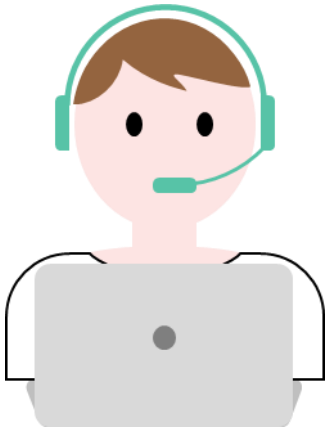
Summer Training Report

By
Dr. Apoorva Shetty



Under the Guidance of
S P Chattopadhyay

IIHMR UNIVERSITY

Part-1

STUDY ON PREVALENCE OF NOSOCOMIAL INFECTION ON INTENSIVE CARE UNIT PATIENTS IN INDIA

Research Project

Introduction

Hospital acquired infection (HAI) or Nosocomial infection are absent during admission appears later in patients under medical care.

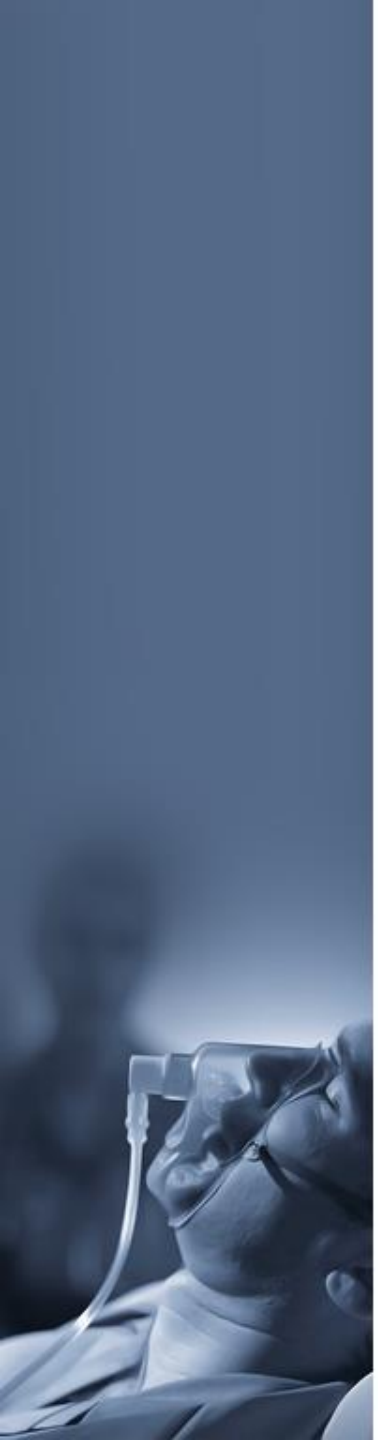
- These infections may occur during health care delivery and even after discharge.
- It also includes occupational infections among health care providers.
- Invasive devices (catheters and ventilators) used during medical procedure also responsible for HOI.
- 10 of every 100 patients can suffer from one of these infections.
- 51% of patients receiving treatment in ICU are infected by nosocomial infections.

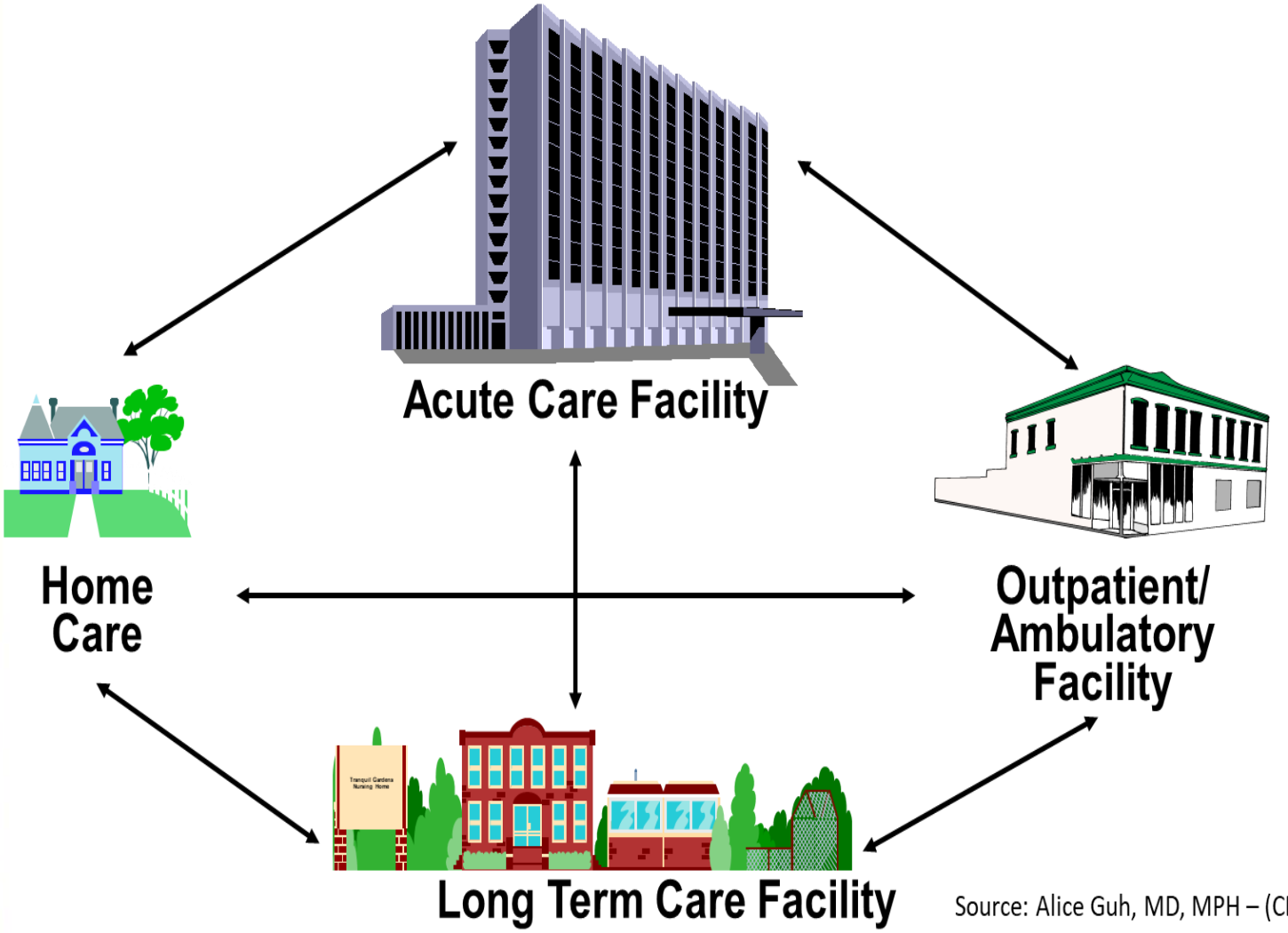
Healthcare Associated Infection (HAI)

HAI means the infection was neither present nor incubating at the time of admission but has developed during a stay in hospital or other facility

- (Haley, 1986 as cited in Horton and Parker 2002; Comptroller and Auditor General, 2000; Public Health Laboratory Service, 2000; Scottish Executives Action Plan, 2002; World Health Organization, 2002; Montana State Hospital, 2003).

The Healthcare System — More than Just Hospitals





Source: Alice Guh, MD, MPH – (CDC)

CLASSIFICATION OF HOSPITAL AQUIRED INFECTION

- **Central venous catheter related**-These are fatal type of nosocomial infection with death rate of 12 % -25%
- **Urinary tract infection caused by Catheter**-These are Most common type of HOI worldwide.
- **Infections of surgical sites-** 2-5% of surgical patients suffer from nosocomial infections of surgical site.
- **Ventilator associated pneumonia -** 9-27% of patients on mechanical ventilation suffers from HOI

PATHOGENS

- **Bacteria-**Most common pathogens causing HOI are bacteria. Acetobacter is the bacteria found in soil and water is responsible for 80% of reported cases

- **Viruses-** Viruses also cause nosocomial infections . 5 % of nosocomial infection are caused by viruses (19). They can spread by contaminated hand , mouth , feaco-oral and respiratory route .

- **Fungal-** Parasites are opportunistic in nature can cause nosocomial infections in immune deficient patient's aspergillus species and cryptococcus neoformans cause infection during hospital stay .

OBJECTIVES

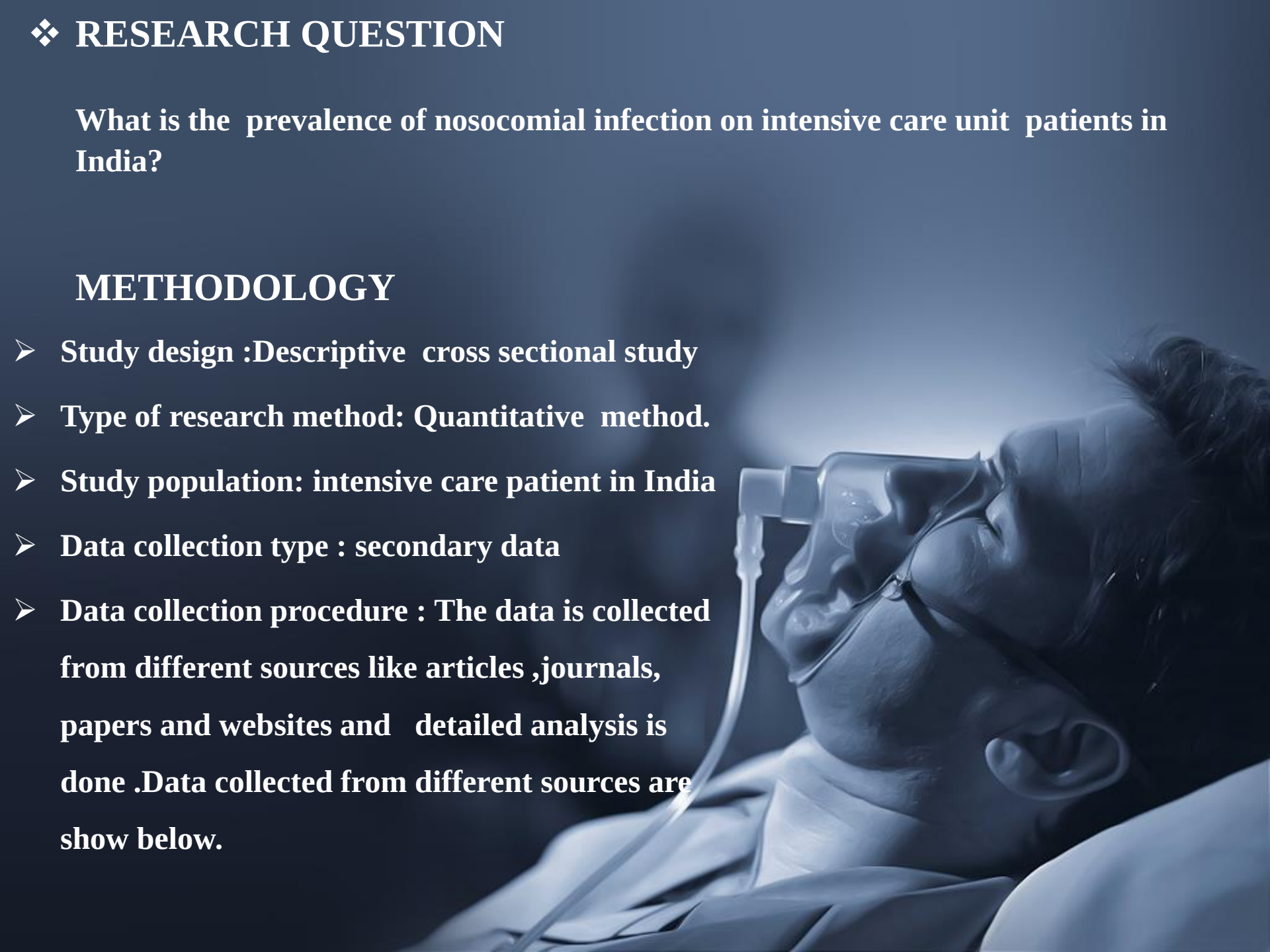
- To study distribution of nosocomial infections.
- To study the current status of nosocomial infections.
- To recommend prevention methods for nosocomial infections .

❖ RESEARCH QUESTION

What is the prevalence of nosocomial infection on intensive care unit patients in India?

METHODOLOGY

- **Study design :Descriptive cross sectional study**
- **Type of research method: Quantitative method.**
- **Study population: intensive care patient in India**
- **Data collection type : secondary data**
- **Data collection procedure : The data is collected from different sources like articles ,journals, papers and websites and detailed analysis is done .Data collected from different sources are show below.**



Nosocomial infection seen in patients admitted in MICU

Nosocomial infections	Number of patients	Percentage
Urinary tract infections	8	34.78
Pneumonia	5	21.73
Soft tissue infections	4	17.39
Gastroenteritis	3	13.04
Blood stream infections	2	8.69
Meningitis	1	4.34
Total	23/130	17.69

This study was carried out on 130 patients admitted in ICU of a hospital. Out of 130 ,23 Patients that is 17.7% were infected with nosocomial pathogens . Among 23 patients 18 male and 5 were females. Patients age was ranged between 43 to 72 years. 8.1 days was the mean duration of hospital stay.

CONCLUSION

- This study attempts to analyse prevalence of nosocomial infection ,the analysis of the study results in signifies that these infections are common in India.
- Nosocomial infections are affecting all commodities . Though health care professionals are taking measures to stop these infections, there is significant number of cases which is alarming.
- UTI and Pneumonia are the common nosocomial infections. Invasive devices tend to cause more infection . study also showed nosocomial infections are more common in males than females.
- Minimal use of invasive devises can reduce existence of nosocomial infection . Healthcare providers one of the priorities should me infection control.
- Short term use of devices like catheters can significantly reduce the disease burden. Surveys should be done in different healthcare to plan a response to reducing nosocomial infection.

PART-2

E-Health:

More than just an electronic record

Institute of Health and Management Research
The IIHMR University, Jaipur
[MBA Hospital & Health Management]
2020

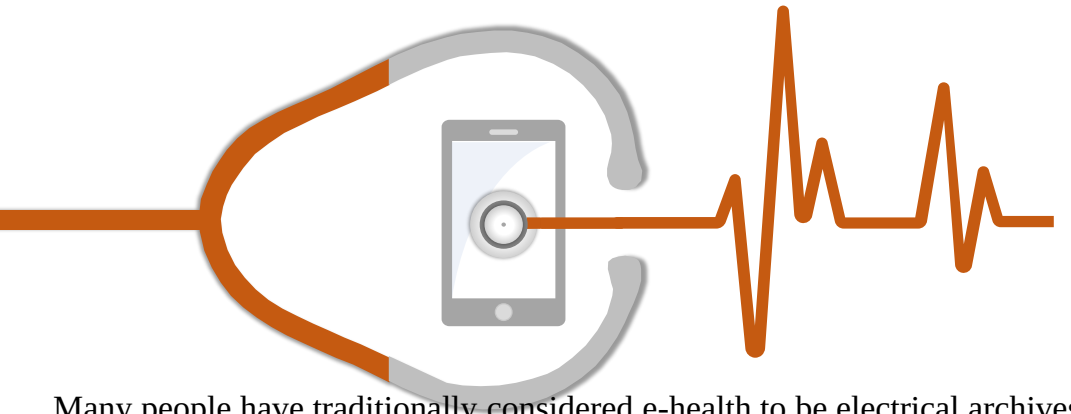
Period: [2019-2021]

Objectives of the course

- ✓ Is to learn the fundamentals of eHealth and its progress
- ✓ What sort of health data we are presently collecting and how it will change healthcare in the coming days.
- ✓ How innovative technologies are improving health consumers participate in their own healthcare.
- ✓ How eHealth can improve the coordination and effectiveness of healthcare and what the barriers might be.

Learning Methodology

- ❖ **Video lectures which included interviews with different health professionals and practice assignment.**
- ❖ **Additional reading materials**
- ❖ **Assignments**
- ❖ **Quizzes**



What is E-health?

Many people have traditionally considered e-health to be electrical archives and equipment, frequently in the acute sector. Though, this definitely isn't the entire picture. Use of e-health is increasing with increased use of technology.

E-Health

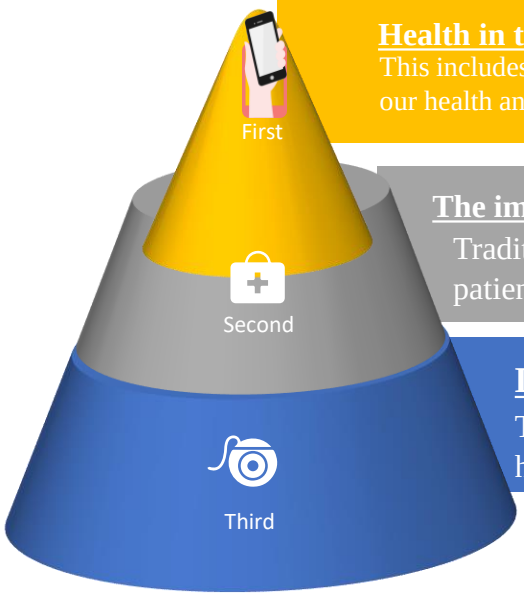
01 **Electronic health record and Devices usually in the acute sector.**

02 **Support communication between healthcare providers, and healthcare consumers**

03 **Used in the context of rural practice to reduce travel time for both practitioners and healthcare consumers**

04 **Empower health professionals and health consumers toe more active participants.**

Model for E- Health

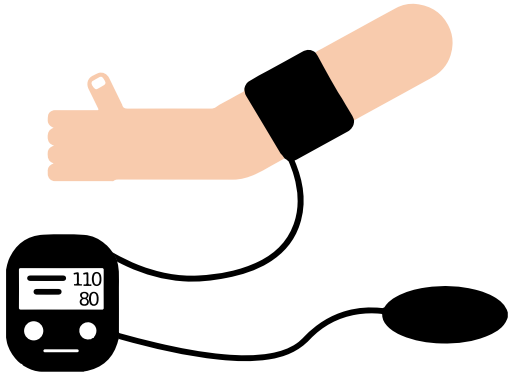


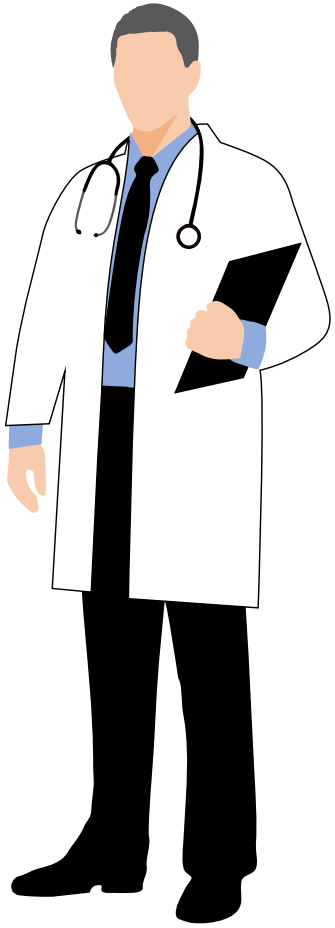
Health in the hands of consumers
This includes the growing use of wearable devices, apps, and social media to monitor and report on our health and wellness.

The impact of new technologies on how health professionals communicate with patients
Traditionally this has been referred to as Telehealth simply video conferencing for rural patients. It also includes emerging areas such as health coaching and maintenance of fitness.

Data records in the quantified self
This includes how we store data in traditional medical records through to how we store data associated with devices and apps.

Mobile Apps for Health





The use of apps, mobile devices, sensors is commonly referred to as mHealth or Mobile Health and it represents a significant and ever-changing component of eHealth.

Impacts

- Education & Awareness
- Helpline for Assessment
- Data collection
- Disease and Epidemic Outbreak Tracking
- Self Monitoring

- Reduce Unnecessary admission.
- Informed Decisions to improve outcomes

76% of

Indian healthcare professionals use digital health record.

Health Information online

Information Age

consumers are turning to the internet for information that can help them self-diagnose.

Role of health professional

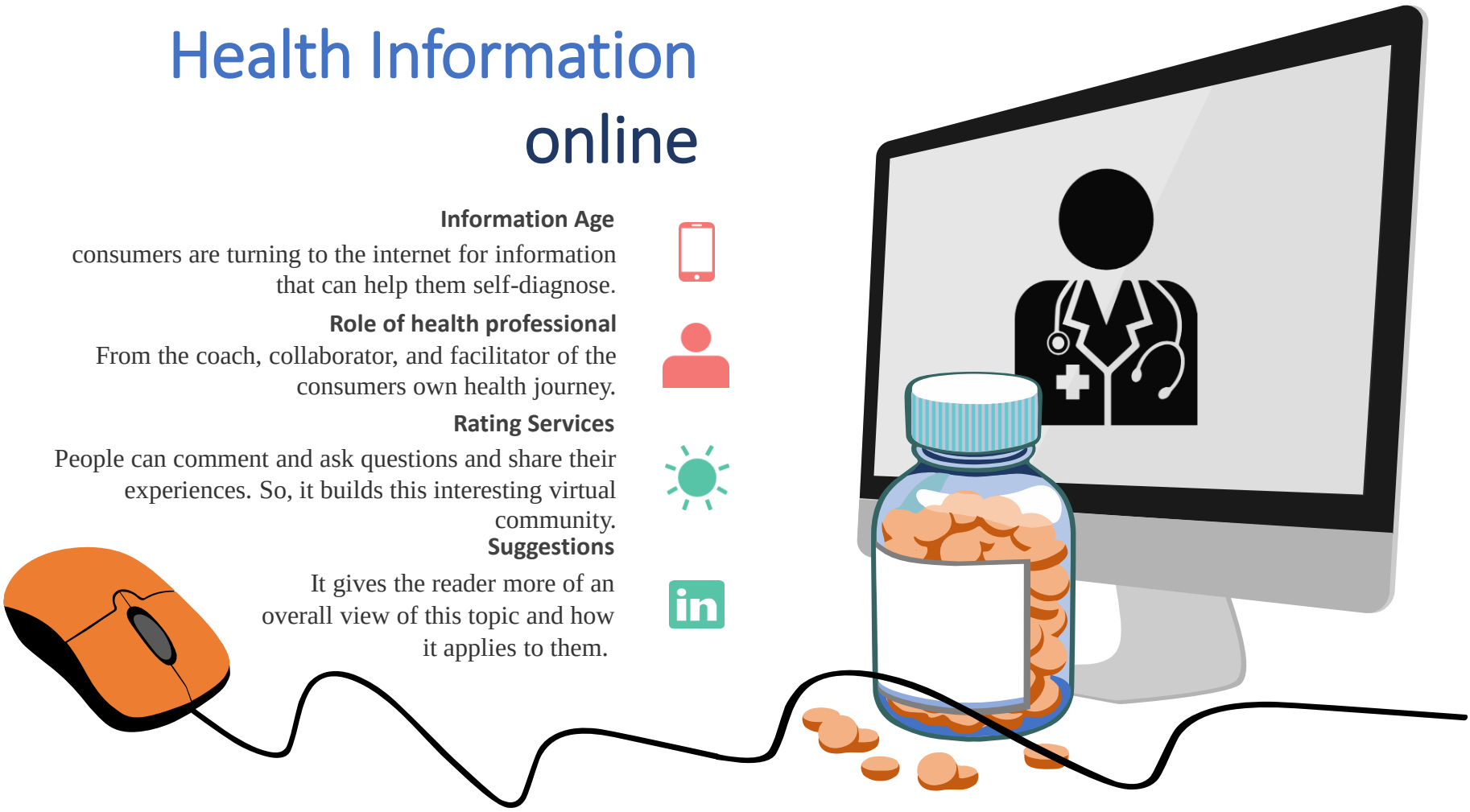
From the coach, collaborator, and facilitator of the consumers own health journey.

Rating Services

People can comment and ask questions and share their experiences. So, it builds this interesting virtual community.

Suggestions

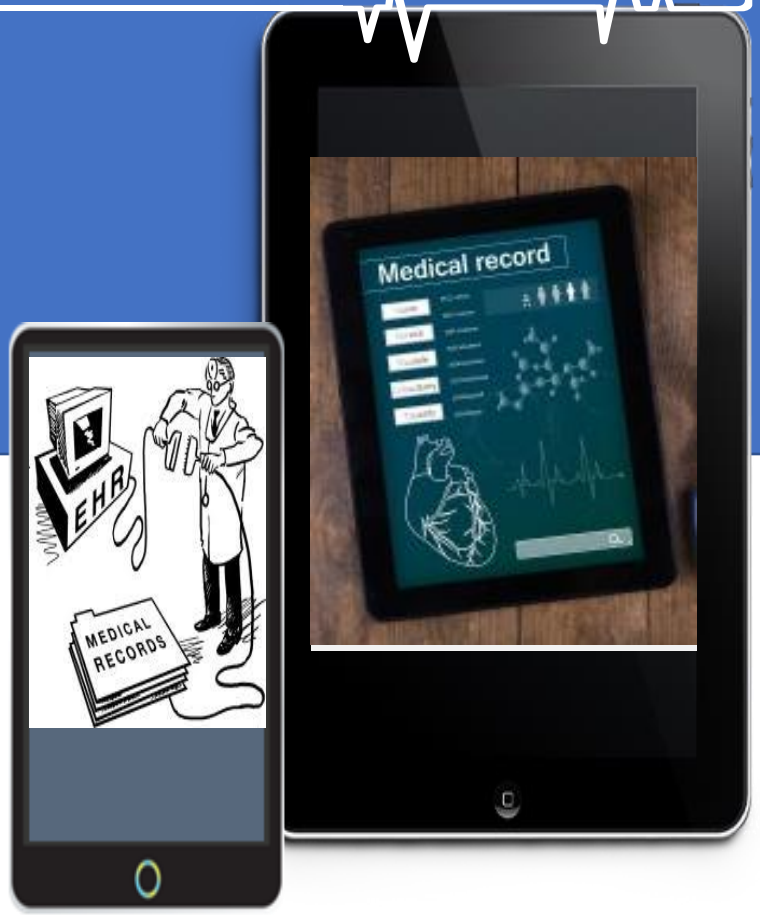
It gives the reader more of an overall view of this topic and how it applies to them.



Data and the “Quantified Self”

Data and Digital Health Record- supporting remote care

Digitizing paper records is clearly beneficial. Aggregate medical records can be used to provide regular downstream information on individual team



Medical History

Patient Vital Signs

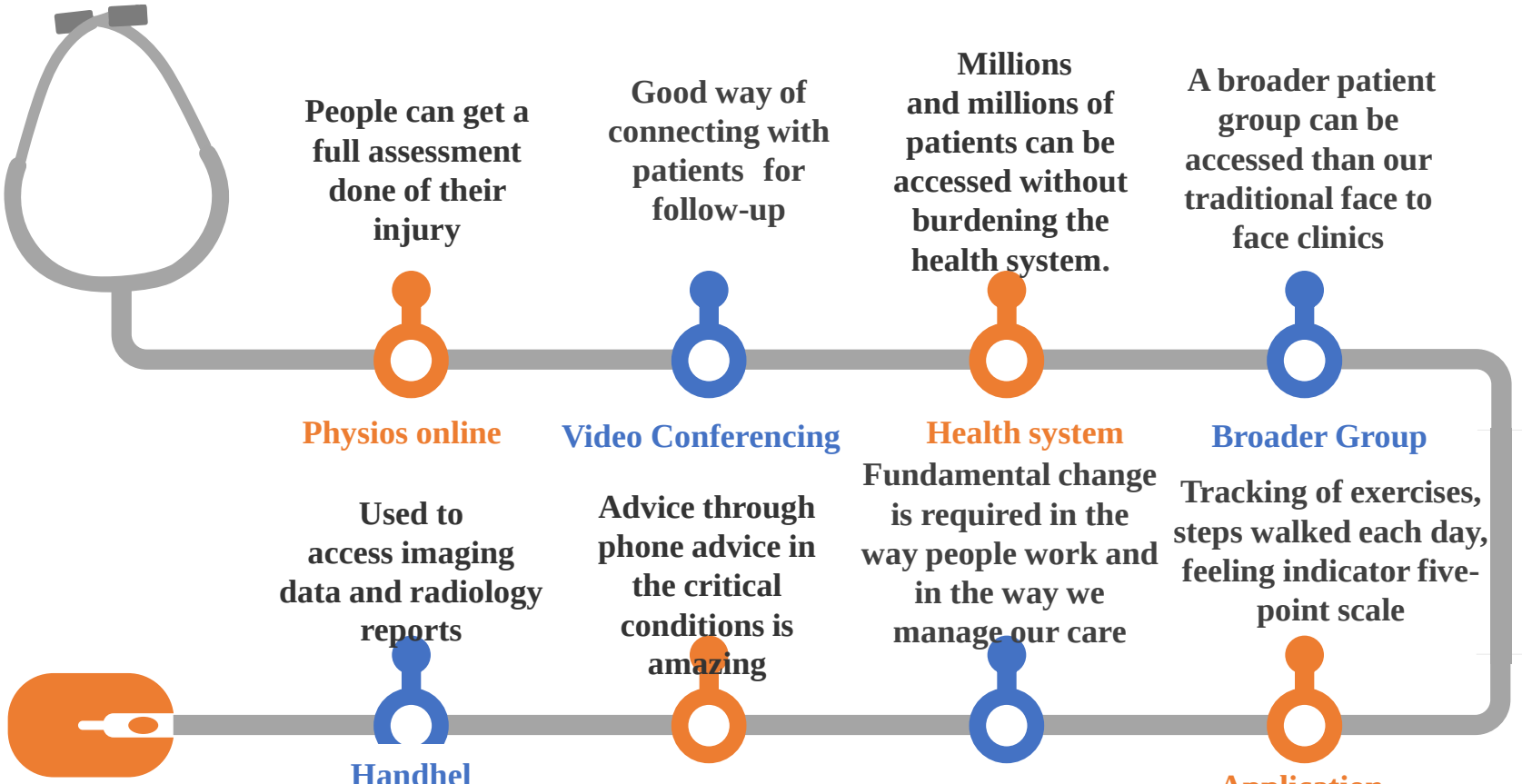
Follow-up Consultations

Patient Centered

Organization Performance

Improve Quality of Care

Interacting with Health Professionals using New Technologies



E-health Impacts

You can simply impress your audience and add a unique zing and appeal to your Presentations. Get a modern PowerPoint Presentation that is beautifully designed. I hope and I believe that this Template will your Time, Money and Reputation.

Challenges-Implementation of e-health solutions

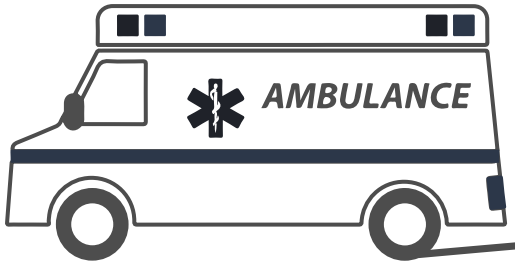
- **Culture Change-**Whole culture change inside health care delivery, to allow this eHealth journey to occur.
- **Potent catalyst-** eHealth is a potent catalyst for change in healthcare delivery. We have to be right up there with our education.
- **Coordinated Care-**The biggest challenges is taking what our patients expect, seamless, connected, coordinated care, and really delivering that.

Health in our hands-The fastest growing area of eHealth with the potential to transform healthcare delivery.

- **Applications and Devices-** Devices are being used by a wide range of individuals to track their performance, diet, sleeping patterns, and almost every conceivable health metric.
- **Communication with health professionals-**Monitoring and tracking progress, delivering information in a variety of formats and providing opportunities for communication with health care professionals and patients

Health information online

- **Information age-**consumers are turning to the internet for information that can help them self-diagnose.
- **Role of Healthcare Professional-**From the prescriber, to the coach, collaborator, and facilitator of the consumers own health journey.



Thank You

#stayhomestaysafe