Care Redesign: improving value

NYP Innovations in Health Care Reform: Experience of Academic Medical Centers: the science of quality

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Vice President, Quality & Safety MGH

October 28, 2011
Why Care Redesign at Partners?
To control health costs, focus on making market work better

September 18, 2011

As state policymakers look for ways to rein in health care costs, the first question they must decide is whether they want to nudge the market toward greater cost sensitivity — or to resort to the heavier hand of rate regulation by the state. Already, the threat of regulation has prompted the state’s largest health care provider, Partners HealthCare System Inc., to reopen its contract with Blue Cross Blue Shield of Massachusetts and agree to changes that will save the state’s largest insurer significant sums. It’s an important move, and the Legislature should
CMS is paying for ‘value’

Pursuing value

Providers aim for rewards by emphasizing quality metrics used in the CMS’ new purchasing system

By Linda Wilson
Posted: September 12, 2011 - 12:01 am ET
Tags: 100 Top Hospitals, California, Hospitals, Massachusetts, Medicare, Patient Safety, Purchasing, Quality, Readmissions, Supplements, Systems

Dr. Elizabeth Mott has kept close tabs on a frail, elderly patient with congestive heart failure since the patient was released from Partners HealthCare System’s Massachusetts General Hospital in August.

After a short stint in rehabilitation, the patient went home—but Partners went with her. The patient uploads to Partners information on her vital signs via an electronic monitor in her home. Nurses, who have received specialized training in congestive heart failure, also provide care in the patient’s home.
High stakes: pay for quality/safety/performance at PHS

GOVERNMENT PROGRAMS ~ $100M

<table>
<thead>
<tr>
<th>Medicare</th>
<th>Medicaid</th>
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<tbody>
<tr>
<td>IQR P4R $14M</td>
<td>P4P $13M</td>
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<tr>
<td>HOP QDRP P4R $6M</td>
<td>Readmissions</td>
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<tr>
<td>MU incentive $12M</td>
<td>MU $4M</td>
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<tr>
<td>HACs penalty FY15 $5M</td>
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<tr>
<td>VBP withhold/bonus $11M</td>
<td></td>
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<tr>
<td>Readmissions</td>
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<td>penalty $23M</td>
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<td>ACO</td>
<td></td>
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<td>shared savings ??</td>
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COMMERCIAL PROGRAMS ~ $50 M

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<thead>
<tr>
<th>BCBS</th>
<th>Tufts</th>
<th>Harvard</th>
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<tbody>
<tr>
<td>Internal P4P</td>
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<tr>
<td>AQC</td>
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~ $150M Revenue at Risk *annually* to large Hospital Systems

Numbers are illustrative., Clinical Affairs, PHS
Care redesign is an investment in the future

Care redesign will prepare our system to be successful in this new environment as we move from unfettered Fee for Service payment to bundled and global payments

Source: Health Care Advisory Board, “Promise or Peril? Preparing Your Health System for Success in the New Health Care Economy”, 2010
The pursuit of value guides the work

- "Value is the only goal that unites the interests of all parties in the health care system".

- "Value improvement should be the goal, not cost containment."

- The goal in clinical redesign is to **improve value**
  - Produce the same outcome at a lower cost - or -
  - Produce better outcomes at the same or lower cost

Breaking down the value equation

Outcomes
- Defined by patient
- Measured for patient’s condition over entire episode of care

Value for Patients = Health Outcomes

Cost
- Measured for patient’s condition over entire episode of care
Condition specific care redesign
Moving to bundled episodes
What are the Elements of Care Redesign at PHS?

- High Risk Patients
- Condition-Focused Care Redesign
- Primary Care
- P4P Program
- Palliative Care
- Readmissions
- Patient Safety
- Future Initiatives TBD

Information Systems/Population Management

(Operations) Infrastructure Development

Performance Measurement
We Started with Targeted Conditions

- NQF Priority Conditions: High Cost Pts >65
- Prometheus Bundles: High Cost Pts <65
- Partners Employees: High Cost Pts

List of 34 Conditions

Leadership Discussion

- AMI
- CABG
- Colon Cancer
- Diabetes
- Stroke
Care Redesign Teams had Deliverables – Phase I

Value Dashboard

Version 1.0: outcomes, processes, service metrics, and cost available currently

Version 2.0 (Future Aspirations): measures that matter to patients, e.g., outcomes

Care Redesign Plan

Care Plan: process, pause points, key interventions, and new delivery elements

Financial Plan: plan to achieve savings of 10% utilization and 5% unit cost

Performance Metrics: measures to monitor implementation and value
Defining the Episode
## Patient Population & Episode (Bundle) Duration

<table>
<thead>
<tr>
<th>Condition</th>
<th>Patient Population</th>
<th>Episode Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI</td>
<td>Acute myocardial infarction STEMI</td>
<td>From 3 days prior to index admission to 30 days post index discharge</td>
</tr>
<tr>
<td>CABG</td>
<td>Isolated CABG procedure ≥18 years</td>
<td>From 30 days prior to index admission to 180 days post index discharge</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>Colon cancer diagnosis and colectomy procedure ≥18 years</td>
<td>Biopsy with positive cancer diagnosis to 30 days post colectomy</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Adult non-pregnant patients ≥18 years with Type 2 Diabetes</td>
<td>One year (365 days) forward from the date of service of the trigger/index claim (ICD coded professional claim)</td>
</tr>
<tr>
<td>Stroke</td>
<td>Ischemic stroke and TIA ≥ 18 years</td>
<td>Ischemic stroke: From hospital arrival to 45 days after</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TIA: From first medical presentation to 45 days after</td>
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Developing the care plan
Teams were Given Data on Payments for AMI

Based on Commercial payor data N = 95 bundles

Top Potential Avoidable Costs (PACs)
- Cardiac arrest, ventricular fibrillation
- Complications of medical care
- Tracheostomy, mechanical ventilation
- Subendocardial infarction
- Pneumonia
- Stroke

23% of AMI bundle dollars attributed to PACs

Typical

Index IP Stay  Readmissions  ED Visits  Ambulatory Care (Hospital)  Prof Services  OP Other  Pharmacy

Hospital-billed dollars

Top Diagnoses/Risk Factors for Typical IP Index Stay
- Emergency room
- Cardiac catherization
- PTCA, stent, intracoronary thrombolytics
- Disorders of lipid metabolism (hyperlipidem)
- Subendocardial infarction

AMI Episode Timeframe:
- Duration of index AMI Inpatient stay
- To 30 days post index AMI discharge

1Prometheus defined
## Summary of AMI team’s Key Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>A</td>
<td><strong>Cath Lab Utilization</strong> Reduce unwarranted variation in visits to the Catheterization Lab for angiographically driven treatment of residual CAD during the index admission.</td>
</tr>
<tr>
<td>B</td>
<td><strong>ECHO Utilization</strong> Reduce unwarranted variation in the number of echocardiogram tests performed.</td>
</tr>
<tr>
<td>C</td>
<td><strong>CCU Utilization</strong> Reduce unwarranted variation in Cardiac Care Unit utilization for uncomplicated STEMI patients.</td>
</tr>
<tr>
<td>D</td>
<td><strong>Discharge Planning</strong> Activate discharge planning for uncomplicated STEMI patients as soon as they exit the Cath Lab.</td>
</tr>
<tr>
<td>E</td>
<td><strong>Post-Discharge Follow-Up</strong> Implement a clinical post-discharge follow-up program to ensure AMI patients receive immediate telephonic follow-up and are seen by a clinician within one week to ensure continuity of care and reduce hospital readmissions.</td>
</tr>
</tbody>
</table>
Phased implementation for AMI

First Wave: Utilization Guidelines
- Multiple Cath Lab Visits
- Echocardiograms
- Cath Lab ⇝ CCU

Second Wave: Discharge Planning and Follow-up
- Early & Detailed Planning
- Follow-up Within 7 Days
AMI team aim to preventing Adverse Events & Readmission

66 year old, on a fixed income, sustains an MI

MI treated successfully with a drug eluting stent

Follow-up appointment not available for three weeks

Sent home on Ecotrin & Plavix ($50 co-pay so he holds off on filling it)

Rehospitalized with a stent thrombosis, MI, and further heart damage ($20,000)
Team’s Recommendation

Implement a discharge follow up program to ensure MI patients receive immediate telephonic follow up and are seen by a clinician within one week.

Improved Value

- **Cost**: Significant savings to the system if readmissions can be lowered by 10-20%.
- **Outcomes**: Better clinical function, improved survival, and better patient and family experience.

- Better coordination between cardiology and primary care with seamless co-management of cardiac disease
- Better access and no dropped balls
Diabetes Team Focused on Pharmacy Costs

N = 3,824 bundles

Top Potential Avoidable Complications (PACs)
- Diabetic emergency, hypo-hyper glycemia
- Preventative, rehab, and after care
- Skin and wound care
- CHF, carditis, cardiomyopathy
- Cardiac dysrhythmias

Diabetes Episode Timeframe\(^1\):
- 365 days from the date of service of visit with a Diabetes diagnosis

\(^1\)Prometheus defined

Overall PACs rate for Diabetes is 27% with PACs distributed across these groupings of care

- Consultation
- Labs
- Ophthalmologic and Otologic diag and treatment
- Electrocardiogram
- Excision of skin lesions
- Destruction of lesion of retina and choroid
- MRI

Hospital-billed dollars
# Diabetes: Summary of Key Recommendations

<table>
<thead>
<tr>
<th>A</th>
<th>Appropriate use of generic medications</th>
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<tbody>
<tr>
<td></td>
<td>In accordance with established treatment guidelines, patients can be managed to achieve good clinical outcomes for HbA1c, LDL, and BP using non-brand agents.</td>
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<table>
<thead>
<tr>
<th>B</th>
<th>Appropriate use of oral agents</th>
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<tbody>
<tr>
<td></td>
<td>In accordance with established treatment guidelines, patients on insulin should not be on any oral agents for glycemic control, with the exception of metformin.</td>
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<thead>
<tr>
<th>C</th>
<th>Appropriate use of insulin</th>
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<tbody>
<tr>
<td></td>
<td>In accordance with established treatment guidelines, patients who are unable to achieve glycemic control on two or more oral agents should be moved to insulin; patients and physicians should have access to resources to facilitate initiation and support ongoing use.</td>
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<tr>
<th>D</th>
<th>Access to care</th>
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<tbody>
<tr>
<td></td>
<td>Patients should have access to comprehensive diabetes care, including, but not limited to: education, individualized care plans, non-visit care, and support for self-management. Care should be available both during and outside of visits, informed by evidence-based clinical guidelines, and supported by an integrated care team.</td>
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<thead>
<tr>
<th>E</th>
<th>Frequency of screening tests</th>
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<tr>
<td></td>
<td>In accordance with established treatment guidelines, patients should get the recommended frequency of screening tests for HbA1c, LDL, and microalbumin, and other evaluations such as blood pressure readings and eye and foot examinations.</td>
</tr>
</tbody>
</table>
55 year old with type 2 diabetes

- Meds: Actos & Januvamet in the morning; Januvia in the evening
- $150/month in copays

She experiences fatigue, blurred vision, thirst

Her HbA1c is 10.0 with the goal being < 7

Her blood sugar is not well controlled
Team’s Recommendation

In accordance with established treatment guidelines, patients who are unable to achieve glycemic control on two or more oral agents should be moved to insulin; patients and physicians should have access to resources to facilitate insulin initiation and ongoing use.

Improved Value

- **Cost**: If we were to move 30% of patients from all brand name meds to generics, pharmacy savings could reach multiple millions.

- **Outcome**: Improving HbA1c scores by 1%, reduce risk of microvascular adverse events (kidney and eye) by 35% and macrovascular events (MIs) by about 20%.

**PCMH**

- Care is proactively managed with decision support and clinical registries
- Non-physicians and electronic communication provide more flexible access points for patients.
Clinical Decision Support for Use of Generics

LMR Alert/Override-Alternative Order Screen for Non-Brand Oral Agents

Warning
You are ordering: JANUVIA (SITAGLIPTIN)

Drug Utilization Guideline - Diabetes Glucose-lowering agents

Alert Message:

ALERT: The substitutions listed below should be considered first line and are less expensive for your patients regardless of drug coverage. Please note: The Suggested Substitutions list does not take into account currently utilized medications, please take note when prescribing.

Suggested Substitutions
Change order to:

- [U] Rx-Gen Unknown  METFORMIN
- [U] Rx-Gen Unknown  GLIMEPIRIDE
- [U] Rx-Gen Unknown  GLIPIZIDE

Select override reason to continue order for:

- [U] Rx-Brand Unknown  JANUVIA (SITAGLIPTIN)

- Intolerant of metformin
- Intolerant of sulfonylureas
- Unwilling/unable to administer insulin
- Other
Stroke team evaluated costs of care and opportunities

**Commercial payor data N = 42 bundles**

**Top Potential Avoidable Costs (PACs)**
- Adverse effects of drugs
- Pneumonia
- Acute renal failure
- GI hemorrhage
- Urinary tract infections

19% of Stroke bundle dollars attributed to PACs

**Typical**

- Index IP Stay
- Readmissions
- ED Visits
- Ambulatory Care (Hospital)
- Prof Services
- OP Other
- Pharmacy

Hospital-billed dollars

**Top Diagnoses/Risk Factors for Typical IP Index Stay**
- Emergency room
- Essential hypertension
- Diseases of the nervous system
- Ischaemic, migraine, thromboembolic stroke
- Transient cerebral ischemia, TIA

**Stroke Episode Timeframe\(^1\):**
- Duration of index Stroke Inpatient stay
- To 30 days post index Stroke discharge

\(^1\)Prometheus defined
Stroke: Summary of Key Recommendations

A. TIA clinic

Establish outpatient TIA clinic of the future for completion of diagnostic evaluation of patients who present with transient neurologic symptoms without brain infarction.

B. Levels of ED/Inpatient Care

Create innovative care environments, e.g., stroke mini-step down-unit, that are appropriate to the level of patient care needs (avoiding admission in some cases, reducing or avoiding ICU stay in others).

C. Uniform Treatment Protocols

Implement uniform and evidence-based protocols across Partners HealthCare System for initial and follow-up diagnostic testing and pharmacy utilization. Reduce unit costs by eliminating unnecessary testing and using lower cost drugs.

D. Discharge Readiness Checklist

Establish Discharge Readiness Checklist to transparently share responsibility for the discharge experience across the care team and minimize avoidable delays in discharge due to missing components required for discharge.

E. Best Practice Rehabilitation Transitions

Establish checklist-driven guidelines for assessing level of rehabilitation needs and determining appropriate discharge destination based upon various factors including medical stability, ability to engage in rehabilitation activities, prognosis for recovery, and emotional/psychosocial state, etc.
Patient with known hypertension experiences transient right arm weakness

Patient calls 911 and is taken to emergency department

Patient receives PHS recommended TIA assessment

Patient is discharged to home with an appointment in 2 days at the PHS Rapid TIA Evaluation Center

Patient is rapidly diagnosed with possible TIA. ABCD2 score is <6 and no vascular lesion or infarction seen
Emerging themes & Recommendations
Key building blocks emerging from the teams’ work

1. A navigation function supported by IT platform
2. Patient and provider compact
3. Rigorous look at costs and identification of non added value expenses
4. Rigorous look at variation in utilization
5. Inclusion of evidence based-practice to promote quality outcomes
6. Inclusion of safety interventions to reduce the risk of adverse event.
7. Mechanism for close post-discharge follow up
8. Inclusion of other interventions to reduce readmissions
9. Measure implementation and value outcomes - IT platform ideally
10. Means to monitor patients longitudinally
Value Dashboard 1.0 was published in the September.

Metrics include available measures of quality, safety, cost with emphasis on outcomes of care.

Teams have targets and accountability will be driven through the CEOs of each hospital.
What’s next?
Bundles have two main components

1. Defined episode of care
   - Engage physicians in care plan development
   - Prioritize cost savings opportunities
   - Emphasize quality and safety improvement opportunities
   - Involve all related providers
   - Involve patients
   - IT infrastructure, tracking progress, registries

2. Defined payment mechanism
   - Identify partners involved in sharing risk
   - Determining the Base Payment and consideration of case-mix
   - Design gain-sharing to reward performance
Thank you