



**PHYSICIANS' VIEWS ON QUALITY OF CARE:
FINDINGS FROM THE COMMONWEALTH FUND
NATIONAL SURVEY OF PHYSICIANS AND QUALITY OF CARE**

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and Stephen C. Schoenbaum

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EXECUTIVE SUMMARY

Although the concept of quality improvement is not new,¹ very little is known about physicians' views on and experiences with quality improvement tools and principles. In 2003, The Commonwealth Fund conducted a National Survey of Physicians and Quality of Care to explore physicians' use of quality improvement tools, including information technology (IT) tools; future plans to initiate quality improvement activities; and views of potential solutions, as well as barriers. Because information is at the core of quality improvement, the survey explored physicians' access to data on their practices and performance, as well as their willingness to share such data.

In its 2001 landmark report, *Crossing the Quality Chasm*, the Institute of Medicine (IOM) stressed the importance of care coordination to providing high-quality care. To examine the issue from a physician-level perspective, The Commonwealth Fund survey asked physicians about the problems that patients encounter as a result of poor coordination, as well as the problems that physicians themselves experience, like the timeliness or availability of referral information.

While research has demonstrated that hospitals and health systems may take financial risks by making quality improvement a priority,² little is known about similar risks physicians might face. To address this gap, the survey asked physicians about the role quality plays in determining compensation and about other financial factors they may have experienced in striving to improve quality. Finally, the survey explored physicians' opinions about various solutions and approaches to improving quality.

Information Technology: Current Use, Future Plans, and Perceived Barriers

Results from the survey indicate physicians' use of information technology (IT) is growing, albeit slowly. Electronic billing is the IT tools used most routinely, despite the reported benefit of other IT applications. For example, providers who use electronic medical records (EMRs) reported more efficient clinical operations, due to better accessibility and organization of information. EMR use may also increase billing revenue as a result of more accurate tracking of service provided, more accurate coding,³ and more timely collection of payments. By reducing the need for transcription, data entry, reception, and medical record management, EMRs may also reduce physicians' office operating costs.^{4,5} Despite these benefits, only 27 percent of surveyed physicians reported using EMRs either routinely or occasionally, with an additional 20 percent saying they plan to use them in the next two years. Another innovation—electronic access of diagnostic test information—allows results to be viewed earlier, facilitates more timely

intervention, decreases the ordering of unnecessary tests by 10 to 15 percent,⁶ and decreases the amount of time spent charting. Although 58 percent of surveyed physicians say they routinely or occasionally access test results electronically, only 37 percent say they do so routinely.

Similarly, more than one-half of the physicians surveyed generate patient reminders, but only 21 percent have automated the process. Clinical decision support systems (CDSS) have also been shown to improve clinical practice and patient outcomes. Such a benefit was demonstrated in 43 percent of the studies reviewed by Dereck Hunt and colleagues.⁷ Yet less than one-quarter of surveyed physicians say they use CDSS routinely or occasionally.

The most significant barrier to IT use is cost, with financial burdens greatest for solo and small-group practices—the settings where most U.S. physicians practice.⁸ The initial costs of acquiring EMR capability have been estimated at \$15,000 to \$50,000 per physician, excluding the cost of decreased productivity that can occur in early stages of implementation. Studies have found that IT can have financial benefits. However, these benefits vary by practice, from no reported gains to gains of more than \$20,000 per year.⁹

Practice-Level and Performance Data: Availability, Sources, and Willingness to Share

According to the survey's findings, physicians are not using data about their practices in a comprehensive way. More than one-half of physicians find it difficult or impossible to get basic profile data on their patients. An even greater percentage (85%) are unable to identify or have difficulty identifying patients who may require closer attention because of abnormal laboratory results or medications that need to be monitored or changed. Physicians who can easily access such information are more likely to practice in larger groups and work full-time in clinical care. Collecting and analyzing data requires knowledge, special technical tools, staff, and time. Large physician groups, due to their financial flexibility and organizational culture, are more likely to engage in these kinds of activities.

Physicians also do not routinely use data to monitor the quality of their clinical practice. Thirty-three percent of surveyed physicians say they have access to performance data, most relying on external sources of information. One-quarter of surveyed physicians identified insurers and health plans as the most common source of quality-of-care data. Only 14 percent said they generated performance measures themselves. Salaried physicians and those who work in larger groups are more likely to generate performance data internally.

Although nearly three-quarters (71%) of physicians agreed that performance data should be shared with their medical leadership, only slightly more than one-half (55%) agreed this information should be shared with patients. Twenty-nine percent agreed that this information definitely or probably should be shared with the public. However, despite physicians' discomfort, there is evidence that sharing medical records with patients may improve adherence to medical advice.¹⁰ Peer comparison and mentoring can lead to improvements in care,¹¹ and information sharing could help physicians refer patients to the most appropriate specialists.

Physicians' Involvement in Quality Improvement Activities

Only one-third of all surveyed physicians report participating in activities designed to change and improve their practices, with the type of practice setting affecting the degree of involvement. Those more likely to be engaged in improvement activities include physicians who work in larger groups, physicians who work in hospital-based or staff models, and salaried physicians. Similarly, a greater percentage of physicians who work full-time (more than 40 hours) are active in redesign, compared with those working part-time (20 hours or fewer) (37% vs. 22%) and a greater percentage of primary care physicians (PCPs) are involved, compared with specialists (42% vs. 31%).

Collaborative activities that involve public agencies or community groups working together to improve outcomes for patients with specific conditions present another strategy to create system-wide change. However, two-thirds of the surveyed physicians report never having participated in collaboratives. Providers who have used quality improvement collaboratives are more likely to be primary care, salaried physicians in larger group practices.

Coordination of Care and Referrals

The most commonly reported quality problems for physicians are issues of care coordination. These issues include disruptions in the process of transferring important patient information and patients receiving conflicting information. Most physicians (72%) reported that patients' medical records, test results, or other relevant information were sometimes or often not available at the time of a scheduled visit. One-third often or sometimes observed that tests or procedures had to be repeated because findings were not available or were inadequate for interpretation, and 28 percent reported that care was compromised due to conflicting information from different health professionals. One-quarter (26%) observed that patients experienced problems following hospital discharge due to information not being released in a timely manner. In some cases (15%), physicians

reported that patients often or sometimes did not receive appropriate follow-up, despite test results that indicate the need for such treatment.

The frequency of coordination problems differs somewhat by practice setting and size, with physicians who practice in groups of more than 50 more likely than solo practitioners to report such problems. In addition, PCPs mainly observe issues around follow-up and hand-off (e.g., hospital discharge process), while specialists more often experience test results that are unavailable and need to be repeated.

One-third of physicians said they had problems receiving information and feedback regarding referral in a timely manner. These problems are more frequently experienced by specialists and physicians in larger group practices. In addition, most physicians (64%) say they rarely or never have objective information about the quality of care provided by physicians to whom they refer patients. Quality-of-care data appears to have little impact on referral decisions, with most physicians using other information, such as patients' experiences with physicians or professional reputation among peers.

Quality Improvement Strategies

The survey explored physicians' opinions on the effectiveness of seven potential strategies to improve quality of care. These include: appropriate time spent with patients; patient access to preventive care and health education; treatment guidelines or protocols; information technologies; information about specialists and specialty centers for referrals; team work and communication. Most physicians (52%) cited time spent with patients as an effective strategy in improving quality of care. They also cited access to preventive care (41%) and teamwork and increased communication among health care professionals (35%). Other approaches such as guidelines, electronic medical records and e-prescribing, and performance data, received only limited support from physicians.

While most physicians believe that team care results in better decisions, some remain skeptical. One-third (32%) agree or strongly agree that teamwork makes care more cumbersome, while one-quarter (24%) agree or strongly agree that a team approach can increase the likelihood of medical errors. Physicians in solo practice are less supportive of team care than those in larger groups or in hospital settings. Specialty and gender are also significant factors. Forty-one percent of primary care physicians said that teamwork would be very effective in improving care, compared with 33 percent of specialists. Thirty-two of male physicians said that teamwork would be very effective, compared with 45 percent of female physicians.

Incentives and Disincentives for Providing Quality Care

For most of the surveyed physicians, productivity remains the major factor determining compensation. Thirty-nine percent of physicians reported that board recertification status is a factor in compensation, while less than one-third (27%) cited clinical quality as a factor. Under current payment policies, physicians are rarely compensated for providing certain patient-centered services, like e-mail or phone consultations. None of the surveyed physicians were reimbursed for e-mail consultations and very few received reimbursements for phone consultations (4%) or group patient visits (5%).

There is no system in place to financially reward physicians for providing high-quality care. In fact, there appear to be financial disincentives. Altogether, one-half of physicians said that providing the best quality of care often (23%) or sometimes (28%) translates into lower revenues. Physicians in solo practice are more likely than physicians in larger group practices to hold this opinion (58% vs. 46%, respectively).

Implications for Policy and Practice

The survey confirms that physicians have not yet fully embraced quality improvement, with a striking gap between physicians in solo practice and those in larger group settings. Although the majority of U.S. physicians work in solo practice or small group (2–9 physicians) practice settings,¹² quality improvement methods have been least adopted in such environments. Quality improvement appears to be institutionalized within organizations that have the infrastructure to support it, but not fully disseminated throughout the profession. Accelerating adoption of quality improvement principles and tools by physicians will require policies that address the following three areas: 1) capacity and infrastructure; 2) education to build knowledge and skills, and 3) professionalism.

It is unlikely that a robust IT infrastructure will be established, and even more unlikely that tools will be adopted by physicians, without federal leadership.¹³ Some recent progress has been made on this front. For instance, in May 2004, the Department of Health and Human Services (HHS) appointed a new national health information technology coordinator, David Brailer, M.D. In addition, the Bush Administration set forth a goal for most Americans to have electronic health records by 2014. In Congress, several bills were proposed that address IT, from Senators Judd Gregg (R-N.H.), Hillary Rodham Clinton (D-N.Y.), John Kerry (D-Mass.), and Representative Nancy Johnson (R-Conn.), and most recently, on May 11th 2005, Rep Tim Murphy (R-Pa.) and Rep Patrick Kennedy (D-R.I.) introduced the 21st Century Health Information Act as a bipartisan legislation to address the systemic obstacles and misaligned incentives that have hindered health information technology adoption. In 2005, the President's budget for IT initiatives

includes \$50 million to AHRQ.¹⁴ In addition, the 2006 budget includes \$75 million to the Office of the National Coordinator for Health Information Technology to foster collaboration and develop an interoperable health information technology network.¹⁵ Although this represents a great step forward, more funding and attention will be required in the future. In the United Kingdom for instance, the government invested \$10 to \$16 billion toward the National Health Information Infrastructure. Future policy options should include federal grants, annexes to the Medicare diagnosis-related group physician reimbursement, and revolving loans (which have been particularly successful in transportation and environmental protection).^{16,17} In the United Kingdom and Sweden, for example, physicians who invest in EMRs receive government subsidies. Fifty-eight percent of physicians in the United Kingdom and 90 percent of physicians in Sweden report using them.¹⁸

To support the spread of IT, it will be necessary to create and support standardization. The Health Informatics Initiative of May 2004 led to the adoption of 15 standards by HHS and 20 federal agencies. The implementation of local or regional standards using “community-based interconnectivity” models are under way on the state-wide and city-wide levels, as well as in local, hospital-based and integrated health care delivery settings (e.g. Massachusetts, Rhode Island, Santa Barbara, Regenstrief Institute in Indianapolis). These systems allow connections to be made and information shared among various providers, including physicians, emergency room staff, and pharmacists. By spreading the cost of the IT infrastructure over a greater number of people, such models may significantly decrease the cost of investment and make it feasible for individual or small groups of physicians to acquire these technologies.^{19,20} Other IT business models will likely require private and public sector partnering to invest in the necessary infrastructure to support and sustain quality.

Quality measurement has not yet been fully embraced by the medical profession, despite its important role in improvement activities. The task of monitoring one’s practice and using that information to make improvements should not only be a required skill, but a professional responsibility. In 1999, the American Council of Graduate Medical Education approved a new set of residency program training requirements, under which residents must reach competency in six areas, including practice-based learning and improvement and systems-based practice.²¹ The recognition of these competencies is an essential first step in training the next generation of physicians to evaluate and improve their own care.

The 2001 IOM report, *Crossing the Quality Chasm*, recognized that necessity of aligning payment policies with quality improvement.²² The IOM called for public and private

purchasers to reexamine their payment policies to remove barriers that impede quality improvement and build stronger incentives for quality enhancement. Currently, quality of care determines compensation for less than 10 percent of physicians. Instead, productivity is the main determinant for most physicians. To understand and determine how financial incentives can best foster quality, pay-for-performance programs are currently being tested and evaluated—at Pacificare and the Integrated Healthcare Association in California, among other locations.²³

Physicians are still cautious about making the quality of their care transparent, but if quality is to be rewarded, data must be measured and shared. Ultimately, the medical profession must take the lead to make care more transparent, with physicians balancing issues of ethics, fairness, accountability, and confidentiality. The public is becoming increasingly worried that doctors are secretive and wary of making full disclosure. Physicians should work to enhance trust between the public and the profession by allowing greater openness about the quality of the care they provide.

I. INFORMATION TECHNOLOGY: CURRENT USE, FUTURE PLANS, AND PERCEIVED BARRIERS

The diffusion of information technology (IT) in health care has been modest, at best, despite its ability to improve health care's efficiency and quality.²⁴ Electronic medical records (EMRs), for instance, have become sophisticated and powerful tools, but few health care organizations use them.²⁵ The situation is similar for related technologies, like clinical decision support systems (CDSS) and computerized prescribing and order entry systems. This survey explored physicians' current use of quality improvement tools, future plans to initiate quality improvement activities, and barriers they perceive in adopting IT tools.²⁶

Use of Information Technologies in Clinical Practice

The most common use of IT is for administrative purposes.

- Over three-quarters of respondents use IT for electronic billing either routinely or occasionally. (Chart I-1)

IT is less commonly used to improve practice efficiency and quality or to communicate with other physicians or patients. IT tools are used by a greater percentage of physicians in large-group practices and by a greater percentage of salaried physicians.

Electronic access to test results

- Fifty-eight percent of all respondents reported using electronic access to patients' test results either routinely (37%) or occasionally (21%).
- Eighty-seven percent of large-group-practice physicians have access to test results electronically routinely or occasionally, compared with 36 percent of solo-practice physicians. (Chart I-2)

Use of EMR and electronic ordering

- About one-quarter (27%) of physicians use EMRs routinely or occasionally. Less than one in five use them routinely. (Chart I-1)
- One-quarter (27%) of physicians order tests, procedures, or drugs electronically either routinely or occasionally, but only 17% do so routinely.
- Fifty-seven percent of physicians who practice in groups of more than 50 use EMRs routinely or occasionally, compared with 13 percent of solo physicians. (Chart I-2)

- Thirty-six percent of salaried physicians use EMRs routinely or occasionally compared with 21 percent of non-salaried physicians. (Table I-2)

Clinical decision support systems

- One-quarter of physicians use electronic CDSS routinely or occasionally (24%), but most of this group only use it occasionally (18%). (Chart I-1)
- Forty percent of physicians who practice in groups of more than 50 use CDSS routinely or occasionally, but only 19 percent of solo practice physicians do so. (Chart I-3)

E-mail communication

- Twenty-eight percent of physicians use e-mail either routinely or occasionally to communicate with other doctors; but only 7 percent do so routinely. (Chart I-1)
- Eighteen percent of physicians communicate with patients either routinely or occasionally via e-mail; but only 3 percent communicate this way routinely.
- Only 17 percent of solo physicians communicate routinely or occasionally with other doctors via e-mail compared with 61 percent of those who practice in groups of more than 50. (Chart I-3)
- Twice the number of salaried than non-salaried physicians use e-mail to communicate with other physicians (39% vs. 20%). (Table I-2)
- E-mail communication between doctors and patients is more likely among physicians in large groups than among those in solo practice (33% vs. 16%). (Chart I-3)

Electronic alerts and reminders

- Although 38 percent of physicians receive alerts about drug prescribing problems, only 12 percent of this group said these alerts are electronically generated. (Chart I-4)
- Forty-one percent of physicians receive alerts for abnormal test results requiring special follow-up, but only 10 percent said these alerts are electronically generated.
- Fifty-four percent of respondents send reminders to their patients regarding routine preventive care. Only 21 percent have computerized this task.

- Among solo physicians, 6 percent receive electronic drug alerts, compared with 27 percent of physicians who practice in groups of more than 50. (Chart I-5)
- One-third of physicians who practice in groups of more than 50 generate patient reminders electronically (31%), compared with 13 percent of solo practice physicians.

For the most part, primary care physicians and specialists do not differ in their use of IT. Some differences exist in use of reminder systems and e-mail communication.

- Specialists are more likely than primary care physicians to generate patient reminders electronically (24% vs. 14%). (Table I-2)
- Specialists are more likely than primary care physicians to communicate with other doctors using e-mail (30% vs. 22%).

Future Use of IT

Physicians were surveyed regarding their future plans (within the next year) to adopt new IT tools. EMRs, electronic ordering and prescribing, CDSS, and electronic access to test results are expected to be the most widely adopted in the next year. In general, it is expected that IT will grow slowly and the rate of adoption will vary according to the type of technology.

- Twenty percent of respondents who are not yet using EMRs plan to use them within the next year. (Chart I-6) Including current users, this would bring the total percentage of users to 47 percent.
- Nineteen percent of respondents plan to adopt electronic ordering and prescribing. Including current users, this would bring the total percentage of users to 47 percent.
- Seventeen percent of physicians plan to adopt CDSS in the next year, leaving a 58 percent share of physicians who will not use or adopt the tool within the next year.
- Fourteen percent of physicians plan to adopt computer access to test results, bringing total users to 73 percent.

The use of e-mail between physicians is likely to grow faster than such use between physicians and patients.

- Twelve percent of physicians plan to start using e-mail to communicate with other physicians, but 57 percent of physicians are not currently using e-mail to

communicate with other physicians nor do they have plans to do so within the next year.

- Eleven percent of physicians plan to start using e-mail to communicate with their patients. Seventy-one percent of respondents do not currently use e-mail to communicate with their patients and have no plans to do so within the next year.

Use of alert systems and patient reminders (electronic or manual) is expected to grow more slowly.

- Less than two of 10 physicians plan to implement systems to receive alerts about potential drug prescribing problems (16%) or abnormal test results that require follow-up (13%). (Chart I-7)
- Ten percent of physicians are planning to adopt reminder systems. About one-third of physicians (34%) do not have such systems and have no plans to implement them.

Practice size affects the expected speed and extent of adoption.

- Nearly twice as many physicians in large group practices as solo practitioners (22% vs. 13%) plan to adopt EMRs within the next year. (Chart I-8)
- A similar percentage of salaried as non-salaried physicians who are not currently using EMRs plan to adopt them (21% vs. 19%). Non-salaried physicians are more likely to say they have no plans to use EMRs within the next year, as compared with salaried physicians (60% vs. 43%). (Table I-2)

Perceived Barriers to IT Adoption

The top three reported barriers to IT adoption are:

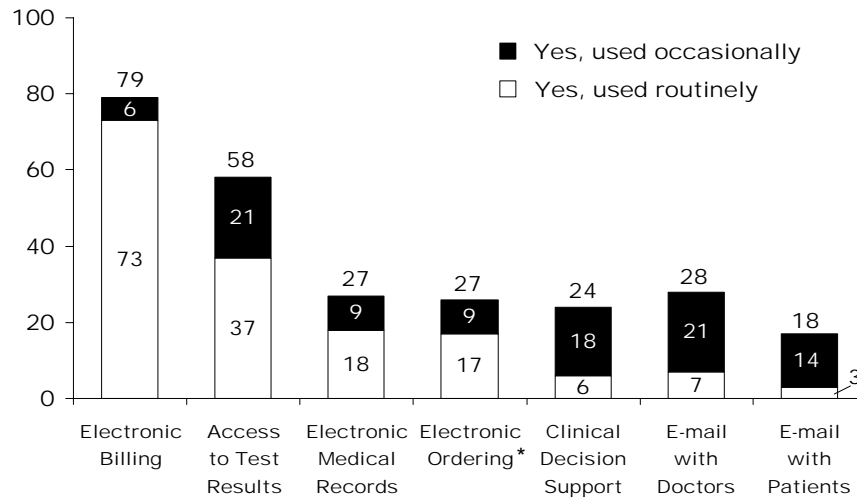
- cost of system start-up and maintenance (56%),
- lack of local, regional, and national standards (44%), and
- lack of time to consider acquiring, implementing, and using a new system (39%). (Chart I-9)

Practice size is the main factor affecting the degree of importance of these barriers. The financial barriers are greatest for solo and small-group practices.

- Sixty-two percent of physicians in solo practice and 59 percent of those in small groups say start-up costs are a major barrier, compared with 43 percent of physicians in groups larger than 50. (Chart I-10)
- Solo practitioners and small group practice physicians are more skeptical about the effectiveness of such technologies than are physicians in large groups. Forty percent of solo-practice physicians and 24 percent of physicians in small groups say that lack of scientific evidence is a concern, compared with 11 percent of physicians in large groups. (Table I-1)
- Physicians in solo practice are more likely (30%) than physicians in larger practices (15% to 19%) to cite privacy concerns as a barrier to adoption.

Chart I-1. Use of Information Technologies

Percent indicating "routine" or "occasional" use

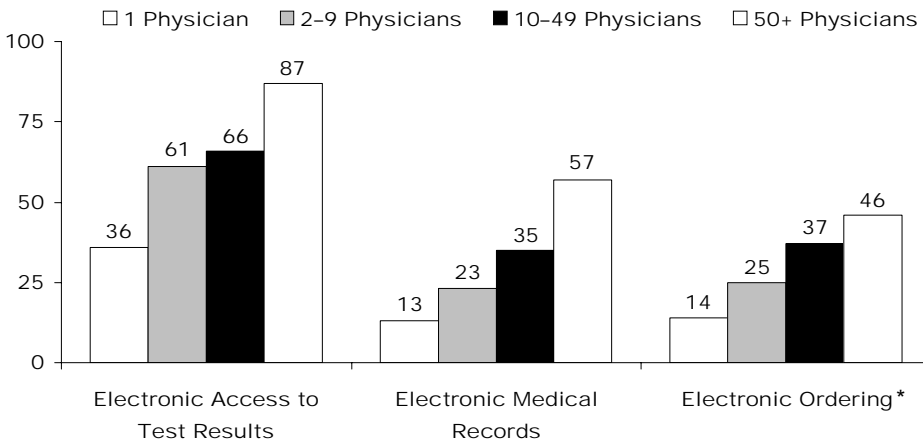


* Electronic ordering of tests, procedures, or drugs.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-2. Electronic Access to Patient Test Results, Electronic Medical Records, and Electronic Ordering, by Practice Size

Percent who currently "routinely/occasionally" use the following

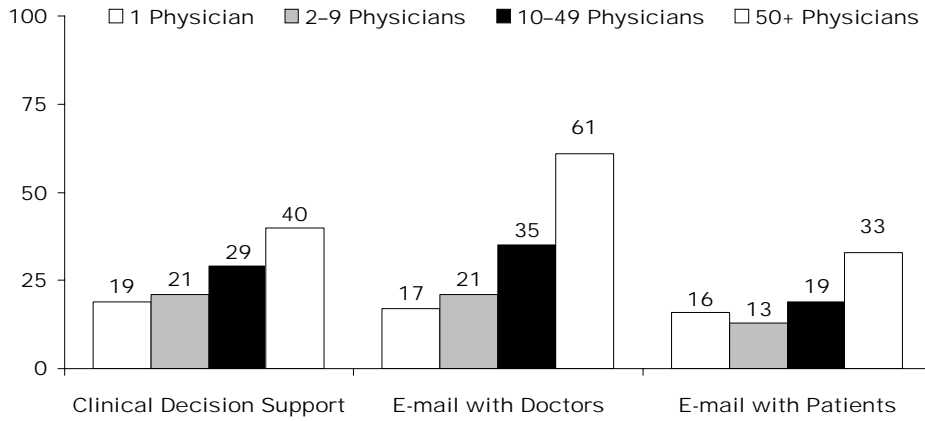


* Electronic ordering of tests, procedures, or drugs.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-3. Use of Clinical Decision Support, E-mail with Doctors, and E-mail with Patients, by Practice Size

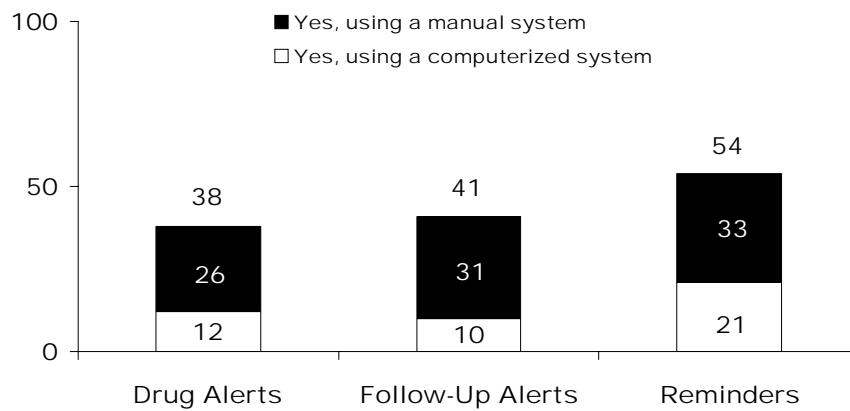
Percent who currently "routinely/occasionally" use the following



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-4. Use of Reminders or Alerts

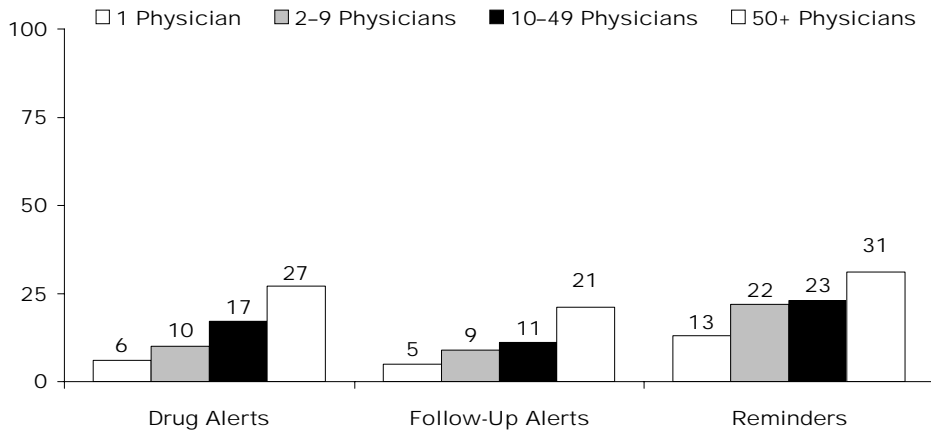
Percent indicating following tasks currently performed in their office practice



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

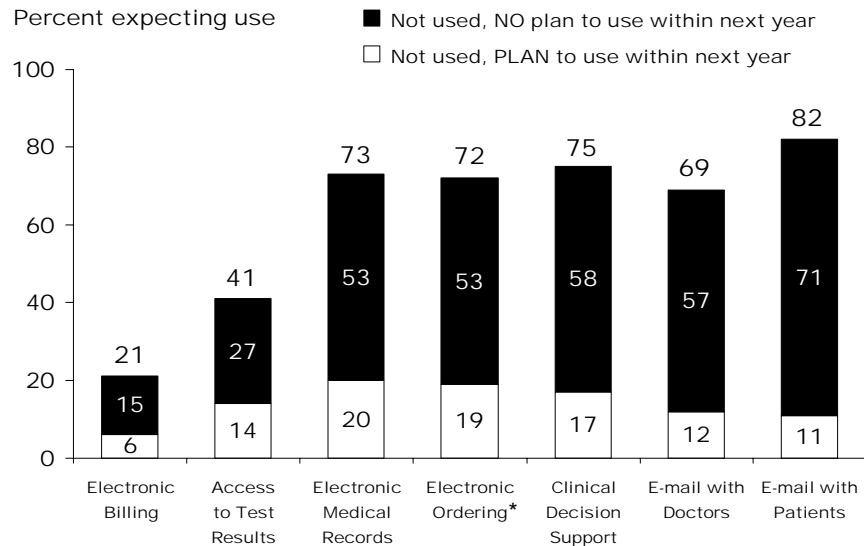
Chart I-5. Use of Electronic Drug Alerts, Follow-Up Alerts, and Reminders, by Practice Size

Percent who currently use a "computerized system" for the following



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-6. Planned Future Use of IT

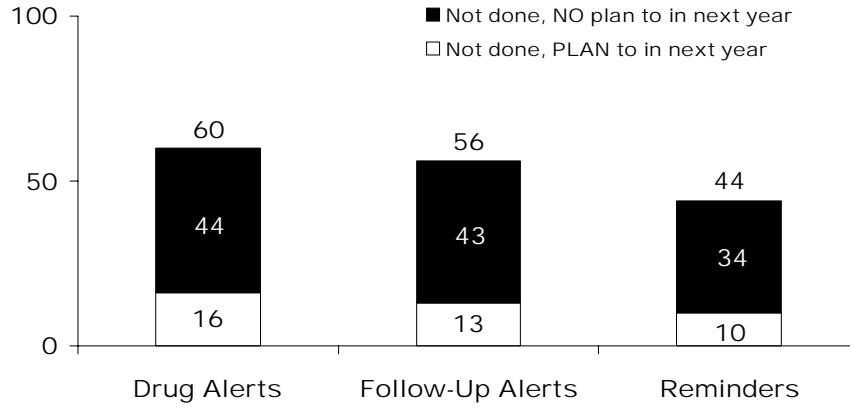


* Electronic ordering of tests, procedures, or drugs.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-7. Planned Future Use of Reminders or Alerts

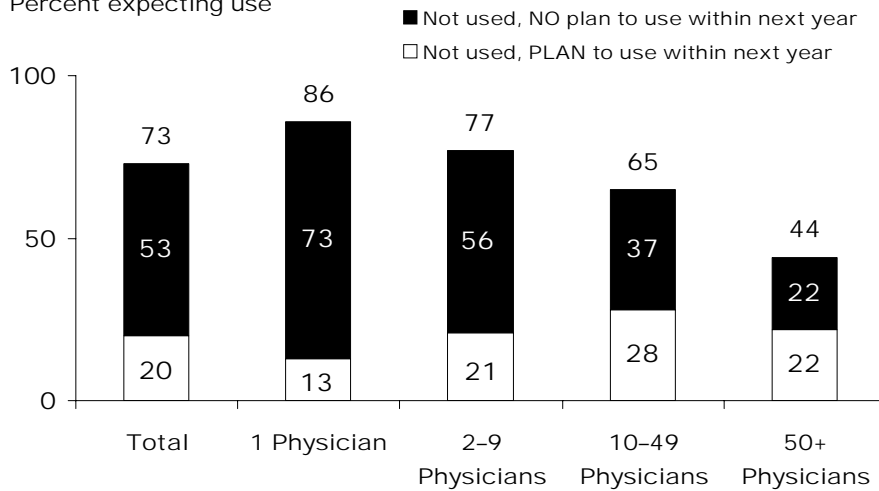
Percent expecting future use of the following



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

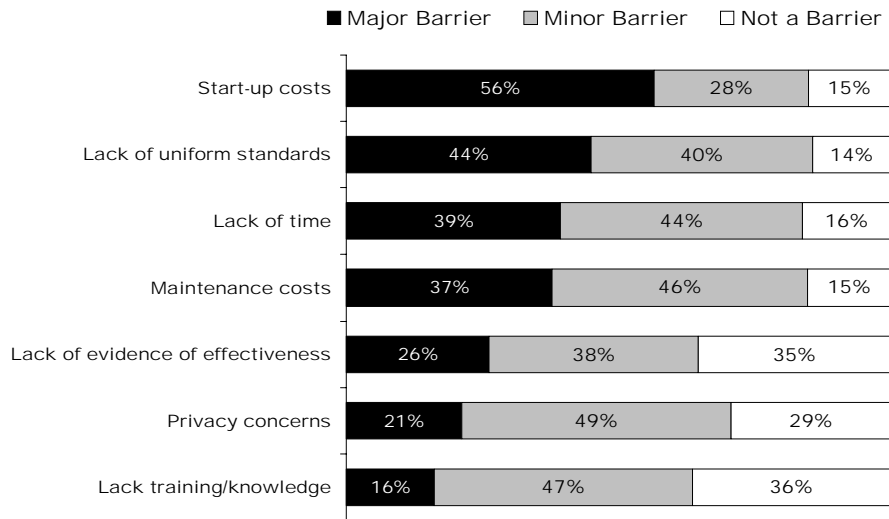
Chart I-8. Planned Future Use of Electronic Medical Records, by Practice Size

Percent expecting use



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

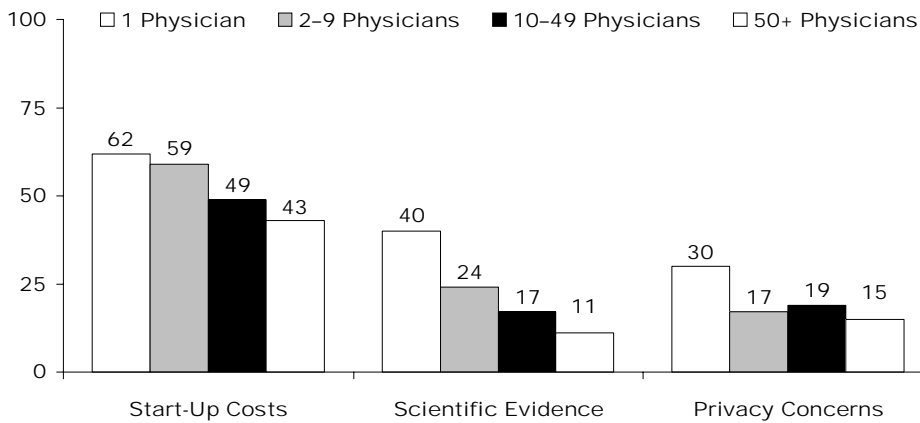
Chart I-9. Barriers to Adoption



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart I-10. Barriers to Adoption of Information Technologies, by Practice Size

Percent indicating start-up costs, scientific evidence, or privacy concerns as a "major barrier" to greater use of information technologies



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

II. PRACTICE-LEVEL AND PERFORMANCE DATA: AVAILABILITY, SOURCES, AND WILLINGNESS TO SHARE

Payers, regulatory agencies, and oversight organizations have shown interest in using quality improvement principles and physician performance measures to improve health care. But little is known about how physicians themselves use data to monitor and improve the care they deliver. The survey explored physicians' access to data about their patient panel, performance data (e.g., percentage of women over age 50 who have had mammograms), outcomes (e.g., percentage of diabetics with HgA1c under control), and data from patient surveys. Physicians were also asked about their views on sharing performance data and medical records.

Access to Patient Panel Data

Most physicians are not making full use of data on their practices, and find it difficult or impossible to get basic profile data of their patient panel.

- One-half or more find it difficult or impossible to generate lists of patients by diagnoses or age group. (Chart II-1)
- Eighty-four percent find it difficult or impossible to generate lists of patients by laboratory results or drugs prescribed. Lack of access to such data makes it more difficult to follow patients who may require closer follow-up given abnormal lab results or high-risk drugs.

Physicians who work full-time and those who work in large group practices are more likely to have access to data on their patient panel.

- Fifty percent of solo physicians can easily generate lists of patients using any criteria (e.g., diagnoses, age, test results, medications), compared with 61 percent of physicians in large groups. (Chart II-2)
- Twenty-seven percent of physicians in groups of 50 or more find it very or somewhat easy to generate lists of patients by laboratory results or by medications prescribed, compared with 12 percent of solo physicians. (Chart II-3)
- Physicians who provide less than 20 hours of direct patient care per week are less likely to easily generate practice data, compared with physicians working 40 hours per week or more (51% vs. 61%). (Table II-3)
- Physicians who use EMRs routinely or occasionally are more likely than those who do not to say that data about their practice can easily be generated (62% vs. 55%). (Chart II-4)

Access to Performance Data

In general, physicians do not routinely use data to assess the quality of their clinical practices.

- Thirty-three percent of all physicians say they have access to performance data. (Chart II-5)
- Patient surveys represent the most commonly used type of performance data; one-quarter of physicians say they have access to such information.
- One of five physicians has access to process-of-care data.
- Only 18 percent of all physicians have data on patients' outcomes.

Access to information about quality varies significantly by practice size.

- One quarter of physicians in groups of 50 or more (27%) say they receive process-of-care data, compared with 14 percent of solo physicians. A similar pattern exists for clinical outcome data. (Chart II-6)
- Forty-four percent of physicians in groups of 50 or more say they receive patient survey data, compared with only 15 percent of solo physicians.

For the most part, physicians rely on external sources of performance data.

- One-quarter of physicians say their clinical performance data come from health plans. (Chart II-7)
- Only 13 percent of survey respondents generate performance data themselves.

Physicians who work in large groups, salaried physicians, and physicians who use EMRs are more likely to generate their own performance data.

- Twenty-eight percent of physicians in practices of 50 or more generate their own performance data, while only 6 percent of solo physicians do so. (Chart II-8)
- Nearly twice the percentage of salaried as non-salaried physicians generate their own data (19% vs. 10%). (Table II-2)
- Twenty-one percent of physicians who use EMRs routinely or occasionally generate performance data internally, compared with 11 percent of physicians who do not use EMRs. (Chart II-8)

Ability to Benchmark

- Physicians reported they are able to use quality-of-care data to compare themselves with physicians in the same specialty (24%) or with physicians in the same health plan (22%). (Chart II-9)
- Nineteen percent said they can compare themselves to physicians who practice in their group or within a local community.
- About one of 10 physicians can compare quality-of-care data to national benchmarks.

Sharing Performance Information

For the most part, physicians are unwilling to share data about the care they provide, even if patients are increasingly requesting that information.

- One-third (33%) of all physicians said their patients are more likely to ask about quality of care than they were two years ago. Specialists are more likely to be asked than are primary care physicians (36% vs. 26%). (Table II-2)
- Nearly three-quarters (71%) of physicians definitely or probably agreed that information about clinical performance should be shared with the medical leadership of their health systems or the facilities at which they have admitting privileges. (Chart II-10)
- Slightly more than one-half of physicians (55%) agreed that performance data should be shared with their patients, but only 13 percent were in definite agreement.
- Sixty-nine percent of physicians said the general public should probably or definitely not have access to such information.

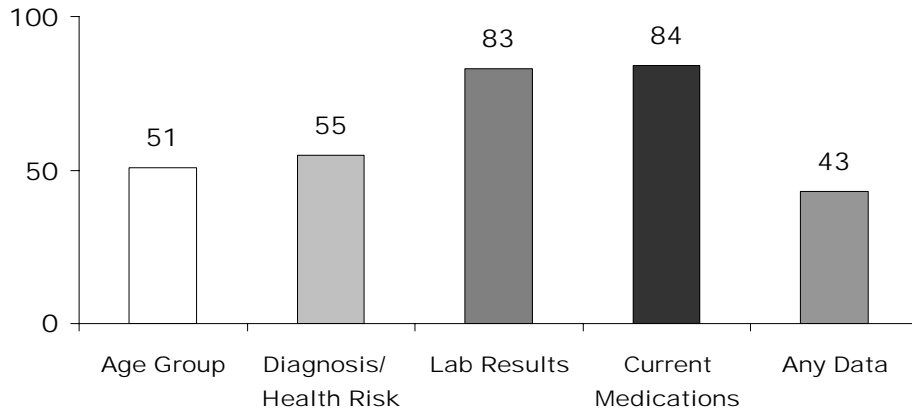
Sharing EMRs with patients

Although the Institute of Medicine's (IOM) *Crossing the Quality Chasm* report recommends that patients "should have unfettered access to their health record,"²⁷ most physicians do not agree with giving patients easy access to their medical records.

- Less than one-half of physicians (41%) definitely agree that patients should have access to their own medical records. Most physicians are not convinced of the idea, with 45 percent reporting that they probably agree that patients should have access to the records, and an additional 14 percent saying they disagree that patients should have such access. (Table II-1)
- A greater percentage of specialists than primary-care physicians definitely agreed that patients should have easy access to their records (43% vs. 35%). (Table II-2)

Chart II-1. Physicians' Access to Patient Panel Data

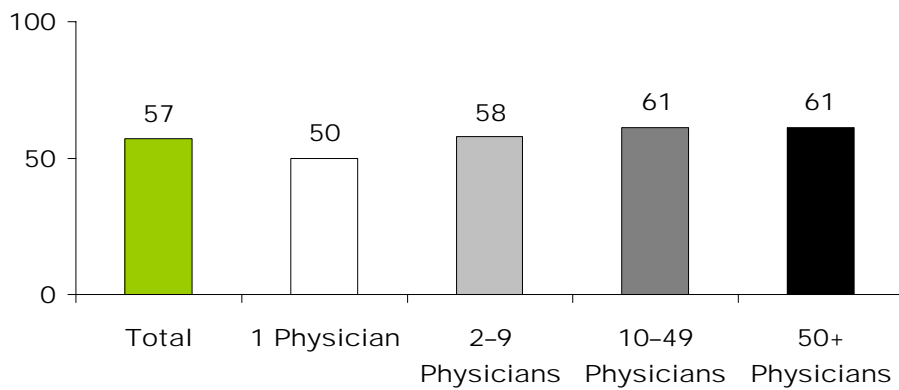
Percent indicating "very/somewhat" difficult or cannot generate lists of patients by



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-2. Physicians' Access to Any Patient Panel Data, by Practice Size

Percent indicating "very/somewhat" easy to generate lists of patients using any* criteria

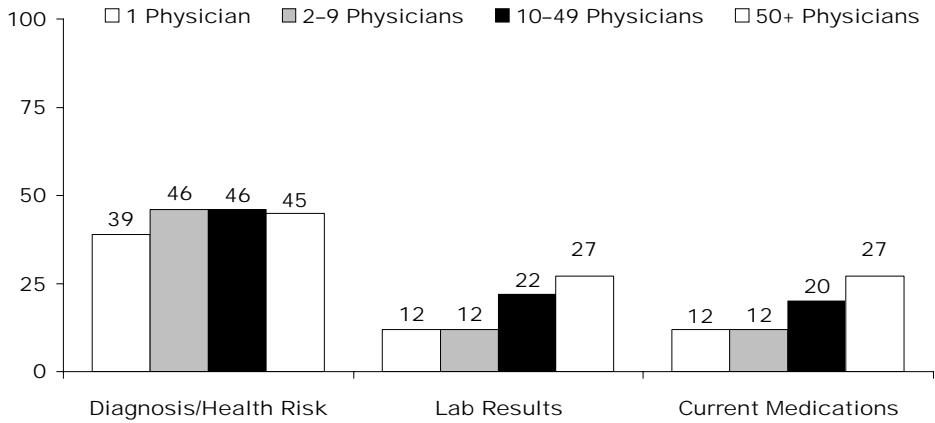


* Indicates "very/somewhat" easy to generate lists of patients using any of the following criteria: age group, diagnosis/health risk, lab results, or current medications.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-3. Physicians' Access to Patient Panel Data, by Practice Size

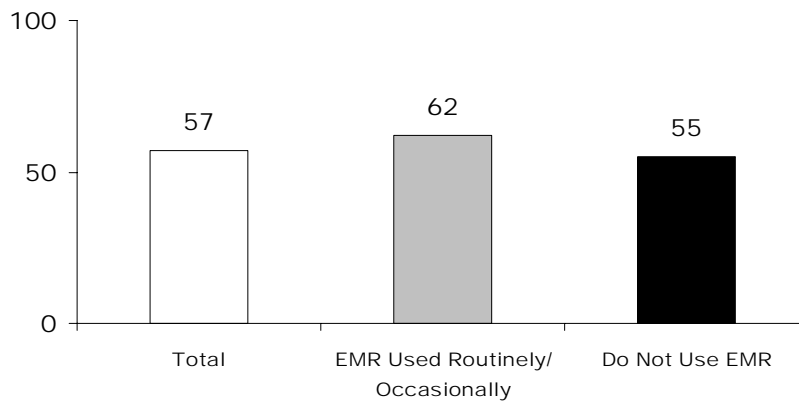
Percent indicating "very/somewhat" easy to generate lists of patients by



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-4. Physicians' Access to Any Patient Panel Data, by Electronic Medical Record Use

Percent indicating "very/somewhat" easy to generate lists of patients using any* criteria

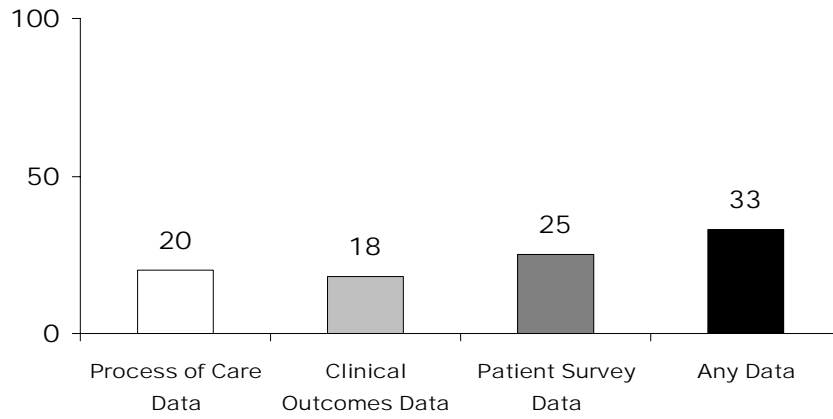


* Indicates "very/somewhat" easy to generate lists of patients using any of the following criteria: age group, diagnosis/health risk, lab results, or current medications.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-5. Physicians' Access to Quality-of-Care or Performance Data

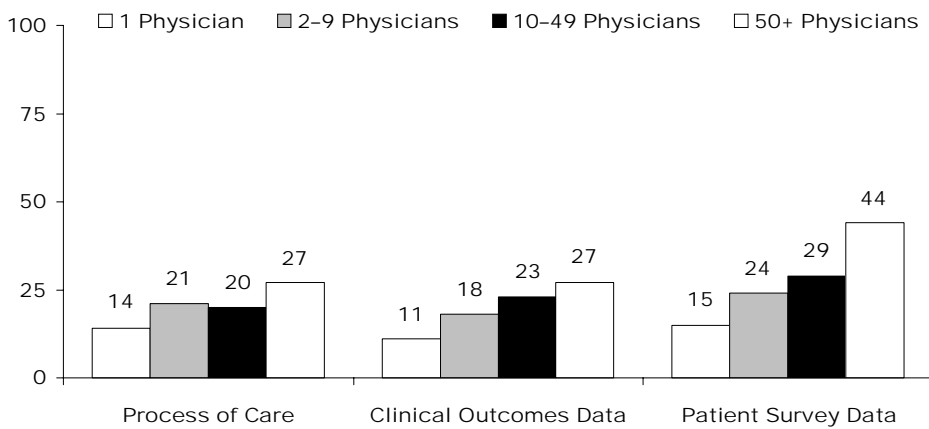
Percent receiving data on the following aspects of patient care



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-6. Physicians' Access to Quality-of-Care Data, by Practice Size

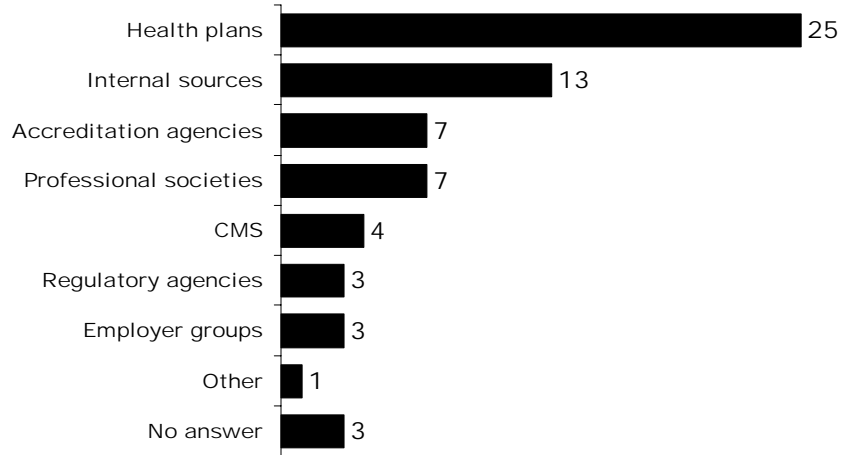
Percent receiving data on the following aspects of patient care



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-7. Physicians' Sources of Quality-of-Care Data

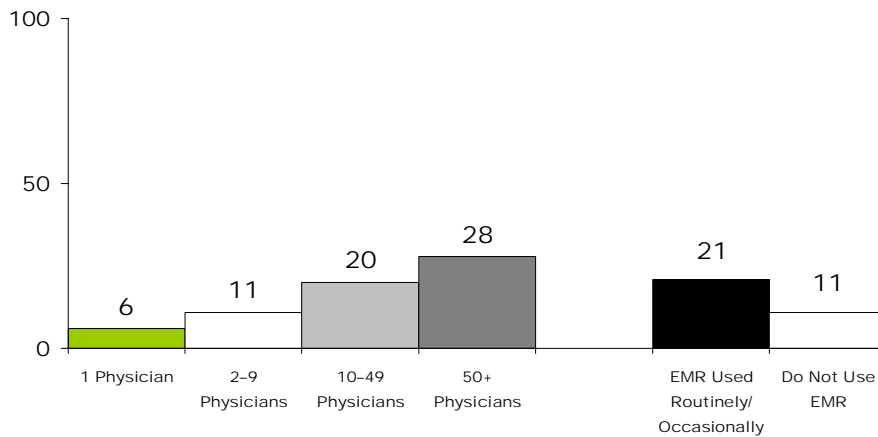
Percent of physicians indicating each as a source of quality of care data



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-8. Physicians' Ability to Generate Any Quality-of-Care Data Internally

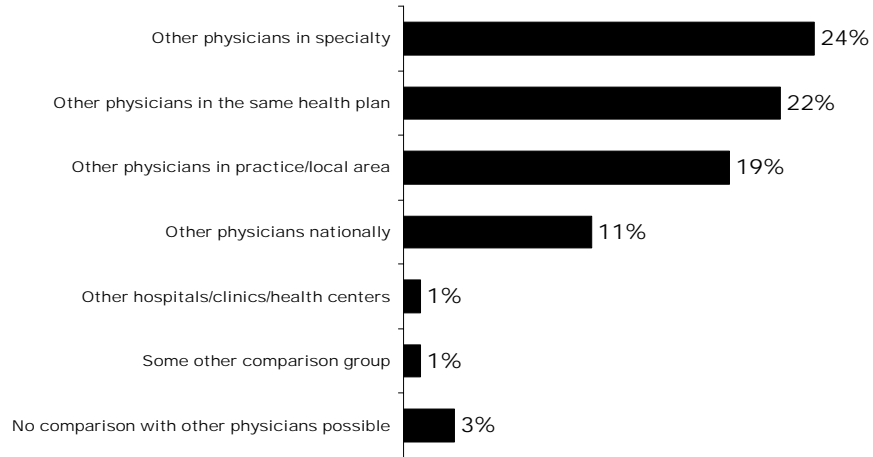
Percent indicating they receive quality-of-care data from internal sources



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-9. Physicians' Ability to Compare Performance

Percent of physicians able to compare themselves to



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart II-10. Physicians' Willingness to Share Quality-of-Care Data

Willingness to share data with:*	Yes, Definitely/Probably	No, Definitely/Probably Not
Medical leadership	71%	27%
Physicians' own patients	55%	44%
General public	29%	69%
Other physicians	72%	26%

* Answers to survey question: "To improve high quality of care in the U.S., which of the following do you think should have access to 'Quality of Care' data about individual physicians?"

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

III. PHYSICIANS' INVOLVEMENT IN QUALITY IMPROVEMENT ACTIVITIES

Historically, physicians have reacted with skepticism to proposed changes in practice methods.²⁸ For example, when practice guidelines were first introduced, physicians opposed them based on issues like self-efficacy and environmental factors, among others.²⁹ Similarly, physicians cite barriers, including increased costs, poor reimbursement, and insufficient staff support, to adopting quality improvement methods. This survey confirms that the medical profession has not yet fully embraced quality improvement. Only a minority of surveyed physicians have been involved in redesign efforts at their own practice settings or at the hospitals in which they practice.

- Only about one-third of physicians (34%) have engaged in a redesign effort to improve system performance. (Chart III-1)

Physicians in larger groups, salaried physicians, physicians who work full time, and primary care physicians are more likely to engage in redesign activities.

- Nearly twice the percentage of physicians in practices with more than 50 have engaged in redesign, compared with solo physicians (47% vs. 24%).
- Salaried physicians (41%) are more likely than non-salaried physicians (30%) to be engaged in redesign. (Table III-2)
- Thirty-seven percent of physicians who spend more than 40 hours per week providing direct patient care have engaged in redesign activities, compared with 23 percent of those practicing less than 20 hours per week. (Table III-3)
- Forty-two percent of primary care physicians say they are involved in redesign efforts, compared with 31 percent of specialists. (Chart III-2)

Collaborative efforts are another way to create system-wide quality improvements. A collaborative effort might involve multiple practices, hospitals, health plans, public agencies, or community groups working together to improve outcomes for patients with specific conditions. This type of activity has not been practiced widely among physicians.

- Two-thirds of physicians (67%) have not been involved, within the past two years, in collaborative efforts to improve quality of care. (Chart III-3)
- Most collaborative efforts are aimed at the local level (23%), versus the regional (8%) or national (6%) level.

Physicians in larger practices, salaried physicians, and primary care physicians are more likely than others to be involved in collaborative efforts. Solo practitioners are less likely to be involved and are also less impressed by the effectiveness of collaborative efforts.

- More than twice the percentage of physicians in practices of more than 50, compared with physicians in solo practices, have engaged in collaborative efforts (50% vs. 20%). (Chart III-1)
- Salaried physicians (39%) are more likely than non-salaried physicians (28%) to be engaged in collaborative efforts. (Table III-2)
- Thirty-six percent of primary care physicians said they are involved in collaborative efforts, compared with 30 percent of specialists. (Chart III-2)

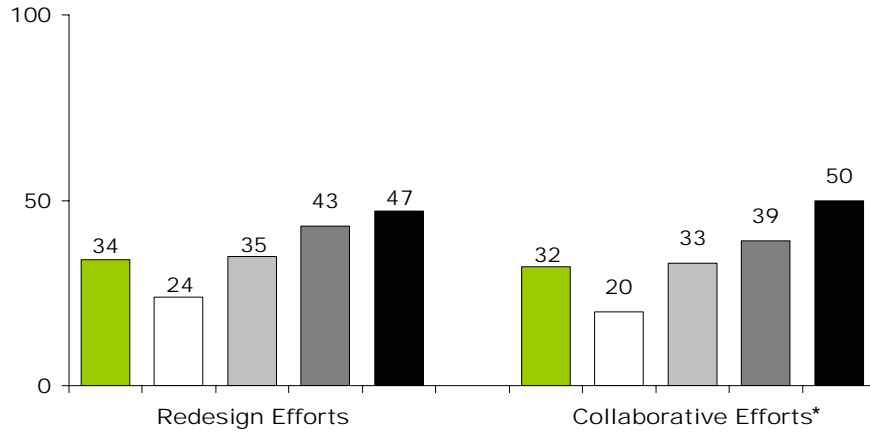
Most physicians (65%) think collaborative efforts are somewhat effective. Eleven percent think they are very effective. (Table III-1)

- Physicians in larger groups are more likely to rate collaboratives more favorably than those in solo practice (83% vs. 68%). (Chart III-4)
- Physicians involved in collaborative efforts rate them more favorably: 21 percent consider them very effective, compared with only 5 percent of those who have not been involved. (Data not shown)

Chart III-1. Physicians' Participation in Redesign and Collaborative Activities, by Practice Size

Percent indicating involvement in redesign and collaborative efforts

■ Total □ 1 Physician ■ 2-9 Physicians ■ 10-49 Physicians ■ 50+ Physicians

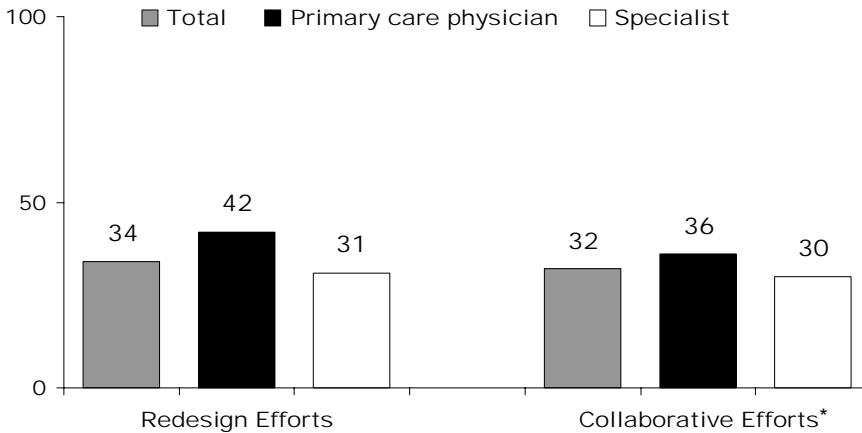


* Indicates physicians who responded yes to participating in local, regional, or national collaboratives in the past 2 years.
Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart III-2. Physicians' Participation in Redesign and Collaborative Activities, by Physician Type

Percent indicating involvement in redesign and collaborative efforts

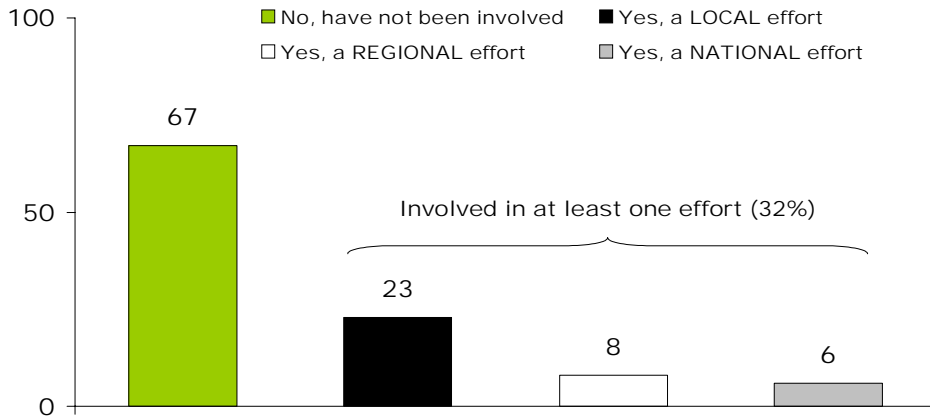
■ Total ■ Primary care physician □ Specialist



* Indicates physicians who responded yes to participating in local, regional, or national collaboratives in the past 2 years.
Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart III-3. Physicians' Involvement in Collaborative Efforts to Improve Quality of Care

Percent indicating involvement in any collaborative efforts in past two years*

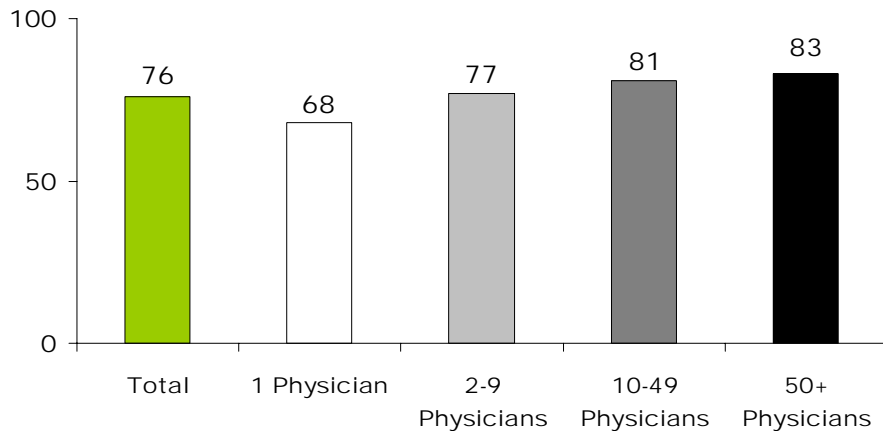


* Multiple answers possible.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart III-4. Physicians' Opinions on Effectiveness of Collaborative Activities, by Practice Size

Percent saying that involvement in collaborative efforts is "very/somewhat" effective in improving quality of care



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

IV. COORDINATION OF CARE AND REFERRALS

Insufficient communication among providers and poor continuity of care may contribute to poor health care quality.³⁰ Older adults, particularly those with multiple chronic conditions, are particularly vulnerable to such problems.^{31,32,33} The referral process is the critical link between primary care and subspecialty care for outpatients. Prior studies have demonstrated that inadequate information exchange between primary care providers (PCPs) and specialists negatively affects the quality of referrals.³⁴ In addition to dissatisfaction among providers and patients, this has likely contributed to suboptimal care and increased costs. The survey queried physicians about coordination of care problems and explored their opinions and experience with the referral process.

Coordination of Care

Issues around coordination of care are the most common quality problems, according to surveyed physicians. Most notably, physicians mention disruptions in the process of transferring information and issues of patients receiving conflicting information.

- In the past 12 months, most physicians (72%) often or sometimes observed that patients' medical records, test results, or other relevant information were not available at the time of a scheduled visit. (Chart IV-1)
- One-third of physicians (34%) often or sometimes observed that tests or procedures had to be repeated because findings were unavailable or were inadequate for interpretation.
- One of four physicians (26%) often or sometimes observed that patients experienced problems following hospital discharge because their physicians did not receive needed information in a timely manner.
- Twenty-eight percent of physicians often or sometimes observed that patients' care was compromised because they received conflicting information from different health professionals.
- Fifteen percent of physicians often or sometimes observed patients did not receive follow-up, despite test results that indicated the need for such treatment.
- Eleven percent of physicians often or sometimes observed that patients received wrong drugs, wrong doses, or were subject to preventable drug-drug interactions.

The frequency of coordination problems differs by practice size. Physicians in large groups are more likely than physicians in solo practices to report observing coordination problems.

- Seventy-six percent of physicians who practice in groups of 50 or more often or sometimes observed that patients' medical records, test results, or other relevant information were not available at the time of scheduled visits, compared with 64 percent of physicians in solo practices. (Chart IV-2)
- Twenty-two percent of physicians who practice in groups of 50 or more often or sometimes observed that test results were not followed up properly, compared with 10 percent of solo practice physicians. (Chart IV-3)
- Thirty-four percent of physicians who practice in groups of 50 or more often or sometimes observed that care was compromised because patients received conflicting information, compared with 24 percent of physicians who practice in small groups of 2–9 physicians. (Chart IV-4)

Primary care physicians and specialists observed different types and frequency of coordination problems.

- Compared with primary care physicians, specialists were more likely to observe tests or procedures that had to be repeated sometimes or often because results were unavailable or inadequate for interpretation (37% of specialists vs. 28% of primary care physicians). (Chart IV-5)
- Thirty-two percent of primary care physicians said they sometimes or often observed patients with problems following hospital discharge because physicians did not receive needed information from the hospital in a timely manner, compared with 23 percent of specialists.

Same-day appointments

Physicians' ability to provide same-day appointments is often an indicator that they are able to provide access on a broader level, including being able to coordinate the care needs of their patients.

- Almost two of three physicians are always (17%) or often (46%) able to provide a same-day appointment. (Chart IV-6)
- Three of four primary care physicians (77%) are able to provide a same-day appointment always or often, compared with 58 percent of specialists.

Referrals

Physicians report coordination problems during the referral process, in terms of the timeliness and efficiency.

Timeliness

- One in three physicians say they receive timely feedback on the results of a referral sometimes (28%) or rarely (6%). (Chart IV-7)
- Sixty-seven percent of physicians in solo practice always or often receive timely referral information, compared with 58 percent of physicians who practice in groups larger than 50. (Chart IV-8)
- Seventy-one percent of primary care physicians always or often receive timely referral information, compared with 62 percent of specialists.
- Seventy-two percent of physicians who have been in practice more than 16 years always or often receive timely referral information, compared with 60 percent of those in practice 10 years or less. (Table IV-3)

Availability of quality-of-care data

- Almost two of three physicians (64%) say they rarely or never have information about the performance of physicians to whom they refer patients. (Chart IV-9)
- Twenty-four percent of physicians in solo practice say they always or often have data on physicians' quality of care when making referrals, compared with 17 percent of those in groups larger than 50. (Chart IV-10)
- Twenty-two percent of physicians who have been in practice for more than 16 years say they always or often have data on physicians' quality of care when making referrals, compared with 18 percent of those who have been in practice 10 years or less.

Overall, quality-of-care data appear to make little impact on decisions about referrals. Most physicians find other types of information, such as patients' experiences with specific physicians or professional reputation, to be equally or more important qualifying factors.

- Most physicians (64%) believe that their own experience and their patients' experiences with a physician are more important than quality-of-care data. (Chart IV-11)
- Forty-two percent think reputation is more important; 25 percent think bedside manner is more important; and 25 percent think technical qualifications are more important than quality-of-care data when making referrals.

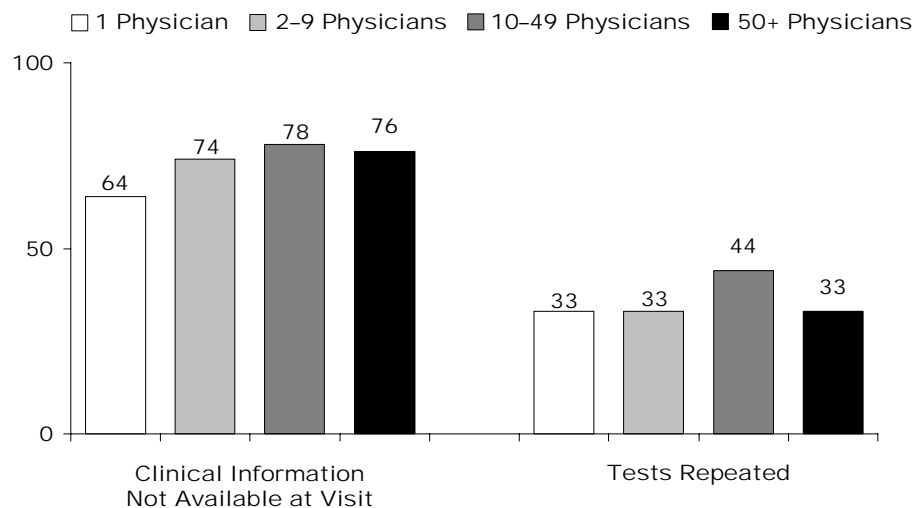
Chart IV-1. Coordination of Care Problems Physicians Observe

Coordination of care problems	Percent who observed problem sometimes or often in past 12 months
Patient's medical record, test results, or other relevant clinical information were not available at the time of the scheduled visit	72%
Tests or procedures had to be repeated because findings were unavailable or inadequate for interpretation	34%
Patient experienced a problem following discharge from a hospital because physician did not receive needed information from the hospital in a timely manner	26%
Patient's care was compromised because he/she received conflicting information from different doctors or other health professionals	28%
Patient had a positive test result that was not followed-up appropriately	15%
Patient received the wrong drug, wrong dose, or had a preventable drug-drug interaction	11%

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-2. Coordination of Care Problems, by Practice Size

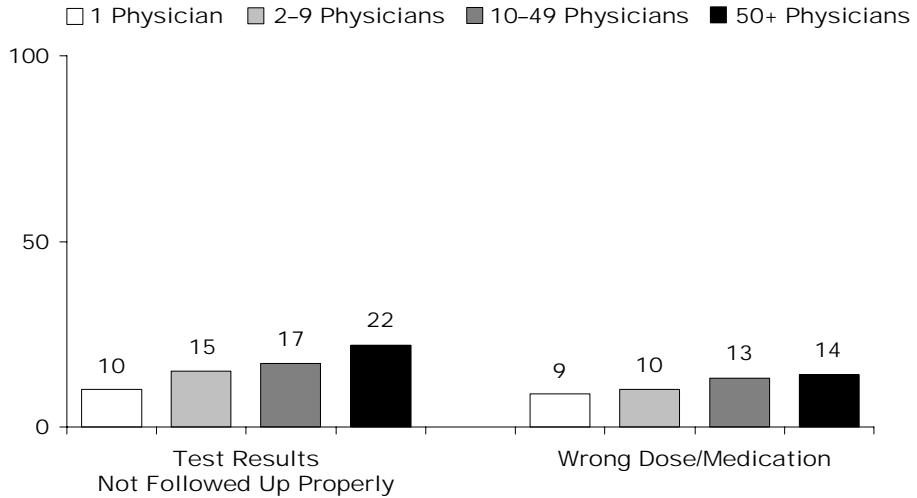
Percent who say "often/sometimes" observed the following



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-3. Coordination of Care Problems, by Practice Size

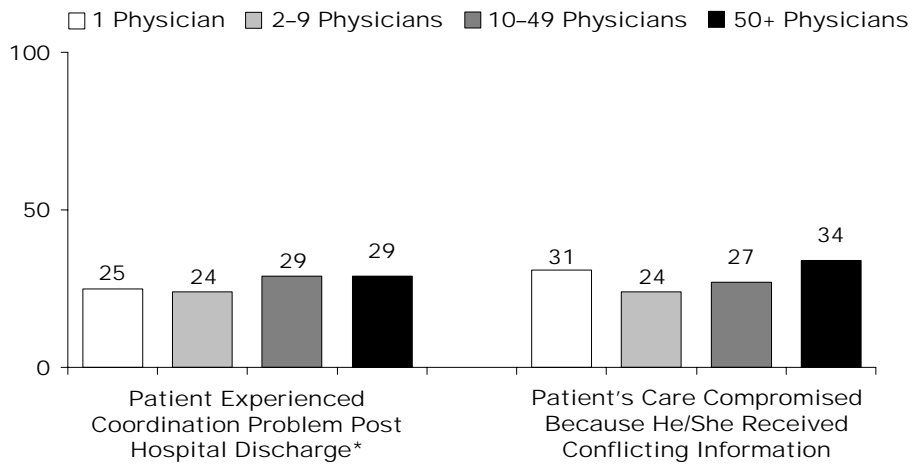
Percent who say "often/sometimes" observed the following



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-4. Coordination of Care Problems, by Practice Size

Percent who say "often/sometimes" observed the following

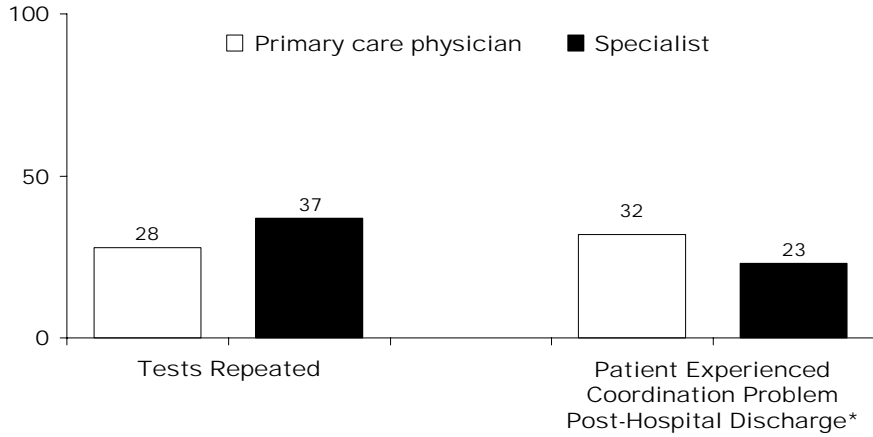


* A patient experienced a problem following discharge from a hospital because his/her physician did not receive needed information from the hospital in a timely manner.

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-5. Coordination of Care Problems, by Physician Type

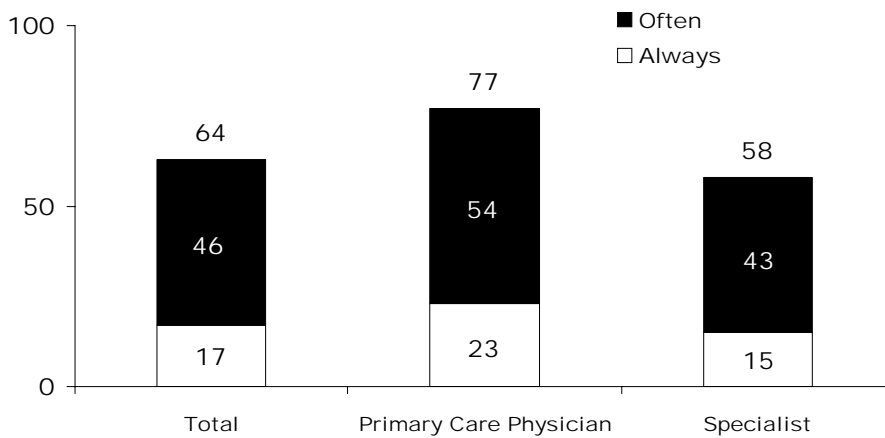
Percent who say "often/sometimes" observed the following



* A patient experienced a problem following discharge from a hospital because his/her physician did not receive needed information from the hospital in a timely manner.
 Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-6. Ability of Physicians to Provide Same-Day Appointments, by Physician Type

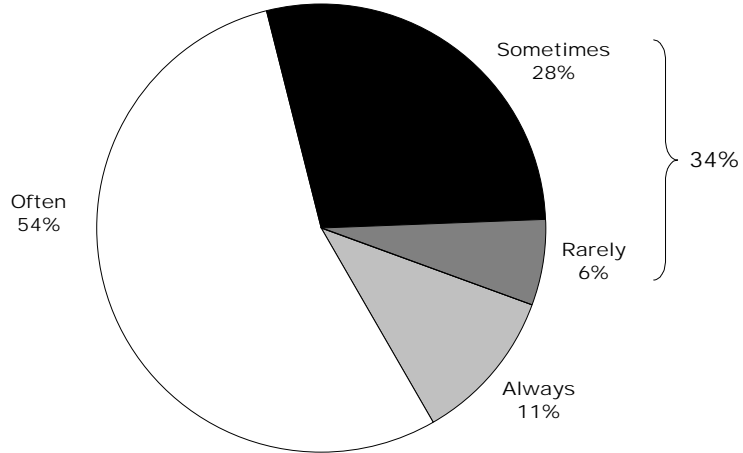
Percent indicating how often they can provide same-day appointments



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-7. Receipt of Timely Referral Information

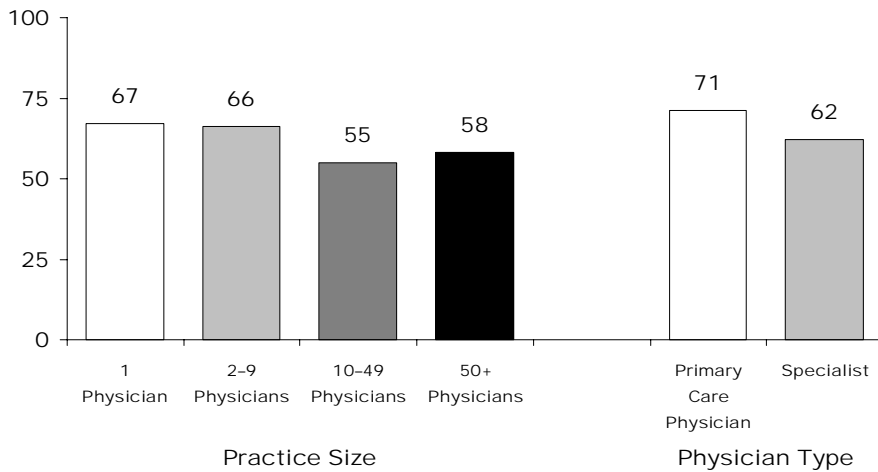
Percent who say they receive *timely* information about the results of a referral



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-8. Receipt of Timely Referral Information

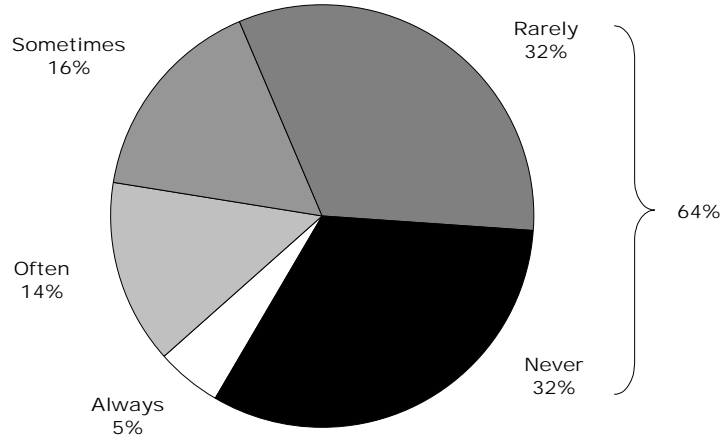
Percent who say they "always/often" receive *timely* information about the results of a referral



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-9. Availability of Quality-of-Care Data When Making Referrals

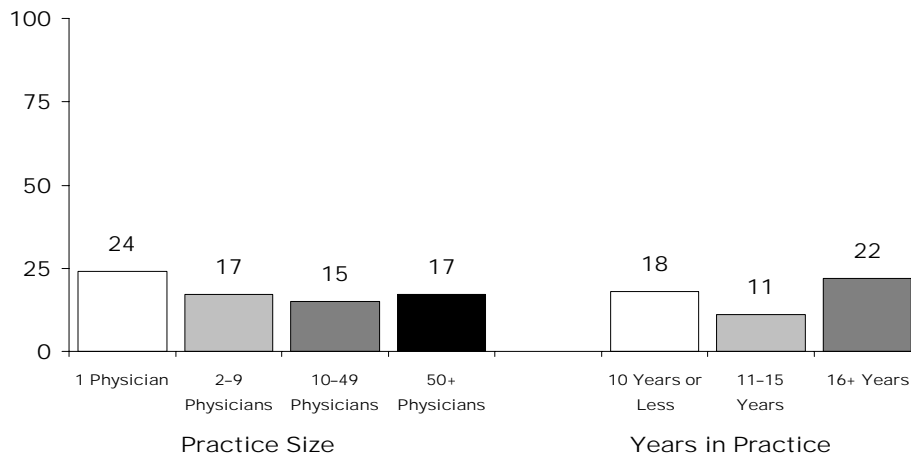
Percent indicating how often they have any data about a physician's quality of care when making referrals



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-10. Availability of Quality-of-Care Data When Making Referrals

Percent indicating they "always/often" have data about a physician's quality of care when making a referral



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart IV-11. Relative Importance of Quality-of-Care Data

	Percent indicating following information is MORE important than quality-of-care data*
Physician's reputation among peers	42%
Physician's technical qualifications (e.g., training, education, board certification)	25%
Experiences with the physician	64%
Physician's bedside manner, as reported by patients	25%

* Indicates physicians who responded that the above information was more important than quality-of-care data.
Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

V. STRATEGIES TO IMPROVE QUALITY OF CARE

The survey explored physicians' opinions on the effectiveness of six potential strategies to improve quality of care: appropriate time spent with patients; patients' access to preventive care and health education; treatment guidelines or protocols; information technologies; information about specialists and specialty centers for referrals; and team work and communication.

Overall, physicians said that more time spent with patients, increased access to preventive care and health education, and better teamwork are the most effective ways to improve care. Other approaches such as guidelines, electronic medical records and e-prescribing, and performance data, received only limited support from physicians.

- Compared with all other strategies, having more time with patients is seen as very effective in improving quality of care by the greatest number of physicians. One-half of physicians (52%) believe that having more time to spend with patients would be very effective in improving the care they provide. (Chart V-1)
- The second strategy most frequently cited—by two in five physicians or 41 percent—is increasing access to preventive care and health education.
- One-third of physicians (35%) cited improved teamwork and communication among health care professionals as a very effective strategy in improving quality of care.
- One of four (25%) physicians thinks increased use of computer technology for patient medical records and prescribing drugs and medical tests would be very effective.
- Almost one of four physicians (23%) thinks having better information about physicians and centers to refer patients for specialized care would be very effective in improving the quality of care they provide.
- One of five physicians (21%) thinks that having better treatment guidelines or protocols for common conditions or procedures would be very effective.

Team Care

Most physicians believe that team care results in better decisions, although some physicians remain skeptical.

- Three of four physicians (73%) agreed or strongly agreed that the give and take among team members results in better decisions. (Chart V-2)

- One of three (32%) agreed or strongly agreed that the team process makes care more cumbersome.
- One of four (24%) agreed or strongly agreed that involving multiple team members increases the likelihood of medical errors.

Physicians in solo practice are less supportive of team care than those in larger groups settings.

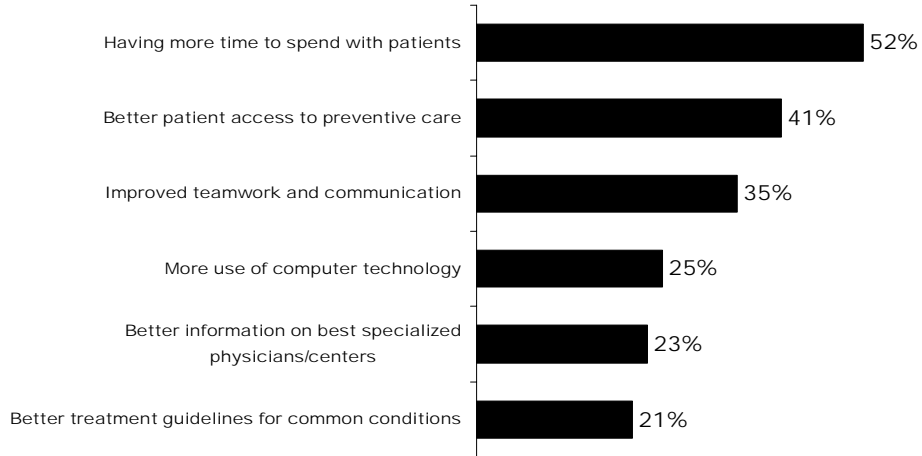
- Sixty-five percent of solo physicians agree or strongly agree that teamwork results in better decisions regarding patient care, compared with 81 percent of physicians in groups larger than 50. (Chart V-3)
- Thirty-seven percent of solo physicians say that the team process makes care more cumbersome, compared with 27 percent of physicians in groups larger than 50.
- One-third (32%) of solo physicians say that involving multiple team members increases the likelihood of medical errors, compared with 17 percent of those in groups larger than 50.

Specialty and gender are also significant factors in a physician's opinion about team care.

- Forty-one percent of primary care physicians say teamwork and communication are effective strategies, compared with 33 percent of specialists. (Chart V-4)
- Thirty-two percent of male physicians say teamwork and communication are effective strategies, compared with 45 percent of female physicians.

Chart V-1. Physicians' Opinions on Strategies to Improve Quality of Care

Percent of physicians who indicate the following are "very effective" in improving quality of care



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

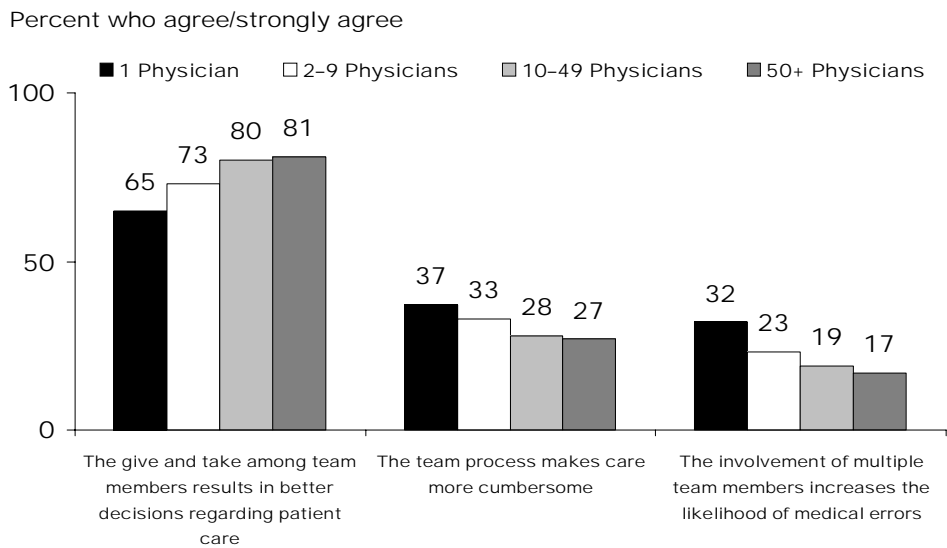
Chart V-2. Physicians' Opinion on Team Care

	Percent indicating they "agree" or "strongly agree" that*
The give and take among team members results in better decisions regarding patient care	73%
The team process makes care more cumbersome	32%
The involvement of multiple team members increases the likelihood of medical errors	24%

* Indicates physicians who, based on their experience working in teams, said that they agree or disagree with the above.

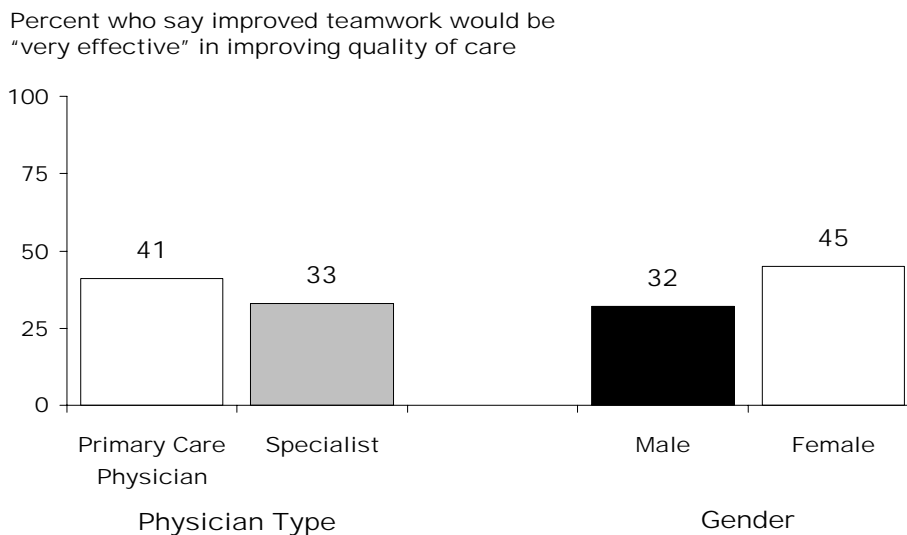
Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart V-3. Physicians' Opinion on Team Care, by Practice Size



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart V-4. Physicians' Opinions on Team Care, by Physician Type



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

VI. INCENTIVES AND DISINCENTIVES TO PROVIDING QUALITY CARE AND PHYSICIANS' SATISFACTION WITH CURRENT PRACTICE

To foster quality in a complex health care system, it is crucial to design incentives that allow the major stakeholders to align their policies and actions toward a goal of improvement. It is also important to remove the disincentives that are barriers to quality. In 2001, the IOM report, *Crossing the Quality Chasm*, recognized that aligning payment policies with quality improvement is an important step in changing the environment of the health care delivery system. The committee called for public and private purchasers to reexamine their payment policies to remove barriers that impede quality improvement and build stronger incentives for quality enhancement. The survey asked physicians about their experiences with financial incentives or disincentives to providing high-quality care.

Reimbursement for Appropriate Care Services

Overall, surveyed physicians indicated there are few incentives that foster quality of care.

- None of the surveyed physicians were reimbursed for e-mail consultations and very few received reimbursements for phone consultations (4%) or group patient visits (5%). (Table VI-1)

Factors Affecting Compensation

Aligning payment policies with performance is an important step in fostering quality and quality improvement. However, for most physicians, quality-of-care measures or evidence of involvement in quality improvement activities (e.g., board recertification) are rarely important factors in determining compensation. Instead, billing and productivity are the primary determinants of compensation.

- Almost three-quarters of physicians (72%) said productivity or billing is a determinant of compensation. (Chart VI-1)
- One of five (19%) physicians said that quality bonuses or incentive programs from insurance plans play a role.
- Close to three-quarters of physicians (72%) said that measures of clinical care or patient surveys play no role at all in compensation.
- Thirty-nine percent of physicians reported that board recertification status is a factor in compensation.

Disincentives to Quality Care

- Altogether, one-half of physicians (51%) said that providing the best quality of care often (23%) or sometimes (28%) translates into lower revenues (Chart VI-2)
- Physicians in solo practice are more likely than physicians in larger group practices to say that providing the best quality of care often translates into lower revenues (58% vs. 46% respectively).

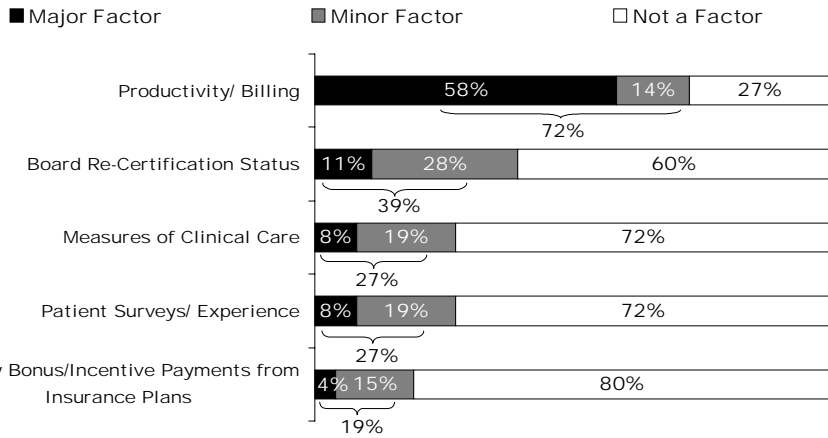
Satisfaction with Current Practice

Most surveyed physicians (78%) are at least somewhat satisfied with their current practices and one-third (33%) are very satisfied. (Chart VI-3) Still, one of five surveyed physicians is either somewhat or very dissatisfied. Physicians in solo practices who have been practicing longer are somewhat more dissatisfied than those who have been practicing for less time and those in larger practices.

- Twenty-seven percent of physicians in solo practices are very or somewhat dissatisfied (Chart VI-4), compared with 14 percent of physicians in practices with 50 or more physicians.
- Twenty-six percent of physicians who have been practicing 21 or more years are dissatisfied, compared with 17 percent who have been practicing 10 years or less. (Data not shown)

Chart VI-1. Factors Affecting Physicians' Compensation

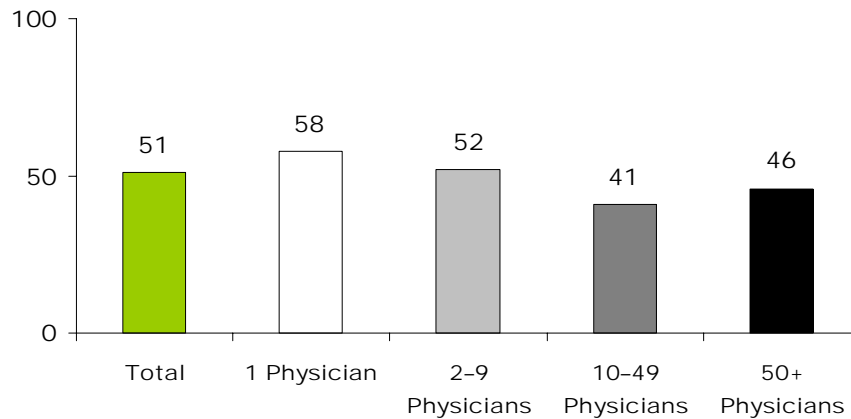
Percent indicating the following as factors in determining compensation or income



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

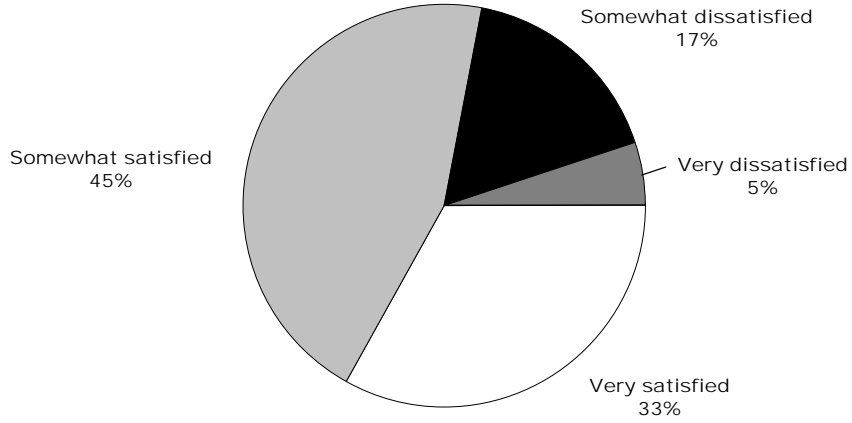
Chart VI-2. Financial Consequences of Providing High Quality of Care, by Practice Size

Percent indicating that providing high quality of care "often/sometimes" means less income



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

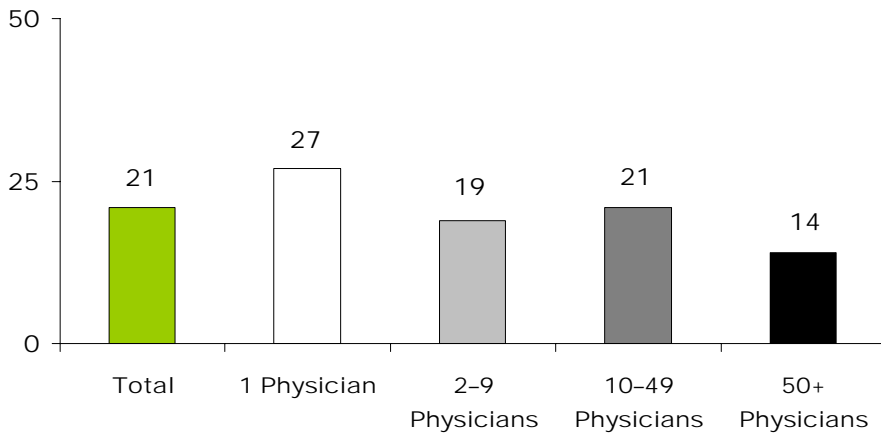
Chart VI-3. Physicians' Satisfaction with Current Medical Practice



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

Chart VI-4. Physicians' Dissatisfaction with Current Practice, by Practice Size

Percent "very or somewhat" dissatisfied with current practice



Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

APPENDIX A. PHYSICIAN AND PRACTICE CHARACTERISTICS

The Commonwealth Fund National Survey of Physicians and Quality of Care surveyed a national, representative cross-section of primary care and specialist physicians involved in direct care of adults. The sample of physicians who responded includes mainly specialists (71%), and a much smaller percentage of primary care providers (29%). Most of the respondents are male (77%) and under 54 years of age (67%). More than one-half of respondents (55%) have been in practice for more than 16 years, and 62 percent perform more than 40 hours of direct patient care per week. More than one-third of physicians (36%) are full owners of their practices. One of five (21%) surveyed physicians is planning to retire or discontinue direct patient care within the next five years. (Data not shown)

Most physicians surveyed (68%) are in small practices of less than 10 physicians; 27 percent are in solo practices and 41 percent are in small groups of two to nine physicians. Only 12 percent of surveyed physicians are in large practices of 50 or more physicians. (Chart A-1)

Physicians in solo practices tend to own their practices and are less likely to be salaried than physicians in larger practice settings.

- Ninety percent of solo practitioners are full owners of their practices, compared with just 13 percent and 7 percent of physicians in mid- and large-size practices, respectively.
- Only 16 percent of physicians in solo practice are salaried, compared with 53 percent of physicians in mid-size practices and 72 percent of those in large practices.

Solo practice physicians are older than physicians practicing in groups and have been practicing for longer periods of time.

- Fifty percent of solo practice physicians are 55 years or older, compared with just one-quarter (26%) of physicians in mid-size and large practices. (Data not shown)
- Seventy percent of solo physicians have been practicing for 16 or more years, compared with just one-half of physicians in smaller and mid-size practices. (Data not shown)

Most physicians (52%) practice in a single specialty or multi-specialty group setting. One-quarter practice in solo settings. Fourteen percent of surveyed physicians practice in hospital or clinic settings. Of these, 20 percent are in solo or small groups of two to nine

physicians, 20 percent are in mid-size groups of 10 to 49 physicians, and 23 percent are in large groups of 50 or more. (Chart A-1)

Physicians practicing in hospital or clinic settings (89%) are more likely to be salaried than those in solo (12%) or single or multi-specialty group (37%) settings. Physicians in single or multi-specialty group settings provide more hours in direct patient care than do physicians in all other settings.

- Seventy percent of physicians in single or multi-specialty group settings provide 41 or more hours per week in direct patient care. In contrast, 50 percent of physicians in hospital or clinic settings provide as many hours of care. (Data not shown)
- Hospital or clinic settings tend to have more primary care providers and women than other practice settings. (Data not shown)

Primary care physicians are younger and have fewer years in practice than specialists.

- Forty percent of primary care physicians and 29 percent of specialists are under age 45. (Data not shown)
- Less than one-half (47%) of primary care physicians have been practicing for 16 or more years, compared with 59 percent of specialists. (Data not shown)

Chart A-1. Characteristics of Small and Large Group Physician Practices

Practice Characteristics	Total	1 Physician	2-9 Physicians	10-49 Physicians	50+ Physicians
Percent Distribution		27%	41%	17%	12%
		100%	100%	100%	100%
Practice Setting					
Hospital or public clinic	14	5	15	20	23
Single or multi-specialty group	52	—	78	69	55
Solo	25	93	—	—	—
Other	9	2	6	11	22
Salary Status					
Salaried (yes)	41	16	43	53	72
Ownership of Practice					
Full owner	36	90	20	13	7
Part owner	28	2	45	35	24
Not an owner	35	8	34	52	68
Physician Type					
Primary care	29	26	29	37	28
Specialist	71	74	71	63	72
Hours in Direct Care					
20 hours or fewer	8	10	6	7	8
21-40 hours	30	32	16	35	34
More than 40 hours	62	58	68	58	57

Source: The Commonwealth Fund National Survey of Physicians and Quality of Care.

APPENDIX B. SURVEY METHODOLOGY

The Commonwealth Fund National Survey of Physicians and Quality of Care was conducted by Harris Interactive on behalf of The Commonwealth Fund, between March 17 and May 30, 2003. A self-administered questionnaire was mailed to 3,598 U.S. physicians, randomly selected from an American Medical Association (AMA) list, including AMA members and nonmembers. All physicians in the sample were involved in direct care of adults and had been in practice at least three years post-residency. Specialists unlikely to be involved in patient care long term (e.g., radiologists, anesthesiologists, pathologists, dermatologists) were excluded. Identification of primary versus specialty care physicians was done using the AMA master file. In the final analyses, data were weighted by gender, age, and practice setting to reflect the national distribution of physicians in the AMA master file.

Study Variables

A total of 1,837 surveys were returned, a response rate of 52.8% (calculated using Response Rate #1 as defined by the American Association for Public Opinion Research). The majority of physicians completed the survey by mail (91%), while a much smaller portion (9%) completed it online. There were no statistically significant differences between respondents and non-respondents according to gender, age, practice size, specialty, or years in practice.

All analyses were conducted using STATA version 7.0 (Stata Corp, College Station, Texas), and use the weighted survey estimator to adjust standard errors for clustering and stratification involved in the survey design.

APPENDIX C. TABLES

General Notes:

On all tables, numbers may not add up to 100 percent. Two factors account for this—unknown responses are not shown, and the rounding of results.

★ = Response rate of less than 1 percent.

— = No response to question category.

Table I-1. Information Technologies: Current Use, Future Plans, and Perceived Barriers

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>Do you currently use any of the following?</i>									
Electronic billing									
Yes, used routinely	73	63	85	62	54	63	81	76	71
Yes, used occasionally	6	5	4	11	7	5	4	8	6
Not used, PLAN to use within the next year	6	8	4	9	8	8	5	4	7
Not used, NO plan to use within the next year	15	23	7	17	29	23	9	12	15
Electronic ordering									
Yes, used routinely	17	6	18	23	39	6	16	26	35
Yes, used occasionally	9	7	10	13	6	6	9	11	11
Not used, PLAN to use within the next year	19	14	21	21	21	14	19	23	25
Not used, NO plan to use within the next year	53	72	51	43	32	71	56	39	28
Electronic medical records									
Yes, used routinely	18	8	18	23	36	8	14	26	39
Yes, used occasionally	9	4	9	13	15	5	9	9	18
Not used, PLAN to use within the next year	20	13	23	22	17	13	21	28	22
Not used, NO plan to use within the next year	53	74	49	42	31	73	56	37	22
Electronic access to patient test results									
Yes, used routinely	37	15	40	52	62	16	37	46	73
Yes, used occasionally	21	20	23	20	15	20	24	20	14
Not used, PLAN to use within the next year	14	17	14	14	4	17	15	13	7
Not used, NO plan to use within the next year	27	47	22	13	17	46	24	20	6

Questions	Total	Practice Setting				Practice Size				
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians	
E-mail with patients										
Yes, used routinely	3	3	3	2	7	3	3	2	6	
Yes, used occasionally	14	13	13	13	26	13	11	17	27	
Not used, PLAN to use within the next year	11	10	10	14	8	11	10	13	10	
Not used, NO plan to use within the next year	71	72	73	70	56	72	75	67	58	
E-mail with doctors										
Yes, used routinely	7	2	7	8	16	2	5	8	22	
Yes, used occasionally	21	15	19	30	34	15	16	28	38	
Not used, PLAN to use within the next year	12	14	12	13	8	14	12	13	10	
Not used, NO plan to use within the next year	57	66	60	46	39	66	65	49	28	
Clinical decision support										
Yes, used routinely	6	4	6	8	9	5	4	8	13	
Yes, used occasionally	18	14	17	26	24	15	17	21	27	
Not used, PLAN to use within the next year	17	17	17	17	16	16	16	19	17	
Not used, NO plan to use within the next year	58	64	59	49	48	63	62	51	42	
<i>Are the following tasks currently performed in your office?</i>										
Patient reminders										
Yes, using a computerized system	21	14	27	11	24	13	22	23	31	
Yes, using a manual system	33	38	33	34	19	38	35	29	25	
No, not done, PLAN to in next year	10	10	8	15	13	10	10	12	6	
No, not done, NO plan to in next year	34	37	31	37	40	37	31	33	37	

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Follow-up alert									
Yes, using a computerized system	10	5	11	11	21	5	9	11	21
Yes, using a manual system	31	39	29	32	17	39	30	27	25
No, not done, PLAN to in next year	13	12	14	14	12	12	14	17	9
No, not done, NO plan to in next year	43	41	45	41	48	41	46	40	44
Drug alert									
Yes, using a computerized system	12	6	11	18	29	6	10	17	27
Yes, using a manual system	26	36	20	28	26	36	22	21	22
No, not done, PLAN to in next year	16	16	17	15	14	16	14	22	14
No, not done, NO plan to in next year	44	41	51	37	29	40	53	37	37
<i>How much are the following a barrier to implementing information technology?</i>									
Start-up costs too high									
Not a barrier	15	10	15	17	26	10	13	20	27
Minor barrier	28	28	28	27	31	28	28	29	30
Major barrier	56	61	55	55	43	62	59	49	43
Lack of uniform standards within the industry									
Not a barrier	14	11	13	17	22	10	14	16	18
Minor barrier	40	35	42	45	40	34	41	40	48
Major barrier	44	52	44	37	36	53	45	42	33
Lack of time to acquire, implement, use such a system									
Not a barrier	16	12	15	21	23	12	14	21	23
Minor barrier	44	38	36	42	49	38	44	47	51
Major barrier	39	49	37	36	27	49	41	30	26

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Maintenance costs too high									
Not a barrier	15	11	14	19	24	12	13	21	23
Minor barrier	46	38	49	49	51	39	48	50	50
Major barrier	37	50	35	31	22	48	38	27	25
Lack of evidence of effectiveness of such technologies									
Not a barrier	35	23	36	45	47	25	34	42	48
Minor barrier	38	35	39	42	36	35	41	39	40
Major barrier	26	41	24	12	15	40	24	17	11
Privacy concerns									
Not a barrier	29	24	32	28	30	23	30	33	33
Minor barrier	49	44	49	52	50	45	52	45	51
Major barrier	21	30	17	19	18	30	17	19	15
Lack training/knowledge on how to use computer technology									
Not a barrier	36	36	38	33	37	34	37	38	38
Minor barrier	47	41	47	51	49	42	45	48	56
Major barrier	16	21	14	15	13	22	17	12	6

Table I-2. Information Technologies: Current Use, Future Plans, and Perceived Barriers

Questions	Salary Status			Physician Type	
	Total	Salaried	Not Salaried	Primary Care Physician	Specialist
Percent Distribution (Weighted)	100%	41%	56%	29%	71%
<i>Do you currently use any of the following?</i>					
Electronic billing					
Yes, used routinely	73	69	77	73	73
Yes, used occasionally	6	8	4	6	6
Not used, PLAN to use within the next year	6	7	5	8	5
Not used, NO plan to use within the next year	15	15	14	13	15
Electronic ordering					
Yes, used routinely	17	24	13	18	17
Yes, used occasionally	9	12	8	8	10
Not used, PLAN to use within the next year	19	21	17	20	19
Not used, NO plan to use within the next year	53	43	62	52	54
Electronic medical records					
Yes, used routinely	18	24	14	16	19
Yes, used occasionally	9	12	7	7	10
Not used, PLAN to use within the next year	20	21	19	23	19
Not used, NO plan to use within the next year	53	43	60	53	53
Electronic access to patient test results					
Yes, used routinely	37	50	28	36	38
Yes, used occasionally	21	19	23	20	22
Not used, PLAN to use within the next year	14	11	16	17	13
Not used, NO plan to use within the next year	27	19	32	25	27

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
E-mail with patients					
Yes, used routinely	3	4	2	1	4
Yes, used occasionally	14	17	12	14	14
Not used, PLAN to use within the next year	11	11	11	12	10
Not used, NO plan to use within the next year	71	67	73	71	70
E-mail with doctors					
Yes, used routinely	7	12	3	5	7
Yes, used occasionally	21	27	17	17	23
Not used, PLAN to use within the next year	12	11	13	13	12
Not used, NO plan to use within the next year	57	48	65	62	55
Clinical decision support					
Yes, used routinely	6	8	5	8	5
Yes, used occasionally	18	23	15	19	18
Not used, PLAN to use within the next year	17	17	16	21	15
Not used, NO plan to use within the next year	58	50	63	50	61
<i>Are the following tasks currently performed in your office?</i>					
Patient reminders					
Yes, using a computerized system	21	20	22	14	24
Yes, using a manual system	33	33	34	33	33
No, not done, PLAN to in next year	10	12	8	19	6
No, not done, NO plan to in next year	34	33	34	32	35

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Follow-up alert					
Yes, using a computerized system	10	14	8	8	11
Yes, using a manual system	31	29	32	35	29
No, not done, PLAN to in next year	13	15	12	16	12
No, not done, NO plan to in next year	43	41	46	39	45
Drug alert					
Yes, using a computerized system	12	19	8	16	11
Yes, using a manual system	26	25	26	25	26
No, not done, PLAN to in next year	16	17	15	21	14
No, not done, NO plan to in next year	44	39	49	36	48
<i>How much of a barrier to information technology?</i>					
Start-up costs too high					
Not a barrier	15	21	11	12	17
Minor barrier	28	27	29	26	29
Major barrier	56	51	59	61	53
Lack of uniform standards within the industry					
Not a barrier	14	18	11	15	13
Minor barrier	40	43	38	40	40
Major barrier	44	38	49	43	45
Lack of time to acquire, implement, use such a system					
Not a barrier	16	19	13	16	16
Minor barrier	44	46	43	40	45
Major barrier	39	34	43	42	38
Maintenance costs too high					
Not a barrier	15	20	12	12	16
Minor barrier	46	49	43	47	46
Major barrier	37	30	43	39	36

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Lack of evidence of effectiveness of such technologies					
Not a barrier	35	43	30	37	35
Minor barrier	38	41	37	40	37
Major barrier	26	16	32	22	27
Privacy concerns					
Not a barrier	29	31	28	28	30
Minor barrier	49	49	48	51	48
Major barrier	21	19	22	19	22
Lack training/knowledge on how to use computer technology					
Not a barrier	36	38	36	34	37
Minor barrier	47	48	46	48	46
Major barrier	16	14	17	17	16

Table I-3. Information Technologies: Current Use, Future Plans, and Perceived Barriers

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>Do you currently use any of the following?</i>							
Electronic billing							
Yes, used routinely	73	75	76	72	56	66	79
Yes, used occasionally	6	8	5	5	6	8	5
Not used, PLAN to use within the next year	6	7	5	6	9	6	6
Not used, NO plan to use within the next year	15	10	14	17	29	19	10
Electronic ordering							
Yes, used routinely	17	16	19	17	16	19	17
Yes, used occasionally	9	9	13	8	5	8	11
Not used, PLAN to use within the next year	19	21	17	19	24	15	21
Not used, NO plan to use within the next year	53	53	51	54	53	58	51
Electronic medical records							
Yes, used routinely	18	14	24	17	25	19	16
Yes, used occasionally	9	12	6	9	11	7	9
Not used, PLAN to use within the next year	20	26	18	18	12	17	22
Not used, NO plan to use within the next year	53	47	51	56	50	56	52
Electronic access to patient test results							
Yes, used routinely	37	38	40	36	38	35	38
Yes, used occasionally	21	22	20	21	18	20	22
Not used, PLAN to use within the next year	14	14	13	14	9	13	15
Not used, NO plan to use within the next year	27	25	26	28	35	30	24

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
E-mail with patients							
Yes, used routinely	3	3	3	4	5	3	3
Yes, used occasionally	14	12	19	13	19	15	13
Not used, PLAN to use within the next year	11	10	8	12	12	11	10
Not used, NO plan to use within the next year	71	74	69	70	63	70	72
E-mail with doctors							
Yes, used routinely	7	6	10	6	13	6	6
Yes, used occasionally	21	20	22	21	25	23	19
Not used, PLAN to use within the next year	12	11	9	14	10	12	13
Not used, NO plan to use within the next year	57	61	58	56	50	55	60
Clinical decision support							
Yes, used routinely	6	6	5	7	8	6	6
Yes, used occasionally	18	20	18	17	20	19	17
Not used, PLAN to use within the next year	17	18	14	18	17	15	18
Not used, NO plan to use within the next year	58	55	61	57	52	58	58
<i>Are the following tasks currently performed in your office?</i>							
Patient reminders							
Yes, using a computerized system	21	18	23	21	12	20	23
Yes, using a manual system	33	35	30	34	28	33	34
No, not done, PLAN to in next year	10	12	11	9	10	11	10
No, not done, NO plan to in next year	34	34	33	35	47	34	32

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Follow-up alert							
Yes, using a computerized system	10	11	11	10	10	12	10
Yes, using a manual system	31	27	30	33	35	27	33
No, not done, PLAN to in next year	13	12	12	14	10	13	14
No, not done, NO plan to in next year	43	48	45	41	42	45	43
Drug alert							
Yes, using a computerized system	12	13	13	12	14	13	12
Yes, using a manual system	26	21	24	29	33	23	26
No, not done, PLAN to in next year	16	17	16	15	10	18	16
No, not done, NO plan to in next year	44	48	46	43	40	44	45
<i>How much of a barrier to information technology?</i>							
Start-up costs too high							
Not a barrier	15	14	12	17	18	16	15
Minor barrier	28	30	29	27	28	28	29
Major barrier	56	56	58	54	54	56	55
Lack of uniform standards within the industry							
Not a barrier	14	13	14	14	20	18	11
Minor barrier	40	43	46	40	40	40	40
Major barrier	44	44	37	47	39	40	47
Lack of time to acquire, implement, use such a system							
Not a barrier	16	13	16	17	19	17	15
Minor barrier	44	46	44	43	44	44	44
Major barrier	39	41	39	39	37	38	40

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Maintenance costs too high							
Not a barrier	15	14	15	16	20	16	14
Minor barrier	46	52	45	44	41	47	46
Major barrier	37	33	38	39	39	36	38
Lack of evidence of effectiveness of such technologies							
Not a barrier	35	38	36	33	42	40	32
Minor barrier	38	41	38	37	30	35	41
Major barrier	26	20	24	28	28	24	26
Privacy concerns							
Not a barrier	29	28	31	29	30	32	28
Minor barrier	49	50	52	47	42	47	50
Major barrier	21	21	17	23	28	20	20
Lack training/knowledge on how to use computer technology							
Not a barrier	36	36	37	36	30	34	39
Minor barrier	47	49	50	44	47	50	45
Major barrier	16	14	12	19	23	15	16

Table II-1. Practice-Level and Performance Data: Availability, Sources, and Willingness to Share

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>With current patient records, how easy is it to generate the following?</i>									
Very/somewhat easy to generate list of patients by ANY criteria	57	47	39	52	43	50	58	61	61
List of patients by age group									
Very easy	21	19	23	16	24	18	23	23	21
Somewhat easy	28	27	29	23	26	26	27	31	29
Somewhat difficult	21	18	21	26	20	20	21	20	25
Very difficult	15	16	14	17	17	16	16	13	15
Cannot generate	14	19	11	17	12	20	11	11	10
List of patients by diagnosis/health risk									
Very easy	18	17	20	13	20	16	20	20	15
Somewhat easy	26	24	27	24	25	23	26	26	30
Somewhat difficult	21	20	21	24	23	21	20	22	26
Very difficult	16	17	16	19	17	18	17	15	15
Cannot generate	17	20	15	20	14	21	17	15	13
List of patients by lab results									
Very easy	6	3	6	6	14	3	6	9	8
Somewhat easy	10	9	8	12	19	9	7	13	19
Somewhat difficult	20	17	20	21	25	17	18	22	28
Very difficult	24	25	24	29	18	25	25	23	22
Cannot generate	39	45	41	31	23	45	43	31	22
List of patients by current medications taken									
Very easy	5	3	4	7	16	3	5	9	8
Somewhat easy	10	8	8	13	20	8	7	12	19
Somewhat difficult	16	15	15	17	19	15	13	15	25
Very difficult	24	24	25	27	17	24	25	26	20
Cannot generate	44	48	48	35	26	48	50	38	28

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
<i>Receives quality-of-care data about the following:</i>									
Proportion of patients who receive recommended care	20	14	21	20	24	14	21	20	27
Patients' clinical outcomes	18	11	21	18	23	11	18	23	27
Patient surveys or experiences with care	25	14	26	31	37	15	24	29	44
Receives any of above quality care data	33	21	36	34	42	21	34	36	47
<i>Does the quality-of-care data allow you to compare yourself to...?</i>									
Other physicians in your specialty	24	17	28	22	26	17	26	25	35
Other physicians in the same health plans	22	18	24	19	24	18	23	19	28
Other physicians in your practice or local area	19	13	22	17	20	14	18	26	26
Other physicians nationally	11	8	13	10	9	9	10	15	16
Other hospital/clinics/health centers	1	0	1	3	1	1	1	2	2
<i>How useful are the following data?</i>									
Proportion of patients who receive recommended care									
Not useful	3	2	4	1	3	2	4	2	2
Somewhat useful	9	6	10	8	15	6	10	10	14
Useful	7	5	6	11	6	5	6	8	11
Patients' clinical outcomes									
Not useful	2	1	3	1	3	1	3	3	1
Somewhat useful	7	5	8	4	9	5	6	10	11
Useful	8	4	8	13	10	4	8	11	15

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Patient surveys or experiences with care									
Not useful	3	2	4	4	3	2	4	5	3
Somewhat useful	12	6	12	16	19	7	13	11	19
Useful	9	5	9	11	14	5	7	12	20
<i>From which of the following sources do you receive quality-of-care data?</i>									
Commercial insurance companies or health plans	25	22	29	18	15	21	28	24	22
Internal sources	13	5	14	19	27	6	11	20	28
Accreditation agencies	7	4	6	11	14	4	7	8	11
Medical, professional, or specialty societies	7	6	8	4	7	6	7	6	9
CMS	4	3	4	6	4	4	5	3	6
Regulatory agencies	3	3	3	5	2	3	3	3	4
Employer groups	3	1	3	2	5	1	3	3	5
<i>To improve quality of care, who should have access to data about physicians?</i>									
Individual physician himself									
Yes, definitely	77	74	78	81	78	74	78	77	83
Yes, probably	19	20	18	16	20	20	19	18	14
No, probably not	2	3	2	—	—	3	1	2	*
No, definitely not	1	2	1	2	1	2	1	1	2
Other physicians									
Yes, definitely	24	24	25	25	18	25	22	25	26
Yes, probably	48	42	48	49	65	42	51	45	56
No, probably not	18	21	19	16	9	20	18	20	13
No, definitely not	8	11	6	8	7	11	7	6	4

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Medical leadership in physicians' own organization									
Yes, definitely	25	22	24	30	28	22	26	21	40
Yes, probably	47	42	48	49	51	43	51	46	45
No, probably not	19	23	19	15	11	22	19	19	10
No, definitely not	8	11	7	5	8	11	8	6	4
Medical leadership in health plans(s)									
Yes, definitely	17	18	14	19	23	18	13	17	25
Yes, probably	46	43	45	51	53	43	46	47	51
No, probably not	23	24	26	17	16	23	26	21	17
No, definitely not	12	13	12	11	6	13	13	12	7
Hospitals where physicians admit									
Yes, definitely	28	28	25	37	34	30	26	26	35
Yes, probably	52	48	53	52	51	48	54	53	54
No, probably not	12	14	14	7	9	13	13	12	8
No, definitely not	6	8	7	4	5	8	6	6	3
Accrediting or licensing agencies									
Yes, definitely	24	25	22	28	30	25	22	22	30
Yes, probably	47	44	48	46	47	45	48	48	44
No, probably not	17	17	19	15	13	16	18	16	19
No, definitely not	10	12	10	9	8	11	10	11	6
A physician's own patients									
Yes, definitely	13	16	10	19	14	16	11	12	12
Yes, probably	41	38	42	40	49	39	42	41	45
No, probably not	29	28	31	26	26	28	30	31	31
No, definitely not	15	15	15	15	9	15	15	14	11
The general public									
Yes, definitely	7	9	6	8	8	10	6	6	7
Yes, probably	22	20	22	25	25	21	23	23	24
No, probably not	34	32	34	36	33	31	35	36	34
No, definitely not	35	36	36	31	32	35	35	33	34

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
<i>Do you think patients should have easy access to their own medical records?</i>									
Yes, definitely	41	39	41	42	45	39	41	43	41
Yes, probably	45	43	45	44	48	43	46	42	50
No	14	18	13	14	7	18	13	14	9
<i>Compared to two years ago, likelihood patients ask about your clinical experience with the management of certain conditions or procedures?</i>									
More likely	33	33	35	28	31	33	32	34	36
Equally likely	61	59	60	62	65	59	62	61	59
Less likely	6	7	5	9	4	8	6	5	5

Table II-2. Practice-Level and Performance Data: Availability, Sources, and Willingness to Share

Questions	Salary Status			Physician Type	
	Total	Salaried	Not Salaried	Primary Care Physician	Specialist
Percent Distribution (Weighted)	100%	41%	56%	29%	71%
<i>With current patient records, how easy is it to generate the following?</i>					
Very/somewhat easy to generate list of patients by ANY criteria	57	55	58	54	58
Patients by age group					
Very easy	21	19	23	22	21
Somewhat easy	28	28	28	26	28
Somewhat difficult	21	21	20	20	22
Very difficult	15	17	15	17	15
Cannot generate	14	14	13	13	14
Patients by diagnosis or health risk					
Very easy	18	17	19	16	19
Somewhat easy	26	25	26	25	26
Somewhat difficult	21	22	21	22	21
Very difficult	16	18	15	17	16
Cannot generate	17	17	17	18	17
Patients by lab results					
Very easy	6	8	4	7	5
Somewhat easy	10	12	8	10	10
Somewhat difficult	20	22	19	23	19
Very difficult	24	24	24	25	24
Cannot generate	39	33	43	33	41
Patients by current medications taken					
Very easy	5	8	4	6	5
Somewhat easy	10	12	8	12	9
Somewhat difficult	16	16	15	17	15
Very difficult	24	25	24	25	23
Cannot generate	44	38	49	39	46

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
<i>Receives quality of care data about the following:</i>					
Proportion of patients who receive recommended care	20	22	18	37	12
Patients' clinical outcomes	18	21	16	34	11
Patient surveys or experiences with care	25	32	20	36	20
Receives any of above quality care data	33	38	29	49	26
<i>Quality-of-care data allows you to compare yourself to:</i>					
Other physicians in your specialty	24	25	23	34	20
Other physicians in the same health plans	22	23	21	39	15
Other physicians in your practice or local area	19	22	17	29	15
Other physicians nationally	11	12	11	14	10
Other hospital/clinics/health centers	1	2	1	1	1
<i>How useful are the following data?</i>					
Proportion of patients who receive recommended care					
Not useful	3	3	3	5	2
Somewhat useful	9	11	9	17	6
Useful	7	8	6	15	3
Patients' clinical outcomes					
Not useful	2	2	2	5	1
Somewhat useful	7	8	6	13	5
Useful	8	11	6	15	5

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Patient surveys or experiences with care					
Not useful	3	4	3	6	2
Somewhat useful	12	15	10	16	10
Useful	9	12	7	13	7
<i>From which of the following sources do you receive quality-of-care data?</i>					
Commercial insurance companies or health plans	25	24	26	43	17
Internal sources	13	19	10	15	13
Accreditation agencies	7	10	4	7	7
Medical, professional, or specialty societies	7	6	7	6	7
CMS	4	6	3	5	4
Regulatory agencies	3	4	2	3	3
Employer groups	3	3	2	3	2
<i>To improve quality of care, who should have access to data about physicians?</i>					
Individual physician himself					
Yes, definitely	77	80	76	81	76
Yes, probably	19	17	20	16	20
No, probably not	2	1	2	1	2
No, definitely not	1	1	2	1	2
Other physicians					
Yes, definitely	24	25	23	23	24
Yes, probably	48	49	47	50	47
No, probably not	18	17	19	17	18
No, definitely not	8	7	9	8	8

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Medical leadership in physicians' own organization					
Yes, definitely	25	28	22	22	26
Yes, probably	47	47	47	51	45
No, probably not	19	17	20	17	20
No, definitely not	8	5	9	8	8
Medical leadership in health plans(s)					
Yes, definitely	17	20	14	17	17
Yes, probably	46	47	46	51	44
No, probably not	23	21	24	19	25
No, definitely not	12	10	12	11	12
Hospitals where physicians admit					
Yes, definitely	28	32	26	26	29
Yes, probably	52	51	52	54	51
No, probably not	12	11	13	12	12
No, definitely not	6	4	7	7	6
Accrediting or licensing agencies					
Yes, definitely	24	27	22	21	26
Yes, probably	47	47	47	48	46
No, probably not	17	17	18	18	17
No, definitely not	10	8	12	11	10
A physician's own patients					
Yes, definitely	13	15	12	13	13
Yes, probably	41	42	41	42	41
No, probably not	29	29	30	28	30
No, definitely not	15	13	15	15	14
The general public					
Yes, definitely	7	8	7	7	7
Yes, probably	22	23	22	21	23
No, probably not	34	36	32	34	34
No, definitely not	35	32	37	36	34

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
<i>Do you think patients should have easy access to their own medical records?</i>					
Yes, definitely	41	42	40	35	43
Yes, probably	45	46	43	47	43
No	14	12	16	17	13
<i>Compared to two years ago, likelihood patients ask about your clinical experience with the management of certain conditions or procedures?</i>					
More likely	33	32	34	26	36
Equally likely	61	61	60	65	59
Less likely	6	6	6	9	5

Table II-3. Practice-Level and Performance Data: Availability, Sources, and Willingness to Share

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>With current patient records, how easy is it to generate the following?</i>							
Very/somewhat easy to generate lists of patients by ANY criteria	57	56	61	56	51	50	61
Patients by age group							
Very easy	21	20	29	19	14	18	23
Somewhat easy	28	24	27	30	25	25	29
Somewhat difficult	21	24	20	20	19	22	21
Very difficult	15	20	12	15	23	16	14
Cannot generate	14	10	12	16	16	17	12
Patients by diagnosis/health risk							
Very easy	18	18	22	17	14	16	20
Somewhat easy	26	25	27	26	22	24	27
Somewhat difficult	21	21	21	21	21	19	23
Very difficult	16	18	13	17	22	19	15
Cannot generate	17	16	16	18	18	21	15
Patients by lab results							
Very easy	6	5	8	5	6	6	6
Somewhat easy	10	8	11	10	12	10	10
Somewhat difficult	20	22	18	20	21	19	20
Very difficult	24	28	23	23	24	24	24
Cannot generate	39	36	10	40	34	39	39
Patients by current medications taken							
Very easy	5	4	8	5	7	5	5
Somewhat easy	10	10	12	9	10	10	10
Somewhat difficult	16	15	14	16	20	14	16
Very difficult	24	28	20	24	25	25	23
Cannot generate	44	42	45	45	36	44	45

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
<i>Receives quality of care data about the following:</i>							
Proportion of patients who receive recommended care	20	21	18	20	12	19	21
Patients' clinical outcomes	18	21	18	17	11	15	20
Patient surveys or experiences with care	25	25	28	24	27	22	26
Receives any of above quality care data	33	35	36	31	28	29	35
<i>Quality-of-care data allows you to compare yourself to:</i>							
Other physicians in your specialty	24	25	23	24	18	20	27
Other physicians in the same health plans	22	21	20	23	17	17	25
Other physicians in your practice or local area	19	16	19	20	14	17	21
Other physicians nationally	11	12	12	10	6	6	14
Other hospital/clinics/health centers	1	*	*	1	2	1	1
<i>How useful are the following data?</i>							
Proportion of patients who receive recommended care							
Not useful	3	4	3	2	1	2	4
Somewhat useful	9	10	9	10	9	8	10
Useful	7	6	6	7	1	8	7
Patients' clinical outcomes							
Not useful	2	3	4	2	0	1	3
Somewhat useful	7	9	6	7	6	6	8
Useful	8	9	8	8	5	8	9

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Patient surveys or experiences with care							
Not useful	3	4	4	3	4	4	3
Somewhat useful	12	11	14	12	17	11	12
Useful	9	10	9	9	5	6	11
<i>From which of the following sources do you receive quality-of-care data?</i>							
Commercial insurance companies or health plans	25	26	21	25	15	20	28
Internal sources	13	15	15	13	19	10	14
Accreditation agencies	7	7	6	7	5	7	7
Medical, professional, or specialty societies	7	6	7	7	6	5	8
CMS	4	2	5	5	4	3	5
Regulatory agencies	3	3	2	4	3	2	4
Employer groups	3	2	2	3	2	2	3
<i>To improve quality of care, who should have access to data about physicians?</i>							
Individual physician himself							
Yes, definitely	77	76	79	77	74	77	78
Yes, probably	19	18	18	19	22	19	18
No, probably not	2	3	1	1	2	1	2
No, definitely not	1	1	2	1	1	1	2
Other physicians							
Yes, definitely	24	26	22	24	20	23	24
Yes, probably	48	49	46	49	51	50	47
No, probably not	18	18	23	16	20	18	18
No, definitely not	8	6	8	9	8	6	9

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Medical leadership in physicians' own organization							
Yes, definitely	25	20	24	27	26	24	25
Yes, probably	47	51	46	46	41	51	46
No, probably not	19	20	23	17	23	18	18
No, definitely not	8	8	7	8	9	4	9
Medical leadership in health plans(s)							
Yes, definitely	17	13	14	19	14	16	17
Yes, probably	46	17	42	48	47	50	44
No, probably not	23	25	29	20	26	22	24
No, definitely not	12	13	13	10	11	8	13
Hospitals where physicians admit							
Yes, definitely	28	23	26	31	33	28	28
Yes, probably	52	55	55	49	49	54	51
No, probably not	12	15	13	11	14	12	12
No, definitely not	6	6	5	7	4	4	8
Accrediting or licensing agencies							
Yes, definitely	24	21	22	26	33	22	24
Yes, probably	47	50	46	45	40	51	46
No, probably not	17	18	20	16	20	16	18
No, definitely not	10	10	10	10	6	9	11
A physician's own patients							
Yes, definitely	13	11	12	14	14	14	13
Yes, probably	41	45	40	41	40	41	42
No, probably not	29	29	31	29	33	32	28
No, definitely not	15	14	16	14	12	12	16
The general public							
Yes, definitely	7	7	6	8	6	6	8
Yes, probably	22	22	23	22	22	23	22
No, probably not	34	26	32	34	40	36	32
No, definitely not	35	34	38	34	31	32	36

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
<i>Do you think patients should have easy access to their own medical records?</i>							
Yes, definitely	41	41	45	39	37	42	40
Yes, probably	45	42	46	45	51	45	44
No	14	16	9	15	12	13	15
<i>Compared to two years ago, likelihood patients ask about your clinical experience with the management of certain conditions or procedures?</i>							
More likely	33	33	35	32	29	30	35
Equally likely	61	60	61	61	65	65	58
Less likely	6	7	4	6	5	5	7

Table III-1. Physicians' Involvement in Quality Improvement Activities

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2-9 Physicians	10-49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>In past two years, have you been involved in redesign efforts?</i>									
Yes	34	22	37	42	40	24	35	43	47
No	65	77	62	58	58	75	65	57	53
<i>In past two years, have you been involved in collaboratives?</i>									
Yes to Any	32	19	34	45	37	20	33	38	50
Yes, a LOCAL	23	15	25	30	27	15	23	29	34
Yes, a REGIONAL	8	4	9	13	7	4	8	9	16
Yes, a NATIONAL	6	3	5	7	10	3	5	7	11
No, have not been involved	67	80	65	55	61	80	67	61	49
<i>How effective do you think these collaboratives are in improving quality?</i>									
Very effective	11	8	9	14	20	8	10	12	16
Somewhat effective	65	59	68	68	61	59	68	69	67
Not very effective	16	20	15	12	10	19	15	13	13
Not at all effective	2	4	2	1	2	4	2	1	1

Table III-2. Physicians' Involvement in Quality Improvement Activities

Questions	Salary Status			Physician Type	
	Total	Salaried	Not Salaried	Primary Care Physician	Specialist
Percent Distribution (Weighted)	100%	41%	56%	29%	71%
<i>In past two years, have you been involved in redesign efforts?</i>					
Yes	34	41	30	42	31
No	65	59	69	57	68
<i>In past two years, have you been involved in collaboratives?</i>					
Yes to Any	32	39	28	36	30
Yes, a LOCAL	23	28	20	25	23
Yes, a REGIONAL	8	10	7	11	7
Yes, a NATIONAL	6	7	5	6	5
No, have not been involved	67	61	72	63	69
<i>How effective do you think these collaboratives are in improving quality?</i>					
Very effective	11	14	8	11	10
Somewhat effective	65	67	64	64	66
Not very effective	16	11	19	18	15
Not at all effective	2	1	3	2	2

Table III-3. Physicians' Involvement in Quality Improvement Activities

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>In past two years, have you been involved in redesign efforts?</i>							
Yes	34	34	44	31	23	31	37
No	65	66	56	68	77	68	62
<i>In past two years, have you been involved in collaboratives?</i>							
Yes to Any	32	35	31	31	27	29	35
Yes, a LOCAL	23	26	24	22	18	19	26
Yes, a REGIONAL	8	8	6	9	6	8	8
Yes, a NATIONAL	6	7	5	5	9	5	5
No, have not been involved	67	64	67	68	71	71	64
<i>How effective do you think these collaboratives are in improving quality?</i>							
Very effective	11	12	11	10	13	9	11
Somewhat effective	65	72	66	62	52	67	66
Not very effective	16	11	18	17	26	13	15
Not at all effective	2	*	2	3	2	2	3

Table IV-1. Coordination of Care and Referrals

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>In the past 12 months, observed the following:</i>									
Tests had to be repeated because finding unavailable/inadequate									
Often	6	4	6	8	9	4	6	9	8
Sometimes	28	28	28	33	27	29	27	35	24
Rarely	53	52	54	48	53	52	56	45	54
Never	12	16	12	10	9	15	11	10	12
Patient's medical records not available at time of visit									
Often	25	18	27	30	31	19	28	30	25
Sometimes	47	45	48	49	46	45	47	48	51
Rarely	23	30	21	16	20	29	22	17	22
Never	4	7	2	3	1	6	3	3	1
Patient had positive test result not followed-up properly									
Often	1	1	—	1	1	1	1	—	—
Sometimes	14	8	12	25	26	9	14	17	22
Rarely	53	57	67	59	63	59	66	65	61
Never	22	32	20	15	8	31	19	18	16
Patient experienced post-discharge problems because physician did not receive information in a timely manner									
Often	2	2	2	6	2	3	3	2	2
Sometimes	23	22	21	28	32	22	21	26	27
Rarely	46	41	50	45	43	42	49	47	49
Never	27	34	27	22	30	32	27	24	21

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Patient had difficulty affording out-of-pocket costs									
Often	52	51	50	61	47	52	51	55	48
Sometimes	40	41	42	32	35	39	41	39	39
Rarely	7	7	7	6	10	7	7	6	11
Never	1	1	—	1	7	1	1	1	2
Patient received wrong drug/dose or experienced drug-drug interaction									
Often	1	1	—	1	1	1	—	1	—
Sometimes	10	8	9	16	13	8	10	12	13
Rarely	66	56	70	69	69	58	71	67	71
Never	23	35	20	15	15	33	19	19	14
Patient care was compromised because of conflicting information									
Often	2	4	2	2	3	4	2	1	1
Sometimes	26	27	23	27	33	27	23	26	33
Rarely	55	49	60	56	46	49	61	54	54
Never	16	19	15	15	17	18	14	18	12
Physicians' ability to provide same-day appointments									
Always	17	16	17	15	25	17	18	17	18
Often	46	46	51	40	36	45	47	50	41
Sometimes	25	27	23	28	22	26	24	22	27
Rarely	9	10	8	13	12	11	9	7	13
Never	1	1	1	2	—	1	1	1	1
After a referral, how often do you receive timely information back about results?									
Always	11	14	10	10	7	13	8	9	13
Often	54	53	59	45	45	53	58	55	45
Sometimes	28	26	25	35	35	25	28	24	36
Rarely	6	6	5	8	12	6	5	10	5
Never	8	2	3	3	—	4	3	—	1

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
<i>When making referrals, how often do you have quality-of-care data?</i>									
Always	5	9	4	3	3	8	3	4	3
Often	14	16	13	14	13	16	14	12	13
Sometimes	16	18	14	14	20	18	13	15	19
Rarely	32	29	34	32	28	29	34	34	33
Never	32	27	34	36	33	27	35	35	30
<i>For referrals, are the following less, equally or more important as physicians' quality-of-care data?</i>									
Physicians' reputation									
Less important	8	9	7	11	10	10	7	8	7
Equally as important	49	51	48	51	49	50	50	43	54
More important	42	39	44	38	42	39	43	47	39
Physicians' technical qualifications									
Less important	13	12	13	13	14	12	13	13	14
Equally as important	61	60	61	64	64	60	61	61	63
More important	25	27	26	23	22	26	26	25	23
You and your patients' experience with physicians									
Less important	2	2	2	5	1	2	2	3	3
Equally as important	34	34	33	34	38	34	33	32	33
More important	64	64	65	61	61	64	64	64	64
What patients have said about physicians' bedside manner									
Less important	25	27	25	27	24	27	24	25	29
Equally as important	48	46	48	51	53	46	48	50	51
More important	25	27	27	22	22	26	27	25	20

Table IV-2. Coordination of Care and Referrals

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Percent Distribution (Weighted)	100%	41%	56%	29%	71%
<i>In the past 12 months, observed the following:</i>					
Tests had to be repeated because finding unavailable/inadequate					
Often	6	7	6	6	6
Sometimes	28	31	27	23	31
Rarely	53	50	54	60	49
Never	12	11	13	11	13
Patient's medical records not available at time of visit					
Often	25	28	24	22	26
Sometimes	47	47	47	50	46
Rarely	23	21	24	23	23
Never	4	3	4	3	4
Patient had positive test result not followed-up properly					
Often	1	1	1	1	1
Sometimes	14	19	11	14	14
Rarely	63	62	64	66	62
Never	22	18	24	19	23
Patient experienced post-discharge problems because physician did not receive information in a timely manner					
Often	2	3	2	3	2
Sometimes	23	26	21	29	21
Rarely	46	46	47	46	46
Never	27	24	29	22	30

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
Patient had difficulty affording out-of-pocket costs					
Often	52	52	51	62	47
Sometimes	40	38	41	32	43
Rarely	7	8	7	5	8
Never	1	2	*	1	1
Patient received wrong drug/dose or experienced a drug-drug interaction					
Often	1	*	1	*	1
Sometimes	10	12	9	12	10
Rarely	66	69	65	70	65
Never	23	19	25	17	25
Patient care was compromised because of conflicting information					
Often	2	2	3	2	3
Sometimes	26	25	26	23	27
Rarely	55	57	55	58	54
Never	16	15	16	16	16
Physicians' ability to provide same-day appointments					
Always	17	18	17	23	15
Often	46	43	49	54	43
Sometimes	25	26	24	18	28
Rarely	9	11	8	3	12
Never	1	1	1	1	1
After a referral, how often do you receive timely information back about results?					
Always	11	12	10	12	10
Often	54	52	56	59	52
Sometimes	28	29	26	23	30
Rarely	6	6	6	5	7
Never	1	1	0	0	0

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
<i>When making referrals, how often do you have quality-of-care data?</i>					
Always	5	4	5	6	4
Often	14	14	14	16	14
Sometimes	16	17	14	16	15
Rarely	32	31	33	30	33
Never	32	32	33	30	33
<i>For referrals, are the following less, equally or more important as physicians' quality-of-care data?</i>					
Physicians' reputation					
Less important	8	9	8	9	8
Equally as important	49	50	48	52	48
More important	42	40	43	38	43
Physicians' technical qualifications					
Less important	13	14	12	13	13
Equally as important	61	61	61	63	60
More important	25	24	26	23	26
You and your patients' experience with physicians					
Less important	2	3	2	2	2
Equally as important	34	35	32	33	34
More important	64	61	66	64	63
What patients have said about physicians' bedside manner					
Less important	25	27	25	21	27
Equally as important	48	49	48	49	48
More important	25	24	27	29	24

Table IV-3. Coordination of Care and Referrals

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>In the past 12 months, observed the following:</i>							
Tests had to be repeated because finding unavailable/inadequate							
Often	6	8	6	6	7	5	7
Sometimes	28	32	26	28	31	25	30
Rarely	53	50	52	54	50	55	52
Never	12	10	14	12	13	14	11
Patient's medical records not available at time of visit							
Often	25	31	27	22	17	22	28
Sometimes	47	48	46	47	53	48	46
Rarely	23	16	22	26	26	25	21
Never	4	2	3	4	4	4	3
Patient had positive test result not followed-up properly							
Often	1	*	1	1	1	1	1
Sometimes	14	18	13	13	19	14	14
Rarely	63	63	65	62	61	62	64
Never	22	19	21	23	18	23	21
Patient experienced post-discharge problems because physician did not receive information in a timely manner							
Often	2	2	3	3	3	3	2
Sometimes	23	24	22	23	30	23	22
Rarely	46	44	43	48	41	44	48
Never	27	29	31	25	25	29	27

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Patient had difficulty affording out-of-pocket costs							
Often	52	53	54	50	43	51	53
Sometimes	40	38	38	40	42	40	39
Rarely	7	8	7	7	12	8	7
Never	1	1	*	2	3	1	1
Patient received wrong drug/dose or experienced a drug-drug interaction							
Often	1	—	*	1	—	1	1
Sometimes	10	10	10	11	12	10	10
Rarely	66	69	68	65	65	63	68
Never	23	21	22	23	22	26	21
Patient care was compromised because of conflicting information							
Often	2	1	2	3	4	2	2
Sometimes	26	23	25	27	30	28	24
Rarely	55	61	51	55	54	51	58
Never	16	14	21	15	12	18	15
Physicians' ability to provide same-day appointments							
Always	17	14	18	18	14	20	16
Often	46	51	43	46	48	42	49
Sometimes	25	24	26	25	25	24	25
Rarely	9	8	11	9	12	11	8
Never	1	1	1	1	*	1	1
After a referral, how often do you receive timely information back about results?							
Always	11	7	6	14	15	11	10
Often	54	53	48	58	43	48	59
Sometimes	28	31	36	23	33	30	26
Rarely	6	8	9	5	8	9	4
Never	*	*	1	*	—	*	1

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
<i>When making referrals, how often do you have quality-of-care data?</i>							
Always	5	4	2	6	7	5	5
Often	14	14	9	16	18	14	14
Sometimes	16	14	14	17	18	15	15
Rarely	32	33	35	30	25	30	34
Never	32	34	38	30	29	35	31
<i>For referrals, are the following less, equally or more important as physicians' quality-of-care data?</i>							
Physicians' reputation							
Less important	8	9	9	8	9	11	7
Equally as important	49	54	45	49	48	50	49
More important	42	36	46	42	43	37	44
Physicians' technical qualifications							
Less important	13	12	14	13	13	14	12
Equally as important	61	61	60	61	62	64	59
More important	25	25	26	26	25	21	28
You and your patients' experience with physicians							
Less important	2	2	3	2	2	4	1
Equally as important	34	32	33	34	28	32	35
More important	64	65	64	63	69	63	64
What patients have said about physicians' bedside manner							
Less important	25	18	25	29	30	29	23
Equally as important	48	51	48	47	50	45	50
More important	25	29	27	23	20	25	26

Table V-1. Strategies to Improve Quality of Care

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>Effectiveness of the following in improving quality of care</i>									
More time to spend with patients									
Very effective	52	50	50	64	55	51	51	55	57
Somewhat effective	36	36	38	26	39	34	38	33	34
Not very effective	9	10	9	9	4	10	9	9	7
Not at all effective	2	3	2	1	1	3	2	1	1
Better patient access to preventive care and health education									
Very effective	41	41	38	49	46	42	38	49	37
Somewhat effective	46	43	49	42	46	43	50	40	50
Not very effective	10	12	10	8	6	12	9	8	11
Not at all effective	2	3	2	1	1	3	2	2	★
Improved teamwork/communication among MDs									
Very effective	35	32	32	50	42	34	32	40	40
Somewhat effective	51	48	54	44	52	47	55	48	52
Not very effective	11	15	12	5	4	15	11	9	7
Not at all effective	2	3	2	1	1	3	2	2	—
More use of computer technology for EMR									
Very effective	25	15	27	35	25	17	25	31	35
Somewhat effective	50	41	52	51	58	42	53	53	54
Not very effective	17	27	14	10	12	25	17	9	9
Not at all effective	8	17	6	4	2	16	6	6	2
Better information on specialists to refer to									
Very effective	23	25	20	32	19	26	21	23	19
Somewhat effective	48	48	48	46	52	47	50	45	52
Not very effective	23	19	26	19	24	19	24	26	23
Not at all effective	5	7	5	2	3	7	4	4	6

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Better treatment guidelines									
Very effective	21	14	21	31	25	16	21	25	22
Somewhat effective	50	47	51	50	53	46	51	51	57
Not very effective	21	25	22	13	18	25	22	17	17
Not at all effective	7	12	6	5	3	12	6	6	4
<i>Based on your experience working in teams, do you agree or disagree with the following?</i>									
Give-and-take among team members results in better decisions re: patient care									
Strongly agree	14	12	12	25	16	13	13	15	16
Agree	59	52	63	55	58	52	59	65	65
Neither agree nor disagree	20	26	19	15	18	26	21	15	16
Disagree	5	7	4	5	5	7	4	4	2
Strongly disagree	1	1	1	*	1	1	1	1	—
Team process makes care more cumbersome									
Strongly agree	4	5	4	5	4	6	4	3	6
Agree	28	33	27	23	23	31	29	24	21
Neither agree nor disagree	27	29	28	25	22	28	26	31	27
Disagree	33	27	34	37	41	27	34	34	38
Strongly disagree	6	5	5	10	7	6	6	7	7
Involvement of multiple team members increases likelihood of medical errors									
Strongly agree	3	5	2	3	2	5	2	3	2
Agree	21	28	19	19	17	28	21	16	15
Neither agree nor disagree	25	26	26	16	26	25	25	25	23
Disagree	41	31	43	48	41	32	41	46	49
Strongly disagree	10	8	9	13	13	9	11	10	10

Table V-2. Strategies to Improve Quality of Care

Questions	Salary Status			Physician Type		Gender	
	Total	Salaried	Not Salaried	Primary Care Physician	Specialist	Male	Female
Percent Distribution (Weighted)	100%	41%	56%	29%	71%	77%	23%
<i>Effectiveness of the following in improving quality of care</i>							
More time to spend with patients							
Very effective	52	58	48	59	50	51	59
Somewhat effective	36	32	39	31	38	37	33
Not very effective	9	8	10	7	10	10	7
Not at all effective	2	1	2	1	2	2	1
Better patient access to preventive care and health education							
Very effective	41	46	37	49	38	37	53
Somewhat effective	46	42	49	43	48	49	38
Not very effective	10	10	10	6	11	11	7
Not at all effective	2	2	3	2	2	2	2
Improved teamwork/communication among MDs							
Very effective	35	41	31	41	33	32	45
Somewhat effective	51	48	54	46	53	53	46
Not very effective	11	8	13	9	12	12	7
Not at all effective	2	2	2	2	2	2	1
More use of computer technology for EMR							
Very effective	25	32	20	29	23	25	25
Somewhat effective	50	49	50	50	50	51	48
Not very effective	17	14	19	14	18	16	17
Not at all effective	8	5	10	6	9	8	9
Better information on specialists to refer to							
Very effective	23	26	21	25	22	20	34
Somewhat effective	48	48	49	50	48	49	46
Not very effective	23	22	23	21	24	25	17
Not at all effective	5	4	6	3	6	6	2

Questions	Total	Salary Status		Physician Type		Gender	
		Salaried	Not Salaried	Primary Care Physician	Specialist	Male	Female
Better treatment guidelines							
Very effective	21	27	17	23	20	20	24
Somewhat effective	50	51	49	53	49	51	46
Not very effective	21	17	24	18	23	21	22
Not at all effective	7	5	9	5	8	7	7
<i>Based on your experience working in teams, do you agree or disagree with the following?</i>							
Give-and-take among team members results in better decisions re: patient care							
Strongly agree	14	19	11	12	15	13	16
Agree	59	60	58	61	58	58	61
Neither agree nor disagree	20	16	23	19	21	21	18
Disagree	5	5	5	6	4	6	2
Strongly disagree	1	*	2	1	1	1	*
Team process makes care more cumbersome							
Strongly agree	4	4	5	6	4	5	3
Agree	28	24	30	27	28	29	24
Neither agree nor disagree	27	26	29	29	27	28	25
Disagree	33	37	31	32	33	32	37
Strongly disagree	6	9	4	6	6	6	8
Involvement of multiple team members increases likelihood of medical errors							
Strongly agree	3	3	3	2	3	3	1
Agree	21	18	23	19	22	22	18
Neither agree nor disagree	25	21	27	26	24	25	22
Disagree	41	45	37	43	39	39	44
Strongly disagree	10	12	8	9	11	9	12

Table V-3. Strategies to Improve Quality of Care

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>Effectiveness of the following in improving quality of care</i>							
More time to spend with patients							
Very effective	52	54	55	51	55	51	53
Somewhat effective	36	36	35	36	32	36	36
Not very effective	9	8	8	10	8	9	9
Not at all effective	2	1	2	3	4	3	2
Better patient access to preventive care and health education							
Very effective	41	48	39	39	45	43	40
Somewhat effective	46	43	49	47	42	44	48
Not very effective	10	8	10	11	11	11	9
Not at all effective	2	1	2	3	1	2	2
Improved teamwork/communication among MDs							
Very effective	35	38	36	34	41	36	34
Somewhat effective	51	51	51	51	47	51	52
Not very effective	11	9	11	12	10	10	12
Not at all effective	2	1	1	3	1	1	2
More use of computer technology for EMR							
Very effective	25	29	26	23	22	22	27
Somewhat effective	50	53	50	48	46	50	50
Not very effective	17	13	18	18	21	18	15
Not at all effective	8	5	6	10	11	10	7
Better information on specialists to refer to							
Very effective	23	24	19	24	30	24	22
Somewhat effective	48	50	55	45	42	50	48
Not very effective	23	22	23	23	22	20	24
Not at all effective	5	4	3	6	6	5	5

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Better treatment guidelines							
Very effective	21	24	21	20	26	21	21
Somewhat effective	50	49	47	52	46	49	51
Not very effective	21	20	27	19	18	21	21
Not at all effective	7	7	5	8	9	8	7
<i>Based on your experience working in teams, do you agree or disagree with the following?</i>							
Give-and-take among team members results in better decisions re: patient care							
Strongly agree	14	12	15	15	21	14	14
Agree	59	60	59	58	59	59	59
Neither agree nor disagree	20	22	19	20	13	21	21
Disagree	5	4	4	5	3	5	5
Strongly disagree	1	1	1	1	1	*	1
Team process makes care more cumbersome							
Strongly agree	4	2	3	6	5	5	4
Agree	28	26	25	29	28	26	28
Neither agree nor disagree	27	28	29	26	26	27	28
Disagree	33	36	33	32	33	35	32
Strongly disagree	6	7	8	5	5	6	6
Involvement of multiple team members increases likelihood of medical errors							
Strongly agree	3	2	2	4	5	2	3
Agree	21	18	19	23	25	22	20
Neither agree nor disagree	25	24	23	25	20	25	25
Disagree	41	43	42	39	37	40	41
Strongly disagree	10	12	12	8	11	10	10

Table VI-1. Incentives and Disincentives to Providing Quality Care

Questions	Practice Setting					Practice Size			
	Total	Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
Percent Distribution (Weighted)	100%	25%	52%	14%	9%	27%	41%	17%	12%
<i>Which of the following are factors in determining your compensation?</i>									
Productivity or billing									
Not a factor	27	29	20	36	47	29	25	24	26
Minor factor	14	13	12	21	21	14	12	18	17
Major factor	58	56	68	42	30	55	63	57	57
Board re-certification status									
Not a factor	60	68	62	48	44	66	63	50	51
Minor factor	28	22	27	35	37	23	27	33	32
Major factor	11	8	10	17	17	9	9	16	16
Measures of clinical care									
Not a factor	72	69	75	70	59	69	77	73	60
Minor factor	19	17	17	20	32	17	15	20	32
Major factor	8	12	7	9	7	12	7	6	8
Patient surveys and experience									
Not a factor	72	68	77	70	57	69	77	74	61
Minor factor	19	17	17	23	31	17	16	21	32
Major factor	8	12	5	6	11	12	6	5	8
Quality bonus or incentive payments from insurance									
Not a factor	80	80	81	80	71	79	83	76	76
Minor factor	15	13	14	15	23	13	14	18	18
Major factor	4	5	4	5	4	5	3	5	6

Questions	Total	Practice Setting				Practice Size			
		Solo	Group	Hospital/ Clinic	Other	1 Physician	2–9 Physicians	10–49 Physicians	50+ Physicians
<i>Receives reimbursements for the following:</i>									
E-mail with patients									
Yes, from health plans or HMOs	—	1	—	—	—	1	—	—	—
Yes, from other sources	—	1	—	—	1	1	—	—	—
No	99	98	99	100	99	98	99	98	100
Phone consultation with patients									
Yes, from health plans or HMOs	1	2	—	1	2	2	—	1	1
Yes, from other sources	3	6	2	1	1	5	2	1	1
No	96	92	97	98	96	92	97	97	98
Group patient visits									
Yes, from health plans or HMOs	3	3	2	3	4	3	2	2	1
Yes, from other sources	2	4	1	4	2	3	2	2	1
No	94	92	95	93	92	93	95	94	94
<i>With current financial incentive in your practice, how often does providing best quality of care mean less income for you?</i>									
Often	23	30	23	16	15	29	22	17	20
Sometimes	28	29	29	27	21	30	30	24	25
Rarely	17	16	17	19	12	16	16	19	17
Never	31	23	30	37	51	24	31	38	37

Table VI-2. Incentives and Disincentives to Providing Quality Care

Questions	Salary Status			Physician Type	
	Total	Salaried	Not Salaried	Primary Care Physician	Specialist
Percent Distribution (Weighted)	100%	41%	56%	29%	71%
<i>Which of the following are factors in determining your compensation?</i>					
Productivity or billing					
Not a factor	27	31	23	28	26
Minor factor	14	20	10	14	14
Major factor	58	48	66	57	59
Board re-certification status					
Not a factor	60	53	65	53	62
Minor factor	28	32	25	34	25
Major factor	11	14	9	12	11
Measures of clinical care					
Not a factor	72	66	76	66	74
Minor factor	19	24	15	24	17
Major factor	8	9	8	9	8
Patient surveys and experience					
Not a factor	72	70	74	69	73
Minor factor	19	22	17	23	18
Major factor	8	7	8	8	8
Quality bonus or incentive payments from insurance					
Not a factor	80	78	81	71	83
Minor factor	15	17	13	23	11
Major factor	4	4	4	5	4

Questions	Total	Salary Status		Physician Type	
		Salaried	Not Salaried	Primary Care Physician	Specialist
<i>Receives reimbursements for the following?</i>					
E-mail with patients					
Yes, from health plans or HMOs	*	—	1	1	*
Yes, from other sources	*	—	1	1	*
No	99	99	98	98	99
Phone consultation with patients					
Yes, from health plans or HMOs	1	1	1	2	1
Yes, from other sources	3	1	4	2	3
No	96	97	95	95	96
Group patient visits					
Yes, from health plans or HMOs	3	3	2	3	3
Yes, from other sources	2	2	2	1	3
No	94	93	95	95	93
<i>With current financial incentive in your practice, how often does providing best quality of care mean less income for you?</i>					
Often	23	19	25	23	23
Sometimes	28	25	30	28	28
Rarely	17	17	16	16	17
Never	31	38	26	31	31

Table VI-3. Incentives and Disincentives to Providing Quality Care

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
Percent Distribution (Weighted)	100%	23	22	55	8%	30%	62%
<i>Which of the following are factors in determining your compensation?</i>							
Productivity or billing							
Not a factor	27	22	25	29	31	31	24
Minor factor	14	14	13	15	21	15	13
Major factor	58	64	61	54	48	53	62
Board re-certification status							
Not a factor	60	50	58	64	62	56	61
Minor factor	28	69	29	23	28	31	26
Major factor	11	11	11	11	9	12	12
Measures of clinical care							
Not a factor	72	71	74	70	70	73	71
Minor factor	19	22	17	18	19	18	19
Major factor	8	7	8	9	10	8	8
Patient surveys and experience							
Not a factor	72	73	75	70	73	71	72
Minor factor	19	20	16	20	17	20	19
Major factor	8	6	8	8	9	7	8
Quality bonus or incentive payments from insurance							
Not a factor	80	79	84	79	82	80	79
Minor factor	15	17	11	15	14	13	16
Major factor	4	4	4	4	4	4	4

Questions	Total	Years in Practice			Hours in Direct Patient Care		
		10 Years or Less	11–15 Years	16 or More Years	20 Hours or Fewer	21–40 Hours	More than 40 Hours
<i>Receives reimbursements for the following?</i>							
E-mail with patients							
Yes, from health plans or HMOs	*	1	—	*	*	*	*
Yes, from other sources	*	*	*	*	—	*	1
No	99	99	99	98	99	99	98
Phone consultation with patients							
Yes, from health plans or HMOs	1	1	1	1	2	1	1
Yes, from other sources	3	2	3	3	6	3	2
No	96	97	96	95	91	96	96
Group patient visits							
Yes, from health plans or HMOs	3	3	2	3	3	3	3
Yes, from other sources	2	2	4	2	5	3	2
No	94	95	94	93	90	93	94
<i>With current financial incentive in your practice, how often does providing best quality of care mean less income for you?</i>							
Often	23	23	23	23	22	20	24
Sometimes	28	26	30	28	26	29	28
Rarely	17	17	16	17	20	19	15
Never	31	32	31	31	33	32	31

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