Implementing Meaningful Quality Improvement Projects in FM Residency Programs

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- Identify RRC requirements for scholarly activities/QI projects
- Compile resources available to assist with QI development and implementation
- Discuss process of development of QI projects
- Discuss process and outcome measures
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Quality Improvement

• Quality improvement (QI) consists of systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups (HRSA)

• IOM defines quality in health care as a direct correlation between the level of improved health services and the desired health outcomes of individuals and populations
Quality Improvement in Healthcare

- The combined and unceasing efforts of everyone—healthcare professionals, patients and their families, researchers, payers, planners and educators—to make the changes that will lead to
  - better patient outcomes = healthier patient
  - better system performance (care) = less frustration at work
  - better professional development = better doctors and nurses
- Making changes = integral part of this
RRC requirements

- Residents’ requirements as of July 1, 2016
  - IV.B. Residents’ Scholarly Activities
    - IV.B.1. The curriculum must advance residents’ knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. (Core)
    - IV.B.2. Residents should participate in scholarly activity. (Core)
    - IV.B.2.a) Residents should complete two scholarly activities, at least one of which should be a quality improvement project.
    - IV.B.3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities.

ABFM Requirements

The ABFM requires residents who entered family medicine residency training on or after June 1, 2012 (including those who received advanced placement credit for prior training in another specialty, including osteopathic training), to complete the Resident Certification Entry Process. In order to become certified by the ABFM, the following requirements must be met:

- Completion of 50 Family Medicine Certification points which includes:
  - Minimum of one (1) Knowledge Self-Assessment (KSA) activity (10 points each)
  - Minimum of one (1) Performance Improvement (PI) activity with data from a patient population (20 points each)
  - Additional approved KSA Knowledge Self-Assessment, Clinical Self-Assessment (CSA 5 points each), or Performance Improvement activities to reach a minimum of 50 points
ABFM’s criteria for meaningful QI

- Quality Improvement (QI) efforts must be developed using best available evidence criteria and national standards
- QI efforts must ensure meaningful physician participation
- QI efforts must incorporate self-evaluation, pre- and post-intervention audits of physician performance using quality indicators based on best available evidence
- QI efforts must incorporate the development and implementation of an individualized plan for intervention

How Does QI Work?

- State the problem and desired result
- Understand the problem using data
- Identify and select strategies to improve (i.e., solutions)
- Implement solutions on a small scale
- Test selected solution(s)
- Expand scope and spread throughout a program, organization, or system
- Evaluate outcomes of QI

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ABFM QI – ‘METRIC’

- An innovative online practice/quality improvement program from the American Academy of Family Physicians
  - Measuring
  - Evaluating and
  - Translating
  - Research (Evidence based guidelines)
  - Into
  - Care (Patient)

How does the METRIC Work?

- Step by step process that takes 1-2 months depending on Metric chosen
- **Stage A: Learning from Current Practice**
  - Complete Practice Assessment Questionnaire.
  - Enter data from patient charts (10 or 15 charts, depending on the module).
  - Assess personal performance and compare results nationally.
How does the METRIC Work?

- **Stage B: Learning from the Application of Performance Improvement to Patient Care**
  - Select from multiple interventions.
  - Use provided resources to develop Action Plan.
  - Implement Action Plan for a minimum of one month, using tips, templates and resources from METRIC.
How does the METRIC Work?

- **Stage C: Learning from the Evaluation of the Performance Improvement Effort**
  - Complete Practice Assessment Questionnaire (re-measure).
  - Enter data from patient charts (re-measure). Does not need to be the same patients as the baseline; patients need to have been seen since implementation of the action plan.
  - Compare to baseline measurements and reflect on experience
Challenges…

- Identifying meaningful QIs for clinical practice
- Timeframe
  - Minimum 1 week!
  - Not enough for process or outcome measures!
- Data collection and analysis
  - Individual vs Cumulative
- Educating rest of the clinic staff/providers not directly involved in the QI project

Challenges…

- Stakeholder challenges
  - Nurses
    - ‘one more thing to do’
  - Residents
    - Time/rotational demands/lack of buy in
  - Faculty
    - Need for ‘QI knowledgeable faculty’
    - Time! Time!! Time!!!
- Gathering meaningful data from EMR!
- Sustaining processes/outcomes long-term
Solutions

- Develop QI projects pertinent to practice
  - ResPIP
- Work with IT to collect cumulative data for clinic
- Engage/educate stakeholders
- Identify TEAM/leader
- Identify process + outcome measures

Cincinnati Children's Medical Center identified 4 key drivers for resident involvement in QI:

- (1) knowledge of key concepts of improvement science (Institute of Healthcare Improvement (IHI) Open School, the Association of American Medical Colleges Teaching for Quality report, the Michigan Quality System);
- (2) resident-initiated quality QI projects and facilitation of “buy in”;
- (3) protected time for learning and development of QI projects; and
- (4) a sustainable system to keep track of resident-initiated projects.
Education in quality improvement for practice in primary care during residency training and subsequent activities in practice.

Abstract

BACKGROUND: Quality improvement (QI) is an integral aspect of graduate medical education and an important competence for physicians.

OBJECTIVE: We examined the QI activities of recent family medicine residency graduates and whether a standardized curriculum in QI during residency resulted in greater self-reported participation in QI activities in practice after graduation.

METHODS: The family medicine residency programs affiliated with the South Carolina Area Health Education Consortium (N = 7) were invited to participate in this study. Following completion of introductory educational activities, each site implemented regularly occurring (at least monthly) educational and patient care activities using QI principles and tools. Semiannually, representatives from each participating site met to review project aims and to provide updates regarding the QI activities in their program. To examine the impact of this project on QI activities, we surveyed graduates from participating programs from the year prior to and 2 years after the implementation of the curriculum.

RESULTS: Graduates in the pre-implementation and post-implementation cohorts reported participating in periodic patient care data review, patient care registries, QI projects, and disease-specific activities (57%–71% and 54%–63%, respectively). There were no significant differences in QI activities between the 2 groups except in activities associated with status of their practice as a patient-centered medical home.

CONCLUSIONS: Most but not all family medicine graduates reported they were actively involved in QI activities within their practices, independent of their exposure to a QI curriculum during training.

What's in It for Me? Maintenance of Certification as an Incentive for Faculty Supervision of Resident Quality Improvement Projects.

Abstract

PROBLEM: Residents are required to engage in quality improvement (QI) activities, which requires faculty engagement. Because of increasing program requirements and clinical demands, faculty may be resistant to taking on additional teaching and supervisory responsibilities without incentives. The authors sought to create an authentic benefit for University of California, San Francisco (UCSF) Pediatric Residency Training Program faculty who supervise pediatric residents’ QI projects by offering maintenance of certification (MOC) Part 4 (Performance in Practice) credit.

APPROACH: The authors identified MOC as an ideal framework to both more actively engage faculty who were supervising QI projects and provide incentives for doing so. To this end, in 2011, the authors designed an MOC portfolio program which included faculty development, active supervision of residents, and QI projects designed to improve patient care.

OUTCOMES: The UCSF Pediatric Residency Training Program’s Portfolio Sponsor application was approved by the American Board of Pediatrics (ABP) in 2012, and faculty whose projects were included in the application were granted MOC Part 4 credit. As of December 2015, six faculty had received MOC Part 4 credit for their supervision of residents’ QI projects.

NEXT STEPS: Based largely on the success of this program, UCSF has transitioned to the MOC portfolio program administered through the American Board of Medical Specialties, which allows the organization to offer MOC Part 4 credit from multiple specialty boards including the ABP. This may require refinements to screening, oversight, and reporting structures to ensure the MOC standards are met. Ongoing faculty development will be essential.
ResPIP Requirements for Programs

• **Portfolio Manager**
  – Attest to the participation of faculty and residents on QI projects undertaken in this track

• **Formal Review Committee (3-5 members)**
  – Approves and maintains information on all QI projects (New QI application template) over a 3 year period
  – Submits approval and completion of any new QI project in this track
  – Submits periodic progress reports to ABFM
Goppert Trinity Family Care, KC, MO

QI at RFMRP

• ABFM Requirement for residents
• Meets need for R2 scholarly projects’ completion requirement (Residency Requirement)
• Maintenance of NCQA certification for PCMH
QI at RFM

• TEAMWORK!
• Use standardized QI tools consistently
• Choose process measures over outcome measures when possible
• Projects completed to date:
  – GO!D, ROR, Comprehensive Care, HPV vaccine (ongoing)

Keys to identifying Work Flow and Process Improvement

• EHR + TEAMWORK!

It starts with YOU...

TEAMWORK
To improve, you must make changes

But…

Not all changes lead to improvement

..Changes need to be efficient to be effective!
QI Approaches and Tools—Examples

- Plan-Do-Check-Act
- Lean
- Balance Scorecard
- Baldrige
- Six Sigma
- Kaizen

- Brainstorming
- Flow Chart
- Fishbone Diagram
- Prioritization Matrix
- Pareto Analysis
- Gantt Chart
- Scatter Diagram

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Fundamental Model for Improvement

What are we trying to accomplish?

How will we know a change is an improvement?

What change can we make that will result in improvement?

<table>
<thead>
<tr>
<th>Aim</th>
<th>Measures</th>
<th>Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are we trying to accomplish?</td>
<td>How will we know a change is an improvement?</td>
<td>What change can we make that will result in improvement?</td>
</tr>
</tbody>
</table>

Plan | Do | Act | Study

Plan
- Find an opportunity to improve
- Find the gap between knowledge & practice

Do
- Identify stakeholders
- Define the AIM statement

Act
- Start the process over

Study
- Collect data on process implementation
- Collect data on desired outcomes

FOCUS
F – Find an opportunity to improve; Find the gap between knowledge & practice
O – Organize the effort
C – find out how the Current process Works by flowcharting; collect data
U – Understand/analyze data; Understand variation in data
S – Select the strategy to improve

Plan the improvement
- Find the process to improve
- Identify stakeholders
- Identify the ‘Why’ as much as ‘how’
- Define the AIM statement

Act to hold the gains
and continue to improve

Do/ Implement the improvement

Study the results
- Collect data on process implementation
- Collect data on desired outcomes
STEP 1: Develop An Aim Statement

- Answers and clarifies “What are we trying to accomplish?”
- Creates a shared language to communicate the project to others
  - **S** – specific
  - **M** – measurable
  - **A** – attainable
  - **R** – relevant /realistic
  - **T** – timely

QI specific ‘Aim Statement’

- Increase HPV vaccination rate of boys and girls aged 11-18 years of age at GTFCC by 20 percent during the study period of July 2016 to November 2016
STEP 2: Process Flow Maps

- Nuts and bolts of the PDSA cycle
- Observe the process
- Understand the current state
- Identify failure modes
- Determine your future state

Why Map a Process?

- How the process is documented
- How you “think” the process works
- How the process “actually” works
Understanding the Current State

Work Flow and Process Mapping
Fishbone and 5 Whys

- Analyze the problem and the potential causes through the use of cause and affect tools
- Uses an orderly, easy-to-read format
- Helps determine root causes
- Indicates possible causes of variation
- **Increases process knowledge**
- **Indentifies areas for data collection**
Building a Fishbone

- Start with a concise description of the “Effect” to which everyone agrees and place in the fish head
- Can be stated in the form of a question: Why do we have low rates of HPV vaccination?
- Can be phrased as a positive (objective or AIM) or negative (problem)

Building a Fishbone

- Brainstorm the primary Causes influencing the Effect and list them for each category
- Secondary Causes may also be identified by continued brainstorming and asking “Why is this happening”. Add sub-factors under each segment and keep asking “Why” until you no longer obtain useful information
Step 3: Defining the Measures

- Identify and track few (2-3) specific measures that are easy to access and measure as part of the daily routine
  - Plot data over time
- Measurement should not slow things down
  - ‘Measurement is not the goal; improvement is the goal’
- Seek usefulness, not perfection
  - Use sampling
- Qualitative (ROR) OR/AND quantitative data
‘Qualitative Data’ – HPV Survey

- Think back to 3 recent patient visits that involved an HPV vaccination visit---describe the difficult questions that patients or parents asked you. Examples might include:
  - Giving the vaccine will encourage sexual behavior
  - I’m uncomfortable talking about sexuality with the child
  - I’m uncomfortable talking about the child’s sexuality with the parent
  - I don’t think the vaccine is necessary for all children
  - I’m concerned about side effects
  - I don’t feel that I have the knowledge to answer patients’ questions.

(a)__________________________________________________________
(b)__________________________________________________________
(c)__________________________________________________________

Outcome vs Process Measures

- **Outcome measures:**
  - High-level clinical or financial outcomes that concern healthcare organizations.
  - Quality and cost targets that you are targeting for improvement.
  - Often reported to government and commercial payers
  - Examples
    - mortality rates, readmission and surgical site infection rates
    - HPV vaccination rates in clinic
Outcome vs Process Measures

**Process measures**

- The evidence-based best practices that represent a health system’s efforts to systematize its improvement efforts
- The ‘backbone’/’puzzle pieces’ for outcome measures
- Example HPV vaccination during ‘ill visit’ encounters
- More feasible for short-term QI projects (3-6 months)

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Process Measure</th>
<th>No. eligible for HPV vaccine</th>
<th>HPV vaccine administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients at GTFCC aged 11-18 years of age</td>
<td>829</td>
<td>230 (27.7%)</td>
<td>355</td>
</tr>
<tr>
<td>Boys at GTFCC aged 11-18 years of age</td>
<td>359</td>
<td>115 (32%)</td>
<td>434</td>
</tr>
<tr>
<td>Girls at GTFCC aged 11-18 years of age</td>
<td>470</td>
<td>115 (24.4%)</td>
<td>114</td>
</tr>
<tr>
<td>Total no. of ‘Preventive’ encounters</td>
<td>286</td>
<td>5 (1.74%)</td>
<td>34</td>
</tr>
</tbody>
</table>
In Summary…

• Be innovative in selecting de novo Quality Improvement projects that are pertinent to your residency programs.
• Choose process measures over outcome measures when implementing short-term QI projects.
• Identify and involve key stakeholders in the implementation of the project.

Please…

Complete the session evaluation.

Thank you.
References

- www.acgme.org
- www.theabfm.org
- www.ihi.org
- www.cdc.gov