AAMSE Expert Summits on the Quality of Patient Care Executive Report

Summary, Synthesis and Future Implications

Introduction

The 2004 strategic plan of the American Association of Medical Society Executives (AAMSE) identified quality of care as a key topic that AAMSE should address on behalf of its members. In response, AAMSE's Council on Health Care Policy developed and conducted an Expert Summit on the Quality of Patient Care as an initial step in this effort. The success of Summit I and the fast pace of activities in the quality arena spurred AAMSE to develop two more Expert Summits in relatively rapid succession. The names and dates of all three summits were:

- Summit I: *Quality of Patient Care,* Washington, DC; October 21-23, 2004.

- Summit II*: Quality Renaissance: Our Leadership Role*, Washington, DC; October 13-14, 2006.

- Summit III: *The Knowledge to Lead, the Tools to Succeed*, Chicago, IL; October 19-20, 2007.

This report is a general summary and synthesis of major findings and themes of the summits as well as future implications of the summits' messages, including an update on more recent developments in the healthcare arena. Based upon the findings of this report, there are also general recommendations for medical societies to help their members succeed in the ongoing quality of care revolution.

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The Timing of the Quality Summits

Quality is one of the most fundamental dimensions of medical care. It is inherent in the concept of professionalism and is a central factor in why and how medical societies advocate for or against a particular action, legislative bill, regulation or proposed new program. Medical journals are dedicated to providing state-of-the-art information so physicians can practice high-quality medicine. Ethics activities are aimed at ensuring that we do not compromise quality in the face of other pressures. In communications, we "point with pride" and "view with alarm" situations that exemplify excellence or that threaten the quality of care. So why, when quality has been such a central element in our agenda for generations, is it such an urgent topic at this moment in time?

The answer is rapid and radical change. For many years the conventional wisdom on quality was that "I know it when I see it, but you can't define it and you can't measure it." We have all heard that – certainly less so today than in the past. But those days are gone forever and the reasons for this change are about to affect almost everything related to medicine as we know it. Medical societies must be aware of the forces of change and how they will manifest themselves so that they can both prepare their members to be part of the transformation process and inspire them to become leaders of it.

While currently gaining enormous momentum, the quality movement has been going through a long incubation period. One of the seminal moments of the movement in modern times was a project conducted by Dartmouth College researcher John Wennberg, MD, in the early 1970s. His premise was that while medicine is both an art and a science, at its core it is science-based. Therefore, we would expect that physicians applying that science to common conditions would demonstrate similar patterns of practice. What Dr. Wennberg found, however, were wide variations in practice patterns. His research results begged the obvious question: Is the application of "state-of-the-art" medicine as universally high and uniform as we thought it was? And if not, why?

Since that time, much has happened. While many of the Expert Summit speakers and their organizations have been pioneers and champions of the quality movement for over a generation, it was the publication of two Institute of Medicine reports that moved the debate on quality care to the center stage: *To Err is Human: Building a Safer Health System* (1999) and *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001). These reports became the catalysts for action on what many in health care already knew—that there was a large gap between the care we receive in this country and the care we could receive. The reports also helped to create a sense of urgency in quality improvement by revealing the magnitude of the problems in the delivery of quality care. These problems include medication errors, lack of adherence to evidence-based clinical guidelines, poor coordination of care, and, to top it off, a rise in healthcare costs almost twice the growth rate of inflation.

One of the key reasons it became possible to expose gaps in the quality of care as well as address the conditions that contributed to them was the advancement of information technology. The broad use of computers and the resulting ability to compile and manipulate large databases were major enabling factors in moving the quality movement from a micro-oriented phenomenon to one with a macro perspective.

What has all of this to do with the day-to-day business of running medical societies? Isn't most of this quality work being done at universities and think tanks by academics and consultants? The answer is yes and no. While much of the developmental work has been done in such places, it has spread quickly to more mainstream arenas. Very soon every physician and every medical society will become part of it; in fact, many are active participants now. While much work has been done already to address quality improvement, there is much more work that is both happening now and will occur in the future.

The Summits' Speakers

Presenters at the three Expert Summits all agreed that there is a critical need for change in this country's healthcare system. They presented data showing the problems we face in delivering quality care.

While they shared their experiences and concerns about the bumps in the road to reach an optimal quality destination, they also gave upbeat messages about the exciting things that are being done to improve the quality of health care. The challenge for organized medicine is to participate in quality care improvement with a commitment and enthusiasm that it shares with its members and to provide leadership that ensures that the quality movement preserves and enhances the doctor-patient relationship and the ability of the medical profession to always put the patients' interests first.

The summits featured expert speakers who gave very informative and insightful presentations. It is impossible to capture all of their contributions in one document. We encourage the reader to visit the AAMSE website (www.aamse.org) to get more information on the expert speakers' individual presentations in the form of PowerPoint presentations and print summaries.

The Summits Collectively: Summary and Synthesis

> *1. Quality is a systems issue and will be improved by using a systems approach.*

Summit I

Several of the expert speakers underscored the point that quality deficiencies are largely *systems* problems. They included Josie R. Williams, MD, MMM, co-chair of the Physician Consortium for Performance Improvement (PCPI), director of the Rural and Community Health Institute: Quality, Patient Safety Initiatives, and TAMUS HSC assistant professor, Internal and Family Medicine, College Station, TX; Donald Berwick, MD, MPP, professor in the Department of Health Policy and Management, Harvard School of Public Health, and president and CEO, Institute for HealthCare Improvement; and David C. Classen, MD, vice president, First Consulting Group, Performance Improvement Group, Stanford University. Dr. Berwick said that telling physicians in a three-person practice who are working as hard as they can to work harder does not make them able to perform better. We need to understand that we all are humans working in interdependent systems that are failing us. Quality is a systems property and the way to improve it is to address it at a systems level. Dr. Williams said that quality is not based on what you know, but on how well you perform in an exceedingly complex world. The Institute of Medicine report on quality of care makes the same point. Systems solutions are rarely the work of one party; that is not the nature of systems. Thus, a system-wide effort to improve the quality of care is needed. Physicians and medical societies are among the most important participants in that system and need to be part of the solution – a major part of it.

Summit II

Again, a number of presenters raised the issue of quality as a systems issue including John C. (Jack) Lewin, MD, executive director and CEO, California Medical Association (who has since become CEO of the American College of Cardiology); Lucian Leape, MD, adjunct professor of health policy, Department of Health Policy and Management, Harvard School of Public Health; Jane Brock, MD, MSPH, medical officer for quality improvement, Colorado Foundation for Medical Care; Paul Miles, MD, FAAP, vice president, director of Quality Improvement and Practice Assessment, American Board of Pediatrics; and Michael Schechter, MD, MPH, FCCP, associate professor of pediatrics, Emory University School of Medicine. Dr. Leape noted that the medical profession cannot make progress in handling problem doctors by dealing only with problem doctors. To address this issue effectively, we need a non-punitive system solution. Dr. Brock, in addressing the need for better workflow in physicians'

practices, said that a major barrier to the delivery of quality care is that we work in a "non-system." In improving the care of children with cystic fibrosis, Dr. Schechter asserted that changes must be made to the system of health care delivery and using the chronic care model to improve care delivery enhances the prospects for success. This model summarizes the basic elements for improving care in health systems at the community, organization, practice and patient levels.

Summit III

Several speakers at this summit directly addressed the necessity of using a systems perspective to adequately address quality of care issues. In describing the Institute for Healthcare Improvement's (IHI) *5 Million Lives Campaig*n, Joe McCannon, vice president, IHI, remarked that challenges in improving patient safety include the coordination and alignment of all stakeholders in health care, including providers in their various practices settings, payers, purchasers, policymakers and patients with their families. Brent C. James, MD, executive director, Intermountain Health Care, spoke to the summit audience about the need for clinical integration in health care by including a clinical process model in management's financial and facility model. Dr. James said that this is a significant step toward implementing evidence-based medicine into the total delivery system.

> *2. Many initiatives have formed around the development of performance measures for the delivery of quality care. While much is being done in this area, there is still much more to do.*

Summit I

While several groups and organizations are measuring clinical performance through a variety of means, including the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), the Leapfrog Group, and the Centers for Medicare and Medicaid Services (CMS), Josie Williams, MD, MMM, co-chair of the Physician Consortium for Performance Improvement (PCPI), reported that the PCPI is working to achieve uniform performance measures that are linked to evidence-based guidelines. Dr. Williams identified a number of demonstration projects that are underway using PCPI measures: the Doctor's Office Quality (DOQ) project and the DOQ-IT information technology project, both funded by CMS. In addition, the EHRs Specifications Project is a collaboration between CMS and the PCPI to develop technical specifications with vendors of electronic health records (EHRs) to ensure that all systems are able to collect and report nationally recognized measures in a standardized manner.

Summit II

Summit II expanded on performance measurement and the increasing role it is playing in the lives of physicians. The process of developing, implementing and testing performance measures is evolving, particularly as the tools required for widespread performance measure continue to improve. Modena Wilson, MD, MPH, FAAP, senior director of professional standards, American Medical Association, gave a progress report on the work of the PCPI highlighting its broad representation and the rigorous process it undertakes to develop and maintain performance measures. Bruce Bagley, MD, medical director for quality improvement, American Academy of Family Physicians, noted that medicine has now adopted a performance mentality. The focus is on how well physicians perform in the realms of measuring clinical outcomes, assessing practice process and function, reporting results, creating evidence-based guidelines, engaging in continuous professional development, and achieving quality improvement. He said that physician performance information technology and incentives for quality care will shape the course of medicine in the next decade.

Summit III

Prominent organizational players in performance measurement described with specificity how they work in this area. Many groups and sectors are collecting and reporting quality performance data in an effort to improve patient care and their representatives addressed these efforts at the summit. Bernard Rosof, MD, MACP, chair of the PCPI and senior vice president, Corporate Relations and Health Affairs, North Shore-Long Island Jewish Health System, discussed the how organizations such as the PCPI and the National Committee for Quality Assurance (NCQA) have developed evidence-based clinical performance measures to assist physicians in improving the quality of care delivered in ambulatory settings. Kevin Weiss, MD, MPH, FACP, chair of the AQA (formerly known as the Ambulatory Care Quality Alliance) Performance Measurement Workgroup, professor of medicine and director of the Institute for Healthcare Studies, Feinberg School of Medicine at Northwestern University, explained that among AQA's activities that address quality improvement through performance measurement are those that focus on evidence-based medicine, efficiency in care delivery and attention to the patient experience. Janet M. Corrigan, PhD, president and CEO of the National Quality Forum (NQF), described the work of the NQF, a consensus, standard-setting body with multi-stakeholders and a partnership between the public and private sectors. The NQF sets national priorities and goals for performance improvement and endorses national consensus standards for measuring and publicly reporting on performance.

> *3. Quality of care is not a stand-alone dimension of health care and health information technology (HIT) is a key enabling factor in quality improvement. Therefore, physician adoption and use of HIT is essential.*

Summit I

Health care is a system and medicine is a key component of that system. But the improvement of quality in health care and medical care involves other systems as well. Two presentations during this summit were from experts on this dimension of the quality movement. David Brailer, MD, PhD, Office of the National Coordinator for Health Information Technology, Department of Health and Human Services, and David C. Kibbe, MD, MBA, director, Center for Health Information Technology, American Academy of Family Physicians, both addressed the Expert Summit on the relationship between quality and health information technology. Their message was clear: *information technology is a key and indispensable enabler of healthcare quality improvement.* A vast amount of work is being done in this field.

The necessary elements for health information technology (HIT) are: 1) development of a workable electronic health record (EHR) that is universally accepted and used; 2) connectivity so information is available when and where it is needed; 3) uniformity and standardization of data submission; 4) systems for medical practices based on EHRs that not only encompass clinical information but also facilitate scheduling, billing and other practice needs. While further development of HIT is necessary and inevitable, the process of using HIT to improve the quality of care can and should proceed now. And, in fact, it is proceeding at a quick pace.

Summit II

A prominent theme at Expert Summit II was the increasing necessity of adopting HIT to improve quality care. Karen Bell, MD, MMS, acting deputy national coordinator, Office of the National Coordinator for Health Information Technology, U.S. Department of Health and Human Services, maintained that the goal of the federal HIT agenda is one of providing optimal care for every American through the use of interoperable health information. To accomplish this, there needs to be widespread adoption, use and support of HIT that is available "virtually" wherever needed. Dr. Bell said that estimates show that as much as 80% of care could be delivered in non-healthcare settings, including homes, schools and workplaces. Fully interoperable HIT will support a new and different reimbursement system and significant changes in the organization of

health care itself. Present challenges to the realization of interoperable HIT include a lack of standardized measurement methodologies across all sites. There is also a need to develop specifications for the electronic capture of data so data can be transmitted without special interfacing and to increase physicians' use of EHRs. Bruce Bagley, MD, medical director for quality improvement, American Academy of Family Physicians, explained that physicians who practice in a paper environment can still significantly improve the quality of care they deliver. However, in the near future, the use of electronic systems like EHRs and computerized provider order entry (CPOE) will be essential to practice medicine.

Summit III

In his presentation, Brent C. James, MD, executive director, Intermountain Health Care, discussed the link between HIT adoption and quality and its impact upon the individual experience of the physician. Dr. James maintained that the healing profession is changing from a craft-based practice to a profession-based one. The concept of individual physicians who work alone is giving way to one in which teams of caregivers treat patients in a shared setting using evidence-based medicine and coordinate the delivery of care processes. Early experience shows that this change is less expensive, less complex, and results in better patient outcomes. However, this transition will require the full use of electronic medical record capability. Janet M. Corrigan, PhD, president and CEO of the National Quality Forum (NQF), noted that current EHRs support only a fraction of the quality measurement requirements that will be needed. Timothy Norbeck, executive director of the Physicians' Foundation for Health Systems Excellence, expressed concern that due to cost barriers and unease about a low return on investment, acquiring EHRs is difficult for physicians, especially for those in solo and small practices. This problem is compounded by the economic uncertainty that comes from the government's annual call for double-digit cuts in Medicare reimbursement.

> *4. Quality cannot be separated from payment and other key aspects of the health care system. Pay-for-performance models (P4P) predominate.*

Summit I

Concerns abound in medical circles that much is done in the name of quality improvement but is really all about cost containment. While there is some truth to that, it is also the case that quality does not exist in a vacuum and has become a more prominent part of market forces in all parts of our and other economies. Therefore, we cannot expect to functionally separate the quality and financial dimensions of health care and deal with them as independent phenomena. Pay for performance (P4P) is the most prominent current manifestation of the quality-

payment relationship. Barbara Paul, MD, SVP/CMO, Beverly Enterprises, Inc., San Francisco, CA, and former director, Quality Measurement and Health Assessment Group, Centers for Medicare and Medicaid Services (CMS), observed that it is unreasonable for Medicare to pay the same amount to physicians regardless of their performance and that Medicare will be applying incentives to physicians to improve the quality of care to its beneficiaries. Several of the presentations explored this relationship, including those of Arnold Milstein, MD, MPH, medical director, Pacific Business Group on Health and Physician Consultant; William M. Mercer, Human Resource Consulting, San Francisco, CA; Stuart Seides, MD, Cardiology Associates PC, Washington, DC; and Steven Una, MD, Castro Valley, CA.

Summit II

Summit II reflected the increased speculation about the reimbursement implications of P4P. Barry Straube, MD, director of clinical standards and quality for CMS, spoke about the CMS "Quality Roadmap Series" as a way of increasing the value of health care for all Americans. One of the programs in this series, the Physician Group Practice (PGP) demonstration project, is testing the effects of financial incentives on group practices in their delivery of quality care for Medicare beneficiaries. Preliminary results from this study suggest that there is improvement in some quality metrics when incentives are used. Meredith Rosenthal, PhD, associate professor of health economics and public policy at the Harvard School of Public Health, noted that in the United States, there are more than 100 existing P4P programs and national survey data from 2005 show that 52% of all HMOs report employing P4P systems. In these programs, Rosenthal reported that the maximum bonus for physicians is 5% to 10% of pay, while for hospitals it is 1% to 2% of revenue. Most programs reimburse providers who reach a fixed threshhold and only 23% of them reward for improvement. She claimed that there are few rigorous studies on this topic and the overall findings are mixed. While evidence suggests that P4P can work, Rosenthal contends that there are many ways to do it poorly.

Bernard Rosof, MD, MACP, chair of the PCPI and senior vice president, Corporate Relations and Health Affairs, North Shore-Long Island Jewish Health System, said that among the lessons learned from the California Healthcare Foundation's test of various P4P models were that incentive payment programs were more effective in improving care when they offered sizeable bonuses, reported provider performance to the public, and gave providers feedback on their performance. Representing providers, Alan Beason, FACMPE, chief executive officer and administrator, Cardiovascular Consultants, LLP, described his group's negative experience with P4P. He said that insufficient communication, the inadequacy of using claims data, and a lack of physician input caused his group feel that P4P was a payer's way to cut costs under the guise of quality improvement. Bruce Bagley, MD, medical director for quality improvement, American Academy of Family Physicians, said that P4P systems

are coming whether we like them or not so physicians must prepare to establish systems that will collect and report performance measurement data.

Summit III

Janet M. Corrigan, PhD, president and CEO of the National Quality Forum (NQF), noted the critical linkage between payment and quality and stated that we are now moving from the development of process measures to outcome measures. Payers will pay for what works and this will drive the adoption of EHRs. With the prospect of more P4P programs coming into play, including a national effort at testing one for Medicare, the presentations on this topic were mostly specific to the pending CMS activity. Dr. Rosof reported that in September 2004, the Institute of Medicine (IOM) launched the Redesigning Health Insurance Performance Measures, Payment, and Performance Improvement Project in response to congressional mandates in the Medicare Prescription Drug, Improvement, and Modernization Improvement Act of 2003. The IOM committee that is implementing this project is producing three reports on strategies for accelerating the diffusion and pace of quality improvement. Collectively known as the "Pathways to Quality Health Care" series, the first report, *Performance Measurement: Accelerating Improvement,* was released in December 2005. It recommends design principles for a national system of performance measurement and reporting.

Dr. Rosof also addressed the Physician Quality Reporting Initiative (PQRI). The 2006 Tax Relief and Health Care Act required the establishment of a physician quality reporting system, including an incentive payment for eligible professionals who report data on quality measures for the delivery of services to Medicare beneficiaries during the second half of 2007. He further noted that the CMS Acting Administrator Leslie Norwalk said that CMS is committed to becoming an active purchaser of high quality, efficient health care and the PQRI Program is an important step in that transformation.

> 5. *Substantial work is being done to improve the quality of care. Exciting activities are demonstrating the value of quality improvement systems on a "real time," not purely theoretical, basis. Collaboration among stakeholders is critical for success.*

Summit I

Summit participants heard from a number of experts who are implementing programs that test and demonstrate how various dimensions of an overall quality of care program can, and do, work. Describing their work in this area were Colonel Jill S. Phillips, AN, ANP, program director, Health Forces, Walter Reed Army Medical Center; David C. Classen, MD**,** vice president, First Consulting

Group, Performance Improvement Group, Stanford University; Carla J. Salvo, health informatics manager, TOPS Program, American Society of Plastic Surgeons; DeLaine Schmitz, BSN, health affairs manager, American Society of Plastic Surgeons; and Jill Silverman, MSPH, president and CEO, Institute of Medical Quality, San Francisco, CA. These speakers discussed their "on the ground" programs that are testing systems and techniques, evaluating alternative approaches and discovering unintended consequences (some good and some bad) that inform further experimentation. They are models of how providers have stepped up to the plate to develop quality and safety initiatives. There is an old saying: "In the final analysis, the world is run by those who show up." These are some of the people who have showed up to do some real-world work on quality of care. The summaries of their work are perhaps the most compelling evidence of what the quality movement is about and where it may be headed.

Summit II

A hallmark of this summit were presentations about comprehensive systems of care that are being delivered on state-wide and regional levels. Louis Diamond, MB, ChB, FACP, FCP, medical director and vice president of Thomson Medstat, discussed how the 18 ESRD networks across the country help improve patient outcomes by collecting, standardizing and aggregating data for their respective dialysis units and sharing these data with them to find opportunities for improvement. Judith Shaw RN, MPH, executive director, Vermont Child Health Improvement Program, University of Vermont, College of Medicine, spoke about the Vermont Child Health Improvement Program or VCHIP, a regional collaboration of public and private partners that uses measure-based efforts and a systems approach to improve the quality of children's health care. Collaborating organizations include practice and hospital based providers, state government agencies and programs (including Medicaid), academic institutions, professional organizations, payers, and policymakers. David Schulke, executive vice president of the American Quality Health Association, reported about how quality improvement organizations (QIOs) have been working with state medical societies to assist them in preparing physicians for the onslaught of HIT and P4P activity.   Matthew Fitzgerald II, DrPH, associate vice president for quality, American College of Cardiology, highlighted three cases of collaborative impact, one in Virginia and two in Michigan. He noted that the lessons learned from the success of these programs included the need for guidelines-based standardized care, facility commitment, physician champions and team members for the entire process. For all of these activities, collaboration among stakeholders is the key to success.

Summit III

Real life collaboration in quality improvement activities was again a summit highlight. David McDermott, MD, FAAFP, medical director, emergency services and medical director, Dover-Foxcroft Family Medicine, Mayo Regional Hospital,

addressed how the Maine Medical Society plays major roles in many initiatives that use collaborative models to improve the quality of care. One example is the Maine Health Management Coalition, a non-profit coalition of 34 employers in Maine who work with physicians, hospitals and insurers to use transparency when they report performance to consumers.

Patricia Hale, MD, PhD, FACP, chair, Medical Informatics, American College of Physicians, outlined a process for developing a collaborative model for engaging physicians in HIT. She also presented a "Roadmap for Collaboration" for the Primary Care Medical Home, the concept that care will be improved if patients have direct access to one physician who accepts responsibility for their care and practices in a system that is organized to deliver better care. In the true sense of collaborative effort, Dr. Hale said that to identify a model for financial support, one must partner, partner and partner.

> *6. A variety of stakeholders are initiating activities that will have major effects on the way the medical profession works to achieve improvements in quality care.*

Summit I

John C. (Jack) Lewin, MD, formerly CEO of the California Medical Association (CMA) and now CEO of the American College of Cardiology, discussed the Doctors' Office Quality and Information Technology Program (DOQ-IT) introduced in California and three other states to begin measuring and rewarding solo and small group practices for HIT enablement and for improving quality of care. This program will apply new dollars and receive physician advisory guidance through the CMA. Eventually, patients will be able to see how their physicians measure up on the DOQ-IT ratings. David C. Classen, MD, vice president, First Consulting Group, Performance Improvement Group, Stanford University, noted that the Leapfrog Group will soon release a standard that addresses ambulatory electronic health records (EHRs) and their interoperability. Bridges to Excellence (BTE) is developing initiatives to improve the quality of care delivered in physicians' offices by focusing on the management of both cardiac and diabetic patients and the administrative processes within the physicians' office. David C. Kibbe, MD, MBA, director, Center for Health Information Technology, American Academy of Family Physicians, spoke about the Physicians Electronic Health Record Coalition (PEHRC), a coalition of 21 medical specialty societies that have come together to work on issues common to the design and use of EHRs.

Summit II

A diversity of stakeholders were represented at Expert Summit II to explain their various roles in the quality of care movement. Karen Bell, MD, MSS, acting

deputy national coordinator, Office of the National Coordinator for Health Information Technology, U.S. Department of Health and Human Services, described health information technology (HIT) efforts at the federal level that promote quality care through the use of interoperable health information so health care will be available "virtually" wherever it is needed.

Edison Machado, MD, MBA, medical director and programs manager of Bridges To Excellence (BTE), addressed the employer initiative on rewarding provider performance by aligning it with incentives in Medicare. BTE has found that incentives can work but that physician practices need help in developing the means to operate in this environment. Better quality can cost less but the right measures need to be in place for this to happen.   Incentive programs need to provide physicians with clearly defined costs and benefits to help them determine the value of both participation and better systems of care, including the use of HIT.

Paul Miles, MD, FAAP, vice president, director of Quality Improvement and Practice Assessment, American Board of Pediatrics, directed his remarks to how the Maintenance of Certification (MOC) will improve the quality of care. He said that physicians have professional obligations to continually improve the care they deliver and to assess their professional development. The core competencies of MOC include practice-based learning and performance improvement that are integrated into daily practice. William Harp, MD, executive director of the Virginia Board of Medicine, described the role of the state medical board in assuring physician competency for acquiring and maintaining licensure. He also indicated that state medical boards are moving in the direction of the quality care movement by revising licensure requirements to include both systems-based and practice-based learning.

Summit III

A highlight of Expert Summit III was how one program integrated a large number and diverse group of stakeholders at every level of care to significantly influence patient safety on a national scale. In introducing the Institute for Healthcare Improvement's (IHI) *5 Million Lives Campaign*, Joe McCannon, vice president, IHI, noted that the IHI estimates that nearly 15 million incidents of medical harm occur in the US each year or a rate of over 40,000 per day.

The goal of this campaign is to protect patients from five million incidents of medical harm over the two years from December 2006 to December 2008. To achieve this goal, IHI is working to enlist at least 4,000 U.S. hospitals as participants in this national activity to improve patient safety. At the time of McCannon's presentation, the number of US hospitals enrolled was 3700 and counting. In addition to enormous voluntary support from the many stakeholders in health care, major financial donations for this campaign have come from America's Blue Cross and Blue Shield health plans, Cardinal Health Foundation,

Blue Shield of California Foundation, Aetna Foundation, Rx Foundation, Baxter International, Inc., and the Abbott Fund.

> **7. Physicians need quality improvement processes and tools in their practices to make it easy to do things right. This includes improvement methods for outpatient settings.**

Summit I

Colonel Jill S. Phillips, AN, ANP, program director, Health Forces, Walter Reed Army Medical Center, spearheaded the development of "HeatheForces," which is a unique, outcome-based electronic health record (EHR). She addressed how this program was developed with the belief that outcomes alone do not define quality. Comfort, dignity, life experiences and affecting behavior changes are also significant quality components. This EHR has evolved to become a toolbox supporting both patients and providers at the point of care. It is an outcomes problem solver that focuses on improving the relationship between the patient, physicians and the health care team.

John C. (Jack) Lewin, MD, formerly CEO of the California Medical Association and now CEO of the American College of Cardiology, noted that "HeatheForces" has greatly interested those working on Aetna and CIGNA Foundation projects because they believe it is the best public sector product that could be widely disseminated to physicians. It could also become a means for EHR adoption and interoperability in many quality of care projects. "HeatheForces" would also allow solo practitioners and small group practices to participate in the same way that large groups can in the ongoing efforts to improve care and patient safety.

Summit II

While acknowledging the necessity for HIT adoption by physicians, some presenters at Expert Summit II noted that even if physicians do not have electronic systems at their disposal for patient care, there are still "low-tech" tools that can make a difference in care improvement. Bruce Bagley, MD, medical director for quality improvement, American Academy of Family Physicians, maintained that information technology and electronic medical records are necessary but not sufficient to provide highly reliable care and that much can be done to increase information systems before an office acquires an EHR. The Ambulatory Care Quality Alliance (AQA) starter sets of performance are small and can be used successfully in a paper-run office. Another example is the integration of the Physician Consortium for Performance Improvement's (PCPI) "Prospective Data Collection Flowsheet" into one's practice, for either manual or computer application.

Jane Brock, MD, MSPH, medical officer for quality improvement, Colorado Foundation for Medical Care, addressed how improving practice workflow can make out-patient settings more efficient. The work world of physicians is confounded by things such as disruptions and patient shifting back and forth. She observed providers in their practice settings and worked with them to improve their workflow by decreasing interruptions during their provision of patient care and reducing their patients' waiting times. Good workflow can improve performance.

Summit III

At Expert Summit III, presenters from a variety of different organizational affiliations provided advice for improving the quality of ambulatory care. Dr. Brock discussed the basics of workflow and measurement saying that practices must learn how to observe and measure tasks including the maintenance of medical records, medicine reconciliation, and examinations. Measurements of these and other tasks should be used to reduce bothersome processes, restructure care teams, and compare one's practice to "best practices" in workflow design.

Michael S. Barr, MD, MBA, FACP, vice president of practice advocacy and improvement, American College of Physicians, presented the concept of the patient-centered medical home (PCMH) as a model of primary care. Patricia Hale, MD, PhD, FACP, chair, Medical Informatics, American College of Physicians, also addressed this concept in Summit III. In this model, care is coordinated and integrated across all elements of the healthcare system, including subspecialty care, hospitals, home health agencies, nursing homes, and the patient's family and community. Care is facilitated by registries and information technology. The American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), the American Osteopathic Association (AOA) and the American College of Physicians (ACP) have developed joint principles for the design of PCMH.

William Jesse, MD, president of the Medical Group Management Association (MGMA), discussed patient safety practices in ambulatory care, saying that adverse events related to drugs are common in primary care and many are preventable or ameliorable. Dr. Jesse said that HIT must be part, but not all of the solution. Dr. Jesse reported on the Physician Practice Patient Safety Assessment Project (PPPSA), in which a national sample of MGMA members completed a survey about their patient safety practices to provide baseline data for the development of the PPPSA safety tool for physician practices in ambulatory care.

William B. Munier, MD, acting director, Center for Quality Improvement and Patient Safety at the Agency for Healthcare Research and Quality (AHRQ), reported on the patient safety initiatives of the AHRQ and how medical society

members nationwide can use its programs and tools. He also described the Patient Safety and Quality Improvement Act and outlined ways in which physicians can participate.

> 8. *Physicians must be actively engaged in the quality measurement process or it cannot succeed. Medical societies must ensure that their members are in leadership roles as part of organized medicine's quality of care agenda.*

Summit I

Virtually all of the presenters at this Expert Summit made note of the need for physician engagement in the quality measurement process and the need for organized medicine to help coordinate this participation. Some specifically asked for or encouraged organized medicine's help (David Brailer, MD; David C. Kibbe, MD, MBA; Arnold Milstein, MD, MPH; Donald Berwick, MD, MPP). The quality improvement movement is large and multi-faceted. Physician input must be planned and coordinated in order to ensure that quality initiatives reflect good medicine and are practical in day-to-day practice settings. Organized medicine is the logical entity to make this happen, but it will not happen spontaneously (except perhaps as a response after the fact). And it cannot be done by only one organization in isolation. Organized medicine has long sought more functional unity. Exercising leadership in the quality improvement arena is an excellent opportunity to pursue such unity and impact.

Summit II

Many of the same challenges and opportunities of Summit I were echoed in Summit II. David Nielsen, MD, executive director, American Academy of Otolaryngology/Head & Neck Surgery, said that the major role for medical societies is to help physicians get a handle on the amount and complexity of new information, be leaders in the development of performance measurements, participate in the implementation of quality initiatives so valid testing is done and provide feedback to ensure that performance measures are clinically meaningful in everyday practice. Bruce Bagley, MD, medical director for quality improvement, American Academy of Family Physicians, asked medical societies to help manage the expectations of their members by letting them know that they will not see a return on their resource investment in data exchange systems on day one. The benefits in quality improvement from using records will flow from efficiency to safety to quality over a period of time. Because payers may be quick to adopt efficiency measures whether related quality measures are in place or not, a major challenge for medical societies is to encourage members to develop some in-house expertise in measurement and quality.

Summit III

Summit III focused on real-life participation in both local and national quality initiatives. Several speakers' messages about physician leadership in the quality movement were consistent with this theme. David B. McDermott, MD, FAAFP, medical director, emergency services and medical director, Dover-Foxcroft Family Medicine, Mayo Regional Hospital, in describing how Maine medical societies play roles in quality initiatives, said that there are many state and federal programs that address the improvement of care. Medical societies can help their members understand these initiatives, participate in them, lower the barriers to participation and mold the discussion of quality improvement in their states and regions.

William Munier, MD, acting director, Center for Quality Improvement and Patient Safety at the Agency for Healthcare Research and Quality (AHRQ), discussed the Patient Safety and Quality Improvement Act of 2005 that created Patient Safety Organizations (PSOs), established a "Network of Patient Safety Databases" and required the reporting of findings annually in the Agency for Healthcare Research and Quality's (AHRQ) National Health Quality/Disparities Reports. New legislation authorizes the creation of PSOs to work with providers on a voluntary basis to assist them in reducing and preventing threats to patient safety. Potential PSOs can include medical societies, specialty societies and group practices. Dr. Munier invited summit attendees to get involved with PSOs and comment on their regulations when published, probably in early 2008. These comprise just a few examples of how organized medicine can become active in the many, diverse efforts to improve the delivery of care.

Updates and Further Focus on Quality Issues

The following section provides an update and additional focus on key issues from the Expert Summits.

> *1. Consumers' roles are expanding in an increasingly patient-centered delivery system, and their access to provider performance measures will increase significantly.*

As the importance of patient-centered care plays out in greater decision-making roles for consumers, they need accessible, comparable information across providers to make informed choices. In an effort to develop valid and standardized measures of physician performance that consumers can use, major consumer and employer groups reached agreement with physician organizations and health insurers on a national set of principles to guide measurement and reporting on physician performance, called the "Patient Charter for Physician Performance Measurement, Reporting and Tiering Programs." Introduced in April 2008, the charter calls for transparency in measurement development, measurement based on science and input from both consumers and physicians, among other criteria. The American Association of Retired Persons, AFL-CIO, Leapfrog Group, National Business Coalition on Health, and Pacific Business Group on Health have endorsed this charter with support from the American College of Physicians, American Academy of Family Physicians, American Medical Association, American College of Cardiology and American College of Surgeons. A variety of major insurers have also adopted the charter.[1]

There is growing activity on the Internet to provide consumers with online opportunities to rate physicians. WellPoint, the nation's largest health benefits company in terms of commercial membership, will team with Zagat, the business known for its restaurant guides, to create an online tool to rate doctors for Wellpoint members in select metropolitan markets.[2] The survey will enable patients to rate their physicians on characteristics such as trust, communication, availability and office environment. Wellpoint's rating system joins a growing number of both members-only health plan websites and those that are open to the general public where consumers can rate their physicians and post comments about them.[3]

Regarding hospital performance, the Centers for Medicare and Medicaid Services (CMS) recently released information from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), a national, standardized, publicly reported survey that measures patient assessments of hospital care. The National Quality Forum (NQF) endorsed this survey in 2005. Voluntary collection of HCAHPS data began in October 2006 and the first public

report of results occurred in March 2008 on the "Hospital Compare" website, a product of both the CMS and the Hospital Quality Alliance (HQA).[4] The belief is that access to such data will not only help consumers in their care decisions, but also encourage hospitals to improve the quality of care they deliver.

> ## 2. As the first national CMS test on P4P, results of the PQRI program are coming in and there is variability in physician participation and assessment of the program.

As noted in Expert Summits II and III, Medicare's voluntary Physician Quality Reporting Initiative (PQRI) was instituted in 2007 by the Centers for Medicare & Medicaid Services (CMS). The first reporting period of the PQRI ended on December 31, 2007. Providers who reported relevant PQRI measures on at least 80% of eligible patient cases qualified for a 1.5 % bonus. In March 2008, CMS reported that approximately 99,000, or 16%, of all health professionals eligible to participate in the 2007 PQRI program attempted to do so.[5] About half of these participants are expected to receive the bonus for their efforts. Final 2007 statistics will not be available for several months since providers had until February 29, 2008, to submit claims for the 2007 program. While CMS and many other health stakeholders view the participation rates of the initial PQRI with optimism, others view the results as a relatively low response to a program with minimal incentives, given the resource costs for participation.

Specialties having the highest PQRI participation rates included anesthesiology, ophthalmology and emergency medicine. This is not surprising since physicians who work in hospitals are more accustomed to quality reporting. To determine factors that contributed to its members participating in the PQRI, the American Society of Anesthesiologists surveyed anesthesiology groups through the Anesthesia Administration Assembly, part of the Medical Group Management Association (MGMA).[6] Results showed that 62% of the surveyed practices decided to participate in the 2007 PQRI program. Half of these practices listed the additional payment from Medicare as the reason they chose to participate; and almost as frequently, practices reported that they wanted to gain experience in reporting because they assume it will become a requirement. The two most common reasons for practices that did not participate were that the return on the cost of participation was too small and the PQRI was too complex to implement.

For the 2008 PQRI, the CMS announced that there will be 119 quality measures compared to 74 measures in 2007. Two of the measures in 2008 will be structural ones that will reward health professionals for using electronic health records and prescribing electronically.

> *3. The discussion continues on why physician adoption of EHRs remains below expectations and on how to increase usage.*

Current physician HIT usage

Results from the National Ambulatory Medical Care Survey of the Centers for Disease Control and Prevention (CDC) show that the adoption of electronic health records (EHRs) is growing among office-based physicians.[7] The survey findings show that in 2006, 29.2% of office-based physicians said that they used full or partial EHR systems. This rate is a 22% increase from that of 2005. The percentage of physicians using comprehensive EHR remained essentially the same, growing from 9.3% in 2005 to 12.4% in 2006, a difference that is not statistically significant. The CDC considers a system to be "comprehensive" if it is used for computerized ordering of prescriptions and tests, reporting test results and maintaining clinical notes. About a quarter of the survey respondents without an EMR system planned to acquire one within the next three years. The CDC concludes that while there is progress in this area, there continues to be room for improvement.[7]

David C. Kibbe, MD, MBA, director, Center for Health Information Technology, American Academy of Family Physicians, notes that when physicians use EHR systems, there is a great variability in the particular applications and tools they employ. Dr. Kibbe cites results from a member survey in late 2007 by the American Academy of Family Physicians (AAFP) that demonstrates the variable use of EHRs.[8] AAFP found that over 50% of its members were using EHRs from commercial vendors. However, only 25% of them were e-prescribing and only 15% to 20% were using EHRs for clinical support. The remainder employed them for such tasks as developing their own connected patient files and maintaining their own notes and records. In this sense, the current application of EHRs by physicians is modular. However, the modular approach may ease the transition to the use of more comprehensive EHRs.

David Brailer, MD, Office of the National Coordinator for Health Information Technology, Department of Health and Human Services, has stated that the "tipping point" for EHR adoption, or the point at which non-adopters would find it difficult to remain non-users, is 45% to 50% of market penetration.[9] While physicians within some medical specialties and practice settings have reached this point among themselves, the total physician population has a long way to go to achieve this degree of market penetration.

Barriers to physician adoption of HIT

- According to Department of Health and Human Services (DHHS) Secretary Michael Leavitt, physicians' upfront investment in EHR technology, which

often ranges from $30,000 to $40,000 for an individual system, is the biggest barrier to implementing EHRs.[10] This barrier is also fueled by a physician's concern about the low rate of return on this investment (ROI).

- Bad economic times breed uncertainty and the medical community shares this feeling. Physicians also face an annual threat of a reduction in Medicare reimbursement rates. These circumstances may slow the momentum of EHR adoption.

- While the DHHS has invested millions of dollars in various programs to help put HIT into the hands of physicians, some see its investment in this area as relatively small given the strategic importance of HIT in driving the quality revolution. They believe that since HIT adoption is essential to improve healthcare quality and reduce healthcare costs, the costs of HIT adoption should be equitably distributed among those who benefit from its use.

Changes that may increase HIT acquisition and use

- The use of EHRs will become mandatory. DHHS Secretary Leavitt recently stated that the EHR early-adoption phase is about over and that we are very close to the time when some part of physician reimbursement will be depend upon using EHRs.[11]

- Once there is a larger scale adoption of EHRs, there will be no turning back. Physicians who a have a longer history of working in a paperless environment, like those in the Veterans Administration, have no desire to return to the use of paper records.[12] Even those who do not work in such environments are generally satisfied with their EHR acquisitions.

- The more HIT is used, the more standards will be refined in the process and the costs purchasing and maintaining an EHR will decrease. Microsoft, Google and other companies are marketing web-based applications for EHRs. They also are creating less expensive, "lighter" software that could help the diffusion of EHRs among physicians' practices. With the Certification Commission for Healthcare Information Technology's (CCHIT) specifications for EHR vendor solutions, these companies can readily satisfy baseline requirements for HIT certification.

- In spite of cost and ROI barriers, there are medical practices that make EHR adoption work for them. A recent account of two small practices reported that neither have any regrets about their investments in HIT and that in both practices their systems pay for themselves. The solo practitioner, with the help from a small business loan, recouped her investment within a year. The EHRs allowed the practices to offset large costs in transcription and updating patient records. In addition, they were able to document patient visits more

accurately, which resulted in increased accuracy in coding and greater reimbursement.[13]

- The combined efforts of both public and private initiatives will help to increase the adoption of EHRs. Initiatives at the federal and state levels are supporting the diffusion of EHRs. Cities that include New York and Minneapolis are investing in the development of local EHR systems to improve the quality of care for their citizens.[14, 15]

> ## 4. Providers should consider increased use of the Internet more for exchanging information with their patients.

One of the most significant technological breakthroughs has been the widespread adoption of the Internet as both a medium of data exchange and an interactive communications tool. We are at a time when the majority of physicians and American households have "online" capability. Despite widespread Internet use, online patient-provider communication remains uncommon, but it is rising. While physicians already use the Internet for making schedules and getting lab results, communicating with their patients is a highly important activity; and for a number of patients, the Internet is a convenient way to accomplish this. This applies to both administrative and clinical communications. The benefits of an expanded means of communication extend to improving the physician-patient relationship.[16] With greater privacy protection technology being developed all the time, privacy worries should become no more of an issue than they are for online banking.

> ## 5. Major players in corporate America are aggressively pursuing roles in marketing electronic patient records (EHRs), and this will likely have a significant effect on physicians' adoption of EHRs.

In encouraging increased physician adoption of health information technology (HIT), the efforts of corporate America may prove to be effective by putting electronic health records (EHRs) into the hands of patients first. Several large companies, including Microsoft and Google, have announced plans to offer online personal health records.[17] Microsoft's HealthVault a network of websites, personal health devices and other services that consumers can use to help manage their care and store their information in one central place on the web. Building upon its web technology, Microsoft is developing online health management tools with the American Heart Association, Johnson & Johnson LifeScan and the Mayo Clinic.

Wal-Mart is providing e-health records to tens of thousands of its employees and their dependents in conjunction with *Dossia*, a consortium of eight large

employers that includes AT&T and Intel and accounts for more than 5 million employees and their dependents. Wal-Mart will also require the use of e-health records for consumers who receive treatment at its in-store clinics, which the retailer will increase by 2,000 in six years.[18]   *Dossia* will also collaborate with Children's Hospital Boston to develop a version of the hospital's existing patient record to provide secure, portable, patient controlled records for employees, their dependents and the retirees of *Dossia's* founding companies.

Other large retailers are also marketing consumer health records. MinuteClinic, the subsidiary of the drug store chain CVS, uses an e-health record in its 485 clinics in more than 30 states. This record integrates third-party components for e-prescribing, drug-interaction checks and insurance claims transmission. The record's support tools guide in-store clinicians on the medical profession's "best practices."[19] These efforts and others to provide consumers with electronic record services and online care devices should encourage more physicians to adopt EHRs.

Implications for the Future

Given the findings of the three Expert Summits and recent activity in the quality improvement arena, the following are likely to characterize the near future of the quality of care revolution.

Measurement

- Alignment issues will continue to cause disorder in the course of quality improvement and should be viewed as part of the improvement process.

- In advocacy activities, when the impact on quality is cited as the reason to do or not do something, it will no longer be accepted at face value. To meet expectations, providers will need to demonstrate their quality performance with hard evidence.

- Consumers will increasingly require more information on quality performance and how providers compare with each other. In the short-term, the means to interpret these data accurately will likely be inadequate.

- The full benefits of quality measurement will not be realized until the use of comprehensive EHRs is widespread.

Health Information Technology

- HIT is a central prerequisite for the success of the quality movement and it will both drive the healthcare delivery system and change the way physicians practice medicine. Ultimately, the impact of HIT will be very positive; but difficult transitions and alignment problems will occur and physicians will need support and assistance along the way.

- Healthcare information interoperability will help bring a higher standard of quality to the healthcare system at less cost.

- Physicians will be faced with more pressure to provide evidence that documents the quality of care they deliver. This will be a burden, especially in the beginning, because of insufficient standardization in data capture and reporting.

Reimbursement

- Pay for performance (P4P) will likely predominate in reimbursement systems. As new performance measurements are developed and more research is conducted on the effects of various P4P models, there will be

variations and changes in current programs as P4P is updated. While most existing P4P programs reward health professionals for achieving specific thresholds, in the future there will likely be more rewards for demonstrating improvement in performance.

- While P4P systems can improve the delivery of care, there will be lingering concern among physicians, at least in the shorter run, that pay-for-performance is more about cost containment than quality improvement.

- Of the reimbursement systems in use today -- including salary, fee for service, capitation, and P4P -- none is ideal. As payment systems develop, some blend of these systems may ultimately prevail (Bruce Bagely, MD, Expert Summit III).

Physician Experience

- The way medicine is taught will change substantially as a result of the quality movement, and eventually it will affect the entire medical education enterprise.

- Physicians have been expressing discontent with their practices because of the increasing amount of resources that they devote to administrative tasks. Shared clinical baselines, HIT and improved work flow will allow physicians more time to focus on the clinical aspects of their practices.

- Choice of practice style has been a hallmark of health care in this country for both physicians and patients. While data show a continued growth in group practices, HIT may enable solo and small group practices to reap the benefits of larger practices by having the interconnectivity of "virtual group practices."

Planning and Management

Once EHRs are widely used, the real promise of the quality movement will start to emerge as large data sets are enabled and real analysis of quality implications takes place. That is somewhat in the future, but such mega-analyses are inevitable and will likely generate major findings (some surprising). Key questions about how these databases will be compiled, who will have access to them, and how they will be controlled for quality will abound. There will be issues of privacy, confidentiality and security (related but separate concerns). Stakeholders in health will need to address the types of data standards that should be put into place and the agents who will develop and enforce them. Organized medicine needs to start thinking about such future implications and what roles it will want to play in these activities and how to position itself to obtain them.

Recommendations for the AAMSE Membership

- Become aware of the scope of the quality movement. To offer real value to membership, medical society executives need to be on top of what is happening now and what may likely happen in the future.

- Become active players in quality efforts, including at the grass roots level, where physicians need guidance and support as they make critical decisions regarding the adoption of health information technology. The right planning and execution of this activity is critical for success, even for those who grew up in the digital age.

- Work to change the "culture of resistance" among some in the medical profession by educating them on how new requirements for data collection and reporting are critical to achieving success in the quality of care movement. Enlist and develop more "champions of change" at the local level to assist in this process.

- Make physicians aware of the opportunities for grants and participation in quality demonstration programs to help integrate them into the medical practice of the future.

- While a challenge, help physicians keep sight of the fact that the quality revolution presents them with the opportunity to enhance the significance of the profession and their satisfaction with it by being key players in dramatically improving the quality of patient care.

- Maintain and increase advocacy efforts to ensure that physician leaders continue to play a role in the development and application of performance measurements. A good example of this is that 80% of the Physician Quality Reporting Initiative's (PQRI) 2007 measures were developed by the Physician Consortium for Performance Improvement (PCPI).

Conclusion

Striving for the delivery of quality care is integral to the identity of medicine as a profession. Some speakers at the Expert Summits said that it is an ethical obligation for members of the medical profession to participate fully in the revolution to improve the quality of care, even though they may encounter hardships in the process. The Expert Summits helped to bring the quality revolution to the front door of the American Association of Medical Society Executives (AAMSE). While the summits' speakers made it very clear that we have an enormous task in bridging the quality of care chasm, they were also enthusiastic about the prospects of meeting that challenge and even going beyond it to a establish a system of care that we can't quite envision now because of its vast opportunities for care improvement. Today, the medical profession finds itself at the intersection of the knowledge, experience and health information technology that will permit physicians to address the quality of care issue with much success. Medical societies and their members must seize this opportunity.

Notes

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Acronym Guide

AAAASF - American Association for Accreditation of Ambulatory Surgery Facilities

AAFP - American Academy of Family Physicians

AAMC - Association of American Medical Colleges

AAMSE - American Association of Medical Society Executives

ABPS - American Board of Plastic Surgeons

ACF - Administration for Children and Families

ACK - General Acknowledgment Message

ACR - American College of Radiology

ACS - American College of Surgeons

ADL - Activities of Daily Living

ADSL - Asymmetric digital Subcriber Line

AHIMA - American Health Information Management Association

AHRQ - Agency for Healthcare Research and Quality

ALF - Assisted Living Facility

AMA - American Medical Association

ANSI - American National Standards Institute

ASA - American Society of Anesthesiologists

ASAPS - American Society for Aesthetic Plastic Surgery

ASC X12 - Accredited Standards Committee X12

ASO - Administrative Services Only Agreement

ASP - Application Service Provider

ASPS - American Society of Plastic Surgeons

ASTM - American Society for Testing and Materials

BPS - Bits per Second

CAH - Critical Access Hospital

CALS - Consolidated Accreditation and Licensure Survey

CBO - Congressional Budget Office

CCOW - Clinical Context Object Workgroup

CCR - Continuity of Care Records

CCRC - Continuing Care Retirement Community

CDA - Clinical Document Architecture

CDC - Centers for Disease Control and Prevention

CEN - The Comite European de Normalisation

CFP - Care Focused Purchasing

CHC - Community Health Center

CME - Continuing Medical Education

CMR - Computerized Medical Record

CMS - The Centers for Medicare & Medicaid Services

COBRA - Consolidated Omnibus Budget Reconciliation Act of 1985

CPI - Consumer Price Index

CPOE - Computerized Provider Order Entry

CPR - Computerized Patient Record

CRS - Congressional Research Service

DBMS - Database Management System

DFT - Detailed Finacial Transaction message

DICOM - Digital Imaging and Communication

DME - Durable Medical Equipment

DOC - Department of Corrections

DOQ-IT - Doctors Office Quality and Information Technology Program

DRA - Deficit Reduction Act of 2005

DRG - Diagnosis-Related Group

DSH - Disproportionate Share Hospital Adjustment

DSL - Digital Subscriber Line

EDI - Electronic Data Interchange

EDIFACT - Electronic Data Interchange For Adminstration, Commerce and Transport

EHR - Electronic Health Record

EMR - Electronic Medical Record

EOE - Electronic Order Entry

EPR - Electronic Patient Record

EPSDT - Early and Periodic Screening, Diagnostic and Treatment Services

ERISA - Employee Retirement Income Security Act

ESRD - End-Stage Renal Disease

EUCLIDES - European Clinical Data Exchange Standards

FDA - Food and Drug Administration

FEHBP - Federal Employees Health Benefits Program

FFS - Fee-for-Service

FMAP - Federal Medical Assistance Percentage

FPL - Federal Poverty Level

FQHC - Federally Qualified Health Center

FTP - File Transfer Protocol

FY - Fiscal Year

GAO - Government Accountability Office

GME - Graduate Medical Education Payment

GUI - Graphical User Interface

HAS - Health Savings Account

HCBS - Home and Community-Based Services

HCFA - Health Care Financing Adminstration

HEDIS - Health Plan Employer Data & Information Set

HHA - Home Health Agency

HHS - Department of Health and Human Services

HI - Hospital Insurance Trust Fund

HIFA - Health Insurance Flexibility and Accountability Demonstration Initiative

HIMSS - Healthcare Information and Management Systems Society

HIN - Health Information Network

HIPAA - Health Insurance Portability and Accountability Act, 1996

HISB - American National Standards Institute's Healthcare Informatics Standards Board

HIT - Health Information Technology

HL7 - Health Level 7

HMO - Health Maintenance Organization

HOA - Health Opportunity Account

HPSA - Health Professional Shortage Area

HRA - Health Reimbursement Arrangement/Account

HRSA - Health Resources and Services Administration

HTML - Hyper Text Markup Language

HTTP - Hyper Text Transfer Protocol

IADL - Instrumental Activities of Daily Living

ICSI - Institute for Clinical Systems Integration

IDCOP - Idealized Design for Clinical Office Practice

IDS - Integrated Delivery System

IGT - Intergovermental Transfer

IHI - Institute for HealthCare Improvement

IHS - Indian Health Service

IMQ - Institute for Medical Quality

IMR - Independent Medical Review organizations

IOM - Institute of Medicine

IP - Internetworking Protocol

IPA - Independent Practice Association

ISDN - Integrated Services Digitial Network

IT - Information Technology

JAMA - Journal of the American Medical Association

JCAHO - Joint Commission on Accreditation of Healthcare Organizations

LAN - Local Area Network

LTC - Long-Term Care

MA-PD - Medicare Advantage Prescription Drug

MCH - Maternal and Child Health

MCO - Managed Care Organization

MedPAC - Medicare Payment Advisory Commission

MEWA - Multiple Employer Welfare Association

MMA - Medicare Prescription Drug, Improvement and Modernization Act of 2003

MSA - Medical Savings Account

MSP - Medicare Savings Program

NAHDO - National Association of Health Data Organizations

NAHIT - National Alliance for Health Information Technology

NAS - National Academy of Sciences

NCQA - National Committee for Quality Assurance

NCQA - National Committee for Quality Assurance

NDEP - National Diabetes of Health

NIH - National Institutes of Health

NP/RNP - Nurse Practitioner (Registered)

NPI - National Provider Identifier

NQF - National Quality Forum

NSF - National Science Foundation

OCR - Optical Character Recognition

OMB - Office of Management and Budget

ONCHIT - Office of the National Coordinator for Health Information Technology

OSI Model - Open Systems Interconnection Model

P4P - Pay for Performance

PACE - Program of All-Inclusive Care for the Elderly

PACS - Picture Archiving and Communication Systems

PBGH - Pacific Business Group on Health

PBM - Pharmacy Benefit Manager

PBX - Private Branch Exchange

PCCM - Primary Care Case Management

PDA - Personal Digital Assistant

PDP - Prescription Drug Program

PDSA - Plan, Do, Study, Act approach

PEHRC - Physicians Electronic Health Record Coalition

PHI - Protected Health Information

PHR - Personal Health Record

PHS - U.S. Public Health Service

PHSSEF - Public Health and Social Services Emergency Fund

PKI - Public Key Infrastructure

POS - Point-of-Service Plan

PPO - Preferred Provider Organization

PPS - Prospective Payment System

PSI - Patient Safety Institute

PSO - Patient Safety Organization

QALY - Quality-Adjusted Life Years

QIO - Quality Improvement Organization

QMB - Qualified Medicare Beneficiary

RBRVS - Resource-Based Relative Value Scale

RFI - Request for Information

RHIO - Regional Health Information Organization

ROI - Return on Investment

RPG - Research Project Grant (NIH)

RRB - Railroad Retirement Bond

RVS - Relative Value Scale

SAMHSA - Substance Abuse and Mental Health Services Administration

SAN - Storage Area Network

SBHP - Small Business Health Plan

SCHIP - State Health Insurance Assisstance Program

SGR - Sustainable Growth Rate

SIG - Special Interest Group

SLMB - Specified Low-Income Medicare Beneficiary

SMI - Supplementary Medical Insurance

SNF - Skilled Nursing Facility

SSA - Social Security Administration

SSDI - Social Security Disability Income

SSL - Secure Sockets Layer

STAR*D - Sequenced Treatement Alternatives to Relieve Depression

TANF - Temporary Assistance for Needy Families

TMA - Transitional Medical Assistance

TOPS - Tracking Operations and Outcomes for Plastic Surgeons

TPA - Third Party Administrator

UPIN - Medicare Unique Physician Identification Number

UPL - Upper Payment Limit

UR - Utilization Review

VPN - Virtual Private Network

WAP - Wireless Application Protocol

WEDI - Workgroup for Electronic Data Interchange

WRHCS - Walter Reed Health Care System