

On August 4-5, 1999, TOD and HCFA hosted a national conference, “Taking on Diabetes: Care in the New Millennium,” that brought together experts in the delivery of health services to people with diabetes. The text of the conference proceedings follows. The full, hard-copy proceedings include additional graphic data, and are available from the TOD program office. To receive a bound copy, send an email TOD@aahp.org. The copy will be sent to you in approximately one week.

Introduction

On August 4th and 5th, 1999, the American Association of Health Plans (AAHP), the American Diabetes Association (ADA), and the Health Care Financing Administration (HCFA) jointly sponsored a conference that examined the opportunities to improve care for individuals with diabetes. Focusing on the role that health systems and patients themselves can play in improving the outcomes from diabetes care, the conference, entitled *Taking on Diabetes: Care in the New Millennium*, included the following plenary sessions:

- Making the business case for quality
- The role of health systems and patients in changing diabetes care
- Measuring and evaluating quality care for patients with diabetes
- A review of what the future holds for diabetes care

In addition, the conference sponsors set aside time for the more than 500 attendees to meet in smaller breakout sessions where a number of topics were discussed, including further conversation on the role of patients and health systems in diabetes care, tools to assist in care, worksite and community partnerships, and forming collaborative relationships to improve diabetes care.

To open the conference, each of the sponsors highlighted their organizations’ goals in sponsoring this event.

American Diabetes Association

Elizabeth Walker, DNSc, RN, CDE, serves as associate professor of epidemiology and social medicine and director of the Behavioral Intervention and Evaluation Core at the Diabetes Research and Training Center (DRTC) of the Albert Einstein College of Medicine. Speaking on behalf of the ADA, she noted that diabetes is a national epidemic that creates not only hardship for millions of individuals, but also a tremendous economic burden on the nation. In Ms. Walker’s view, the key to improvement is to implement interventions within systems of care that can replace the old acute care model with a new set of tools that focus on prevention and patient self-management by encouraging individuals with diabetes to play a larger role in their own care. This conference helps to provide some of the knowledge necessary to facilitate that change.

American Association of Health Plans

Karen Ignagni, MBA, president and chief executive officer (CEO) of AAHP, commented that in today’s politically charged health care environment, this conference is symbolic of the enduring work being undertaken by a number of health plans and provider organizations that are coming together to tackle diabetes care and to make better care management a priority. Ms. Ignagni noted the importance of establishing partnerships, such as those behind the *Taking on Diabetes* conference, across health care to improve outcomes in chronic diseases. By working together, health plans will deliver significant improvements in the quality of care and the quality of life for people with diabetes across the country.

Using this tool, the doctor found that patients were able to bring their FBS to normal levels very quickly. In fact, 38 of the physician's 42 patients showed statistically significant improvements in FBS. In a controlled study evaluating the impact of the intervention on a larger scale, mean FBS dropped from 189 before the intervention to 125 afterward, while the median FBS dropped from 169 to 121. And while less than 30 percent of patients met the goal of a HbA1c level below 8.0 before the intervention, over 70 percent reached the goal after implementation.

Changing Practice through Measurement, Feedback, and Action

A common pattern for managing clinical processes is what Dr. James described as a measurement, feedback, and action loop, as outlined below:

- **Step 1: Measure practice variation.** This step includes practice profiling which provides statistical comparisons between individual units of care (e.g., health care systems, individual practitioners), as well as measurements of variations from baseline (as defined by practice protocols).
- **Step 2: Feed the variance back to a professional peer group.** This feedback is similar to “academic detailing”, which is the one proven method of changing practice protocols. Academic detailing involves use of a respected colleague to present literature, discuss real cases, and present evidence-based medicine in an effort to share best practices.
- **Step 3: Take action.** These actions can include changing protocols, fixing measurement systems (e.g., data entry, risk adjustment), changing clinical practice, or, in some cases, deciding to treat a specific variance as random noise.

Applying the Model to Diabetes Care

Dr. James shared examples of how the measurement, feedback, and action loop works in diabetes care at IHC. Each quarter, every physician with diabetes patients receives a report that compares HbA1c testing rates and results for that physician to the results for all employed family practice physicians at IHC and to all employed physicians at IHC. This bar chart report quickly allows an individual physician to see whether his or her testing rates are adequate, and whether his or her patients' results are in line with those of peers.

Physicians also receive a list of “outlier” patients, including all patients who were not tested, patients whose results are unavailable, and patients whose last HbA1c test results were greater than 8.0. To complement this patient list, IHC is currently developing a diabetes worksheet (see below) that will automatically produce at any visit all relevant information (e.g., past test results, blood pressure, last retinal exam) for patients with diabetes. With access to this worksheet, physicians can generate recommendations for patients based on the data alone, even if the patient accesses the system for some problem that is unrelated to his or her diabetes. Going forward, IHC plans to expand the outlier patient list to incorporate who needs to come in for follow-up examinations, including HbA1c, lipid panels, urine proteins, retinal exams, and sensory exams.

Applying the Model Throughout the System

These diabetes tools represent only one of 65 “successful” clinical improvement projects at IHC. (Success is defined as any project that results in equal or better outcomes and lower costs.) In fact, the top 11 projects, including fast-track extubation in the intensive care unit and long-term ventilator management, have resulted in \$20.7 million in savings on pilot units alone (see table on facing page). Inclusion of 30 additional successful projects brings the total to \$30 million in savings, roughly two percent of IHC's total costs of operation. And while two percent may seem like a small figure, Dr. James noted that this level of savings can make the difference between “life and death” in IHC's intensely competitive market.

Interestingly, even though the diabetes project did not make this list, today the diabetes improvement project is almost assuredly saving IHC millions of dollars each year. In fact, after reviewing a computer simulation of the cost-effectiveness of a care management strategy that results in a two-point reduction in HbA1c levels, Dr. James is convinced that the diabetes project could jump to the top of the cost-savings list. The key to realizing these savings, however, is time; while the program actually results in a net cost increase of \$94 per patient in the first two years, net annual savings kick in by year three (\$764 per patient), and really begin to accelerate by year four, when they reach \$1,493 per patient. By year 15, annual savings reach \$2,864 per patient, with total cumulative savings over the 15-year period being \$30,927 per patient. If this level of savings were achieved for only a subset of the 6,000 to 13,000 individuals with diabetes at IHC, savings could run \$3 to \$5 million per year, thus vaulting the diabetes project right near the top of the savings chart.

The Net Result: Quality Controls Cost

In short, Dr. James summed up the business case for quality with the simple phrase: “quality controls cost.” Reducing waste, for example, result in better quality and lower costs. Some experts estimate that 25 percent to 40 percent of all hospital costs can be classified as waste. Similarly, costs can be reduced (without negatively affecting quality) by choosing the more efficient of two processes that result in the same outcomes.

To demonstrate the power of quality as a cost-reduction strategy, Dr. James noted that the 30 clinical improvement projects cited earlier were primarily confined to pilot units. If all of these projects were implemented across the entire system, the total estimated savings would be \$100 to \$150 million, or roughly six percent to 10 percent of the total operating costs at IHC. Clearly, savings such as these are worth pursuing, as no other strategy offers the same potential to remain financially viable while simultaneously serving the patient and upholding the mission to provide the best possible care.

Measurement: The Key to Realizing Improvements

Dr. James emphasized that the key to realizing cost reduction and quality improvement is measurement. Three classes of outcomes can be measured in every process:

- **Physical outcomes**

These include medical outcomes (e.g., complications, therapeutic goals) and functional status measures (including patient perceptions of medical outcomes).

- **Service outcomes, which often drive market share**

These include satisfaction of patients, families, communities, professionals, purchasers, and employees. Service outcomes can also include access issues, such as waiting times.

- **Cost outcomes, including the cost of the burden of disease**

As Dr. James noted, these outcomes are interrelated; processes designed to manage one will affect the others. For instance, better medical care can result in better medical and cost outcomes.

To appropriately measure and manage care, therefore, a health care system needs both a management structure that can create an “academic detailing environment” and an outcomes tracking system that regularly measures adherence to appropriateness criteria, clinical outcomes, patient satisfaction, and cost. For example, at the beginning of 1999, IHC began rolling out an outcomes tracking system in cardiovascular, women and newborn, neuromusculoskeletal, and primary care. (These areas were chosen based on their high volume and costs.) Data are being collected at the encounter level and can be rolled up to the practitioner, clinic, hospital, system, or region level. This system helps to bring people together to review performance and to share best practices.

Selling Quality Improvement to the Market

Dr. James noted that cost reduction might not necessarily be good for a health system’s bottom line. In fact, depending upon the payment mechanism in place, some types of cost reduction may have a negative impact on income. For example, while lower costs per unit of care (e.g., a lab test) are always beneficial to income, fewer units per case (e.g., lower length of stay, fewer tests) can have a negative impact on revenues

and income under fee-for-service or per-diem reimbursement. Only under per-case or shared-risk arrangements will such cost reductions be likely to improve the bottom line. Similarly, reducing the number of cases (e.g., hospitalizations for patients with congestive heart failure) will reduce revenues and income unless some sort of shared-risk arrangement is in place. This negative impact on income is often not inconsequential; at IHC, for example, 85 percent of patients are still reimbursed under a fee-for-service, per-diem, or per-case arrangement. In fact, several years ago Dr. James was hearing complaints from physicians that, despite cost reductions, budgets were being negatively affected.

To address this issue, Dr. James began pushing purchasers and health plans to offer shared-risk arrangements, where risk pools are shared between physicians, plans, and hospitals in a manner that aligns incentives. He also urged provider systems to take their lower cost structure to the marketplace when negotiating contracts for the next business cycle. With the market demanding appropriate care, excellent outcomes and customer service, and reasonable costs, the goal for any health system must be to seek the best possible medical outcomes at the lowest possible cost, as this approach maximizes the value equation that health care consumers are seeking. In Dr. James' view, however, health plans are too far removed from the key decision-making point (the physician-patient interaction) and the right level of data aggregation (the physician) to truly manage patient care. Instead, he urges care delivery groups to take control of quality by documenting appropriate care, excellent medical outcomes, excellent patient service, and low costs.

IHC has been successful with this approach, increasing market share from 50 percent to 62 percent over the last few years with the acquisition of over 100,000 new patients. As evidence of the fact that it is quality that is driving market share, Dr. James noted that IHC is only very rarely the low-cost bidder. In most cases, IHC bids five percent to seven percent above its competition, and wins contracts by demonstrating superior outcomes.

Summary

In conclusion, Dr. James noted that he has never found an area that could not be improved. The challenge going forward is to work together to improve health care to levels of quality that are not even imaginable today.

The Role of Health Systems and Patients in Changing Diabetes Care

Edward H. Wagner, MD, MPH, director of the W.A. MacColl Institute for Health Care Innovation at the Group Health Cooperative of Puget Sound, built on Dr. James' presentation by reviewing the role of systems in improving diabetes care. Roland G. Hiss, MD, professor of medicine and professor and chair in the Department of Medical Education at the University of Michigan Medical School, joined him in discussing the patients' role in improving diabetes care.

The Health System Role in Changing Diabetes Care

Dr. Wagner began by taking a systematic look at the role of the health system in changing diabetes care.

The Current System of Care for Diabetes

In Dr. Wagner's view, the current system of care for diabetes, consisting of interactions between community resources and the health system, has resulted in suboptimal functional and clinical outcomes and suboptimal adherence to guidelines.

Problems within the Health System and the Community

The central component of this dysfunctional system is frustrating, non-productive, problem-focused interactions with patients, which stem from unprepared practice teams and uninformed, passive patients. The root cause of the problem is health system leadership that is often concerned about the bottom line, and therefore favors frequent, shorter visits as a means to maximize fee-for-service revenues. In fact, there is little or no incentive to invest in quality improvement. Additional problems include the following:

- No systematic approach to self-management support by providers
For example, educational pamphlets are often hidden in drawers.
- A delivery system designed for acute care, including short, problem-focused, patient-initiated interactions where the focus is on the symptoms or abnormal lab results, not on long-term care management or prevention
- A lack of agreement on what is good care
- Overreliance on traditional consultation and referral channels, leaving primary care providers with little access to specialty centers
- Overreliance on the paper record as the primary source of clinical information
As a result, practitioners do not know which patients have diabetes or what patients with diabetes need.

Compounding the problem is the fact that community resources are largely underutilized and not linked to health care.

Why Change the System?

Dr. Wagner believes that there are compelling reasons to try to improve upon the current suboptimal system. The primary reason is to take advantage of the opportunity to simultaneously reduce costs and improve quality through better care management. To support this view, Dr. Wagner shared the results of a study at HealthPartners, a large managed care organization in Minnesota, which found that each one-percentage point reduction in HbA1c levels resulted in a sizable cost savings. Depending on the initial HbA1c level and complications, savings range from \$500 to \$3,000 per patient each year. Group Health Cooperative staff tested the HealthPartners results by dividing patients into two groups—those whose HbA1c level fell by one percentage point or more and those whose rate stayed the same or increased. Group Health found that, after adjusting for age, sex, complications, and baseline HbA1c level, reductions in HbA1c led to annual savings of \$600 to \$800 for each patient. Net savings, moreover, were achieved more quickly than anticipated, as better glycemic control resulted in fewer lost workdays, fewer bed days, and lower health care utilization within 15 weeks of the drop in HbA1c levels.

Developing a New Model of Care

Beginning in 1993, Group Health Cooperative began working on a new model of diabetes care. This model began with the premise that productive interventions would be a function of informed, “activated” patients and a prepared, proactive provider team working together to collaboratively define the problem and set targeted goals and plans for improvement that emphasize patient self-management. Better self-management support, a redesigned delivery system, and enhanced decision support through better clinical information systems (e.g., systems that can provide data feedback and reminder notices) were seen as critical to the success of the model.

Themes in the Chronic Care Model

The Group Health model was built on three themes that are central to effective management of chronic conditions:

- Evidence-based care with data showing that intervention leads to improved patient outcomes
The usual method of dissemination for such care is a guideline.
- Population-based care, with a goal of maximizing the health outcomes of a defined population
- Patient-centered care, where increasing the knowledge, confidence, and skills of patients remains a high priority in program design and resource allocation

More specifically, the Group Health model is built upon seven key attributes:

- 1 Self-management support to assist patients and families with the 95 percent of diabetes care that they render
- 2 System change, in which evidence-based programs help patients to acquire the skills and confidence they need to better manage their own conditions
- 3 Delivery system design
- 4 Decision support, which helps to incorporate evidence-based guidelines and specialist expertise into everyday systems of care
- 5 Clinical information systems that prevent patients from “falling through the cracks” and/or developing preventable complications
- 6 Community resources and policies (which are typically underutilized)
- 7 Health system leadership that commits the organization to better diabetes care because it is the right thing to do for patients and for the business

Putting the Model into Action

The Group Health is similar in many ways to a model put in place by a Florida medical group which added a nurse case manager to a system that already included self-management support (including individual and group counseling/education), decision support through guidelines and specialist support teams, delivery system redesign (e.g., nurse visits, telephone follow-up), and clinical information systems through a diabetes registry. This group achieved a greater than one percentage point drop in HbA1c levels within six months of implementation. Patients also saw an improvement in their general health status.

Like the Florida medical group’s initiative, Group Health’s program combines one-on-one counseling by a nurse case manager with support groups, telephone follow-up, guidelines, expert teams, provider education, an automated on-line registry, practice profiling, and reminder notices. Group Health has also achieved impressive results, as outlined below:

- HbA1c testing rates rose from 73 percent to 90 percent between 1994 and 1997.
- Lipid testing rates reached 55 percent.
- Total costs fell by 12 percent.
- Patient satisfaction rose, with 30 percent of patients rating care as excellent in 1997, up from 24 percent in 1996.

To date, HbA1c levels have not dropped. In Dr. Wagner’s view, this failure to improve is because the program lacks adequate levels of personal attention for patients. This kind of attention, often provided by nurse case managers, increases patient confidence, and improves self-management skills. Along with explicit personal attention, reducing HbA1c levels requires close monitoring of the patient’s regimen, adherence, and results, along with optimal dosing.

Going forward, Group Health is testing the model in 150 sites around the country; it continues to be a useful tool for improving diabetes care.

Summary

Dr. Wagner concluded by noting that good evidence exists on what does and does not work in improving diabetes care. The challenge is to put in place those system changes that allow the industry to actually enhance patient outcomes.

The Patient's Role in Changing Diabetes Care

Roland G. Hiss, MD, serves as professor and chair of the Department of Medical Education and professor of medicine and coordinator of the Demonstration and Education Division of the Michigan Diabetes Research and Training Center (DRTC), all located at the University of Michigan Medical School. He offered his perspective on the patient's role in changing diabetes care.

Barriers to the Adoption of New Science

DRTC not only supports basic biomedical research, but also translational research—that is, the application of new science to the practice of medicine. Dr. Hiss noted that a variety of factors presently serve as barriers to the adoption of new science related to diabetes care:

- Geographic distances
- Attitudes and beliefs
- Economics, including required patient copayments
- Clinical traditions
- Politics
- Poor communication (e.g., lack of clarity, lack of timeliness)
- Variations in practice settings

To learn more about these barriers and strategies for improving the adoption of new science to diabetes care, DRTC conducted more than 3,500 patient assessments in Michigan communities between 1980 and 1999. These comprehensive assessments consisted of a variety of components, including a diabetes/general medical history, review of current diabetes status, a psychosocial assessment, height and weight measurements, a blood pressure check, a foot exam, a neuropathic exam, a retinal screening, glycosylated hemoglobin, C-peptide, serum creatinine tests, a lipid profile, and a microalbuminuria assessment. From this experience, the following were found to be barriers to the adoption of new science in diabetes care:

- The asymptomatic nature of the disease itself, which results in patients not visiting a health care provider until they are actually experiencing symptoms
- Physician unawareness of the pathogenesis of complications, especially for type II diabetes and resistance to insulin
- The confounding influence of obesity on social and professional attitudes toward the disease

Sadly, physicians still look at obese patients as bringing the disease upon themselves. This attitude causes patients to stay away from the physician until they become sick.

- Gross flaws and deficiencies in the medical model for diabetes management
- The lack of behavior change in adults

Characteristics of Barrier-Free Adoption of the New Science

Dr. Hiss reviewed the characteristics that need to be in place to result in “barrier-free” adoption of the new science. He acknowledged, however, that these characteristics are very seldom in place.

- Evidence that the approach really works
- Little controversy over the approach
- Little required time or effort on anyone’s part
- Equal desire by both patients and professionals
- Reimbursement mechanisms in place

If these are not in place, the science will not be adopted.

Presently, few if any of these characteristics are in place for primary care providers who want to provide high-quality diabetes care. These providers are overworked, pressured for time, poorly reimbursed, and frequently working alone. They are also discouraged that the medical model does not work well for their patients with diabetes. In fact, primary care physicians often find themselves in the middle of a very loose, unwieldy network of providers for diabetes care, a network that includes diabetes referral centers and a whole host of independent providers, including diabetes educators, dietitians, and other health care providers.

A System for Proactive Revolution in Diabetes Care

To address the flaws in the system described above, Dr. Hiss proposes adoption of a new, revolutionary model in diabetes care. This “triangle” model finds the patient at the top, playing an active role in managing the disease and in setting aggressive, quantitative goals. Supporting the patient in this role is a proactive prevention manager—a nurse who works with the patient to manage the disease on an ongoing basis and to prevent the onset of complications. Playing a more reactive role in support of these two individuals is the primary care provider, who offers care on an as-needed basis, often in response to the onset of symptoms or complications.

DRTC conducted a study to show the value of this approach. The control group patients (and their physicians) had a report mailed to them showing key statistics related to the disease (e.g., blood sugar levels). The intervention group not only received the report, but also had a nurse sit down for one-on-one counseling with patients, including going over problem lists and a series of actions the patient should take to address them. By the end of a year, the mean HbA1c level dropped by 1.8 percentage points in the intervention group, compared to a 1.2 percentage point drop for control group patients whose physicians had other patients in the intervention group, and a 1.0 percentage point drop for control group patients whose physicians had no other patients in the intervention group. Similar improvements were seen in other measures, including blood pressure and cholesterol levels.

In Dr. Hiss’ view, the improvement achieved by this model is the result of an ancient adage that a “picture is worth a thousand words.” Rather than having a simple report full of words and statistics, the patients in the intervention group could learn from their own experiences as well as those of the nurse educators. In Dr. Hiss’ view, experience is the best way to learn because it is real. Thus, rather than being forced to rely on words (which often remain abstract), patients can learn on a more permanent basis.

Conclusion

Dr. Hiss concluded with the following advice on the steps to take to improve diabetes care from the patient’s perspective.

- Define the target audience.
- Define the appropriate message.
- Identify the barriers to transmitting that message.
- Deal with the barriers so that the message is adopted.

- When possible, structure the intervention to tap into the real experiences of patients and physicians.

Report from Breakouts on Changing Diabetes Care

Dr. Wagner and Dr. Hiss reviewed the most innovative ideas from the breakout sessions on the role of health systems and of patients in changing diabetes care.

The Role of Health Systems in Change

Dr. Wagner discussed six areas where participants in the breakout sessions felt that health systems can play a role in improving diabetes care.

Area #1: Community Linkages and Resources

Community linkages and resources can play a vital role in improving diabetes care, as outlined below:

- Peer review organizations can extend their work in helping provider groups and health plans to build capabilities with respect to diabetes care.
- Community agencies can assist in developing culturally competent materials in multiple languages that are tailored to diverse ethnicities.
- Community social service and home health agencies can play a critical role in identifying needs and in steering patients to appropriate resources, including evidence-based diabetes specialty centers.
- Communities can increasingly collaborate around diabetes care. Collaboration and standardization can make a huge difference, especially when multiple health plans are working with a similar set of providers.

Area #2: Health Care Organization

Breakout participants also felt that the organization of the health care system can play an important role in improving diabetes care, as outlined below:

- Leadership can help to identify and nurture clinical “champions” to spearhead improvement efforts.
- Financial and non-financial incentives can be developed to encourage patients to take a more active role in the self-management of diabetes.
- Leadership plays an important role in achieving greater standardization through guidelines, laboratory test protocols, and other measures. One of the most important tasks is to liberate providers from multiple, redundant, and often competing guidelines.
- Leadership can help make available to local sites tools and support for quality improvement efforts.

Area #3: Self-Management Support

Breakout participants identified several opportunities to support patients in managing diabetes more effectively:

- Linking patients with peers to serve as mentors in supporting self-management activities

- Individualizing self-management support by helping patients to set personalized targets, goals, and priority lists
This step is critical to encouraging patients to manage their conditions successfully.
- Using events (e.g., meter exchange days) as an organized approach to screening and patient education activities
- Enlisting the services of telephone case managers to support patients

Area #4: Delivery Design

Breakout participants highlighted a number of ways in which the design of the delivery system can improve diabetes care.

- Ensuring that clinicians and patients have the same information at the same time (e.g., what the care guidelines are and how they should be used)
- Using integrated teams, led by primary care physicians, to manage the care of patients with diabetes
- Allocating blocks of time to care for groups of patients with diabetes
These “diabetes days” bring together the people and resources that are difficult to gather all in one place.
- Placing an emphasis on the coordination of care for patients, while simultaneously reinforcing primary care’s role in care management

Area #5: Decision Support

The breakout sessions produced several recommendations with respect to decision-support tools to assist with diabetes care.

- Development of coordinated, standardized guidelines and pathways to assist providers
Competing guidelines, along with varying benefits packages and corollaries, can serve as a barrier to standardization.
- Use of one-on-one education of providers
Several group practices are successfully using nurse educators for this purpose.
- Formation of an expert team to develop a model of good diabetes care

Area #6: Clinical Information System

There was a general consensus that everyone would like to have better data to feed back to providers to drive quality improvement; the evidence would suggest that this approach produces positive results. The problem is a lack of standardization of the data. Breakout participants felt that health system leadership needs to play a key role in standardizing this information. Flow sheets can be used to help collect data in a consistent fashion, ideally allowing for automated data entry from the flow sheet to the computer system. Unfortunately, however, physicians often lack confidence in the quality of the data. The best way around this problem is to engage physicians in the coordination and review of research projects related to data. In fact, many group practices are using this approach to improve the confidence that physicians have in data.

The Role of Patients in Change

Dr. Hiss reviewed the major themes from the breakout sessions that examined the role of patients in changing diabetes care. Six different categories of ideas emerged from these sessions.

Category #1: Direct Patient Approaches

One group suggested the use of mentors or “buddies” to assist patients with diabetes, especially those of particular ethnicities that have unique characteristics with respect to accessing health care services (e.g., American Indians). Community organizations, such as churches, can often serve to organize these mentor programs and other direct-to-patient approaches. Mentors will typically be other patients with diabetes.

Category #2: Telephone Follow-Up and Other Reminder Systems

A variety of ideas surfaced related to using the telephone to follow-up with patients to encourage them to play an active role in monitoring and managing their disease. In some systems patients are encouraged to phone in regularly, while other organizations use staff to place outbound calls to patients with diabetes on a regular basis. To complement the effectiveness of telephone follow-up, patients can be given diaries, calendars, and/or report cards.

Category #3: Patient and Family Education

Many sources of information, including the Internet, libraries, pamphlets, and literature, are available to patients with diabetes and their family members. Both plans and providers can encourage patients to access this information. To assist patients in educating themselves, educational materials should be developed at different reading levels and matched to different learning styles. Materials should also be developed to maximize their impact; for example, an educational video will be more effective if a credible messenger is used. In addition, special efforts should be made to educate family members (e.g., spouses and significant others), including dispelling the myth that the family or culture is responsible for “passing down” the disease. It was also suggested that midlevel providers and/or educators could provide patients with training in role playing so as to maximize the usefulness of their interactions with physicians. Educators should see patients at the same time that the physician sees the patient.

Category #4: Patient Setting of Goals

Patients need to be encouraged to become “captains of their own team” by becoming involved in the setting of personalized, quantifiable goals, and in working with the provider team in making decisions related to care. Physicians should be “coaches,” with patients acting as captain of the team.

Category #5: Diabetes Health Fairs

There was general agreement that diabetes health fairs should be held on a quarterly or annual basis where patients can access different “stations” that provide information to help them in managing their disease. Individuals staffing these stations can provide advice on such things as appropriate cooking and proper screening schedules for patients with diabetes. Fairs also serve to increase awareness of the need for periodic screening and testing.

Category #6: Focus Groups

Breakout participants felt that focus groups with patients are a good way to get feedback on what patients want from the health care system, and to get their reactions to proposed programs. Through this type of “social marketing,” plans and providers often provide useful insights and recommendations for change related to what health care systems and their providers should offer to patients with diabetes.

Other Important Ideas

Additional ideas surfacing from the breakout session included the following:

- When possible, all the care that a person requires should be made available in one site, so as to maximize convenience and continuity of care.
- Patient incentives can be useful in encouraging appropriate behavior.
- Guidelines for patients and physicians need to be consistent and reinforce each other.

- Office staff members should be trained to assist with care.
- Guidelines can be linked to birthday reminders and to annual events.
- Interventions should be sensitive to the unique characteristics of particular cultures.
- Any benefits changes which could affect care should be communicated in a timely fashion.
- Caregivers should consider the special needs of younger patients.
- Providers should pay more attention to the diagnosis of anxiety or depression in patients with chronic disease.

Collaborating for Quality

The conference included a plenary session during which the benefits of collaborations to improve diabetes care were discussed. This session included two presentations—one on collaborations in Massachusetts and a second on collaborative activities in Washington State.

A Case Study of Collaboration in Massachusetts

Kathryn L. Coltin, director of external affairs and measurement systems at Harvard Pilgrim Health Care, made the case for collaboration on quality by sharing the experiences of Harvard Pilgrim and other organizations in Massachusetts. She began by reviewing the potential benefits of collaboration, even in a market where plans are being forced to compete on quality. Perhaps the biggest benefit comes from the fact that collaboration can result in improved population health and lower costs. This is particularly beneficial if plan retention rates are not high, meaning that consumers switch among different health plans. If all plans work together to improve quality, every plan will share in the benefits even if patients switch plans. Other reasons for collaboration include the following:

- To tap into a broader base of expertise, including specialists
- To enhance the credibility of the message and the program
- To focus provider attention and minimize confusion, disruption, and hassle
For example, common guidelines, referral forms, and claim forms can help.
- To heighten consumer and patient awareness, thus creating a groundswell of support
- To expand distribution channels for messages about quality (e.g., public service announcements)
- To share measurement and program costs, which is increasingly important in today's market

Factors Inhibiting and Facilitating Collaboration

Ms. Coltin reviewed a number of factors inhibiting collaboration in Massachusetts:

- Proprietary interests of health plans (e.g., on how to manage a condition)
- Free-rider issues (where one organization benefits from the work of others)
- Competing initiatives which create a limit as to how many collaborations and programs a given plan can pursue
- “Scope creep”

If every partner has an agenda, the program can enlarge to the point that it is no longer feasible.

- “Turf” and control issues
- Attitudes toward compromise
- Anti-trust concerns

Ms. Coltin recommended using a lawyer to ensure that the partners do not get into the “wrong” issues. This step is especially important when discussing a set of common guidelines.

- Time

Everything takes longer when there are lots of partners, since representatives are often not empowered to commit the organization without discussion back home.

Yet there are also a number of factors promoting collaboration in Massachusetts, as outlined below:

- Overlaps in service area, provider networks, and customer base

For example, because different plans work with the same physicians, collaboration helps to get the physicians’ attention.

- Common quality improvement goals among different plans
- Market share that is fairly evenly distributed among plans, with three plans controlling over 20 percent of the managed care market (which represents over 50 percent of the total market)

In Massachusetts, if one plan comes to the table, all the other similarly sized plans want to participate as well. In other markets, dominant plans might be less interested in collaborating.

- Financial incentives, including the availability of public funding and the opportunity to share costs
- Non-profit status, which gives plans an incentive to demonstrate their commitment to community benefit to the attorney general

Collaboration on Quality Measurement in Massachusetts

The New England market in which Harvard Pilgrim Health Care operates has a long history of collaboration:

- In 1993, the New England HEDIS Coalition (NEHC) formed as a partnership of purchasers and health plans to focus on measuring health plan performance collaboratively.

- In 1995, the Massachusetts Health Quality Partnership (MHQP) came together as a partnership of providers, health plans, purchasers, and public health agencies to focus on measuring and improving provider performance.
- In 1997, the Massachusetts Health Assessment Partnership (MHAP) was developed as a collaboration of public health agencies, health plans, and providers focusing on community health assessment and improvement.
- In 1998, the HHS (Health and Human Services) Region I Office Collaborative brought together state health departments and health plans to focus on improving regional performance.

The New England HEDIS Coalition (NEHC)

NEHC was formed to ensure the comparability of HEDIS measures through analyst workgroups and joint contracting for survey measures and auditing. The project disseminates HEDIS measures through report cards, educational forums for purchasers and providers, and a public website (www.nehedis.org) with results and links to health plan sites.

Massachusetts Health Quality Partnership (MHQP)

MHQP consists of a set of hospital-focused initiatives, including a statewide hospital patient survey (developed by The Picker Institute) that covers adult medical, adult surgical, and obstetrics admissions. First-round results from this survey were made available only to the hospitals, with the second round results released to the public in the *Boston Globe*. MHQP also tracks readmissions, returns to the operating room, C-section and vaginal birth after C-section (VBAC) rates, emergency department returns, and waiting times. In addition, physician-focused initiatives include clinical practice guidelines and a state-wide office-based patient survey.

The Massachusetts Health Assessment Partnership (MHAP)

Funded by The Centers for Disease Control and prevention (CDC), MHAP includes plans, providers, and the community, with joint oversight by the state and managed care organizations. In the first year, the program focused on whether data can be pooled to get better information in the areas of maternal and infant health and secondary prevention of coronary artery disease. Year two initiatives will look at behavioral risks and prevention surveillance, cancer screening and early diagnosis through a link to the tumor registry, childhood immunizations, and data sharing and confidentiality.

The HHS Region I Office Collaborative

After looking to improve adult immunization and smoking rates in its first year, the HHS Region I Office Collaborative is focusing on improving diabetes care in year two. The goal is to convene collaborators and to promote coordination and create synergy. The collaborative will provide infrastructure support, including financial backing, project staffing, and meeting or tele-/video-conferencing support. The collaborative will also provide models for success (e.g., best practice information) and benchmarking data.

Benefits of Collaboration on Quality Measurement

Ms. Coltin reviewed a number of benefits that collaboration brings to performance measurement, including the following:

- Addressing the need for comparable performance data
- Establishing an “even playing field”
 - The collaborative can get performance data on plans even if the plan does not agree to release it.*
- Improving the confidentiality of measurement

- Developing benchmarks for both managed care and the fee-for-service sector
- Building trust as part of a team
- Achieving economies of scale in the costs of producing some HEDIS measures
- Producing new measures at marginal cost
- Extending the level of measurement at marginal cost

Collaboration is also influencing quality by creating a consensus on priorities, common goals within these priorities, a unified approach across plans, the pooling of resources, shared responsibility for improvement, and greater accountability at all levels.

Benefits of Collaboration for Diabetes Care

Ms. Coltin closed her presentation by reviewing the benefits of collaborative quality measurement for the care of diabetes. New collaborative efforts in diabetes can do the following:

- Utilize existing and effective infrastructure and support systems
- Piggy-back on existing projects or agendas
- Incorporate “lessons learned” into project planning
- Leverage positive working relationships
- Build on a track record of successful collaboration

In Massachusetts, this collaboration has resulted in three different groups, including MHQP, that have come together to look at clinical practice guidelines. In addition, four groups are evaluating other clinical practice support, while other groups have come together to look at consumer awareness, patient education, and clinical performance measurement. The goal is to bring different groups together in order to end the current situation where multiple, uncoordinated efforts create competition for health plan resources.

Using Community Partnerships in Washington to Help Improve Diabetes Outcomes

Kathleen Clark, MS, RD, CDE, coordinator of the National Diabetes Education Program (NDEP) for the Washington State Department of Health Diabetes Control Program, shared her insights on the value of two models of community partnerships in improving diabetes outcomes.

National Diabetes Education Program

NDEP is a partnership of CDC, the National Institutes of Health (NIH), and public and private sector partners. The initiative consists of five components:

- An awareness campaign
- Care for special, high-risk populations, including African-Americans and Hispanics
- Community intervention
- Health systems
- Partnership network

The hope is that this initiative will result in five major achievements:

- To improve the treatment and outcomes for people with diabetes through early diagnosis, and to ultimately prevent the onset of the disease
- To reduce the morbidity and mortality associated with diabetes and its complications

- To increase public awareness of the seriousness of diabetes, its risk factors, and potential strategies for preventing diabetes and its complications
- To improve understanding of diabetes and its control among health professionals, and to promote an integrated approach to care
- To promote health care policies that improve quality and access to diabetes care

Within Washington State, 30 partners participate in the program, including five health plans, the American Diabetes Association, the county health department, the USDA Cooperative Extension, professional health care organizations, retail pharmacies, pharmaceutical and supply companies, diabetes education centers, community health centers, and the University of Washington. The partnership identifies needs in the state and how NDEP can help to meet some of those needs.

First Product: A Wallet Card

The first product developed by NDEP was a wallet card that helps patients to keep track of key indicators. Sample cards, along with information on the wallet card campaign, were initially distributed to 7,000 primary care physicians. To date, more than 280 physicians have requested additional cards. An additional 90,000 cards were then distributed to consumers, with the support of pharmaceutical companies. Once initial distribution was complete, an additional 75,000 cards were given to patients through approximately 1,000 retail pharmacies. Two health plans have also distributed the cards to enrollees who have diabetes. In addition, cards have been made available to the Washington Association of Diabetes Educators.

Second Project: Reaching Underserved, High-Risk Populations

A second NDEP initiative relates to reaching underserved, high-risk populations in Washington State, including African-Americans, Hispanics, and Asian-American/Pacific Islanders. In partnership with the American Diabetes Association and the University of Washington Diabetes Prevention Program, NDEP is reaching out to these populations through a variety of culturally-sensitive patient education initiatives.

Other Partnership Activities

Other NDEP activities include the following:

- A Washington State NDEP web page
- A toll-free information line for seniors on issues related to diabetes, including proper nutrition, exercise, and blood sugar control
- Development of a language-specific diabetes education resource directory

Evaluating the Partnership

Ms. Clark noted that it is too early to tell if NDEP is having a positive impact on diabetes outcomes. That said, she sees the wide distribution of wallet cards as an encouraging sign. She also noted that a “process evaluation” of the project, including a review of meeting attendance, completion of workplan activities, and the addition of new members, suggests that the project has been successful.

Diabetes Outcome Measurement Project

Ms. Clark also discussed a second initiative in Washington State, the Diabetes Outcome Measurement Project, which is intended to gather standardized information on the quality of care for people with diabetes in the state. Ten private health plans, four public systems, three state agencies, PRO-West (the local peer review organization), and the Foundation for Healthcare Quality (a local, non-profit institution) have joined forces to determine the feasibility of implementing a standardized measurement set to evaluate care for people with diabetes across health plans, thus providing information for health plans and public officials to fuel quality improvement and promote value-based purchasing among employers using a common measurement system.

Goals of the Project

The project should create a “win-win” situation for all involved:

- The Department of Health can evaluate the health status of the insured population with diabetes in Washington State.
- Plans can evaluate their own performance compared to the state average.
- Joint quality improvement interventions can address gaps in care.
- The feasibility of using one standardized measurement set can be evaluated.
- Purchasers can evaluate the quality of care offered by plans and providers.

Measurement and Data Collection

The measurement set being tested includes a number of specific indicators, as outlined below:

- Provider visits
- Dilated eye exam
- Foot exam
- Blood pressure
- Kidney function testing
- Glycosylated hemoglobin
- Blood lipid levels
- Diabetes education
- Smoking status and counseling
- Aspirin use
- Coping with disease
- Maintaining daily activities

Data collection for the project involved review of 33,000 records included in the population files from health systems, as well as survey and chart abstractions conducted during a five-month period. During the effort, 2,809 medical records were reviewed and 2,978 patient surveys completed.

Benefits of the Project

In Ms. Clark’s view, the strengths of the project included the following:

- Development of collaborative relationships among health systems
- Realization of administrative efficiencies through central coordination
- Agreement by plans to make system changes to improve diabetes care in Washington State

Summary

Ms. Clark concluded her presentation by noting that collaborative diabetes projects allow partners to improve quality in a cost-effective manner by using proven, evidence-based practices for reaching patients and improving self-management. The improvements achieved are typically greater than any individual partner could achieve on its own. For this reason, Ms. Clark believes that collaboration and partnership should be a core business strategy, as improving diabetes care should be on everyone’s agenda.

Measuring and Evaluating Quality Care

The conference included a plenary session in which four experts discussed the importance of measuring and evaluating the quality of diabetes care. Gregg Meyer, MD, MSc, director of the Center for Quality Measurement and Improvement of the Agency for Health Care Policy and Research (AHCPR) began the session by reviewing the definition of quality and emphasizing the reasons for measuring it.

What Is Quality? Why Measure It?

Dr. Meyer believes that the industry must move beyond the “I-know-it-when-I-see-it” definition of quality to adopt the Institute of Medicine viewpoint that defines quality as the “right thing for the right patient at the right time with the right results.” Quality matters because it is important to stakeholders and because it varies from site to site and practitioner to practitioner. And because quality is worth improving, it is worth measuring.

A number of factors, moreover, can lead to “voltage drops” in quality of care, including the following:

- Reduced access to coverage
- Lower insurance enrollment
- Reduced access to covered services and providers
- Reduced access to a consistent source of primary care or to referrals

In addition, reducing variation in quality can help reduce overuse, underuse, and misuse of health care resources.

Advancing the Science of Measurement

In the past, health care knowledge was passed down from experts, making quality the result of individual efforts. In the future, knowledge will be obtained from multiple dynamic sources of evidence-based medicine. The Diabetes Quality Improvement Project (DQIP), a performance measurement tool developed by HCFA, will serve as the “poster child” of this movement.

In Dr. Meyer’s view, it is critically important to get the measures right. Credibility remains the key to the acceptance of both the measures and the results; in some cases, risk adjustment may be necessary.

Desirable Attributes of Quality Measures

Dr. Meyer reviewed the National Committee for Quality Assurance’s list of desirable attributes for quality measures.

- Relevance for making choices between systems, negotiating with systems, and/or stimulating quality improvement
- Scientific soundness (e.g., is there clinical evidence supporting the measure? is the measure reproducible, valid, and accurate?)
- Feasibility in terms of precise specification, cost, confidentiality, and ability to be audited

That said, no measure will be perfect with respect to each of these attributes. Not all attributes will be equally important for all measures. And finally, measures relating to access, satisfaction, and informed health care choices may require consideration of additional criteria. For example, a measure to evaluate use of chlamydia screening among young women could raise privacy issues. To get around this issue, researchers must develop a means of capturing a denominator population (women who are sexually active) without using a survey, which could be offensive to some young women.

In closing, Dr. Meyer asked the remaining panelists to discuss how to make quality measurement in diabetes in general, and DQIP in particular, work effectively. More specifically, he asked the panelists to comment on the following:

- How to obtain data in a reliable fashion through standardized collection tools, training, and the like
- How to avoid major pitfalls in data collection
- How to validate data that has been collected, and how to overcome barriers to acceptance of the data
- How to use the data that have proven to be of value

The Health Plan Perspective on Quality Measurement

Charles Cutler, MD, vice president of medical services at Prudential HealthCare, offered the health plan perspective on the issues raised by Dr. Meyer. He agreed with Dr. James that the health plan role in quality improvement cannot be the same as that of the group practice or individual doctor. Unable to play a hands-on role in improving care management, the plan instead takes a more structured approach, offering data feedback that is not often available in the clinic. Plans play this role through use of the following:

- A structured database including claims, pharmacy, and encounter data
- A consistent process for reaching members
- Support for physician practices
- Clarification of benefits (e.g., with respect to preventive diabetes care, such as the diabetic retinal exam)
- Closing the data collection and feedback loop

Choosing the Right Measures

In Dr. Cutler's view, the right measures are those that are emblematic of the standard of care, provide opportunities for improvement, flag sentinel events, and are relevant to the stakeholders, including employers, providers, HCFA, and regulators. They should also meet NCQA's standards for desirable attributes of quality measures, which were discussed previously.

Challenges in Performance Measurement

Dr. Cutler reviewed a number of challenges in performance measurement:

- **Logistical challenges**
Are administrative data available? If so, which elements? What is the source of the data (e.g., ICD-9, CPT)? Is there an electronic medical record? Which model—independent practice association or group practice—is providing the data?
- **Chart review when data are not available**
Chart review is costly, as it is often difficult to find the right provider or the right information. In some instances, providers do not routinely record the information or share it with others.

- Physician resistance due to fear and concerns about autonomy, unwarranted intrusion into the practice, and confidentiality issues

Tools to Overcome These Challenges

Dr. Cutler highlighted a number of data collection tools that can help to overcome these challenges. In addition to encounter forms, claims data, and paper chart abstraction tools, lap top and enhanced lap top technologies can also serve as a primary collection tool. Known as DARTH (Data Analysis and Reporting Tool for HEDIS) at Prudential, this database is prepopulated with demographic and physician data. Physicians fill in a number of other data elements, including blood pressure, weight, foot exams, and whether the patient was referred for an eye exam. (This last piece of information can be especially informative. For example, the data may show that patients are being referred for eye exams but not showing up, thus indicating that patients, not physicians, are the problem.) Information is also included on lifestyle issues. All data are audited to ensure accuracy. The system also includes help screens for each data element to assist physicians and reviewers.

Tools to Encourage Quality Improvement

Dr. Cutler also reviewed several strategies and tactics that can assist in improving the quality of care provided to patients with diabetes, including member education materials and provider support tools.

Member Education Materials

A variety of member education materials assist in improving quality for patients with diabetes, including the following:

- Customized member letters from the health plan's medical director
- Educational pamphlets, including *Don't Lose Sight of Diabetic Eye Disease*, *Passport to Diabetes Control*, *Helpful Tips for Your Doctor's Appointment*, and *Diabetes Management Resources*.

Provider Support Tools

For providers, the following tools support quality improvement efforts:

- Customized letter from the medical director
- Lists of diabetic patients, including those in need of a retinal exam
- Business reply envelope
- A pocket guide entitled *1999 Clinical Practice Recommendations*
- A chart sticker entitled *Recommended Diabetes Assessment*

Improving the Accuracy and Efficiency of Data Collection

Herman Jenich, MPP, associate vice president of the Managed Care Department for Island Peer Review Organization (IPRO), built upon Dr. Cutler's presentation by providing insights on how to improve the accuracy and efficiency of data collection. His presentation focused on the following:

- Identifying common reasons why health plans may fail to accurately measure performance
- Sharing strategies to reduce the likelihood of measurement difficulties
- Providing practical information to assist health plans

Common Problem Areas and Solutions

Mr. Jenich reviewed a number of common problem areas in data collection, providing potential solutions to each.

Administrative Data Quality

Within the area of administrative data quality, there are a number of problem areas, as outlined below:

- Use of proprietary codes which do not translate into standard codes
- Modified use of standard codes
- Use of proprietary systems, such as “check-off forms”
In some cases, the computer systems can only handle one or two “checked-off” items, meaning that those further down the list are not recorded.
- Data in multiple, hard-to-integrate systems, which is especially a problem during upgrades and mergers
- Existence of claims lag and data entry backlogs
- Inadequate capture of claims and encounters, leading to incomplete data
This represents the toughest issue to handle. According to the Medicare HEDIS audit of 1998, most types of data do not meet the standard of 95 percent completeness. Only pharmacy data met the standard the majority (59 percent) of the time. For most types of data—including primary care, specialist care, inpatient, vision care, and radiology—approximately 30 percent to 40 percent of data met the 95 percent standard.

Vendor Data

Difficulties often occur at multiple levels with vendor data, primarily related to underreporting and incomplete information. Unfortunately, however, an increasing number of health plans are relying on vendor data; poor quality data from these vendors is the primary reason that medical record reviews are necessary. Mr. Jenich urged health plans to place explicit language in contracts with vendors that specifies what data are required. He also urged consideration of the following questions:

- Does the vendor collect data?
- Is data collected by the health plan from the vendor?
- Can member-level data from the vendor be integrated into the health plan systems?
Getting the data is worthless if the health plan cannot use it within existing systems.
- Does the health plan validate the data for accuracy and completeness?

Medical Record Review

Key problems with medical record review include the following:

- Identifying the providers seen by a member
- Determining which portions of the medical record are needed (e.g., primary care physician versus specialist sections of the record)
- Obtaining records from providers
- Developing abstraction tools and instructions
- Training and quality control for record reviewers

Unfortunately, studies show that there can be significant problems with the data from medical record review for patients with diabetes. For example, eye exams showed an error rate of greater than 10 percent in roughly one quarter of surveyed markets.

Data Integration and Rate Calculation

Data integration and rate calculation are too often left to the “data people” without oversight. Mr. Jenich strongly suggested some level of oversight before the audit, as very simple errors can often lead to miscalculations of 10 percent to 30 percent. More specific problems relating to data integration and rate calculation include the following:

- Translating specifications into accurate computer programs
- Combining multiple administrative data sources (e.g., claims, encounter, provider, membership, vendor data)
- Combining medical record review data with administrative data

Rate Validation

Before releasing data, rates must be validated through the following steps:

- Checking compliance with the algorithm
- Using multiple mechanisms to ensure validity of results, including member-level data review, trending, benchmarking, and sharing results to check for the reasonableness of the data

Preliminary Results from a DQIP Pilot Test

Mr. Jenich shared preliminary results from a DQIP pilot to test the measure specifications and abstraction tool using health plan records. Nine health plans participated, each submitting 110 medical records. The test included a comparison of health plan medical records to health plan administrative data and to fee-for-service findings. Selected preliminary results, shown below, are based on medical record review for eight plans:

- HbA1c testing rates ranged from 62 percent to 95 percent, with an average of 74 percent.
- The percentage of plan patients with diabetes who had an HbA1c level below 9.0 ranged from 11 percent to 45 percent, with an average of 34 percent.
- Eye exam testing rates ranged from eight percent to 69 percent, with an average of 43 percent.
- Lipid profile rates ranged from 53 percent to 79 percent, with an average of 64 percent.
- Foot exam rates ranged from 31 percent to 47 percent, with an average of 45 percent.
- The percentage of patients with blood pressure below 140/90 ranged from 31 percent to 47 percent, with an average of 39 percent.

Findings related to the DQIP measurement process included the following:

- Most health plans did not believe that administrative data alone were accurate.
- Health plans that submitted complete primary care and specialist records for 1997 and 1998 had the most accurate rates.

- Records from diabetes management/education centers and care management programs often provided the most comprehensive documentation.
- Only a small percentage of members were excluded from samples; the most common exclusion was for steroid-induced diabetes.

Conclusions and Next Steps

Unfortunately, health plan performance rates often reflect both data issues and quality of care. Mr. Jenich urged all health plans to make use of available strategies for ensuring that data collection problems do not have an impact on results, thus ensuring that any calculated rates are a true measure of performance. To assist with this effort, results from the 1999 DQIP pilot test will be shared with HCFA, the NCQA, and health plans to refine and standardize DQIP measurement specifications and data collection.

The Group Practice Perspective on Measuring and Evaluating Quality Care

Julie Sanderson-Austin, RN, vice president of operations and quality management and research at the American Medical Group Association (AMGA), offered the group practice perspective on measuring and evaluating the quality of diabetes care. Her presentation centered on the following:

- Summary of AMGA experience in provider-level quality improvement initiatives in diabetes
- Review of what benefits physicians derive from becoming engaged in such activities
- Overview of tools to encourage behavior change
- Summary of lessons learned

AMGA Experience in Quality Improvement in Diabetes

Ms. Sanderson-Austin reviewed several AMGA programs designed to improve the quality of diabetes care.

Diabetes Benchmark Program

Nineteen group practices are participating in the diabetes benchmark program, which draws data from a point-of-service data collection tool. (AMGA has found the medical record to be the least reliable source of accurate information.) Using this tool, patients provide health status, demographic data, co-morbidity history, and medication use information, which is recorded by physicians. Fortunately, the AMGA has been delighted with the response to this initiative, as they have found that the data are better than that obtained from claims records. Physicians supplement this data with clinical information. Performance results are then compared to norms and benchmarks on a severity-adjusted basis.

The positive aspects of the program include good patient response and high (86 percent) completion rates. In addition, the program takes advantage of standardized data variables and collection protocols. On the down side, the program is costly in terms of physician and staff time. It also does not provide immediate feedback for physicians or patients.

AMGA Diabetes Health Plan Study

A second project, which incorporates the lessons from the first, provides information at the provider level. Patients with diabetes are identified through claims and pharmacy data. For each patient, the frequency and values of HbA1c tests are assessed and compared to HbA1c levels among various therapeutic categories. Each physician receives feedback on his or her own population.

On the positive side, the program uses only electronic data and is able to identify differences in performance among medical groups and among physicians. On the downside, less than half of the 26 participating medical groups are able to provide reliable pharmacy data.

AMGA Diabetes Risk Project

A third initiative, the AMGA Diabetes Risk Project, seeks to develop a model for referring high-risk patients to specialty care. The project includes the following components:

- Identifying resource utilization units that reflect the cost of diabetes patient management
- Identifying health outcomes that reflect adverse events and poor physical function
- Developing a model for predicting the cost of services and health outcomes
- Developing guidelines for referring based on model type

Getting Physicians Involved

Based on focus groups, AMGA has found that physicians will change behavior because they perceive that the change will add value, reduce burden and/or hassle, or increase knowledge (leading to better patient care). The change must also be “doable” within the system of care that they operate; in particular, the change should not disrupt patient flow. To help quality improvement experts in meeting these criteria for change, Ms. Sanderson-Austin reviewed the “do’s and don’ts” in getting physicians involved in quality improvement efforts for diabetes care. The “do’s” included the following:

- Tell them what they need to know.
- Reduce redundancy and burden.

Given that physicians contract with between two and 25 health plans, efforts cannot overlap.

- Give them the tools to get the job done, including optical readers and electronic surveys.

To minimize the effort of physicians, the results produced from these tools should serve as the medical record.

- Provide feedback that is non-punitive, frequent, and includes peer comparisons, including comparisons to the performance of the department and to specialty societies.

On the “don’t” list, Ms. Sanderson-Austin recommended that physicians not be asked to collect data that provides no useful information. She also cautioned against requests for things that are difficult-to-impossible to complete. Quality improvement personnel must always remember that the physician’s primary role is patient care and advocacy; anything else, including participation in quality improvement projects, remains secondary.

Summary

Ms. Sanderson-Austin concluded by urging plans and provider organizations to carefully scrutinize DQIP measures to ensure that they meet these critical tests. While the AMGA fully supports DQIP as a way to standardize performance measurement, it is important to look at each measure to determine whether it adds value, reduces the burden on providers, and/or increases knowledge. Physicians will not accept the measures unless these tests are met.

A Perspective from the Veterans’ Health Administration

Clark T. Sawin, MD, acting chief of the Office of Performance and Quality with the Veterans’ Health Administration (VHA), reviewed the VHA’s efforts to measure and improve the quality of care for patients with diabetes. With 150 hospitals, 400 clinics, and 3,500,000 “enrollees”, VHA faces a big challenge in serving over 500,000 patients identified through pharmacy data as having diabetes. VHA focuses its

quality improvement efforts on common disorders and on prevention activities, especially in the ambulatory/outpatient arena. Diabetes care represents a high-priority area for improvement. VHA offers a variety of tools to support physicians in their effort to improve care:

- A computer-based patient record system (in progress)
- Evidence-based guidelines developed by special committees of primary care physicians and specialists
While physicians are not required to use the guidelines, they are held accountable for outcomes.
- Computer reminders and decision-support systems (used on a limited basis today)
- Timely data feedback to VHA “network” directors
VHA divides its activities into 22 separate networks or regions of the country. Feedback reports incorporate information very quickly; data from June 1999 were available by early August.

These tools appear to be working to improve care for all patients, including those with diabetes, as evidenced by data and chart review by trained abstractors from a statistically valid sample for each of 22 VHA network directors. Outside of diabetes care, performance results show improvements in virtually every prevention measure, including flu vaccinations (which rose from 34 percent at baseline to 70 percent by 1998), pneumococcal vaccinations (from 25 percent to 68 percent), obesity counseling (from 68 percent to 95 percent), and smoking cessation efforts (from 39 percent to 90 percent). All measures have continued to hold steady or show improvement thus far in 1999.

Within diabetes care, virtually all measures have also improved, as outlined below:

- HbA1c screening rates rose from 59 percent at baseline to 91 percent by 1998.
- The percentage of patients with HbA1c rates below 10.0 rose from 72 percent to 87 percent; 81 percent of patients had a level below 9.5.
- Retinal exam rates increased from 44 percent to 62 percent; Dr. Sawin would like to see this rate increase further.
- Foot pulse tests increased from 51 percent to 84 percent, while foot sensation tests rose from 38 percent to 78 percent.
- Eighty percent of high-risk patients are referred for specialty care. Dr. Sawin would also like to see further improvement in this measure.
- The percentage of patients with diabetes whose blood pressure is below 140/90 rose modestly, from 40 percent in 1997 to 44 percent in 1999. Dr. Sawin characterizes this performance as “dismal” and is spearheading efforts to improve the situation.
- The percentage of patients having their cholesterol measured rose from 47 percent to 64 percent, but further improvement is needed.

Summary

Dr. Sawin concluded by noting that the VHA is, for the most part, doing a good job in caring for patients with diabetes, primarily thanks to the organization’s “systems approach” for improving quality. Yet as the data indicate, there are a number of areas still in need of significant improvement. VHA has placed these areas at the top of its priority list going forward.

Tools for Care Management and for Worksite and Community Partnerships

The conference included breakout sessions in which participants identified innovative tools for managing the care of individuals with diabetes, including employer-based programs.

Tools for Improving Eye Care

C.P. Wilkinson, chairman of the Department of Ophthalmology at the Greater Baltimore Medical Center and professor in the Department of Ophthalmology at Johns Hopkins University, reviewed the best ideas for improving eye care for patients with diabetes. She began by noting that the profession has a long way to go in improving eye care. Several barriers, however, prevent such progress, including the following:

- Payment and reimbursement systems which require formal referrals and copayments, as well as complicated rules related to the type of exam for which the reimbursement applies
- Coding variations
- Information transfer problems

To overcome these barriers, breakout group participants suggested that HCFA and private payers develop clarifications and standards with respect to payment methodologies and coding. They also recommended the development of centers that can provide one-stop shopping for patients. In addition, it was suggested that a triplicate form be developed so that records are available for payers, the primary care physician, and the eye doctor.

Yet the biggest barrier to improving eye care remains patient compliance, as cultural, educational, and socioeconomic factors affect the ability of patients to comply. To improve patient compliance, breakout participants suggested use of the following tools:

- Reminder letters and follow-up phone calls for patients and physicians
- Educational tools, such as videotapes
- Involvement of patients in setting goals and keeping records
- Use of targeted support groups, tailored by culture
- Incentives, such as raffles and gift certificates, to encourage patients to come in for eye exams

Tools for Improving Care of Cardiovascular Disease

Thomas R. Jackson, MBA, director of Utah Operations for Health Insight, reviewed the groups' ideas for improving the care of cardiovascular disease for individuals with diabetes. The most innovative suggestions included the following:

- Birthday card reminders

- Addressing preventive issues related to diabetes at every patient visit (regardless of the reason for the visit)
- Development of systems to schedule laboratory tests prior to patient visits, so that results are available at the time of the visit
- Development of a reminder list for physicians and patients, combined with an incentive system for patients, to encourage completion of all needed tests each year
- Diabetes education programs in churches and local businesses

However, Mr. Jackson cautioned that there is a sense of helplessness in the industry. Administrators complain that clinics will not participate in improvement efforts, while clinic management believes that patients are not compliant. In Mr. Jackson's view, the industry needs to figure out how to reach both patients and physicians. Other industries have successfully tackled the issue of customer compliance, and he urged the health care industry to learn from these industries. The key to success is simply to get started on something, no matter how small it is, quickly. To that end, he urged every member of the audience to start a project within a few days of returning from the conference. Delays will result in nothing getting done.

Tools for Improving Glycemic Control

Peter Pendergrass, MD, MPH, associate clinical coordinator at the Texas Medical Foundation, reviewed breakout participants' views on the best tools for improving glycemic control. He began by noting that the barriers to improvement include a lack of patient and physician time, inadequate knowledge, and limited access to care. He reviewed five separate areas in need of improvement.

Education

Because providers are trained to provide services, not to improve processes or engage in continuous quality improvement, breakout participants felt that providers need assistance in fostering improvement. Use of physician mentors, academic detailing, community experts, and guidelines (backed up by the literature) can assist with this task. Like physicians, patients also need education to help improve glycemic control. The key to engaging patients is to train them to become more proactive (e.g., in asking for necessary tests).

Improvement Tools

Dr. Pendergrass noted that not all tools work in every situation. Because there is no "magic bullet," systems need a portfolio of tools, including computerized flow sheets, wallet cards, and telephone follow-up that all integrate the messages of different providers (e.g., pharmacists and primary care physicians). Other tools, such as post card reminders and health fairs, can also help. Finally, breakout participants suggested use of a yearly calendar for patients that includes sticker reminders of when to come in for services.

Performance Measures

Breakout participants urged the development of standardized systems for collecting, analyzing, and reporting data. However, participants also emphasized the need to use local benchmarks to compare performance to that of peers in the area. It is not particularly meaningful to compare the performance of physicians in New York to others in Texas.

Incentives

Breakout participants felt that incentives should be created that are directly tied to meeting quality objectives and standards. Incentives should be made available to entire teams of providers caring for individuals with diabetes, including physicians, nurses, office managers, and any other individuals involved in the provision of services to these patients.

Other Suggestions

Other ideas for improving glycemic control include the following:

- **Setting aside several days each month in the clinic setting for the care of patients with diabetes**
These “diabetes clinics” could make use of outside experts, including diabetes educators and specialists.
- **Standardizing HbA1c laboratories to ensure consistency of results**

Tools for Improving Foot Care

Jeffrey Newman, MD, MPH, vice president of medical affairs for California Medical Review, Inc., reviewed the views of breakout group participants on tools for improving foot care. Participants recognize that many physicians lack the knowledge and motivation to document exams (which are often performed by nurses or office managers) or to make appropriate referrals. Realizing that reminder posters in the office are inadequate to solve this problem, the group recommended the following:

- **Using a multidisciplinary team to ensure adequate foot care**
- **Involving families, caregivers, and the community to educate patients about the need for regular exams**
- **Offering an aggressive education campaign for general practitioners about DQIP measures and the importance of foot care**
- **Changing reimbursement policies within HCFA and private insurers for foot exams, especially with respect to paying when qualified, non-physicians perform the examination**
- **Tailoring programs to special high-risk populations such as the homeless and Asian-Pacific islanders, taking into account unique cultural and other special factors**

Activities such as these will help to prevent the need for amputations somewhere down the line, thus improving quality of life and reducing overall costs.

Innovative Worksite Programs for Individual with Diabetes

Kathleen Clark, RD, CDE, health promotion specialist at the Washington State Department of Health Diabetes Control Program, shared several suggestions for worksite interventions that were made during the breakout sessions. The key to making these partnerships successful is to work locally and to begin on a small scale with local employers. For example:

- **A local bus company approached a local HMO in Hawaii because its drivers suffered from a high incidence of diabetes. The result was the placement of signs offering messages about diabetes on the sides of buses. The signs reached both the drivers and passengers.**
- **In the Washington, DC area, a local news station sponsors a health fair each year in conjunction with local health care professionals.**
- **A CBS radio affiliate sponsors a van that provides diabetes care in outlying areas.**

Breakout participants also had the following specific suggestions for employers:

- **Offer training and education to employees on issues such as screening and caring for diabetes**

- Allow workers with diabetes to attend support groups (and offer videotapes for those who miss the session)
- Provide “tidbits” on the corporation’s web site for workers and family members with diabetes

Finally, when developing programs, employers need to be careful to include all of the stakeholders, including the patients themselves.

What Does the Future Hold?

The final plenary session of the conference consisted of three presentations on the future of diabetes care. Moderated by Jeffrey L. Kang, MD, MPH, director of HCFA’s Office of Clinical Standards and Quality, this session focused on three key issues:

- The driving forces for quality improvement and high quality diabetes care
- The barriers and challenges to improving quality
- The changes that must be made at the system level to improve the quality of diabetes care

Overcoming the Failures of the Marketplace

Robert A. Berenson, MD, director of the Center for Health Plans and Providers at HCFA, began by noting that historically quality has not been recognized in managed care. He has a theory, however, on how to get quality recognized in the managed care setting. His logic begins by recognizing that managed competition is not working as originally envisioned. The expected competition among different, discrete health plans has not resulted in value to employers and employees who care primarily about price and freedom of choice. As a result, these plans have not gained any leverage over providers. In fact, Dr. Berenson highlighted six problems that prevent the market from rewarding, and therefore promoting, quality improvement:

- Beneficiaries and consumers are not asking for quality, and thus there is no tangible reward for quality improvement, which is expensive. As a result, medical directors have few resources with which to work.
- There is no incentive for innovation because premiums are not risk adjusted. Plans that develop programs for specific chronic illnesses will attract high-risk individuals who suffer from these diseases. This problem is especially acute with the Medicare population, as individuals are free to choose among plans on their own.
- Provider networks are diluted, thus preventing the formation of the relatively small, carefully selected provider networks needed for meaningful quality improvement.
- Practitioners believe they have too many “bosses,” as each of the five to 10 plans that they deal with may have its own set of formularies and guidelines. No

single plan accounts for enough of a physician's business to make it worthwhile to pay attention. Similar issues result with respect to data feedback; no individual plan represents enough of a physician's practice for the data to be meaningful.

- The lack of exclusive relationships leads to a "free rider" problem where if one health plan invests in quality improvement, all plans benefit from it. Thus, the incentive is to sit back and let someone else invest the required funds.
- The lack of scale economies in quality improvement makes it prohibitively expensive for plans to invest in programs such as academic detailing that are known to improve quality.

To overcome these problems, Dr. Berenson recommended the development of an educational campaign designed to convince consumers that "broader is not necessarily better." While consumer preferences for broad networks cannot be changed overnight, they can perhaps be changed eventually. He also recommended that plans begin to collaborate on quality improvement. Such collaborations are possible within the constraints of antitrust laws, including programs such as the merging of data and the development of common practice guidelines. To make these collaborations work, Dr. Berenson recommended the following:

- Start with a few tangible initiatives.
- Include purchasers and peer review organizations as a part of the collaboration.

Dr. Berenson acknowledged, however, that there are significant cultural, business, and economic barriers to such collaboration, including the fear of losing competitive, proprietary, and first-mover advantages. Plans may also fear losing the opportunity to differentiate their services. Finally, the incentive to be a free rider remains strong. Yet in the end he feels that purchasers and PROs can play a role in convincing the plans of the value of everyone coming together, not the least of which is enhanced leverage over providers who are the true catalysts of change.

Closing the Performance Gap

Richard Dixon, vice president of the San Francisco office of The Lewin Group, Inc., built on Dr. Berenson's presentation by reviewing the steps needed to close the "performance gap"—the big gap between what the industry could do and actual performance with respect to diabetes care. He began by noting that the gaps between optimal and actual results of care are due not to poor science but rather primarily result from the following:

- A weak, perhaps non-existent, business case for quality

Mr. Dixon noted that major commercial purchasers are even backing away from their commitment to purchase high-value health care, in spite of all the arguments and theory that better care is cheaper care. Some fear they may move away from offering health care coverage at all. Should these employers take this step, the purchasing program of the Federal government (including the Federal Employee Health Benefits Plan and Medicare) will become the "last great hope" as a force for value-based purchasing in health care.

- The failure of organizations to discover ways to change providers' and patients' behaviors, and to deliver high quality care in general

These failures stem from a variety of factors, some of which are political. For example, some providers resist the concepts of managed care and standardization, and the industry has not been very effective in changing these attitudes. While there are some incentives to provide high-quality care, these incentives are rarely driven down to the level of the individual physician. For example, in California purchasers failed in their efforts to create at least a 10 percent difference in reimbursement between low- and high-quality

providers, and to get independent practice associations and group practices to put in incentives for quality for individual physicians. Proprietary interests, including the need to differentiate products, got in the way.

On the bright side, however, Mr. Dixon believes that there are promising approaches to improving quality that are becoming available, including the following:

- **Use of technology to improve quality**

For example, physicians in California are using E-mail, computers, and clinical algorithms to identify and work with patients not meeting the standards of care. These technologies can provide just-in-time support at relatively low cost. In Mr. Dixon's view, they should be utilized more than they are today.

- **Use of integrated disease management programs**

Disease management programs represent low-cost technologies that are ready for deployment. Some, though not all, of these initiatives work quite well and should be deployed more widely.

- **Encouragement of patients to take a more active role in their care**

This step is becoming increasingly important and must continue.

These three approaches are both affordable and effective. The industry must somehow get around the barriers to more widespread adoption of these programs. The key is to have the political will to create incentives to reward quality care, and therefore to make quality a part of the business model of health care.

An Investor-Owned Health Plan's Perspective on the Future

Jerry Reeves, MD, chief medical officer at Humana Health Plans, offered his perspective on the future for diabetes care as the clinical head of an investor-owned health plan. He began by noting that there are many driving forces for improving diabetes care, as outlined below:

- **Approximately \$100 billion is spent each year to care for the nation's 16 million individuals with diabetes.**
- **Roughly 150,000 individuals die each year from diabetes, while another 67,000 lose a limb and between 12,000 and 24,000 go blind due to diabetic retinopathy.**
- **Diabetes is the seventh leading cause of death in the United States, and the leading cause of end-stage renal disease, accounting for 40 percent of new cases.**
- **The risk of stroke for individuals with diabetes is two to four times that of the general population.**

Yet in spite of these telling statistics, the current system of providing care to individuals with diabetes is inadequate, as evidenced below:

- **Only about half of those with diabetes have been diagnosed as having the disease.**
- **Distribution of care to individuals with diabetes is inequitable, with a few receiving the best care and many more remaining undiagnosed or receiving ineffective care. In fact, seven percent of individuals with diabetes do not seek care each year, while another 13 percent seek care only once a year, primarily in conjunction with an acute visit.**
- **Current quality measurement systems for diabetes care are expensive but provide only marginal benefit. At Humana last year, over 250,000 charts were pulled at a cost of \$30 per chart, with little tangible benefit.**

- Some high-risk populations, such as Puerto Ricans, Mexican-Americans, Native Americans, African Americans, and Cuban Americans, have special needs and exhibit special behaviors (e.g., some cultures tend not to trust physicians). The delivery and provider systems do not adopt well to the unique characteristics of these populations.
- Incentive systems in the fee-for-service world differ from those in a capitated system. While a group practice in California may have the incentive to develop a multidisciplinary team to care for patients with diabetes, providers in the fee-for-service world will be motivated to continue to treat diabetes in a reactive manner, meaning that patients only receive care when they come in with an acute episode.

In short, Dr. Reeves does not believe that the industry is winning the war against diabetes. New systems and approaches are needed to solve what is by no means a simple problem. But progress can be made. In Dr. Reeves' view, one of the key steps is to begin one-on-one counseling with patients. The traditional view that patients are too ignorant to understand how to manage their conditions must be replaced with the assumption that patients can and should take charge of managing their condition. Drawing on lessons from the advertising industry, the message may need to be put in simple terms and repeated as many as seven to 12 times per year to get it across. But it can be effectively conveyed. Most individuals with diabetes are able to understand what they need to do to improve their health and quality of life. But because physicians lack the time to perform counseling on these issues, other providers, most notably nurses who specialize in diabetes care, must play a more proactive role in making sure that patients receive regular foot and retinal exams, and get everything they need to monitor and control blood sugar, lipid levels, blood pressure, and body weight. Physicians can aid in this process through a variety of activities, including the following:

- Developing standing orders covering laboratory measures, blood pressure checks, foot and eye exams, podiatry referrals, and ophthalmology consults for the entire year
- Using a flow sheet and care plan to help individuals with diabetes interpret when it is time for them to take charge of the next steps in their care
- Using websites containing personal medical records, interactive voice data support, telephone follow-up by nurse case managers, and mailed alert and reminder systems to assist patients in managing their disease

As Dr. Reeves noted, patients are not “dummies.” They are already choosing providers who meet their most important needs—low costs, convenience, courtesy, and personalized, culturally sensitive service. They also look for providers offering care interventions that are timed with their readiness to change, and for care that achieves the results that they are trying to achieve. If patients do not get the services that they are demanding, they will vote with their feet.

In Dr. Reeves' view, health plans are the natural entities to work together with provider systems to encourage patients to take charge of their own care in the 21st century. Providers are motivated to please patients in order to have successful practices. But health plans such as Humana also play an important role during the 95 percent of the time that patients spend between provider visits, serving as care facilitators and providing organized accountable processes to improve medical care, service, and outcomes. In fact, Dr. Reeves envisions 21st century diabetes care as consisting of the following:

- Care teams that focus on ongoing personal relationships and rational allocation of resources (e.g., diabetes nurse educators, health risk appraisals, disease management programs)
- New technologies, such as inhaled insulin, continuous insulin infusion, and continuous glucose monitoring

- Communication technologies, including the Internet for mail ordering of supplies, flow sheets, reminder notices, test result tracking, medication advice, chat rooms, support groups, group clinics, and telemedicine (e.g., for tracking foot exams and educational activities)
- Information technologies that simplify and ultimately eliminate the need for manual chart review, and which provide the ability to track and act on population and patient profiles, report on provider performance, and improve clinical, functional, satisfaction, and financial outcomes

The bottom line is that 21st century diabetes care should result in health improvement, including reductions in mortality rates, complication rates, and costs, and improvements in functional status, quality of life indicators (e.g., fewer missed work or school days), satisfaction, and medication compliance. In short, this next-generation care should result in a reduction in the “five D’s”—death, disease, dissatisfaction, disability, and discomfort.

Conclusion

As the proceedings from this conference should make clear, there is much that can be done to improve the care of patients with diabetes. Through comprehensive, coordinated, proactive interventions by both providers and health plans, individuals with diabetes will be able to manage their disease successfully, thus avoiding costly complications that can lead to acute episodes and hospitalizations. Such efforts not only make good business sense for providers and health plans (since they result in lower costs), they also improve the quality of life for the millions of individuals suffering from diabetes. In sponsoring the August 4-5, 1999 meeting and this summary report from that gathering, AAHP, HCFA, and the ADA hope to begin to provide some of the tools needed to actualize the potential for improvement.