Reducing Readmissions in Medical Inpatients with Mental Health Comorbidities

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Strategic Alignment: Quality, Finance, People, Patient Experience

Aim Statement
We aim to reduce the readmission rate from 26% to 21% by December 31, 2015 of Internal Medicine Service Line patients from Boone County who are discharged from 6 East with a primary medical diagnosis and at least one mental health comorbidity.

Current State at MUHC

- An analysis of FY14 billing data led to the following key findings:
  - A baseline of 277 patients was obtained with which to compare our prospective results (Figure 1, “Target Population”)
  - Seventy-five (75) percent of all FY14 UH Internal Medicine Patients had a documented Mental Health-related diagnosis
  - As shown in Figure 2, it was found that the readmission rate for the Target population was nearly 2.4 times greater than that of the non-Mental Health Comparison group (26.1% vs. 11%)
  - Figure 3 shows that the number of patients with greater than four Emergency Department visits in FY14 was 10.5 times greater for the Target Population than for the non-Mental Health Comparison group (42 vs. 4)
  - Through Cause-and-Effect analysis (Figure 4), it was determined that there is no process to formally identify medical inpatients with mental health comorbidities. When and if identified, there is no current process in an acute setting to intervene, other than if a pronounced mental health event occurs (MUPC consult).
  - This lack of formal identification and intervention could potentially contribute to higher readmission rates for patients with Mental Health Comorbidities

Specific Outcome Measures
Readmission Rate, Length of Stay, Emergency Department Utilization, % of patients who arrive at follow-up appointment within 7 days

Graphics

Plan
- Define Target Population and understand current state at MUHC
- Add FTE for Mental Health Professional on 6 East unit to perform in-person assessment of admitted patients to formally identify patients in target population and facilitate intervention
- Develop processes and communication plans for new FTE on 6 East
- Develop documentation and data collection tools
- Partner with on-going MUHC readmissions initiatives

Do
- Six Month Pilot of Mental Health Nurse on 6 East (2/16/15)
- Patients identified through chart review by mental health nurse. Of those identified, in person assessment conducted
- Determine appropriate mental health intervention for these patients
- Document in Behavioral Health documentation tool (Available for testing April 10th)
- Communicate findings to medical team
- Coordinate aftercare with Psychiatric Provider as well as placement for select patients

Study
- From 2/16/15 to 4/10/15, Mental Health Nurse conducted 442 chart audits, 324 in-person consultations, and facilitated varying degrees of intervention for 160 patients
- Interventions include, but are not limited to:
  - Medication via medical team
  - Connection to internal and external resources
  - Talk therapy and tactile simulation
- Barriers identified during first two months of Pilot:
  - RN cannot prescribe medication
  - Partnerships with community resources
- Larger volume of patients than anticipated

Act/Next Steps
- Develop partnership with MUHC Nurse Care Managers
- Develop educational interventions for resident physicians
- Continue to foster relationship with community resources
- Continue to define process and communication plans for inpatient mental health nurse
- Analyze post-intervention data and specific outcome measures after 6 months (August 2015)

Plan

- Fiscal Year 2014 Patients (n=174,870) (excluding patients with only diagnostic visits)
- University Hospital Inpatients (n=10,656)
- Internal Medicine Service Line Patients (n=8,175)
- Patients with no Primary Psych or Substance Abuse Diagnoses on Internal Medicine Visits (n=2,969)
- Patients with a “Psych” Diagnosis in FY14 visit (n=42)
- Patients discharged from 6 East (n=823)
- Patients from Boone County (n=277)

Do

- Percent Readmission: Target Group vs. Non-Mental Health Group

<table>
<thead>
<tr>
<th>Group</th>
<th># Patients with 6E Visit</th>
<th># of Eligible 6E Index Visits</th>
<th>% of Visits with readmission*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Group**</td>
<td>277</td>
<td>345</td>
<td>26.1%</td>
</tr>
<tr>
<td>Non-Mental Health Comparison***</td>
<td>352</td>
<td>373</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

Study

- Population Target Group** (n=277) Non-Mental Health Comparison*** (n=352)
- # of patients with >4 ED visits in 2014
- Highest number of ED visits for a patient

Act/Next Steps

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