

In Memoriam

Editors' Note

The Medical Informatics and Health Sciences Library communities have lost a true pioneer with the passing of Donald A.B. Lindberg, MD. Dr. Lindberg's extraordinary accomplishments have benefited researchers, practitioners and policy makers beyond these disciplinary domains, extending to the entirety of our information society. I had the privilege of working alongside Don Lindberg at the U.S. National Library of Medicine. Don was my boss, my mentor, my friend. *Information Services and Use* reprints with permission in this issue the obituary that appeared in the September 3, 2019 edition of The New York Times. It is a wonderful tribute to a remarkable man.

Readers of *ISU* will recognize the contributions of Dr. Lindberg's work to advance the early development of Internet public policy, promote the widespread availability of high performance computing, support research on decision support and other knowledge-based systems, advance access to and the use of the latest information and computer technologies in major academic health science centers and by remote users alike, worldwide. Libraries were both an instrument and beneficiary of Dr. Lindberg's vision and long-range planning. He was an early promoter of once controversial end-user searching, nurtured the unique capabilities of librarians to train their institutional colleagues to use contemporary information resources and services that support research, and initiate outreach to persons in surrounding and distant communities to access and use information services that enhance their knowledge and understanding, and safeguard their health. PubMed and PubMed Central are among the premier Information resources that are products of Don Lindberg's visionary leadership. They are an important factor in the current public policy debate that surrounds Open Access. Their roles continue to be the subject of lively discussion in the pages of this journal and elsewhere.

Elliot R. Siegel, Ph.D.
Co-Editor-in-Chief

Obituary

Donald Lindberg, 85, Dies; Digitized Medical Library



Photo credits: National Library of Medicine

Katharine Q. Seelye, Lawrence K. Altman
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The New York Times

Dr. Donald A.B. Lindberg, who as director of the National Library of Medicine – the world’s largest – computerized its vast holdings and made them accessible to researchers around the world, died on Aug. 17 at a hospital in Bethesda, Md. He was 85.

His wife, Mary, said the cause was a cerebral hemorrhage sustained after he fell at home on Aug. 12.

Dr. Lindberg was a leader in medical informatics, the science of using computer technology to improve human health and the delivery of health care services. As the longtime leader of the library, which is part of the National Institutes of Health, he modernized, expanded and transformed a trove of material, some of which dates to the 12th century.

“He changed fundamentally the way biomedical knowledge and health information is collected, organized, and made available for public use – in small villages in Alaska and Mali as well as in laboratories of Nobel prizewinners”, the library’s board of regents said in a resolution when he retired in 2015.

The library began humbly in 1836 as a few books in the office of the Surgeon General of the Army in downtown Washington. After several moves, it landed permanently on the sprawling campus of the National Institutes of Health in Bethesda in 1962. Constructed during the Cold War, it featured foot-thick limestone walls, more than 50 miles of subterranean bookshelves and a pagoda-like roof that could relieve pressure in case of an atomic bomb blast.

Dr. Lindberg, who was a professor of information science and professor of pathology at the University of Missouri, was named director of the library in 1984 and led it through three decades of astonishing technological advances.

“He envisioned the future of computers in medicine a generation before it happened”, said Robert A. Logan, a former senior staff member at the library who worked closely with Dr. Lindberg.

Under Dr. Lindberg’s tenure, the library began providing users with access to clinical trials, environmental data, genomic information and molecular sequence data. The library’s website, established in 1993, was one of the first in the federal government.

But his contributions went far beyond making material available online. He helped to establish the National Center for Biotechnology Information, which now provides access to the results of the human genome project and to current as well as historical full-text biomedical and life sciences journals.

The library also produced the “Visible Human Male” and “Visible Human Female”, which are detailed photographic images of cadavers and are used for diagnostic, educational and industrial purposes. They were made possible by people who willed their bodies to science.

Eager to extend the library’s resources to underserved populations while respecting the traditions of those populations, Dr. Lindberg oversaw numerous exhibitions at the library of health-related information involving American Indians, Asian-Americans, people in the Arctic, the elderly, and those whose primary language is Spanish.

A man of whimsy, he once named a software program ‘Grateful Med’

As part of an oral history for the library’s Native Voices exhibitions, he personally interviewed more than 100 Native American, Alaska Native and Native Hawaiian physicians, healers and medical students.

He considered the biggest change that took place under his guidance to have been introducing the computer interpretation of the electrocardiogram, a test that measures the electrical activity of the heart.

“It was a big deal for a computer to do that, and it was rapidly accepted”, he told Kaiser Health News in 2015.

He was also proud of how the library had helped two scientists in the remote Australian outback win the 2005 Nobel Prize for Physiology or Medicine. One of them, Dr. Barry J. Marshall, said in an email that the library’s database pointed him to old studies that would help prove their prizewinning theory – that a bacterium, not stress, caused most stomach ulcers. Because the studies were so old, they had not been digitized, so the library helped gather photocopies from old journals and mailed them to him.

Citing Dr. Marshall’s success, Dr. Lindberg said in a 2007 lecture: “I tell this to my medical students, that there are still important discoveries to be made, library-based discovery”.

Among his colleagues, Dr. Lindberg was regarded as a Renaissance man.

“Don was incredibly well read, in medicine and beyond”, Dr. Francis S. Collins, director of the N.I.H., and Dr. Patricia F. Brennan, who succeeded Dr. Lindberg as director of the library, said in a tribute after his death.

He also had a sense of whimsy not generally evident in the federal bureaucracy. For a software program developed at the library, he selected the name “Grateful Med” from among several submissions. “It’s just too good to pass up”, he wrote in a 1985 memo.

Dr. Lindberg was once asked at a professional meeting what it was like to oversee an institution as vast as the National Library of Medicine. As a boating enthusiast, he responded with a nautical analogy. He said he had imagined it would be fairly calm, like captaining the Queen Mary. “I was thinking that I could walk out on the deck once in a while and say things like: ‘Mr. Smith, take her to point starboard’”, he said.

In fact, he said, it was more like driving on the Beltway at rush hour. "If you don't do something pretty alert every four or five minutes, you'll drive the thing off the highway", he said. "The number of opportunities to destroy the institution were very much larger than I thought of initially".

Donald Allen Bror Lindberg was born on Sept. 21, 1933, in Brooklyn. His father, Harry Bror Lindberg, was an architect and his mother, Frances Seeley (Little), who had been a teacher, was a homemaker.

He went to Amherst, where he intended to major in English but graduated in 1954 with a major in biology. Four years later, he graduated from the Columbia University College of Physicians and Surgeons, as it was known then.

He married Mary Musick, a pediatric nurse, in 1957. In addition to his wife, he is survived by: two sons, Donald Allen Bror Lindbergh II (who spells his surname with an "h", as his grandfather had spelled it before he emigrated from Sweden), and Jonathan Edward Moyer Lindberg; a brother, Charles Frank Lindberg; and two grandchildren. A third son, Christopher Lindberg, died in 1996.

While teaching in Missouri, he wrote a book, "The Computer and Medical Care" (1968); was co-editor on another, "Computers in Life Science Research" (1974); and edited a third, "The Growth of Medical Information Systems in the United States" (1979).

Through all the computerized changes he oversaw at the library, he still valued primary resources and original documents and the stories they told.

"Speedy computer access to information is truly wonderful", he wrote in the introduction to "Hidden Treasure" (2011), published to celebrate the library's 175th anniversary. "Yet there are times – especially when we ask why or how a discovery or a belief arose – when we need to see and hold original intellectual works".