## GENOMIC MEDICINE On Genes and Justice

onsider the following scenario: At your next job interview, the senior partner in the practice asks about your family history of hereditary colorectal cancer and then requests that you have a genetic test to define your risk. That

same day, you get an irate phone call from a patient who carries a BRCA1 mutation, which predisposes to hereditary breast and ovarian cancer syndrome, because her self-employed daughter whose mutation status is unknown has been denied health insurance.

Do these examples constitute ethically questionable behavior on the part of employers and insurers? To most, they do. Are these actions illegal? That depends.

Federal laws such as the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and the Americans with Disabilities Act (ADA) do not explicitly prohibit an employer from requiring you to take a genetic test as a condition of employment. Nor do these laws prevent private insurers in the individual market



from denying insurance to certain applicants or setting high premiums based on genetic information.

For the most part, genetic antidiscrimination legislation has fallen into the hands of the states. Although 47 states offer some

> protection from insurance discrimination and 35 offer protections against discrimination in the workplace, some state laws are so narrowly drafted that they do not provide any meaningful protection. For example, some state laws exclude chemical tests and blood tests from their discrimination legislation. Because all genetic tests are, by definition, chemical tests (and many are also blood tests), such laws pro-

vide no real protection against genetic discrimination. As a result, residents of the United States are only partially protected from genetic discrimination by a complicated patchwork of state-level laws that vary widely in scope and effect.

Clear-cut examples of genetic discrimination are uncommon, but patients and clinicians cite the fear of discrimination as a major reason for not seeking genetic testing. In a recent study of 1,199 Americans by researchers at Johns Hopkins University's Genetics and Public Policy Institute in Washington, 86% of participants expressed some or a lot of trust in their doctor having access to genetic test results. By contrast, only 24% expressed some or a lot of trust in their insurer having access to such information, and 16% indicated some or a lot of trust in their employer having such access.

This perceived risk of discrimination has had a chilling effect on the willingness of patients and clinicians to make use of genetic testing. As long as the fear of discrimination in these circumstances persists, it will remain a significant obstacle in the path to achieving the full promise of genomics in health care.

The current U.S. Congress is considering a very important legislative item known as the Genetic Information Nondiscrimination Act of 2007 (GINA), which would provide specific protections against discrimination in health insurance or employment because of genetic test results or family history information.

GINA has had a long and interesting course, with different versions of the bill coming before Congress several times in the past 12 years. In 2003 and again in 2005, GINA passed the Senate unanimously but was not taken up by the House. Those opposed to GINA have cited concerns that the legislation could adversely affect the business practices of insurers and employers by, for example, generating frivolous lawsuits.

In April, the House passed GINA by a vote of 420-3 and, at the time of writing, the Senate has yet to consider the bill. President Bush has indicated his intention to sign the legislation if it reaches his desk.

Whether or not GINA becomes law this year, primary care providers need to discuss with their patients the relevant legal protections (or lack thereof) against genetic discrimination before they order genetic testing. It remains to be seen how complex these discussions will be.

For more information on the legislation, visit www.genome.gov/24519851.

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## Two Physicians Show There's More Than One Path to Success

BY MARY ELLEN SCHNEIDER New York Bureau

SAN DIEGO — Physicians are finding ways to redesign their practices and improve efficiency, both with and without the use of electronic medical records.

Dr. Kevin D. Egly of Sandwich, Ill., has used his comprehensive electronic medical record (EMR) system to practice in a scaleddown office without staff. Taking a lower-tech approach, Dr. Barbara E. Magera of Charleston, S.C., uses preprinted forms to accomplish many of the functions done by an electronic system but for a fraction of the cost.

The two physicians presented their different approaches at the annual meeting of the American College of Physicians. Both practices have been studied by the ACP's Center for Practice Innovation, a 2-year project created by the ACP to help small practices improve their work flow.

For Dr. Egly, the comprehensive EMR system, which performs chart documentation and billing, is what makes it possible for him to practice the way that he does. He and his wife Angela, also an internist, each work about 20 hours a week in their small practice. Since they don't employ any other staff, they answer the phones themselves and handle their own billing.

They have built the practice over the last 3 years, and each now sees about 400-500 patients. Dr. Egly and his wife started the practice after each working in a large multispecialty group for about 4 years, and they quickly realized that to be successful they would have to practice differently. "In opening our practice, we realized that resources are tough to come by," Dr. Egly said.

They implemented the EMR system from the start, and they have tried to keep their overhead low. For 2007, Dr. Egly estimates that

overhead for the practice will be about 36% of projected revenue, with the EMR and its network accounting for only about 2.5% of the overhead costs.

The benefits of the low overhead are that he and his wife can see a lower volume of patients and still support the practice. They estimate that it takes about four patients a day to cover their expenses. They can also provide generally longer patient appointments. For example, they routinely provide 60 minutes for a physical, 40 minutes for a chronic care appointment, and 20 minutes for an short-term care visit. "It provides a good work flow for the day and breathing room every day," he said.

And the design of the practice also lends itself to better patient access, Dr. Egly said. Because he and his wife answer the phones themselves, patients can speak directly to their physician. They also provide 24/7 access to patients. After-hours calls to the office are put through to a pager, and the patient receives a call back in about 15 minutes. "By giving them the access, I actually

Preprinted forms have made it easier for the staff to code correctly. 'We code it right the first time. Therefore, we get very few calls back.'

get fewer calls, but the calls I get are the important ones," he said.

To improve access, they are working on creating a patient portal that will allow patients to make online appointments, check lab results, and access their charts.

"This is a very satisfying way to practice medicine," Dr. Egly said.

For Dr. Magera, an EMR system is still too expensive, and she hasn't been able to find one with the necessary functionality for her practice. Instead, she uses preprinted forms that are aimed at streamlining the work flow in her office and reducing callbacks from pharmacists, caregivers, other physicians, and insurers.

Dr. Magera, who has been in practice for about 10 years, sees

both allergy and internal medicine patients at four offices in the Charleston area.

The preprinted forms she created have also made it easier for the staff to code correctly, she said. "We code it right the first time. Therefore, we get very few calls back," she said.

For example, Dr. Magera uses preprinted prescription pads for each drug she prescribes with the

drug name and dosage already printed. The prescriptions are compliant with state pharmacy laws and are color coded for patients with low literacy. The

pads are relatively cheap but make prescribing much faster, Dr. Magera said. And she doesn't run into the handwriting problems or dosage mistakes that can plague handwritten prescriptions.

Dr. Magera and her staff also have created special forms for phone notes, allowing the staff to document any contact the patient has with office staff that doesn't happen during a visit.

The notes, which also cover contacts by e-mail, letter, fax, or handheld personal digital assistant, are given first to a nurse for review and then signed by the physician. All phone notes must be reviewed before the end of the work day, she said.

But those are just a few of the

standardized forms that she uses in her practice. She also uses preprinted forms to request laboratory, x-ray, and CT studies.

Some of her forms help her to get paid, she said. Dr. Magera has a standard insurance verification form that asks for current demographic information on the patient and policy holder, deductibles and copays for the office visit and procedures, preexisting conditions, which facilities are covered for lab and x-ray procedures, and whether precertification is required.

Although the process was originally time consuming, the staff is now able to get some information online. Having the standardized form allows her billing staff to discuss financial responsibility with the patient before the first office visit.

So far, consistently using the form to collect information before the visit has helped increase revenues by 25%-40%, she said. And the process is popular with patients because there are no surprise bills later on, she said.

Having a paper-based office can work, Dr. Magera said, and her rule of thumb is that if she does a task more than once it qualifies for a preprinted form.

But she doesn't expect to be using paper forever. "These forms are really preparing us for when we get our EMR," she said.