The Most Influential Scientists in the Development of Medical Informatics (15)

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HOMER R. WARNER (1922-2012)

Homer R. Warner is one of the pioneers and fathers of medical informatics in the world (1-4). Many aspects of computer applications in medicine is well known, discovered and introduced in the mid-1950's and late by Homer Warner. He began working on clinical decision support technology in the cardiology department at LDS Hospital. Dr. Warner and his colleagues developed the HELP (Health Evaluation through Logical Processing) system which is still in use today at Intermountain Healthcare.

Homer Warner received his bachelor's and medical degree from the University of Utah, and a doctorate degree in physiology from the University of Minnesota. Dr. Warner founded and became the first chair in the Department of Biomedical Informatics in the School of Medicine which existed under various names since 1972. Dr. Warner's legacy of excellence and innovation has persisted and the department remains a leader in informatics research, training, and implementation.

Homer Richards Warner was born on April 18, 1922 and died on November 30, 2012, in Salt Lake City from complications of pancreatitis.

During WWII he enlisted in the Naval Air Corps where he was trained to be a carrier-based fighter pilot. After the war he returned to the Utah where he met Katherine Ann Romney and they graduated together in 1946 and later married in the Salt Lake Temple. He graduated from the University of Utah medical school in 1949 and continued his training in Dallas, and

then the University of Minnesota. He earned his PhD in Physiology in 1953. He started to work at the Mayo Clinic where where he developed an equation for estimating the beat-by-beat stroke volume of the heart from the shape of the pressure wave in the aorta. His experience with Dr. Earl Wood at the Mayo Clinic was pivotal in his decision to pursue a career in medical research.

After that (in 1954) Homer returned to Salt Lake City and with an American Heart research fellowship he opened the Cardiovascular Laboratory at the LDS Hospital. Within four years he published his first article about the use of computers to analyze waveforms. Homer established the Department of Biophysics and Bioengineering (later renamed Medical Informatics) at the University of Utah in 1964 and served as Chair.

In the 1960's Homer built an analog computer to represent mathematical models of the circulation. With this tool he was able to demonstrate for the first time in experiments on animals the amount of blood pumped by the heart during exercise was dependent upon the dilatation of the blood vessels in the exercising muscles. Then, with the digital computer, he developed a model of diagnostic reasoning that could diag-

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nose patients with congenital heart disease more accurately than physicians could without this tool.

Homer founded the journal *Computers and Biomedical Research* in 1968 and remained its Editor-in-Chief till 1992 (24 years). In 1977 while on sabbatical in Vancouver B.C., he authored a Medical Informatics textbook still used today. After his department moved to the medical school in 1985, Homer worked with internal medicine faculty to develop a computer program called ILIAD. This program was used to teach diagnostic skills to medical students.

The Homer Warner Center for Informatics Research at Intermountain Medical Center in Salt Lake City continues his pioneering work in computers and medicine. Thanks to the hard work and vision of Homer Warner and his colleagues, Intermountain has an outstanding legacy on which to build all of its future information systems. In USA today exists Homer R. Warner award. The award was created by the Object Management Group (OMG), selfdescribed as “an international, open membership, not-for-profit computer industry consortium”. It includes a \$1000 prize, and is presented each year at the American Medical Informatics Association (AMIA). It is named for Warner. It is awarded for the paper that best describes approaches to improving computerized information acquisition, knowledge data acquisition and management, and experimental results documenting the value of these approaches.

For his excellent contribution to development of Medical Informatics Homer Warner received a lot of awards including Morris F. Collen award in 1994. For this work he

also received a Career Research Award from the National Institutes of Health and went on to build, with his colleagues at LDS hospital, the first computer-based patient record system (HELP) that incorporated a knowledge base to improve decision-making by physicians and nurses.

Homer Warner graduated from and played football for East High School and the University of Utah, fulfilling and leaving a long family legacy at both institutions. He was a member of Sigma Chi fraternity.

His unassuming demeanor, adventurous spirit and new ideas attracted people from all walks of life. He had a humble, patient, and gentle nature and took an interest in other people. People who were familiar with him thought that Homer had a rare mix of intellect and accomplishment coupled with warmth, humor and charm.

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