Reduction of 30 day hospital readmissions after patient-centric telephonic medication therapy management (MTM) services

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Background

- The University of Florida MTM Communication and Care Center provides telephonic MTM services to transitions of care patients following the 5 core elements of MTM services model framework.1 The MTM service includes a comprehensive medication review (CMR), personalized medication list (PML), medication action plan (MAP), documentation of the services, and provider intervention.
- The Hospital Readmission Reduction program requires CMS to reduce payments to hospitals with excess readmissions, defined as readmission within 30 days of a previous discharge.1
- Health plans aim to decrease hospitalizations with a goal of improved patient outcomes and a reduction in medical costs.

Methods

- A retrospective chart review was performed on 314 patients who participated in patient-centric telephonic follow-up services after hospital discharge during a UFHealth transitions of care pilot project from 2/23/2014 to 7/4/2014.
- Eligible patients were discharged to home from internal medicine or hospitalist services with 4 or more medications. Exclusion criteria included those patients who were on the family medicine or specialty service, enrolled in the University of Florida Community Care Transitions Program (CCTP), uninsured, discharged to skilled nursing, dual eligible for Medicare and Medicaid, or had an admission secondary to cancer or radiation therapy.
- Participating patients were offered a pharmacist-facilitated comprehensive medication review (CMR) within 72 hours of hospital discharge, and provided telephonic follow-up 14 to 30 days after provision of MTM services.
- Statistical analysis for the primary outcome was done via time series analysis on 267 charts after further exclusion criteria were applied to the patient population.
- Secondary outcomes were manually categorized and totaled.

Workflow and Process Model

- Daily hospital and nurse report generated
- Day 1: CMR identified
- Day 2: CMR delivered
- Day 3: Follow-up call (if patient did not have access to EMR)
- Day 4-7: Extended CMR delivery
- Day 8-14: Document second CMR completed

Objective

- To evaluate the effectiveness of pharmacist-facilitated telephonic MTM services on reducing hospital readmissions from an academic medical facility

Results

- Baseline Characteristics of Treatment Group

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Total</th>
<th>% Discharge with 30 Day Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55</td>
<td>24.3</td>
</tr>
<tr>
<td>2</td>
<td>53</td>
<td>24.3</td>
</tr>
<tr>
<td>3</td>
<td>54</td>
<td>24.8</td>
</tr>
<tr>
<td>4</td>
<td>52</td>
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<td>24.3</td>
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<tr>
<td>10</td>
<td>54</td>
<td>24.8</td>
</tr>
</tbody>
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- Primary Outcome: 30 day, all cause readmission

Discussion

- UFHealth crude readmission rates during quarters 9 and 10 were increased compared to the previous 8 quarters without clear explanation
- For the primary outcome, both quarters 9 (9.6 % decrease compared to control) and 10 (0.8% decrease compared to control) favored treatment per admission.
- Limitations
  - Exclusion criteria
  - Patients predisposed to readmission due to complex disease states (Ex. Sickle cell disease, CF) were included in study
  - Patient population did not exclude patients with dementia/cognitive impairment, home care, or caregivers
  - Health literacy was not evaluated
- Influence of Community-based Care Transitions Program (CCTP) on our patient population
- Patients who were enrolled in a similar program geared at geriatric patients were excluded from this pilot study

Conclusion

- Pharmacist facilitated telephonic MTM services did not demonstrate a relationship between exposure to CMR and reduced readmission rate.
  - May be a consequence of reasons including but not limited to:
    1. Inadequate inclusion and/or exclusion criteria
    2. Fluctuations of the data during periods 9 and 10
    3. Lack of effectiveness of the CMR
- Pharmacist identified and intervened on clinical interventions via prescriber fax and prescriber phone call in patients who received telephonic MTM service.
- 92 gaps in therapy identified (49% of interventions via facsimile)
- 823 discrepancies identified between the medication lists
- 78.34% of CMRs completed had at least 1 discrepancy

References