type 1

The impact of IT on health care costs

The rapidly rising cost of health care is one of the twenty-first century's major challenges. The development and use of new medical technology, such as new diagnostic procedures and treatments, account for much of the increase in healthcare spending per person in excess of general inflation.

Although many new diagnostic procedures and treatments are at least moderately more effective than their older counterparts, they are also more costly. In addition, even if new procedures and treatments cost less they may stimulate much higher rates of use because they are more effective or cause less discomfort to patients. Patients sometimes overuse medical resources that appear to be free or almost free thanks to the share of medical bills that is paid by third parties, such as insurance companies and government programs. A patient who doesn't have to pay for a medical test or procedure is probably less likely to consider its cost-to-benefit ratio. To really gain control over soaring healthcare costs, patient awareness must be raised and technology costs must be managed more carefully. In the meantime, however, the improved use of IT in the healthcare industry can lead to significant cost reductions in a number of ways.

type 2

Tele health

- Tele health employs electronic information processing and telecommunications to support at-a-distance health care, provide professional and patient health-related training, and support healthcare administration.
- The Internet, broadband and wireless technologies, laptop and tablet computers, videoconferencing, streaming media, and store-and-forward, high-resolution imaging are technologies frequently used to support tele health

type 3

Telemedicine is the component of tele health that provides medical care to people at a location different from the healthcare providers. This technology reduces the need for patients to travel for treatment and allows healthcare professionals to serve more patients in a broader geographic area.

There are three basic forms of telemedicine:

1. Store and-forward,
2. Live telemedicine, and
3. Remote monitoring.

type 3 explanation chaile :

- Store-and-forward telemedicine involves acquiring data, sound, images, and video from a patient and then transmitting everything to a medical specialist for later evaluation. This type of monitoring does not require the presence of the patient and care provider at the same time. Yet, having access to such information can enable healthcare professionals to recognize problems and intervene with remote patients before high-risk situations become life threatening.

- Live telemedicine requires the presence of patients and healthcare providers at different sites at the same time and often involves a videoconference link between the two sites. For example, work on an oil rig can be extremely dangerous and the nearest hospital is often hundreds of miles away. Oil companies are increasingly relying on live telemedicine to connect a nurse or EMT on an oil platform to emergency physicians at a major medical center.

- Remote monitoring (also called home monitoring) involves the regular, ongoing measurement of an individual's vital signs (temperature, blood pressure, heart rate, and breathing rate) and other health measures (e.g., glucose levels for a diabetic) and the transmission of this data to a healthcare provider. Patients who have chronic diseases often don't recognize early warning signs that indicate an impending health crisis. For example, a sudden weight gain by a patient who has suffered congestive heart failure could indicate retention of fluids, which could lead to a traumatic trip to the emergency room or even loss of life. While the patient might not be aware of the potential danger, a physician using telemedicine to keep tabs on such a patient could be alerted to this potentially life-threatening development before a health crisis occurs. It is estimated that 2.8 million people worldwide used some form of home monitoring device in 2012.

- Thousands of mobile applications are available to improve patient access to healthcare information and to enable doctors to keep a close watch on patients' conditions.
- Appointment and prescription reminders, medication and vital sign tracking, and diet and weight monitoring are common applications based on the sending of text messages to the patient, the healthcare professional, or a monitoring computer. For example, one iPhone app can measure your blood pressure and heart rate, timestamp and record the readings, and then email the data to a physician.