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20th-Century Medicine Books

Telemedicine Books

Advances in computer and Internet technologies created new possibilities for doctors and their patients in the early 1990s. Using computers to send live video, sound, and high-resolution images between two distant locations, doctors can easily examine patients in offices thousands of miles away. Rural patients no longer had to make long trips into urban centers to consult specialists.

In telemedicine, a computer fitted with special software and a video camera turns a live video image of a patient into a digital signal. This signal is transmitted over high-speed telephone lines to similar equipment at the doctor's office, where it is converted back into a format that can be viewed live on a television screen. Telemedicine also includes machines specially designed to measure and record a patient's vital signs at home, then transmit the information directly to a hospital nursing station. This electronic remote home care enables health care professionals to monitor a patient's heart rate, temperature, blood pressure, pulse, blood-oxygen levels, and weight several times a day, without the patient ever having to leave home.

In addition to providing a vehicle for doctors and patients in remote locations to interact, telemedicine also enabled doctors in distant locations to share information. Patient charts, X rays, and other diagnostic materials can be transmitted between doctors' offices. Moreover, doctors in rural areas of the world can observe state-of-the-art medical procedures that they would otherwise have had to travel thousands of miles to witness. Still in its infancy in the late 1990s, telemedicine may one day alleviate some of the regional inequalities inherent in modern medicine, not just between regions of North America, but also between developing countries and urban medical centers in the industrialized world.