

# 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

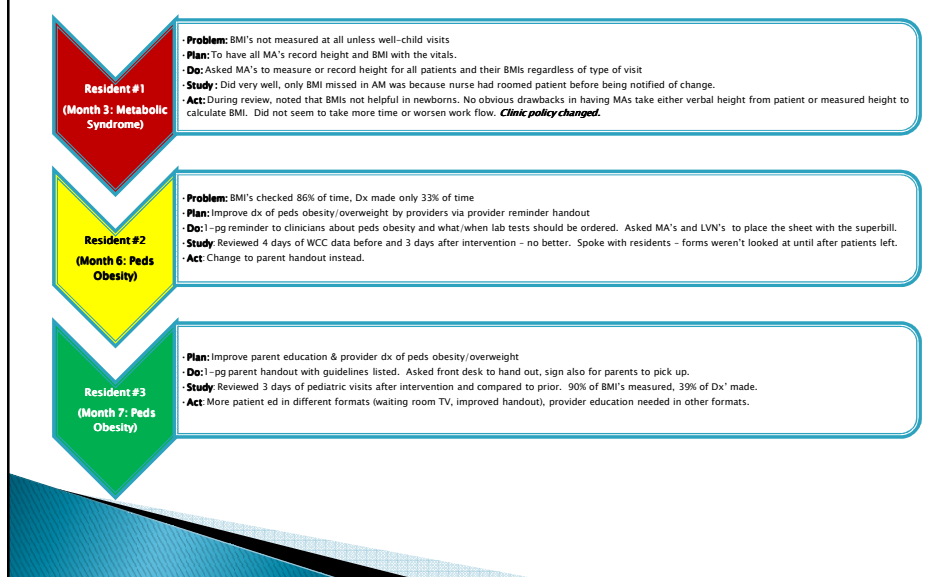
## Design of the Program

- ▶ 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

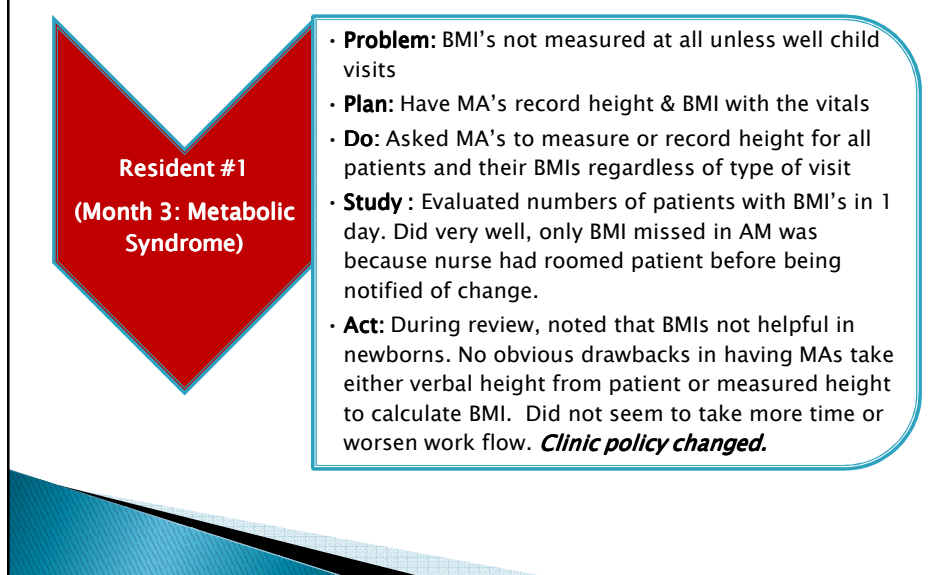
## Evaluating the Program

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

## Sample PDSAs & Project Continuity



## Sample PDSAs & Project Continuity



## Sample PDSAs & Project Continuity

**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.

## Sample PDSAs & Project Continuity

**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.

## 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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