What is Health Informatics?

As defined by the U.S. National Library of Medicine, health informatics is the interdisciplinary study of the design, development, adoption and application of IT-based innovations in healthcare services delivery, management and planning.
1. The first computer is widely considered to be the Abacus. However, an interesting bronze construction, with a crank, might actually be a computer of sorts. It’s called the Antikythera Mechanism, and it was dated to as far back as 100 B.C. There is speculation that it might have provided mechanical (albeit analog) computation.
2. The first modern computer is credited to John Atanasoff and Clifford Berry. The first electronic-digital computer was built sometime between 1939 and 1942. It was a collaboration between professor Atanasoff and his graduate student, Berry, at Iowa State university.
3. The first professional informatics organization was started in 1949 — even before computers gained widespread acceptance (although computers did exist). Gustav Wagner founded a professional organization in Germany, and from there it spread.

4. Countries that first embraced specialized training for informatics included Germany, France, Belgium and The Netherlands. These specialized informatics training programs became popular during the 1960s.

5. Health care informatics started out with a variety of different names. Some of these names included medical computing (which is still used today), computer medicine, medical electronic data processing, medical information science, and medical automatic data processing. These different names mostly fizzled out, to be replaced by the term informatics.
6. The term “informatics” was introduced in the 1960s in France – a French version of the word, of course: Informatique. And, of course, it makes sense to use the informatics, since the whole field of health care and medical informatics is based on data and information.

7. Computation for medical purposes was first done in the 1950s. It was used for dentistry. Robert Ledley at the National Bureau of Standards tested out the usefulness of using computers in medicine.

8. Clinical operations had a programming language all its own for quite some time. It was known as MUMPS, a name developed from the Massachusetts General Hospital Utility Multi-Programming System, where it was first developed and implemented. Even though this programming language is no longer used heavily, the U.S. Veterans Affairs hospitals used a descendent of MUMPS for a long time.
9. One of the reasons that informatics is so important in today's world is due to the development of the Internet. However, the precursor to the Internet was ARPANET, a Defense Department funded research project. It linked universities and other research centers all over the country. The first two nodes on the project were UCLA and Stanford. Interestingly, the third node was the University of Utah, located in Salt Lake City. Without the Internet that eventually developed from ARPANET, we wouldn't have access to all the medical information we have today.

10. MEDLINE is one of the oldest medical information sharing databases around. The National Library of Medicine began using MEDLINE as a way to retrieve medical information and articles in 1965. However, since then, the database has expanded to include archives going all the way back to 1950. This is one of the finest examples of medical informatics, since it arranges data in a way that is easy to retrieve.
11. One of the founding fathers of medical informatics in the United States was Homer R. Warner. In 1972, he founded an entire department devoted to medical informatics at the University of Utah. The Department of Biomedical Informatics has had many names since then. With such a history, it is little surprise that the University of Utah has a good medical program, and that it focuses a great deal on technology as it relates to medicine.

12. Electronic medical records (also called electronic health records) have been in existence since the 1970s. Having access to this information can be useful for patients and doctors. Indeed, it is becoming more common to see health care informatics presented this way so that it is easy for health care providers and patients to quickly see the medical data that relates to them. One of the goals of those pushing the use of medical informatics is to try to increase the access to electronic medical records, and encourage their widespread use.

13. One of the countries to really push the development of medical informatics along early was Brazil. In 1968, Brazil was using computers for medicine and health care. The country was also among the first to begin installing computer mainframes in hospitals at university hospitals. Additionally, the country was an early adopter of the idea of using programmable calculators to aid in medical research and enhance informatics. Brazil has been quick to embrace advancing technology and incorporate it in its health care system, and use it to help in medical settings, including for diagnostics, research and treatment.
11. In 1978, the term bioinformatics was coined to describe a subset of medical informatics. The idea was to look at biological systems, and compile data on them. Bioinformatics focuses a great deal on DNA sequencing for informational purposes, and the technologies developed to aid in that area. Additionally, bioinformatics has provided a great deal of additional information on biology, and the way our bodies work as systems.

12. More recently, health care informatics got a boost from its inclusion the American Recovery and Reinvestment Act of 2009. Some of the informatics related projects that have received funding as a result of the Act include electronic health records, tracking disease and health, as well as DNA sequencing. Medical informatics are gaining more attention every day, and more people are recognizing how information technology can contribute in the health care arena.