BUMED Perinatal Advisory Board
Adverse Outcome Report

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Altarum Institute – Christina Ciucci
Agenda

Background

What is our goal?

What are Adverse Outcome Indices?

Why are they modified?

Data and Reports

How is the data developed?

How is it reported?

How is it distributed?

Highlights

What makes these reports great?

How do the pieces fit together?

What is the road ahead?
What is our goal?

To provide decision makers with metrics which offer:

- Prospective view of quality to address issues before they happen
- Insight into the private sector
- Usable information to make decisions

BUMED strives to provide world-class Perinatal Care to its beneficiaries in all care environments.

BUMED contracted with Altarum Institute to develop a report which could provide the Perinatal Advisory Board and the individual MTFs with actionable data.
In the absence of a nationally accepted set of quality indicators for obstetrics, these metrics were developed with input from the following:

**Current Measures**
- American College of Obstetricians and Gynecologists (ACOG)
- Joint Commission
- Agency for Healthcare Research and Quality (AHRQ)
- National Perinatal Information Center (NPIC)
- Maryland Hospital Quality Indicator Project

**Conference Participants**
- Nurses
- Obstetricians
- Anesthesiologists
- Association of Women’s Health Obstetric and Neonatal Nurses
- Society for Obstetric Anesthesia and Perinatology
- AF Institute of Pathology
- US Navy BUMED
- Office of Surgeon General
- TRICARE Management Activity

**Participating hospitals**
- Beth Israel Deaconess Medical Center
- University of Miami
- Madigan Army Medical Center
- University of Michigan Health Systems
The 10 adverse outcome measures and their weighted values are used as input to the AOI metrics:

<table>
<thead>
<tr>
<th>Event</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Deaths</td>
<td>750</td>
</tr>
<tr>
<td>Intrapartum Neonatal Death</td>
<td>400</td>
</tr>
<tr>
<td>Uterine Rupture During Labor</td>
<td>100</td>
</tr>
<tr>
<td>Unplanned Admission to ICU</td>
<td>65</td>
</tr>
<tr>
<td>Birth Trauma</td>
<td>60</td>
</tr>
<tr>
<td>Unanticipated Operative Procedure</td>
<td>40</td>
</tr>
<tr>
<td>Admission to NICU</td>
<td>35</td>
</tr>
<tr>
<td>APGAR 5 &lt; 7</td>
<td>25</td>
</tr>
<tr>
<td>Maternal Blood Transfusion</td>
<td>20</td>
</tr>
<tr>
<td>3rd or 4th Degree Perineal Laceration</td>
<td>5</td>
</tr>
</tbody>
</table>
What are the Adverse Outcome Indices?

<table>
<thead>
<tr>
<th>MAOI</th>
<th>MWAOS</th>
<th>MSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Modified Adverse Outcome Index</td>
<td>• Modified Weighted Adverse Outcome Score</td>
<td>• Modified Severity Index</td>
</tr>
<tr>
<td># Deliveries w/AE</td>
<td>(\sum (\text{weight} \times \text{AE}))</td>
<td>(\sum (\text{weight} \times \text{AE}))</td>
</tr>
<tr>
<td>Total Deliveries</td>
<td>Total Deliveries</td>
<td># patients w/AE</td>
</tr>
</tbody>
</table>

\(\text{AE}\) represents Adverse Events.
Why are these modified?

A modified version of the AOI was defined for reporting after discussions with BUMED, Navy personnel, and Altarum.

Indices are modified due to the following:

- **APGAR**: Available in Essentris, however lacks standardization and is difficult to access.
- **NICU**: Available in MDR but modified slightly due to data limitations.
How is the data developed?

MDR/Service Node

MDR
- SIDR
- TEDI
- DMIS ID Information
- TEDPR

SAS Programs
- Extract direct and purchased care delivery and birth records
- Filter records based on metric criteria
- Calculate composite metrics
- Aggregate records

Output Text Files
- Annual and Monthly Data
- MTF level report data
- PBB

Adverse Outcome Datasets
- Individual Adverse Outcome Metrics
- Adverse Outcome Composite Metrics - MAOI - MWAOS - MSI

Adverse Outcome Reports (Excel)
- Perinatal Advisory Board/BUMED Report
- MTF-level reports

No PHI/PII

FOR OFFICIAL USE ONLY
How is the data reported?

*Note: Data shown are not representative of actual scores.

Perinatal Advisory Board/BUMED Report

Individual MTF Report
How is the data distributed?

MDR

NH Camp Pendleton
NH Lemoore
NMC San Diego
NH Twenty-nine Palms
All Navy Hospitals
Perinatal Advisory Board

Monthly reports and inquiry responses
Specific inquiries
What makes these reports great?

These metrics offer a prospective view of quality to address issues before they happen, provide insight into the private sector, and provide leadership with usable information to make decisions.

| MHS Data Repository (MDR) | MSMA and MTF level reports | Annual and 12 month trend reports | Includes Purchased Care | Excel format | Easy to read Dashboard | Updated regularly |
How do the pieces fit together?

AOI is a stable indicator that allows tracking of rare events over time.

Reports give the detail needed to zoom in on specific areas of concern.

Reports put data in front of decision-makers whom otherwise might not have access to it.

Overall goal to improve quality of OB care in Navy hospitals for mothers and newborns!
What is the road ahead?

The goal is to transform data into information, and information into insight

~ Carly Fiorina, Former President Hewlitt Packard

If you want to know your past, look into your present conditions. If you want to know your future, look into your present actions.

~ Buddhist Saying
Questions

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