Effectiveness of Alternative Ways of Implementing Care Coordination Components in Medicare D-SNPs

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Background

- Little is known about how best to provide care management services
- Used an orthogonal design to test two alternative ways to implement 10 intervention components
- Study was implemented at Care Wisconsin and Gateway D-SNPs
  - 24 care managers serving 1,562 dual eligibles with disabilities
**Methods (1)**

- **Orthogonal design:** randomly assigned care managers to a combination of options
  - For example, 1 = a, 2 = a, 3 = b, … ,10 = b

- **Used regression analysis to compare outcomes between members assigned to routine care (a) vs. enhanced care (b)**

- **Routine and enhanced care differ by**
  - How often to provide a service
  - How intensely to provide a service
Methods (2)

- “No difference” is a valuable finding: more expensive options are no more effective than routine practices
- Analyzed fidelity to assigned options by using encounter-level data and conversations with care management staff
Data and Variables (1)

- Outcomes (claims data)
  - Number of inpatient admissions
  - Number of readmissions
  - Number of ER visits

- Conversations with plan staff
  - Perceptions of effectiveness of tested options
  - Implementation and feedback on study in general
Data and Variables (2)

- Fidelity measures (tracking tool data)
  - Percentage of members who received a given option at least once
  - Percentage of members who received a given option as often as specified in study protocol
  - Number of times each member received a given option
Intervention Components

- Frequency of routine contacts and medication review (1 component)
- Frequency of depression and falls risk screening, and use of instruments in both (4)
- Care plan review (1)
- Patient coaching and engagement (1)
- Care transitions (3)
## Routine Contacts

<table>
<thead>
<tr>
<th>Component</th>
<th>Options Tested</th>
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</table>
| **1 Frequency of routine contacts and med review** | a) Low-risk members: at least once every 3 months  
High-risk members: at least once or twice per month  
Review medication at least once every 3 months  
b) Low-risk members: at least once every 2 months  
High-risk members: at least 2 or 3 times per month  
Review medication at least once every 2 months |
## Differences in Outcomes: Enhanced vs. Routine Care

<table>
<thead>
<tr>
<th>Change in Outcome</th>
<th>More Frequent Contacts and Medication Review</th>
<th>More Frequent Review of Care Plans</th>
<th>Teachback Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ER visits</td>
<td>-16%**</td>
<td>Not significant</td>
<td>15%**</td>
</tr>
<tr>
<td>Percent readmitted after medical discharge</td>
<td>Not significant</td>
<td>-33%**</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

** Significantly different from zero at the 5 percent level
More Frequent Contacts and Med Reviews Reduced ER Visits

- Requiring more contacts and medication reviews reduced ER visits by 16%
- Number of contacts slightly higher under enhanced care
  - Only 38% of enhanced care group received assigned number of contacts
- But number of med reviews was 38% higher for enhanced care group
More Frequent Care Plan Reviews Associated with Fewer Readmissions

- Requiring care plans to be reviewed more often was associated with fewer readmissions
  - About three-quarters of members were screened
  - But members assigned to quarterly reviews received fewer reviews than those assigned to routine care
  - Finding appears to be a statistical anomaly
Teachback Associated with More ER Visits

- Teachback was associated with more ER visits
- Members assigned to teachback might have gotten less coaching overall
  - 39% of members got teachback
  - 75% of members got routine coaching
- Care managers assigned to teachback might have needed more training
Enhanced Care Was No Better Than Routine Care for Several Components (1)

- Falls risk screening three times yearly vs. as needed
- Fall prevention referral letter vs. no letter
- Quarterly depression screening vs. twice yearly
- Use of PHQ-9 vs. PHQ-2 instrument
Enhanced Care Was No Better Than Routine Care for Several Components (2)

- Two follow-ups post-discharge vs. one
- Phone call and letter informing primary care physician (PCP) of discharge vs. letter only
- Use of instrument and checklist during post-discharge follow-up vs. no specific protocol
Staff Found Several Components Helpful Despite Anomalous Results

- Falls risk screening tool: helped to “have a set of questions to ask”
- More frequent depression screening: helped identify and refer more members than before the study
- Teachback method: found helpful
- Post-discharge follow-up checklist: provided much-needed structure
Why No Difference in Measured Outcomes? (1)

- Enhanced care options for several components were implemented less consistently than routine care
- Possible that enhanced care options had favorable impacts on intermediate outcomes
  - Screenings (depression and falls risk)
  - Teachback method
Why No Difference in Measured Outcomes? (2)

- Power: minimum detectable differences were approximately 22-32% of the mean
- Care transitions components are applicable only to those with inpatient admissions (half of the sample)
  - Power was even lower
Study Facilitated Learning & Improvements (1)

- **Plan 1**
  - Intends to implement PHQ-9 and teachback method
  - Considering training care managers in assessing the risk of falls
  - Developed post-discharge tool similar to the study tool
  - Considering adopting second follow-up
Plan 2

- Benefited from more structure in routine contacts, falls risk screening, and care transitions management
- Intends to train care managers in depression screening and teachback method

Both plans recognized the need to track provision of services
Orthogonal Design: Final Comments (1)

- Can improve efficiency of care management programs
- Quickly produces rigorous results
  - Allows for comparison of multiple components
  - Tests enhancements to routine practices
  - All subjects receive some intervention
Orthogonal Design: Final Comments (2)

- Needs adequate power to get credible results

- Most important benefit could be encouraging plans to do continuous quality improvement studies
  - Could be incorporated into the Plan Do Study Act (PDSA) framework
Acknowledgments

- Thanks to the three SNPs for their participation and dedication
  - Care Wisconsin
  - Gateway
  - Brand New Day

- Thanks to project staff

- Thanks to Rich Bringewatt and Kieron Dey
For More Information

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Supplementary Slides
## Routine Contacts

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## Falls Risk Screening and Prevention Referral

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<tbody>
<tr>
<td><strong>2 Falls risk screening</strong></td>
<td>a) Routine care: screen members as needed</td>
</tr>
<tr>
<td></td>
<td>b) Use an instrument; screen all members at months 1, 4, and 7</td>
</tr>
<tr>
<td><strong>3 Falls prevention referral</strong></td>
<td>a) Refer as per routine care</td>
</tr>
<tr>
<td></td>
<td>b) Refer as per routine care AND send members a letter</td>
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## Depression Screening

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| 4 Depression screening tools | a) Use PHQ-2 instrument  
b) Use **PHQ-9** instrument |
| 5 Depression screening frequency and referral | a) Screen at least once every 6 months; refer those who screen positive as per routine care  
b) Screen *at least once every 3 months*; refer those who screen positive as per routine care **AND send a letter encouraging mental health follow-up to the primary care provider** |

PHQ = Patient Health Questionnaire
## Care Planning and Member Coaching

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<th>Options Tested</th>
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<td>6 Frequency of care plan review</td>
<td>a) Review care plan as per routine care</td>
</tr>
<tr>
<td></td>
<td>b) Review care plan <strong>at least once every 3 months</strong></td>
</tr>
<tr>
<td>7 Method used to coach and educate members</td>
<td>a) Routine care/clinical judgment</td>
</tr>
<tr>
<td></td>
<td>b) Use the <strong>teachback method</strong></td>
</tr>
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## Care Transitions

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| **8** Frequency of contact after discharge | a) Contact within 3 days post-discharge  
   b) Contact within 3 days post-discharge AND within 7 days of first follow-up |
| **9** Inform PCP of discharge | a) Inform primary care physician (PCP) of the member’s discharge via letter  
   b) Inform PCP of the discharge via letter AND telephone |
| **10** Follow-up after discharge | a) Routine care  
   b) **Administer CTM-3 instrument and use a structured checklist during follow-up** |

**CTM =** Care Transitions Measure; adopted from Eric Coleman’s Care Transitions Intervention (Coleman et al. 2006)