Improving Postpartum Depression Screening

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Background: Postpartum Depression (PPD)

- Includes major depressive episode occurring during first 12 months after delivery
- One of the most common medical complications during pregnancy and postpartum period affecting as many as 1 in 6 women (10-20%)
- In setting of maternal (MFCU) and neonatal complications (NICU) rates as high as 40%
- Life threatening: maternal suicide exceeds hemorrhage and hypertensive disorders as leading cause of maternal mortality

Gavin et al., 2005; Vigod et al., 2010; Palladino et al., 2011
Postpartum Blues

↑ risk for Postpartum Depression
50% to 80%

Postpartum Depression

2/3 have onset by 6 wks postpartum
10-20%

Postpartum Psychosis

70% are affective (Bipolar, Major Depression)
0.001%

Cohen LS. 1998
**Impacts of PPD**

- Ability to care for baby
- Adverse effects on newborn cognitive, behavioral, emotional development
- Family and relationship problems
- If left untreated can worsen and become chronic depression
- Severe cases risk of harming self or others

*Vliegen, et al., 2014*
PPD Screening

• ACOG recommends screening patients at least once during perinatal period

• USPSTF and AAP also recommend PPD Screening

• Early detection → initiate treatment prior to disease worsening

• Patient Health Questionnaire-9 Cutoffs:
  • Low risk: ≤ 4
  • Mild to moderate risk: 5-12
  • High risk: ≥ 13
PPD Education and Referral

• Screening alone is not sufficient
• Screening needs to be at the right time by trained staff

Any screening program requires:
1. Education
2. Referrals
3. Treatment

• In the process women and support persons should be educated on the differences between baby blues and PPD, warning signs
Depression Screening at Cedars-Sinai

• Depression screening with PHQ-2 on admission hospital-wide starting April 2014

• Very low rates of screening with PHQ-2 for OB patients
  • Only 10% screened in L&D (triage not the best time)
  • Positive Screen Rate in L&D = 0.04% (Only 4 in 100 women = inaccurate)

• No standardized education or referrals

• No formal nurse training – are nurses comfortable screening for PPD?

• Led to CHANGE in April 2017 to New PPD Screening, Education and Referral Program
PPD Screening, Education and Referral Program

- In April 2015 a Working Group from OBGYN, Nursing, Psychiatry and Social Work met regularly for 2 years
- Prepared Protocol and Flowsheet (figure)
- Designed training for nurses specific to maternal mental health with community partner Maternal Mental Health NOW
- January 2017 – 8 hour Maternal Mental Health Training for 20 Nurse Champions – Goal was for them to Train others
Quality Improvement Project

OBJECTIVE: To improve postpartum depression screening rates and accuracy for all patients in Postpartum Unit through nursing education and training

QUESTIONS:
1. What is the new screening rate for Postpartum Unit and does nurse training improve rate?
2. Are the screen positive rates accurate (in line with national prevalence rates, 10-20%)?
3. Are depression scores higher in new moms with babies in the NICU?

METHODS:
- IRB approval
- Track Nursing education/training
- Chart review
- Statistical analysis
January 2017 Nurse Champion Training Results

- Gathered QI data from 20 nurses before and after the full day training.
- Before and after the 8 hour training by Maternal Mental Health Now in January 2017, the 20 nurse champions were asked: **How comfortable are you screening patients for maternal depression and anxiety?**

  **BEFORE:**
  - Very comfortable (teal): 35%
  - Somewhat comfortable (coral): 45%
  - Not comfortable (lime): 10%
  - Not applicable to my job / role (gold): 10%

  **AFTER:**
  - Very comfortable (teal): 83%
  - Somewhat comfortable (coral): 17%

- **CONCLUSION:** Maternal Mental Health NOW provided excellent 8 hour training that resulted in increase comfort to ask these questions! **Screening can begin!**

These results were presented at PAC/LAC in April 2017.
Early Screening Results

Percent Screened with PHQ-9 in PPU
May 2017 - August 2017 (~N=2000)
QUESTION 1: What is the new screening rate for Postpartum Unit and does nurse training improve rate?

RESULTS

• Compared to the L&D Screening Rate of 2014 we see a markedly improved Screening Rate: ~20-60% of women are being screened in the PPU, compared to only ~10% while screening in L&D (in 2014-2017)

• Nursing leadership embraces the protocol AND are more comfortable than before the 2017 training

• Additional nurse training and instruction needed
Additional Nurse Training

1. October 2017 – 1 hour Training on Maternal Mental Health and Screening
   • Modeling for 30 PPU Nurses

2. November 2017 - 1 hour Training on Maternal Mental Health and Screening
   • Modeling for 20 MFCU Nurses

• Both trainings conducted by Dr. Eynav Accortt – Cedars-Sinai Clinical Psychologist
  • ADDED new component of modeling the PHQ-9 screening with a social worker who “acted” like a depressed new mother

• Quality Improvement Data collected before and after these trainings
Screening Results

Percent Screened with PHQ-9 in PPU
August 2017 - November 2017 (N=~2000)
QUESTION 2: Are screen positive rates accurate?

RESULTS: From April 2017 – December 2017 the Mean PHQ-9 score was 0.8 ± 1.735

- The range is 0 – 24!
- The cutoff is 13 for severe depression

Of the N=3237 women who HAVE PHQ-9, how many scored above 10 (moderate depression)?

- Only 17 women had PHQ9 ≥ 10 which is 0.4%
- This is an improvement over L&D which was 0.04%!
- This is NOT in line with national prevalence rates of 10-20%
RESULTS: April 2017 – December 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Number Screened/Total number of women in PPU</th>
<th>Screening Rate</th>
<th>Accuracy (number PHQ-9 ≥ 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-October</strong></td>
<td>1684/3202</td>
<td>52.6%</td>
<td>11/1684 = 0.65%</td>
</tr>
<tr>
<td>(BEFORE Nurse Trainings)</td>
<td></td>
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<tr>
<td><strong>Post-October</strong></td>
<td>1553/1625</td>
<td>95.6%</td>
<td>6/1553 = 0.4%</td>
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<tr>
<td>(AFTER Nurse Training 1)</td>
<td></td>
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<tr>
<td><strong>Post-November</strong></td>
<td>1025/1047</td>
<td>97.9%</td>
<td>1/1025 = 0.1%</td>
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</tbody>
</table>
Results: Accuracy

Mental Health Diagnoses from Chart

- N= 609 of the 4216 women have a diagnosis which is 12.6% (in line with epi rates)

Within this group of N=609 what is the PHQ-9 ≥ 10 rate?

- For those that HAVE PHQ-9 data in the chart:
  - PHQ-9 ≥ 10 for 9 out of 414 of them. Which is a rate of 1.5%
  - PHQ-9 ≥ 13 are 7 of those 9 women above
QUESTION 3: Are depression scores higher in new moms with babies in the NICU?

RESULTS: A total of 627 babies (of 4827 deliveries) were admitted to NICU (13%)
- N = 360 of the 627 have PHQ-9 scores
- PHQ-9 scores are inaccurate (very low)
- BUT we can still pick up significant differences between groups, in the expected direction

<table>
<thead>
<tr>
<th></th>
<th>NICU</th>
<th>NOT in NICU</th>
<th>P value</th>
</tr>
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<tbody>
<tr>
<td>Mean Score PHQ-9</td>
<td>1.00 +/- 2.24</td>
<td>0.78 +/- 1.66</td>
<td>0.022</td>
</tr>
<tr>
<td>Mental Health Diagnosis from Chart</td>
<td>16.6%</td>
<td>12%</td>
<td>0.002</td>
</tr>
</tbody>
</table>
Q1. What is the new screening rate for Postpartum Unit and does nurse training improve rate?
A1. We had 99% screening by December 2017 due almost entirely to nurse training initiatives.

Q2. Are the Screen positive rates accurate - in line with national prevalence rates (10-20%)?
A2. No. QI data show that PHQ-9 values are consistently very low. Compared the PHQ9 scores with mental health diagnosis in the chart and saw gaping discrepancies.

Q3. Are depression scores higher in new moms with babies in the NICU?
A3. Yes, they are higher, statistically but not clinically.
NEXT STEPS

• Nursing, Psychiatry, OBGYN and Social Work departments are working together to provide in-services and training to increase accuracy of screening efforts in the PPU

• GOALS
  • Continue to have 99-100% screening rates in Year 2
  • Investigate the unique mental health needs of new moms in the MFCU and those with babies in the NICU
  • Check Accuracy (screen positive rates) and Plans for improvement
Conclusion and Future Directions

Need for formal training to be on-going
- Revisit “Train the Trainer” approach?

Need unique format for training nursing staff
- 100s of them, turnover, travelers
- SOLUTION = 10 minute Training Video
Thank you:
Kathleen Weber, MD
OBGYN Resident QI Project

Questions?
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