



Public Health Issues

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“HEALTH INFORMATION TECHNOLOGY IS THE CIRCULATORY SYSTEM FOR THE VITAL ORGANS OF HEALTH CARE.”

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The Information Age has reached the practice of medicine. Bolstered by billions of dollars of new public and private investments and the promise of improved healthcare quality (better outcomes and controlled costs), electronic medical records will soon be seen in almost every encounter an individual has with the health care system.

Laboratories were the first entities to use electronic records. The machinery and numerical outputs lend themselves naturally to a world of bits and bytes. In the pre-Information Age (dare I say the Dark Age?), I remember in medical school in the 1970's retrieving lab slips on my patients that were hand-transcribed carbon copies of hemograms and chemistry panels. Rapid improvements in hardware, notably speed and memory, enabled alphanumeric and imaging data to be added to the electronic record. Hospitals adapted quickly investing in information technology departments which ran mainframe computers that managed most business and clinical operations.

In the past decade, the World Wide Web, also known as the internet, has become ubiquitous in all corners of the world. With wireless technology, one can access huge amounts of information on a handheld device like a cell phone or a laptop. Software advances allow relational databases to run on the internet on “virtual” mainframes, also known as servers. A user anywhere in the world with a proper device, identification and password can access their personal health record anywhere and any time.

These technological advances and the societal pressure to improve healthcare quality have elevated the concept of health information exchange from a theoretic

cal construct to a platform that is coming into practice. The clinical benefits of an exchange are obvious. Having the medical record available at the point of care enables providers to more accurately assess patients with significant past medical histories. On an exchange, recent discharge summaries and clinic notes, labs and imaging studies, and a current medication list are instantaneously available. Hence, unnecessary duplication of tests and drug toxicities can be avoided improving quality and reducing cost of the care episode.

Health information exchange has led to a strategy of “meaningful use” criteria, whereby the government, information technology vendors, providers and patients align incentives to create systemic improvements in healthcare delivery.

Meaningful use of health information includes, for a start, these four criteria:

- Structured laboratory results reporting,
- Electronic prescribing,
- Sharing of clinical record summaries, and
- Public health reporting.

The public health reporting meaningful use criterion on the health information exchange focuses initially on disease surveillance and reporting and immunizations. The reportable communicable diseases (refer to Wake County morbidity table on page 17) are amenable to automatic reporting to public health agencies from an electronic medical record. The best examples are from electronic laboratory reports of positive microbiologic results for tuberculosis, Salmonella, gonorrhea, chlamydia and many others. Certain serologic results can also initiate a public health report such as a positive immunoglobulin M (IgM) for hepatitis B core antigen which in the

proper clinical setting (i.e. acute onset of jaundice) fulfills the surveillance definition of an acute case of hepatitis B. Timeliness and accuracy of reporting of these diseases will greatly enhance the ability of public health to respond to potential outbreaks and epidemics. New cancer diagnoses (incidence) are also reportable by physicians to public health. An electronic exchange of clinical information including ICD 9 or 10 codes, imaging results and labs could be designed to automatically update the state cancer registry.

A health information exchange can also be programmed to automatically populate the state's immunization registry. Here, pediatric practices will greatly benefit because they will no longer have to do double-data entry of vaccine administration into both the clinical record and the North Carolina Immunization Registry, as is current practice. Since many vaccines are given outside the medical home, particularly the influenza shot, a patient's medical record can be kept up-to-date from multiple points of care. Since flu shot campaigns have now expanded to the retail pharmacy sector and school-based clinics, this meaningful use of an exchange between the registry and the medical record has obvious benefit for public health practice during routine flu seasons and pandemics.

The public health reporting and exchange can work as a two-way communication tool to providers. Alerts can be sent to providers via the electronic medical record that are specific to certain community situations and individual diagnoses. An example might be a Legionnaire's Disease outbreak in a community that is known to the local public health agency. A disease alert could be [Continued on page 26]

JOURNALISM *continued from page 19*
he had the stock but soon found it saying he never expected to get the money back. General Carr transferred the stock to Daniels and said pay me what you think it is worth when you can. Soon after, Daniels was elected state printer, which provided enough money to keep the paper going.

In 1891, *The State Chronicle* merged with *The Call* and *The State Chronicle* became a daily. In 1892, Thomas Jernigan, owner of *The Intelligencer*, purchased *The State Chronicle* for all debts and \$2600 and in 1893 this combination merged with Captain Ashe's *News and Observer*. Later that year, Daniels established a weekly, *The North Carolinian*. Making no money in the newspaper business, Daniels acquired a job as Chief Clerk of the Interior, working for Hoke Smith, and moved to Washington, D.C. In 1894, *The News and Observer* declared bankruptcy. Daniels, with General Carr's backing, bought

the paper out of bankruptcy and kept it operating by sending \$100 a month home from his salary. The paper cost \$10,000. Daniels went on to become Secretary of the Navy and later Ambassador to Mexico.

The predecessor to *The Raleigh Times* was probably *The Evening Visitor*, which was started in 1879. There were numerous inconsistencies and *The Visitor/Times* was not in continuous publication until 1912 through 1989.

The building on Hargett Street, where *The Raleigh Times Bar* is located, was built in 1906. Even today you can see the name on the top of the three-story building.

The Raleigh Times was first published under this name in 1901. In 1911, John A. Park purchased it and was editor and publisher until 1955, a total of 44 years. Park was Raleigh's first automobile dealer and in 1909 was issued Raleigh's first license plate #100.

The News and Observer acquired *The Raleigh Times* on June 4, 1955 and published it until closing it in 1989.

The Carolinian came to Raleigh from Wilmington when P.R. Jervay, Sr. purchased *The Carolina Tribune*, a local African-American paper. It is still owned by the Jervay family and is published twice weekly.

The Mini-Page was founded by Betty Debnam Hunt, of Raleigh, in 1969 and is produced and published in over 400 newspapers across the country.

There is also *The Technician*, which is the campus newspaper for North Carolina State University.

I have not attempted to trace the history of *The Cary News* or *The Wake Forest Weekly*. §

**The writer is the Retired President & Publisher of The News and Observer Publishing Company.*

ROLE MODEL *continued from back cover*



Bernard Goldberg

berg secured a job designing airplanes with the Bendix Corporation. Unusual by today's standards his 43-year career began and ended with one company. Bern spent his free time in up-state New York fishing and

boating. After being thoroughly drenched for several days, he checked into a hotel near Lake George to warm up. There he met Miriam Roth, a Philadelphian week-ending with girlfriends and soon the son and daughter of immigrants formed their own family.

Work led them to Bendix's Fluid Power Division located in the Adirondack foothill city of Utica, New York. Bern's career flourished while raising a son Richard, now a UNC physician, and daughter, Debbie, who teaches elementary school in Long Island. He rose from engineer to chief engineer, production manager, and then plant manager. During that time he patented the gimbal rings for steering the Saturn and later generations of space rockets that launched the U.S. manned space

shots. He also designed generators for starting aircraft and drive shafts

for helicopters. Every time an aircraft with Bendix equipment on it crashed, he and his team held their breath hoping that their products had not been to blame. They were determined to never be the source of a catastrophe. Eventually, back in New Jersey, he became a group executive managing several factories. In addition to working he supported higher education by serving on the boards of and generously supporting Utica College and Mohawk Valley Community College, Monmouth College and Monmouth County Community College, and the YMCA. One benefit of moving back home was resuming tennis rivalries with some of his childhood competitors. He enjoyed doubles until he banged his head after hitting an overhead smash at the age of 78.

After retirement he nursed Miriam through a tumultuous four-year tussle with ovarian cancer supported by the compassionate team at Robert Wood Johnson Medical Center. Bern decided to move back to the town where his kid brother Sol (now in his late 80s) lived. He bought an apartment in Cedar Crest, a community for older adults perched on a hilltop in northern New Jersey. His window overlooks a reservoir that he fished in as a kid. He had spent a few years alone after Miriam's death, but found the stimulation at Cedar Crest rejuvenating. Besides establishing a cadre of mentally agile if physically frag-

ile compadres, he participates in or leads a number of discussion groups that include Socrates Café, a current events club, and an opera group. He continues to advise his former colleagues, friends, and family on their lives and careers with a wisdom honed by ninety years of observation and reflection. Every morning he awakens with a sense of wonder and is delighted that the beat goes on. §

HEALTH INFO *continued from page 18*
downloaded onto the clinical record of any patient in the region being evaluated for community acquired pneumonia. This exchange may prompt the provider to order additional tests for Legionella bacterial infection and institute appropriate antimicrobial therapy.

In his 2004 State of the Union address, President George W. Bush challenged the nation to eliminate paper medical records within a decade. The federal funding is aligning to accomplish this challenge by 2015. Cost aside, society will also have to figure out ways to ensure that patient confidentiality is not compromised. Ultimately patients will have the right to decide which elements of their health record they want shared on health exchanges. Public health laws currently exempt reportable diseases from patient confidentiality laws (HIPAA). It will be interesting to see how this plays out in the Information Age of meaningful use and robust health information exchange. §