

Using information technology to save lives and money

By **Matt Handley, MD**, family physician and Associate Medical Director for Quality and Informatics

WHEN PEOPLE THINK ABOUT DOCTORS saving lives, they naturally picture a masterful surgeon replacing a heart valve, or a fast-moving physician directing high-tech heroics in the intensive care unit. Yet these stereotypes can sidetrack us from medicine's greatest opportunity to save lives.

Consider this: Although preventive care helps people avoid or postpone numerous chronic illnesses, Americans get their preventive care needs met only 55 percent of the time. And once people have a condition such as diabetes, they fare no better,

who receive care at Group Health medical centers can call up their records from any computer in the world, see lab results, find out when screenings are due, securely e-mail their physicians with questions about health problems—and receive answers within a few hours, all for no extra charge.

We use our system to generate alerts based on the recommendations of Group Health experts, to remind our physicians of recommended strategies, and to track medications. Whenever patients interact with clinicians—physicians, nurses, radiologists,

“If every medical group in America used our clinical information system the way Group Health does, our country would be much farther down the road toward solving its health care crisis.”—Judy Faulkner, Chief Executive Officer, Epic Systems Corp.

getting only 56 percent of their chronic care needs met. It's extremely rare for them to receive every routine test or treatment that science has proven would be helpful.

These failures increase their odds of getting sicker and dying sooner. If patients received all of the advice, tests, and screenings shown to improve outcomes, the country would save hundreds of thousands more lives each year than the number saved by all of those surgeons and intensive care teams.

So why doesn't this happen? Because most health practitioners lack the integrated systems to help them deliver the best care.

When a patient at one of our medical centers is diagnosed with diabetes, we immediately note this in the clinical information system we use for our electronic medical records. Group Health implemented the system differently than anyone else, because we looked at what our patients could get from it, not just what clinicians need. At most organizations, medical records are kept close by doctors, so patients can't easily see them. Patients

pharmacists—the system updates their record. Even phone calls to our Consulting Nurse Service are entered into the record.

A few years ago, Milliman did a study that showed that the care of diabetic patients at Group Health costs about half as much as those with other health carriers in Washington state. Why? Because our patients' medical needs are meticulously tracked, so they reliably get what they need when they need it. We're avoiding the costs of poor care; patients with diabetes in our system end up with fewer hospitalizations, fewer amputations, less blindness, and less cardiovascular disease. We're being proactive and preventive, instead of reactive.

State-of-the-art medicine takes more than great doctors and nurses. It also depends on sophisticated, customized support systems that empower providers to place the patient at the center of care.

Matt Handley, MD, is responsible for quality improvement and clinical information technology, working to create an infrastructure that supports the highest levels of individual and organizational performance. He led efforts to establish Group Health's clinical information system, and has practiced family medicine here since 1984.



Dr. Matt Handley says Group Health customized its clinical information system and use of electronic medical records to do three key things: improve health outcomes, help avoid the considerable costs of poor care, and enhance the patient care experience.



Making it easy to connect and act quickly

MARY GRUENEWALD EXPERIENCED firsthand the speed and effectiveness of Group Health's clinical information system. One Thursday, she had a bone-density scan ordered by her family doctor, Stacy Globerman, MD. On Friday, the radiologist posted the scan in the system. Both doctors, in different locations, studied her thinning spine on their computer screens. Then Dr. Globerman prescribed a calcium-replacement drug and e-mailed Mary.

“On Saturday, I took my first dose. Just three days,” Mary says. “All because of the electronic clinical information system and instant communication, which gets people to act quickly.”

“In another system, an older woman would have probably broken her hip, been taken to emergency, admitted for surgery, and—when she finally was stable—discharged,” Mary adds. “Then she would have had to undergo lengthy physical therapy.”

CLINICAL INFORMATION SYSTEM

HOW IT WORKS

1. Patients, like Mary, use www.ghc.org to contact their doctors, get lab results, check prescriptions, and review benefits.
2. After-visit summaries and physician orders are captured in the system.
3. Specialists add images, test results, and reports that can be viewed by clinicians at other locations.
4. Doctors review results online and order prescriptions or other procedures from their computers.
5. Pharmacists prepare orders and instructions for pick-up by patients. As needed, refills may be ordered online and delivered by mail.

