Have you ever left a medical appointment thinking your doctor interacted more with her computer screen than you? Health care’s long immunity to computers had been remarkable when compared to other industries, until we entered the 21st Century. Now it too has fallen under the spell that digital technology improves the performance of everything it touches.

UCSF’s Chair of the Department of Medicine, Robert Wachter explores the good, bad and repugnant of we patients becoming iPatients in his delightfully entertaining and informative “The Digital Doctor.”

It’s disconcerting reading about how medicine “en masse” teaches its doctors, nurses, and pharmacists to get in touch with their inner geek. Meanwhile, thousands of coders suddenly face that “Geez, wish I’d taken Anatomy” moment as they test software. The result “isn’t a technical project, but a social change project.”

System designers face a particularly onerous challenge, as the term “big data” hardly does justice to the amount of records that must be sorted through. He suggests, “There are two big data problems. First, the literature of medicine currently contains about 24 million records, and expands at the rate of 2,100 articles per day.” Second, the data contained within a complicated patient’s own health record can easily contain thousands of pages, both structured (such as lab results), and unstructured (such as physician narratives).”

Much of the hype stems from the promise that Electronic Health Records (EHR’s) would save lots of money. This belief was surprisingly bipartisan. In his 2004 State of the Union address, George W. Bush promised that every American would have a personal electronic health record by the end of the decade. His successor’s “Obama Care” effort utilizes digitization of health records massively for billing purposes. You’ll read how particular diagnostic codes can mean tremendous differences in Medicare payments, and how these peculiarities can be gamed.

The author muses, “In most industries, they bring in computers and immediately start laying off people. Only in health care do we bring in computers and then hire extra people to use them.”

A major gain of these EHR systems is the ability of the patient to see test results, (often before the physician), have encounter summaries, and of course, pay bills. But as yet unsolved dilemmas include interconnectivity between hospitals and complaints from privacy advocates. But should you fall sick and unconscious far away from home, an emergency room needs to know whom the heck you are. “Take Boston’s Longwood Medical Area, where several of the nation’s most prestigious teaching hospitals share a space of about ten city blocks. Exchange of information is critical, yet the joke goes around Longwood, ‘what’s the fastest way to get a patient record from Brigham to Beth Israel? Answer: A paper airplane.’”
Wachter introduces us to Epic Systems of Verona, Wisconsin, the 800-pound gorilla of EHR’s. Never heard of it? Virtually every large medical provider in the Bay Area – Stanford, UCSF, Davis, Kaiser, PAMF, as well as most of the top ten “Best US Hospitals” - as determined by various surveys have it at the heart of their information technology (IT) systems.

You’ll cringe while reading the drop-down menu details of how UCSF’s state-of-the-art computerized prescribing system ordered a 39-fold overdose of a common antibiotic (Septra) for a hospitalized teenager, nearly killing him. Even worse is how numerous hospital professionals didn’t catch this error.

To add insult to injury, healthcare IT vendors enjoy a contractual and legal structure that renders them virtually liability free, even if their proprietary products may be implicated in adverse events involving patients.

Wachter sees lots of potential in EHR’s, but believes there is a long way to go. Data entry is a source of heartburn for nearly all physicians, and he spends pages speculating whether diagnosis by computer can ever be as reliable as that of personal experience.

“Medicine is late to this digital carnival, but there are barkers everywhere telling us that this app will change everything,” Wachter concludes. “Starting now and lasting until forever, your health and health care will be determined to a remarkable, and somewhat disquieting degree, by how well the technology works.”