Maternal mortality in America

Knowing our data

Vizient Clinical Data Base (CDB) illustrates a picture of our members experience from 2015-2017 regarding maternal mortality rates. Vizient CDB hospitals include 98 academic medical centers, 101 complex teaching hospitals and 92 community hospitals.

- Within CDB hospitals from 2015-2017, data showed that there were 14.2 maternal deaths per 100,000 live births.¹
- This rate is below the Center for Disease Control’s (CDC) reported national maternal mortality rate, cited at 18.0 maternal deaths per 100,000 live births in 2014 (the last year of data available).
- Table 1 reflects the annual number of deaths based on the number of cases of women being treated with DRGs associated with pregnancy and delivery as recorded in the CDB database. Using the CDC’s predictive position that 60% of all deaths could be prevented, the loss of 167 lives could have been averted.²,³

Table 1. Annual number of CDB-identified maternal mortality cases

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>91</td>
<td>92</td>
<td>98</td>
</tr>
<tr>
<td>Preventable rate of 60% per CDC</td>
<td>54</td>
<td>55</td>
<td>58</td>
</tr>
</tbody>
</table>

Factors influencing maternal mortality: Race and Ethnicity

- More women classified for race/ethnicity as “Unknown” are dying than those identified as a specific race or ethnicity. Figure 1 demonstrates the importance of collecting comprehensive patient demographic information to show a complete and transparent picture of the patient outcomes.⁴
- Interestingly, though, individuals classified as White incurred a significant increase in death during 2017, while Black and the “Unknown” classifications are trending down in the maternal death rate per 100,000 pregnancies year-over-year.⁵

---

¹ Source: CDB, 2015-2017. Sorted by MDC 14: Pregnancy, childbirth & the puerperium with discharge status: expired
⁴ Source: CDB, 2015-2017. Sorted by MDC 14: Pregnancy, childbirth & the puerperium, race, ethnicity, discharge status: expired. Note this graph shows maternal deaths per 100,000 pregnancies, as to show the race and ethnicity of the pregnant woman
⁵ Hispanic refers to patients of Hispanic origin of any race. Asian, Black, White, and Unknown are patients of non-Hispanic origin
Figure 1. Maternal deaths per 100,000 pregnancies by race and ethnicity

Factors influencing maternal mortality: Socioeconomic Status

- As shown in Figure 2, although only 7% of pregnancies fall into the payer category of “Other,” maternal deaths in this group far outnumber other payers, with Medicaid recipients following behind in a distant second place.⁶
- “Other” includes Medicare (27% of cases in the category), Uninsured (24%), Military insurance (23%), State Assisted Healthcare (9%) and Self-Pay (5%). Auto insurance, Charity, County Medical Indigent Services, Research, Title V Maternal and Child Health, Workers Compensation, and Unknown payers are also included in “Other”, but represent less than 1% of cases within the category each.
- Women covered by Medicaid are dying at a significantly higher rate than commercially-insured women.

Factors influencing maternal mortality: Age

- As seen in Figure 3, patients under the age of 18 have a higher rate of pregnancy-related death than women aged 18-35.⁷ These patients are more likely to be covered under Medicaid (82% of cases) than those over age 18 (44% of cases).
- Women over the age of 41 are dying more frequently due to pregnancy-related complications than their younger counterparts.

⁷ Source: CDB, 2015-2017. Sorted by MDC 14: Pregnancy, childbirth & the puerperium, age, discharge status: expired
Figure 2. Maternal deaths per 100,000 pregnancies and cases by payer, 2015-2017

Figure 3. Deaths per 100,000 pregnancies by age, 2015-2017
Principal clinical classifications for cases of maternal death

- Table 2 shows the principal diagnosis in cases of maternal death using the Agency for Healthcare Research and Quality’s Clinical Classification Software (CCS) grouping system.\(^8\)

- Using this categorization system, 77\% of maternal deaths were caused by unspecified complications of birth or pregnancy.\(^9\)

### Table 2. Maternal Deaths Categorized by CCS Codes, 2015-2017

<table>
<thead>
<tr>
<th>Principal CCS Code and Description</th>
<th>Number of deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>195: Other complications of birth; puerperium affecting management of mother</td>
<td>120</td>
</tr>
<tr>
<td>181: Other complications of pregnancy</td>
<td>95</td>
</tr>
<tr>
<td>183: Hypertension complicating pregnancy, childbirth and the puerperium (eclampsia and preeclampsia)</td>
<td>17</td>
</tr>
<tr>
<td>182: Hemorrhage during pregnancy; abruption placenta; placenta previa</td>
<td>9</td>
</tr>
<tr>
<td>189: Previous C-section</td>
<td>8</td>
</tr>
<tr>
<td>191: Polyhydramnios and other problems of amniotic cavity</td>
<td>7</td>
</tr>
</tbody>
</table>

---


\(^9\) Due to the high number of academic medical and complex teaching hospitals, data may be highly reflective of high-risk pregnancies.