Reduced Cost and Mortality among Fee-for-Service Medicare Beneficiaries Dispositioned from ED to Home Health as Alternative to Hospitalization

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Disclosures

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Consulting Clinical Researcher for West Health Institute
BACKGROUND: “Acute care at home” (ACH) as an alternative to hospitalization has generally more effective outcomes for seniors; however, there are barriers to adoption.

<table>
<thead>
<tr>
<th>Standard Outcome Metrics</th>
<th>ACH Compared to Hospitalization</th>
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</thead>
<tbody>
<tr>
<td>60-Day Mortality</td>
<td>Improved</td>
</tr>
<tr>
<td>Cost Reduction (19%)</td>
<td>Improved</td>
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<tr>
<td>Functional Recovery</td>
<td>Improved</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>Improved</td>
</tr>
<tr>
<td>Family Member Stress</td>
<td>Improved</td>
</tr>
<tr>
<td>Length of Stay</td>
<td>Improved</td>
</tr>
<tr>
<td>Readmission Rates</td>
<td>Equal</td>
</tr>
<tr>
<td>90 Day Mortality</td>
<td>Equal</td>
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</tbody>
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**Barriers**
- Lack of reimbursement
- Attitudes of Hospitals being a Safer Place
- Implementation Cost and Infrastructure
Question:

What is the opportunity for dispositioning seniors from the ED to home health instead of admitting to the hospital?
Methods

Conducted retrospective analysis of 5% Medicare Claims Data from 2012-2013

Two Cohorts of patients constructed
- Patients transitioned from ED to home health
- Patients admitted to hospital for 5 Low-acuity conditions (CHF, COPD, PNA, UTI, CELLULITIS)

Logistic Regression weighted by Propensity Score (IPTW)
Results: The opportunity is significant for our healthcare system and seniors

### Annual Estimates
- Avg. Total Cost Savings (Per Pt: $2136.20) **$750M**
- Avg. Medicare Cost Savings (Per Pt: $1468.59) **$516M**
- Est. Difference in **MORTALITY** (31,617 - 14,052 = 17,565)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Inpatient Hospitalization (n=17,565)</th>
<th>ED to Home Health (n=354)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Total Cost (STD)</td>
<td>$6342.79 ($1,605.10)</td>
<td>$4206.59 ($1853.74)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Mean Medicare Cost (STD)</td>
<td>$5395.97 ($1771.41)</td>
<td>$3,927.38 ($1732.10)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>90 Day Mortality</td>
<td>9.2%</td>
<td>4.0%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>90 Day ED Visits</td>
<td>42.7%</td>
<td>39.0%</td>
<td>.2349</td>
</tr>
<tr>
<td>90 Day Hospitalization</td>
<td>33%</td>
<td>23.7%</td>
<td>0.0003</td>
</tr>
</tbody>
</table>
Limitations:

- Retrospective study of claims
- Significant differences in sample size
- Even after propensity matching, it is possible there are clinical differences between comparison groups
Conclusion:

Transitioning senior patients from the ED to home as an alternative to inpatient admissions for selected low-acuity conditions could significantly decrease:

- Cost
- Hospitalizations
- Mortality
References

5. Cryer, L., et al., Costs for 'hospital at home' patients were 19 percent lower, with equal or better outcomes compared to similar inpatients. Health Aff (Millwood), 2012. 31(6): p. 1237-43.
West Health Team

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• Tyler Kent, BS
• Amy Stuck, PhD, RN
• Chris Crowley, PhD
• James Howard, MD, MS
• Zia Agha, MD
Thank you

“There’s no place like home”