Transition of Care

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Objectives

• Recognize the importance of transition of care services

• Develop evidence-based interventions aimed at improving the transition of care process
Transition of Care

• “Movement of patients between health care practitioners and settings as their condition and care needs change”

• Between June 2014 and May 2015:
  – 17.8% of Medicare beneficiaries readmitted within 30 days for HRRP condition
  – 13.1% for non-targeted conditions

• 27.1% of all hospital readmissions are potentially avoidable

Zuckerman, et al. NEJM. 2016;374:1543-51
van Walraven, et al. CMAJ. 2011;183(7):E391-E402
Transition of Care

• Largest cause of hospital readmission are medication related problems (MRPs)
  – Account for 40% of hospital readmissions
  – Prevalence of preventable medication related readmission is 14%

• Post-discharge events cost U.S. healthcare system $12-44 billion annually

Jencks, et al. NEJM. 2009;360:1418-1428
Forster, et al. CMAJ. 2004;170(3):345-349
Bonnet-Zamponi, et al. JAGS. 2013;61:113-121
Percent of Patients Readmitted within 30 days of Discharge (2012)
Percentage Point Change in Medicare Readmission Rates January-August 2013 to 2007-2011 Average
Figure 3: 30-Day Rehospitalizations per 1,000 Medicare Beneficiaries by Community, Current Year

- Northern Idaho: 22.8
- Eastern Idaho: 25.7
- Treasure Valley: 25.9
- North Central Idaho: 26.4
- Southeast Idaho: 26.9
- Greater Canyon County: 30.1
- Magic Valley: 35.7

State Average (26.2) vs. National Average (36.2)

Figure 6: 30-Day Rehospitalizations (as a Percent of Medicare Discharges), Community vs. Statewide

- Community: 2014 Baseline 13.5%, Current Year 13.4%
- Statewide: 2014 Baseline 13.5%, Current Year 13.4%

Community vs. Median (13.4%) and 10% Improvement (12.6%)
Figure 12: Days Elapsed Prior to a 30-Day Rehospitalization of the Community’s Medicare Beneficiaries, Current Year

- % of community's Medicare 30-day rehospitalizations occurring on this day
- Community's median day
Figure 13: Number of Discharges and Percent Readmitted by Condition, Community vs. Statewide, Current Year

<table>
<thead>
<tr>
<th>Chronic conditions documented as the primary or secondary diagnosis</th>
<th>Community Discharges</th>
<th>Community Rehospitalization</th>
<th>Statewide Rehospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>4+ Chronic Conditions</td>
<td>3,019</td>
<td>14.5%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease (COPD)*</td>
<td>960</td>
<td>15.0%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Dementia</td>
<td>486</td>
<td>12.6%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1,860</td>
<td>14.9%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Heart Failure (HF)*</td>
<td>1,178</td>
<td>16.0%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>3,654</td>
<td>13.1%</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute conditions documented as the primary diagnosis</th>
<th>Community Distances</th>
<th>Community Rehospitalization</th>
<th>Statewide Rehospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Myocardial Infarction (AMI)*</td>
<td>104</td>
<td>9.6%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Coronary Artery Bypass Grafting (CABG)*</td>
<td>40</td>
<td>10.0%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Pneumonia*</td>
<td>283</td>
<td>12.7%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Septicemia</td>
<td>511</td>
<td>18.0%</td>
<td>15.8%</td>
</tr>
<tr>
<td>Stroke</td>
<td>167</td>
<td>9.6%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Total Hip Arthroplasty (THA)*</td>
<td>167</td>
<td>7.2%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Total Knee Arthroplasty (TKA)*</td>
<td>344</td>
<td>3.2%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Stages of Care for Targeted Intervention

During hospitalization ➔ At discharge ➔ Post-discharge
Known Predictors of Readmission

- Number of prior hospital admissions
- Length of hospital stay
- Number and severity of comorbidities
- Number of ED visits
- Degree of health literacy
- Age 65 and older
- ≥ 2 medication changes
- ≥ 5 prescription medications
- Social support
- Documented poor compliance in the past
Transition of Care Interventions

• Medication reconciliation
• Electronic tools to facilitate quick, clear, and structured discharge summaries
• Discharge planning
• Shared involvement in follow-up by hospital and community care providers
• Use of electronic discharge notifications
• Web-based access to discharge information for general practitioners
• Patient engagement
• Dedicated transition of care provider
• Communication with outpatient providers

Critical Elements of TOC Interventions

- Assess post-hospital needs
- Medication management
- Transition planning
- Patient and family engagement/education
- Information transfer/real-time communication
- Ensure post-discharge follow-up care
- Healthcare provider engagement/education
- Shared accountability across providers and organizations
Transition of Care
“Best Practices”

• Risk stratification
• Avoid commonly used interventions which have not been shown to be effective
• Use intervention with lasting effect
• Create an effective team
• Broaden intervention to target high-risk groups who have not been the focus

The Baby Boomer Medical Home Project*

- The Baby Boomer Medical Home project and this presentation are funded by Primary Care Training and Enhancement grant # D58HP23221 (Patient Protection and Affordable Care Act, HRSA, BHP/ Division of Medicine & Dentistry)

- **Goal 1:** Build the infrastructure for a Baby Boomer Medical Home that addresses the unique health care needs of aging adults (>55 years of age).
  - Faculty development
  - PCMH transformation
  - Didactics and experiential curricula

- **Goal 2:** Develop integrated, multidisciplinary care processes, clinical services and lifestyle interventions that are designed to enhance the health and wellbeing of older adults.
  - Transitions of care
  - Integrated pharmacotherapy
  - Lifestyle interventions
  - Behavioral Health

* Principle Investigator – Bill Woodhouse, MD
ISU Internal Medicine Team

- Daily census
  - 12-15 patients

- Patient makeup
  - Eight-clinic Federally Qualified Health Center
    - Includes ISU Family Medicine Residency outpatient clinic
  - Unassigned
  - A single group primary care practice
  - Indian Health Service

- Interdisciplinary
ISU TOC Program History

2006-2008
- Office Based
- "Discharge Clinic"
- Nurse Practitioner
- Pharmacy Resident
- Medical Resident

2009-2014
- Home Visits
- Nurse Practitioner
- Pharmacy Resident
- Health Professions Students

2014-2015
- Little to no TOC activities

2015-Present
- TOC Coordinator Resident
- Physician Faculty
- Pharmacy Resident
<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td>Report</td>
<td>Report</td>
<td>Report</td>
<td>Report w/TOC highlight</td>
<td>Report</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Orientation</td>
<td>Phone Patients</td>
<td>Clinic</td>
<td>Phone Patients</td>
<td>SNF</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Phone Patients</td>
<td>Video Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td></td>
<td>Phone Patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Handover to next week</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Didactic</td>
<td>Didactic</td>
<td>Didactic</td>
<td>Didactic</td>
<td>Didactic</td>
</tr>
<tr>
<td>1:00 PM</td>
<td>Clinic</td>
<td>Home Visits</td>
<td>Clinic</td>
<td></td>
<td>Clinic</td>
</tr>
<tr>
<td>2:00 PM</td>
<td>(Patient encounters videotaped)</td>
<td>Home Visits</td>
<td>(focus on hospital follow-up patients)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TOC Services Offered

• Medication Reconciliation
• Assessment for drug-induced adverse effects
• Evaluation of drug regimen for MRPs
• Cost-saving measures
• Patient education
• Personal medication record
TOC Services Offered

• Assessment of efficacy of drug therapy and clinical improvement
  – Physical exam, patient interview, vital signs, etc.

• Understanding of discharge plan

• Assessment of social support and ability to perform ADLs

• Set up follow-up appointments

• Emergency phone numbers
RM

• HPI
  – 59 year old female
  – Worsening shortness of breath, increased sputum, fevers, chills, sweats, decreased appetite
  – Hospitalized 1 month ago for CHF exacerbation

• Home Medications
  – MANY discrepancies between home medication list at admission and history and physical

• Discharge Diagnosis
  – Acute hypoxic respiratory failure secondary to COPD exacerbation and CAP
  – Type 2 DM, HTN, hyperlipidemia, others
RM

• New Medications at Discharge
  – Prednisone 40mg daily for 3 more days
  – Levofloxacin 750mg daily for 3 more days
  – Insulin glargine 5 units at bedtime daily
  – Insulin lispro 4 units three times daily with correction scale
  – Oxygen

• Continued other home medications
  – Many discrepancies between discharge instructions, discharge summary, and what patient actually doing

• Telephone call and Home Visit
What did we find?

- Patient has no insurance
  - Little to no income
  - Gets “help” from relatives
- Didn’t pick up antibiotic, steroid, or insulin
- Can’t afford oxygen; has an old concentrator
- Lung function worse
- Can’t buy any medications for another 5 days
Program Weaknesses

- Not enough **direct or timely data feedback**
- Lack of a **TOC champion** to offer continuity
- Minimal **standardization** between weeks
- Too much **paperwork and charting**
- Lack of **coordination and communication**
  - Week-to-week, month-to-month, hospital TOC activities
- Non-PCP **community TOC services**
- Billing
Questions?