EFFECTIVE CLINICAL PRACTICES IN MANAGED CARE: FINDINGS FROM TEN CASE STUDIES

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AVAILABILITY OF HEALTH PLAN SUMMARY REPORTS

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EXECUTIVE SUMMARY

Despite research findings showing that managed care can improve the quality of health care, much of this opportunity remains unfulfilled (Miller and Luft 1994, 1997). One indicator of this gap between the present and the possible is to be found in the large variations in the clinical performance of managed care plans (NCQA 1999; NCQA 1998; State of New York 1999). Little is known about which of many practices intended to improve quality of care actually lead to superior performance. This is one of the questions we must answer if we are to move health care toward our best understanding of the ideal.

To begin to fill this gap, The Commonwealth Fund supported this study to develop and disseminate information about how some of the nation's high-performing HMOs have achieved their successes, with the hope that other plans would use this information to improve care. This report presents the results of the study, which involved site visits to a diverse set of high-performing health plans. Plans were invited to participate based on their high performance on selected effectiveness-of-care indicators from the Health Plan Employer Data and Information Set (HEDIS[®]).

In brief, we find that factors that contribute to high clinical performance transcend specific improvement activities or programs. Delivering high-quality care is a primary driving force for nearly all the high-performing plans we studied. There is a culture of respect for clinicians in these plans. The plans view their role as assisting clinicians to perform clinical processes better, and use clinicians as important resources for accomplishing quality improvement. The plans also invest in and use clinical data often and appropriately both to manage clinical improvement and to demonstrate it. Many of these plans grew out of outstanding local clinical systems (multispecialty groups or hospital-based systems). It is not necessary to be "born well" in order to achieve high clinical performance, but we found that it might help. Market factors—employers who demanded high quality, and competition from other plans in the market—were important in several instances.

In the study plans, the ability to improve performance was influenced both by the plans' overarching approach to managing care, and by the specifics of their quality improvement efforts. Therefore, we describe a variety of specific clinical improvement activities that plans have undertaken. Although some of the effectiveness of these interventions is related to the factors described above, we believe that a description of such

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efforts is a useful addition to the managed care community's knowledge of potential options for quality improvement.

STUDY METHODOLOGY

Selection of Health Plans

The selection of 10 health plans for study was based on high clinical performance as measured by six HEDIS indicators of effectiveness of care: advice to quit smoking, adolescent immunization, beta-blocker treatment after heart attack, diabetic eye exams, follow-up after hospitalization for mental illness, and postnatal check-ups. These indicators span a variety of aspects of clinical practice, and, for the most part, they have not been the focus of intense public scrutiny. Thus, we reasoned, they are likely to represent the quality of practice across the spectrum of care at a plan.

We designed a methodology that allowed us to rank all 382 managed care plans that publicly reported their data to the National Committee for Quality Assurance's (NCQA) *1998 Quality Compass* database. Working with NCQA research staff, we scored the performance of all publicly reporting plans on each of the six measures, based on their ranking for that measure. Table ES.1 shows how points were assigned for each measure. We then summed the scores and ranked the plans again based on the summed scores. Plans that performed in the bottom quartile on any measure (percentiles included nonreporting plans), or those that reported fewer than four of the desired measures were not eligible for selection. We also considered changes in performance to select several plans that had improved and several that were consistently high performers. Because we sought to select a mix of plan types in varied environments, we considered region, model type, total number of enrollees, and tax status in addition to plans' total score and extent of improvement. Table ES.2 shows the selected plans.

Table ES.1
Point Assignments for Performance
on Quality Measures

Percentile	Points
≥ 95%	7
90%–94%	6
75%–89%	4
50%–74%	3
25%–49%	2
< 25%	1
Missing	2.5

Table ES.2
Selected Plans

Selected Plans	Region	Profit Status	Plan Score[a]	Median Plan Score for Region	Improvement Score[b]	HMO Enrollment	Number of Measures in Top 25% (of 6)
Fallon Community Health Plan	Northeast	NFP	38	20	3	240,000	6
Harvard Pilgrim Health Plan	Northeast	NFP	32	20	0	1.5 million	6
Preferred Care, Inc.	Northeast	NFP	28	20	5	196,000	6
Blue Cross and Blue Shield of Maine	Northeast	NFP	36	20	6	60,000	6
Group Health Cooperative of Puget Sound	West	NFP	33	15	3	654,000	5
Kaiser Foundation Health Plan, Inc., Southern California Region	West	NFP	22	15	2	2.28 million	4
Network Health Plan of Wisconsin	Midwest	FP	29.5	15.8	-1	100,000	5
Touchpoint Health Plan[c]	Midwest	FP	26.5	15.8	-3	125,000	4
PARTNERS National Health Plans of North Carolina	South	FP	18	15.5	2	250,000	2
Scott and White Health Plan	South	NFP	23	15.5	-3	150,000	3

[a] Nationally, the median plan score was 16, the range of scores was 6 to 38, and the 75th percentile was 19.75.

[b] Improvement score was calculated as follows based on plan scores for 1997 and 1998: gain 2 points for increase in total plan score of 5 points or more; lose 2 points for decrease in total plan score of 5 points or more; lose 1 point for decrease in the absolute rate of any measure by 5 percent per measure; gain 1 point for increase in the absolute rate for any measure by 5 percent per measure. The improvement scores nationally range from -7 to 6, with 1 representing the 75th percentile.

[c] Formerly United Health Insurance Company, Inc.

Site Visit Methods

Two-person teams conducted 1½ - to 2-day site visits to the health plans during April and May 1999.[1] Each team included at least one of the principal investigators. We interviewed health plan officials and reviewed selected documentation for each plan. Those interviewed at each plan included senior administrative and medical leaders, quality improvement leaders and staff, and several practicing clinicians. Interviews covered the same topics at all plans, using an interview guide based on a conceptual framework that we developed. The framework recognizes that clinical performance results from an interaction of controllable and uncontrollable factors, and that we must interpret our findings in light of the managed care organization's structures and processes and in the context of its environment. We view the environment as including clinical, social, and cultural attitudes, as well as the health care business climate.

Strengths and Limitations

The strength of the case study method in the hands of knowledgeable researchers and with a well-planned study process, is its strong ability to explore complex questions and relationships like those studied here. Further, the major findings of the study were highly consistent across the study plans, and across respondents and documentation within the plans. However, several limitations exist. Because we selected only high-performing plans for study, we are not able to compare the actions and characteristics of high- and low-performing plans. It may be that low-performing plans are similar in many respects to high-performing plans in ways that we cannot identify in this study. Also, the sites were limited in number and not randomly selected from a population of interest, and thus cannot be assumed to be representative of all high-performing health plans. Because several of the plans we visited were facing major organizational changes, we cannot say whether their organizational characteristics, programs, or even their high performance will be maintained in the future. We can say with confidence that this study has resulted in a coherent description of a sample of plans whose common denominator was excellent performance on a set of clinical HEDIS measures.

FINDINGS

Factors That Contribute to High Clinical Performance

The following four factors contributed consistently to high clinical performance in at least eight of the 10 plans:

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[1] This was true for nine of the 10 plans. The equivalent of a day of interviews at the tenth plan was conducted by telephone in September 1999.

1. A strong working relationship with the plan's physicians,

2. Quality-focused leadership, culture, and values,

3. A high-quality physician practice base in the delivery system, and

4. An emphasis on the use of data and analysis in clinical improvement activities.

Each of these factors is discussed more thoroughly below. Three other factors were important at a number of the plans: (1) the plan's history and origin—e.g., several plans originated from high-quality medical groups or hospital systems; (2) the plan's structure—e.g., whether it was integrated with a core delivery system; and (3) market factors—employer demands and competition, which were strong motivators for improving quality in four plans. In addition, all the plans we visited had instituted many specific clinical improvement initiatives, and some of these initiatives had worked to improve quality in the context of the other factors noted above.

Strong Working Relationship with Physicians

Plan administrators in our study plans treat physicians with respect and regard them as significant stakeholders and partners. In many cases (six of the 10), plans had emerged from existing medical groups or integrated delivery systems with an existing reputation for high quality. Thus, a shared history appeared to promote the respect and continuing partnership that we observed.

Senior leaders frequently expressed the view that excellent physicians are major assets of the plan. Many also explained that because physicians as a group naturally desire to excel, they simply need information and support to improve when performance is suboptimal. Senior leaders in all the plans expressed a desire to support rather than control the clinical process. For example, each of the study plans adopted practice guidelines, but the guidelines were viewed as advisory, or were implemented in a manner that was responsive to concerns about extenuating circumstances. Many plans provided examples of how their utilization-management practices, authorization procedures, and avenues for provider appeal are designed to create minimal hassle, to be viewed as (and to be) clinically oriented rather than as matters of administrative control, and to allow frustrated providers to be heard. Also of note, the high-performing plans actively work to support the clinical process. They involve physicians (as well as other clinicians) as they develop information, practice tools, and programs designed to support clinical improvement at the

practice level. We found several styles for involving physicians and working with them to improve clinical quality at the practice level:

- **Individual efforts by medical leaders or leading physicians who represent the plan.** Having a highly respected member of the physician community represent the plan to other physicians by speaking about clinical improvement data and strategies is an effective means for encouraging improvement, we heard. At one plan, the medical director himself had acquired a reputation as a leading clinical voice; when he presented performance data that contrasted a clinical practice's performance with that of its peers, there was immediate buy-in from the practice's physicians. Other plans told us of the importance of using one or more clinical leaders with good reputations in targeted areas to lead implementation of related clinical improvement strategies, and to interact with many groups of physicians during the implementation process.

- **Management structure and process.** At two predominantly group- or staff-model plans, administrators use the management structure and process to build and reinforce strong working relationships with physicians while achieving improvement goals. One plan's strategy integrates clinical departments with site management. Other group- or staff-model plans use individual goal-setting sessions between clinical leaders and clinicians as well as annual reviews to discuss appropriate clinical improvement goals based on quality and other performance data. Network and IPA-model plans we visited typically include clinical improvement goals and best practices on the agenda at periodic meetings of physicians in their networks.

- **Committees.** Most of the plans we visited use health improvement committees in some form in important roles to effectively target and shape the plan's clinical improvement activities. The committees generally include a coordinating committee and several others formed around a broadly defined clinical area targeted for improvement. Physicians, along with members of other disciplines, are important participants. Such committees are yet another way to use clinicians as important resources in quality improvement efforts.

We consistently heard that good working relationships with physicians had contributed to these plans' high performance. However, at the time of our visits, three of the 10 plans were experiencing some degree of strain in their physician relations stemming from the plans' recent financial problems and subsequent responses. Because of the

newness of the problems, any downstream effects on quality would not yet have appeared in the plans' performance data at the time of our visit. Thus, we could not examine whether or to what extent disturbances in physician/plan relations and business practices might affect quality.

Leadership, Culture, and Values

Respondents at nine of the 10 plans stated that the desire to provide high-quality care is a primary driving force for the plan. Plans' history of clinical improvement and current investment in efforts and staff to improve quality supported these claims, particularly given the presence of strong working relationships with physicians discussed above. Also, our in-depth interviews with quality improvement staff suggested that improvement efforts were pursued in a collaborative environment where commitment to excellent job performance was the staff norm.

Interviewees were also asked to complete a survey to further define the plans' leadership, culture, and values. When staff members were asked to rank plan priorities in 19 listed areas, the highest priorities included quality of care, NCQA accreditation, patient satisfaction, and HEDIS performance. External rankings (e.g., popular press rankings) and guideline development and implementation were among the lesser priorities. When presented with the question of whether the plan would be willing to spend money to improve clinical performance given a scenario of sub-par performance but where the plan could not recoup its costs, 95 percent of respondents said they would choose to spend money to improve performance.

Underlying Quality of Physician Practice in the Delivery System

The underlying quality of physician practice in the plan's delivery system is another factor that contributes to high performance. Six of the study plans originated from medical groups or systems with existing reputations for high quality. Also, executives of two plans believed that the high quality of their IPA-type provider networks had contributed to their superior performances. They explained that the medical teaching institutions in their areas are highly ranked nationally, and that their contracted providers' continuing involvement in teaching activities keeps them current on the latest medical thinking. Three other plans also had relationships with academic health centers that may have contributed to their high performance.

Emphasis on Data and Analysis

All the plans we visited place a heavy emphasis on generating and using quality-of-care data and analysis for clinical improvement. In nearly all the plans, data and analysis capability had been a point of emphasis for many years—at least since 1993 when plans

first began to produce HEDIS data—and in all cases the capability had improved over time. The plans use quality measurement and analysis to identify clinical areas on which to focus improvement strategies, to monitor improvements in care and outcomes as initiatives are implemented, and to support key quality indicators data feedback to providers at the group and individual level. Typically, the definition of key quality indicators is based largely, but not wholly, on HEDIS measures. The 10 plans use varying methodologies for tracking and all monitor key quality indicators at least annually.

The plans' corporate commitment to quality measurement and analysis was expressed repeatedly in the interviews and shown in other ways. Many had hired staff with training and/or prior experience in health data analysis, including masters-prepared staff and epidemiologists. Many of the plans had invested in substantial initiatives to improve clinical data quality or analysis capability. These efforts ranged from a major system overhaul to create a data warehouse, to developing disease registries that would provide improved quality-of-care data to support disease management programs. Interviewees at all the plans explained how they used quality-of-care data and analysis throughout the regular cycle of quality improvement efforts.

Not surprisingly, the plans also use data and analysis to demonstrate high performance. The plans we visited devote intensive effort to the annual HEDIS process and most had worked to refine this process over several years. Techniques included increasing the rigor of training for abstractors, improving specific fields on the abstraction instruments to reduce input error, and allowing time in the data collection process to locate documentation for members whose missing service information was contributing to lower scores.

Clinical Improvement Strategies

The plans use various types of clinical improvement strategies, including those that are clinician-focused, member-focused, and cross-cutting (Table ES.3). The mix of strategies varies by plan and by clinical area; often, plans use a set of strategies, rather than a single one, to improve care in the highest priority clinical areas.

In addition to the design of the initiatives, the method for implementation and the context are also important. Accurate data and analysis are often a key to the successful strategy design. Many plans emphasize a partnership approach: Traditionally, they had partnered with their clinicians to implement these initiatives; increasingly, they were expanding on this approach by seeking external sources of funding (e.g., from foundations

or pharmaceutical companies) and partnering with universities, corporations, and employers as well.

Table ES.3
Common Types of Strategies for Clinical Improvement

Clinician-Focused	Practice Tools	Enhanced Roles for Nurses and Office Staff
	Guideline Dissemination	
	Feedback to Clinicians on Performance Measures	
Member-Focused	Reminder Calls and Educational Mailings and Materials	Condition-Specific Case Management
		Educational Programs
Cross-Cutting	Disease and/or Population Registries	Reminder Systems
	Plan Policies, Benefits, Incentives	

Key themes that emerged in the study about the use of clinical improvement strategies include the following:

- Successful clinician-focused strategies were developed using highly respected clinicians to shape and implement initiatives that were both feasible and useful. Performance feedback to clinicians can be powerful when well done, we observed. It must be accurate and clinicians must view it as credible. In general, this required a specific internal marketing effort to promote the credibility of performance data. Many plans focus clinicians' attention on the data through token financial incentives applied to performance, discussion of group performance among peers, one-on-one discussions between clinicians and a medical leader, and the publication within the plan of data on individual or practice performance. In part, the success of clinician-focused strategies lies in harnessing the competitive aspects of the medical culture at their plans, we were told.

- Member-focused strategies are increasing in number and emphasis, particularly among plans whose provider networks are expanding or are loosely structured and shared with other plans. Typically, the study plans developed "home-grown" member education and care management strategies rather than contracting for or buying ready-made ones. Plan executives cited concerns about incompatibility with external systems and people as well as cost issues as reasons for this approach.

- Interviewees at plans with two types of cross-cutting strategies—1) disease or population registries, and (2) careful processes for aligning benefits, policies, and

incentives with other strategies—strongly believed these had improved clinical performance. Disease registries—accurate databases with person-specific information about members with certain conditions—generated accurate data to support improvement. Clinicians valued the registries, and those whose offices could connect electronically to the registries used them directly to support patient care.

CONCLUSIONS

1. **High-performing plans value and invest in quality and partner with clinicians to improve member health. The factors contributing to their high performance transcend specific improvement activities.**
The administrations of nine of the 10 plans studied regard the use of their data, organizational, and financial resources to partner with clinical leadership to improve the health of their members as a major aspect of their roles. The tenth plan had recently undergone a major change in its provider contracting arrangements and was coincidentally shifting from a more heavy-handed approach to a partnership with clinicians. We attribute its high performance largely to the high quality of the physician practice base in the community. We found evidence that clinical improvement initiatives in the study plans had contributed to improved performance in some of the clinical areas they targeted, but also that a supportive corporate environment contributed to the initiatives' success.

2. **Plans in areas with a high-quality provider practice base, and those that are closely affiliated with a high-quality medical group or system, have a major performance advantage over plans that must improve performance beginning from a low level.**
We found that the underlying quality of provider practice was a major factor contributing to high performance in most of the study plans. This supports the idea that the wide geographic variations in clinical practice quality help explain why plan performance varies so much across plans and regions. Therefore, if plans' contributions to quality improvement are to be recognized, a plan can perhaps best be judged by comparing its performance with that of its regional peers, and with its own previous clinical performance.

3. **Findings about the keys to achieving high performance are similar across regions.**
Our findings were surprisingly consistent across different markets and regions. In several markets, employer demands and competition were important motivators for

performance improvement. But the way the plans pursued improvement—through multiple types of strategies embedded in a supportive corporate culture with strong clinician relationships and an emphasis on data—was essentially the same in nine of the 10 plans.

4. Ranking plans within regions based on a composite score drawn from HEDIS effectiveness-of-care measures serves as a useful tool for identifying high-quality plans.

   The plans we selected based on high performance on a set of six HEDIS effectiveness-of-care measures were organizations that valued and invested in quality. They also demonstrated high performance on indicators other than those used to select them. In most cases, these plans were recognized by the popular press and through NCQA accreditation as high-quality plans regionally and/or nationally. Six of the 10 plans were recently identified as among the first 40 plans nationally to receive NCQA's new "excellent" rating. Of the remaining four plans, all are accredited, three with "commendable" and one with an "accredited" rating.

5. Data capability is important to performance, not just a way for plans to "test well."

   The study plans all had a respect for data and invested in data infrastructure. Many of these plans used data for strategic planning, for feedback to physicians or groups, and to shape and monitor specific quality improvement initiatives. Because of the importance of data to how these plans worked to improve, as well as to demonstrate quality, we do not believe that plans that perform poorly across many measures would prove equally high-performing if only their performance were better measured. However, we recognize that it is likely that some amount of the variation in HEDIS performance among plans nationally does represent variability in data integrity and completeness.

DISCUSSION

Health plans with loose provider networks that did not evolve from a high-quality medical group or hospital system often face greater challenges than many of the study plans in developing the strong working relationships with clinicians and other quality-related characteristics noted above. However, several study plans had improved performance in their loose networks, so overcoming these challenges appears feasible. The only major difference in types of improvement strategies these plans used when pursuing improvement in their loose networks was a higher emphasis on member-focused strategies relative to clinician-focused strategies. Overcoming the challenges of loose networks is an

important issue that merits more study.[2] However, in general, we believe that future study is most likely to identify more specific ways of implementing our findings rather than identifying different keys to success.

Our study has a limited scope. It does not, for example, examine the important relationship between cost and quality. For example, we cannot say whether these plans' investments in quality harmed them financially or what they cost consumers in terms of higher premiums. However, we did review plan data on administrative costs and profit margins for 1997, the year used to assess performance levels for the study, and in each case the indicators for the study plans looked the same or better than those of the other plans in the region.

Also, by design, we set out to learn from high-performing plans only. Because we did not study lower-performing plans, we are unable to assess whether they are attempting to pursue similar strategies. If they are, why are they having less success? Although this is a significant question, we do not see a need to delay action while pursuing an answer. Table ES.4 suggests questions that plans may want to consider as they work to improve clinical performance. We would encourage plans to use our findings to examine their strategies and level of corporate support for clinical quality, and to pursue improvement by adopting, adapting, and/or refining many of the strategies discussed here in the spirit of continuous improvement.

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[2] Due to limitations in the data available at the time of plan selection, our study included only two plans whose provider networks were primarily loosely structured. Although we also sought insights from all the mixed-model plans about how to translate success from their group- or staff-model component into their network component, these plans had struggled with this issue and hoped others would have found easier ways to foster improvement in loose networks.

Table ES.4
Questions Plans May Want to Consider as They Work to Improve Clinical Performance

I.   How solid is the plan's foundation for quality?

 • Does the plan's leadership and organizational culture clearly convey the message that high quality and pursuit of excellence are valued?

 • Does the plan have strong and collaborative relationships with clinicians?

 • Are practice guidelines used as the basis for clinical improvement efforts and measures?

 • Are the plan's data systems and staff capacity and skills sufficient for generating and analyzing clinical data?

II. To what extent does the plan have an effective overall approach to clinical improvement?

 • Are clinical data being effectively used across the full span of clinical improvement activities, from agenda setting to shaping initiatives to monitoring and demonstrating improvement?

 • Is the mix of strategies being used to address high-priority clinical areas effective and appropriately matched to the plan's strengths?

   — Are high-priority areas being addressed from multiple vantage points?

   — Do clinical improvement strategies take advantage of variations in performance within the plan's provider network, allowing low performers to meet and learn from high performers?

   — Do the short-term improvement strategies play to the particular strengths of the plan? For example, in the short term, it may be more effective for plans without strong provider relations to emphasize improvement strategies that focus on members, that are aligned with physician preferences, or that are cross-cutting, rather than emphasizing strategies that directly ask clinicians to change behavior.

 • How carefully aligned are plan policies, benefits, and incentives with clinical improvement efforts?

III. Do specific improvement strategies capitalize on current thinking?

 • Has the plan considered establishing disease or population registries for high-priority conditions?

 • Are the performance data that are fed back to clinicians as powerful a clinical improvement tool as they might reasonably be?:

   — Do clinicians view the data as credible? Has an effort been made to convince clinicians that the data are credible?

   — Are the performance data that are fed back to clinicians sufficiently specific that clinicians can use them to identify actionable implications?

   — Are benchmarks provided for comparison, and are these ones the clinicians view as relevant? For example, clinicians may find performance results for practices within the plan to be more useful than results for other plans or regions, though all may be useful to present.

   — Is the plan using any of the following techniques to draw clinicians' attention to the data:

     – Small group discussions with clinicians about the data that would be led by plan medical leadership or prominent clinicians in the community

     – Token financial incentives associated with performance on clinical measures

     – Personalized letters to clinicians or individual discussions with medical management about clinical performance

     – Making the data "public to peers" to facilitate communication between high and low performers

 • Is the plan developing member education and other member-focused strategies for the 21st century? Examples include (1) libraries of health information that enrollees can access directly, such as audiotape libraries or websites, (2) strategies that offer members effective programs for managing their conditions, through linking them to reviewed community-based efforts, or more directly through plan partnerships, and (3) "birthday card" reminders to obtain preventive services.

EFFECTIVE CLINICAL PRACTICES IN MANAGED CARE: FINDINGS FROM TEN CASE STUDIES

I. INTRODUCTION AND METHODS

A. Introduction

Despite research findings showing that managed care can improve the quality of health care, much of this opportunity remains unfulfilled (Miller and Luft 1994, 1997). One indicator of this gap between the present and the possible is to be found in the large variations in the clinical performance of managed care plans (NCQA 1999; NCQA 1998; State of New York 1999). Little is known about which of many practices intended to improve quality of care actually lead to superior performance. This is one of the questions we must answer if we are to move health care toward our best understanding of the ideal.

To this end, The Commonwealth Fund supported this study to develop and disseminate information about how some of the nation's high-performing HMOs have achieved their successes, in the hope that other plans will use this information to improve care. This report presents the results of the study, which involved site visits to a diverse set of high-performing plans. The team selected 10 HMOs for the study and visited them during 1999. These plans were invited to participate based on their performance on selected effectiveness-of-care indicators from the Health Plan Employer Data and Information Set (HEDIS®).

B. METHODOLOGY

Our specific interest was to learn how HMOs work with other factors to produce high quality care. Existing conceptual frameworks were insufficient to this goal. Therefore, we developed a conceptual framework to guide our study design (Figure I.1).

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Figure I.1
Conceptual Framework

Environment

| Market characteristics |
| Organizational history |
| Financial resources |
| Community resources |

Health Plan

Features and Behavior

| Selection of providers |
| Incentives and coverage |
| Information |
| Requirements |
| Action-oriented programs |
| Leadership and organizational culture |

Plan Infrastructure

| Provider capacity and location |
| Plan staffing |
| Computer systems |
| Other systems |

Other Intrinsic Influences
(attitudes, health status, special needs)

Provider behavior
Patient behavior — Process of Care
System/Technology

Clinical Outcomes for Enrolled Population

Other External Influences
(competing incentives or demands,
public health or
other program supports)

At the center of the framework is the process of care, which, with a set of individual or *intrinsic* factors, determines health outcomes. (Intrinsic factors include the attitudes of patients and providers and the health status and special needs of patients.) The health plan influences the process of care through such actions as provider selection, incentive and coverage decisions, action-oriented program implementation, and computer system design. These features are themselves influenced by other factors—e.g., market characteristics, the organization's history, and its financial resources. Thus, as the framework shows, both the health plan and the care process are subject to the dynamics of a larger environment. This includes market conditions; the history and relationships that exist among health plans, providers, and others; the composition of the patient and clinician populations; and the local health care milieu (including local or regional public health activities).

1. Selection of Plans

The study design called for site visits to 10 managed care plans that demonstrated outstanding clinical performance. We sought a geographically diverse set of plans with varying organizational characteristics (e.g., ownership, size, tax status). We planned to

select at least three plans that had shown substantial improvement from reporting year 1996 to reporting year 1997. We used quantitative methods to inform the selection process, though selection was ultimately a qualitative process aimed at balancing the desirable characteristics noted above to obtain a diverse set of high-performing plans for study.

We used plan performance on selected quality indicators from HEDIS as the basis for identifying high-performing plans. HEDIS, the only widely used national data set that measures clinical performance in managed care plans, consists of dozens of performance measures with clearly stated technical specifications in the following domains: effectiveness of care, access/availability of care, satisfaction, use of services, organizational characteristics, and cost. In 1998, 382 plans allowed their data (collected during reporting year 1997) to be reported publicly as a part of NCQA's *Quality Compass.* We used *Quality Compass* data for certain effectiveness-of-care measures to select our sample from among these publicly reporting plans.

We first identified the following six clinical HEDIS measures that spanned a variety of aspects of practice: advice to quit smoking, adolescent immunization, beta-blocker treatment after heart attack, eye exams for diabetics, follow-up after hospitalization for mental illness, and postnatal check-ups. These measures represent several important aspects of clinical care, as shown in Table I.1. Many of these measures also had the advantage of being relatively new and less likely to be the focus of intensive health plan efforts, and thus may be more likely to be representative of practice across the spectrum of care at the plan.

Table I.1
Aspects of Care Covered by Selected HEDIS Measures

Aspects of Care	Selected HEDIS Measures					
	Advice to Quit Smoking	Adolescent Immunization	Beta-Blocker Treatment After Heart Attack	Diabetic Eye Exams	Follow-up After Hospitalization for Mental Illness	Check-ups After Delivery
General adult practice	X		X	X		
Reproductive health						X
Adolescent health		X				
Primary prevention	X	X				
Tertiary prevention			X	X		
Care for people with chronic illness			X	X	X	
Care for people with acute manifestations of illness			X		X	
Continuum and comprehensiveness of an episode of care			X		X	X

[a] MMR and hepatitis B vaccine.

Next, we developed a methodology to create a summary score from these six measures. Each plan received a score for each HEDIS measure based on how it performed relative to other plans (see Appendix A for details). We also:

— screened out plans that did not report four or more measures in 1998,

— screened out plans that performed in the bottom quartile on any measure, and

— calculated an improvement score for each plan, based on the change in its performance from the previous year, in order to include plans that had shown improved performance as well as plans that were consistently high performers.

We decided to select plans for this study that were geographically dispersed, rather than simply selecting the plans that performed best nationally. Had we selected the 10 top-performing plans nationally, seven would have been from the Northeast. We were not surprised that managed care plans in different environments achieved differing levels of performance, given our conceptual framework and the likelihood that those factors would differ regionally. It may be reasonable to expect that it is a managed care plan's first responsibility to improve the way that care is delivered to its members relative to its peers and local competitors. Therefore, to select at least two plans from each geographic region,[3] we generated a series of four regional lists of the plans that met the eligibility criteria, in descending order of overall score.

We identified 10 plans and an alternate for our sample. One of the plans had new ownership and declined to participate, so the alternate was included in our study. The study included four plans from the Northeast and two plans from each of the other three regions. The 10 plans that we visited had scores that ranged from 18 (South) to 38 (New England) out of a possible 42 points. Nationally, the range of scores was 6 to 38, the median score was 16, and the 75th percentile was 19.75. Six of the 10 plans had improved based on our improvement scoring method. The characteristics of the study plans are described further in Section C below.

2. Site Visit Methods
Nine of the 10 site visits involved one-and-a-half to two days of interviewing at each site by two researchers, including at least one of the principal investigators, during April and May 1999. The tenth plan received an abbreviated "visit" consisting of a day of interviews

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[3] As defined by the U.S. Census Bureau.

conducted by telephone during September 1999. The topics we covered with each plan are outlined in Table I.2. We used a semistructured interview protocol as a guide.

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Table I.2
Outline of Topics Covered on Site Visits
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1. Background information about the plan and its market environment

2. Current emphasis, strengths, and challenges of plan's efforts to improve clinical quality in past few years

3. Quality management (QM) program:

    a. Brief history, current emphasis, strengths, and challenges
    b. Quality improvement initiatives under way
    c. For selected initiatives, description of the initiative, implementation process, and lessons learned

4. Provider-related topics:

    a. Services and information extended to support providers in delivering high-quality care (feedback of information, educational efforts, other tools)
    b. Clinical practice guidelines
    c. Relationships between providers, medical director, and nonclinician decision-makers at the plan
    d. Selection of providers: anything about recruitment that might result in a provider network with generally better-quality clinicians than other plans
    e. Plan physicians' involvement with and perception of QM, and other plan services and information
    f. Identification of HMO systems that assist clinical performance (from the physicians' perspective)

5. Organizational culture and leadership, including perception and effect of organizational culture on quality, leadership style, and attitudes toward innovation and risk

6. Other topics:

    a. Financial incentives (if any) related to quality of care
    b. Generating and disseminating HEDIS measures
    c. Plan's philosophy on utilization management and how it relates to quality management

At each site, we interviewed senior health plan leadership (e.g., chief executive officer, chief operations officer, and medical director), several practicing clinicians, quality improvement leadership and staff, and other staff as appropriate (e.g., information systems staff, marketing director, and member education specialist). We also reviewed selected documentation, typically including:

- Quality management program description,

- The plan's self-evaluation of its quality improvement program,

- Any plan-generated HEDIS report,

- Materials relevant to specific quality improvement programs,

- Examples of information feedback to providers, and

- Mission statements and marketing materials.

Following each visit, we prepared a site visit summary based on our notes (typically 15–20 pages). All the plans reviewed and commented on these summaries.

To supplement the interview information, we developed a survey on the subject of organizational leadership, culture, and values. Generally, we provided the survey to everyone we interviewed at the plans. Most questions were closed-ended. Respondents were allowed to remain anonymous and mail back their surveys. A total of 75 were returned including nine from senior executives (non-MDs), 12 from senior MDs, four from other MDs, and 15 from quality improvement staff. Every plan returned at least three surveys and seven plans returned from eight to 12 surveys each. The surveys capture the views of respondents about their organization's leadership, culture, and values in a standardized, rather than conversational, manner.

3. Strengths and Limitations

The strength of the case study method, when paired with knowledgeable researchers and a well-planned study process, is its ability to explore complex questions and relationships like those studied here. The major findings of the study were highly consistent across the study plans, and across respondents and documentation within the plans. We therefore believe that the study has produced both useful information and a good foundation for future research. We note that as with any case study research, the analysis and synthesis of information collected on site is sensitive to the experience and talent of the researchers.

Several limitations exist. Because only high-performing plans were selected for study, we are not able to compare the actions and characteristics of high- and low-performing plans. It may be that low-performing plans are similar in many respects to high-performing ones, except for some distinguishing characteristic that we cannot identify. Also, the sites were limited in number and not randomly selected from a population of interest, and thus cannot be assumed to be representative of all high-

performing health plans. Because several of the plans we visited were facing major organizational changes, we cannot say whether their organizational characteristics, programs, or even their high performance will be maintained in the future.

C. OVERVIEW OF THE SELECTED PLANS

In addition to being higher-performing plans, the study plans differ from the population of HMOs nationally in other important ways, as shown in Table I.3. The study plans are larger, older, more concentrated in the Northeast (though there are at least two in each region), more often nonprofit, and apparently more integrated with their delivery systems than HMOs nationally. Although additional, quantitative study would be needed to confirm this, we suspect from the data we reviewed informally during the selection process that our plans are roughly representative of high-performing plans nationally. That is, high-performing plans are found with a wide range of characteristics (as the diversity of our study sample indicates), but they may more often be larger, older, nonprofit, and more integrated with their delivery systems.

Table I.3
Organizational Characteristics of Study Plans

Characteristics	Number of Study Plans (of 10)	Percentage of All HMOs Nationally	Percentage of Enrollment in HMOs Nationally
Total HMO Enrollment			
<100,000	1	70	20
100,000–199,999	4	17	21
200,000 or more	5	13	60
Plan Age			
<10 years	0	40	13
10 to <20 years	5	48	56
20 years or more	5	11	31
Region			
Northeast	4	16	26
West	2	19	30
South	2	36	26
Midwest	2	28	19
Tax Status			
For Profit	3	74	63
Nonprofit	7	26	37
Model Type			
Staff	0	2	1
Group	2	4	11
IPA	2	49	43
Network	2	12	7
Mixed	4	33	39

Source: National data from InterStudy Competitive Edge 8.2 Part II: Industry Report, using data as of January 1, 1998. Data on study plans from InterStudy Competitive Edge 8.1 HMO Directory, confirmed by the plans.

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II. FACTORS THAT CONTRIBUTE TO HIGH CLINICAL PERFORMANCE

Four factors contributed to high clinical performance consistently and across nearly all the plans we visited:

(1)   a historically strong working relationship between the HMO and its physicians, often a formal or informal partnership relationship;

(2)   the HMO's leadership, culture, and values, all of which strongly supported quality of care as a central part of the plan's mission;

(3)   the underlying quality of physician practice in the delivery system; and

(4)   an emphasis on the use of data and analysis in clinical improvement activities.

Three other factors were very important at a number of the plans we visited:

(1)   the plan's history and origin (e.g., several plans originated from a high-quality medical group);

(2)   the plan's structure (e.g., whether it was integrated with a core delivery system); and

(3)   market factors—employer demands and competition.

In addition, all the plans we visited had many specific clinical improvement initiatives in place and at least some of these initiatives seemed to work to improve quality within the context of the other factors.

Thus, high clinical performance in each plan appeared to be the result of several factors working together over time. Some of these factors are interrelated—for example, in plans that originate from a high-quality medical group, strong physician relationships occur naturally. Similarly, such plans enjoy an underlying high-quality provider base. Thus, the plan's history, structure, and environment, as well as its leadership shaped the exact constellation of factors that were important at each plan.

A. WORKING RELATIONSHIPS WITH PHYSICIANS

We identified strong working relationships with physicians as a key success factor at the high-performing plans. The physicians in the study plans are treated with respect and regarded as significant stakeholders and plan partners. In fact, nine of the 10 plans view assisting clinicians to perform clinical processes better as a primary component of their own role.

These plans' business practices appeared consistent with their statements about the value they place on physicians. That is, one of the most striking observations from our site visits was the absence of management desire to control the clinical process. Our readings of the popular and professional literature had led us to expect that one strategy of successful managed care plans would be to reduce clinical variations in practice by controlling clinical decision-making. However, this did not appear to be the case at the study plans. For example, while all the plans we visited had adopted practice guidelines or other forms of practice parameters, plan administrators often viewed them as advisory for physicians rather than controlling. Parameters that were controlling had been implemented in a collaborative, collegial manner that allowed for identification of extenuating circumstances that could override the guideline. Many plans provided specific examples of how their utilization management practices, authorization procedures, and avenues for provider appeal are designed to create minimal hassle, to be viewed by clinicians as (and to be) clinically oriented rather than as matters of administrative control, and to allow frustrated providers to be heard.

The high-performing plans also work actively to support the clinical process. They involve physicians (as well as other clinicians) as they develop information, practice tools, and programs designed to support clinical improvement at the practice level. We found several styles for involving and working with physicians. They include:

Individual efforts by medical leadership or leading physicians who represent the plan. An effective means for encouraging improvement, we heard, is to have a highly respected member of the physician community represent the plan to other physicians by speaking about clinical improvement data and strategies. At one plan, the medical director himself had acquired a reputation as a leading clinical voice; when he presented physicians with performance data on each clinical practice that compared their performance with that of their peers, there was immediate buy-in. Administrators of other plans told us of the importance of using one or more clinical leaders with good reputations in targeted areas to lead implementation of related clinical improvement strategies, interacting with many groups of physicians during the implementation process.

Management structure and process. Two predominantly group- or staff-model plans use the management structure and process to build and reinforce strong working relationships with physicians while achieving improvement goals. One plan integrates clinical departments with site management. Each site has clinical department heads, and the plan also has overall department chairs. Each site is responsible for achieving specific performance goals and each local chief is accountable for departmental performance. Innovation is encouraged, as is the sharing of successful practice improvement models. The plan also uses mentoring of and feedback to new physicians as a way to help promote a culture of physician self-management; this keeps the interests of the plan and physicians well aligned. Other group- or staff-model plans use individual goal-setting sessions between clinical leaders and clinicians, as well as annual reviews, to discuss appropriate clinical improvement goals based on quality and other performance data. Network and IPA-model plans we visited typically include clinical improvement goals and shared best practices on the agendas of periodic meetings with network physicians.

Committees. Committees are yet another way plans use clinicians as important resources to accomplish quality improvement. Most of the plans we visited use health improvement committees in some form to effectively target and shape the plan's clinical improvement activities. The committees generally include a coordinating committee and several others formed around a broadly defined clinical area targeted for improvement. Physicians and members of other disciplines are involved as important participants.

The origin of many of the plans helps to explain the basis for the close relationships with plan physicians. In many cases (six of the 10), plans had emerged from existing medical groups or integrated delivery systems with a reputation for high quality. Thus, a shared history appears to promote the respect and continuing partnership that we observed.

We consistently heard that good working relationships with physicians had contributed to these plans' high performance. However, at the time of our visits, three of the 10 plans were experiencing some degree of strain in physician relations that stemmed from the plans' recent financial problems and subsequent responses. Because of the newness of the problems, any downstream effects on quality would not yet have appeared in the plans' performance data. Thus, we could not examine whether or to what extent disturbances in physician/plan relations and business practices might affect quality.

B. LEADERSHIP, CULTURE, AND VALUES

The recent prominence of total quality management (TQM) has renewed interest in the articulation of organizational values, often in the form of a mission or vision statement.

One definition of organizational culture is that it consists of the common beliefs, understandings, myths, and expectations that define the milieu in which a leader operates and an organization performs. Increasingly, the role of leadership is coming to be recognized as critical to defining the performance of organizations in general, and health care units in particular, as they pursue their missions. We hypothesized that organizational leadership, culture, and values would contribute to plan performance.[4]

Our site visits confirm this. Respondents at nine of the 10 plans stated that quality of care is a primary driving force behind the plan. Plans' history of and current investment in clinical improvement efforts support these claims, particularly given the context of the kind of strong working relationships with physicians discussed above. Some plans strongly emphasize the clinical topic areas measured by HEDIS, while others set priorities solely on the basis of internal analyses and considerations. However, none of the plans limits its activities to areas that HEDIS measures. While one medical director noted that HEDIS motivated the CEO to finance the development of a clinical data and quality improvement infrastructure, it was clear that the delivery of quality health care was a central value guiding the operations of nine of the 10 plans. Also, our in-depth interviews with quality improvement staff suggested that improvement efforts were pursued in a collaborative environment where commitment to excellent job performance is the staff norm.

Beyond the consistent statements of those we interviewed, Table II.1 provides some examples of plan characteristics that point to quality as a central value in the study plans; the constellation of evidence was somewhat different in each plan.

Results of the survey we left behind for interviewees to complete help us further describe the plans' leadership, culture, and values from the perspective of respondents. When asked to rank plan priorities in 19 listed areas, quality of care, NCQA accreditation, member satisfaction, and HEDIS performance were rated consistently as high priorities, while external rankings (e.g., *U.S. News and World Report*) and guideline development and implementation were rated as lower priorities. Clinician satisfaction and disease management were viewed as equally important. On the question of whether the plan would be willing to spend money to improve clinical performance given a scenario of sub-par performance where the plan could not recoup its costs, only 5 percent of respondents said they would be unwilling to spend money to improve performance. (See Table II.2)

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[4] We considered culture and values to be closely related phenomenon and did not seek to distinguish between them.

Table II.1
Some Examples of Plan Characteristics That Point
to Quality as a Central Plan Value*

Plan A (IPA-type plan)

Increasing or stable corporate resources over time for very active Health Improvement Department and substantial quality measurement efforts.

Small portion of all plan staff salaries tied to specific clinical and service performance indicators.

Many examples given of changes in business practice to better support quality improvement. Internal workgroups for each clinical priority area work to ensure plan's business practices encourage improvements (they include staff from a range of departments, not just QI).

Highly active quality oversight committee reports to board of directors and is made up of physicians who were formerly board members.

Clinical and service departments both report to a physician (senior vice president of medical affairs).

Health improvement department leadership and staff are well-qualified, energetic people able to clearly explain their initiatives with appropriate documentation.

Plan B (Network-type plan)

Long history of plan medical leadership working with physicians in its core integrated-delivery system to measure quality, discuss standards of care, and use data feedback to foster clinical improvement (specific examples discussed, level of effort was and is substantial).

Plan is involved in community-wide efforts to improve health, together with competing plan, employers, school system, and the area's two major delivery systems (specific activities discussed).

Plan's medical director and three associate medical directors must continue to practice two days per week in part to keep a clinician's perspective.

Hospital that is core of plan's delivery system has been recognized nationally as a high-quality hospital; several plan executives report to both plan and delivery system heads, reinforcing joint plan/delivery system mission of improving health.

Board of directors' Quality Committee (includes providers, employers, consumers) said to provide active oversight, asks tough questions about evidence for proposed approaches for improvement.

* Plans' mission statements and the priorities listed by executives and staff we interviewed also indicated quality is a central value for the plans (for nine of the 10).

Table II.2
Plans' Stated Willingness to Support New QI Initiatives
Under Different Cost and Performance Scenarios

When asked if they would support new QI or disease management initiatives under three clinical and three financial scenarios, the survey respondents replied as shown below. In the three financial scenarios, the initiative was either going to cost money, be revenue neutral, or save money. The three clinical scenarios represented clinical areas for which current performance was believed to be above, at, or below average clinically.

Percent Who Would Support New QI Initiatives:*

If Planned Clinical Performance Is:	Only if Saves $	At Least Neutral	Even if Costs $
Below average	5%	16%	76%
Average	11%	29%	57%
Above average	13%	36%	48%

* Rows do not add to 100% because of missing values.

Highly valued characteristics at each of the organizations include leadership, teamwork, loyalty, and continuous learning. Flexibility and adaptability are more highly regarded than obedience and conformity, and slightly more valued than accountability. Long-range planning is much more highly valued than short-term success. Although respondents report that innovation is valued and failed innovation is not punished, risk-taking is not particularly valued at these plans. The respondents to the survey identified project staff and clinicians as the major sources of good ideas, with senior staff also an important source. Neither regulators nor plan members were regarded as favorably as sources of innovation.

When asked to rate the allocation of funds within the plans for quality improvement activities, medical expenses, quality management activities, and executive salaries, the respondents essentially expressed satisfaction with how the plans are spending money. There was a slight trend among respondents that favored spending more money on quality management and less on direct medical expenses.

Finally, these plan leaders, clinicians, and quality management staff were asked to rank the applicability of a number of descriptions of senior leadership to actual leadership at their organizations. On a scale from 1 (not applicable at all) to 10 (applicable a great deal), two styles were rated above 7: "coaches or develops talent," and "leads through consensus."

The lack of a control group for this study limits the extent to which we can draw conclusions. However, we can contrast the general consistency of our observations across plans with "anecdotal" controls—newspaper and journal reports of doctor and patient

revolts and heavy-handed styles of leadership and/or care management. This exercise suggests that these findings might represent one differentiating factor for plans that perform well on HEDIS measures of clinical quality.

C. EMPHASIS ON DATA AND ANALYSIS

All of the plans we visited place a heavy emphasis on the generation and use of quality-of-care data and analysis for clinical improvement. Our sense was that this emphasis on data and analysis contributes both to the high clinical performance and to the ability to demonstrate it. In nearly all the plans, data and analysis capability had been a point of emphasis for many years—at least since 1993 when plans first began to produce HEDIS data. In all cases, it had improved over time.

1. Corporate Commitment to Quality Measurement and Analysis

All of the plans believe in the importance of quality measurement and analysis. The statement of this belief in our interviews was borne out in several ways. Many of the plans have hired staff with training and/or prior experience in health data analysis, including masters-prepared staff and epidemiologists. Many have invested in substantial initiatives to improve clinical data quality or analysis capability. These efforts range from a major system overhaul to create a data warehouse, to the development of disease registries that provide improved quality-of-care data to support disease management programs. All the plans explained how quality-of-care data and analysis are used in the regular cycle of quality improvement efforts. Plans have also invested heavily in HEDIS data collection and auditing—even before audits were required for NCQA accreditation.

2. The Contribution of Quality Measurement and Analysis to High Clinical Performance

Quality measurement and analysis contributes to high clinical performance in several ways. First, plans use quality measurement and analysis to provide a focus for their efforts, helping to target improvement strategies toward appropriate clinical areas, and to target them more specifically within those areas. For example, descriptive analyses of diagnoses that account for high service use and cost help to target clinical areas on which to focus improvement efforts. Analysis is then used to assess the difference between current practice and a practice guideline for the targeted clinical area, since appropriate targeting of effort is widely believed to be critical to improving performance.

Second, plans use quality measurement and analysis to monitor improvements in care and outcomes as initiatives are implemented, which often triggers adjustments to the initiatives. Typically, the definition of key quality indicators is based largely, but not

wholly, on HEDIS measures. Plans vary widely in the ways they monitor improvement—e.g., the frequency of analysis, the level of aggregation of the data, the data sources—but all monitor key quality indicators at least annually.

Third, several plans measure key quality indicators at the medical group and/or individual practice level. These plans believe that feedback of performance data at that level, accompanied by comparative data, financial incentives, and/or small group discussions with medical leaders, has helped improve care. This strategy is further described in Chapter III of this report. Here we simply note that the results of plan and physician interviews support a relationship between such feedback and improvement, and that often plan performance had improved (sometimes dramatically) over time on the indicators that were being measured and fed back in this way.[5]

3. How Quality Measurement and Analysis Helped Demonstrate High Performance

Most of the plans we visited devote intensive effort to the annual HEDIS process. Most train their own nurse abstractors to conduct the necessary chart reviews (often hiring them temporarily from, for example, a plan's most closely affiliated hospital system) and send them to provider offices to abstract the medical charts on-site. They believe that this process gives them more complete data and supports good provider relations, as opposed to a process in which people with no direct relationship to the plan do the abstracting or provider office staff are obliged to photocopy many records. Plans stressed the importance of beginning this process early, and many allow for time after the initial data collection to take additional steps to find documentation for members whose missing service information is contributing to lower HEDIS scores based on the first run of the data.

Plans had worked to refine the HEDIS data collection process over several years. Examples of methods they used include increasing the rigor of training for abstractors, improving the specific fields on the abstraction instrument to reduce input error, and equipping a central manager with a pager to enable the immediate address of the inevitable questions that come up during abstracting. All take the quality of their data very seriously; several had their HEDIS data audited in 1997, and several more were going through the audit process for 1998 around the time of our visit.

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[5] Often there were several initiatives aimed at improving the same indicators. Our methodology does not allow us to distinguish the effect of this feedback from other factors.

D. THE UNDERLYING QUALITY OF PROVIDER PRACTICE

As noted above, six of the study plans originated from medical groups or hospital systems that had strong reputations for high quality. Therefore, it seems very likely that the underlying quality of provider practice contributes to the high performance of these plans. However, we were unable to distinguish the separate effect that underlying quality might have on performance because this factor was obscured by the years that had passed between the time the plan emerged from the clinic or system and the development of plan/medical group synergy.

In addition to likely effects at the six group or system plans, executives of two plans believed that the clinical performance of their IPA-type provider networks was higher than it would otherwise have been because the physician community was of a particularly high quality. Representatives of both plans explained that the medical teaching institutions in their areas are highly ranked nationally and that their contracted providers' continuing involvement in teaching activities keeps them up-to-date with the latest medical thinking and interested in improving practice. They believe they do well on the HEDIS beta-blocker-after-heart-attack indicator, for example, because teaching institutions have widely disseminated information about the importance of this practice. Consistent with their statements, the other plans in the area with highly overlapping provider networks achieved similarly high HEDIS effectiveness-of-care scores.

E. OTHER CONTRIBUTING FACTORS

1. History and Origin

History and origin contributed to high performance in several interrelated ways for the six plans that originated from a high-quality medical group or integrated delivery system. First, the clinical leadership in high-quality medical groups or systems consists of individuals who care deeply about quality and bring this value to the health plan as it develops. Second, the historical partnerships with delivery system clinicians and personnel paved the way for "buy-in" on plan efforts, and created synergy between plan and delivery system efforts. Having a resource base of interested clinicians with which to work allowed better design and assured effective implementation of plan initiatives. Third, the shared histories of the plans and physicians established trust between the plan and the original delivery system. This trust seems to facilitate less resistance to plan suggestions for change or innovations.

2. Structure

Significant integration between the plans and their core delivery systems gave eight of the 10 plans a clear advantage for improving quality—an advantage that was diminishing for some plans at the time of our visit as they substantially expanded their service areas and

provider networks.[6] The service area expansions were accomplished by contracting with a number of practices that did not necessarily serve many plan members and with which the plans were essentially unfamiliar. In contrast, the integration between the plan and a core delivery system meant several things. First, integration gave both the plans and the clinicians greater incentive to listen to one another and work together for common quality goals. Second, integration most often included computer system compatibility that allowed integrated providers to use intranet-based practice tools and clinical data. Third, because such integrated relationships tend to be long-term and local, they facilitate the trust between the plan and physicians that is an essential part of a strong working relationship.

By integrated, we mean that the plan's enrollees accounted for a high percentage of the business of the medical group or hospital system and that there was an exclusive or near-exclusive relationship between the two for HMO business. In several cases, personnel who also reported to executives in the delivery system filled one or more leadership positions in the plan. Also in several cases, the ownership relationships, though sometimes complex and changing, meant that the delivery system itself or providers who owned the delivery system owned the plan.[7]

3. Market Factors: Employer Demands and Competition

Employer demands and competition helped stimulate the high performance of at least four plans located in three markets. Three of the markets in which study plans are based have certain large employers who demand high performance and, at the same time, fierce competition between two or more high-performing plans. The employers that demand high performance are among the largest accounts of the plans we studied, although a majority of plan enrollees came from other accounts.

In one market area, a large employer had decided to offer an exclusive, five-year contract to the winning HMO. Clinical improvement strategy was an important part of the employer's evaluation of bids, and the fifth year of the contract was dependent upon meeting clinical improvement goals. About one-fourth of this study plan's enrollees are

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[6] Two large plans that had been expanding routinely tracked quality indicators separately for their core delivery system and other parts of their provider network, and reported consistently lower performance outside the core delivery system. The other plans discussed their concerns about this pattern qualitatively.

[7] Neither HMO model-type designation nor ownership information available from secondary sources proved to be a good guide to the degree of integration we found in the selected plans. Three plans that had been labeled network or IPA-model plans in secondary sources were provider-owned and highly integrated with the medical group or system from which the plan originated. Also, ownership information available to us during the selection process did not indicate whether providers owned the plans; if it had, we might have suspected a higher degree of integration. Although they were expanding, the 1997 data we used to select the high-performing plans was still heavily influenced by enrollees within the core, integrated part of these plans' delivery systems.

now in multiyear contracts. The plan regards this as important to its ability to show meaningful improvement and return on investment for many clinical improvement strategies. In this market area, two provider-owned HMOs developed around the two competing delivery systems in the area, one hospital-based and one medical-group based. The strong rivalries of the competing delivery systems—each of which acknowledges that the other is of high clinical quality—carried over into a rivalry between their HMOs.

In a second area, several area employers (Xerox, Kodak, and General Motors) have long been on the cutting edge of private-sector purchasing for value. Plan executives we visited in this market noted that not only must it maintain high performance to retain its contracts with these employers, but also that its performance determines what incentives the employer will give employees to join the plan (employees have multiple plan options). Also in this area, one large employer decided to self-insure, but to contract with a plan for administration of the self-insured product. The request for proposals to administer the product asked how the bidding plan would improve the health of the employees. The HMO we visited won the contract after developing a major plan for clinical improvement tailored to this population of employees. The study HMO has a strong and much larger competitor in the area. We were told that to maintain its patient base in this competitive context, the study plan cannot be perceived as being of lesser quality and thus must continue to demonstrate high performance.

In the third area, employers were said to carefully review the relative performance of plans on HEDIS indicators during the contracting process. The study plan has a long-standing high-quality competitor based in the same area, as well as competition from several other high-performing plans originally based out-of-state that have expanded into the market. In that context, competition to show higher performance than competing plans was fierce.

Competition may have played a role in one additional highly competitive market where plan executives stated that the plan could not afford to be perceived as of lesser quality than its competitors, all of which were high-performing plans. Other factors appeared to be much more important in explaining that plan's high performance, however, including the underlying quality of provider practice.

4. Specific Clinical Initiatives in the Context of Other Factors

All the plans we visited had implemented many specific clinical improvement initiatives. Table II.3 shows the types of programs in place in three or more study plans. A substantial subset of these programs appeared to be improving clinical quality in the targeted areas, based on trends in key quality indicators and the comments of practicing physicians and plan staff we interviewed. More specific information about the quality improvement initiatives is found in Chapter III.

Table II.3
Common Types of Programs for Clinical Improvement
(Three or More Plans)

Disease Management Programs
Diabetes
Asthma
Depression
Coronary Artery Disease
Congestive Heart Failure

Other Health Improvement Programs
Breast Cancer Screening
Cervical Cancer Screening
Immunizations
Pregnancy
Smoking Cessation

The plans we visited had invested sustained energy over a period of several years in clinical initiatives targeting many areas. Every plan we visited had at least two fairly comprehensive disease management programs in place for conditions such as diabetes and asthma, as well as many other condition-specific initiatives ranging from routine reminder systems for mammography and immunizations to comprehensive efforts related to smoking cessation and prevention and pregnancy care. As is further discussed in the next chapter, most of these plans had developed two or more initiatives that addressed a gap in clinical performance through multiple channels—practice tools and group discussions for physicians, training and system-based tools for provider office staff, case management, materials sent to or calls made to members themselves, and changes to plan policies or incentives to promote better practice.

Implementation of the clinical improvement initiatives was neither easy nor universally successful. Overall, however, we found substantial reason to believe that the initiatives had contributed to improved clinical performance in these plans.[8] In many cases, it appears that the other factors we list as contributing to high performance generally (such as relationships with physicians and a culture that supports high quality) also contributed to the success of the initiatives. Therefore, we cannot assume that the initiatives that seemed to be working well in these plans would work as well in plans without the other supporting factors in place.

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[8] Examples of the types of trend data we reviewed on key indicators at the plans can be obtained from Sue Felt-Lisk, Mathematica Policy Research, Inc., 600 Maryland Avenue, SW, Suite 550, Washington, DC 20024.

III. CLINICAL IMPROVEMENT STRATEGIES

This chapter focuses on the clinical improvement tactics that high-performing plans use. We included this focus because some of these strategies appear to be effective or very promising, and they represent a practical way for plans to use our findings to improve care. After an overview of clinical improvement initiatives and ways of implementing them, we present themes from the site visits and observations about each major type of improvement strategy. Appendix B provides selected examples of clinical improvement initiatives in our study plans.

A. OVERVIEW OF STRATEGIES AND THEIR IMPLEMENTATION

Clinical improvement *strategies* are the building blocks of a plan's disease management and other health improvement *programs.* The types of strategies study plans use can best be described as clinician-focused, member-focused, and cross-cutting (Table III.1).[9] The mix of strategies varied by plan and by clinical area; plans often used a set of strategies, rather than a single one, to improve care in the highest-priority clinical areas. While all the plans used all three types of strategies, IPA-type plans tended to emphasize member-focused strategies over clinician-focused ones, and mixed-model plans that originated as highly integrated plans tended to add more member-focused strategies as they expanded. Conversely, plans with more integrated delivery systems relied more on clinician-focused strategies, particularly those that required compatible computer systems.

Table III.1
Common Types of Strategies for Clinical Improvement

Clinician-Focused
Practice Tools
Guideline Dissemination
Feedback to Clinicians on Performance Measures
Leveraging Capabilities of Nurses and Provider Office Staff

Member-Focused
Reminder Calls and Educational Mailings and Materials
   (including "birthday card" reminders)
Educational Programs
Condition-Specific Case Management

Cross-Cutting
Disease Registries
Aligning Plan Policies, Benefits, Incentives
Reminder Systems

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[9] A few strategies were aimed at the community in general.

Interviewees at some plans had strong opinions about the use of strategies. For example, administrators of one plan believed that physician-focused strategies have the potential to raise clinical performance to a certain level, but further quality improvement requires the implementation of member-focused strategies. A representative of another plan was adamant that to be effective, every clinical improvement initiative has to be comprehensive; it must include clinician- and member-focused strategies, alignment of plan policies (a cross-cutting strategy), and leveraging of employers and the community.

Some clinical improvement strategies and programs stood out as more successful than others within each of the study plans.[10] The reasons for their greater success usually lay as much or more in the way they were developed and implemented as in their content, we were told. In addition, certain supportive elements of the study plans' organizational cultures worked to favor successful development and implementation.

In the three sections that follow, we first explain how the factors discussed in Chapter II were important to successful implementation of improvement strategies. Next, we observe that successful improvement strategies in these plans usually reflected broad-based thinking about strategic options for improvement. Finally, we note that several of the study plans cited the importance of making adjustments to their strategies and programs after initial implementation.

1. Successful Implementation of Strategies Is Easier in Organizational Environments That Promote Quality

Several of the factors discussed in Chapter II—a collaborative corporate culture that promotes excellence, strong leadership, appropriate use of data and analysis, and collaboration with physicians—influenced the success of many clinical improvement initiatives.

For example, nearly all the quality improvement staff with whom we met are highly motivated, well-qualified men and women who seek to create excellent programs. The plans support their work and supply them colleagues and managers who routinely provide helpful input and advice and who also pursue excellence in their own jobs. Our sense is that this drive for excellence is an important though intangible element in the successful programs and strategies.

The way physicians and other clinicians are involved in developing effective strategies warrants more discussion, since such involvement seems to be a key distinguishing factor between more- and less-successful efforts. There are several related themes.

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[10] "Success" is used loosely, as rigorous evaluations of plan strategies had not been conducted.

First, if a clinical improvement program includes provider-focused strategies and aims to change clinician behavior, it is critical to have a physician champion for the program. The best physician champion, we heard, is one who is both enthusiastic about the program and perceived to be a leader in the relevant field. Usually, plans create a largely provider-based committee to develop each of their more comprehensive programs, and the chair or cochair of the committee is the physician champion. The status and commitment of this figure was reported to be a key factor in program success. Status appears to be important in gaining the attention of physicians in the field, and commitment is important to keeping the development and implementation process moving.

Involving targeted physicians in the development and implementation of clinician-focused strategies is one way plans attempt to create buy-in. In particular, plans seek to identify and involve physician opinion leaders, most often through including them on the committees charged with addressing the targeted clinical area. The administration of one plan believes that correctly identifying and involving opinion leaders is so important, it has begun conducting e-mail or paper surveys of its clinicians asking them whom they would consult about a particular condition. The plan then targets the top names for involvement in developing and implementing the relevant initiative.

Interviewees from several plans that formed multidisciplinary clinical improvement committees believe this approach produces better results than single-specialty committees. For example, one plan administrator commented that a social worker who participated with psychologists on a depression committee substantially advanced the thinking of the group by expressing her different viewpoint. Many plans include both specialists and primary care physicians on their committees, and some include nurses. One includes an employer and a consumer representative as well as providers on every clinical improvement committee and believes their input is valuable. At least two plans have tried a single-specialty approach and shifted away from it.

2. Broad-based Thinking About Strategic Options for Improvement

Once a clinical area is targeted for improvement and practice guidelines are adopted, the plans we visited attempt to think broadly about strategic options for improvement. The practice guidelines and the plan's analysis of where improvement was needed serve as a foundation for identifying opportunities to improve care. From that foundation, clinical improvement committees consider which clinician- and member-focused strategies might be adopted. They also think more broadly about the following:

- Are the plan's policies and incentives working for or against improvement in the relevant clinical area?

- Do opportunities for external partnerships exist that would help support an effective intervention in this area?

- To what extent must the plan attempt to influence physician behavior to improve this area and to what extent can it leverage the capabilities of nurses and provider office staff?

Plans can use plan policies and incentives to support improvement in a clinical area either as a strategy or as a way to remove barriers to success for other initiatives. For purposes of this report, we discuss this approach in Section D as a "cross-cutting" strategy for improvement.

At the time of our study, most of the plans were turning increasingly toward external partnerships as a way to finance more clinical improvement efforts than the plan could afford on its own. Many of these partnerships were in the early stages. Plan staff with whom we spoke about their experience with external partnerships noted that they had been careful to ensure that there was not an unspoken or unwarranted expectation of a quid pro quo from the partners—particularly pharmaceutical companies. Several plans had sought or were seeking foundation funding for some efforts. Some examples of partnerships include:

- An asthma education program developed in conjunction with a grocery store chain that has in-store pharmacies.

- A partnership between a health plan and a university professor to reduce cholesterol levels in members with coronary heart disease. The initiative involved feedback to physicians of patient data on cholesterol levels and drug therapy type for enrollees with the disease.

- An osteoporosis screening program conducted in conjunction with a pharmaceutical company and an employer that consisted of offering risk assessments at job sites and follow-up prevention or treatment.

Several of the study plans had also been increasingly leveraging the capabilities of nurses and office staff wherever this was a feasible approach to improvement.

3. Implementing and Fine-Tuning Strategies and Programs

A final theme of successful implementation of improvement strategies is the need to make adjustments after initial implementation. Programs and strategies were often pilot-tested in a few sites, or phased in beginning with the provider sites most closely integrated with the plan. Adjustments could be made on the basis of the pilot test or as the program was phased in. Plans often made adjustments in the second year of the program based on initial experience and on whether or not the key performance measures—identified prior to implementation—had improved. While many clinical improvement efforts had begun several years before this study began, we encountered none that plan administrators regarded as successful enough to disband; by definition, continuous improvement creates moving targets.

We noted two cautions about making adjustments based on a change in performance indicators. First, discontinuation of a program or strategy once an improvement target has been reached can lead to a return to behavior as usual, along with a drop in the indicator. Second, the data used for the performance measurement must be for care provided after implementation of the program or strategy. While this data timing issue may seem obvious, the pressure for demonstrated improvement from these programs can be strong, making it tempting to expect earlier measurement results than is realistic. The efforts and activities of the plans we visited strongly suggest that both persistence and patience—along with all of the other ingredients discussed above—are necessary to make substantial clinical improvements a reality.

B. CLINICIAN-FOCUSED STRATEGIES

The current wisdom about the usefulness of different types of clinician-focused strategies is summarized below.

1. Practice Tools

Practice tools are popular strategies for supporting a clinical improvement program, provided they are effectively designed and implemented (see above). Examples of practice tools that the plans under study disseminated as part of a clinical improvement program include:

- A risk calculator for heart events. Both an electronic version and a version with a configuration similar to a slide rule were developed.

- A brief questionnaire to help primary care providers diagnose depression.

- Monofilaments (a small tool made of wire used to conduct foot exams) distributed with revised diabetes guidelines, to remind physicians to conduct foot exams.

- Stickers, which provider offices can use to flag charts (for example, a brightly colored sticker indicating the patient is a smoker reminds the provider to discuss quitting with the patient).

- Letter templates offices can use to generate reminder letters for overdue preventive services.

2. Guideline Dissemination

All plans adopted and disseminated clinical guidelines. We found a near consensus that clinical practice guidelines must be summarized in a *very* succinct manner if they are to be a useful reference in everyday practice. To promote guideline use, plans distributed schematic diagrams rather than text, converted guidelines into office wall charts, and otherwise attempted to creatively package the guidelines. At least one plan published guidelines in varying levels of detail for physicians to access on the plan's website.

The plans we visited generally view guidelines as an advisory for physicians and as an essential backdrop to quality improvement efforts. The plans used practice guidelines to convey to providers the expectations against which provider practice would be measured. They were a first step that enabled the plan to assess the gap between current practice and optimal practice, and the basis from which to identify potential interventions for improvement.

3. Feedback to Providers on Performance Measures

All the plans used feedback to providers on performance measures, although there was wide variation in how it was provided, what it contained, and the emphasis plans placed on this strategy relative to others. The intent of this strategy is to foster improvement by tapping into physicians' naturally competitive spirits and intellectual curiosity. Plan respondents believe that when faced with credible data showing lower performance relative to peers, most physicians will want to know how the superior performers achieved their scores and adopt or adapt that behavior. Small group discussions often included physicians from high-performing sites sharing their experience and processes. The following themes emerged.

1. Although common, written reports that provide anonymous individual or practice-level feedback on performance are not likely to get much attention from

physicians and thus are unlikely to be very effective in improving performance. However, such feedback can be powerful when paired with other strategies.

2. Financial incentives are useful in drawing attention to performance indicators, and in keeping them on physicians' minds. This increased level of attention was more important than the actual dollar amount involved, which was often a token. However, the medical director of one group acknowledged it was easier to justify the expense of mailing a large volume of reminder letters for preventive services when there was some financial return for improving the corresponding indicators. Where financial incentives are tied to performance measures, the timing of the feedback reports is critical, we heard—providers should have sufficient time to improve their scores after receiving a report before the amount of financial incentive is determined.

3. Reasonably accurate data are critical if feedback is to be credible (and thus effective) to physicians. Physicians with whom we spoke emphasized that data on clinical indicators run from administrative data are often of poor quality unless specific steps have been taken to clean up the data and make them clinically relevant. Plans acknowledged data problems as well. Some, however, had succeeded in cleaning up their data to the point where physicians regarded them as generally credible. These efforts took place over a period of years.

4. Small group discussions led by a respected physician leader using comparative performance data as a springboard for discussion among physicians are thought to be an effective strategy. The most effective data for these discussions, we were told, are based on cases from the group of physicians in attendance. For this reason, plan medical directors used this strategy most when working with contracted medical groups that have a substantial number of plan enrollees.

4. Leveraging the Capabilities of Nurses and Provider Office Staff

Several plan executives believe that leveraging the capabilities and energy of nurses and other provider office staff is one key to improving performance. The practice improves performance by shifting the focus of office operations toward population-based health care, we were told. Therefore performance on some measures can be improved without much change in a *physician's* day-to-day way of practicing medicine. The targeting of office staff and nurses to implement some improvement initiatives avoids overloading physicians with additional, unnecessary demands.

Outreach and patient education are key components to which office staff and nurses are well suited. Office staff people can verify lists the plan sends to identify patients who are due or overdue for preventive services or scheduled monitoring of chronic diseases. They can also contact patients, work to overcome knowledge barriers that hinder patients from receiving appropriate care, and schedule necessary appointments. Therefore, several plans offered training for office staff on how to use office-based tools for patient outreach and education that the plan provides. (These are most often disease registries, which are discussed below.)

One plan had explored the characteristics of high-performing offices and found that nurse as well as physician leadership is key. In its group-model sites, this plan has officially elevated the role of the nurse and has been working to improve office teamwork. Plan executives believe this major effort will improve quality of care.

C. MEMBER-FOCUSED STRATEGIES

All the plans had member-focused quality improvement strategies in place and their number was increasing at almost all the plans. These increases are occurring in tandem with increases in disease management programs, common components of which are member-focused strategies like case management, condition-specific educational materials, and educational programs.

1. Condition-Specific Case Management

Most of the plans conduct condition-specific case management, usually in the context of disease management programs. Typically, case management is performed by telephone and involves the following:

- A method of identifying members of the enrolled population who meet criteria for the targeted condition. Usually plans used information systems as a starting point and publicized the program to physicians, who could also refer enrollees with the targeted condition into the program.

- Hiring or designating case managers, preferably staff members willing to work odd hours (usually nurses in the plans we visited). Case managers call members of the target population when they are at home. Finding the right case managers was considered critical to the effectiveness of the program—they need to be talented communicators to be effective by telephone, we were told.

- Creating a protocol for the case-management process and related supports, e.g., structured question lists for standard information. Most plans developed a tiered protocol of some sort—for example, suggesting monthly calls for diabetics whose condition is not in good control and less-frequent calls for those who are in good control. However, the protocol is flexible, allowing the case managers to tailor follow-up based on the enrollees' needs and preferences. Where eligible enrollees are identified through data, the plans typically inform the patients' physicians that the plan member is a candidate for case management before contacting the patient.

- Implementing and documenting the process. Only one study plan had outsourced case management, to a contracted organization that was part of the plan's closely linked integrated delivery system. One plan had a project budget from which case managers could draw to fund necessary supports for the members under management. For example, they could authorize childcare for a diabetic member who otherwise could not come in for routine monitoring.

2. Reminder Calls, Mailings, and Educational Materials

Plans use reminder calls, mailings, and educational materials within case-management programs and in other ways. We found general agreement that reminders for preventive services and routine monitoring of chronic diseases are more effective when the reminder is from the relevant provider's office rather than from the plan. One plan had compared the success rate for requests from the plan versus that for provider requests, and found it higher for provider requests. It used this information to persuade provider practices to make reminder calls.

Several plans have expended considerable effort to develop their own condition-specific educational materials. Plan officials emphasize that readily available generic materials for particular conditions need to be adapted if they are to effectively guide enrollees to the best resources given a particular plan's benefits and programs.

One plan has developed an extensive health education website for the general public (http://www.ghc.org/web/health_info) that includes information about common conditions and their treatment as well as tips for good health and disease prevention.

3. Educational Programs

The study plans make health educational programs available to enrollees in three ways. The plans provide some programs themselves, develop others in partnership with other organizations, and link members and subsidize their costs for some community programs.

All plans advertise their health education programs through member newsletters. In addition, one plan developed an extensive health education audiotape library that contained 16,000 tapes at the time of our site visit. The plans we visited were more focused on providing better health education programs through partnerships and linking strategies than on developing their own programs, perhaps because partnerships and linkages work better across larger geographic areas. From a practical perspective, in-person education programs need to be local if they are to be effective.

D. CROSS-CUTTING STRATEGIES

Several common, but important types of improvement strategies cut across the clinician and member domains.

1. Disease Registries

Both plan officials and physicians we interviewed perceived disease registries as helpful tools for improving care. In simplest terms, a disease registry is a database that lists the names of people who have a specific condition. In the plans we visited that used registries, they contained person-specific information about the enrollee's health, condition, and course of treatment.

The potential power of the registries can best be tapped when both plans and providers have compatible information systems and can readily access the registry. Thus, disease registries were being used in those plans or parts of plans where provider groups were closely linked to the plan. The registries were used in the following ways:

- To generate accurate clinical quality measures. The registries are kept relatively accurate because members are contacted from the database information; if a member does not have the condition in question, he or she is dropped from the database. In a plan with a database that generates lists of patients who are overdue for services, physician office staffs checked once a month to verify that the patents actually did need the services and had not received them. Such verification lists were reportedly cumbersome for providers at first, but they have become less burdensome as the data have become more accurate.

- To identify members who need reminders for routine monitoring services and educational materials on their disease.

- To identify members who need and would like to receive case management.

- To assist physicians who have electronic access to the registries, in two important ways:

  — The database provides a concise, patient-specific snapshot of care and health status information that physicians can review prior to a patient's appointment. This allows easy identification of any guideline-appropriate services that are due or overdue.

  — The registries assist providers' office staffs with population-based health functions. For example, it allows offices to easily list all diabetic patients with no visits in the past six months, or all children who are due for an immunization in the next month. One plan provided templates for letters that can be readily merged with the patient listings for reminder mailings.

Nurses and other provider office staff usually operate disease registries.

Two plans had adapted the disease registry concept for preventive services. One kept a database of women who should be receiving annual mammograms. The database allowed the plan to permanently exclude women who had had a radical mastectomy, thus eliminating the possibility of an unnecessary and potentially painful reminder call. The other plan had developed an immunization registry which it used to assemble immunization information that was more complete than had heretofore been possible.

2. Aligning Policies, Benefits, and Incentives

All the plans we visited had formal or informal ways to review their policies, benefits, and incentives as they related to the specific clinical areas the plan had targeted for improvement. Executives at one plan particularly stressed the need for a formal review and alignment each time the plan adopted a practice guideline, providing many examples to show how they had restructured plan benefits and incentives to work with other strategies for clinical improvement for particular conditions. The questions this plan considers in such a review include:

- Are providers penalized financially for providing more preventive services (e.g., are these services included in a capitated payment to the primary care providers)?

- Do plan benefits and copayment policies adequately support members in pursuing educational classes that will help them manage their conditions?

- Are there unintended procedural disincentives for members to get the preventive services they need (e.g., a requirement that everyone including diabetic patients needs a referral to an ophthalmologist for an eye examination)?

- Do plan benefits support the supplies or pharmaceuticals that could improve outcomes (e.g., nicotine replacement products for smokers, diabetic supplies for members with diabetes)?

In addition to reviewing their policies, benefits, and incentives, several plans also established bonus programs in which bonuses for plan executives (and in one case, all plan staff) were affected by the plan's success in meeting its health improvement targets as demonstrated by key performance measures (often HEDIS measures). While the affected bonus amount was usually not large, it was said to be effective in the same way that we heard financial incentives for providers were effective—by drawing attention to specific health improvement measures and emphasizing their importance to the organization.

3. Reminder Systems

Another cross-cutting strategy is the use of reminder systems for the scheduling of preventive services and routine monitoring of chronic conditions. In addition to the common practice of disseminating preventive service guidelines annually through member newsletters, some plans had a proactive reminder mechanism. An example is a small calendar that one plan sends to new mothers which lists specific due dates for her baby's immunizations, dates which the plan calculates based on the child's date of birth. A couple of plans send annual letters to all women over a threshold age on their birth month, reminding them to schedule a mammogram.

Whether or not plans had a proactive reminder system, they usually use their information systems to identify members who are overdue for guideline-appropriate services, and send that list to provider offices on a routine (e.g., monthly) basis. In most cases, providers are asked to verify that the lists are accurate and to call the listed enrollees to schedule the necessary appointments.

IV. CONCLUSIONS AND DISCUSSION

A. CONCLUSIONS

1. **High-performing plans value and invest in quality and partner with clinicians to improve member health; the factors that contribute to their high performances transcend specific improvement activities.**
   Nine of the 10 plans we studied regarded partnership with clinical leadership to improve the health of their members as a major part of their role, and used their data, organizational, and financial resources to support that goal. The tenth plan had recently undergone a major change in its provider contracting arrangements and was coincidentally shifting from a more heavy-handed approach to a partnership with clinicians. We attribute its high performance largely to the high-quality physician practice base in the community. While we found evidence that clinical improvement initiatives in the study plans had been effective to some degree, a supportive corporate environment appeared important to their success.

2. **Plans that are closely affiliated with a high-quality medical group or system in areas with a high-quality provider base have a major performance advantage over plans that must improve performance beginning from a low level.**
   We found that the underlying quality of provider practice was a major factor contributing to high performance in most of the study plans. This suggests that the wide geographic variations in clinical practice quality may help explain why plan performance varies so much across plans and regions. Therefore, if plans' contributions to quality improvement are to be recognized, consumers and purchasers should reward high performance within regions, not just nationally. Conversely, expecting plans in low-performing regions to rapidly become high performers nationally appears unrealistic.

3. **Findings about the keys to achieving high performance are similar across regions.**
   We found that the underlying quality of provider practice was a major factor contributing to high performance in most of the study plans. This supports the idea that the wide geographic variations in clinical practice quality help explain why plan performance varies so much across plans and regions. Therefore, if plans' contributions to quality improvement are to be recognized, a plan can perhaps best be judged by comparing its performance with that of its regional peers, and with its own previous clinical performance.

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4. Ranking plans within regions based on a composite score drawn from HEDIS effectiveness-of-care measures serves as a useful tool for identifying high-quality plans.

   The plans we selected based on high performance on a set of six HEDIS effectiveness-of-care measures are organizations that value and invest in quality. They also demonstrated high performance on indicators other than those used to select them. In most cases, these plans were recognized by the popular press and through NCQA accreditation as high-quality plans regionally and/or nationally. Six of the 10 plans were recently identified as among the first 40 plans nationally to receive NCQA's new "excellent" rating.

5. Data capability is important to performance, not just a way for plans to "test well."

   The study plans all had a respect for data and invested in data infrastructure. Many of these plans used data for strategic planning, feedback to physicians or groups, and to shape and monitor specific quality improvement initiatives. Because data are important to how these plans worked to improve as well as to demonstrate quality, we do not believe that plans that perform poorly across many measures would prove equally high-performing if only their performance were better measured. However, we recognize that it is likely that some amount of the variation in HEDIS performance among plans nationally does represent variability in data integrity and completeness.

B. DISCUSSION

Health plans with loose provider networks that did not evolve from a high-quality medical group or hospital system often face greater challenges than many of the study plans in developing the strong working relationships with clinicians and other quality-related characteristics noted above. However, several study plans had improved performance in their loose networks, so overcoming these challenges appears feasible. The only major difference in types of improvement strategies these plans used when pursuing improvement in their loose networks was a higher emphasis on member-focused strategies relative to clinician-focused strategies.

Overcoming the challenges of loose networks is an important issue that merits more study.[11] However, in general, we believe that future study is most likely to identify

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[11] Due to limitations in the data available at the time of plan selection, our study included only two plans whose provider networks were primarily loosely structured. Although we also sought insights from all the mixed-model plans about how to translate success from their group- or staff-model component into their network component, these plans had struggled with this issue and hoped others would have found easier ways to foster improvement in loose networks.

more specific ways of implementing our findings rather than identifying different keys to success.

Our study has a limited scope. It does not, for example, examine the important relationship between cost and quality. For example, we cannot say whether these plans' investments in quality harmed them financially or what they cost consumers in terms of higher premiums. However, we did review plan data on administrative costs and profit margins for 1997, the year used to assess performance levels for the study, and in each case the indicators looked the same as or better than other plans in the region (Table IV.1).

Also, by design, we set out to learn from high-performing plans only. Because we did not study lower-performing plans, we are unable to assess whether they are attempting to pursue similar strategies. If they are, why are they having less success? Although this is a significant question, we do not see a need to delay action while pursuing an answer. We would encourage plans to use our findings to examine their level of corporate support for clinical quality and to pursue improvement by adopting, adapting, and/or refining the strategies discussed here in the spirit of continuous improvement. Table IV.2 offers questions we developed based on the study findings that plans may want to consider as they work to improve clinical performance.

Table IV.1
Selected Financial Indicators for Study Plans, 1997

	Medical Expenses as a Percentage of Revenue		Administrative Expenses as a Percentage of Revenue		Net Profit Margin	
	Plan	Regional Average	Plan	Regional Average	Plan	Regional Average
National Average	87.5		15.6		-.05	
Scott and White Health Plan	91.7	85.5	7.9	17.6	.01	-.07
Fallon Community Health Plan	91.6	89.3	8.0	13.4	.00	-.04
Harvard Pilgrim Health Care	86.1	86.4	8.7	16.5	.05	-.05
Preferred Care, Inc.	88.7	89.3	9.3	13.4	.02	-.04
Group Health Cooperative of Puget Sound	94.7	86.4	6.4	13.7	NA	NA
Network Health Plan of Wisconsin, Inc.	84.5	89.3	13.3	14.1	.01	-.03
United Health Plan of Wisconsin Insurance Co., Inc.	89.7	89.3	10.0	14.1	.00	-.03
PARTNERS National Health Plans of North Carolina	85.7	89.3	9.6	13.4	.03	-.04

Note: The measures presented were selected because they are commonly used financial indicators for which plan and comparative data were available. For a discussion of the limitations of the measures of medical and administrative expenses, see Robinson 1997. Also, please note that net profit margin often fluctuates from year to year and thus is not a reliable indicator of financial stability.

Source: Health Care Investment Analysts, *The Guide to the Managed Care Industry, 1999.* Baltimore, MD: HCIA Inc., 1998. Data for study plans not listed were not available from this source.

Table IV.2
Questions Plans May Want to Consider as They Work to Improve
Clinical Performance

I. How solid is the plan's foundation for quality?

    • Does the plan's leadership and organizational culture clearly convey the message that high quality and pursuit of excellence are valued?

    • Does the plan have strong and collaborative relationships with clinicians?

    • Are practice guidelines used as the basis for clinical improvement efforts and measures?

    • Are the plan's data systems and staff capacity and skills sufficient for generating and analyzing clinical data?

II. To what extent does the plan have an effective overall approach to clinical improvement?

    • Are clinical data being effectively used across the full span of clinical improvement activities, from agenda-setting to shaping initiatives to monitoring and demonstrating improvement?

    • Is the mix of strategies being used to address high-priority clinical areas effective and appropriately matched to the plan's strengths?

        — Are high-priority areas being addressed from multiple vantage points?

        — Do clinical improvement strategies take advantage of variations in performance within the plan's provider network, allowing low performers to meet and learn from high performers?

        — Do the short-term improvement strategies play to the particular strengths of the plan? For example, in the short term, it may be more effective for plans without strong provider relations to emphasize improvement strategies that focus on members, that are aligned with physician preferences, or that are cross-cutting, rather than emphasizing strategies that directly ask clinicians to change behavior.

    • How carefully aligned are plan policies, benefits, and incentives with clinical improvement efforts?

III. Do specific improvement strategies capitalize on current thinking?

- Has the plan considered establishing disease or population registries for high-priority conditions?

- Are the performance data that are fed back to clinicians as powerful a clinical improvement tool as they might reasonably be?

  — Do clinicians view the data as credible?

  — Are the performance data that are fed back to clinicians sufficiently specific that clinicians can use them to identify actionable implications?

  — Are benchmarks provided for comparison, and are these ones the clinicians view as relevant? For example, clinicians may find performance results for practices within the plan to be more useful than results for other plans or regions, though all may be useful to present.

  — Is the plan using any of the following techniques to draw clinicians' attention to the data:

    – Small group discussions with clinicians about the data that would be led by plan medical leadership or prominent clinicians in the community

    – Token financial incentives associated with performance on clinical measures

    – Personalized letters to clinicians or individual discussions with medical management about clinical performance

    – Making the data "public to peers" to facilitate communication between high and low performers

- Is the plan developing member education and other member-focused strategies for the 21st century? Examples include: (1) libraries of health information that enrollees can access directly, such as audiotape libraries or website strategies; (2) strategies that offer members effective programs for managing their conditions, through linking them to reviewed community-based efforts, or more directly through plan partnerships; and (3) "birthday card" reminders to obtain preventive services.

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APPENDIX A
METHOD FOR SELECTING PLANS FOR STUDY

This appendix provides a more detailed explanation than we give in the report text of how we selected health plans for study.

We planned to perform site visits to 10 managed care plans that demonstrated outstanding clinical performance. We sought a geographically diverse set of plans with varying organizational characteristics (e.g. ownership, size, and tax status). We planned to select at least three plans that had shown substantial improvement from reporting year 1996 to reporting year 1997. We used quantitative methods to inform the selection process, though selection was ultimately a qualitative process aimed at balancing the desirable characteristics noted above to obtain a diverse set of high-performing plans for study.

We used plan performance on selected quality indicators from HEDIS as the basis for identifying high-performing plans. HEDIS is the only widely used national data set that measures clinical performance in managed care plans. It is a set of dozens of performance measures with clearly stated technical specifications in the following domains: effectiveness of care; access/availability of care; satisfaction; use of services; and organizational characteristics and cost. In 1998, 382 of these plans allowed their data (collected during reporting year 1997) to be reported publicly as a part of NCQA's *Quality Compass.* We used *Quality Compass* data for certain effectiveness-of-care measures (discussed below) to select our sample from among these publicly reporting plans.

A. Defining Outstanding Performance
We identified six clinical HEDIS measures that spanned a variety of aspects of practice. These measures were:

1. Advice to quit smoking
2. Adolescent immunization (MMR and hepatitis B vaccine)
3. Beta-blocker treatment after heart attack
4. Diabetic eye exams
5. Follow-up after hospitalization for mental illness
6. Check-ups after delivery

These measures represent several important aspects of clinical care, including: general adult practice (1, 3, 4); reproductive health (6); adolescent health (2); primary prevention (1, 2); tertiary prevention (3, 4); care for people with chronic illness (3, 4, 5); care for people with acute manifestations of illness (3, 5); and the continuum and

comprehensiveness of an episode of care (3, 5, 6). For the purposes of this study, these measures had the advantage of being newer measures that have not been studied extensively and thus are more likely to be representative of practice across the spectrum of care at the plan.

We developed a methodology to create a summary score from these six measures. Each plan received a score for each HEDIS measure based on how it performed relative to other plans. For example, plans whose actual results on a measure places it in the top 5 percent of the distribution will receive the maximum score of 7. The table below illustrates the scoring system:

Percentile	Points
≥95%	7
90%–94%	6
75%–89%	4
50%–74%	3
25%–49%	2
<25%	1
Missing	2.5

Although we were selecting only among plans that permitted public reporting of their data, NCQA had data on all plans that submitted data and it was this larger data set that was used to define the distribution for the purposes of scoring plans. In other words, all plans were used to create the normative distribution; however, only plans that permit public reporting of their data were scored or available to be considered for selection for study. For each plan, the scores were summed across the six measures.

Because we were seeking plans that had generally outstanding clinical performance, we assessed the consistency of plan performance in several ways. We reviewed how many measures in each high-performing plan were in the top 10 percent and in the top 25 percent of all plans. We also reviewed how many plans that were in the top quartile for multiple measures were never in the bottom quartile for any measure. If any measures had appeared to be outliers, we would have reassessed the desirability of including that measure for the purpose of plan selection.

The minimum possible total score for a plan was 6, with a maximum of 42. The actual scores ranged from 6 to 38, with a median of 16, and the 75th percentile at 19.75.

B. Selecting a Sample

After performing the above analysis, we decided that before selecting high-performing plans from the list, we would screen out plans that did not report four or more measures in 1998, and plans that performed in the bottom quartile on any measure.

Because we were interested in selecting some plans that had plans that had static performance and others that demonstrated improvement, we calculated an improvement score for each plan as follows:

- gain 2 points for increase in total plan score of 5 points or more;

- lose 2 points for decrease in total plan score of 5 points or more;

- gain 1 point for increase in the absolute rate of any measure by 5 percent per measure;

- lose 1 point for decrease in the absolute rate of any measure by 5 percent per measure.

The maximum possible score was 8, with a minimum of –8. The improvement scores in our full data set ranged from –7 to 6, with 1 representing the 75th percentile.

We decided to select plans for this study that were geographically dispersed, rather than simply the plans that performed best nationally. In fact, had we selected the top 10 performing plans nationally, seven would have been from the Northeast. We felt it was not surprising that managed care plans in different environments achieve differing levels of performance, given the many factors in our conceptual framework (see Figure I.1), and the likelihood that those factors would differ regionally. A reasonable expectation may be that it is a managed care plan's first responsibility to improve the way that care is delivered to its members relative to its peers and local competitors. Therefore, to select at least two plans from each of the geographic regions,[12] we generated a series of four regional lists of the plans that met the eligibility criteria, in descending order of overall score. The regional averages and number of plans meeting our criteria for each region follow based on analysis of *Quality Compass 1998:*

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[12] Regions were defined by the United States Census Bureau.

Region	N	Mean	Median	75th Percentile
Northeast	45	20.9	20	26
South	16	15.5	15.5	17
Midwest	33	16.4	15.8	19
West	11	16.0	15	18

We identified 10 plans and an alternate for our sample. One of the plans had new ownership and declined to participate, so the alternate was included in our study. The study plans included four plans from the Northeast and two plans from each of the other three regions. The 10 plans that we visited had scores that ranged from 18 (South) to 38 (New England). Six of the 10 plans had positive improvement scores, with an average of 1.4 and a range from (–3) to 6. The characteristics of the study plans are described further in Chapter I of the report.

APPENDIX B

SELECTED EXAMPLES OF SPECIFIC QUALITY IMPROVEMENT INITIATIVES AND STRATEGIES IN THE STUDY PLANS*

I. DISEASE MANAGEMENT AND HEALTH IMPROVEMENT PROGRAMS

Initiative: Smoking Cessation and Prevention Program

Source Plan: Blue Cross Blue Shield of Maine (BCBS-ME)

Background: In 1995, BCBS-ME identified smoking cessation as a top priority after a medical record audit and its membership survey showed that 26 percent of its managed care members smoked. Because smoking is the leading cause of preventable death in Maine, and is related to diabetes, secondary prevention of cardiovascular disease, pediatric asthma, and high risk pregnancy (areas the plan has also worked to address), BCBS-ME developed a smoking cessation and prevention program to reduce the prevalence of smoking among its members. The program began to be implemented in October 1996.

Description: BCBS-ME began by adopting AHCPR smoking cessation guidelines. Ultimately, the guidelines were disseminated to physicians in a packet with other materials developed by the plan including:

- A pocket guide outlining new benefits the plan had created to address smoking, and the AHCPR guidelines

- A list of smoking cessation programs approved by the plan and thus covered by the plan's smoking cessation benefit

- Educational brochures for the physicians to give to members

- Brightly colored stickers for the medical charts of patients who are smokers or passive smokers, so that the physicians and their staff can easily identify these members and remember to counsel them.

In addition to developing these tools for providers, the plan aligned its copayment and benefit structure with the guidelines. Effective January 1998, BCBS-ME removed smoking cessation and counseling/advice services from physicians' primary care capitation so there would be no incentive to undertreat. It now pays for two sessions of smoking counseling per member with a physician, pays dentists to talk with smokers who are members,[13] and encourages use of approved smoking cessation programs through a new smoking cessation education benefit of $200 per member (lifetime). Nicotine replacement products are also covered. BCBS-ME also revised its recredentialing procedures to include a review of physicians' smoking cessation/prevention counseling and documentation. The colored chart stickers distributed by the plan are frequently used by the physician offices and thus reportedly help flag charts that should be reviewed for proper documentation.

* Note: Quality improvement strategies in health plans are constantly evolving. The initiatives and strategies in this appendix are described as they were at the time of our site visit in April/May 1999.

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[13] Sixty percent of its members have dental coverage.

BCBS-ME has monitored the utilization of smoking medication, smoking cessation classes, and physician follow-up visits, and has surveyed the cessation rate of nicotine replacement therapy users, smoking cessation class attendees, and members with physician follow-up visits.

In addition to developing tools for providers and shifting policies internally, BCBS-ME is working with employers and the larger Maine community to promote smoking cessation and prevention. BCBS-ME developed an employer worksite kit to assist employers to promote the smoking cessation benefit among employees and to develop a smoke-free work environment. BCBS-ME also is working the Maine Medical Association to introduce and reinforce its smoking cessation program in its newsletter. BCBS-ME also has shared its tools with the Maine Bureau of Health and is collaborating with the Bureau on a smoking cessation study. BCBS-ME also has publicly supported a tobacco tax and rules to ban smoking in restaurants.

Initiative:	Diabetes Mellitus Clinical Project
Source Plan:	Blue Cross Blue Shield of Maine (BCBS-ME)
Background:	Analysis of claims data showed that BCBS-ME had room to improve the health of its members with diabetes. The plan had a high rate of diabetic adults who are amputees, low average rates of members receiving hemoglobin A_{1C} tests, low rates of diabetic foot exams, and low rates of annual dilated eye exams for its diabetic members. The goals of the project are to improve the health status of members with the disease through education, advocacy, and self-empowerment, and to improve the rates of hemoglobin A_{1C} (HbA$_{1C}$), diabetic foot exams, and annual dilated eye exams.
Description:	The Diabetes Mellitus project was established in 1994 and is one of BCBS-ME's longest running disease management programs. BCBS-ME convened a multidisciplinary diabetes external advisory committee. The group developed interventions that included a disease case management program for high-risk diabetic members, clinical studies, patient and physician reminder mailings for diabetic retinal exams, and member newsletter health information on diabetes. The diabetes disease registry identifies high, medium and low-risk diabetic patients. High risk patients are evaluated for case management. Two nurse case managers each have a caseload of 90 to 100 patients. Those members with diabetes who are over age 40 are considered at risk for cardiovascular disease, and thus are sent additional information on smoking cessation, hypertension, and cholesterol problems. All registry patients receive postcard reminders for guideline-appropriate preventive service appointments. Lower risk patients receive targeted educational mailings. For members with diabetes who still don't receive guideline-appropriate services, BCBS-ME staff call them, and send the list of those being called to their providers to enable the provider offices to follow up as well.

BCBS-ME changed its benefits to align with the guidelines; dilated eye exams for people with diabetes no longer require a referral, and glucose monitors are covered. Claims processing changes were made to accommodate these benefit expansions. Staff also revised the medical record review form used during recredentialing to collect data on hemoglobin A_{1C} values and microalbumin testing.

In terms of provider tools, a compact diabetic foot care kit was developed, including a monofilament and information on its use. The kit was reported to be very popular with providers.

Staff have monitored the program by conducting "barrier analyses" to identify member barriers to accessing services and reviewed comments that its members were receiving "too much paper." In response, BCBS-ME redesigned and simplified its educational mailings.

Based on its guidelines, BCBS-ME also has designed an employer worksite intervention with two main components: a worksite screening for early detection, implemented with the state chapter of the American Diabetes Association, and a worksite diabetic support group that will provide information on lifestyle changes to help employees better manage their disease. BCBS-ME works with employers to organize the screenings and support group.

Indications of Success:	The percentage of members with diabetes who receive hemoglobin A1c tests during a 12-month period has risen from 45 percent in 1994 to 73 percent during 1996–97 to 79% during 1997–98. The rate at which diabetic members receive eye exams has risen from 44 percent in 1995 to 57 percent in 1996 to 64 percent in 1997.

Initiative:	High-Risk Pregnancy Programs
Source Plan:	Preferred Care, Inc.
Description:	Preferred Care has three types of high-risk pregnancy programs.[14] Case management (discussed in general terms above) is offered to women identified by their provider as high-risk, based on a risk assessment tool used at the first prenatal visit (the tool is also used a second time for Medicaid members).

In 1998, the New Beginnings program was initiated for Medicaid recipients. The program offers a coupon book where the coupons, once initialed by a physician at the appropriate appointments, offer rewards to women who receive their pre and postnatal care on schedule. Incentives include items such as diapers, self-help books, and carseat discounts. The coupon books were developed as a partnership with WalMart. At the postpartum appointment, women receive a basket of lotions and other toiletry items. The plan is considering how it might expand the incentives of this program to the commercial population, and how to provide the same type of coupon-based incentives to more effectively encourage members with diabetes to receive preventive services.

Also in 1998, Preferred Beginnings—a smoking cessation program developed with funding from the March of Dimes—was initiated for pregnant women who smoke. Nurses make weekly telephone calls to pregnant women who smoke to encourage them to quit, tailoring their discussions using a survey-based assessment of the woman's stage of readiness to quit.[15] The plan noted that an important implementation challenge (overcome, in this case) is finding nurses who are willing to make such calls in the evenings when the women are at home.

Indications of Success:	The plan found its HEDIS measure for Medicaid for check-ups after delivery rose from 49.8 to 55.4 percent between 1997 and 1998. The Preferred Beginnings program is well used and well-liked. At the time of our visit 120 women were receiving calls under the program, and only 10 had refused to participate. Plan staff noted that of the 58 women who have delivered after participating in the program, 55 have had normal birth weight babies. The contracted OB/GYN we interviewed also commented on the usefulness of this program.

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[14] In addition, the plan places related articles in the member and provider newsletters; eligible members receive reminder messages through the nurse line about needed appointments; information about the plan's programs was sent to provider offices; and guidelines for prenatal care have been adopted, revised, and disseminated.

[15] The plan worked with the University of Rochester to design how it would determine what phase of readiness women are in.

Initiative: Asthma Management Program

Source Plan: Harvard Pilgrim Health Care

Background: Harvard Pilgrim's asthma program was piloted back in 1991 in the HCHP health centers, and expanded plan-wide in 1993 for adults and 1994 for children.

Description: The components of the asthma program are as follows:

- Guidelines, based on NHLBI guidelines. These are periodically published in the *Practice Forum* (the guidelines have been slightly revised over time to keep pace with science).

- Clinician education. Analysis of key measures showed that the plan's members with asthma often were not taking the most appropriate medication. Therefore, the program's first priority was to change physician prescribing behavior. To educate clinicians, the plan first provided formal education by a physician leader at the Vanguard centers, then found and often paid local physician champions to conduct CME training at the local level in other parts of the delivery system.

- Patient education. This is performed by RNs and respiratory therapists in the Vanguard centers, and is coordinated with home care agencies in other parts of the plan. Plan staff educate and monitor home care agencies to ensure they are following the plan's guidelines. Topics of patient education follow a common outline and include use of peak flow meters and inhalers, importance of tracking peak flows, and, very importantly, what a patient should do if they are slipping out of control.

- Ambulatory and hospital-based case management and outreach

- Correction of operational barriers to care. A distribution system was established to make peak flow meters available. Tool kits for nurses were developed to facilitate care.

- Measurement of key indicators for the program. These included measures of pharmacy and facility utilization.

The asthma program coordinator and one of the physician leaders we spoke with emphasized the importance of effectively using midlevel practitioners (including nurses) to effectively implement disease management programs. This was felt to be both efficient, because it off-loaded work that the physician would otherwise need to do, and because nurses were generally said to be better communicators with the patients.

Indications of Success: The plan reports the asthma program is widely viewed as successful, and the trends in key indicators for the program have improved (see table below). The early success of the program was attributed to the efforts to change physician prescribing behavior, while continued improvement was attributed to the patient education, case management, and outreach efforts by nonphysician clinicians (e.g., the RNs and respiratory therapists). While overall performance is high, the plan is now focused on finding ways to close at least 50 percent of the gap between the lower-performing sites and the "best-in-class" sites.

Measure	1993	1994	1995	1996[a]	1997	1998	Target 2000[b]
Pediatrics							
ER Visits/1000		96.6	77.7	81.7	64.1	65.3	68.0
Hospital Days/1000		119.1	60.7	62.7	63.1	65.6	59.3
Adults							
ER Visits/1000	72.8	74.3	79.2	79.1	80.3	73.8	64.3
Hospital Days/1000	137.5	129.8	135.2	118.8	94.4	95.7	95.2

[a] 1996 data does not include integrated product members. Measures for 1996 forward are based on HVMA/MAR/SNE/NNE org. structure.

[b] Targets for 2000 to be revised when data through Q4-98 is available (around 6–99).

Note: Data for 1993–1995 is HCHP-wide. Data for 1996 forward is HPHC-wide.

Source: Harvard Pilgrim Health Care.

Initiative:	Disease Management Program for Diabetes

Source Plan:	United Health of Wisconsin Insurance Company (UHOW)
	(now Touchpoint Health Plan)

Background: Initial measurement of the rate of diabetic eye exams using claims data showed only about 24 percent of members with diabetes received an eye exam in 1994. The plan's disease management program for diabetes began as a targeted emphasis on improving the rate of eye exams and appropriate testing of hemoglobin A1C levels for members with diabetes, and has built on that over time in order to affect quality of care for members with diabetes more broadly. Prior to beginning any initiative targeting diabetes, in 1995, UHOW adopted a clinical practice guideline drawn from the American Diabetes Association guidelines.

Description: Presentations to physician groups about the plan's new diabetes guideline and the low rates of eye exams for enrollees with diabetes called attention to this as an area for improvement, but also led to identification of many mistakes in the data, which ultimately led to the development of a disease registry.[16] At this time (1995), diabetes was a clinical focus area not only for the plan but also for the integrated delivery system, which at the time served a very high proportion of the plan's enrollees. This synergy acted to reinforce the plan's efforts.

In addition to the many discussions with physicians about the data, actions taken during 1995–1997 included:

- Eliminating the requirement that members with diabetes must get a referral before receiving a diabetic eye exam.

- Telephone reminders to overdue members with diabetes due for an eye exam, at the end of 1995. This effort was not repeated in 1996 and staff believe that at least partly explains why the rate dropped slightly that year.

- Sending letters out to providers listing their patients due for diabetic eye exams and also showing when each patient had their two most recent hemoglobin A1c tests (from claims data). The diabetes registry began in late 1997 with feedback on these lists from providers.

In early 1998, two new staff (a registered nurse and a registered dietician) were hired to focus on disease management of diabetes and coronary artery disease. Their responsibilities include case management, patient education, and counseling. High, medium, and low-risk diabetics were defined. If a case meets certain criteria, such as an emergency visit, then regardless of the risk category the person is identified for case management. Case management interventions—telephone calls and mailings—are based on specific criteria. For example, high-risk diabetics are contacted four times per year. The diabetes health management guidelines below provide the plan's definition for high, medium, and low-risk cases and the protocol for contacts and mailings. All diabetic members receive targeted educational mailings annually. The program is new enough that the plan did not yet have any indication of effectiveness or lessons to share about this approach.

Indications of Success: UHOW's rate for diabetic eye exams improved from 24 percent in 1995 to 69 percent in 1997, and though plan-wide statistics are not available, there is some evidence for a positive effect of the initiative on hemoglobin A1c levels.

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[16] However, plan staff have since re-reviewed the rate using a sample of medical records and the rate was not any better.

II. INITIATIVES TO SUPPORT CLINICIANS IN PROVIDING BETTER CARE

Initiative: Registry for Diabetes and Coronary Artery Disease[17]

Source Plan: United Health of Wisconsin Insurance Company
(now Touchpoint Health Plan)

Background: The plan's medical leadership believes that primary care physicians need to shift to manage the health of their member population, reaching beyond their traditional caring role for those patients who make and keep appointments and comply with their treatment plans. The plan believes that the keys to accomplishing this often lie in the routine process of care that is as much or more the domain of the supporting office staff as of the physician. Therefore, the plan has had a significant focus on developing tools for improving care that are primarily used by provider office staff (with physician oversight and buy-in). The plan's Medical Director noted that his continuing to practice has practical advantage in that he often uses his own office to explore whether proposed office tools are workable in practice. Though other tools have also been developed, the registry for diabetes and coronary artery disease are the tools that are in widespread use in physician offices and have probably had the most impact on care.

Description: In the simplest terms, the registry is an accurate patient-level database of members with diabetes and coronary artery disease. At the time of our visit, about 2,000 members with diabetes and 1,400 with coronary artery disease were in the database. The registry has two primary uses: (1) to allow accurate quality measures to be generated and fed back to providers,[18] and (2) to allow provider offices real-time access to the data as a tool to help them provide better care. Similar to most other tools the plan has used to implement quality initiatives, the registry was developed in-house, with input from providers.

Data sources for the registry. At present there are three major data sources for the registry: (1) claims data, added quarterly from the plan's information system, (2) data provided by the offices of physicians who participate in the registry, and (3) laboratory data from a major laboratory (used by 60 percent of the members on the registry). Prior to the registry, claims data alone were used to generate quality measures for diabetes; the limitations of these data prompted its development. Now, about 200 primary care physician offices participate with the plan to keep the registry data complete and accurate. About 60 percent of these providers access the database electronically from their office, while the other 40 percent—typically lower-volume practices—exchange information with the plan manually each month.[19]

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[17] An immunization registry is also maintained by the plan in much the same way, except it is not used as an interactive tool with provider offices. Rather, it is used to generate accurate immunization rate measures at the plan and provider levels.

[18] Report card measures for these two conditions are generated from the registry.

[19] Those who access the registry electronically include about 20 primary care clinics.

What participation in the registry entails from providers. Every provider office that participates has designated an office staff person to be responsible for the registry. That person is invited to attend bimonthly user group meetings, and is expected to (1) review for accuracy a quarterly list of any new patients identified through claims data as having the condition, (2) add information that is highlighted as missing on key indicators, for example, adding the LDL level for patients with coronary artery disease where lab data are not available electronically, and (3) follow up on patients listed who appear not to have had guideline-appropriate visits, to either attempt to schedule a visit for them, or correct the database if they either should not have had the visit or had the visit and it was not yet identified through the claims system.

The offices that use the electronic version of the database tap more of its features at their discretion. For example, the registry includes a template reminder letter to a patient that they are overdue for an appointment, that can be printed on the provider's stationery. The registry can easily be used to produce proactive reminders as well. For example, a provider can generate a template letter automatically for those members with diabetes due for an eye exam in the next month. Also, a summary page for a patient can easily be printed out and inserted into a patient's chart.

Challenges. The development of the registry has not been without challenges. The staff member responsible for the registry noted that different users have different needs and preferences, and if data were added to satisfy every request the database would not be feasible to maintain. Historical data must be limited (to eight prior visits, for example) to keep the size of the database manageable (in its present form as an Access database). Also, as the plan has spread geographically, it is difficult to make the database accessible to more remote offices with varying computer systems. At present, system access by remote offices is too slow for most to take advantage of an electronic link, thus, remote offices exchange the necessary information with the plan by mail. The plan reports working toward a technology upgrade to speed access, but the timetable for completing the upgrade has not yet been set. About 45 percent of members with diabetes are not included on the registry, because they are cared for by providers who do not currently participate.

Indications of Success:
The physicians we spoke with commented on the usefulness of the registry, and believed the plan had developed a tool that had indeed helped them improve quality of care for their patients with those conditions. The level of participation by primary care offices is high. The rate at which diabetic members receive eye exams has risen from 24 percent in 1994 to 69 percent in 1997.

Initiative:	Clinical Support Tools Including Online Registries
Source Plan:	Group Health Cooperative of Puget Sound (GHC)
Background:	Not surprisingly given GHC's integration with its delivery system, the plan places heavy emphasis on developing tools to support high-quality clinical practice.
Description:	*Online registries.* GHC has developed online registries for diabetes, heart care, depression, breast cancer and pediatric immunizations. The registries provide member-level clinical data for members with the targeted conditions, including dates of visits for recommended preventive services, results of laboratory tests, and prescriptions, as well as other key information such as risk factors (e.g., smoking), and patient contact information.[20] They also show red flags when a lab test is abnormal or recommended visit schedules have not been met (e.g., a diabetic patient is overdue for an eye exam).

The registries are easily manipulated to respond to different inquiries. For example, they can list who is due for immunizations in the next month, as well as who is overdue, or whether any of today's scheduled patients have been previously identified as having minor depression. Physicians can enter care information directly into the registry after a visit, although many still choose to use paper and have their office staff enter the information. Providers also correct patient information on the registry as necessary, resulting in a more accurate database from which to monitor progress toward improvement goals for these populations.

Most physician offices reportedly use the registry information to some extent, and the physicians we interviewed found the registries helpful. The extent and types of use vary by area and office. In one district, office nurses reportedly are consistent about using the registries to generate timed, proactive letters to patients who are due to receive lab tests. Some offices reportedly generate automated letters that include customized clinical information, for example, stating the patient's last LDL measurement and explaining the special need for the patient to follow up because their LDL value was above 130.

Several respondents noted that the registries are tools for population-based care that are used by office teams. Nurses rather then doctors most often take responsibility for keeping the registries accurate and actively using them to outreach to members who need care.

Other clinical support tools. Many other types of clinical support tools are developed and made available online or in other formats. GHC's intranet contains tools including:

- Patient education brochures on at least 20 clinical topics

- The plan's practice guidelines, in brief and with full text, along with supporting information at optional levels of detail drawn from the reviews of the evidence conducted to support guideline development.

- A database of pharmacy information on all the plan's members who use group model pharmacies, and many who use network-side pharmacies.

- Various specific tools developed as part of clinical roadmap efforts, including a "risk calculator" that allows a provider to input patient data and obtain a calculation of risk for cardiovascular events (e.g., stroke, heart attack, new angina, etc.) and a brief questionnaire that primary care physicians can use with a patient if they suspect depression.

Indications of Success:	Online registries, which have been developed with considerable resources and energy in recent years, were cited as particularly helpful by all the physicians we interviewed, and plan staff believed these had led to "dramatic shifts in practice" in the clinical areas they target.

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[20] The registries do not yet act as complete patient charts.

Initiative:	Data Feedback to Providers Accompanied by Small Group Discussion
Source Plan:	PARTNERS National Health Plans of North Carolina
Description:	During 1993 to mid-1997, the plan's quality improvement activities largely focused on information and data feedback to providers in order to encourage better adherence to guidelines that underlie the HEDIS effectiveness of care measures. By mid-1996, the PARTNERS Medical Director began meeting with primary care leaders, particularly high-volume practices, sharing HEDIS indicators and discussing performance. He also met with groups of specialists (including specialists in orthopedics, gastroenterology, ENT, neurology, obstetrics/gynecology, general surgery) to discuss results of analysis of specialty-specific performance data. Variations within the specialty were discussed and compared to regional and national benchmarks. This became an ongoing activity.
	Current plans are to extend this in-person data feedback strategy to the many new providers in widely scattered locations. This presents a tremendous challenge, even with more staff devoted to the effort. Several of those interviewed commented that improving clinical performance for 1998 and 1999 will probably be impossible, and just sustaining it will be a major challenge. Plan staff believe that it takes three years to demonstrate improvement after adding new practice groups in an area. They approach this by feeding back the HEDIS data to groups of practices the same way they have been doing since 1996: one year to develop enough data on the patients of that practice to show the physicians their own data; the second year to talk through the results of data analysis with the groups and let them begin to respond; and the third year to collect data that can show improvement. The plan has begun efforts to meet with some of the more tightly organized groups of providers in the new service areas, to discuss what the plan can offer them in terms of data feedback.
Indications of Success:	The plan believes the in-person data feedback strategy has been helpful in improving care. On the set of HEDIS measures we reviewed, the increase in the percentage of women receiving check-ups after delivery is most notable—it grew from 69 percent to 91 percent between 1996 and 1997. Data feedback to OB/GYNs occurred at dinner meetings held by the Medical Director. Discussions centered on data pertaining to women's care topics including C-section rates, vaginal birth after C-section, check-ups after delivery, and prenatal care in the first trimester. Coding issues were also presented and discussed internally and the importance of being able to isolate and identify exact dates stressed, with the result that coding improved in the claims administration system.
	Other measures we reviewed on which the plan improved during 1996–1997 included the rate at which smokers were advised to quit (51 to 62 percent), the rate at which heart attack patients received beta blockers (33 to 63 percent), and the rate of follow-up after hospitalization for mental illness (76 to 81 percent).[21,22]

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[21] The plan passed an external audit of its HEDIS data for 1997.

[22] Improvement was not uniform, however, as a few other rates did not improve or declined.

RELATED PUBLICATIONS

In the list below, items that begin with a publication number are available from The Commonwealth Fund by calling our toll-free publications line at 1-888-777-2744 and ordering by number. These items can also be found on the Fund's website at www.cmwf.org. Other items are available from the authors and/or publishers.

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#428 *Getting Behind the Numbers: Understanding Patients' Assessments of Managed Care* (November 2000). Margaret Gerteis, Teresa Harrison, Cara V. James, Michael Manocchia, and Susan Edgman-Levitan, The Picker Institute. Using data from the Medicare Managed Care Consumer Assessment of Health Plans Survey, this report examines nine managed care plans and identifies plan-level practices that contribute to a positive experience for plan members.

#409 *Perspectives on PPO Performance Measurement from Consumers, PPO Leaders, and Employers* (September 2000). Liza Greenberg, American Accreditation Healthcare Commission/URAC. This report presents findings from meetings with key players in the preferred provider organization (PPO) quality arena, in an attempt to determine if PPOs are capable of reporting standardized health care quality data using nationally recognized measures.

#366 *National Medicaid HEDIS Database/Benchmark Project: Pilot-Year Experience and Benchmark Results* (February 2000). Lee Partridge and Carrie Ingalls Szlyk, American Public Human Services Association. This report summarizes the first year of a project to create national summaries of state Medicaid HEDIS data and national Medicaid quality benchmarks against which each state can measure its program's performance.

#359 *Quality Management Practices in Medicaid Managed Care* (November 10, 1999). Bruce Landon and Arnold Epstein. *Journal of the American Medical Association,* vol. 282, no. 18. In their study of Medicaid plan quality, the authors discover that plans serving predominantly Medicaid beneficiaries were more likely than those with mainly commercial enrollments to provide services to patients that address their special needs, including those related to transportation, literacy, and nutrition.

#296 *Assuring Quality, Information, and Choice in Managed Care* (Summer 1998). Karen Davis and Cathy Schoen. *Inquiry,* vol. 35, no. 2. Citing results from Fund surveys of patients' and physicians' experiences with managed care over the last five years, the authors suggest that minimum quality standards, assurance of choice among quality plans, and comparative information on quality are vital if plans are to be responsive to patient concerns.

#205 *Improving the Delivery of Clinical Preventive Services to Women in Managed Care Organizations: A Case Study Analysis* (January 1997). Nancy Heiser and Robert St. Peter, Mathematica Policy Research, Inc. This paper provides practical information on the types of preventive programs available for women and their potential contributions to women's health. Experiences of knowledgeable health researchers in designing and implementing preventive service programs in managed care settings are highlighted.