From Reducing Readmissions to Reducing Admissions: Coming Soon to Your Hospital

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Learning Objectives

The learner should be able to:
- Identify characteristics of patients who are frequently readmitted
- Describe several models for programs oriented at improving transitions of care
- Describe several models of care management programs which are aimed at reducing admissions
- Understand new policy initiatives by CMMI aimed at improving care and reducing cost which may have an impact on hospital admissions and readmissions

Readmissions... and admissions

- Readmissions are frequent (20%), expensive ($17 billion) and reflect poor patient outcomes
- Penalties start in 2013 for hospitals with high risk-adjusted readmission rates
- Many types of initiatives — some locally successful, but few have a broad impact
- Health Reform (CMMI) refocuses the discussion to reduce hospital admissions

Causes of “Avoidable” Readmissions

- Hospital-acquired infections and iatrogenic complications
- Premature discharge
- Failure to coordinate/reconcile medications
- Inadequate communication
- Poorly planned care transitions

However, only 27% may be preventable – only 12% in studies using clinical rather than administrative data

References:

Predictors of Readmission

- Severity of Illness
- Presence of coexisting illness
- Older age (especially >85 years)
- Male gender
- Blacks
- ESRD
- Prior readmission
- Dx and Longer LOS on prior hospital stay
- Hospital’s readmission rate

References:

Readmission Rates Vary

30-Day Rates

References:
Readmission Rates after Hospitalization for CHF and Pneumonia

306 Hospital Referral Regions (HRR)
4432 hospitals; 234,477 admits – Jan-July, 2008

Readmission Rates are Related to Hospital Admission Rates

- Goals: examine potential predictors of readmission
  - case mix
  - discharge planning [HCAPS]
  - MD access, beds
  - all cause admission rates
- Results: highest readmissions associated with highest underlying rates of admission
  - Lower HCAPS discharge planning metrics
  - Hospital referral regions with more specialists, hospital beds and overall admission rates; all cause admission rates explained 27.5% of the variability

Variability in 30-day Readmission Rates associated with:

- Composition of patient population
  - e.g. mental illness, poor social support & poverty
- Community resources
Interventions to Reduce Readmissions

- Improvements in hospital care: Pre-discharge Programs
- Transitions Programs
- Post-discharge Programs
- Payment Incentives

Goals of Hospital-based Pre-discharge Programs

- Effective discharge planning
- Better communication between hospital MD and patient (and community providers)
- Better patient education to manage their care
- Medication reconciliation

Pre-discharge Programs

- ACE Units
  - Age, function, clinical admit criteria
  - Environmental modification
  - Focus on function as well as treatment
  - Interdisciplinary assessment, early disch. planning
- Delirium Prevention - Hospital Elder Life Program¹
- Consultation Services (Geriatrics, palliative care)
- Hospitalist programs
- Discharge planning/standardized discharge forms
- Appointment before discharge

¹ http://hospitalelderlifeprogram.org
Transitions of Care: Quality Indicators

- **Structure**
  - Accountable care provider at all transitions
  - Care Plan with preferences
  - Health Information Technology

- **Care team processes**
  - Care planning (including advance directives)
  - Medication reconciliation (patient and family)
  - Test tracking (labs, radiology, dx procedures)
  - Referral and follow-up appt tracking (providers/settings)
  - Admission and discharge planning
  - End-of-life decision making

Transitions of Care: Quality Indicators

- **Information transfer/communication between providers and care settings:**
  - Timeliness, completeness, and accuracy of information
  - Protocol of shared accountability in effective info transfer

- **Patient/family education and engagement**
  - preparation for transfer
  - agreement with the care transition (active participation in making informed decisions)
  - education for self-care management (NTOCC tools My Medicine List, Taking Care of My Health)
  - Appropriate communication with a patient with limited English proficiency and health literacy.

Transitions Intervention Programs

- Care Transitions Intervention (Coleman)
- Chronic Care Coordination
- Collaborative Care Management
- Discharge planning & home followup (Naylor)
- Home healthcare telemedicine
- Hospital to nursing home transitions
- Medication reconciliation programs

www.caredeliverymodels.com
The Care Transitions Intervention

- Principles:
  - Assistance with medication self-management
  - A patient-centered record for cross-site information transfer
  - Timely follow-up with primary or specialty care
  - “red flags” and instructions on how to respond

- Methods:
  - A personal health record
  - A series of visits/calls with transition coach

- Readmission results
  - 30-day: 41%-48% reduction
  - 90-day: 36%-56% reduction
  - 180-day: 20%-68% reduction

- Annual cost (2006) $74,310


The Care Transitions Intervention: RI

- 6 RI Hospitals (1/09-6/10) FFS MC cardiac or resp patients
- Coaching – hosp & home visit, 2 calls in 30 d
- Study Participants:
  - 257 intervention group – hospital & home visits
  - 736 internal control group – hospital visit only
  - 14,514 external controls
- Results 30-day readmissions: 12.8% vs. 20%


Transitional Care Model: Comprehensive Discharge Planning & Home Follow-up of Hospitalized Elders

- In-Hospital APN visit ~ 48h of adm., q48h
  - Identify patient/caregiver discharge needs → individualized discharge plan
  - Implement plan through clinical care, patient/caregiver education, validation of learning, coordination of home svcns

- Post-Discharge Intervention (APN Home visits @ 48 hrs; 7-10 days; then prn; weekly phone calls)
  - physical and environmental assessments
  - focus on meds, symptoms, diet, activity, sleep, medical follow-up, and patient/caregiver emotional status
  - written instructions & medication sch. to reinforce teaching

Transitional Care Model Results

- Reduced readmissions (20.3% vs. 37.1% in controls)
- Reduced DRG reimbursements for all hospital readm. @ 24 weeks after discharge ($427,217 vs. $1,024,218)
- The total reimbursement costs/patient @ 24 wks post discharge for readms, acute care & home visits: $3630 vs. $6661 (controls)
- At 6 months, est. savings in Medicare reimb. for all post index hosp. discharge services ~ $600K (177 pts); a mean per-patient savings of ~ $3000


Post-discharge Programs

- Timely communication and appts
- Follow-up calls
- Home visits

Results of Intervention Programs to Prevent Readmission

- 16 RCTs with >4500 patients
- Most were multicomponent “discharge bundles”
- 11 RCTs: ↓ readmission rates (5 stat. sign.); 5 did not
- Mean absolute reduction: 3.8%
- 5 interventions with statistically significant effects:
  - 1: early discharge planning in high-risk patients
  - 4: discharge bundles with patient-centered discharge instructions & post-discharge phone call

Payment Incentives to Reduce Readmissions

Under the Accountable Care Act (ACA),
- Medicare will adjust payment to hospitals with relatively high rates of readmissions for selected high-volume or high-expenditure conditions 10/12
- The readmissions reduction program initially will target acute MI, heart failure, and pneumonia
- Accountable care organizations, shared savings programs are mechanisms to improve care, lower cost and increase access

The Montefiore Experience

- Reducing readmissions
- Improving hospital care
- Improving the use of hospital care to reduce admissions
- Improving care upstream (amb., LTC, home)
- Transitioning to the Accountable Care Model

The Bronx

- The poorest borough in NYC: 1.3 million; 10% aged 65+
- High rates of obesity, diabetes, asthma
- Per capita health care expenses 22% higher than national averages
- Medicare 30-day readmission rates higher than national averages
- 46 SNFs (12,033 beds) = 8.6 beds/1,000 pop. 60% greater than NYC average
Montefiore – an Integrated Health System and Urban Safety Net

- 66,125 adult med/surg admissions in 2010; 7,576 (11%) from SNFs
- 80% patients insured by Medicare and/or Medicaid
- 15 year full risk managed care experience (CMO)
  - 94,000 risk lives (2010) → 140,000 (2012) → 210K
  - 2012 Bronx Accountable Healthcare Network (BAHN) Pioneer ACO - 23,000 Medicare FFS
  - 2012 NYS Health Home

Who is readmitted?

- Older adults (mean age 68 yrs v. 62 yrs)
- Medicine (67% v. 61%), nonteaching service (26% v. 18%)
- SNF discharge disposition (38% v. 14%)
- More medications (8 v. 6, IV meds 6% v. 0%)
- Neuropsychiatric diagnoses: dementia (26% v. 6%); psychiatric dx (22% v. 2%); substance abuse (8% v. 4%)
- Social Work consulted day of discharge (28% v. 8%)
- Wound care required (22% v 14%)
- ADL impairment: ambulation (44% v 30%), feeding (34% v. 22%), toileting (54% v. 28%), dressing (54% v 28%)

Geriatricians Needed

Experts in the care of patients who are often re-admitted
- Manage complex decision-making
- Focus on iatrogenic issues: infections, functional loss, delirium, nutrition
- Understand systems, services and team-based coordination of care across transitions

Readmissions are a Problem; SNF
Readmissions are the Perfect Storm

- 17.4% readmission rate (adult med/surg 2010)
  - 19.6% Medicare rate
  - 37.3% SNF rate (27% CMO SNF rate)
- Why are SNF residents readmitted?
  - Many SNFs – large and small
  - Different skills & services; different expectations
  - Increasing medical & psychosocial complexity
  - Pressures to reduce length of stay on both sides
  - Managing patient/caregiver expectations

Montefiore Programs to Reduce Readmissions

- Geriatrics Hospitalist Program
- Care Transitions Programs
  - ED navigator
  - SNF Programs
  - Bronx Collaborative
  - Post discharge Call Programs
- Care Guidance Programs
  - Home Visit Programs
  - Disease Management & Clinical Pathways
  - Case Management
  - Behavioral Health
Geriatrics Hospitalist Program
- 3 - 4 Non-Unit based Geriatrician-Led Teams, ADC = 7.7
- Rounds 7 days/week; nights onsite Pas, geriatrics on call by phone
- Primary care and “consultations” (hip fx, surgery, SNF pts)
- Geriatrician hospitalists and rotating geriatrics faculty
- Teaching and nonteaching teams
- Funded by hospital, DOM, practice income, CMO
- Ongoing relationship with SNFs, House Call Programs
- 2011 Admissions 1744 (mean age 82; female 67%)

Sources:
- Race / Ethnicity (SNF pts only):
  - 48% SNF
  - 34% Geriatrics Amb/Home Visit
  - 8% CMO House Call Program
  - 10% Consults
  - 39% African American
  - 23% Hispanic
  - 25% Caucasian
  - 13% Other

Geriatrics Hospitalist Program: SNF Readmissions Study
- Identify risk factors predicting early readmission
- Chart review 810 SNF admits
- 22% 30-day readmission rate
  - 15% for community dwellers
  - 27% for SNF residents on Geriatrics Hospitalist Program (less than Montefiore’s 37% SNF readmit rate)


Co-morbidities Predict Readmissions
- Pressure ulcers, before and during hospitalization
- CHF, COPD, CKD, dementia
- Lack of advance directives and goals of care
- Readmission was often not for the same diagnosis

<table>
<thead>
<tr>
<th>TOP 4</th>
<th>Initial Admission diagnosis</th>
<th>Readmission diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF</td>
<td>40%</td>
<td>UTI</td>
</tr>
<tr>
<td>UTI</td>
<td>36.8%</td>
<td>Pneumonia</td>
</tr>
<tr>
<td>GI Bleed</td>
<td>27%</td>
<td>CHF</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>20%</td>
<td>GI Bleed</td>
</tr>
</tbody>
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Variability in Rates Among SNFs

<table>
<thead>
<tr>
<th>Admission Source</th>
<th>Readmit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility A (800 beds)</td>
<td>19.8%</td>
</tr>
<tr>
<td>Facility B (400 beds)</td>
<td>30.5%</td>
</tr>
<tr>
<td>Facility C (800 beds)</td>
<td>34.6%</td>
</tr>
<tr>
<td>Facility D (800 beds)</td>
<td>41.7%</td>
</tr>
<tr>
<td>Facility E (200 beds)</td>
<td>43.1%</td>
</tr>
<tr>
<td>Facility F (100 beds)</td>
<td>46.7%</td>
</tr>
<tr>
<td>Facility G (200 beds)</td>
<td>48.3%</td>
</tr>
</tbody>
</table>

- Variable pm and weekend medical coverage
- MD vs. PA vs. RN evaluation prior to transfer
- Medical director approval
- Communication with Geriatrics Hospitalists
- Ability to provide IV therapy
- Family expectations and communication
- LTC rates similar to SAR

Impact of Communication with SNF on Readmission Rates

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Odds Ratio (95% CI) For Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekend vs. weekday discharge</td>
<td>1.6 (0.9 - 2.6)</td>
</tr>
<tr>
<td>Discharge summary with follow-up plan of care</td>
<td>0.7 (0.5 - 0.9)</td>
</tr>
<tr>
<td>Discharge summary with contact number of discharging physician</td>
<td>0.6 (0.4 - 1.03)</td>
</tr>
</tbody>
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Impact of Geriatrics Hospitalist Skill on Readmissions from SNFs

SNF discharges from geriatrician hospitalists were readmitted at half the rate of the non-hospitalist geriatricians.

<table>
<thead>
<tr>
<th>MD</th>
<th>Readmit Rate</th>
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<tbody>
<tr>
<td>A</td>
<td>17%</td>
</tr>
<tr>
<td>B</td>
<td>22%</td>
</tr>
<tr>
<td>C</td>
<td>23%</td>
</tr>
<tr>
<td>D</td>
<td>25%</td>
</tr>
<tr>
<td>E</td>
<td>25%</td>
</tr>
<tr>
<td>F</td>
<td>27%</td>
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<tr>
<td>G</td>
<td>34%</td>
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<tr>
<td>H</td>
<td>36%</td>
</tr>
<tr>
<td>I</td>
<td>46%</td>
</tr>
<tr>
<td>J</td>
<td>46%</td>
</tr>
<tr>
<td>K</td>
<td>58%</td>
</tr>
<tr>
<td>L</td>
<td>62%</td>
</tr>
<tr>
<td>P</td>
<td>64%</td>
</tr>
</tbody>
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Interventions for Hospitals and SNFs to Reduce Hospital Readmissions

- Enhance ulcer prevention and care programs
- Bridge specialty programs for select diagnoses (COPD, CKD, CHF)
- Clarify goals and expectations for hospital care
- Enhance information exchange and MD contact
- Increase support for the geriatric hospitalist program


SNF Care Transitions Initiatives

- Emergency Department Patient Navigator
- Joint Oversight Committees (3 high volume SNFs)
  - Analysis of readmissions for performance improvement
  - Improve process to complete/share ADs, palliative care programs, do not hospitalize initiatives
- Shared clinical pathways (eg anticoagulation, pain)
- CMO: designated staff SNF contact; case conference post SNF admit; proactive screening for palliative/hospice needs
- INTERACT II (Interventions to Reduce Acute Care Transfers) tools integration
- AllScripts system facilitates SNF & home care discharges
- Centralized support unit assist with transportation and other discharge needs

Bronx Collaborative Care Transitions Program

- Reduce readmission & improve patient satisfaction with home discharges - enhance plans & post-hosp. followup
- Collaboration: 3 delivery systems and 2 insurance co. (220,000 [16%] Bronx residents; MA, MC & commercial)
  - Participation of payers with per discharge fee
  - Program conducted across multiple hospitals
  - RHIO sets electronic care transition record, facilitates data exchange, reporting and uniformity
  - Uses predictive model to target high-risk cases
  - Focus on 60-day readmissions vs. 30-day
  - Patients more clinically diverse & socially disadvantaged

S Rosenthal, Exec Dir. The Bronx Collaborative & President, Montefiore CMO
**Hospital Discharge Call Program**

- **Patient targeting:** community discharges age > 69; adults discharged with home care services; readmission within 60 days; one insurer (Emblem Health)
- Standardized telephonic assessment by RN with patient/caregiver within 1 week of discharge
- Assessment logic generates patient-specific problem list and interventions

<table>
<thead>
<tr>
<th>Preliminary Results</th>
<th># Meeting Criteria</th>
<th>Readmit Rate</th>
</tr>
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<tbody>
<tr>
<td>2008 Base Year</td>
<td>All</td>
<td>24.9%</td>
</tr>
<tr>
<td>2009 - 10 Intervention Year</td>
<td>All</td>
<td>19.1%</td>
</tr>
<tr>
<td></td>
<td>Assessed</td>
<td>14.1%</td>
</tr>
<tr>
<td></td>
<td>Not reached</td>
<td>21.5%</td>
</tr>
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Preliminary Results

Ann Meara, RN, MBA, Associate VP, CMO, Montefiore Care Management

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**Hospital Discharge Call Program**

Five Year Readmission Rates

<table>
<thead>
<tr>
<th>Date</th>
<th>% Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-07</td>
<td>10.0%</td>
</tr>
<tr>
<td>5-07</td>
<td>15.0%</td>
</tr>
<tr>
<td>9-07</td>
<td>20.0%</td>
</tr>
<tr>
<td>1-08</td>
<td>25.0%</td>
</tr>
<tr>
<td>5-08</td>
<td>20.0%</td>
</tr>
<tr>
<td>9-08</td>
<td>15.0%</td>
</tr>
<tr>
<td>1-09</td>
<td>10.0%</td>
</tr>
<tr>
<td>5-09</td>
<td>15.0%</td>
</tr>
<tr>
<td>9-09</td>
<td>20.0%</td>
</tr>
<tr>
<td>1-10</td>
<td>25.0%</td>
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<tr>
<td>5-10</td>
<td>20.0%</td>
</tr>
<tr>
<td>9-10</td>
<td>15.0%</td>
</tr>
<tr>
<td>1-11</td>
<td>10.0%</td>
</tr>
<tr>
<td>5-11</td>
<td>15.0%</td>
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**Medical House Call Programs**

**Geriatrics Home Visit Program**
- Frail homebound (150 pts)
- Risk and FFS
- Teaching program
- Limited geography
- Limited emergency visits
- Geriatrician, ANP, fellows, SW, Geropsychiatrist

**Geriatrics Hospitalist Service** admits both

**CMO House Call Program**
- Risk pop with high utilization, homebound, social problems (>500 pts)
- Focused teams (2012)
- Geriatricians, behavioral health, palliative care
- Geriatrician/NP team; SW; CMO & tele. support, no UM
- Reduced admissions; 2 yr 37% decr in expenses; 35% achieved in year 1
**Care Guidance Programs**

- Identify patients (complex, chronic dis., high cost)
- Assessment & care plan, including psychosocial
- Interventions
  - Chronic care mgmt programs – diabetes, HF, respiratory
  - Telemonitoring (HF, DM, frail elderly)
  - Medication reconciliation
  - Linkage to community supports, entitlements
  - Depression and alcohol screening
  - Palliative Care Program linkage
  - Inpatient care monitoring/ care managers
  - Caregiver support
  - Intensive case management
  - Behavioral health care management

Anne Meara, RN, MBA, Associate VP, CMO, Montefiore Care Management

**Care Guidance Patient Management Process (Risk Population)**

- Structured assessment
- Problem list
- Each problem linked to interventions
- Personalized care plans
- Periodic reassessment

**16% Decline in Annual Hospital Admissions for Diabetic Patients**

Admissions / 1000 for Diabetic Patients with A1C>7

<table>
<thead>
<tr>
<th>Year</th>
<th>Admissions / 1000</th>
</tr>
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<tbody>
<tr>
<td>2006</td>
<td>524</td>
</tr>
<tr>
<td>2007</td>
<td>491</td>
</tr>
<tr>
<td>2008</td>
<td>488</td>
</tr>
<tr>
<td>2009</td>
<td>438</td>
</tr>
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Source: CMO Paul Clames; H. Shao
Clinical Pathways

- ED Chest pain assessment unit: Imaging, EST tests
- Heart failure programs: hospital svce; team training, medication clinic; SNF program; Telehealth; Home visits
- “Frequent Flyer” EMR ident. and intervention
- Thrombosis program & anticoagulation guidelines
- Back Pain guideline
- Pain clinics
- Palliative Care programs

Coordinated Delivery and Payment Models: Pioneer Accountable Care Organizations

- Population-based model
- Care coordination across settings & providers
- Improve quality and experience for individuals
  - 33 quality and patient experience measures
  - Public reporting of results
- Improve the health of populations (prevention)
- Reduce the rate of growth in health care spending (shared savings and risk)


Moving from Vision and Philosophy to Successful Implementation:
Bronx Accountable Healthcare Network

- Accountable Care Organization: MIPA providers who are accountable for the quality, cost and overall care of patients.
- BAHN Pioneer ACO: 23,000 individuals
- No gatekeeping; choice of providers
- FFS provider billing to Medicare
- MIPA Board of Directors will determine method of (any) shared savings
- CMO will provide care coordination
Interventions to reduce readmissions.....are improvements in care which should reduce admissions

• CMMI initiatives
  – Shared savings with ACOs
    • Better Healthcare (quality)
    • Better Health
    • Lower Costs through improvement


Questions?