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"Innovative Practices And Strategies In Computer Science And Applications

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SUB-TOPIC: "An Overview on E- Health"

ABSTRACT:

India is a country with vast unmet medical needs. E- Health has the potential to improve the quality of Healthcare and reach the unreached. We have sought to understand the kinds of E-health, the use of service providing application at the time of emergency and the first aid provided by the applicant of this E-health it is a medical Informatics referring to the organisation and delivering of health service and information using the internet and related Technologies. The E-health initiatives has a vision to deliver better health outcomes in terms of access, quality, affordability, lowering of disease burden, Internet connectivity and the benefits of health can be brought to these regions using satellite broadband Technology .the scope of e-health initiative to make all the medical facilities available all time from any part of the world through web service, mobile service, SMS and call centre service.

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Key words:

E- Health, web service, mobile service, call centre service, SMS, health service and medical facilities

"An Overview on E- Health"

INTRODUCTION

There is a great potential for e- health to deliver cost effective, quality healthcare and spending on e- health systems by governments. There are thousands of websites offering health information of varying quality used by health professionals as well as by laypersons, and online health information which has become one of the important sources for people seeking health information in recent years. A survey by the office for national statistics reports that 43% of surveyed UK internets users have accessed health information through online were the figure is increases to 59% among those aged 24-35. In developing countries, use of mobile phone technologies has improved health outcomes for chronic disease conditions such as diabetes, heart disease and hypertension. This research aims to identify, summarise and synthesise currently available evidence, by undertaking a systematic review to explore the barriers and facilitators by implementing e-health throughout the country.



Meaning

-Health care service provided electronically via the Internet

-It is an intersection of medical informatics, public health and business, health services and information delivered over the web.

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Definition

According to encyclopaedia" An umbrella term for health information via electronic means. It encompasses health care information system, including the management and sharing of healthcare records, the dissemination of healthcare information, both privately and publicly medical research and consumer healthcare websites"

OBJECTIVE OF OUR STUDY

- E- Health is a tool of applications which is used in the time of emergency to aid the people who suffer from health issues.
- To make an awareness to the general public about e-health.
- To create awareness to the government to initiate e- health.
- To aid people who suffer from unexpected health issues.
- E- Health acts as guidance to the people to save them and also to save others.



SCOPE OF THE STUDY

- Benefiting the general public
- To provide service at the time of emergency
- Less time consuming
- Many life can be saved

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TYPES OF E-HEALTH:

E- Health is used in various types of health care services they are;

1. Digital Health Start-up Forum

Recent advancements in the field of healthcare technologies and more need for advanced healthcare regime, number of start-up companies is utilizing digital and Internet-based health technologies to make behavioural and lifestyle changes for patients. In few last year's number of start-up businesses seemed to light like digital health therapeutics, tele-health, digital pathology, digital health, e-health, m-health companies is being promoted with their latest innovative methodologies that use digital implements like mobile-devices, apps, sensors, etc. to trigger behavioural changes in patients.

2 .Electronic Health Records

It is a record in digital format that is capable of being shared across completely different health care settings, by being embedded in network-connected enterprise wide data systems. Its purpose is understood as an entire record of patient encounters that enables the automation and streamlining of the work flow in health care setting .such records might embody a full vary of knowledge in comprehensive or outline type, along with demographics , medical record, immunisation standing, allergies and radiology pictures .



3. Electronic Medical Record

EMR stands for Electronic medical records, it generally contains general information like treatment and case history of couple of patient

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4. Telemedicine

Telemedicine is a developing application of clinical medication wherever medical information is transferred through interactive audio visual media for the aim of consulting, and typically remote medical procedures or examinations. Telemedicine could also be as straightforward as two health professionals discussing a case over the phone to phone, or as advanced as exploitation satellite technology and video conferencing instrumentality to conduct a period of time consultation between medical specialists in two completely different countries.

Telemedicine usually refers to the utilization of communications and knowledge technologies for the delivery of clinical care. Care at a distance (also referred to as in absentia care), Associate in nursing recent observe that was typically conducted via post. There has been a protracted and flourishing history of in absentia health care that, because of trendy communication technology has evolved into what we all know as trendy telemedicine.



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5. Mobile Health

m-Health conjointly referred to as mobile health - refers to the apply of drugs and public health supported by mobile devices like mobile phones, tablets, personal digital assistants and therefore the wireless infrastructure at intervals digital health, m-health encompasses all applications of telecommunications and transmission technologies for the delivery of care and health info. Patients receive phone calls or text/voice messages associated with health education, treatment adherence, contacting employees' doctors, physicians, medical experts or organizing transport to health healthcare workers are provided with needed resources to access the most up-to-date clinical guidelines, collaborate with colleagues, analyse data, receive diagnostic support, and interact with clients.

- Disease and epidemic outbreak tracking
- Health care supply chain management
- Diagnostic and treatment support
- Chronic disease management



6. Prescription Drugs

A written or verbal order for a medication by a licensed individual (physician, dentist etc).It have been used since ancient times. Medication must be prescribed a registered medical practitioner. Should be clearly written, typed or computed generated and be indelible and dated. If a drug replaces a previously prescribed drug then the outdated one must be

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cancelled, signed and dated. Information regarding changes in medication must be communicated to all who need to know Nursing staff, patient.

- Prescription in general practice
- Hospital prescription for in – patients
- Hospital prescription for a non-hospital pharmacy



7. Consumer Health Informatics

Client Health informatics helps bridges the gap between patients and health resources. Client Health informatics embrace technologies focused on patients as a result of the first users to health information. Client Health informatics includes: information Resources, Communications, Remote observance, Videoconferencing, and Telepresence. Client health informatics is that the branch of medical informatics that analyses customers' needs for information; studies and implements ways that of constructing info accessible to customers and models and integrates consumers' preferences.



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8. Virtual Healthcare

Virtual attention refers to the "virtual visits" that present itself between patients and clinicians -via technology the video and audio property that enables "virtual" conferences to occur in real time, from nearly any location. A virtual visit will be a video conference between a doctor and patient. It can even provide patients the prospect to additional pronto realizes qualified second opinions on-line. Thus far, virtual attention has been used primarily for conferences and consultations, and standing reports, instead of in-depth diagnosing or treatments. Still, because the technology evolves, additional serious conditions like polygenic disorder are falling below the influence of virtual attention. Virtual healthcare also better enables specialists to monitor situations or procedures from remote locations. Patient monitoring at home has also been shown to be useful for treating patients with chronic conditions like diabetes and hypertension, where rehospitalisation's too often occur due to lack of communications and transparency ...



9. E- prescription

E-prescription or electronic prescription is a technology framework that allows physicians and other medical practitioners to write and send prescriptions to a participating pharmacy electronically instead of using handwritten or faxed notes or calling in prescriptions. Electronic prescriptions are easier for the pharmacist to read than handwritten prescriptions.



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10. Artificial intelligence

It is also known as machine intelligence. This intelligence is explained by use of machines which is different from the natural intelligence displayed by humans and other animals. Mostly, artificial intelligence is used when a machine copies the "cognitive" functions through human interact with other humans. This is the ability of computers to think like and complete tasks currently performed by humans with greater speed, accuracy, and lower resource utilization. It is a great advancement in the field of healthcare. Robotics is also a major field related to Artificial Intelligence. Robots require intelligence to handle tasks such as object manipulation and navigation, along with sub-problems of localization, motion planning and mapping.

- Speech recognition
- Learning
- Planning



RESEARCH METHODOLOGY

The study is based on primary data and secondary data .Questioners and oral views are used to analyse primary data they are journals, research articles and books whereas internet is used to analyse for secondary data.

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REVIEW OF LITERATURE

E- Heath (Electronic health)

E-Health is defined as use of internet and other related technologies in the health care, health education, knowledge, research and industry to improve the efficiency, effectiveness, quality of treatment, business process utilized by healthcare organizations, practitioners, patients and consumers with the help of Next Generation Network (NGN) to improve the health and status of patient.

- Access to product/information/knowledge
- Access to Health Service.
- Access to Experts/Doctors.

Why E- health is important?

In the 21st century the NHS in the UK and health care providers in other developed countries face some major challenges. Three key challenges are identified below. Uniquely, E- health is seen as providing answers to each of these key challenges they are;

- Providing for an ageing population with increasing prevalence of chronic illness, which is increasingly expensive to treat.
- Improving patient safety and reducing errors.
- Supporting patients to become informed consumers who take an active role in their own health care.

Impacts of E- health towards society

- E-health tools are designed to improve health surveillance,
- It helps health-system management,
- It provide health education and clinical decision –making,
- And also support behavioural changes related to public health priorities and disease management.

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Evidence collection:

We focused on evidence for the impacts of e-health in three areas identified by prior reviews are;

- Systems facilitating clinical practise
- Institutional systems
- Systems facilitating care at a distance.

Scope

1. Service and application

- Telemedicine
- Tele health
- Tele monitoring
- M health
- Electronic prescribing
- Laboratory information system
- Health information system

2. Technology

- Telecommunication
- Computer
  -desktop and mobiles
  -video conferencing
  -sensors
  -networks
- Medical
  -imaging
  -diagnostic
  -therapeutic

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3. Innovation

Advantages of E- health

- E-health will promote Increase patient safety
- Reduction in medical and clinical effects
- Improved communication between the patient and the carer.
- Improved medications managements.
- Reduced time locating and collecting patient information.
- Decreased number of avoidable clinical incidents.
- Access to modern day electronic media and social media.
- People can aid their own self through e-health

Disadvantages of E- health

- Potential privacy and security issues
- Inaccurate information
- Frightening patients needlessly
- Nervousness while performing treatment.

ESSENTIALS OF E-HEALTH

In addition to these 10 essential e's, e-health should also be

1. Efficiency - one of the promises of e-health is to increase efficiency in health care, thereby decreasing costs. One possible way of decreasing costs would be by avoiding duplicative or unnecessary diagnostic or therapeutic interventions, through enhanced communication possibilities between health care establishments, and through patient involvement.
2. Enhancing quality of care - increasing efficiency involves not only reducing costs, but at the same time improving quality. E-health may enhance the quality of health care for example by allowing comparisons between different providers, involving

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consumers as additional power for quality assurance, and directing patient streams to the best quality providers.

3. Evidence based - e-health interventions should be evidence-based in a sense that their effectiveness and efficiency should not be assumed but proven by rigorous scientific evaluation. Much work still has to be done in this area.

4. Empowerment of consumers and patients - by making the knowledge bases of medicine and personal electronic records accessible to consumers over the Internet, e-health opens new avenues for patient-centered medicine, and enables evidence-based patient choice.

5. Encouragement of a new relationship between the patient and health professional, towards a true partnership, where decisions are made in a shared manner.

6. Education of physicians through online sources (continuing medical education) and consumers (health education, tailored preventive information for consumers)

7. Enabling information exchange and communication in a standardized way between health care establishments.

8. Extending the scope of health care beyond its conventional boundaries. This is meant in both a geographical sense as well as in a conceptual sense. e-health enables consumers to easily obtain health services online from global providers. These services can range from simple advice to more complex interventions or products such as pharmaceuticals.

9. Ethics - e-health involves new forms of patient-physician interaction and poses new challenges and threats to ethical issues such as online professional practice, informed consent, privacy and equity issues.

10. Equity - to make health care more equitable is one of the promises of e-health, but at the same time there is a considerable threat that e-health may deepen the gap between the "haves" and "have-nots". People, who do not have the money, skills, and access to computers and networks, cannot use computers effectively. As a result, these patient populations (which would actually benefit the most from health information) are those who are the least likely to benefit from advances in information technology, unless

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political measures ensure equitable access for all. The digital divide currently runs between rural vs. urban populations, rich vs. poor, young vs. old, male vs. female people, and between neglected/rare vs. common diseases.

FINDING

- Easy to use
- Flexible
- Any time any where it can be used
- Beneficiary for the general public
- Less cost involved
- Service can be used and provided by anyone to anyone
- People can avoid getting panic
- Highly advance
- Improves communication between the patient and the carer.
- Improves medications managements
- innovative methodologies that use digital implements like mobile-devices, apps, sensors, etc. to trigger behavioral changes in patients

SUGGESTION

- To create awareness about the e-health
- All the hospital can utilize e-health as one of its advancement and serve the society
- Instead of thinking money mind if the service run in mind e-health can be utilized well
- Government should take project in creating e-health app in all the state
- It can monitor self treatment without hesitation

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- Reduced time locating and collecting patient information.
- Decreased number of avoidable clinical incidents

CONCLUSION

Today's generation is will wise in using technology. Using technology to save once life would be the best thing ever as a country is promoting digit India ahead .making the people to use e-health is the main motive so that it can help people to understand about the health issue. It involves consumers as additional power for quality assurance, and directing patient streams to the best quality providers. We can also aid people through the guidance given by the doctor so that self monitoring can be done in an innovative methodology the use of digital implements like mobile-devices, apps, sensors, etc. to trigger behavioral changes in patients e-health enables consumers to easily obtain health services online from global providers. These services can range from simple advice to more complex interventions or products such as pharmaceuticals.

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