

Bangor doctor touts new diagnostic technology



BANGOR DAILY NEWS PHOTO BY KEVIN BENNETT

Dr. Charles Burger explains on Thursday, August 21, 2008 how new software that allows his patients to send in their symptoms via e-mail is helping to reduce the work load at his office and better serve his patients needs.

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By Meg Haskell
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BANGOR, Maine — Got a headache? Charlie Burger's got you covered. In just a few minutes, he can come up with a list of more than 100 reasons — literally — that you might be suffering from those maddening bouts of pain, and once you answer some questions, he can narrow the possibilities significantly and suggest appropriate treatment.

Not on his own, but with the help of a huge online medical database. Dr. Charles Burger, 70, who has practiced in the Bangor area since 1971, is on the leading edge of Maine physicians using computer technology to match patient symptoms and other factors with possible diagnoses.

With international research advancing medical understanding at an unprecedented rate, Burger said in an interview Thursday at his Evergreen Woods office, there's no way doctors can keep track of all the information that's pertinent to one patient's persistent headaches, another's sudden abdominal pain, and a third's unbearably achy joints.

“All of medical education is geared toward cramming as much information as possible into our heads” on the unrealistic assumption that doctors will be able to recall the appropriate information at a moment's notice, often in a crisis situation, he said. Compounded by the ever-changing nature of medical knowledge and the modern pressure to see as many patients as possible each day in order to maximize insurance payments, the situation sets up doctors and patients for costly and dangerous failures.

“[Medicine] is the only profession that doesn't use this technology,” Burger said, demonstrating the “problem-knowledge coupler” computer software he uses in his office. For example, he said, even tax accountants gather individual financial information from

clients and then plug that information into a software program that computes the taxes owed.

The medical version, which uses the computer's virtually limitless ability to store and synthesize information to help doctors make accurate diagnoses, is the brainchild of another forward-thinking physician and researcher with Maine connections, Dr. Lawrence Weed.

In the late 1950s Weed opened a primary care practice in Hampden, where he promoted the then-radical notion of using "problem-oriented medical information systems," or PROMIS, to organize patients' medical records. Weed and the other doctors who worked with him at the PROMIS clinic used the system to create an orderly process for identifying patients' problems, establishing treatment, evaluating the response and making adjustments as needed. It sounds like common sense now, and in fact virtually all health care professions now use some variation of the model, but at the time it was considered highly controversial, Burger said.

"It was change," he said. "People didn't like it."

Burger practiced at the PROMIS clinic after studying under Weed at Case Western Reserve Medical School in Cleveland, after the older doctor had left Maine and returned to teaching.

The paper-based PROMIS organizational model lent itself nicely to early computer technology, and when Weed moved his research center to the University of Vermont in the late 1960s, it wasn't long before he developed a simple version of an electronic medical record. As he refined the technology, Weed started developing a computer-based "problem-knowledge coupler" that could link patient-specific health complaints to a constantly updated bank of medical information. In 1982 Weed founded the PKC Corp. and began marketing his products.

Burger was an early devotee and his Evergreen Woods practice in Bangor continues to be a pilot site for the company, tracking the accuracy of the system and providing feedback to ensure it is a reliable tool. Now an affiliate of Portland-based Martin's Point Healthcare, the practice Burger shares with his professional partner, Dr. David Hallbert, also uses the coupling technology to screen patients who call for appointments.

This allows trained office staff, but not necessarily highly paid nurses or other professionals, to triage these calls and determine whether the caller needs a same-day appointment, a next-week appointment or a trip to the nearest emergency room. "It's a good morale-builder for our patient service representatives, because they are empowered to help the patients directly," Burger said. Patients like it, too, he added, because they get an immediate, informed response to their concerns.

Burger and Hallbert's practice uses other innovative technology, including a customized "Web portal" that allows patients to request an appointment, get a prescription refill

phoned in to their pharmacy or e-mail a question to the medical staff. Standing physician orders allow a number of straightforward medical complaints, such as a urinary tract infection, to be diagnosed and treated without the patient ever setting foot in the office.

The practice doesn't get paid for these virtual visits or the time it takes to provide them. But Burger said the relatively small amount of revenue lost is offset by the ability to see in a timely and effective way patients who are sicker or have more complex problems. "It's not like our schedule is empty," he said.

While some other area medical practices are beginning to adopt the coupler technology to tie their patient records to computerized diagnostic and treatment resources, Burger said it's a challenge for many health care providers to change the way they practice.

"The biggest barrier," he said, "is getting physicians to accept a new philosophy — that what you're trying to do is impossible, that you have to think about using these tools to extend your mind, the way an astronomer uses a telescope to extend his vision into the universe."

On the Web: www.pkc.com

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