Utilizing #Hashtags for a VQI Regional Quality Improvement Project

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Background:
• Patients undergoing endovascular aneurysm repair (EVAR) surgery data are at risk for developing contrast induced nephropathy (CIN) during the perioperative period.
• Variables needed to study CIN such as perioperative renal function indicators (e.g. creatinine levels), and renal protective measures (e.g. CO2 angiography, pre-op IV sodium bicarbonate, etc.) are NOT included within the SVS-VQI EVAR Registry.
• Data collection in the SVS-VQI EVAR registry outside of VQI pre-populated forms can occur via #hashtag data entry into the comment section of the form.

Goals/Objectives:
• To initiate a quality improvement (QI) project within the Rocky Mountain Region Vascular Quality Initiative (RMVQI).
• To evaluate the feasibility of #hashtag data collection and entry into the SVS PSO database for a multi-site project.
• To evaluate the usage and effectiveness of different renal protective strategies.

Results: N=163

<table>
<thead>
<tr>
<th>Pre-Operative Creatinine Category</th>
<th>Mean Creatinine Pre-Op</th>
<th>Mean Creatinine POD #1</th>
<th>Mean Creatinine POD #3</th>
<th>Mean Creatinine 1 month Post-Op</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creatinine &lt;1.3 (N = 101)</td>
<td>0.95</td>
<td>0.92</td>
<td>0.99</td>
<td>0.97</td>
</tr>
<tr>
<td>Creatinine 1.3–2.0 (N = 30)</td>
<td>1.48</td>
<td>1.43</td>
<td>1.40</td>
<td>1.54</td>
</tr>
<tr>
<td>Creatinine &gt;2.0 (N = 19)</td>
<td>2.16</td>
<td>2.42</td>
<td>2.67</td>
<td>3.54</td>
</tr>
</tbody>
</table>

Improvement Process:
• Renal protective measures and pre/post-operative creatinine values were collected using pre-designed #hashtag character strings.
• #Hashtags were entered into the comment box of the VQI electronic case entry form.

Challenges:
• 1-month post-operative creatinine values were missing approximately 40% of the time.
• Reasons for missingness included lab ordering errors and lack of patient follow up.

Success Factors:
• #Hashtag data were accurately entered into the VQI database by study site personnel over 80% of the time.
• Upon data pull request, #hashtag data were returned in a timely manner by VQI database administrators.

Conclusions:
• Utilizing #hashtags within the existing infrastructure of the SVS-VQI registry is a valuable method to facilitate regional and national QI projects.