Assessment That Matters for Patients:
Positive Association Between Entrustment Decisions and Quality Care Measures for Residents Caring for Patients with Asthma

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Background

• Recent focus has been placed on the entrustment construct for assessing residents
  • How much supervision is needed to provide safe care?
• This method of assessment *theoretically* puts the patient at its core
• However, whether entrustment decisions are related to quality care is not known
Objective

• Determine the association between entrustment decisions made about pediatric residents in the pediatric emergency department (PED) caring for patients presenting with acute asthma exacerbations and resident quality measures for those patient encounters
Methods

• 2017-2018 academic year
• Categorical pediatric residents
• Two types of data collected following encounters of patients presenting with asthma exacerbations to the CCHMC PED
  • Entrustment score based on Chen supervision scale
    • Score: 0-7
  • Resident quality measure score: Proportion of 21 resident-sensitive quality measures achieved
    • Score: 0-1
Resident-Sensitive Quality Measures (RSQMs)

• Previously developed through expert consensus

• Largely focused in 3 areas
  • Appropriate medications, dosing, and timeliness
    • Ex: Use asthma order set, dexamethasone as steroid, time to dexamethasone, initial treatment matches documented Pediatric Respiratory Assessment Measure (PRAM)
  • Appropriate documentation of key history and exam findings
    • Ex: Previous intubation or BiPAP, work of breathing, wheezing, document own PRAM
  • Appropriate discharge guidance
    • Ex: Follow-up recommendation, return if needing albuterol more than every 4 hours

Schumacher et al, Academic Medicine 2018
Schumacher et al, Academic Pediatrics 2018
Methods

• Supervising faculty and fellows reported an entrustment decision for each encounter
• RSQMs were manually extracted from the electronic medical record
• To account for nested data within residents, association of entrustment scores with quality scores were evaluated using mixed models adjusting for patient acuity and complexity
Results

• 59 residents provided care for 110 unique patients

• Entrustment scores exhibited a significant positive linear relationship with quality scores (p-value = 0.0004)
  • For every 1 (out of 7) point increase in entrustment decision score, RSQM composite score increased by 0.03 (out of 1)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Min</th>
<th>Max</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrustment Score (0-7)</td>
<td>1</td>
<td>7</td>
<td>5 (4-6)</td>
</tr>
<tr>
<td>Quality Score (0-1)</td>
<td>0.47</td>
<td>1</td>
<td>0.81 (0.74-0.88)</td>
</tr>
</tbody>
</table>
Conclusions

- This study demonstrates a statistically significant association between resident performance assessments and quality of care for the patients treated by those residents.

- This is likely not educationally significant.

- There should be an association between entrustment decisions and quality measures.
Asthma

Number of Encounters

RSQM Composite Score

Mean (SD): 0.81 (0.11)
Median (IQR): 0.81 (0.74-0.88)

Bronchiolitis

Number of Encounters

RSQM Composite Score

Mean (SD): 0.62 (0.12)
Median (IQR): 0.61 (0.53-0.71)

Closed Head Injury

Number of Encounters

RSQM Composite Score

Mean (SD): 0.63 (0.10)
Median (IQR): 0.63 (0.56-0.68)
Entrustment Ratings in Internal Medicine Training: Capturing Meaningful Supervision Decisions or Just Another Rating?

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