Thirty Day Readmission Rates for Acute Asthma Exacerbation in a Community Based Hospital Setting

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INTRODUCTION

- Asthma is a serious health concern in the United States affecting 1 in 12 adults, resulting in 439,000 asthma-related hospitalizations in 2013 alone. To date, there is a paucity of data determining the thirty day asthma re-hospitalization rates in US based community hospitals in patients discharged on combined inhaled corticosteroid (ICS) and oral corticosteroid (OCS), OCS or ICS alone. We hypothesize that the re-hospitalization rates in the combined treatment populations will be relatively low.

METHODS

Type of Study: - Retrospective
Inclusion Criteria: - Admission to UH Regional or UH Geauga for an acute exacerbation of asthma
- Between Jan 2011 - Dec 2015
Exclusion Criteria: - COPD
- Fever >38°C
- >15 pack year history
- Pregnancy/Lactation
- Severe mental illness (past or present)
- Diabetes or Peptic ulcer disease
- Abnormalities on X-ray
- Extra-pulmonary infection

RESULTS (Continued)

OCS  Combined  ICS  None  N

<table>
<thead>
<tr>
<th>Total Admissions</th>
<th>39 (23.5%)</th>
<th>114 (68.3%)</th>
<th>11 (6.59%)</th>
<th>3 (1.80%)</th>
<th>167 (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Readmission</td>
<td>38 (23.7%)</td>
<td>108 (67.5%)</td>
<td>11 (6.9%)</td>
<td>3 (1.9%)</td>
<td>160 (100%)</td>
</tr>
<tr>
<td>Readmission &lt;30 days</td>
<td>1 (14.3%)</td>
<td>6 (87.7%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>7 (100%)</td>
</tr>
<tr>
<td>% of Readmissions</td>
<td>2.56%</td>
<td>5.26%</td>
<td>0%</td>
<td>0%</td>
<td>4.19%</td>
</tr>
<tr>
<td>Admissions in past year</td>
<td>1.0</td>
<td>4.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
| P = 0.754

RESULTS

- 373 admissions between Jan 2011 & Dec 2015
- 319 between 18-65 years-old (mean age 44.98)
- 167 included after applying exclusion criteria
- Sex
  - Female: 67.1%
  - Male: 32.9%
- Ethnicity
  - African American 65.9%
  - White 33.5%
  - Asian 0.6%
- Hospitalizations in past year
  - Mean: 0.83 (min 0; max 8)
- ICS prior to admission
  - Prior ICS 50.3%
- Discharge regimen
  - Combined: 68.3%
  - OCS alone: 23.4%
  - ICS alone: 6.6%
- LABA at discharge
  - 60.7%

CONCLUSION

- The data showed the thirty-day readmission rate of patients discharged on combined therapy (5.26%) was higher, although not significantly (p=0.754), compared to that for patients discharged on OCS alone (2.56%).
- Our data suggests that there is no difference in 30 day readmission rates comparing discharge medications of OCS versus OCS plus ICS in community based hospital settings.
- Our data also suggests that less expensive discharge medications may be sufficient in decreasing readmission rates and decreasing patient’s financial burden in community based hospital settings.
- We are currently in the process of revising the data to account for asthma severity. We are also increasing our sample size by adding patients from other hospitals within the UH system.