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Some people remember their childhood as a magical time, but Danny Sands took this a step further and became a performing magician at the age of five and a half years. While other kids earned pocket money by mowing lawns or delivering newspapers, Sands performed magic tricks at parties and events.

"I was interested in everything," he says. "I used to read books on nuclear physics and other science in my spare time. But what I loved about magic was that it brings out the child in even the most curmudgeonly person. It enables people to revisit their childhood vision of the world as a place filled with wonder and excitement—and magic."

By the time Sands was in high school, he had decided on performing magic as a career. His mother did not discourage him—but she did say that it would be best to have a more traditional career qualification, just in case the magic didn't work out. He took her advice and entered Brown University, intending to pursue law, operations research (he had already taught himself a great deal about computing), or math. Law proved too dry and the higher math required for an operations research or math degree was too abstract to engage him, but he discovered new inspiration in the life sciences. The clincher came when he read an 1893 paper by German philosopher Max Dessoir, in which Dessoir said that a physician must have many of the same characteristics as a magician—the ability to inspire confidence being foremost. The light dawned, and the world gained a new physician.

Sands earned his M.D. at Ohio State University College of Medicine and pursued an internal medicine residency at Boston City Hospital. As a resident, he was shocked to discover how poorly computing technology was deployed in the delivery of medical care.



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"In the entire medical building, they had two antiquated and glacially slow terminals through which we needed to find the test results for all the patients in that building," he relates. "We had to stand in line to wait for a terminal. That's when I decided I needed to do something about the state of information management in healthcare."

Following his residency, Sands was granted a fellowship in clinical computing at Beth Israel Hospital Harvard Medical School (both in Boston, MA), and earned a Master of Public Health degree at the Harvard School of Public Health. During his fellowship and then as part of the faculty and as a lead clinician-informaticist, he developed, implemented, and evaluated a variety of systems designed to improve clinical care and bridge the gap between patient and physician, including electronic medical records (EMRs), clinical decision support systems, and a patient portal.

The ability to improve healthcare through computer technology grew from interest to passion. After 14 years with Beth Israel and Harvard, Sands took a position as the first chief medical officer with a small technology company that was making inroads into healthcare. With Sands' assistance, Zix Corporation became a leader in electronic prescribing and secure email for healthcare organizations.

By the time Sands joined the Cisco® Internet Business Solutions Group (IBSG), he was something of a rare bird. A fully-qualified, practicing primary care internist, he also had extensive experience working in hospital IT with hands-on development to his credit, and also had experience as a business executive. He had devoted much of his career to successfully bridging the gap between IT, clinicians, and patients through technology. He taught and spoke frequently on the subject of healthcare IT, wrote numerous papers on the subject, and won several awards on the basis of his work. In short, he was trilingual in the languages of business, medicine, and IT, with deep insight into how these spheres needed to interoperate.

It is this extraordinary trifecta of experience and knowledge that has made Sands such an invaluable consultant with IBSG's Healthcare Practice. For example, one of the largest healthcare systems in the United States asked Sands to help it prepare for a transition in its patient population. While its current revenues derive primarily from inpatient activity, analysis showed that in the future, revenues from outpatient activity would rise and eventually surpass inpatient revenues. The organization was not structured to meet this transition, and wanted to address it in a purposeful and strategic manner.

Sands, recognizing commonalities between outpatient-oriented healthcare and retail, brought in expertise from IBSG's Retail Practice to help strategize how the organization could best meet its challenges. In addition to other strategies, he showed how the organization could extend its catchment (the geographical area from which a healthcare organization draws its patients) by deploying a new healthcare delivery technology, Cisco HealthPresence™, which allows remote consultation of healthcare professionals by combining state-of-the-art video, audio, and medical technology to create an environment similar to what most people experience when they visit their doctor in person. Cisco HealthPresence extends the organization's "virtual catchment area" to outlying hospitals to deliver specialty care. Previously, the organization physically sent specialists to

consult—an extremely expensive solution that does not make the most productive use of the physicians' time.

For an academic medical center in the Midwest, Sands brought his unique experience to bear on improving delivery of cancer care services. The hospital treated cancer patients across many different areas, but believed it could do a better job of providing patient-centered care by building a new, dedicated cancer center. The medical center saw that it was difficult to get an "outside-in" perspective on what the organization was doing, and asked Sands to help identify problems and propose solutions. Supported by Cisco Advisory Services, Sands organized two days of workshops, pulling in stakeholders across the organization—from the chief medical officer, oncologists, and nurses to lab clinicians, pharmacists, and a patient. During the first workshop, the group tried to understand the current process, what worked, what did not, and how it could be optimized from both the staff's and the patients' perspective. The second day, the group brainstormed how technologies might enable their vision and prioritized these technologies. The organization was pleased with the outcome and is presently engaged in implementing these technologies as it builds its new cancer care center.

Sands continues to practice as an internist a half day a week. "Even though I travel frequently, my patients can always contact me, and I always have access to their records. I couldn't do this if it weren't for the secure network-based tools now available, many of which I helped develop when I was practicing full-time," he says. He feels it is critical to maintain an active practice because excellence in healthcare delivery cannot be achieved without understanding the patient perspective. And while he is an active member of many medical and medical IT associations, he recently founded a new one, the Society for Participatory Medicine, aimed at engaging patients as well as clinicians and caregivers in the process of healthcare delivery.

Sands enjoys sailing, exercise, music, and relaxing with his family (a wife and two teenaged daughters)—and he hasn't given up on magic. "I've put it on hold for a while," he admits, "But someday I'll get back into practice and start performing again." In the meantime, Sands continues to make the magic happen for IBSG's healthcare customers.

For more insight on Sands' passion for patient-centered healthcare and how technology can enhance and improve patient care, see his blog at

<http://e-patients.net/archives/2009/11/why-participatory-medicine.html>