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

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Readmissions…and admissions

- Readmissions are frequent (20%), expensive ($17 billion) and reflect poor patient outcomes[1]
- 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

Jenks SF, et al. N Engl J Med 2009;360:1418-28 [Erratum, N Engl J Med 2011;364:1582]

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Causes of "Avoidable" Readmissions[1]

- 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[2]

1 Berenson RA, et all. N Engl J Med 366; 15:1364-6
2 van Walraven C, et al. CMAJ 2011;183(7): E391-E402

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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

Jencks SF et al. NEJM 2009; 360: 1418-28

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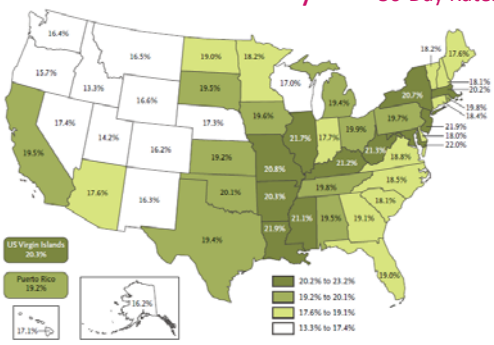
Readmission Rates Vary

30-Day Rates



Jencks SF et al. N Engl J Med 2009;360:1418-1428

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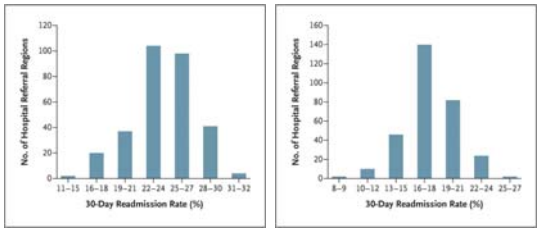
Readmission Rates after Hospitalization for CHF and Pneumonia



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

Epstein AM et al. N Engl J Med 2011;365:2287-2295

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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

Epstein AM et al. N Engl J Med 2011;365:2287-2295

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Variability in 30-day Readmission Rates associated with:

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

Joynt KE, Jha AK. N Engl J Med 366;15:1366-8
Joynt KE, Orav EF, Jha AK. JAMA 2011;305:675-81

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Interventions to Reduce Readmissions

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

Hansen LO et al. Ann Intern Med 2011; 155: 520-28.

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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

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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 Program[1]
- Consultation Services (Geriatrics, palliative care)
- Hospitalist programs
- Discharge planning/ standardized discharge forms
- Appointment before discharge

1 http://hospitalelderlifeprogram.org

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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

National Transitions of Care Coalition Care Measures
http://www.ntocc.org/Home/HealthCareProfessionals/WWS_HCP_Tools.aspx

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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.

National Transitions of Care Coalition Care Measures
http://www.ntocc.org/Home/HealthCareProfessionals/WWS_HCP_Tools.aspx

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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

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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

Coleman E, et al. J Amer Geriatr Soc 2004;52(11);1817-1825
Coleman E, et al. Arch Intern Med 2006; 166; 1822-8.

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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%

Voss R et al. Arch Intern Med. 2011;171(14):1232-1237

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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 svces
- 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

Naylor M, et al. JAMA 1999:281(7);613-620

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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

Naylor M, et al. JAMA 1999:281(7);613-620

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Post-discharge Programs

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

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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

Hansen LO et al. Ann Intern Med 2011; 155: 520-28.

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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

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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

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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

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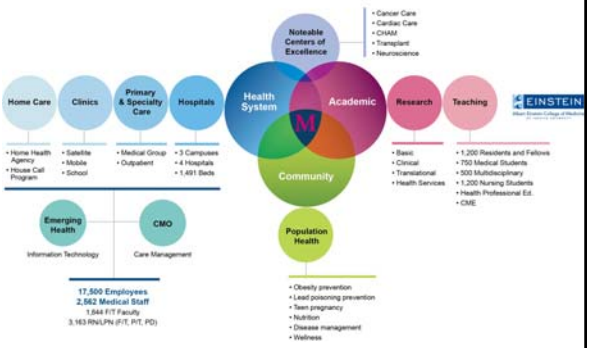

Montefiore – an Integrated Health System and Urban Safety Net

- 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

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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%)

2008 Chart Review, R. Bhalla, MD MPH, et al.

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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

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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

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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

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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	39% African American
34% Geriatrics Amb/Home Visit	23% Hispanic
8% CMO House Call Program	25% Caucasian
10% Consults	13% Other

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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)

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients at Montefiore 2010.

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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

"TOP 4"			
Initial Admission diagnosis		**Readmission diagnosis**	
CHF	40%	UTI	13%
UTI	36.8%	Pneumonia	12%
GI Bleed	27%	CHF	9%
Pneumonia	20%	GI Bleed	4%

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients at Montefiore 2010.

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Variability in Rates Among SNFs

Admission Source	Readmit Rate
Facility A (800 beds)	19.8%
Facility B (400 beds)	30.5%
Facility C (800 beds)	34.6%
Facility D (800 beds)	41.7%
Facility E (200 beds)	43.1%
Facility F (100 beds)	46.7%
Facility G (200 beds)	48.3%

- 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

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients at Montefiore 2010.

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Impact of Communication with SNF on Readmission Rates

Risk Factor	Odds Ratio (95% CI) For Readmission
Weekend vs. weekday discharge	1.6 (.99 - 2.6)
Discharge summary with follow-up plan of care	0.7 (0.5 - 0.9)
Discharge summary with contact number of discharging physician	0.6 (0.4 -1.03)

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients. Montefiore 2010.

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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.

MD	Readmit Rate
A	17%
B	22%
C	23%
D	25%
E	25%
F	27%
G	34%
H	36%
I	46%
J	46%
K	58%
L	62%
P	64%

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients. Montefiore 2010.

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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

Bogaisky M, Dezieck. Risk Factors Predicting Early Rehospitalization in Nursing Home Patients. Montefiore, 2010.

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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

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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

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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

Preliminary Results	# Meeting Criteria		Readmit Rate
2008 Base Year	All	2,809	24.9%
2009 -10 Intervention Year	All	3,445	19.1%
	Assessed	2,187	14.1%
	Not reached	1,258	21.5%

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

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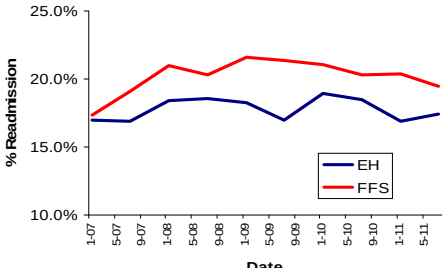
Hospital Discharge Call Program
Five Year Readmission Rates



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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) geriatrics, 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

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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

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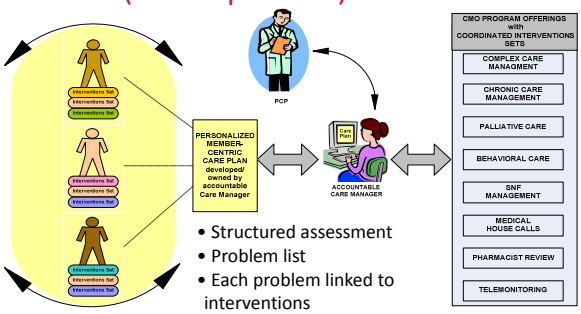
Care Guidance Patient Management Process (Risk Population)



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

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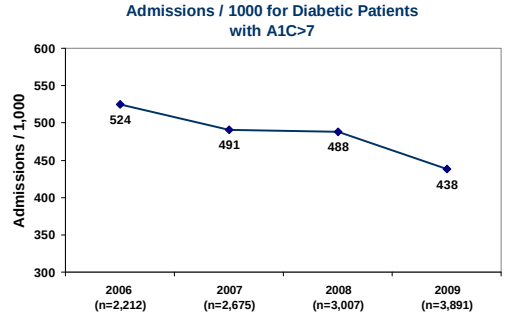
16% Decline in Annual Hospital Admissions for Diabetic Patients



Source: CMO Paid Claims; H. Shao

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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

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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)

http://innovations.cms.gov/areas-of-focus/seamless-and-coordinated-care-models/pioneer-aco/

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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

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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

http://innovations.cms.gov/index.html

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Questions ?

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