MOC – Helping Physicians Improve Quality of Care

Evidence that initial certification correlates with better quality of care (19 studies):

- **Outcomes**
  - Certified physicians had better outcomes on 15 of 23 measures compared to non-certified physicians – E.g. 15% lower mortality for acute myocardial infarction (Norcini et al, 2002)

- **Processes of care**
  - Certified physicians performed better on processes of care on 14 of 29 comparisons – E.g. Higher rates of screening mammography and colonoscopy (Pham, et al, 2005)

Association of MOC exam and quality

- Proximity of exam correlated with intensification of therapy for DM patients with hypertension – The “closer” to the exam the better (Turchin, 2008)

- Physicians in top 25% are approximately 15% more likely (OR 1.14 -1.17) to perform mammography and diabetic processes of care (Holmboe et al, 2008)

Practice Improvement in MOC

- Audit and feedback is an established approach to improving quality care (AHRQ Technical review series; Veloski, Med Teach, 2006; Jamtvedt, G; Cochrane, 2005)

- Eleven (11) published or in press PIM studies to date
  - Overall, physicians value experience and self-report practice behavior change

- 73 percent of physicians who have completed PIMs report they have changed their practice as a result, 82 percent would recommend the PIM to a colleague. (ABIM Post PIM Survey, 1/06 – 12/08, n= Approximately 5,000)

Re-measurement in PIMs: MDs Achieving Significant Change

Two published studies (3,7) and a upcoming abstract presentation (18) demonstrate PIMs do lead to significant improvements in practice performance. In addition, a recent report from a Rochester, New York Blue Cross-Excellus project also demonstrated significant improvement in performance, combining coaching from the health plan with the PIMs (H. Beckman, personal communication; manuscript in production).
Annotated Bibliography: Practice Improvement Modules

   This was one of the first studies of the practice improvement module, using both quantitative and qualitative methods, to examining feasibility and satisfaction with 16 practicing physicians. All the physicians found the data from the PIM to be valuable, and the PIM process often created an “aha” moment where the physicians discovered gaps in performance they did not expect or believed was not a problem before performing the audit. The patient survey also provided valuable data about the practice’s quality in communication, with a number of physicians targeting their quality improvement plan based on the patient survey data.

   This study used the experience of the first 626 physicians to complete the diabetes PIM to investigate the reliability of the three components of the module (medical record audit; patient survey and systems survey) and to compare reliabilities of composite measures compared to individual measures. The analysis demonstrated composite measures were more reliable and required a smaller sample size. Meaningful associations were also found between composites.

   This study was a clustered randomized controlled trial using the asthma PIM on a CD-based platform. Eight practices (19 internists) were randomized to the intervention group and 8 practices (21 internists) to the control group. The primary outcome, ICS fill rates, was not significantly different between patients seen by intervention group physicians when compared with patients seen by control group physicians in the post-intervention period. Patients seen for asthma by intervention group physicians were less likely to receive a written action plan (aOR 0.67; 95% CI 0.48, 0.93); however, they were more likely to discuss potential asthma triggers (aOR 1.62; 95% CI 1.08, 2.42) and had lower self-reported asthma severity measures (unadjusted P-value 0.031) when compared with patients seen by control group physicians. The diplomates in the intervention group had difficulty with the CD technology.

   This article describes the evolution of the PIM to a web-based tool and also provides data on the early experience with the preventive cardiology PIM among 179 cardiologists and general internists. The mean rate for systolic blood pressure control was 48%, for diastolic blood pressure 84%, and for LDL cholesterol at goal 65%. 61% of patients rated the quality of care as excellent and 58% rated the practices excellent at encouraging questions and answering them clearly. More than 85% of patients reported “no problem” obtaining a prescription refill, scheduling an appointment, reaching someone in the practice with a question or obtaining lab results. Targets for improvement were increasing the rates for LDL
cholesterol or systolic blood pressure at goal, improving patients’ physical activity, patient education, and accuracy of risk assessment. Improvement strategies included implementing chart forms, patient education, or care management processes.


Few question the need for continuous professional development throughout a physician’s career, but rapid changes in healthcare is creating demand for physicians to acquire new knowledge, skills and attitudes to implement quality improvement in clinical practice. The internet and world-wide-web are technologies that have the potential to facilitate deep change in physician practice and lifelong learning. The primary objective of this paper was to describe how the American Board of Internal Medicine (ABIM) has utilized the web and internet to engage physicians in the competencies of practice-based learning and improvement and systems-based practice. This paper specifically described how the ABIM developed and implemented web-based practice improvement modules (PIMs) to help physicians measure and improve their clinical practice.


The three aims of this study were to 1) assess the quality of preventive cardiology care; 2) characterize the practice-based systems that currently exist in internal medicine residency training programs; and 3) examine the relationships between quality, practice-based systems and features of fifteen residency training programs (23 clinic sites) as part of an observational study. Chart abstraction of 4,783 patients showed substantial variability across sites. On average, 25.8% of patients (range 4.2% to 45.1%) showed evidence of cardiovascular disease and 25% had at least one important barrier of care. Patients received an average of 57.4% (range 29.9-76.8%) of the appropriate interventions. Sites with an EMR showed better overall information management (81% versus 27%) as well as better modes of communication (79% versus 43%). We found substantial heterogeneity among the training sites exists. Because clinics are educational venues, institutions must insist upon high functioning training environments and compliance with evidence-based guidelines to continuously improve patient outcomes.


This study describes how the University of Chicago internal medicine program used the Clinical Preventive Services PIM in the residency’s quality improvement and assessment curriculum (QIAC). The PIM lead to three quality improvement projects in the ambulatory clinic: improving measurement and documentation of body mass index, smoking cessation counseling and accuracy of medication lists. Each project led to improvements in patient care; from baseline to follow-up re-measurement, BMI measurement improved from 4% to 79%; smoking cessation counseling improved from 41% to 67%; and inaccuracies in medication lists fell from 25% to 9%. They study also found increases in resident confidence in using a plan-do-study-act cycle to improve quality.

This study explored the impact of the Preventive Cardiology Practice Improvement Module (PC-PIM) on residency clinics. Results from 22 clinic interviews indicated merit in using the PC-PIM to teach QI in residency. Many residents reported increased knowledge and confidence, particularly around the value of QI. Importantly, the majority recognized that QI often leads to improved patient care and outcomes, even in resource poor environments. Conducting aspects of the QI process themselves (e.g. the chart audit, decision making) led to greater awareness of the patient and systems perspectives. Barriers included a lack of resident buy-in, discontinuity of care, and a lack of institutional support. These findings shed light on how residency clinics engage in QI activities, and may aid in the implementation of future QI initiatives in residency more generally.


Physicians play an important role in hospital quality improvement (QI) activities. The Hospital-Based Practice Improvement Module (Hospital PIM) is a web-based assessment tool designed by the American Board of Internal Medicine to facilitate physician involvement in QI as a part of maintaining certification. The objective of this study was to explore the impact of the Hospital PIM on physicians participating in hospital-based quality improvement. A second objective is to explore the role of physician engagement on the impact of the Hospital PIM. The methodological design was a qualitative study using grounded theory among 23 early completers of the hospital PIM.

Physician completers of the Hospital PIM described the impact in a variety of ways including new learning about QI principles and activities, added value to their practice, and enhanced QI experience. An emerging theme was the mediating role of physician engagement in learning about QI activities and overall impact of the Hospital PIM. Facilitators and barriers that influence the overall experience of the PIM are described.

The impact of completing the Hospital PIM is described as increased awareness of hospital QI activities and learning about standard QI procedures. This impact is mediated by the degree of physician engagement with the QI process.


The United States healthcare system is not prepared to meet the needs of the increasing population of older adults. Few physicians become geriatricians; most will care for older adults and need to understand their healthcare needs. Using the American Board of Internal Medicine (ABIM) Care of the Vulnerable Elderly (CoVE) Practice Improvement Module (PIM™), we studied the level of care provided to older adults in 52 internal medicine and family medicine residency clinic sites, the characteristics of the practice systems in those clinics, and the relationship between specific elements of the practice systems and processes of care important to older adults, and compared the results in these clinics with care provided by 144 practicing physicians electing to complete the CoVE PIM as part of maintaining ABIM certification. Patients seen by residents were younger and had fewer
chronic conditions. They were less likely to receive recommended geriatric-specific and other services. The residency clinic systems were less likely to have elements designed to support these services, and even when present, there was little correlation between the system and the delivery of specified services. Among practicing physicians, there remained much room for improvement, although system elements were more likely to function well and to be correlated with higher performance on delivery of key processes of care. Much remains to be learned about the interactions between systems of care and the users of those systems.


Good communication is vital for effective care coordination. Previous research has shown that physicians can provide valid and reliable assessment of their peers. This study determined the value of the Communication with Referring Physicians Practice Improvement Module (CRP-PIM℠) designed to help consultants measure and improve the quality of communication with physicians that refer patients to them. The CRP-PIM℠ required each consultant to complete a practice system survey and to invite at least ten referring physicians to complete a survey about specific communication processes from the consultant’s practice. An interactive performance report was provided to help consultants select targets for improvement. In total, 803 internists and subspecialists completed the CRP-PIM℠. Consultants received data from a mean of 15.21 referring physicians (SD = 5.78); surveys were received from a total of 12,212 referring physicians. Ratings were obtained from 13 items using a six-point Likert scale. Mean overall rating for consultants was high, at 5.53 (SD 0.23, range 2.46 to 5.95). Generalizability coefficient for the ratings was .78. Factor analysis supported two distinct categories of ratings. The lowest rated consultants as a group had distinct qualities. In conclusion, the CRP-PIM℠ allows consultants to apply quality measurement in their practices to improve their communication with referring physicians and ultimately help them achieve better care coordination.


Background: Although residency programs must prepare physicians who can analyze and improve their practice, practice improvement (PI) is new for many faculty preceptors. We describe the pilot of a PI curriculum incorporating a practice improvement module (PIM) from the American Board of Internal Medicine for residents and their faculty preceptors. Methods: Residents attended PI didactics and completed a PIM during continuity clinic and outpatient months working in groups under committed faculty. Results: All residents participated in PI group projects. Residents agreed or strongly agreed that the projects and the curriculum benefited their learning and patient care. A self-assessment revealed significant improvement in PI competencies, but residents were just reaching a “somewhat confident” level. Conclusion: A PI curriculum incorporating PIMs is an effective way to teach PI to both residents and faculty preceptors. We recommend the team approach and use of the PIM tutorial approach especially for faculty.

Health reform legislation grants authority for patient-centered medical home pilot projects to test changes in the way primary care is provided. There is concern that using a measurement tool to qualify medical homes that is solely based on presence or absence of “systems elements” may miss the point conceptually and lead physicians astray in attempts to transform their entire practice. To find out whether and how practice characteristics explain health care quality, we examined risk-adjusted composite measures of quality for common chronic and acute care conditions and preventive care from 202 general internists working primarily in small primary care office settings. We found that current conceptions and measures of what constitutes “successful” practice and care are incomplete, and have limited associations with measures of health care quality. Future research should explore more fully the issues around physician competence, including competence in systems and quality improvement; the interactive nature of clinical practice; and other important system elements not captured by current tools.

**Point-of-Care Module:**


INTRODUCTION: Diplomates in the American Board of Internal Medicine (ABIM) Maintenance of Certification (MOC) program satisfy the self-evaluation of medical knowledge requirement by completing open-book multiple-choice exams. However, this method remains unlikely to affect practice change and often covers content areas not relevant to diplomates' practices. We developed and evaluated an Internet-based point of care (POC) learning portfolio to serve as an alternative. METHODS: Participants enter information about their clinical questions, including characteristics, information pursuit, application, and practice change. After documenting 20 questions, they reflect upon a summary report and write commitment-to-change statements about their learning strategies. They can link to help screens and medical information resources. We report on the beta test evaluation of the module, completed by 23 internists and 4 internal medicine residents. RESULTS: Participants found the instructions clear and navigated the module without difficulty. The majority preferred the POC portfolio to multiple-choice examinations, citing greater relevance to their practice, guidance in expanding their palette of information resources, opportunity to reflect on their learning needs, and "credit" for self-directed learning related to their patients. Participants entered a total of 543 clinical questions, of which 250 (46%) resulted in a planned practice change. After completing the module, 14 of 27 (52%) participants committed to at least 1 change in their POC learning strategies. DISCUSSION: Internists found the portfolio valuable, preferred it to multiple-choice examinations, often changed their practice after pursuing clinical questions, and productively reflected on their learning strategies. The ABIM will offer this portfolio as an elective option in MOC.
Abstracts:


2. Caverzagie K, Reddy S, Bernabeo E, Holmboe ES. The ABIM Hospital-Based Practice Improvement Module (PIM): Who are the completers and what have we learned? Society of Hospital Medicine. April, 2008.


