Reducing the Length of Stay of Elderly Patients in Acute Medicine by using the Dementia and Delirium Six (DD 6) Bundle

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BACKGROUND

Dementia is one of the biggest global health challenges facing our generation especially with the aging population. Dementia can often coexist with delirium.

Delirium is an acute medical emergency associated with increased mortality rates, increased length of stay in hospital, increased likelihood of admission to long-term care (institutionalisation), increased rates of subsequently developing dementia and overall poorer long term outcomes. [1]

Care bundles are a novel approach to care - providing the basis for which every patient gets equitable care.

It has been previously demonstrated that the DD6 bundle produces improvement in the delivery of evidenced based care to acutely ill patients attending MAU assuming that giving care more reliably ensures equity of care [2]

However is was unknown whether the DD6 bundle when done reliably actually improves any outcome for these acutely ill elderly patients.

METHODS

Currently, all elderly patients (>65 years) presenting to our Acute Medical Unit should have the six elements completed 100% of the time using a sticker based approach and using the Institute of Health Improvement (IHI) model of improvement.

The six elements are key areas which are evidenced based and widely accepted as good practice and can be implemented easily:

1) Cognitive screening for dementia and/or delirium using the 4AT test
2) Medicine reconciliation
3) Sepsis screening
4) Involvement of carers or family
5) Discharge planning
6) Determination of cardio pulmonary resuscitation status.

Two independent reviewers did case notes study of admissions of elderly patients with use of the DD6 bundle in 2014 compared to pre bundle time of 2012.

The outcomes measured were:

a) Mean length of stay
b) Documentation of cognitive screening
c) Documentation of diagnosis of delirium and or dementia in the case notes

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>2012 (n=60)</th>
<th>2014 (n=75)</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male : Female</td>
<td>25.35</td>
<td>35.40</td>
<td>P = 0.1922</td>
</tr>
<tr>
<td>Mean Age</td>
<td>76.8</td>
<td>78.7</td>
<td></td>
</tr>
<tr>
<td>Mean Length of Stay</td>
<td>5.1 days</td>
<td>3.5 days</td>
<td>P &lt;= 0.01124</td>
</tr>
<tr>
<td>Cognitive Screening</td>
<td>8</td>
<td>52</td>
<td>P &lt;0.005</td>
</tr>
<tr>
<td>Documentation of delirium or Dementia</td>
<td>11</td>
<td>22</td>
<td>P = 0.162</td>
</tr>
</tbody>
</table>

CONCLUSIONS

A bundle approach to elderly patient care in front door acute medicine using the DD6 bundle with high reliability not only ensures equity of care but also improves outcomes through reduced length of stay without any extra resources.

It is easily implemented using a sticker based approach and using IHI model of improvement methods ensures reliability. It may lead to potential savings as a result of reduced bed occupancy.

ACKNOWLEDGEMENTS

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Healthcare Improvement Scotland

REFERENCES


www.ihi.org/IHI/Topics/CriticalCare/IntensiveCare/Literature/RaisingtheBarwithBundles