

Internet and Medicine



Computers are a part of everyone's daily life and have changed the way we live. These have also changed the way in which we practice medicine. Computers are increasingly being used in medicine because the advances in computer technology have made them user friendly and cheap. The availability of good and effective software has also helped in opening up a lot of possibilities for their application in the medical field. Computers are being used in hospitals at the reception, billing, admission, OPDs registration, laboratories, radiology (3D reconstruction in CT/MRI), OT (endoscopes) and patient management in the wards. The use of Hospital information systems and Laboratory information systems are increasingly becoming the norm. The computers can also be used by doctors for their practice management - recording patient history, writing prescriptions, maintaining the treatment history, accounts & billing, scheduling appointments and managing correspondence - letters/messages by email or paper, is made simpler by the use of computers. Nowadays, nearly all medical conferences use computers and Internet - by having their own websites, registration and abstract submission by email and the conference proceedings and abstracts provided online or on CD ROM.

The use of computers in most spheres of medicine has rendered the use of Internet for medical research very easy. A survey on Internet use amongst health care professionals found that, 69% of the patients discuss the information found on the net with their health care provider. 80% doctors found this to be helpful as it improved communication, with more knowledge, made the patient a better partner in health care, and saved time in explanations. However, 20% doctors felt that it was not helpful, as there was a risk of patient self-treatment. Doctors recommended health websites (78%) and support groups (72%) to their patients for their education thereby saving time during their practice. The main obstacles to Internet usage included lack of time (56%), poor quality of information on the net (29%) and insufficient IT training (25%). The study found that the shortcomings of eHealth include - time wasting information searches (59%) and excessive commercial emphasis (35%). The single most important force over the coming decade will be the convergence of healthcare and Internet. There are over one million health websites and nearly 1,000 new sites are being added every month. The importance of health on the Internet can be gauged by the fact that health is the second most searched for topic on the Internet.

Internet is an extensive network of computers around the world or a huge library of information on computers, classified into websites. Created in 1969, by the Advanced Research Projects Agency of US department of Defense - 4 computers formed the ARPANET. In 1980s, NSFNET (National Science Foundation) was launched. More networks were added following this, and in 1995, VSNL brought Internet access to India. Internet use in India is projected to grow nine- fold, by 2005 with 40 million

users. Of all the Asia-Pacific nations, only China is expected to experience faster growth in Internet penetration during this time. In India, most of Internet users are young males and utilize the web mainly for Email communication.

Internet has been called the I.C.E. (Information, Communication & E-commerce) age. The power of information of medical databases, websites/newsletters and services can be tapped through the net. Communication needs are fulfilled by Email and discussion groups. The eCommerce could be amongst business (B2B) or targeted at the consumers (B2C).

The information needs of the medical professionals include medical research, which can be aided by the use of Internet. Right from the selection of the topic, to organizing review of literature, designing the research, finding the techniques to the discussion of the findings are facilitated by the use of Internet. One of the most common uses of computers in medicine is for communication by Email and searching for medical information. The other possibilities include eCommerce that includes - sale & purchase of drugs, equipment, instruments, etc. Books and medical software can also be located and sold over the net. The net offers a vehicle of self-promotion or advertisement for doctors and hospitals, though this may be a controversial ethical issue.

MEDLINE is probably the reason for the most common access of the net by medical professionals. The availability of eJournals has also facilitated the dissemination of medical information. The future trends of cybermedicine include:

1. Global exchange of open, non-clinical information by patients and doctor
2. Preventive medicine/ Public Health (Telemedicine – diagnostic/curative)
3. Advances in communication technology - Increasing bandwidth, faster speed of access – images, voice, data
4. Free Internet
5. Online hospitals
6. Telemedicine/Telesurgery
7. Global teaching

Medical transcription has already become a big industry and is helped mainly by the time difference across the American continent and the use of Internet for data transfer. The future might see voice recognition based input being used. Whether we like it or not, the use of Internet in medicine is increasing and will have a big impact in the future, on the way we practice medicine.

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