

findings brief

Improving Access to Improve Quality: Evaluation of an Organizational Innovation

key findings

The combination of increased access to providers, new information technology (IT), and physician payment incentives in health care systems can lead to increases in patient satisfaction, physician productivity, and lower health care costs without affecting provider continuity and clinical quality of care. However, such changes may decrease physician job satisfaction.

Access and quality are key issues for our nation's health care system. Separate reports from the Institute of Medicine (IOM) and RAND conclude that the U.S. health care system is "plagued by low quality of care and in need of fundamental change."^{1,2} The IOM additionally stresses that in order to receive quality care, people must have access to care, recommending that quality can be improved by offering patient-centered care, providing better IT to support care processes, and aligning provider payment with quality improvement.

Further, health care costs in the United States are high and continue to increase. Among all developed nations, the United States has both the highest per capita health care spending and the highest percentage of the gross domestic product (GDP) spent on health care. In 2003, the United States spent \$5,711 per capita on health care, and health care spending comprised 15.2 percent of the GDP. Not only is spending high, but the rate of expenditures has been increasing by 4.4 percent annually since 1980.³

Effectively restructuring the health care delivery system could help curb rising health care costs and improve access to and quality of care. Better access to primary and specialty care might reduce the number of high-cost safety net services such as emergency room visits.

Faced with declining revenues and members, in 2002 Group Health Cooperative (GHC), a Seattle-based health care system, implemented a set of system reforms called the "Access Initiative" that are consistent with the IOM recommendations.⁴ The broad goal of the Access Initiative was to change GHC from the more traditional health management organization (HMO) model, where controls restrict enrollees' access to care and choice of provider, to a more patient-centered model, in which enrollees choose when, how, and by whom they receive care. Components of the Access Initiative include a patient Web site, same-day appointments with primary care physicians, direct patient access to specialist physicians, physician compensation with productivity and quality incentives, and other mechanisms for encouraging patient interactions with the health care system. Overall, GHC hoped that by "set-



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Changes in Health Care Financing and Organization is a national program of the Robert Wood Johnson Foundation administered by AcademyHealth.



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ting the standard” for access, the Initiative would increase member satisfaction and promote more effective and efficient care. A key assumption of the transformation to patient-centered access was that members would make good choices in their use of services.

Impact of Access Initiative

HCFO funded David Grembowski, Ph.D., professor of health services at the University of Washington School of Public Health and Community Medicine, to examine the combined effectiveness of the GHC Access Initiative, in collaboration with other investigators from the School and the Center for Health Studies at GHC. Rather than examining each individual change’s impact on access, cost, and quality, Grembowski and colleagues studied the combined impact of the various components of the Access Initiative.

The evaluation consisted of four parts:

1. **Estimating the change in enrollee utilization of the MyGroupHealth Web services and physician compensation resulting from the new incentives.** Enrollee utilization increased during the Access Initiative, and physician compensation increased in comparison to the pre-Initiative period.
2. **Examining patient and provider satisfaction with the Access Initiative.** Patient satisfaction increased, but results are mixed about provider satisfaction following the Access Initiative.
3. **Comparing physician visits, hospital use, costs, and physician productivity before and after the implementation of the Access Initiative.** Upon full implementation, the number of primary care visits decreased, the number of specialty care visits increased, total costs decreased, and primary physician productivity increased.
4. **Comparing continuity of physician and quality of care before and after implementation of the Access Initiative.** The results show little effect on provider continuity in primary care and clinical quality of care.

The Access Initiative At-a-Glance

Access to patient Web site, MyGroupHealth (MyGH).

GHC designed an enrollee Web site, “MyGroupHealth” (MyGH), which provides patients with access to patient-physician secure e-mail, their electronic medical records, and health promotion information. Enrollees can:

- Exchange secure e-mail messages with their primary and specialist physicians and their entire health care team. Physicians receive a monetary incentive for responding to patient messages;
- Access their electronic medical records through a direct link to GHC’s clinical information system, EpicCare™;
- Refill medications, schedule appointments with providers, participate in discussion groups, or use health assessment tools; and
- Search the Healthwise® knowledge base, a health and drug reference library with more than 5,000 topics.

EpicCare™ also supports all care from providers and has a variety of information facilities for providers, including electronic patient scheduling, online order entry tools (e.g., laboratory tests, prescriptions, referrals), systematic clinical documentation (e.g., visit summaries), clinical decision support, computerized physician order entry, clinical messaging among providers, and automated reminders.

Same-day appointments with primary care physicians.

Patients can schedule same-day appointments, or whenever they prefer, by phone or over the Internet through GHC’s Web site. Primary care physicians in GHC medical centers are organized into clusters of about three or four providers. Enrollees who want same-day appointments are less likely to see their own primary care physician, but they will see one of the physicians within their cluster. The timeliness of care also is improved by reducing wait times throughout the system.

Primary care system redesign to control costs.

To increase their market competitiveness, GHC underwent a set of changes in their primary care system design. Changes included reducing the number of physicians, increasing physician productivity, increasing physician influence and accountability, simplifying the delivery system structure, and reducing the practice’s direct overhead costs.

Direct patient access to specialist physicians.

The Access Initiative removed the practice of “gatekeeping,” which requires a referral from a primary care physician to see a physician specialist. Instead, enrollees can make appointments directly with most specialty providers without first seeing their primary care physician.

Physician compensation with productivity and quality incentives.

Primary care physician compensation was aligned with the system reforms, changing from 100 percent guaranteed salary to a variable compensation system. Primary care physicians receive 80 percent guaranteed base salary plus additional variable compensation up to 120 percent of the guaranteed base. Variable compensation is based on individual physician productivity (number and intensity of patient encounters) and attainment of objectives for service quality and coding accuracy. A similar compensation system was implemented for specialty physicians. In 2005, GHC leadership stopped specialty productivity incentives; however, specialist compensation based on service quality and coding accuracy continues.

Methodology

To determine the effects of the Access Initiative, Grembowski and colleagues studied 842,246 GHC enrollees who were enrolled for at least one quarter between 1997 and 2005. Primary care physicians for the productivity analysis were employed at least 0.25 full-time equivalents (FTE) within the Group Health system and had at least 250 enrollees in their panels.

The study team used the following data sources for the evaluations:

- **Enrollee utilization, cost, and continuity of care:** GHC Center for Health Study (CHS) and GHC Data Warehouses
- **MyGroupHealth Web site activity and patient-physician e-mailing:** the Epic Clarity reporting database
- **Clinical indicators of quality of care:** Group Health Performance Reporting and Assessment Group
- **Enrollee satisfaction:** the GHC annual Consumer Assessment of Health Plans Survey (CAHPS)
- **Provider satisfaction:** the annual Group Health Work Environment Assessment Survey and qualitative interviews with 10 primary and 12 specialty physicians
- **Physician employment:** Group Health Permanente

The team analyzed the quantitative data using bivariate statistical tests and generalized estimating equations. In addition, the researchers performed content analysis of the qualitative physician interviews to identify themes, categories, and patterns for each question in the interview.

Findings

Enrollee utilization of the new services in the MyGroupHealth Web services increased throughout the study period. The percentage of enrollees who used electronic medical records and secure e-mail

messaging to providers rose continuously from 5 percent in September 2002 to 33 percent in December 2005. The team expected utilization of the Web services to increase throughout the implementation of the Access Initiative as more enrollees became aware of the new service options. Grembowski found that patients who enrolled in the online services were more likely to be women, have moderate or high expected clinical need, and have commercial versus other insurance.

Primary physician compensation was expected to increase in response to the added productivity and quality requirements for compensation. As anticipated, compared to the pre-Initiative period, average primary care physician compensation increased during the Access Initiative. Over the course of the Initiative, average compensation decreased; but, as of 2005, compensation was still higher than prior to the Initiative. In 2003, more than 60 percent of primary care physicians were receiving compensation greater than 115 percent of their base salary. In 2005 only 30 percent of primary care physicians were receiving this level of compensation, and slightly more than 40 percent of physicians were receiving between 100 percent and 115 percent of their base salaries.

The results indicate that enrollee satisfaction and enrollment increased after full implementation of the Access Initiative. With increased patient access to providers and information, Grembowski correctly hypothesized that patient satisfaction would increase. On the other hand, the researchers expected providers to be less satisfied after the implementation of the Access Initiative due to the organizational change and increased workloads for providers, including responding to patient e-mails. Contrary to the hypothesis, the quantitative data indicate that providers were more satisfied over the study period compared to before the Access Initiative. However, the qualitative interviews of physicians indicate that the increase in patient satisfaction may have occurred at the expense of physician satisfaction.

Interviews also revealed that physician job satisfaction suffered in primary care and some medical subspecialties due in large part to workload increases and productivity pressures. Grembowski thinks the physician responses differed from the annual provider survey because of the ways the questions were asked. He explains, “The annual survey provided only general indications of job satisfaction and did not allow the providers to specifically express their opinions of the Access Initiative.”

The researchers’ expectations were realized in terms of utilization, cost, and provider productivity. They hypothesized that primary care visits would decline because of the removal of the gatekeeping requirement. Correspondingly, they expected specialist visits to increase as patients had direct access to specialty care without first going through their primary care physicians. With the ability of patients to e-mail providers, provider face-to-face visits were expected to decrease. As expected, Grembowski found that during full implementation, the number of primary care visits decreased while specialty visits increased.

Also, upon full implementation of the Access Initiative, the team hypothesized that average enrollee costs would grow at a slower rate through greater physician productivity and the primary care redesign. With the Access Initiative, primary care and specialty care costs per enrollee decreased, but emergency department costs increased. The rise in emergency department costs parallels an increase in emergency room (ER) visits during the Access Initiative. The reason for the increase in ER visits is uncertain at this time. Despite the increase in emergency department costs, overall, total health services costs per enrollee decreased after full implementation of the Access Initiative.

Since the Access Initiative bases physician compensation partly on productivity, the researchers predicted that physician productivity would sustain its previous level or increase. As expected, the results indicate an

increase in primary care provider productivity. However, productivity decreased during the initial stages of implementation as providers adjusted to the new systems, incentives, and clinical management routines.

Past research has yielded mixed results for the effects of increased patient access on continuity and quality of care.^{5,6} Grembowski expected enrollees to self-refer to specialists more often and make appointments with multiple primary care providers under the Access Initiative, yielding a decline in continuity of care. At the same time, the reforms to improve patient-centered care could distract from explicit efforts to improve clinical quality of care; thus, Grembowski hypothesized that clinical quality of care would remain stable or decrease following full implementation of the Access Initiative. However, the results show that the Access Initiative had little effect on provider continuity in primary care and clinical quality of care. Although the researchers expected the Access Initiative to cause enrollees to see multiple primary care clinicians, about 62 percent of in-person physician visits were with an enrollee's own primary care clinician dur-

ing the Access Initiative. These results are encouraging as they show that access can be increased without adversely affecting continuity and quality of care.

Conclusion

Evidence from this research indicates that restructuring the health care delivery system to increase patient access can lead to increased patient satisfaction and lower health care costs. While annual provider surveys generally indicate the work environment improved following the Access Initiative, the gains in access and patient satisfaction may have come at the expense of physician satisfaction, particularly primary care physicians.

Grembowski notes, "Few studies have examined the 'real world' efforts to implement several IOM recommendations, and these findings offer insights about how health care organizations balance trade-offs between service, quality, and cost. This service-quality-cost trade-off is the 'holy grail' that contemporary health care organizations are seeking to remain competitive in today's marketplace."

About the Author

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Endnotes

- 1 Institute of Medicine. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press.
- 2 McGlynn, E. et al. 2003. "The Quality of Health Care Delivered to Adults in the United States," *New England Journal of Medicine*, Vol. 348, pp. 2635-45.
- 3 Kaiser Family Foundation. 2007. *Healthcare Spending in the United States and OECD Countries*.
- 4 The Access Initiative has been in continuous operation since its implementation.
- 5 Koppel, R. et al. 2005. "Role of Computerized Physician Order Entry Systems in Facilitating Medication Errors," *Journal of the American Medical Association*, Vol. 293, pp. 1197-1203.
- 6 Balas, E.A. et al. 2001. "Information Systems Can Prevent Error and Improve Quality," *Journal of the American Medical Informatics Association*, Vol. 8, No. 4, pp. 398-399.