## 2016 Patient Safety First Data Measurements

### Sepsis Mortality

**Data Definition #1:**
- **Numerator:** Number of sepsis patients who expired from denominator
- **Denominator:** Number of sepsis patients 18 years and over with an ICD-10-CM principal or other diagnosis codes of sepsis, severe sepsis or septic shock

**Data Definition #2:**
- **Numerator:** Number of sepsis patients who expired excluding those with admission day orders for no code, or comfort care only from denominator
- **Denominator:** Number of sepsis patients 18 years and over with an ICD-10-CM principal or other diagnosis codes of sepsis, severe sepsis or septic shock excluding those with admission day orders for no code, or comfort care only

### PSF Goal
Relative reduction of mortality by 10% from 2015 (baseline)

### Process Measures
- Simulation training participation
- Surviving Sepsis Campaign Guidelines/Bundle

### References
ICD 10 Principal diagnosis codes: See table below

#### Denominator: Primary Codes for Identifying Sepsis Patients (Inclusion Criteria)

| Sepsis due to streptococcus, group A group B, Staphylococcus aureus, Streptococcus pneumoniae, others streptococcal Sepsis | A 40.0, A40.1, A40.3, A40.8, A40.9, A41.0, A41.02, A41.1, A41.2, A41.3 |
| Sepsis due to anaerobes, Gram-negative unspecified | A41.4, A41.50 |
| Sepsis due to Hemophilus influenza, Escherichia coli, pseudomonas, serratia, other gram-negative sepsis, Enterococcus, Other specified and unspecified sepsis | A41.3, A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9 |
| Sepsis without septic shock | R65.20 |
| Sepsis with septic shock | R65.21 |

Sources for bundle info: [http://survivingsepsis.org/SiteCollectionDocuments/SSC_Bundle.pdf](http://survivingsepsis.org/SiteCollectionDocuments/SSC_Bundle.pdf)

### Rate Calculation
Rate = Numerator*100/Denominator
### Cesarean Rate for Low Risk, First Birth Women (NTSV CS Rate)

#### Data Definition:

**Numerator:** Patients with cesarean sections from denominator  
**Denominator:** Nulliparous patients delivered of a live term singleton newborn in vertex presentation

#### Numerator:

**Included Populations:** ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for cesarean birth as defined in Appendix A, Table 11.06  
**Excluded Populations:** None

#### Data Elements:

- ICD-10-PCS Other Procedure Codes  
- ICD-10-PCS Principal Procedure Code

#### Denominator:

**Included Populations:**  
- ICD-10-PCS Principal Procedure Code or ICD-10-PCS Other Procedure Codes for delivery as defined in Appendix A, Table 11.01.1  
- Nulliparous patients with ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for outcome of delivery as defined in Appendix A, Table 11.08 and with a delivery of a newborn with 37 weeks or more of gestation completed

**Excluded Populations:**  
- ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09  
- Less than 8 years of age  
- Greater than or equal to 65 years of age  
- Length of Stay >120 days  
- Enrolled in clinical trials  
- Gestational Age < 37 weeks or UTD

#### Data Elements:

- Admission Date  
- Birthdate  
- Clinical Trial  
- Discharge Date  
- Gestational Age
## 2016 Patient Safety First Data Measurements

- **ICD-10-CM Other Diagnosis Codes**
- **ICD-10-CM Principal Diagnosis Code**
- **Number of Previous Live Births**

### PSF Goal
Hospitals will target a rate of 23.9%, or lower, for Low-risk First-Birth (NTSV) Cesarean Birth Rate (Healthy People 2020 goal)

### Process Measures
- Guidelines for Induction for Nulliparous at/after 41 weeks
- Protocol/Policies for Labor Management Practices
- Staff/Physician Education on avoiding preventable NTSV C-Sections
- Patient Counseling/Education (Nulliparous women with unfavorable cervix should be counseled about the risk of C-section and its effects on subsequent pregnancies during the child birth class)

### References
- California Maternal Quality Care Collaborative White Paper. “Cesarean Deliveries, Outcomes, and Opportunities for Change in California: Toward a Public Agenda for Maternity Care Safety and Quality” 2011
  [https://www.cmqcc.org/resources/2079](https://www.cmqcc.org/resources/2079)
- Committee on Obstetric Practice. “Committee Opinion: Cesarean Delivery on Maternal Request.” 2013
  [http://europepmc.org/abstract/MED/21646928/reload=0;jsessionid=HHgGcY9DOTMYOZLaS54L2](http://europepmc.org/abstract/MED/21646928/reload=0;jsessionid=HHgGcY9DOTMYOZLaS54L2)
- Obstetrics & Gynecology, Vol., 120, No. 5, November 2012; Preventing the First Cesarean Delivery, P. 1181.
### 2016 Patient Safety First Data Measurements

#### OB Hemorrhage

**Measure 1: Massive Transfusion (per 1,000 mothers giving birth)**

**Numerator:** Among women in the denominator, total number of women in the denominator who received \( \geq 4 \) units of RBCs*

**Denominator:** All women during the birth admission (>20 weeks of gestation) and were discharged during the data collection period

*Transfusion data is typically provided by the blood bank. This has been harmonized with the new Joint Commission indicator for Severe Maternal Morbidity that is effective Jan 1, 2015. This is an uncommon event (~1/500 births). Submit the number of cases with \( \geq 4 \) units of RBC per quarter.

**Numerator:** ICD-10 Codes for women received \( \geq 4 \) units of RBCs (Inclusion Criteria)

<table>
<thead>
<tr>
<th>RBCs Transfusion Codes</th>
<th>30233NO, 30243NO, 30253NO, 30263NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other RBCs Transfusion Codes</td>
<td>30233N1, 30233P1, 30243N1, 30243P1, 30253N1, 30253P1, 30263N1, 30263P1</td>
</tr>
</tbody>
</table>

**Denominator:** All Women during Birth Admission >20 weeks of gestation (Inclusion Criteria)

<table>
<thead>
<tr>
<th>Single Live Birth</th>
<th>Z370</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin, both live Births</td>
<td>Z372</td>
</tr>
<tr>
<td>Multiple Live Births, all live born</td>
<td>Z3750, Z3751, Z3752, Z3753, Z3754, Z3759</td>
</tr>
</tbody>
</table>

**Measure 2: Severe Maternal Morbidity (SMM) (per 100 women with obstetric hemorrhage)**

**Numerator:** Among the denominator, total number of women who experienced Severe Maternal Morbidity defined by a set of ICD 10 diagnosis and procedure codes (see codes below)

**Denominator:** All women with a birth admission (>20 weeks of gestation and who were discharged during the data collection period who had an obstetric hemorrhage diagnosis (see codes for diagnosis below)

This measure is collected entirely with submitted ICD 10 codes from Hospital Discharge Diagnosis files. This reflects how well active response to hemorrhage reduced the frequency of Severe Maternal Morbidity.

**Numerator:** ICD -10 Diagnosis and procedure codes of significant complications that are related to hemorrhage (Inclusion Criteria)

<table>
<thead>
<tr>
<th>Hysterectomy, exploratory laparotomy</th>
<th>OUT94ZZ, OUTC4ZZ, 0W3G0ZZ, OW3H0ZZ, 0W3P0ZZ, 0WJG0ZZ, 0WJH0ZZ, ODJ00ZZ, ODJ6OZZ, ODJDOZZ, ODJU0ZZ, ODJW0ZZ, 0WJJ0ZZ, 0WJP0ZZ, 0WJROZZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Renal Failure</td>
<td>090.4</td>
</tr>
<tr>
<td>Pulmonary Edema/ Fluid Overload</td>
<td>J81.0, J50.9, E87.70, E87.71, E87.79</td>
</tr>
<tr>
<td>Adult Respiratory Distress Syndrome</td>
<td>J96.00 OR J96.90, J80, J96.20, J98.8, R09.2</td>
</tr>
</tbody>
</table>
### 2016 Patient Safety First Data Measurements

**Disseminated Intravascular Coagulation (DIC)**

<table>
<thead>
<tr>
<th>Code(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D65, D68.8 OR D68.0, 072.3</td>
<td>DIC codes</td>
</tr>
</tbody>
</table>

**Ventilation**

<table>
<thead>
<tr>
<th>Code(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5A09357, 5A09457, 5A09557, 09HN7BZ OR 09HN8BZ, OCHY7BZ OR OCHY8BZ, ODH57BZ OR ODH58BZ, OBH17EZ OR OBH18EZ, OB717DZ OR OB718DZ, OBH07DZ, OWHQ7YZ, 5A1935Z, 5A1945Z, 5A1955Z</td>
<td>Ventilation codes</td>
</tr>
</tbody>
</table>

**Denominator: ICD-10 Diagnosis and procedures codes to identify all possible obstetric hemorrhage cases (Inclusion Criteria)**

<table>
<thead>
<tr>
<th>Code(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>044.00 Through 044.13, 045.8X9 Through 045.8X3, 045.91 through 045.93, 046.009 through 046.099, 046.90 through 046.93, 045.001 to 046.093, 067.0, 046.8X1, 046.8X2, 046.8X3 and 046.8X9, 067.8 and 067.9</td>
<td>Abruption, Previa or Antepartum hemorrhage codes</td>
</tr>
<tr>
<td>30233HO, 30233NO, 30233WO, 30243HO, 30243NO, 30243WO, 30253HO, 30253NO, 30253WO, 30263HO, 30263NO, 30263WO, 30233H1, 30243H1, 30253H1, 30263H1, 30233N1, 30233P1, 30243N1, 30243P1, 30253N1, 30253P1, 30263N1, 30263P1, 30233R1, 30243R1, 30253R1, 30263R1, 30233T1, 30233V1, 30233W1, 30243T1, 30243V1, 30243W1, 30253T1, 30253V1, 30253W1, 30263T1, 30263V1, 30263W1, 30233J1 to 30263M1, 3E033GC through 3E063GC, 30233Q1 through 30263Q1</td>
<td>Transfusion codes</td>
</tr>
<tr>
<td>072.0, 072.3, 043.211 through 043.233</td>
<td>Postpartum Hemorrhage codes</td>
</tr>
</tbody>
</table>

**PSF Goal**

No cases with 4 or more units of RBC (excluding placenta accreta cases)

**Process Measure**

Completed Post-hemorrhage debrief forms* for hemorrhage ≥Stage 2 or ≥ 1000 ml Blood loss.

*Debriefs following an event was judged by the expert panel as the single most important activity to support full implementation of the safety bundle. A sample debrief form that quickly reviews the hemorrhage care is provided. The rate of Stage 2 or 1,000ml blood loss (or beyond) is estimated to be 1-2% of births, so only a limited number would be expected to be completed per month. If severe hemorrhages are uncommon on your unit, the debrief form can be completed for lesser hemorrhages.
### References

California Maternal Quality Care Collaborative:
- [https://www.cmqcc.org/ob_hemorrhage](https://www.cmqcc.org/ob_hemorrhage)

### Rate Calculation

*Measure 1*: numerator * 1,000/denominator  
*Measure 2*: numerator * 100/denominator