



ASSOCIATION OF
AMERICAN
MEDICAL COLLEGES

Report V
**Contemporary Issues in Medicine:
Quality of Care**

**Medical School Objectives Project
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“ Mr. Jones had received a gastric endoscopy but the scheduled biopsy was cancelled when a nurse noticed the patient was still on anticoagulation medication. Sarah Smith, 3rd Year Internal Medicine Student, asked her attending if this happened frequently... ”

Not even 50 years ago the greatest harm when one was sick was from the disease itself. Today sick patients are vulnerable on two fronts; one from the disease and the other from the very care giving system in which they place their trust. Though quality of care issues are not new to medical care delivery or medical practice, per se, there is an increasing concern that safeguards designed to protect patients need improvement, and that medical school graduates are ill-prepared to address the system shortcomings that put patients at risk in the first place. These system shortcomings result in the overuse, underuse, and misuse of medical care, preventable errors, and even death. The world in which today's graduates will be providing care is changing, as are the expectations of physician performance. Medical school graduates can expect to practice in an era where measurement of results, outcomes, and physician accountability are the norm. They must be prepared. Leadership in the country's medical schools must take up the charge to ensure that all medical students are able to assess and improve their own performance throughout their professional lives, and be able to do the same to improve the delivery system in which care is provided. Bodies responsible for accreditation and credentialing are taking steps to incorporate issues of quality into their guidelines and assessment of competency and skill. Likewise, there are pockets of innovation in the medical education community, at both the under-graduate and graduate levels,



where a new spirit and professional pride is emerging aimed at making changes for the improvement of patient care.

The report of the Institute of Medicine's Committee on Healthcare in America, "To Err Is Human," released in 1999, and the report of President Clinton's Advisory Committee on Consumer Protection and Quality in the Health Care Industry offer detailed rationales for why people should be concerned about quality in US health care. Quality problems present themselves several ways: errors, underused services, and overused services, as well as variation in care and quality. Errors occur as missed or delayed diagnoses, misinterpreted laboratory tests, surgical pathology errors, medication errors, and other events. Underused services include failure to provide appropriate services in preventive care, acute care, and chronic care. Overused services include provision of non-indicated services including some cardiac treatments, hysterectomies, and prescription of antibiotics, to name a few examples cited by the President's Advisory Commission. The magnitude and scope of over and underuse problems across the U.S. are supported by the geographic variation studies and sub-optimal rates of screening according to widely endorsed preventive services guidelines. The quality and type of care received depends largely on socio-economic variables, as well as regional locations. These variations are of such magnitude that a scientific rationale to explain them can not be constructed, concluded the Commission.

In March 2001, the IOM released a follow-up report, "Crossing the Quality Chasm: A New Health System for the 21st Century," calling for a major overhaul of the healthcare system which focuses on the patient, fosters teamwork, and better utilizes information technology. Additionally, the report calls for a "technology-based infrastructure," and a payment system that rewards quality. In the report's section on "Preparing the Workforce" the authors point to the need to reform current clinical training and education in order to change the 'culture of health care practice.' The AAMC currently has underway a project to examine in detail the state of clinical education at US medical schools, and to specify necessary reforms.

In addition to the IOM report, several studies of the health professional workforce have pointed out the need for modification in the education of health professionals, to prepare them better to address quality issues. This inevitably makes new demands on an already overstretched curriculum and overtaxed faculty. The Association of American Medical Colleges (AAMC) has responded to the challenges in quality improvement education by establishing an expert panel as part of the Association's on-going Medical School Objectives Project (MSOP). The panel's charge was to consider the issue of quality improvement education within the con-

text of undergraduate medical education by addressing two fundamental questions.

- What should medical school students learn about quality of care issues (*learning objectives*)? and
- What kinds of educational experiences would allow students to achieve those learning objectives (*educational strategies*)?




While rotating on a busy surgical service I was responsible for the care of a middle-aged gentleman who had undergone back surgery. Unfortunately, he developed a complex wound infection that required antibiotic treatment. The patient was appraised of the situation and the Infectious Disease (ID) service recommended an antibiotic that was dosed by the patient's weight. The total amount of medication was to be divided by 3, for equal dosing every eight hours. In my haste, I erroneously wrote for the antibiotic total dose to be given every eight hours, in effect prescribing 3 times the maximum daily dose. The pharmacy called to confirm the order and I maintained my dosing schedule, convinced that I had done the math correctly. Later that day, after the patient received his first dose, I realized that had written for a toxic dose. (The antibiotic is toxic to the kidneys, particularly in high doses.) I discontinued the medication and informed the patient of the overdose. I told him that I had written an incorrect prescription and as a result, he had received an overdose of the medication, which could potentially lead to kidney complications. I explained that I had ignored the oversight of the pharmacy and accepted full responsibility. While this interaction was upsetting for both the patient and me, the frank and early admission of the error allowed for us to concentrate on the potential complications and outcomes, and I believe he appreciated my candor. Fortunately, my patient enjoyed a full recovery from his infection and overdose. I have since learned to triple check my arithmetic and never discount the value of another layer of oversight.

A 3rd year resident

MSOP Panel on Quality of Care Education

The panel took as its aim “to develop a program of learning in medical school to educate students about the assessment and improvement of the quality of healthcare.” It was neither the intent, nor the charge of the panel, to develop a course on quality of care issues. Indeed, it was the thinking of the panel that learning about quality of care must occur in the course of, and as a part of, learning about patient care. Knowledge of what quality is in health care, and the ability to analyze evidence to identify gaps in quality is a necessary, but not sufficient, goal in the education of medical students about quality of care. The ultimate goal is that all medical school graduates have a working knowledge of how quality is a factor, overt or covert, in



every clinical decision, and every system and process in which a physician will be involved. In this same vein, the panel determined that there already exists ample opportunity within existing curricula to design educational experiences on quality of care issues. The content integration itself is not the largest challenge. The challenge is mobilizing the medical education community to ensure that the general education of all medical students includes quality of care issues, and that related measurement tools are practiced and properly taught, emphasized, and evaluated by faculty and attending physicians.

In addition to developing learning objectives and identifying suggested educational strategies, the panel recommends linking medical student learning with efforts to improve patient care. Though this is beyond the immediate scope of the panel's work, it is imperative that the interplay along the medical education and care delivery continuum be recognized. Along these lines, the panel believes that several schools should be identified to serve as curricular innovation sites that will implement the suggestions of this report and model integrating the report's learning objectives into their curricula.

The New Skills Curriculum at Dartmouth Medical School

In 1996, the dean of Dartmouth Medical School (DMS), Andrew Wallace, M.D., commissioned a committee of faculty to develop a set of "new skills" for the DMS curriculum, which in turn identified three overarching content areas:

1. What is the health care system?
2. How can a physician assess what he or she is doing and find better ways to do it?
3. How can a physician relate better to patients and the health care system?

These concepts were integrated into existing orientation sessions, courses, and clerkships, so no new courses were created nor faculty added, which places the new skills in the background of the students' learning, in contrast to teaching a separate course on quality improvement or systems and process analysis.

In the first two years, students receive an orientation lecture about process analysis and variation in health care. While the first year students focus on mapping an ambulatory visit from the perspective of a patient, the second year students consider the process and variation of care for an individual disease within a practice (e.g., diabetes care for a panel of patients). Small group problem-based learning sessions cover such topics as clinical processes, medical error, and systems improvement. The basic theories introduced in the first year are expanded to the clinical realm in the second.

At the primary care clerkship site in the third year, each student picks a clinical problem to study, and with the preceptor's assistance, gathers evidence about the problem. Drawing on work

learned in the first two years, students display the current system of care on a process flow diagram, gather data about this process, and, if time allows, recommend changes to the site based on their findings. Finally, students present a summary of their project to their classmates, including a literature review and local health plan approaches to this condition.

During a five-week period in February and March of the fourth year, DMS students return to the main campus for two courses: Health, Society, and the Physician (HSP) and Clinical Pharmacology. One full week of the HSP course is dedicated to synthesizing and applying the quality improvement skills gathered in the first three years. Small groups of students are given a real quality improvement problem to study that will be pertinent in their residencies. An individual who is actually working on the problem in the clinical setting joins each small group. The group makes change recommendations in the form of a final report that is submitted to the QI team working on the problem.

The New Skills Curriculum provides a comprehensive set of useful skills for DMS students to evaluate, measure, and improve systems of patient care. These skills complement the traditional scientific and clinical knowledge that is gained in medical school. The curriculum incorporates the students' developmental learning and accomplishes this without adding new courses to the curriculum. As residency programs and specialty societies move toward competency-based evaluation systems, the DMS students will have a solid foundation on which to continue their professional growth.

Greg Ogrinc, M.D.

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Acknowledgement

The authors wish to acknowledge the leadership and vision of David Nierenberg, M.D., in guiding the development of the New Skills Curriculum at DMS. Also, the continued support of the entire DMS faculty has been greatly appreciated.

Learning Objectives

Learning objectives have been grouped into three main areas:

- The ability to critically evaluate the knowledge base supporting good patient care
- An understanding of the gap between prevailing practices and best practices, and the steps necessary to close that gap
- Participating in closing the gap between prevailing and best practices

Student learning in these areas follows a natural progression from the acquisition of basic skills and knowledge, to the more refined skill of critically analyzing and applying those skills and knowledge in the practice and delivery of patient care. Any program of learning must recognize that developmental progression in the learner.



The ability to critically evaluate the knowledge base supporting good patient care.

A firm grounding in the scientific literature and an ability to integrate information from patients and other sources of health related information is critical for the delivery of quality care to patients, for maintaining the integrity of the systems of care, and for the life-long learning of physicians.

For its part the medical school must ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:

- The ability to find evidence relevant to a clinical case or topic
- The ability to analyze available evidence and understand its limits
- The ability to understand how evidence is translated into best practice guidelines for patient care
- The ability to elicit and combine patient's preferences with other available information

An understanding of the gap between prevailing practices, and best practices, and the steps necessary to close that gap.

Modern physicians must possess the ability to measure and improve their own performance, as well as identify and improve system performance. For advances in patient care, and in the science of medical and quality care issues to occur, students must be trained to evaluate the status quo of practice and organizational structure, with the ultimate aim of improving patient care. This includes questioning and revising conventional practices should they become ineffective or need improvement.

For its part the medical school must ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:

- The ability to identify examples of each of the three major classes of quality problems (overuse, underuse, and misuse) and to demonstrate an understanding of how each does harm to patients
- The ability to assess prevailing local practices and compare them to relevant better practices elsewhere as a means of identifying opportunities for improvement
- The ability to identify, map, and study local care processes

- The ability to identify barriers to closing the gap between prevailing and best practices
- The ability to identify multiple approaches to successfully closing the gap

Participating in closing the gap between prevailing and best practices.

Everyone involved in providing medical care is responsible for improving the system. To that end, students must be trained in how to become change agents in their own right by participating in a system and care improvement effort.

For its part the medical school must ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:

- The ability to understand the physician's role as a member of a team delivering care within a local clinical care environment (micro-system)
- The ability to integrate information technology into the improvement of patient care
- The ability to describe the principles of a quality improvement initiative that maximizes patient safety, despite barriers and variability in the practice environment
- The understanding of, by way of direct participation in the design, implementation and testing of change for the improvement of patient care
- The ability to learn from one's own practices and corresponding efforts to improve them

Institute for Healthcare Improvement

The Institute for Healthcare Improvement (IHI), a Boston-based, independent organization working to accelerate improvement in healthcare systems, has identified the general learning domains listed below as areas which encompass the knowledge and skill-sets needed to make dramatic and long-lasting improvements that will enhance clinical outcomes and reduce costs.

Learning Domains

- | | |
|---|--|
| ■ Health care as a process, system | ■ Collaboration |
| ■ Variation and measurement | ■ Social context and accountability |
| ■ Customer/Beneficiary knowledge | ■ Developing new, locally useful knowledge |
| ■ Leading, following and making changes in healthcare | ■ Professional subject matter |

www.ihl.org



Illustrative Educational Strategies

A field experience in quality improvement should be offered in which medical students study practice measurements, variation, and improvement focused on the care delivered on the inpatient (or outpatient) service to which they are assigned. These experiences should include the components delineated below.

In order to develop an ability to critically evaluate the knowledge base supporting good patient care medical students should

- Present the evidence about quality as well as evidence concerning diagnosis and treatment
- When working up cases, medical students should evaluate the rigor of quality research, as well as the rigor of treatment studies
- Investigate a topic or question finding and rating national guidelines using an evaluation tool

In order to develop an understanding of the gap between prevailing practices and best practices, medical students should

- Have an experience where they examine an actual clinical case, locate and evaluate relevant guidelines, and identify variations in care between their case and the guidelines, so that they can ultimately suggest provider behavior and systems changes that would reduce variation in future cases of a similar nature
- Know how to find evidence of practice variation between patients, and among providers, when writing up patient care plans
- Know best practices for specific cases and understand performance of their own teaching hospital or clinical setting in comparison to those best practices
- Using the first clinical case of their rotation, pick one action of care or clinical decision that varied from optimal, and thoroughly investigate the quality of patient care, applying skills of practice evaluation and assessment
- Work in groups to write a description of their own health system, perhaps with a structured questionnaire, or join an ongoing team to do a special project (individually or as a student team) that contributes to the work of a clinical improvement team

- Describe a step-by-step approach to improvement by extrapolating core principles and methods from their experience

In order to participate meaningfully in closing the gap between prevailing practices and best practices, medical students should

- Document use of information technology (IT) to address quality issues in work-ups of every case
- Looking back on the first case of their clinical rotation, develop a strategy to improve the care given
- Be included as a member of an ongoing QI team at clinical site, even as a data collector and/or meeting participant



**Involving Medical Students in the Improvement of Clinical Care
An Educational Strategy from Case Western Reserve University**

An interdisciplinary team of students, sponsored by MetroHealth Medical Center (MHMC), a county hospital and major teaching affiliate of CWRU, undertook a project to study the care of acute pain crisis for adults with sickle cell disease, and to recommend improvements in care to help patients stay well and reduce hospital stays. Health professionals at MHMC had been working to improve the care of patients with sickle cell disease, but remained concerned about high rates of emergency department utilization, frequent hospital admissions, and low rates of attendance at primary care appointments.

Faculty sponsors provided students with written instructions that included:

- a description of goals, expectations, roles and responsibilities;
- suggestions for obtaining agreement on the end-products of the project and a plan for regular communication with the project sponsor;
- guidelines for professional behavior appropriate to “guests” working in a health care organization (including confidentiality);
- background on improvement methods to get the students started.

Over the next ten weeks, the student team identified best practices for caring for sickle cell disease patients, reviewed national guidelines, talked with the leaders of nationally recognized programs at two other academic health centers, interviewed patients, talked with professional staff, analyzed the process of care in the emergency department (ED) for 23 consecutive patient visits for sickle crisis, and created a detailed table comparing current MHMC practice with National Institutes of Health guidelines. They confirmed that the benchmark programs provided care for similar patients and



identified several strategies potentially usefully at MHMC. The students found dissatisfaction with current care for acute pain crisis among both patients and providers, and documented variation in the process of urgent pain control in the ED, including widely varying patient waits for first administration of pain medication.

Based on their findings, the students offered the following recommendations for improved care:

- implement a pain protocol in the ED to simplify the process and decrease time to administration of medication;
- replicate an intervention developed elsewhere to give patients an identification card identifying their primary care physician, current medication, and recommended regimen for acute pain control;
- increasing ED observation time to eight hours, a strategy that elsewhere had led to decreased hospital admissions.

The MHMC sickle cell team has begun to implement the first two recommendations and is investigating options for the third.

Other recent student team projects at CWRU include identifying factors associated with re-admission for patients with stroke at a community hospital and studying staff needs for improving pain control at an academic medical center. These examples illustrate how with careful project selection, site preparation and learner coaching, students can contribute meaningfully to clinical improvement in projects that fit their busy schedules and can be accomplished in a defined period of time.

Linda A. Headrick, M.D., M.S.

Acknowledgement

The author wishes to acknowledge that the example here is the result of the work of an interdisciplinary faculty team: Farrokh Alemi, Ph.D. (George Mason University), Nancy Tinsley, R.N., M.B.A. (University Hospitals of Cleveland), Shirley Moore, R.N., Ph.D. (Frances Payne Bolton CWRU School of Nursing), and Duncan Neuhauser, Ph.D. (CWRU School of Medicine).

Factors That Promote Successful Integration

To integrate and foster an ability to critically evaluate the knowledge base supporting good patient care, it is vital that students have competent role models, and that housestaff and faculty take quality evidence seriously, by utilizing it themselves, and by being receptive when presented such information by students. As it stands now, there is no easily accessible textbook or pocket guide to get to data, but by educating patient care providers in sources of information and methods of incorporating such information into patient care decisions, this kind of approach will be reinforced along the medical care continuum.

To understand and work to close the gap between prevailing and best practices there must be a culture change that will ease defensiveness from teaching hospital staff and faculty in examining errors and problems of quality. An understanding that this will serve to enhance and improve care overall should mitigate concerns that any criticism of the system is an admission of failure. Realistically, for this to happen, medical schools and hospitals must address unanticipated liability risks involved in making quality of care lapses and error incidents into learning tools. Though there is currently no easy access to appropriate literature, this should change as more learning institutions develop their own approaches for teaching about quality of care. For effective quality improvement to be role-modeled, our teachers will also have to work to dismantle the inter-professional silos in medical practice that make change difficult.



Mastering Medical Information Course at the University of Rochester School of Medicine

The overall goal of the Mastering Medical Information Course is to provide the student at the beginning of his/her medical school career with a foundation for the location, management, analysis, and appraisal of medical information. The Double Helix curriculum of the University of Rochester challenges the student with vast amounts of information from the basic, clinical, and population sciences. The course is designed to provide students with a core of knowledge, attitudes and skills necessary to build the students' biomedical information base over the four years of medical school and beyond to postgraduate and continuing education.

To accomplish this overall goal, Mastering Medical Information has been developed as a unique six week course. The first four weeks of the first year of the Year I curriculum is devoted to Epidemiology, Biostatistics, Medical Informatics, and Evidence-based Medicine. The course sections for the last two weeks of the Year I curriculum encompass the Organization, Financing and Quality of Healthcare. Course learning objectives are carried out through a combination of lectures, problem-based learning experiences, small group discussions, laboratories, and Biopsychosocial Integration Conferences.

Another goal of Mastering Medical Information is to launch the Biopsychosocial Themes of Aging, Diversity, Ethics, Health Economics, Nutrition and Prevention.

Thomas A. Pearson, M.D., Ph.D.

Competency Assessment

Faculty should assess the competency of the learner in the context of the developmental stage of the learner. Modeling the use of quality of care improvement methods is the first step to establishing for the novice learner the value of quality improvement efforts. As medical training progresses, so too should the use and knowledge of self-assessment and improvement methods. Explicit assessment of the



understanding and application of such methods is the responsibility of the medical school program. An example could be that evaluations for each clinical rotation should include assessment of the student's knowledge of quality literature, as applied clinically. A more in-depth experience would be that students should be given a project to identify a case or area, and create a quality of care/improvement action and evaluation plan, ideally real, but fictional if need be, in which the student assesses successes and identifies unexpected outcomes. Addressing the ethical implications in the case would be an important component. Students should ultimately be able to describe their improvement work to others in a way that allows faculty to judge whether or not the learning objectives have been achieved.

The Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS) are collaborating on the development of an assessment toolbox. The toolbox is a Web-based resource designed to assist medical educators with the selection and development of evaluation techniques that residency programs can use to assess the competencies of their residents, and evaluate program outcomes.

The toolbox includes:

- Descriptions and examples of assessment methods
- Recommended use of methods
- Feasibility and practicality of methods
- Reference list
- Glossary of key assessment terms

Susan Swing, Ph.D.
www.acgme.org

Faculty Development

The area of faculty development is a critical point of leverage between quality education inclusion in the curriculum and actual clinical instruction in quality. The faculty need to demonstrate competencies to teach the knowledge and skills associated with the learning objectives laid out above. Further, schools need to designate an overall coordinator who will oversee the content offered in the curriculum, as well as monitor competency acquisition on the part of the faculty.

In order to realistically expect medical students and graduates to incorporate skills of quality assessment and improvement in their own training and subsequent practice, there must be a concurrent effort to train faculty in doing their own critical

analysis along quality of care dimensions, as well as faculty development in training students about quality of care issues. For this to happen effectively, faculty must take quality education seriously. A tangible mechanism to ensure this is to make promotion directly tied to evidence of personal quality assessment and improvement efforts. Though to do so would be a departure from conventional promotion protocol, it is likely the only way to effect change within the very faculty who are responsible for training today's medical students and tomorrow's doctors. Faculty need to experience first hand quality evidence issues, such as requiring performance measures of faculty practice and evaluating faculty based on their performance. At most institutions, this will require a substantial change in culture, but this change will result not only in a better education program, but also in better care for the patients served at our institutions.



QI Efforts and Faculty Development University of Michigan Medical School

Training in Quality Improvement (QI) occurs throughout many departments at the University of Michigan Medical School, with efforts varying from informal discussions to more formal lectures or conferences. Teaching and learning in QI occurs throughout both undergraduate and graduate training.

Concepts and practices in Quality Improvement, including Evidence-Based Medicine (EBM), are introduced to medical students formally during the second and third years. During the second year, students receive an introduction during the year-long "Introduction to the Patient" course. This is augmented by seminars on QI and Evidence-Based Medicine during the third year "Seminars in Medicine," multidisciplinary seminars attended by all third-year students weekly.

However, much of what the students learn is taught informally through role modeling by faculty and residents regarding their approaches to medical practice during clinical rotations. Like many of our educational interventions that impact the "practice" of medicine, it is these daily clinical activities that influence student learning and behaviors most directly. Accordingly, faculty too are being taught the principles and process of QI. For example, in the Department of Internal Medicine, opportunities for improving the care of patients are emphasized in divisional meetings and department-wide conferences. Even more significantly, quality improvement measures are included as part of annual performance reviews in many departments. Some departments are more explicit about teaching faculty the principles of QI. In Family Medicine, specific QI projects (such as ways to improve the telephone triage system) are discussed in detail, including the stages of the QI project, the roles of team members, and the results of the initial PDSA cycles. Many of the surgical programs have extensive databases to track quality of care measures. For example, data on thoracic surgery patients (demographics, risk factors, operation, complications, length of stay, follow-up, survival, quality of life, etc.) are tracked and serve as an important means of documenting problems and improvements in treatment. As one faculty member stated, "Monitoring and reporting of clinical results is an integral part of professional life here."



Faculty at the University of Michigan are also involved in the development and implementation of clinical guidelines. Through the GUIDES (Guideline Utilization Implementation Development and Evaluation Studies) program, faculty develop and then teach other faculty about the use of UM clinical practice guidelines to improve care. In addition, faculty in General Pediatrics and other departments have participated in faculty development programs on EBM. The goal of these sessions has been to help faculty practice EBM, and teach EBM principles to residents and students.

Through these programs and others under development, the University of Michigan Medical School is committed to fostering the incorporation of Quality Improvement principles and practice throughout each of its teaching programs and clinical delivery services.

*John G. Frohna, MD, MPH
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Implementation Strategies

The panel has identified several strategies that would support efforts by the medical education community to include instruction about quality of care issues, and to foster within medical students values that encourage continuous quality improvement at the personal and system levels.

Pilot implementation initiative

- A pilot program (such as a three year program for five schools) for a school wide quality curriculum implementation initiative which considers the recommendations set forth in this report and integrates throughout the curriculum educational experiences which ensures that students develop competency in the three main learning objectives articulated earlier, could serve as the basis for a template for other institutions considering curriculum changes.

Collaborative faculty development program

- A program that fosters cross-discipline cooperation in educational development would serve to incorporate many of the quality improvement exercises that are currently absent from professional education, that so often serves more to promote competition, rather than to foster true quality improvement. Cooperation at the faculty development level will likely promote genuine cross-disciplinary quality improvement activities, which would provide an excellent setting for

quality improvement education activities. The Institute for Healthcare Improvement uses such a model in their summer symposium for health professional faculty.

Faculty development seminars are crucial for teaching faculty to offer educational models on quality of care integration, or “off-the-shelf” teaching cases. Existing professional development venues could be utilized for “marketing” these seminars to various constituent groups of the AAMC. Appropriate external funding to support such efforts should be explored.



Develop teaching cases as part of Web-based clearinghouse

- Teaching cases that focus on quality (under, over and misuse), medical error, and processes should be developed and incorporated into existing curricula. Such cases could be part of a clearinghouse “tool box.”
- A virtual clearinghouse of innovations in education of quality occurring among our constituent colleagues, and related professional schools, and an anthology of published material on quality and quality education needs to be developed and made available to the medical education community at-large.

Single point of accountability for “competency” assessment within the curricular structure

- There needs to be at each medical school a designated leader who is responsible for overseeing that education efforts in quality of care are properly integrated and coordinated between the clinical and pre-clinical experiences, as well as ensuring that appropriate competency measures are in place, linking medical student learning and patient care clinical outcomes

Conclusion

The Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties have recently adopted general competencies that incorporate the knowledge and recognition of quality of care issues. The six general competency areas are Patient Care, Medical Knowledge, Practice-based Learning and Improvement, Professionalism, Interpersonal and Communication Skills, and



Systems-based Practice. These competencies are to be included in all of the residency review program requirements by the fall of 2002. The recent activities of licensing and accrediting agencies have been important developments, but need to be preceded by explicit educational efforts at the undergraduate level, so that medical school graduates are prepared to engage in the next level of learning.

In the current climate of medical malpractice fears, the inclination within the medical delivery system and medical education community has been to insulate students and physicians from public accountability. As a result, the systematic study of error and quality has been limited. For real reform and improvement, students must be expected to evaluate themselves, and should have values inculcated that will result in their own continuous self-improvement.

Quality of Care Education MSOP Expert Panel

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