Maximizing Antenatal Steroid Therapy Initiation
Vanderbilt University Medical Center

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PROJECT DESCRIPTION
Antenatal steroid therapy (ANS) is associated with improved neonatal outcomes, and as project participants in this maternal TIPQC project, we have committed to sharing data and experience with potentially better practices and processes to improve the antenatal steroid therapy initiation rate statewide.

GEOGRAPHY & DEMOGRAPHICS
Vanderbilt University Medical Center is located in Nashville, TN and is recognized as one of five TN Perinatal Regional Centers, providing high-risk maternal and infant care. VUMC had a total of 4572 births in 2014. Of those, 171 were between 24 0/7 and 31 6/7 weeks gestation.

AIM
The aim of this project was to use a collaborative quality improvement approach to improve the rate of antenatal steroid therapy initiation to patients delivering between 24 0/7 completed weeks gestation through 31 6/7 weeks in Tennessee. Baseline data (TJC PC-03) was collected to systematically identify missed opportunities to implement this evidence based practice, and potentially better practices were introduced by participants with a goal of reducing the missed antenatal steroid initiation rate by 20%.

VUH Goal: 100%

HISTORY AND TIMELINE
2013
• 182 infants born between 24 0/7 – 31 6/7
• 92% of eligible patients received ANS

2014
• 173 infants born between 24 0/7 – 31 6/7
98.8% of eligible patients received ANS (as shown in results)

CHALLENGES
• Data abstraction and chart review can be time consuming.
• If reason for not administering ANS is not clearly documented in the record, it could result in false noncompliance
• DKA may be difficult to “capture” in EMR

RESULTS

<table>
<thead>
<tr>
<th>MONTH OF ANS INFORMATION (2014)</th>
<th>No. in eligible EGA range</th>
<th>No. antenatal steroids initiated</th>
<th>No. with documented exclusion</th>
<th>% of No. of ANS initiated</th>
<th>DKA cases/1000 deliveries</th>
<th>DKA cases/1000 deliveries receiving steroids</th>
<th>Total No. of deliveries</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>384</td>
</tr>
<tr>
<td>February</td>
<td>16</td>
<td>16</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>338</td>
</tr>
<tr>
<td>March</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>373</td>
</tr>
<tr>
<td>April</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>340</td>
</tr>
<tr>
<td>May</td>
<td>20</td>
<td>19</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>389</td>
</tr>
<tr>
<td>June</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>337</td>
</tr>
<tr>
<td>July</td>
<td>17</td>
<td>17</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>428</td>
</tr>
<tr>
<td>August</td>
<td>21</td>
<td>21</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>429</td>
</tr>
<tr>
<td>September</td>
<td>10</td>
<td>9</td>
<td>0</td>
<td>90%</td>
<td>0</td>
<td>0</td>
<td>365</td>
</tr>
<tr>
<td>October</td>
<td>18</td>
<td>18</td>
<td>0</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>426</td>
</tr>
<tr>
<td>November</td>
<td>17</td>
<td>17</td>
<td>0</td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>397</td>
</tr>
<tr>
<td>December</td>
<td>15</td>
<td>14</td>
<td>0</td>
<td>93.3%</td>
<td>1</td>
<td>0</td>
<td>366</td>
</tr>
<tr>
<td>TOTAL</td>
<td>173</td>
<td>170</td>
<td>1</td>
<td>98.8%</td>
<td>2</td>
<td>0</td>
<td>4,572</td>
</tr>
</tbody>
</table>

1 Denominator - No. of patients with an EGA greater than or equal to 24 0/7 wks AND less than or equal to 31 6/7 wks
2 Numerator - No. of patients with ANS therapy initiated prior to delivering preterm newborn with an EGA greater than or equal to 24 0/7 wks AND less than or equal to 31 6/7 wks
3 Exclusions - No. of cases excluded from "denominator" with an exclusion explicitly documented in the patient’s chart
4 Percentage was calculated using as Denominator: No. in eligible EGA range - No. with documented exclusion

LESIONS LEARNED/
KEY SOLUTIONS
• Preterm Labor/PPROM Order sets include order for ANS
• Bedside nursing handover report includes ANS query to prompt order

FUTURE PLANS
➢ ROLL OUT TO AFFILIATE HOSPITALS WITHIN VANDERBILT NETWORK
➢ DEVELOP WAY TO DOCUMENT RATIONALE WHEN ANS NOT GIVEN

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