nurses ask a series of questions at Initial Visit
   - Does the patient have a history of PTD
   - If yes was the delivery spontaneous
   - If yes is the patient a candidate for Makena

2. Positive answers trigger an alert to the provider

3. The alert allows providers to order the correct medications, diagnoses and consults

4. Staff made aware to expedite the insurance process
OB Provider will be notified when all questions are answered yes at the intake visit:
## WHSL 17 ALPHA-HYDROXYPROGESTERONE OP [11869]

### Documentation
- **17 ALPHA HYDROXYPROGESTERONE DOCUMENTATION**
  - IM PROGESTERONE RISK/BENEFIT

### 17 Alpha Hydroxyprogesterone Prescription
**PRESCRIPTION**
- **17 ALPHA HYDROXYPROGESTERONE CAPROATE 250MG/ML INJ[100132]**
  - 1 Vial, 4, Normal patient requests script

### Orders
**INJECTION ORDER(PATIENT SUPPLIES MEDICATION-NO CHARGE)**
- Hydroxyprogesterone 1mg, Inj [J1725]
  - Site, Routine, Qty-250, DO NOT CHARGE - NON BILLABLE MEDICATION
- INJECTION, DX/TX/PROPHYLAXIS, IM OR SUBQ[96372]
  - Site, Routine, Qty-1

**INJECTION ORDER(PATIENT SUPPLIES MEDICATION-NO CHARGE) STANDING**
- Hydroxyprogesterone 1mg, Inj [J1725]
  - Site, Routine, Qty-250, DO NOT CHARGE - NON BILLABLE MEDICATION, Status: Standing Manual-release
- INJECTION, DX/TX/PROPHYLAXIS, IM OR SUBQ[96372]
  - Site, Routine, Qty-1, Status: Standing Manual-release

**INJECTION ORDER (PT DOES NOT SUPPLY MEDICATION/CLINIC STOCK) NOW**
- INJECTION, DX/TX/PROPHYLAXIS, IM OR SUBQ[96372]
  - Site, Routine, Qty-1
- Hydroxyprogesterone 1mg, Inj [J1725]
  - Site, Routine, Qty-250

**INJECTION ORDER (PT DOES NOT SUPPLY MEDICATION/CLINIC STOCK) STANDING**
- INJECTION, DX/TX/PROPHYLAXIS, IM OR SUBQ[96372]
  - Site, Routine, Qty-1, Status: Standing Manual-release
- Hydroxyprogesterone 1mg, Inj [J1725]
  - Site, Routine, Qty-250, Status: Standing Manual-release

### Diagnoses
- Pregnancy with history of pre-term labor
- Supervision of other high-risk pregnancy

### Follow up
- **RETURN APPT WITH NURSE**
  - 1 week return with nurse

### Level of Service
**LEVEL OF SERVICE**
- NIC ANCILLARY SERVICES
  - LOS Code

### Chief Complaint
**CHIEF COMPLAINT**
- MEDICATION ADMINISTRATION
  - Chief Complaint
17-P Counseling Documentation

Discussion:
Reviewed data regarding 17 alpha-hydroxyprogesterone. Studies show that it can decrease the risk of recurrent preterm delivery by up to 60% in women with previous spontaneous preterm delivery prior to 37 weeks. Additionally, when still delivered prematurely, neonates have lower rates of necrotizing enterocolitis, intraventricular hemorrhage and a decreased need for supplemental oxygen.

Recommendations:
Recommended weekly IM 17 alpha-hydroxyprogesterone 250 mg administration initiated between 16-24 weeks gestation and continued until 37 weeks gestation for prevention of preterm labor and delivery. Patient’s primary OB/GYN can coordinate therapy.
Risks and benefits of 17 alpha-hydroxyprogesterone were discussed with the patient. Patient [accept/reject:45547] treatment
Communication Plan

- **Staff education**
  - Division Meetings
  - Team Meetings
  - Fast Facts
  - Email communications

- **Patient education**
  - Provider
    - Smart sets
  - Pamphlets
Individual nurse compliance reports have allowed for targeted education at the individual level, rather than department-wide.

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<th>Makena Nurse Compliance</th>
<th>Quarter 2, 2016</th>
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• Nursing compliance with the eligibility question continues to increase
IM Progesterone – Results
(First Trimester Patients Only)

Percentage of Patients Starting Injections before 21 Weeks Gestation

- 2014: 60.0%
- 2015: 80.6%
- 2016: 78.9%
- 2017: 80.0%
Practice Implications

- Lessons Learned
  - Importance of standardized processes that are reliable
  - Importance and use of transparent data that is shared regularly and attributed to individuals
  - Recognizing high performers
Practice Implications

• Next Steps
  • Continue reviewing the data and looking for future opportunities
  • Evaluate current preterm delivery rates to assess impact of process
  • Apply the process to other quality initiatives