Addressing Perinatal Mortality

By Sara Margetts, Emily Lowe, and Jamal-Jared Alexander
Research Question:
What are evidence-based approaches to treating Perinatal Mood and Anxiety Disorders (PMAD)?

Program goal:
Decrease perinatal mortality rates
- Identify population health need
  - Interviews and data analysis
- Identify interventions
  - Theoretical framework
- Plan program
  - Logic model
Topic and Target Population
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Pre-existing Depression</th>
<th>Pre-existing Anxiety</th>
<th>Postpartum Depressive Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% 95% Confidence Interval</td>
<td>P-Value</td>
<td>% 95% Confidence Interval</td>
</tr>
<tr>
<td><strong>Total Maternal Population</strong></td>
<td>10.3 (9.2 – 11.4)</td>
<td>NS</td>
<td>14.8 (13.6 – 16.1)</td>
</tr>
<tr>
<td><strong>Maternal Age</strong></td>
<td></td>
<td></td>
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<tr>
<td>≤ 17</td>
<td>19.3 (10.1 – 28.5)</td>
<td>NS</td>
<td>25.0 (14.9 – 35.2)</td>
</tr>
<tr>
<td>18 - 19</td>
<td>15.2 (9.5 – 21.0)</td>
<td></td>
<td>25.2 (18.0 – 32.4)</td>
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<tr>
<td>20 - 24</td>
<td>12.0 (9.6 – 14.4)</td>
<td></td>
<td>15.6 (12.9 – 18.2)</td>
</tr>
<tr>
<td>25 - 29</td>
<td>9.1 (7.3 – 11.0)</td>
<td></td>
<td>13.6 (11.4 – 15.7)</td>
</tr>
<tr>
<td>30 - 34</td>
<td>9.2 (7.2 – 11.3)</td>
<td></td>
<td>14.4 (11.8 – 17.0)</td>
</tr>
<tr>
<td>35 - 39</td>
<td>11.2 (7.5 – 14.8)</td>
<td></td>
<td>15.8 (11.7 – 19.9)</td>
</tr>
<tr>
<td>40 +</td>
<td>10.4* (0.8 – 20.0)</td>
<td>&lt;0.0001</td>
<td>9.6* (1.7 – 17.4)</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Less than High School</td>
<td>14.8 (12.2 – 17.3)</td>
<td>&lt;0.0001</td>
<td>17.5 (14.8 – 20.1)</td>
</tr>
<tr>
<td>Completed High School</td>
<td>13.0 (10.9 – 15.0)</td>
<td></td>
<td>18.4 (16.1 – 20.7)</td>
</tr>
<tr>
<td>Some College</td>
<td>10.6 (8.4 – 12.9)</td>
<td></td>
<td>16.2 (13.6 – 18.7)</td>
</tr>
<tr>
<td>College Graduate</td>
<td>7.4 (5.6 – 9.2)</td>
<td>&lt;0.0001</td>
<td>11.1 (8.9 – 13.3)</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>8.6 (7.5 – 9.8)</td>
<td>&lt;0.0001</td>
<td>13.5 (12.1 – 14.9)</td>
</tr>
<tr>
<td>Unmarried</td>
<td>18.5 (15.2 – 21.9)</td>
<td>&lt;0.05</td>
<td>21.7 (18.5 – 24.9)</td>
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<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>10.8 (9.3 – 12.0)</td>
<td>&lt;0.05</td>
<td>16.0 (14.5 – 17.4)</td>
</tr>
<tr>
<td>Other than White</td>
<td>7.3 (4.9 – 9.7)</td>
<td></td>
<td>9.0 (6.5 – 11.5)</td>
</tr>
</tbody>
</table>
The Problem/ Needs Assessment Data:

**Demographic characteristics**
Women in the perinatal period who are pregnant or have given birth within the last year

**Health conditions**
Depression, anxiety, and other mood disorders which occur in the perinatal period

**Environment**
No psychiatrists focusing exclusively on perinatal care in the state of Utah.

**Existing programs**
Postpartum Support International has provider training available

**Funding stream**
Grants, and insurance reimbursement for inpatient care services
• The Perinatal Mood & Anxiety Disorders program:
  • Pilot a program in a single large metropolitan hospital psychiatric ward in SLC.
  
  • Activities related to training mental health providers to establish a perinatal-specific inpatient treatment unit.
  
  • Program interventions apply to the infrastructure services level of the public health pyramid.
Theoretical Framework:

- Lack of screening for postpartum mood disorders
- Lack of use of latest FDA approved pharmacological treatment for severe postpartum depression
- Lack of trained mental health professionals
- Lack of inpatient mental health facilities specializing in perinatal mood disorders
- Lack of adequate insurance coverage for mental health care
- Stigma is U.S. culture regarding mental health issues
- Lack of knowledge for women and families regarding risks, symptoms, resources and treatment options for perinatal mood disorders
- Perceived barrier that treatments are often slow to take effect or ineffective
- Perceived barrier of being separated from family & infant

Unresponsive infrastructure support regarding perinatal mental health needs

Women don’t receive necessary evidence-based mental health interventions

Women don’t self-report perinatal mental health needs

Suicide or overdose in 1st year postpartum
| Logic Model: |

| Logic Model: |

<table>
<thead>
<tr>
<th>Personnel Funding</th>
<th>Space/building Education/awareness materials</th>
<th>Identify coalition of groups or organizations who will support program.</th>
<th>Possible coalition members identified.</th>
<th>Make twenty contacts with leaders or organizations.</th>
<th>Identify ten to participate and contribute.</th>
<th>Coalition of leaders and organizations working to implement program.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify space for Hospital inpatient unit with 3-5 beds.</td>
<td>Identify space for Hospital inpatient unit with 3-5 beds.</td>
<td>Designated patient rooms.</td>
<td># of patients admitted</td>
<td># of patients treated</td>
<td></td>
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</tr>
<tr>
<td>Create educational materials to increase community awareness and primary care provider education of the program.</td>
<td>Create educational materials to increase community awareness and primary care provider education of the program.</td>
<td>Educational materials created.</td>
<td>Primary care provider more aware of the program.</td>
<td>Perinatal patients are admitted to the specific perinatal psychiatric unit.</td>
<td>Increased mental health of perinatal patients.</td>
<td></td>
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</tr>
<tr>
<td>Train staff with online webinar through PSI.</td>
<td>Train staff with online webinar through PSI.</td>
<td>100% of staff complete PSI certificate training.</td>
<td>Increased knowledge of providers</td>
<td>Increased effective inpatient treatment by experts.</td>
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<td></td>
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</tr>
<tr>
<td>Brexanolone training.</td>
<td>Brexanolone training.</td>
<td>Psychiatrists and pharmacists are trained in Brexanolone.</td>
<td>Increase skills – knowledge of Brexanolone.</td>
<td>Women receive appropriate pharmaceutical treatment for PMAD.</td>
<td></td>
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</tr>
</tbody>
</table>

| Decrease mortality in women in the perinatal period due to mood and anxiety disorders. | |
| Increased health in infants and families in the community. | |
Timeline:

April 2019
- Creation, Build and Funding required for P.M.A.D.
  (http://www.cmast.com/)

July 2019
- Increase community awareness by creating
  ongoing education materials for the P.M.A.D.
  years.
- Program education for healthcare team.

Dec. 2019
- P.M.A.D. write fully accepted for the latest
  technology and equipment for Precision and
  Accurate care.

March 2020
- Grand opening of P.M.A.D.
  unit, documented patients are
  entered into the second
  P.M.A.D. and the E.O.C.
- Family reservoirs will be
  provided.

March 2021
- Annual review of unit that
  will include: data, patient
  satisfaction, outcomes, etc.

May 2019
- ID# based on hospital standard
  tool for PMAD.

July 2019
- Number of patients admitted and
  treated.

Sept. 2019
- Inpatient care team working the P.M.A.D.
  unit will undergo PMAD training.

October 2019
- Implement integration of
  PMAD into a hospital.

January 2020
- FDA approved provision of
  equipment, etc. for PMAD.

July 2020
- P.M.A.D. undergoes semi-
  annual evaluation for funding
  requirement of productivity and
  sustainably for the
  Foundation.

2019 - 2021
Funding for Inpatient Unit Budget

- **Total Balance**
  - First-year operation: $491,000
  - Total: $1,078,500

- **Total Annual Revenue**
  - Total: $1,825,000

- **Total Annual Expense**
  - Total: $1,078,500

- **Total One Time Expense**
  - Total: $132,500


References


