

# Fulfilling Core Competencies: A CQI Curriculum for Family Medicine Residents

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## A Little About Our Program

- ▶ Community-based 8-8-8 program
- ▶ Only residents in the hospital
- ▶ Prior to 2007, no structured QI efforts or teaching curriculum
  - Family & Community Medicine Rotation
  - Involvement in the CA-ACCC to improve chronic care training in a residency setting → structured Diabetes Management Program & more interest in CQI
- ▶ Implemented Misys EMR in 11/07

## Why We Got Started

- ▶ External forces (ACGME Requirements):
  - PBL&I: Residents should perform practice-based improvement activities using a systematic methodology
  - Medical Knowledge: Residents should demonstrate knowledge of established clinical guidelines
  
- ▶ Residents:
  - Complained about clinic problems but no outlet
  - FCM projects focused on identifying problems, but not how to fix them
  
- ▶ Personal:
  - Participation in the learning collaborative = a turning point for me

## Goals of the CQI Program

- ▶ To have residents explore system operations and improvement methodology
- ▶ To have residents reflect on the process of change → active engagement in the creation of solutions, an important step beyond just identifying problems
- ▶ To have residents learn key concepts of CQI through experiential learning

## Design of the Program

- ▶ Small group (1–4 resident) seminars led by one faculty member
- ▶ PGY–II and PGY–III residents on their ambulatory medicine rotations (2 mos/year)
- ▶ Three sessions (half–day, can be consolidated)
  
- ▶ *Requires no extra work for faculty or residents beyond time allotted for the sessions*

## Design of the Program

- ▶ Session 1
  - Pretest on CQI elements, self–confidence, interest
  - Didactic overview of CQI concepts
  - Group selection of area of interest & then individual research of guidelines
  - Discussion of the guidelines & review of best process for finding them
  - Creation of chart review tool specific to condition

**Asthma Chart Audit Tool**  
**July 2009 Ambulatory Medicine**

*(Based on National Heart, Blood, & Lung Institute Expert Panel Report 3,  
National Asthma Education & Prevention 2007 Guidelines)*

Hint: Review the most recent encounter note addressing asthma.  
Patient population: Patients seen within last 12 months with dx of asthma (seen 2+ times)

**Name (last, first)** \_\_\_\_\_

**DOB (MM/DD/YY)** \_\_\_\_\_

**Provider** \_\_\_\_\_

	Yes	No	N/A
<b>1) Components of history documented?</b>			
Nighttime awakenings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of short-acting beta-agonist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interference with daily activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lung function documentation (i.e. spirometry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2) Classification of severity documented?</b>			
Level (if documented)	_____		
<b>3) Does classification of severity correlate with therapy prescribed?</b>			
Mild intermittent: SABA prn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mild persistent: SABA prn, Low-dose inhaled CS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mod persistent: LABA + Low-moderate-dose inhaled CS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe persistent: High-dose inhaled CS + LABA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4) Is there an Asthma Action Plan?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5) Smoking?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, is provider addressing smoking cessation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6) Was patient seen for f/u within a 6 mo period (addressing asthma)?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>7) Was influenza vaccination done within the past year?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Design of the Program

- ▶ Session 2
  - Individual completion of chart audits
  - Group discussion of chart review process & input into Excel-based registry
  - Intro to PDSA cycles
  - Identification of individual PDSA cycles for each resident
  - Homework: Try out PDSA cycles in clinic

## Design of the Program

- ▶ Session 3
  - Individual analysis of PDSA's
  - Group discussion of PDSA's
  - Discussion of panel management, registries, and EBM in practice
  - Post-test on CQI elements & condition-specific guidelines
- ▶ Quarterly CQI presentations during noon lecture (15 min/team x 3 teams) to present findings & changes recommended/made

## Evaluating the Program

- ▶ Pre- & post-tests of residents
- ▶ Qualitative feedback from residents
- ▶ Chart review (pre & post)?

# Sample PDSAs & Project Continuity

**Resident #1**  
(Month 3: Metabolic Syndrome)

**Problem:** BMI's not measured at all unless well-child visits  
**Plan:** To have all MA's record height and BMI with the vitals.  
**Do:** Asked MA's to measure or record height for all patients and their BMIs regardless of type of visit  
**Study:** Did very well, only BMI missed in AM was because nurse had roomed patient before being notified of change.  
**Act:** During review, noted that BMIs not helpful in newborns. No obvious drawbacks in having MAs take either verbal height from patient or measured height to calculate BMI. Did not seem to take more time or worsen work flow. *Clinic policy changed.*

**Resident #2**  
(Month 6: Peds Obesity)

**Problem:** BMI's checked 86% of time, Dx made only 33% of time  
**Plan:** Improve dx of peds obesity/overweight by providers via provider reminder handout  
**Do:** 1-pg reminder to clinicians about peds obesity and what/when lab tests should be ordered. Asked MA's and LVN's to place the sheet with the superbill.  
**Study:** Reviewed 4 days of WCC data before and 3 days after intervention - no better. Spoke with residents - forms weren't looked at until after patients left.  
**Act:** Change to parent handout instead.

**Resident #3**  
(Month 7: Peds Obesity)

**Plan:** Improve parent education & provider dx of peds obesity/overweight  
**Do:** 1-pg parent handout with guidelines listed. Asked front desk to hand out, sign also for parents to pick up.  
**Study:** Reviewed 3 days of pediatric visits after intervention and compared to prior. 90% of BMI's measured, 39% of Dx' made.  
**Act:** More patient ed in different formats (waiting room TV, improved handout), provider education needed in other formats.

# Sample PDSAs & Project Continuity

**Resident #1**  
(Month 3: Metabolic Syndrome)

• **Problem:** BMI's not measured at all unless well child visits  
• **Plan:** Have MA's record height & BMI with the vitals  
• **Do:** Asked MA's to measure or record height for all patients and their BMIs regardless of type of visit  
• **Study :** Evaluated numbers of patients with BMI's in 1 day. Did very well, only BMI missed in AM was because nurse had roomed patient before being notified of change.  
• **Act:** During review, noted that BMIs not helpful in newborns. No obvious drawbacks in having MAs take either verbal height from patient or measured MAs height to calculate BMI. Did not seem to take more time or worsen work flow. *Clinic policy changed.*

## Sample PDSAs & Project Continuity

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## Feedback from Residents

- ▶ On the CQI concept –
  - Like the idea of CQI
  - Great process to learn
  - More doable than usual “research”
  - Pleasant break from usual residency stuff
  - Makes me think how workflow occurs, how systems change
  - Enjoy when we review the PDSA cycle & how to implement it...every time it reinforces my understanding

## Feedback from Residents

- ▶ On the structure of the program –
  - Nice to have time built-in for doing chart reviews & PDSA's
  - Would be nice to have time for a 2<sup>nd</sup> PDSA cycle
  - Nice to have continuity in topics from month to month, projects are building on each other
- ▶ On the overall program –
  - Has increased my awareness of chronic disease guidelines
  - Quality is improving in the clinic
  - Wonderful program! Will continue to use this knowledge

## Added Program Benefits

- ▶ On the systems level –
  - Change in the clinic (BMI, tape measures, labeling of annual visits in EMR, asthma action plans searchable in EMR)
  
- ▶ On the educational level –
  - Better understanding of clinical guidelines
  - Rich discussions due to small group, multi-year format
  - Residents teaching each other, as change agents
  - Residents learning more about workflow issues, clinic systems
  - Different from other educational methods

## Challenges

- ▶ Requires faculty champion & investment of time
- ▶ Scheduling is difficult, hence sometimes not following usual format
- ▶ Helpful to have chronic disease management software to provide patient lists (Cognos) & EMR to facilitate chart reviews
- ▶ Flexibility needed when residents are not synced (some on first month, others on 2<sup>nd</sup> or 3<sup>rd</sup> month)

## Back to the PBL&I Competency

- ▶ Residents are expected to develop skills and habits to be able to meet the following goals:
  - ✓ identify strengths, deficiencies, and limits in one's knowledge and expertise;
  - ✓ set learning and improvement goals;
  - ✓ identify and perform appropriate learning activities;
  - ✓ systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
  - ✓ incorporate formative evaluation feedback into daily practice;
  - ✓ locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;
  - ✓ use information technology to optimize learning; and,
  - ✓ participate in the education of patients.

## Our Conclusions (so far...)

- ▶ Residents can learn the skill of constructing CQI projects within the framework of PDSA cycle
- ▶ Residents are eager to make improvements
- ▶ Patient care likely has been enhanced
- ▶ Both PBL&I and Medical Knowledge Core Competencies can be addressed through such a curriculum

**Questions?**

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