Building the Medical Home: UNDER CONSTRUCTION

Dave Baker
Jim Foody
Dan Dunham
Phil Roemer
Martin Arron

Association of Chiefs of GIM Summit
December 7th, 2008
Evolution is Hard to Predict
We Are Here
Dec 7, 2008
Outline for Today

- Jim Foody – Principles and concepts
- Dan Dunham – Advanced access
- Dave Baker – Performance reporting, QI, care management, and patient education
- Phil Roemer – Advanced electronic communication, care coordination (test and referral tracking), e-prescribing
- Martin Arron – Financial models
- Jim Foody – View from the Dept of Medicine

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Quality Measurement, Quality Improvement, Care Management, and Patient Self-Management Education

Dave Baker

Association of Chiefs of GIM Summit
December 6th, 2008
Requirements for the “Optimal” (Tier 3) Medical Home that Need HIT

- Has an EHRS
- Measures performance on quality
- Uses data to guide QI activities (i.e., gaps)
- Implements system of reminders for 1) preventive services and 2) chronic care
- Uses searchable EHRS data to generate lists of patients to remind clinicians
- Electronic prescribing
- Secure access by patient to PHI and email

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Quality Measurement Using Electronic Health Record Data
Quality Measures (18)

- **CHD**
  - Antiplatelet therapy
  - Lipid lowering
  - Beta blocker-MI
  - ACE/ARB-CHD+DM

- **Heart failure**
  - Beta blocker-LVSD
  - ACE/ARB-LVSD
  - Anticoagulation-AFIB

- **Hypertension control**

- **Diabetes**
  - HbA1c control
  - LDL control
  - Blood pressure control
  - Nephropathy screen/treat
  - Aspirin primary prevention

- **Preventive care**
  - Mammography
  - Cervical cancer screen
  - Colon cancer screen
  - Pneumonia vaccine ≥65 y
  - Osteoporosis screen/treat

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EHR Facilitates Quality Measurement

Preventive Services

Diabetes

Cardiovascular Disease 1

Cardiovascular Disease 2

Percent

Denise Au

EHR Facilitates Quality Measurement

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Q1 2006  Q2 2006  GIM Q2 2006
# Automated Measurement vs. Hybrid Measurement

<table>
<thead>
<tr>
<th>Quality measure</th>
<th>Automated %</th>
<th>After MD review %</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Antiplatelet drug</td>
<td>82</td>
<td>96</td>
<td>+ 14</td>
</tr>
<tr>
<td>2. Lipid lowering drug</td>
<td>93</td>
<td>97</td>
<td>+ 4</td>
</tr>
<tr>
<td>3. Beta blocker</td>
<td>83</td>
<td>90</td>
<td>+ 7</td>
</tr>
<tr>
<td>4. BP measured</td>
<td>97</td>
<td>99</td>
<td>+ 2</td>
</tr>
<tr>
<td>5. Lipid measurement</td>
<td>82</td>
<td>88</td>
<td>+ 6</td>
</tr>
<tr>
<td>6. LDL control</td>
<td>85</td>
<td>87</td>
<td>+ 2</td>
</tr>
<tr>
<td>7. ACE inhibitor</td>
<td>85</td>
<td>89</td>
<td>+ 4</td>
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</tbody>
</table>

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Conclusions

- Overall, good agreement between quality measured by EHR data compared to MD notes
- Several factors limit accuracy of EHR measures
  - Many pts did not actually have HF, CAD
  - Medications were not always documented, but especially problematic for aspirin
  - Exclusion criteria less well captured

Baker DW, Ann Intern Med 2007
Persell SD, Arch Intern Med 2006
Implications for QI

• As quality of care improves and specificity of “failure to comply” declines:
  – Point-of-care alerts for individual patients are usually incorrect: MDs ignore alerts
  – List of patients need outreach are mostly wrong: outreach expensive, inefficient

Persell SD, Jt Comm J Qual Patient Saf. 2008
Quality Improvement: UPQUAL
Utilizing Precision Performance Measurement for Focused Quality Improvement
Funded by AHRQ

- Implement multi-component quality improvement intervention
- Aim to achieve ultra-high level of performance through more accurate performance measurement
- Use quality measurement system to drive focused quality improvement

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UPQUAL—Components

- Audit and feedback to physicians
- Point of care alerts for quality measures which are not satisfied
  - Allows easy review and ordering
  - Allows documentation of medical and patient reasons for not ordering
- Medical and patient reasons sent to care manager and member of quality committee
- Monthly feedback on individual patients not receiving essential medications

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Implementation Concepts

- Fit existing work flow
  - Avoid pop-up interruptions
- Improve user efficiency
- Help physicians follow guidelines
- Easily document reasons for not following guidelines so data accuracy improves

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Best Practice Alert

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Physician Sees Patient Who Needs Testing or Treatment
CONSIDER CHECKING LIPIDS IN DIABETES - SmartSet # 866

- Consider checking lipids in diabetes
- Diagnosis (multiple)
  - Diabetes Mellitus
- Order (multiple)
  - LIPID RISK PANEL

MAMMOGRAPHY SCREENING - SmartSet # 870
- Consider mammography
- (MAMMOGRAM YEARLY last satisfied: 8/7/2002)
- Diagnosis (multiple)
  - Screening Mammogram [V76.12B]
- Order (multiple)
  - MAMMOGRAM, SCREENING
CONSIDER CHECKING LIPIDS IN DIABETES - SmartSet # 866

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- Order (multiple)
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MAMMOGRAPHY SCREENING - SmartSet # 870

- Consider mammography
- (MAMMOGRAM YEARLY last satisfied: 8/7/2002)

- Diagnosis (multiple)
  - Screening Mammogram [V76.12B]

- Order (multiple)
  - MAMMOGRAM, SCREENING
**Patient Information**
- **Name:** Zztest, Sharon
- **Age:** 57 y.o. female (5/16/1950)
- **Allergies:** No Active Allergies
- **PCP:** None
- **HM:** None
- **Status:** Inactive

**Order Entry**
- **Enc Date:** 3/27/2008
- **Wt:** Not entered for this visit
- **Ht:** Not entered for this visit

<table>
<thead>
<tr>
<th>Take</th>
<th>Req</th>
<th>T/S</th>
<th>Order</th>
<th>Dx</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LIPID RISK PANEL [80061]</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAMMOGRAM, SCREENING [77057]</td>
<td>2</td>
</tr>
</tbody>
</table>

**Referral**
- **By:** PERSELL, STEPHEN
- **Qty:** 1
- **FM:** Routine
- **FMS:** Lynn Sage Breast Center

**Diagnosis**
- **P:** Encounter Diagnoses (right-click dx for more options)
  1. Diabetes Mellitus [250.00A]
  2. Screening Mammogram [V76.12B]
Physician Sees Patient Who Cannot Afford Medication
## 2/5/2008 Visit with David W. Baker

### Chief Complaint
None

### Vitals
- **Readings**
  - **BP:**
  - **Pulse:**
  - **Resp:**
  - **Temp:**
  - **Temp Src:**
  - **Weight:**
  - **Height:**
- **Tobacco:** Not Asked
- **Status:** Not Asked
- **Verified:** Never verified

### BestPractice Alerts
- **Annual flu vaccine recommended for pts 65 years or older**
  - Open SmartSet: FLU VACCINE
- **Consider antiplatelet drug for CHD**
  - **Acknowledge Reason:**
    - Not Done - Patient Reason, Cost
    - Not Done - Medical Reason
    - Not Done - Patient Reason, Non-Cost
  - Jump to review medication history
  - Jump to order entry to order antiplatelet drug
- **Consider checking lipids in CHD**
  - **Acknowledge Reason:**
Each week, care manager receives list of patients who refuse or cannot afford a recommended test or procedure → outreach
Physician Sees Patient Who S/he Thinks Has Contraindication to Medication
3/27/2008 visit with Stephen Persell

Allergies: Dust, Sulfur Drugs, Penicillins, Erythromycin, Abilify Reviewed on 11/7/2005

Nurse
- Chief Complaint
- Patient Gown
- Vitals & Tobacco
- PCP
- Allergies
- Nursing Notes

Physician
- BestPractice
- Medications
- Progress Notes
- Diagnoses
- Orders
- Pt. Instructions
- LOS & Follow-up
- Close Encounter

BestPractice Alerts

1. **Consider pneumococcal vaccine**
   - (PNEUMOCOCCAL VACCINE >65 ONCE last satisfied: Not on file)
   - Open SmartSet: Pneumococcal vaccine
   - Jump to health maintenance

2. **Consider colon cancer screening**
   - (COLON CA SCREENING >50 YO, Q YR last satisfied: Not on file)
   - Open SmartSet: Colon cancer screening
   - Jump to health maintenance

3. **Consider beta blocker for HF with LVSD**
   - Acknowledge Reason: Not Done, Medical Reason
   - Not Done-Medical Reason
   - Not Done-Patient Reason, Cost
   - Not Done-Patient Reason, Non-Cost
   - EF > 40%
   - Jump to review medication history
   - Jump to order entry to order a beta blocker

4. **Consider ACE/ARB for HF with LVSD**
   - Last K: Not on file
   - Last CR: Not on file
   - Acknowledge Reason:
     - Not Done-Medical Reason
     - Not Done-Patient Reason, Cost
     - Not Done-Patient Reason, Non-Cost
     - EF > 40%
   - Jump to review medication history
Each week, QI committee member receives list of patients with medical reason listed and reviews for appropriateness.
Preserving Physician Judgment:
Removing Patients from QI Registries with "Global Exceptions"
Care Management: Improving Quality for the Unseen Patient
# Monthly List of Patients Sent to MD

**Provider:** Marcus Welby, M. D.

<table>
<thead>
<tr>
<th>Name</th>
<th>MRN</th>
<th>DOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOE, JANE</td>
<td>123919</td>
<td>2/1/54</td>
</tr>
<tr>
<td></td>
<td><strong>Consider antiplatelet drug for CHD</strong></td>
<td></td>
</tr>
<tr>
<td>JUAN, DON</td>
<td>999660</td>
<td>4/4/37</td>
</tr>
</tbody>
</table>
|            | **Consider beta blocker for prior MI**
|            | **Consider ACE/ARB for CHD with DM** |
| SMITH, ZORRO| 139784    | 7/3/24   |
|            | **Consider antiplatelet drug for CHD** |

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Outreach to 156 Diabetics at an FQHC with no visit for > 6 mos

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Patient Education and Self-Management Support

- Most PCPs do not have a good system for educating patients
- Need effectiveness data: what models?
  - PCMH employs an educator?
    - Pay for by capitation? Fee-for-service?
    - Very difficult for solo MDs - small groups
  - PCMH contracts with patient educators and health counselors (e.g., weight loss)
    - Need an excellent system for communicating behavioral goals, etc.

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Care Management: Next Steps

- Carve-out programs have not worked
  - Need PCPs to lead (Medicare PGDP)
- Topics we are considering:
  - DM with persistently elevated A1c
  - HTN with persistently poor control
- Need effectiveness data on models that work for small office practices
  - PCMH manages?
  - PCP works with DM teams or insurers?

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The ability to **routinely** measure quality and improve quality will be essential for survival under pay for performance and the PCMH payment models: EHRS essential.

Measures must have high degree of accuracy if used for alerts and outreach.

The UPQUAL intervention offers a model for an integrated system of reminders, exception reporting, and outreach activities.

Need to develop PCMH-based models of care management & education/counseling.

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"You know, you can do this just as easily online."