



In the Literature

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

Anne-Marie Audet, M.D., M.Sc.
Michelle Doty, Ph.D., M.P.H.
Jordon Peugh, M.S.
Jamil Shamasdin
Kinga Zapert, Ph.D.
Stephen Schoenbaum, M.D.,
M.P.H.

Medscape General Medicine
Dec. 7, 2004

Full text is available at:
[http://www.medscape.com/
viewarticle/493210](http://www.medscape.com/viewarticle/493210)

For more information about
this study, contact:

**Anne-Marie Audet, M.D.,
M.Sc.**

Assistant Vice President,
Quality Improvement
The Commonwealth Fund
TEL 212-606-3856
E-MAIL ama@cmwf.org

or

Mary Mahon

Public Information Officer
The Commonwealth Fund
TEL 212-606-3853
E-MAIL mm@cmwf.org

Commonwealth Fund Pub. #799
December 2004

In the Literature presents brief
summaries of Commonwealth Fund-
supported research recently pub-
lished in professional journals. To
read or learn more about new pub-
lications as soon as they become
available, visit www.cmwf.org and
register to receive Commonwealth
Fund e-mail alerts.

THE COMMONWEALTH FUND
ONE EAST 75TH STREET
NEW YORK, NY 10021-2692
TEL 212.606.3800
FAX 212.606.3500
E-MAIL cmwf@cmwf.org
<http://www.cmwf.org>

The benefits of using information technol-
ogy (IT) tools in health care are undeni-
able. Innovations like electronic medical
records (EMRs), computerized drug order
entry, and clinical decision support systems
can improve the quality of care that pa-
tients receive and also help to increase effi-
ciencies 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 Common-
wealth 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 in-
volved in the direct care of adults and had
been in practice at least three years follow-
ing 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 (sala-
ried or unsalaried).

Use of IT in Clinical Practices

Overall, the survey results show only mod-
est 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 elec-
tronic 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 under-
utilized. Only 7 percent of physicians said
they routinely use e-mail to communicate
with other doctors, and only 3 percent rou-
tinely 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 prac-
tice physicians have access to electronic test
results compared with 36 percent of solo-
practice physicians. Other technologies fol-
low a similar pattern. Physicians in large
group practices are more likely than solo
practitioners to use EMRs, receive elec-
tronic drug alerts, use e-mail to communi-
cate with colleagues and patients, and prac-
tice in a “high-tech” office—defined as
one where physicians routinely or occa-
sionally use at least four of the tools refer-
enced 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.

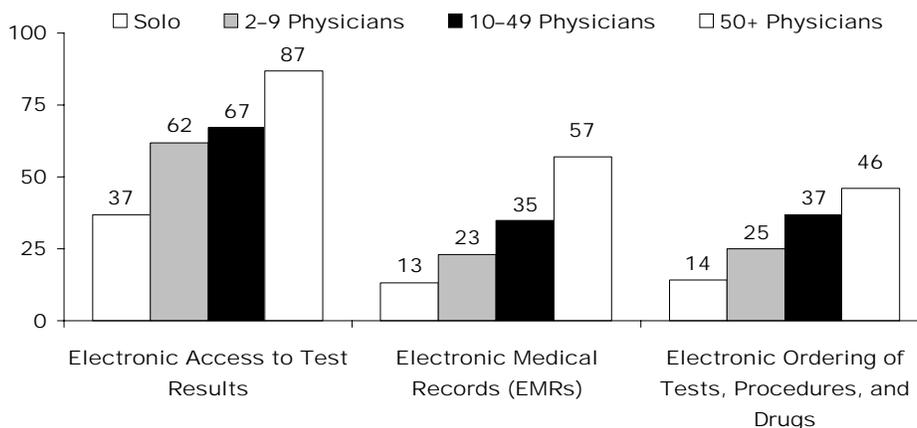
Conclusions

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