Using Prior Home Care Data to Predict CCC Length of Stay

Chi-Ling Joanna Sinn1, J. Leo Chow2, Tim Pauley3, John Hirdes1,4
1University of Waterloo, 2The Salvation Army Toronto Grace Health Centre, 3Toronto Central Community Care Access Centre, 4Ontario Home Care Research Network

Introduction

Objectives

• To estimate the proportion of patients who received home care services up to one year prior to CCC admission
• To identify predictors of CCC length of stay from home care assessments completed up to one year prior to CCC admission
• To assess the effect of community variables on CCC length of stay

Methods

Sample
• A whole sample was defined based on all unique patients (N = 211) who were admitted to Toronto Grace Health Centre’s CCC program between September 1, 2010 and August 31, 2013.
• By matching patient name and date of birth, the last home care (RAI-HC) assessment that occurred before the CCC admission date was retrieved.

Analysis
• Simple linear regression was used to identify variables based on a p<0.05 significance level.

Results

What proportion of patients received home care services up to one year prior to CCC admission?

Referral Source

0% were admitted directly from home care...

Variables associated with longer CCC length of stay

<table>
<thead>
<tr>
<th>Variables from CCC assessments (MDS 2.0)</th>
<th>Significance (p)</th>
<th>Variables from Home Care assessments (RAI-HC)</th>
<th>Significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater ADL impairment</td>
<td>0.127</td>
<td>Greater cognitive impairment</td>
<td>0.0292</td>
</tr>
<tr>
<td>Poor verbal comprehension (occasionally to never understand)</td>
<td>0.0153</td>
<td>Poor verbal comprehension (occasionally to never understand)</td>
<td>0.0037</td>
</tr>
<tr>
<td>Bladder incontinence (sensitively to completely incontinent)</td>
<td>0.1817</td>
<td>Bladder incontinence (sensitively to completely incontinent)</td>
<td>0.0189</td>
</tr>
<tr>
<td>Bowel incontinence (sensitively to completely incontinent)</td>
<td>0.0447</td>
<td>Bowel incontinence (sensitively to completely incontinent)</td>
<td>0.0198</td>
</tr>
</tbody>
</table>

Variables associated with shorter CCC length of stay

<table>
<thead>
<tr>
<th>Variables from CCC assessments (MDS 2.0)</th>
<th>Significance (p)</th>
<th>Variables from Home Care assessments (RAI-HC)</th>
<th>Significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishes own goals</td>
<td>0.0034</td>
<td>Preference to return to the community</td>
<td>0.0636</td>
</tr>
</tbody>
</table>

Conclusions

• Limitations of this research include small sample size, inability to access home care data from other CCACs and inability to access acute care data.
• Variables measured up to one year prior to CCC admission (e.g., comprehension, bladder incontinence) may be as strong as variables measured during the CCC episode in ability to predict CCC length of stay.
• Several decline-related variables may also predict CCC length of stay, but it is true only for decline assessed in the community.
• Applying Cohen’s kappa test shows there is disagreement between community-coded and CCC-coded decline variables.
• This disagreement may be due to inaccurate information from the patient and/or family at CCC admission, or a real finding that a decline in the past year is more predictive than a decline in the past 90 days.

This research supports increased sharing of information between care settings (e.g., home care and CCC). Doing so will allow CCCs to better anticipate resource needs such as length of stay, and may encourage more tailored care plans so that patients can return to the community (or long term care) as soon as possible.

This research is part of an ongoing project involving Toronto Grace Health Centre, Toronto Central CCAC, and the University of Waterloo. One of the project goals is to incorporate previous RAI-HC assessments completed by Toronto Central CCAC into the clinical record for new admissions into Toronto Grace Health Centre.

References


Contact: Chi-Ling Joanna Sinn, BSc, PhD(c)
cjsinn@uwaterloo.ca

www.interraianada.uwaterloo.ca