

What is Medical Informatics?

Written by Dr. Hazem El-Oraby

Friday, 05 January 2007 18:06 - Last Updated Thursday, 11 January 2007 04:57

Medical informatics has to do with all aspects of understanding and promoting the effective organization, analysis, management, and use of information in health care.

Medical Informatics has been emerging as a discipline in its own right over the past quarter century. During that evolution, there have been a number of notable attempts along the way to define the field in scientific and formal yet succinct terms, and in many cases each has built on its predecessors.

While the field of medical informatics shares the general scope of these interests with some other health care specialties and disciplines, medical informatics has developed its own areas of emphasis and approaches that have set it apart from other disciplines and specialties. For one, a common thread through medical informatics has been the emphasis on technology as an integral tool to help organize, analyze, manage, and use information. In addition, as professionals involved at the intersection of information and technology and health care, those in medical informatics have historically tended to be engaged in the research, development, and evaluation side of things, and in studying and teaching the theoretical and methodological underpinnings of data applications in health care.

However, today medical informatics also counts among its profession many whose activities are focused on dimensions that include the administration and everyday collection and use of information in health care.

Some Formal Definitions of the Field

British Medical Informatics Society - "...the understanding, skills, and tools that enable the sharing and use of information to deliver healthcare and promote health" and "...the name of an academic discipline developed and pursued over the past decades by a world-wide scientific community engaged in advancing and teaching knowledge about the application of information and technologies to healthcare - the place where health, information and computer sciences, psychology, epidemiology, and engineering intersect."

Web site of the British Medical Informatics Society <http://www.bmis.org>

M.S. Blois and Edward H. Shortliffe, 1990 - "Medical informatics is the rapidly developing scientific field that deals with the storage, retrieval, and optimal use of biomedical information, data, and knowledge for problem solving and decision making."

What is Medical Informatics?

Written by Dr. Hazem El-Oraby

Friday, 05 January 2007 18:06 - Last Updated Thursday, 11 January 2007 04:57

Blois, M.S., and E.H. Shortliffe. "The computer meets medicine: Emergence of a discipline"; in *Medical Informatics: Computer Applications in Health Care*, 1990, p. 20.

Donald A.B. Lindberg, 1987 - "Medical informatics attempts to provide the theoretical and scientific basis for the application of computer and automated information systems to biomedicine and health affairs . . . medical informatics studies biomedical information, data, and knowledge - their storage, retrieval, and optimal use for problem-solving and decision-making."

Lindberg, D.A.B. NLM Long Range Plan. Report of the Board of Regents, 1987, p. 31.

Jack D. Myers, 1986 - "...a developing body of knowledge and set of techniques concerning the organization and management of information in support of medical research, education, and patient care."

Myers, J.D. "Medical education in the information age"; *Proceedings of the Symposium on Medical Informatics*, 1986, p. 3.

Jan van Bommel, 1984 - "Medical informatics comprises the theoretical and practical aspects of information processing and communication, based on knowledge and experience derived from processes in medical and health care."

Van Bommel, J.H. "The structure of medical informatics"; *Medical Informatics*, 9(1984), p. 175.

Morris F. Collen, 1977 - "Medical informatics is the application of computer technology to all fields of medicine - medical care, medical teaching, and medical research."

Preliminary announcement for the Third World Conference on Medical Informatics, MEDINFO 80, 1977.

Allan H. Levy, 1977 - identified the scope of medical informatics as "...dealing with the problems associated with information, its acquisition, analysis, and dissemination in health care delivery processes."

Levy, A.H. "Is informatics a basic medical science?"; *Proceedings of MEDINFO*, 1977, p. 979.

An emerging discipline that has been defined as the study, invention, and implementation of

What is Medical Informatics?

Written by Dr. Hazem El-Oraby

Friday, 05 January 2007 18:06 - Last Updated Thursday, 11 January 2007 04:57

structures and algorithms to improve communication, understanding and management of medical information. The end objective of biomedical informatics is the coalescing of data, knowledge, and the tools necessary to apply that data and knowledge in the decision-making process, at the time and place that a decision needs to be made. ...

www.genomicglossaries.com/content/clinical_genomics_email.asp

information about diseases, patients, drug use, and drug interactions
pharmacy.ucsf.edu/glossary/i/

An emerging discipline that melds the data analysis tools of computing with medical information and the provision of health-care services.

www.homepages.indiana.edu/120800/text/glossary.html

The scientific field that deals with the storage, retrieval and optimal use of information and data. Rapid development is due to advances in computing, communication technology and an increasing awareness that the knowledge base of medicine is essentially unmanageable by traditional paper-based methods. Medicine - An agent, such as a drug, used to treat disease or injury.

www.iit.edu/~ipro372f04/definitions.htm

Medical informatics is the systematic study, or science, of the identification, collection, storage, communication, retrieval, and analysis of data about medical care services to improve decisions made by physicians and managers of health care organizations. Medical informatics will be as important to physicians and medical managers as the rules of financial accounting are to auditors.

www.plexisweb.com/glossary/words/m2.html

Medical Informatics is the name given to the application of information technology to healthcare. It is the: Medical informatics is often called healthcare informatics or biomedical informatics, and forms part of the wider domain of eHealth. These later-generation terms reflect the substantive contribution of the citizen & non-medical professions to the generation and usage of healthcare data and related information. ...

en.wikipedia.org/wiki/Medical_informatics