Clinical Innovations in the Patient Centered Medical Home to Improve Diabetes Care

Robert A. Gabbay, MD, PhD, FACP
Chief Medical Officer & Senior Vice President
Joslin Diabetes Center
Harvard Medical School

Future Thinking in Diabetes Care: The Impact of New Practice Models
- A Journey Towards Quality - Measure and Improve
- Medical Home
- Empanelment
- Risk Stratification
- Care Management
- Medical Neighborhood

Evidence Based Interventions to Reduce Morbidity and Mortality
- A1C < 7
- BP < 140/90
- Cholesterol LDL <100 (or <70 if CAD)
- Aspirin age > 50 men, 60 women – with 1 risk
- ACE age >55
- Statin Use age > 40
- Yearly screening for nephropathy, foot, and eye examinations
Most patients are not at these goals

Only 14% of diabetes patients in the US are currently at goal for ABCs

The Problem

- It’s not because of bad doctors or are bad patients

IT IS THE SYSTEM
Acute Care vs. Chronic Care

A Journey Towards Quality

THROUGH INNOVATION!
Joslin: A Leader in Innovation

VISION: A world free of diabetes and its complications.
MISSION: To prevent, treat, and cure diabetes.

Joslin's History Of Innovation Began With Elliott P. Joslin, MD

- 1869 - 1962
- Founder of the Joslin Clinic, world’s first diabetes care facility -116 years ago
- Developed the role of the diabetes educator
- Recognized patients, families, and primary care doctors are key
- Published many books which created world-wide standards of diabetes care
  - 10 medical textbooks
  - 10 manuals “for the mutual use of doctor and patient”
- A true pioneer

The First Step

Measure Quality
Mental Shift: Population Management
- Shift from treating one patient at a time to managing populations of patients
- Shift from looking at only a single patient to looking at a population of patients within your practice

A Diabetes Registry
A Registry is a searchable list of all patients with a particular condition

Elliott P. Joslin: The First Diabetes Registry
- “Ledgers” were recorded in accounting books, 1892
- Began the first work in epidemiology for chronic diseases
- Largest collection of clinical data in the world
- Metropolitan Life Insurance utilized these statistics for actuarial tables
Steps to Improving Quality

- Critical first step = **MEASURE IT!**
- Most providers overestimate the effectiveness of their care
- **Measure** quality
  - Look at population or practice level outcomes
  - **Measure** quality
    - By Provider
    - By Practice
    - By Region

Sharing Quality Data
At Your Own Risk?

- **Typical Reactions**
  - Denial – It’s not my patients
  - Anger - Attack the data
  - Bargaining - My patients are sicker
  - The 7 stages of grief leading to ...acceptance
  - In improvement science, you don’t have to be perfect to work to improve

- Share blinded comparator data
- Eventually unblinded data
PRACTICE WHAT WE PREACH

Joslin Outcomes: Metabolic Control in Adults with T2 Diabetes

- Patients referred to Joslin had poorer metabolic control than T2 adults in the general population
- After one year at Joslin:
  - A 230% improvement in the attainment of “ABC” control in referred patients
  - Average A1C values for all patients dropped from 8.5 to 7.6
  - The percentage of patients with an A1C > 9.0 was cut in half
  - The number of patients with a LDL level > 130 was also cut in half

Results presented at the 73rd ADA Scientific Sessions, June 2013

Joslin Clinical Quality Measures

<table>
<thead>
<tr>
<th>Quality Measure</th>
<th>ADA Benchmark</th>
<th>Joslin</th>
</tr>
</thead>
<tbody>
<tr>
<td>% dilated eye exam in past year</td>
<td>&gt;61%</td>
<td>83%**</td>
</tr>
<tr>
<td>% microalbuminuria in the past year</td>
<td>&gt;73%</td>
<td>89%</td>
</tr>
<tr>
<td>% creatine clearance &lt;60 with referral to renal</td>
<td>&gt;18%</td>
<td>31%</td>
</tr>
<tr>
<td>% visual foot exam</td>
<td>&gt;80%</td>
<td>90%</td>
</tr>
</tbody>
</table>

** = HEDIS 90th Percentile Goal Achieved

NOTE: Not all ADA measures have associated HEDIS measures.
Joslin Clinical Quality Measures

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<tr>
<th>Quality Measure</th>
<th>ADA Benchmark</th>
<th>Joslin</th>
</tr>
</thead>
<tbody>
<tr>
<td>% patients received an HbA1c in the last 6 months</td>
<td>&gt;93%**</td>
<td>98%**</td>
</tr>
<tr>
<td>% A1c &lt;9.0%</td>
<td>&gt;79%</td>
<td>84%</td>
</tr>
<tr>
<td>% lipid profile in the past year</td>
<td>&gt;80%**</td>
<td>95%**</td>
</tr>
<tr>
<td>% LDL &lt;130</td>
<td>&gt;63%</td>
<td>89%</td>
</tr>
<tr>
<td>% LDL &lt;100</td>
<td>&gt;45%**</td>
<td>71%**</td>
</tr>
<tr>
<td>% BP &lt;140/80</td>
<td>&gt;50%</td>
<td>64%**</td>
</tr>
</tbody>
</table>

** = HEDIS 90th Percentile Goal Achieved

NOTE: Not all ADA measures have associated HEDIS measures.

DM as the Vanguard Disease in Health Care Delivery Changes

- DM (and Joslin) has long been the vanguard condition where key health system changes were developed and spread
  - Self-management education
  - Team based care
  - Population health and registry
  - Chronic Care Model
  - Patient Centered Medical Home and Neighborhood

Diabetes Education Team Approach to Care

- “Wandering Nurses”
  - Nurses that instructed the community to instruct people with diabetes about the use of insulin and management of the disease
- Now known as Certified Diabetes Educators
The Patient-Centered Medical Home

The Patient-Centered Medical Home and Diabetes
- PCMH is a journey, not a destination
- Pilot typically includes
  - Payment reform and Data
  - Technical assistance = can’t do on their own
- Key attribute- population health, team based care, high risk ID and care management

The Chronic Care Initiative in Pennsylvania
- Statewide, state-led, multi-payer PCMH initiative
  - Initial target disease of diabetes
  - 17 Payers
  - 150+ primary care practices
  - Over 1,000 providers

Overall Framework: Regional Rollouts

- Practices guided to change by:
  1. Learning collaboratives
  2. Test rapid small changes (PDSAs)
  3. Monthly registry quality reporting
  4. Practice coaches
  5. Reimbursement change

Pennsylvania Results
(n=80,000 patients)

<table>
<thead>
<tr>
<th>Process Measures</th>
<th>Absolute % Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot Exam</td>
<td>+41%</td>
</tr>
<tr>
<td>Eye Exam</td>
<td>+31%</td>
</tr>
<tr>
<td>Diabetic Nephropathy</td>
<td>+31%</td>
</tr>
<tr>
<td>Self-Management Goal Setting</td>
<td>+37%</td>
</tr>
</tbody>
</table>

Over 1 year
All p <0.01

<table>
<thead>
<tr>
<th>Clinical Measures</th>
<th>Absolute % Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP &lt;130/80</td>
<td>+7.0%</td>
</tr>
<tr>
<td>BP &lt;140/90</td>
<td>+16%</td>
</tr>
<tr>
<td>LDL &lt;100</td>
<td>+12%</td>
</tr>
<tr>
<td>LDL &lt;130</td>
<td>+19%</td>
</tr>
<tr>
<td>HbA1C &gt;9%</td>
<td>-14%</td>
</tr>
<tr>
<td>HbA1C &lt;7%</td>
<td>+13%</td>
</tr>
</tbody>
</table>

Over 1 year
All p <0.01
POPULATION HEALTH

SO WHAT DO I DO?

Empanelment

Definition:
• The act of assigning a patient to a primary care provider (PCP) who assumes responsibility for coordination of comprehensive services for his/her panel of patients.

Why?
• Accurate provider panels allow for better continuity of care, which can produce improved clinical outcomes and efficiency, decreased rework, increased patient, staff & provider satisfaction and sets the stage for population management.
Steps to Empanelment

- **Step 1:** Assign panel manager
- **Step 2:** Document
- **Step 3:** Define active patient
- **Step 4:** Clean up panel
- **Step 5:** Involve providers and patients
- **Step 6:** Maintain

4 Cut Method

<table>
<thead>
<tr>
<th>Cut</th>
<th>Description</th>
<th>PCP Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Patients who have seen only one provider in the past year</td>
<td>Assigned to that sole provider</td>
</tr>
<tr>
<td>2nd</td>
<td>Patients who have seen multiple providers, but one provider the majority of the time in the past year</td>
<td>Assigned to majority provider</td>
</tr>
<tr>
<td>3rd</td>
<td>Patients who have seen two or more providers equally in the past year. (Health plan can determine)</td>
<td>Assigned to the provider who performed the last physical exam</td>
</tr>
<tr>
<td>4th</td>
<td>Patients who have seen multiple providers</td>
<td>Assigned to last provider seen</td>
</tr>
</tbody>
</table>

How Do You Improve Quality?

- **Step 1:** Measure it.
- **Step 2:** Improve it.
POPULATION MANAGEMENT

- Identify patient subgroups
  - Not seen >6 months and not at goal
  - High A1c – engage in diabetes education or a nurse care manager
  - High LDL
  - Overdue Complication screening
- Follow the impact of practice changes
- Compare providers/clinics
  - Creates healthy competition

Risk Stratification

The Care Manager
THE TREATMENT FOR THE HIGH RISK PATIENT
LOTS OF DEFINITIONS

Someone who’s JOB it is to engage and help high risk patients

Evidence For Care Management

Quality improvement strategies lead to small to modest improvements in glycemic control

Team changes and care management showed more robust change and were the most effective QI strategies
PCMH 3: Plan and Manage Care

- **Element C: Care Management (MUST PASS)**
  - Pre-visit planning
  - Develop individualized care plans in collaboration with patients and review/update them each visit
  - Give patients written plan of care and clinical summary at each visit
  - Assess and address barriers when treatment goals are not met
  - Identify patients needing more support
  - Follow up with patients who miss visits

Features of Effective Care Management

- Assess disease control, adherence and self-management status
- Either adjust treatment (best practice) or communicate need to physician immediately (may be less effective)
- Provide self-management support
- Provide more intense follow-up
- Assist with navigation through the healthcare process and community resources

WHO MAKES A GOOD CARE MANAGER

- Independent thinker
- Good listener with communication skills
- Patient-centered
- Passionate/empathic
- Problem solver
  - Able to support patients and families in solving their own problems
Care Manager Duties

<table>
<thead>
<tr>
<th>Care Manager Duties</th>
<th>Upper-Tier</th>
<th>Lower-Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient population of focus</td>
<td>High-risk and diabetic patients only</td>
<td>Mix of high-risk, diabetic, and other patients</td>
</tr>
<tr>
<td>Initial followup</td>
<td>In person and phone</td>
<td>Phone only</td>
</tr>
<tr>
<td>Laboratory reconciliation</td>
<td>Input new labs regularly, identified missing laboratory results</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Self-management support</td>
<td>Performed by care manager on site</td>
<td>Referred to outside health educator</td>
</tr>
<tr>
<td>See own patients</td>
<td>Maintained personal roster</td>
<td>No specific roster</td>
</tr>
<tr>
<td>Other administrative duties</td>
<td>No other duties discussed</td>
<td>Orients, monitors, and performs administrative duties</td>
</tr>
</tbody>
</table>

*Upper-tier care managers had more patient-centered duties, while lower-tier care managers performed more administrative tasks.*

Taliani, Bricker, Adelman, Cronholm, Gabbay. Implementing Effective Care Management in the Patient-Centered Medical Home. AJMC. 2013 19(12):957-964

Patient-Centered Medical Neighborhood

[Diagram of Patient-Centered Medical Neighborhood]

What does a Good Neighbor Look Like?

[Image of a good neighbor]
The Patient-Centered Medical Neighborhood

- Need for coordinated care around medically complex disease
- Appropriate and timely consultations and referrals
- Efficient, appropriate and effective flow of necessary care information

Will greater sharing of care between primary and specialty care improve care for complex patients?

- Recent meta-analysis* of interventions to increase collaboration between primary and specialist physicians found consistently positive effects on patient outcomes in mental illness and diabetes.

- Effective interventions include:
  - interactive communication—telephone, E-mail, videoconference
  - quality of information—structured information, pathways to improve information quality


Stratifying Patients

- Type 2 with CVD, nephropathy, hyperlipidemia
- Specific identified need
- 3 visit care with care plan to PCP
- Guide PCP
- Health & Wellness Digital solutions
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