Safety Action Series

Using the Revised Severe Maternal Morbidity Review Forms
Speakers

Fouad Atallah, MD, FACOG
Director, Patient Safety
Department of Obstetrics & Gynecology
Maimonides Medical Center
Brooklyn, NY

Sarah Kilpatrick, MD, PhD, FACOG
Chair, Department of Obstetrics & Gynecology
Associate Dean, Faculty Development
Cedars-Sinai Medical Center
Los Angeles, CA

Sandra McCalla, MD, FACOG
Vice Chair, Obstetrics & Gynecology
Maimonides Medical Center
Brooklyn, NY
Disclosures

- Fouad Atallah, MD, FACOG has no real or perceived conflicts of interest to disclose.

- Sarah Kilpatrick, MD, PhD, FACOG is on the scientific advisory board for OBMedical.

- Sandra McCalla, MD, FACOG has no real or perceived conflicts of interest to disclose.
Objectives

- Review the revised Severe Maternal Morbidity (SMM) Abstraction and Assessment Forms.
- Explore how to conduct a debrief session following a severe maternal morbidity event including: which events to review, who should conduct the review, and appropriate time to review.
- Hear insights from institutions utilizing the SMM Forms.
- Provide tips for encouraging the use of SMM forms within your institution.

Morbidity: The Problem

- Maternal morbidity is difficult to define
  - Broad range of complications and conditions
  - Broad range of severity

- Maternal morbidity cannot be captured by a defined set of metrics

- Administrative vs. more local records
  - We need to start somewhere
Prevention or Opportunity to Alter Outcome

- Prevention morbidity: harder concept
  - Reduce eclampsia, DIC, LOS, renal failure, HELLP, stroke etc.

- Identifying opportunities to alter outcome
  - Strong, possible, none
What To Do?

• Obtain data
  ➢ Follow CDC 2001 recommendations for severe morbidity and death
• Utilize multidisciplinary approach
• Identify opportunities to alter outcome
• Implement interventions based on data
  ➢ Educational programs on the basics: hemorrhage, hypertensive disease, infection, cardiac disease
Facility-Based Identification of Women with Severe Maternal Morbidity: 2014

• **Terminology**: severe maternal morbidity

• **Identification of cases**:
  - ICU admission or
    - 3-4/1000 deliveries
  - Transfusion of 4 or more units of blood products
    - 2/1000 deliveries

• **Review**: should be done so lessons can be learned
  - Facility based

• **Research**:
  - Are we identifying the right cases?
  - Can we improve outcomes?

SMM Review: Process

• Identify women with 4 or more units of blood, ICU admission

• Develop multidisciplinary committee
  ➢ OB, MFM, RN, CNM, OB anesthesia, others

• Encourage debriefing after event
  ➢ This is not the same as a review

• Primary data abstracted from record and presented to committee for evaluation

Council on Patient Safety in Women’s Health Care Website

www.safehealthcareforeverywoman.org
Select ‘Severe Maternal Morbidity Forms’ from dropdown
Council on Patient Safety in Women’s Health Care Website

www.safehealthcareforeverywoman.org

Sign in with your registered email address or click ‘Need an account?’ to create one
Council on Patient Safety in Women’s Health Care Website

www.safehealthcareforeverywoman.org

Click the Severe Maternal Morbidity (SMM) Forms link in order to view and download
### SEVERE MATERNAL MORBIDITY REVIEW FORM v2

6/2015

#### ABSTRACTION

<table>
<thead>
<tr>
<th>Screened Positive by</th>
<th>[ ] COD Code</th>
<th>[ ] ICU Code</th>
<th>[ ] VLBW</th>
<th>[ ] ICU Admit</th>
<th>[ ] PILOS</th>
<th>[ ] Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Abstractation Date]</td>
<td>[ ] Click here to enter a date.</td>
<td>[ ] Abstractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[VR #]</td>
<td>[ ] Patient ID</td>
<td>[ ] Discharge Date</td>
<td>[ ] Click here to enter a date.</td>
<td>[ ] Zip code of Patient Residence</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PATIENT CHARACTERISTICS

| Age | [ ] [ ] [ ] |
| Weight/Height | [ ] [ ] |
| BMI at first prenatal visit | [ ] [ ] [ ] |

#### OBSTETRIC HISTORY

| Gravida | [ ] [ ] [ ] |
| Para Term | [ ] [ ] |
| [ ] [ ] [ ] | [ ] [ ] |

#### PRENATAL CARE (PNC)

| Yes | [ ] Week PNC began: [ ] Gestational Age | No | [ ] Unknown PNC Status |
| [ ] Number of PNC visits |

#### Assisted Reproductive Technology (ART)

| Yes/No |
| [ ] | [ ] Depression/Psychiatric Disorder |
| if yes, what: |

#### Obstetric History

| Discipline of Primary PNC Provider | [ ] Preventive care source/location |
| [ ] | [ ] Choose an item. |

#### Planned/intended place of delivery

| Timing of maternal morbidity | [ ] | [ ] Choose an item. |
| [ ] | [ ] | [ ] Choose an item. |

#### Maternal Transport during peripartum period

| Yes | [ ] Transfer from/to: | No | [ ] Unknown |
| [ ] | [ ] Provider type: |

#### Delivery Information

| Singleton | Multiple |
| [ ] | [ ] [ ] |

#### Obstetric age at time of morbidity

| Birth status | [ ] | [ ] |
| [ ] | [ ] Labor | [ ] Delivery type |
| [ ] | [ ] | [ ] Choose an item. |

#### Type of C-Section

| Primary reason for C-Section | [ ] |
| [ ] | [ ] Primary payer source |

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Once clicked, it will open in Microsoft Word where data can be entered and saved on your local device.
SMM Review Process

• Can use SMM abstraction and assessment form

  ➢ Abstraction:
    ▪ Trained abstractor
    ▪ Capture analyzable and descriptive data from medical record
    ▪ Identify specific morbidity
    ▪ Develop narrative of key aspects of morbidity
    ▪ Focused questions re: care quality
      ▪ Was hypertension recognized appropriately
      ▪ Did woman appropriately receive magnesium
      ▪ Was severe hypertension treated in a timely fashion
      ▪ Was woman delivered in a timely fashion
Assessment: Done by Committee

- Identify whether opportunities to alter outcome (strong, possible, none)
- If yes enumerate and make specific recommendations
- Identify things that went well

- Conduct of committee
  - Just culture or other nonjudgmental approach
## SMM Review Form (6/3/2015 version)

### ABSTRACTION

- [Screened Positive by] **NEW**
- ICDDx Code □
- ICD Px Code □
- ≥4 Units RBC □
- ICU Admit □
- PPLOS □
- Other

### PATIENT CHARACTERISTICS

mostly drop down boxes

### OBSTETRIC HISTORY

### PRENATAL CARE (PNC)

<table>
<thead>
<tr>
<th>[Assisted Reproductive Technology (ART)]</th>
<th>Depression/Psychiatric Disorder <strong>NEW</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEW</strong> Yes/No</td>
<td>If Yes, what:</td>
</tr>
<tr>
<td>[Planned/intended place of delivery]</td>
<td></td>
</tr>
</tbody>
</table>

### DELIVERY INFORMATION

- [Gestational age at time of morbidity]
- [Birth status]
- [If C-Section]
  - Type of C-Section
  - Type of anesthesia|
Severe Maternal Morbidity Review Form

ABSTRACTION: CASE NARRATIVE AND TIMELINE
Should include brief synopsis focused on the **specific severe maternal morbidity** that occurred. It should be concise and pertinent to the particular SMM and include appropriate time line, evaluation and be in chronologic format. Please attempt to identify key moments that impacted care.

ASSESSMENT

A. **[Primary Cause of Morbidity]** *
   [If trauma indicated as primary cause of morbidity]
   [Other cause]

B. **[Sequence of Morbidity: Clinical Cause of Morbidity]**
   1 and 2 reflect what initiated the final cause resulting in the severe morbidity and 3 is the final cause.
   
   *For example: 1. Preeclampsia 2. uncontrolled hypertension 3. intracranial bleed*
   
   *So that 1, caused 2, that resulted in 3 – the severe morbidity event*

   1.
   2.
   3.

C. **[Affected organ systems (can have >1)]**
## Severe Maternal Morbidity Review Form

### Section Reorganized

<table>
<thead>
<tr>
<th>ASSESSMENT: SYSTEM, PROVIDER AND PATIENT FACTORS</th>
<th>CHECK OR WRITE DETAILS IN BOX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYSTEM/PROVIDER FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td><em>Point of Entry to Healthcare</em></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT ☐ POSSIBLE ☐</td>
</tr>
<tr>
<td></td>
<td>NONE ☐</td>
</tr>
<tr>
<td></td>
<td>Delay ☐ Other ☐ [If other, list specific details]</td>
</tr>
<tr>
<td><em>Diagnosis</em></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT ☐ POSSIBLE ☐</td>
</tr>
<tr>
<td></td>
<td>NONE ☐</td>
</tr>
<tr>
<td></td>
<td>Suboptimal ☐ Delay ☐ None ☐</td>
</tr>
<tr>
<td><em>Referral to Higher Level Care</em></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT ☐ POSSIBLE ☐</td>
</tr>
<tr>
<td></td>
<td>NONE ☐</td>
</tr>
<tr>
<td></td>
<td>Delay ☐ None ☐</td>
</tr>
<tr>
<td><em>Treatment</em></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT ☐ POSSIBLE ☐</td>
</tr>
<tr>
<td></td>
<td>NONE ☐</td>
</tr>
<tr>
<td></td>
<td>Suboptimal ☐ Delay ☐ None ☐</td>
</tr>
<tr>
<td><em>Management Hierarchy (i.e. RN to MD, Resident to Attending)</em></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT ☐ POSSIBLE ☐</td>
</tr>
<tr>
<td></td>
<td>NONE ☐</td>
</tr>
<tr>
<td></td>
<td>Suboptimal ☐ Delay ☐ None ☐</td>
</tr>
<tr>
<td>SYSTEM/PROVIDER FACTORS</td>
<td>CHECK OR WRITE DETAILS IN BOX</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>Education</td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Lack of Staff/Physician Training □ None □</td>
</tr>
<tr>
<td>Team Communication</td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Suboptimal □ None □</td>
</tr>
<tr>
<td>Policies/Procedures</td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Suboptimal □ None □</td>
</tr>
<tr>
<td></td>
<td>[List specific details]</td>
</tr>
<tr>
<td>Documentation</td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Suboptimal □ None □</td>
</tr>
<tr>
<td>Equipment/Environment Factors</td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>[List specific details]</td>
</tr>
</tbody>
</table>
### Severe Maternal Morbidity Review Form

#### Section Reorganized

<table>
<thead>
<tr>
<th>ASSESSMENT: SYSTEM, PROVIDER AND PATIENT FACTORS</th>
<th>CHECK OR WRITE DETAILS IN BOX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYSTEM/PROVIDER FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Discharge</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Suboptimal □ Lack of Patient Education □ Failure to follow-up □</td>
</tr>
<tr>
<td><strong>Pre-pregnancy: Underlying significant medical or physical conditions</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>[List specific details]</td>
</tr>
<tr>
<td><strong>Previous significant obstetric conditions</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>[List specific details]</td>
</tr>
<tr>
<td><strong>Non-obstetric medical complications that occurred during pregnancy</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>[List specific details]</td>
</tr>
<tr>
<td><strong>Psychiatric/Behavioral Health</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □</td>
</tr>
<tr>
<td></td>
<td>Alcohol □ Tobacco □ Illicit Drugs □ Psychiatric Disorder □ Other □ [If other, list details]</td>
</tr>
</tbody>
</table>
## Severe Maternal Morbidity Review Form

Section Reorganized

### ASSESSMENT: SYSTEM, PROVIDER AND PATIENT FACTORS

<table>
<thead>
<tr>
<th>SYSTEM/PROVIDER FACTORS</th>
<th>CHECK OR WRITE DETAILS IN BOX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Significant Stressors</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □ Domestic Violence □ Lack of food access □ Lack of housing □ Other □ [If other, list specific details]</td>
</tr>
<tr>
<td><strong>Barriers to seeking healthcare or healthcare access</strong></td>
<td>CONTRIBUTION TO MORBIDITY: DIRECT □ POSSIBLE □ NONE □ Refusal □ Cultural beliefs □ Lack of health insurance □ Lack of transportation □ Other □ [If other, list specific details]</td>
</tr>
</tbody>
</table>
## Final Review Committee Analysis

**[Opportunity to alter outcome]**

<table>
<thead>
<tr>
<th>Strong</th>
<th>Possible</th>
<th>None</th>
</tr>
</thead>
</table>

**[If opportunity to alter outcome present were opportunities largely (select all that apply)]**

<table>
<thead>
<tr>
<th>Provider</th>
<th>System</th>
<th>Patient</th>
</tr>
</thead>
</table>

**[List up to 3 things that could be done to alter outcome]**


**[Identify practices that were done well and should be reinforced]**


**[Recommendations for system, practice, provider improvements]**


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Slide 24
Example

- 43 YO with known previa, presumed accreta
  - Presents at 37 wks with hemorrhage
  - To OR cesarean hysterectomy performed
    - Becomes hypotensive, tachycardic, Develops DIC
    - Difficulty finding extra surgical help
  - EBL 4 liters, transfused 8 PRBCs, 6 FFP
  - To SICU postop intubated
  - Discharge home on POD 4
**SMM Review Form Example 1**

### ABSTRACTION

[Screened Positive by]
- ICDDx Code □
- ICD Px Code X
- ≥4 Units RBC X
- ICU Admit X
- PPLOS □
- Other

### PATIENT CHARACTERISTICS

### OBSTETRIC HISTORY

### PREGNATAL CARE (PNC)

- [Assisted Reproductive Technology (ART)]
  - Yes/No
  - If Yes, what: **IVF**

- [Planned/intended place of delivery]
  - Level 3

### DELIVERY INFORMATION

- [Gestational age at time of morbidity] **37**
- [Birth status] **live born**
- [If C-Section] **classical/hysterectomy**
- Type of C-Section
- [Type of anesthesia] **general**
# SMM Review Form Example 1

## ABSTRACTION: CASE NARRATIVE AND TIMELINE

Should include brief synopsis focused on the specific severe maternal morbidity that occurred. It should be concise and pertinent to the particular SMM and include appropriate time line, evaluation and be in chronologic format. Please attempt to identify key moments that impacted care.

## ASSESSMENT

<table>
<thead>
<tr>
<th>A. [Primary Cause of Morbidity]</th>
<th>[If trauma indicated as primary cause of morbidity]</th>
<th>[Other cause]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OB hemorrhage</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. [Sequence of Morbidity: Clinical Cause of Morbidity]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 and 2 reflect what initiated the final cause resulting in the severe morbidity and 3 is the final cause.</td>
</tr>
<tr>
<td>For example: 1. Preeclampsia 2. uncontrolled hypertension 3. intracranial bleed</td>
</tr>
<tr>
<td>So that 1, caused 2, that resulted in 3 – the severe morbidity event</td>
</tr>
</tbody>
</table>

1. previa, accreta
2. Placental hemorrhage, hysterectomy
3. DIC

<table>
<thead>
<tr>
<th>C. [Affected organ systems (can have &gt;1)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>placental hemorrhage, hematologic</td>
</tr>
</tbody>
</table>
**FINAL REVIEW COMMITTEE ANALYSIS**

**[Opportunity to alter outcome]**

- Strong ☐
- Possible **X**
- None ☐

**[If opportunity to alter outcome present were opportunities largely (select all that apply)]**

- Provider **X**
- System **X**
- Patient ☐

**[List up to 3 things that could be done to alter outcome]**

- Multidisciplinary planning for accreta before del
- Planned del before 37 wks
- Have better urgent way to reach gynecologic advanced surgical help

**[Identify practices that were done well and should be reinforced]**

- Emergent delivery handled well by initial providers

**[Recommendations for system, practice, provider improvements]**

- Implement system for accreta delivery planning
- Make contact list for 24 hr availability for surgical help
SMM Review Process Continued...

- Have institutional mechanisms to implement change
- Trend data internally potentially regionally, etc.
- Review timing
- Confidentiality
- Focus on systems
Final Thoughts

• Review forms are just a suggestion
• Important to capture analyzable data locally, regionally, etc.
• ICU admission, transfusion of 4 or more units are not meant to be quality measures
• Debriefs are not the same as reviews
• Open to input regarding ease of use of forms
Insight from Maimonides

- Brooklyn, NY
- Highest number of deliveries in NY State
- Regional Perinatal Center
- Level IV Maternal care

Image from: http://www.nyskairos.com/
Insight from Maimonides

• Experience with SMM form since 06/2015
• Preliminary experience
• Parallel to current Peer Review and RCA practice
Insight from Maimonides

• Current process – Reporting
  – Shift Nursing Report (twice a day) to Nursing leadership, Director of OB and Patient Safety
  – Daily morning verbal report by Chief resident to the Vice – Chair of night shift’s activities
  – Culture of reporting (email from care providers to a designated QA group)
  – Electronically generated daily and weekly morbidity report
Insight from Maimonides

• Current process – Debrief
  – Shoulder dystocia with suspected palsy
  – Massive transfusion
  – ICU admission
  – Uterine rupture/Hysterectomy
  – Unplanned return to the OR or UAE
  – Eclampsia
  – Others as deemed necessary
Insight from Maimonides

• **Current process – QA review**
  – Just culture model: deals with system and provider issues (often system > individual)
  – TeamSTEPPS opportunities
  – Action plan with owner and timeline
Insight from Maimonides

• Current process – Follow-up
  – Patient Safety meetings with updates/metrics
  – Liberal use of simulation
  – Institutional support from the hospital’s Performance Improvement department
  – Principles of writing > disseminating > auditing > enforcing any policy, protocol, or process
Insight from Maimonides

• Pre-requisites
  – Desire to enhance your QI process and improve your outcomes
  – Expertise in chart review and debriefing
  – Impartiality
  – Read the article: Standardized severe maternal morbidity review: rationale and process.

Insight from Maimonides

• Qualities
  – Systematic approach
  – Comprehensive
  – Consistent with a just culture model
  – Forcing function
  – Does not eliminate the narrative
  – Morbidity-specific questions very helpful
  – Continuum from reporting > debrief > QA/Peer review > RCA > Action plan: longitudinal form
  – Repository of pearls that can be shared locally, regionally and nationally
Insight from Maimonides

• Feedback
  – May be time consuming in the beginning
  – May be helpful to have detailed options under each categories (like in the initial form) or by morbidity
  – System/provider does not eliminate the need for the QA process in terms of provider accountability
  – Case analysis notes to follow the systematic assessment?
Insight from Maimonides

• Conclusions and plans
  – Plan to include the form as part of the QA and RCA process
  – Local repository of lessons learned and actions to share (like the CEMACH)
  – One step further towards decreasing variation in medicine
Insight from Maimonides

“You must accept the truth from whatever source it comes”

Maimonides
The Guide for the Perplexed
Q&A Session

Press *1 to ask a question

You will enter the question queue
Your line will be unmuted by the operator for your turn

A recording of this presentation will be made available on our website:
www.safehealthcareforeverywoman.org
Next Safety Action Series

Conducting Drills for Hypertension in Pregnancy

Thursday, September 17, 2015 | 11:00 a.m. Eastern

Kristin Atkins, MD, FACOG
Assistant Professor of Obstetrics & Gynecology
University of Maryland Medical Center

Jenifer Fahey, CNM, MSN, MPH
Assistant Professor of Obstetrics & Gynecology
University of Maryland Medical Center

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