



# In the Literature

## INFORMATION TECHNOLOGIES: WHEN WILL THEY MAKE IT INTO PHYSICIANS' BLACK BAGS?

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The benefits of using information technology (IT) tools in health care are undeniable. Innovations like electronic medical records (EMRs), computerized drug order entry, and clinical decision support systems can improve the quality of care that patients receive and also help to increase efficiencies in medical practice. But despite the clear benefits, health care organizations and physicians have been slow to embrace such technologies, due in large part to the high costs of implementation, a new Commonwealth Fund survey finds.

In [“Information Technologies: When Will They Make It into Physicians’ Black Bags?”](#) (*Medscape General Medicine*, Dec. 7, 2004) a research team led by Commonwealth Fund assistant vice president Anne-Marie Audet, M.D., discuss results of the Commonwealth Fund National Survey of Physicians and Quality of Care with regard to physicians’ use of IT, their future plans to use IT, and perceived barriers to adoption.

The 2003 survey was completed by 1,837 U.S. physicians randomly selected from a national sample. All respondents were involved in the direct care of adults and had been in practice at least three years following residency. In addition to demographic variables, the survey also took into account practice size, defined as solo, small (2–9 physicians), medium (10–49), or large (50 or more), and type of compensation (salaried or unsalaried).

### Use of IT in Clinical Practices

Overall, the survey results show only modest adoption of IT applications with a few

exceptions. More than three-quarters (79%) of physicians report using electronic billing either routinely or occasionally, and 59 percent said they use electronic access to patients’ test results either routinely or occasionally. Other technologies are less widely employed. About one-quarter (27%) of physicians use EMRs and electronic ordering of tests, procedures, or drugs routinely or occasionally. Fifty-four percent of respondents send reminders to their patients regarding routine preventive care, but only 21 percent have automated the process. One-quarter of physicians use electronic clinical decision support systems, but only 6 percent said they used them routinely.

Even standard office technology is underutilized. Only 7 percent of physicians said they routinely use e-mail to communicate with other doctors, and only 3 percent routinely communicate with patients this way.

### Factors Affecting Use of IT

According to the authors, the predominant factor affecting use of IT is practice size. Eighty-seven percent of large group practice physicians have access to electronic test results compared with 36 percent of solo-practice physicians. Other technologies follow a similar pattern. Physicians in large group practices are more likely than solo practitioners to use EMRs, receive electronic drug alerts, use e-mail to communicate with colleagues and patients, and practice in a “high-tech” office—defined as one where physicians routinely or occasionally use at least four of the tools referenced in the survey.

How doctors are compensated also significantly affects use of IT, the authors say. Thirty-four percent of salaried physicians work in a high-tech office, compared with 17 percent of non-salaried ones.

### Future Use of IT in Clinical Practices

After billing, the most widely adopted clinical IT tool is electronic access to patient test results. Fifty-nine percent of respondents have computer access to such results and 14 percent plan to have it within the next year. The use of EMRs also appears to be poised for greater use: 20 percent of physicians say they plan to begin using EMRs within the next year, which would bring the total to nearly 50 percent, with computerized test ordering and prescribing following a similar pattern. Use of electronic clinical decision support, patient reminders, and alert systems, however, can be predicted to grow more slowly, the authors say.

### Perceived Barriers to Adoption

The top three reported barriers to IT adoption are costs of system start-up and maintenance; lack of local, regional, and national standards; and lack of time to consider acquiring, implementing, and using a new system. Again, practice size plays a role here, with physicians in solo and smaller practices more likely to cite barriers as causes for concern.

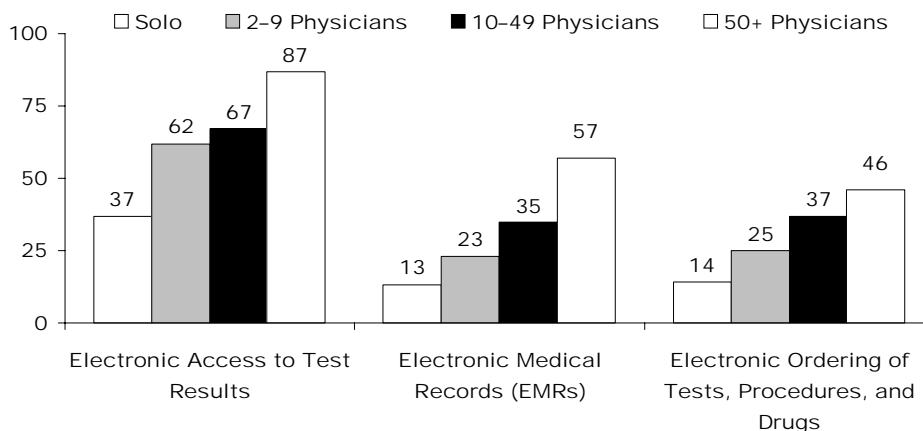
### Conclusions

The use of IT in medical practices is growing slowly. There appears to be a deep technological divide between physicians in large group practices and physicians in smaller settings, as well as between salaried and non-salaried physicians. This gap is further widened, the authors say, by the fact that the barriers to use—including financial barriers—are greatest for solo and small group practices.

Encouraging widespread IT adoption will require federal leadership, potentially in the form of federal grants, expansion of the Medicare diagnosis-related group physician reimbursement, and revolving loans, the researchers argue. It will also require additional standardization to allow for interoperability and the exchange of relevant information within the health care system. In this regard, continued support for the National Health Information Infrastructure is crucial. As barriers to implementation decrease and pressures to improve efficiency and quality increase, the authors predict that more and more physicians will incorporate IT into their practices. Another challenge will be educating physicians in the use of these tools, optimally, for the purposes of quality improvement.

## Physicians' Use of Electronic Access to Test Results, EMRs, and Electronic Ordering of Tests, Procedures, and Drugs, by Practice Size

Percent of practices that currently 'routinely/occasionally' use the following:



Source: The 2003 Commonwealth Fund National Survey of Physicians and Quality of Care