

Knowledge, Attitude and Practice (KAP) towards m-Health in Hospital settings in Bengaluru

Presented by:

Ipshita Deb

MBA Hospital Management

IIHMR University



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Introduction to mHealth

mHealth or mobile health is the use of medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices-Global Observatory for eHealth (GOe)



Health Care

Apps



Introduction to mHealth (Contd)

Key Focus Areas of mHealth



Introduction to mHealth (Contd)

Different mHealth Stakeholders

Health

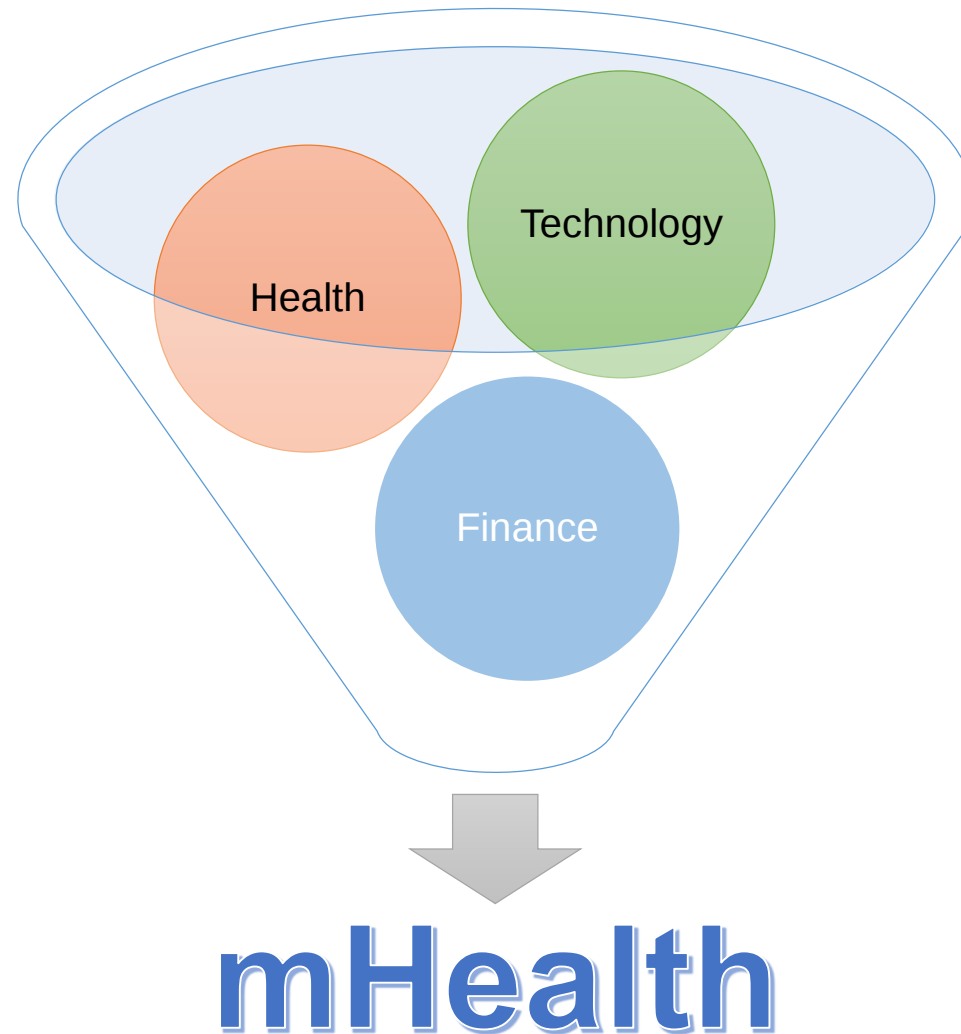
- Health system
- Healthcare workers
- Patients
- Medical supply chains

Technology

- Mobile operators
- Handset makers
- Software developers

Finance

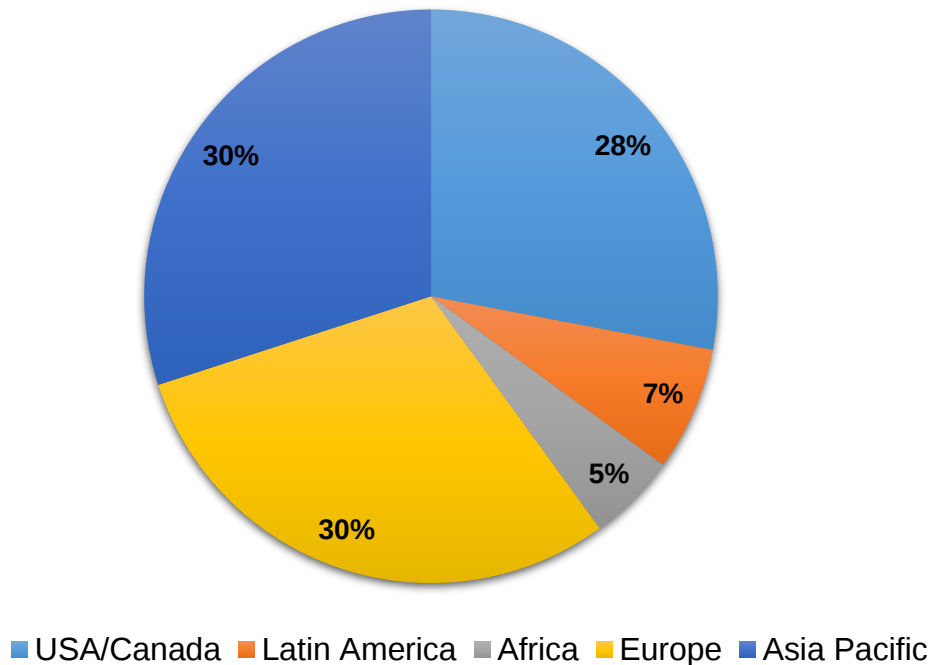
- Banks
- Insurance companies
- Sponsors



Introduction to mHealth (Contd)

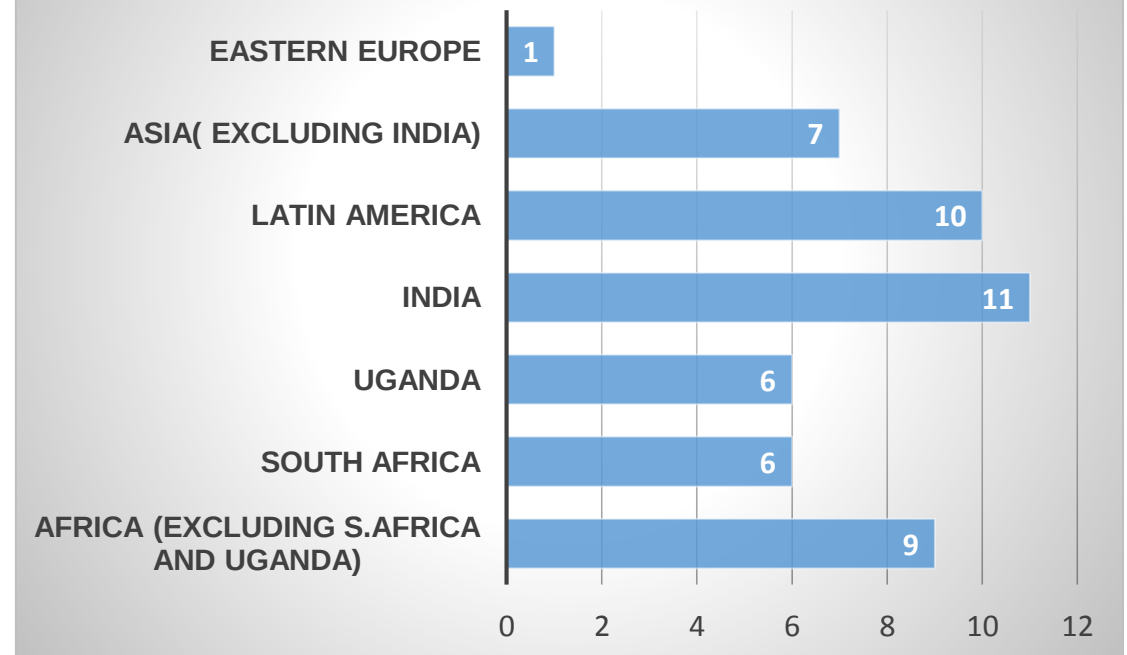
Global mHealth Scenario

Percentage Share of Global mHealth Market, 2017



Source: PWC Analysis: V. Siddharth, V. Kaushal, N. Ravi "Touching lives through mobile health", 2012

Region Wise Number of mHealth programs Worldwide



Source: United Nations Foundation: mHealth for development

WHAT IS A “KAP” STUDY

Knowledge, Attitude and Practices (KAP) survey is a quantitative method (predefined questions formatted in standardized questionnaires) that provides access to quantitative and qualitative information

Objectives of the Study

Objective 1

- To understand various mHealth applications and mobile medical devices used in Indian and Global scenario

Objective 2

- To identify the awareness and attitude of healthcare professionals on the use of healthcare applications and mobile medical devices

Objective 3

- To identify the Market and challenges of implementing mHealth

Study Methodology

Study Design

- Descriptive Cross-Sectional

Study Duration

- Three Months (02/06-05/05)

Setting

- Hospital (7)
- Clinics (5)

Study Population

- Doctors
- Nurses

Sampling

- Non Probability Purposive Sampling

Sample Size

- 139

Study Findings- Objective 1

**mHealth Applications Used Across
Countries**

AFRICA

FOCUS AREA	APPLICATION	ABOUT APPLICATION
Healthcare workers and health systems	Medic Mobile,Frontline SMS 	SMS platform for patient management for accessing of EHR
HIV/AIDS	Weltel, Kenya (Dimagi) 	SMS service to maintain antiretroviral medication adherence.
Mobile doctors network	MDNet, Ghana: Vodafone, Ghana Medical Association 	A free voice and SMS services which promotes transfer of information among the doctors
Maternal care	WE CARE Solar, Nigeria: 	Promotes the secure motherhood and decrease maternal mortality in developing region.

ASIA-PACIFIC

FOCUS AREA	APPLICATION	ABOUT APPLICATION
Chronic-Disease Management	Ideal Life Kiosks, (China) 	Remote monitoring kiosks are used for the high-volume setting such as living centres, schools, doctor's offices and health clinics.
Health line providers	Health Line, Telenor (Bangladesh) 	Backend by 24/7 medical call centre staffed by doctors, intended for the people in remote areas.
Breast Mammography Screening	Breast Screening Rural Broadband Digital Mammography Project, (Australia) 	Digital mammography in rural areas for women
Preventive Health	Health Text, (UAE) 	Some of the programs are Live Well, Lose Weight, Her Health, Pregnancy Tips and Quit Smoke. The service is provided in Arabic and English and offers advice, counsel and facts for everyday health

EUROPE

FOCUS AREA	APPLICATION	ABOUT APPLICATION
Alzheimer's Disease	SIMAP, (Spain) 	Vodafone Tele-monitoring - It is an alerting system for the family members and caregivers of Alzheimer's disease
Remote Tele-health For Kidney Diseases	ORANGE, Calydial (France) 	It is a remote monitoring of kidney failure. It involves transferring patient data to the doctors touch screen.
Wireless Pagers For Emergency Services	Amcom (Commotech), (UK): 	It is a middleware that sends the alert notifications from patient remote monitoring to the accountable staff members for quick response in case of occurrence of emergency situation
Skin Self-Assessments	SkinScan, (Romania): 	iPhone application that helps the user examine skin for melanoma.

INDIA

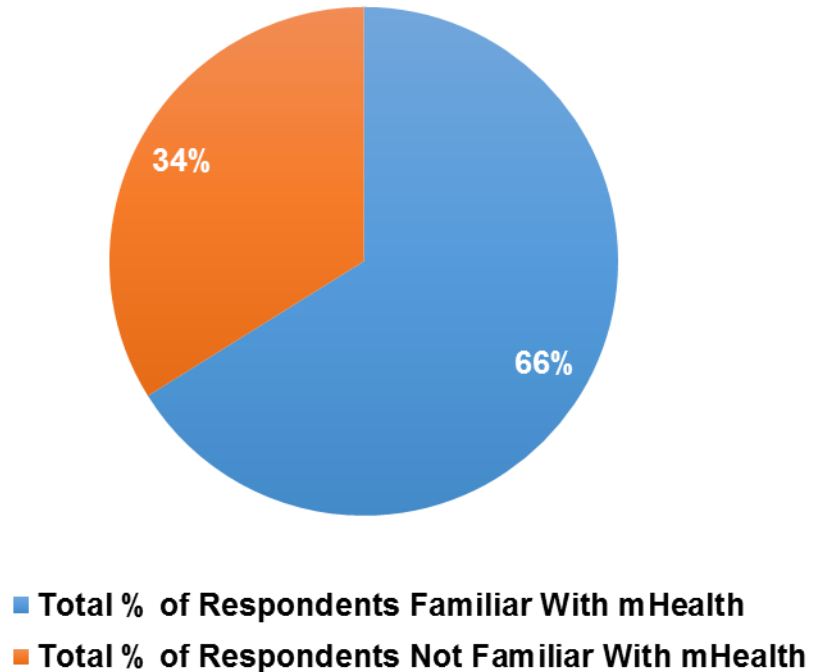
FOCUS AREA	APPLICATION	ABOUT APPLICATION
Online Pharmacy	1 mg 	online pharmacy for a range drugs which can be purchased online
Doctors App	Curofy 	It is a medical engaging networking application for communication between doctors
Emergency Support System	Lybrate 	It is a search tool for nearby ambulance services, booking appointments
Clinical Decision Support System	UpToDate 	Answers all the clinical questions saving time of the doctors.
Health, Wellness And Fitness	mSwasthya-CDAC 	Used for diabetes monitoring, vaccination alerts, hospital search, monitoring of the patients
Doctor Appointments Booking	Practo 	Used for appointment booking for the doctors, consult with doctor, ordering medicines online, reading articles or booking a test.

Study Findings- Objective 2

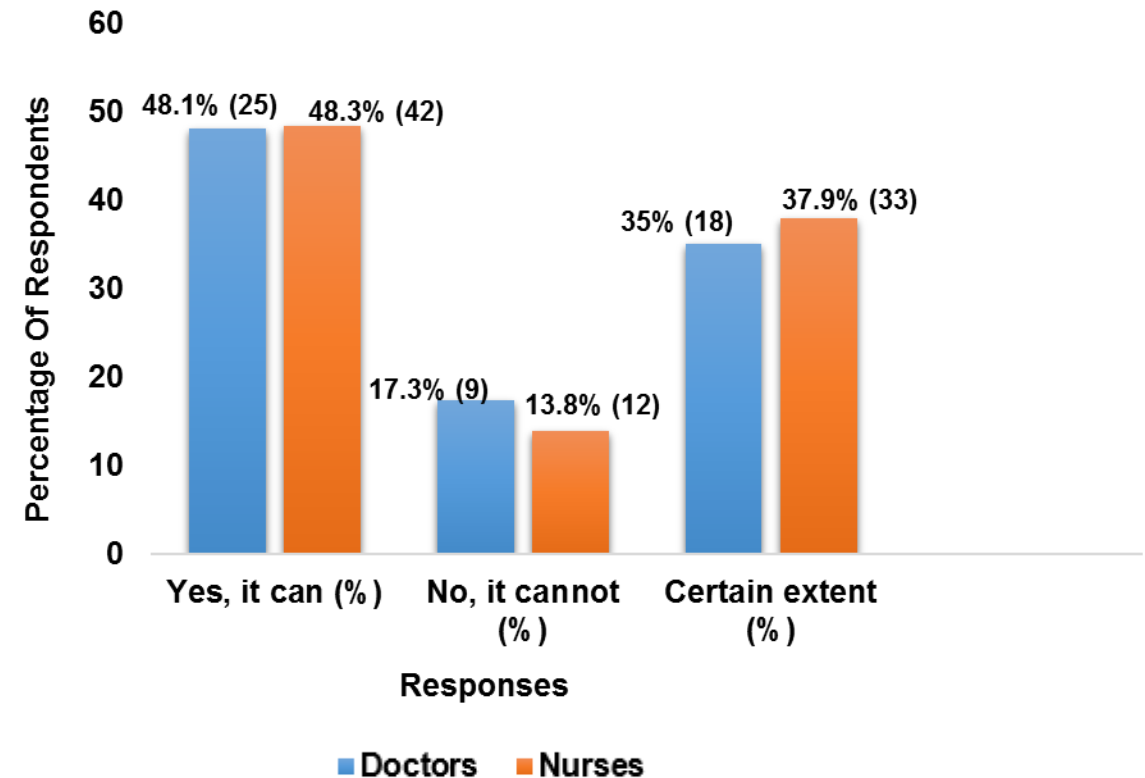
Awareness and Attitude of Healthcare professionals on
the use of Mobile Medical Devices and Healthcare
Applications

Knowledge of mHealth Amongst the Study Group

Overall Study Group's Familiarity With The Healthcare Applications and Mobile Medical Devices

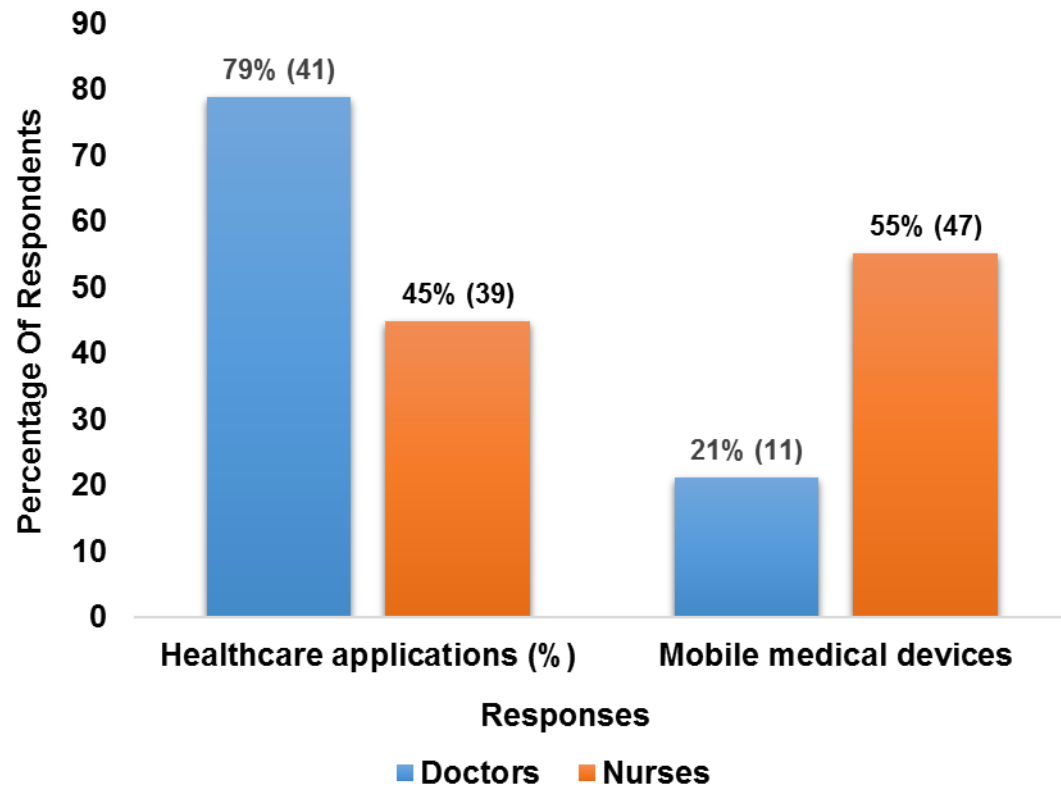


Knowledge Regarding The Use Of mHealth Towards Healthcare Quality Improvement

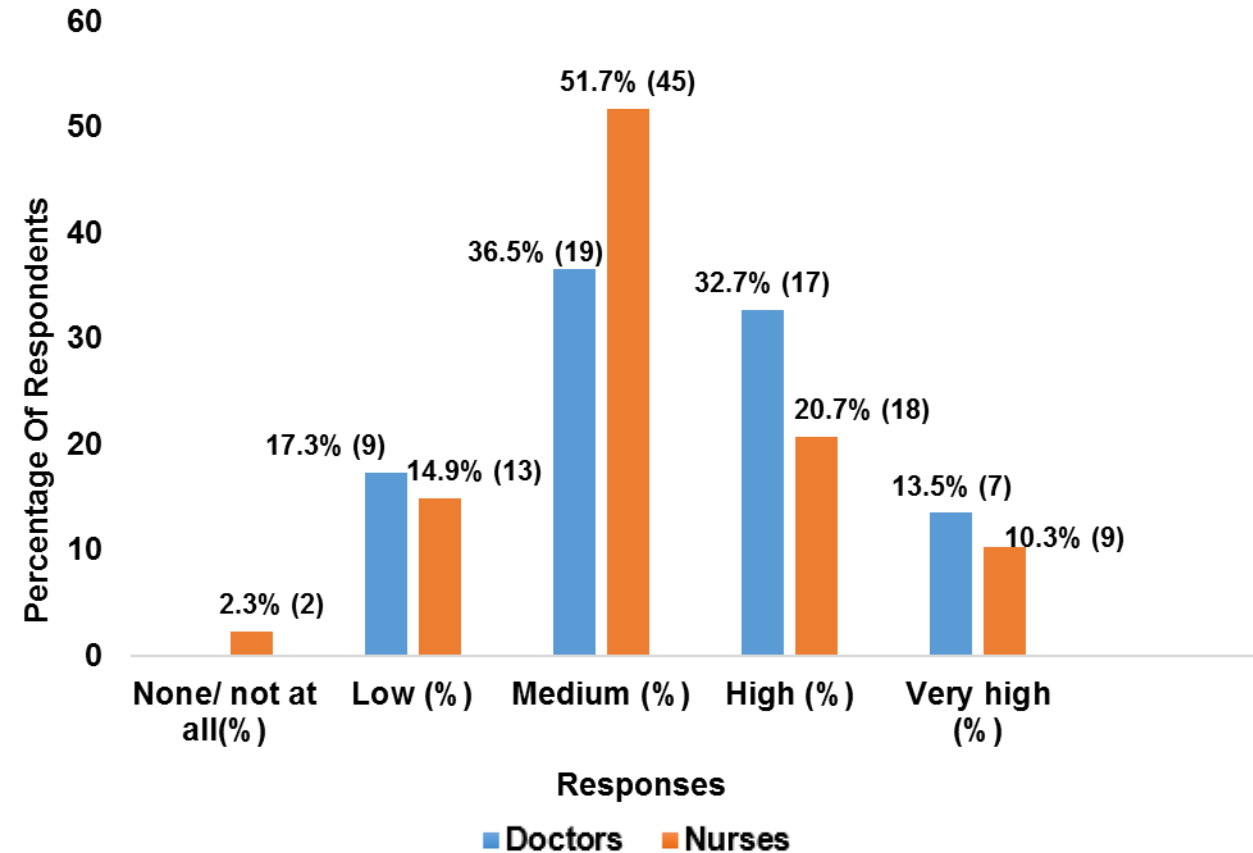


Awareness and Importance of mHealth Amongst the Study Group

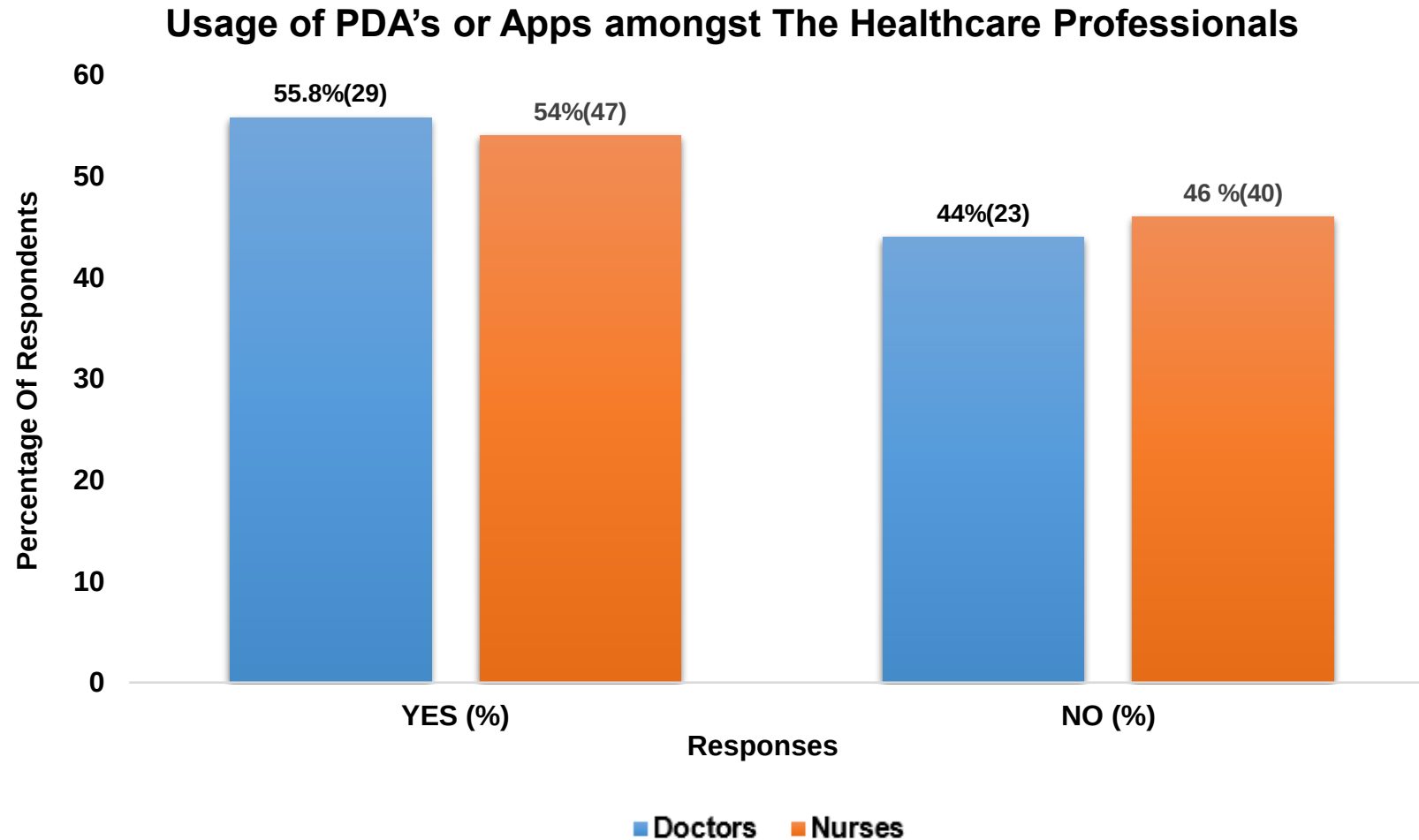
Awareness About Healthcare Applications and Mobile Medical Devices



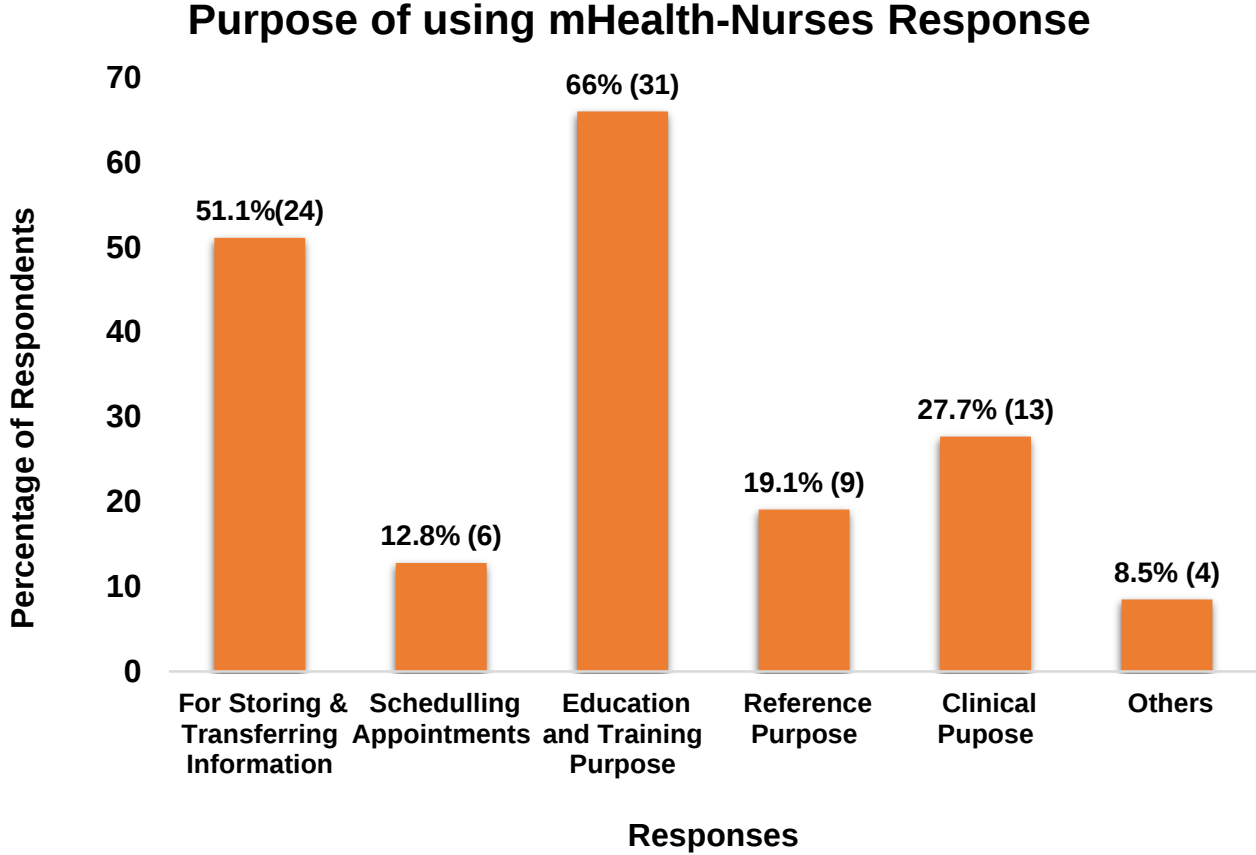
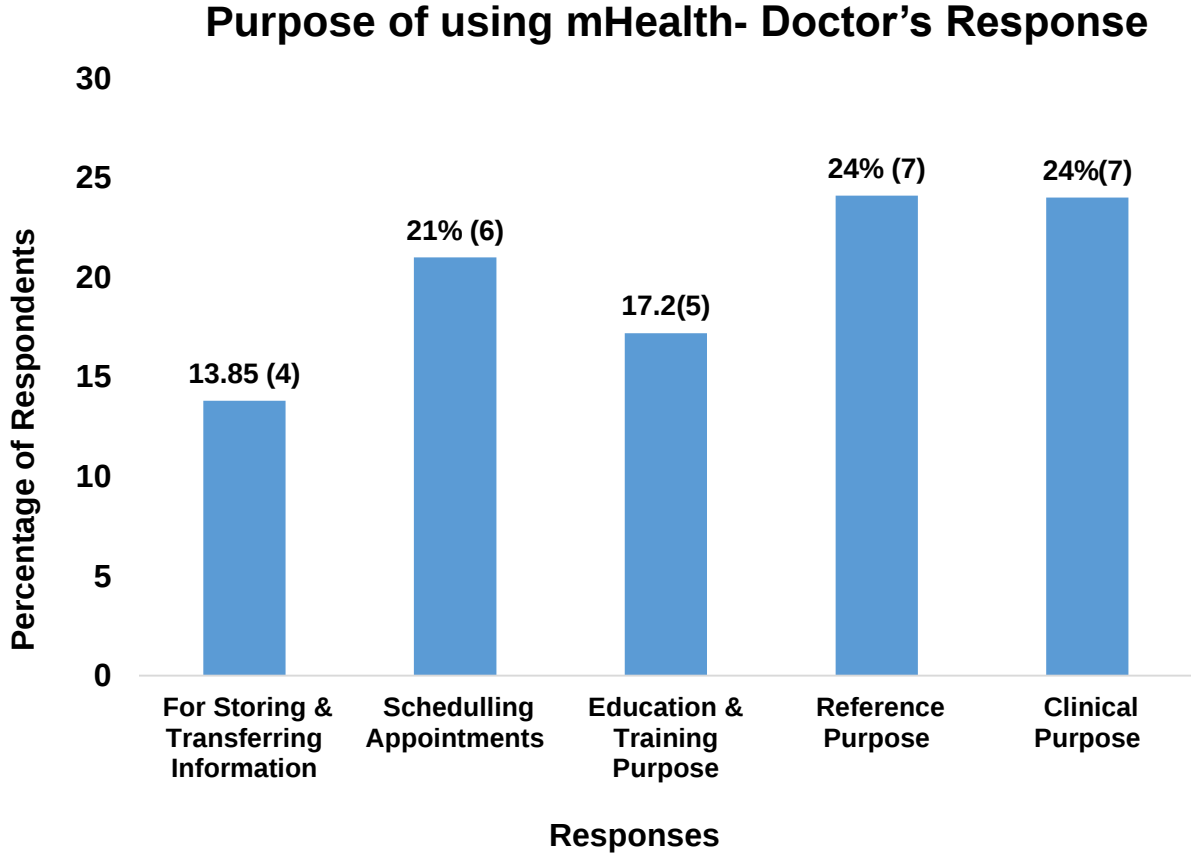
Importance of mHealth In Workplace



Practice of mHealth Amongst the Study Group

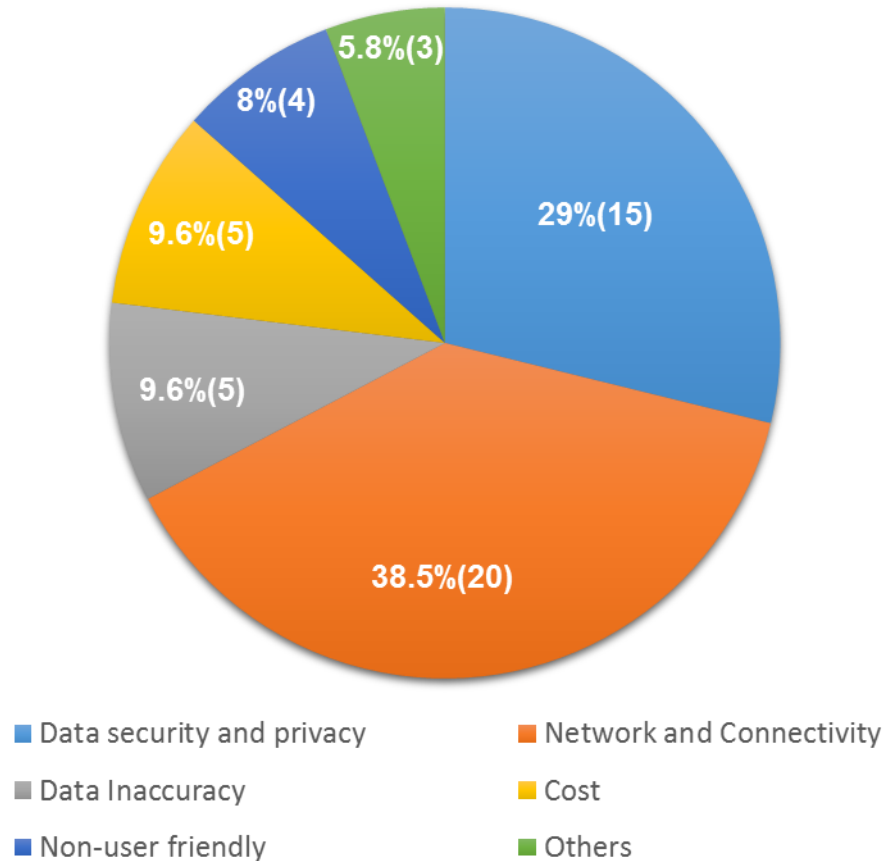


Practice of mHealth Amongst the Study Group

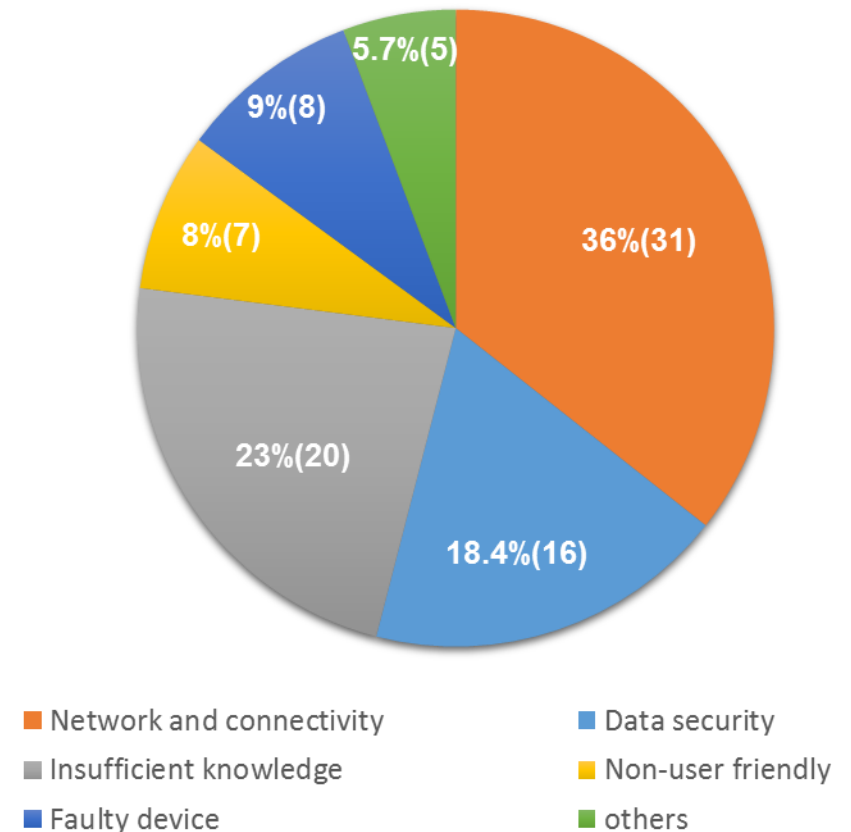


Practice of mHealth amongst the Study Group

Problems Faced by Doctors While Using mHealth Applications/Devices



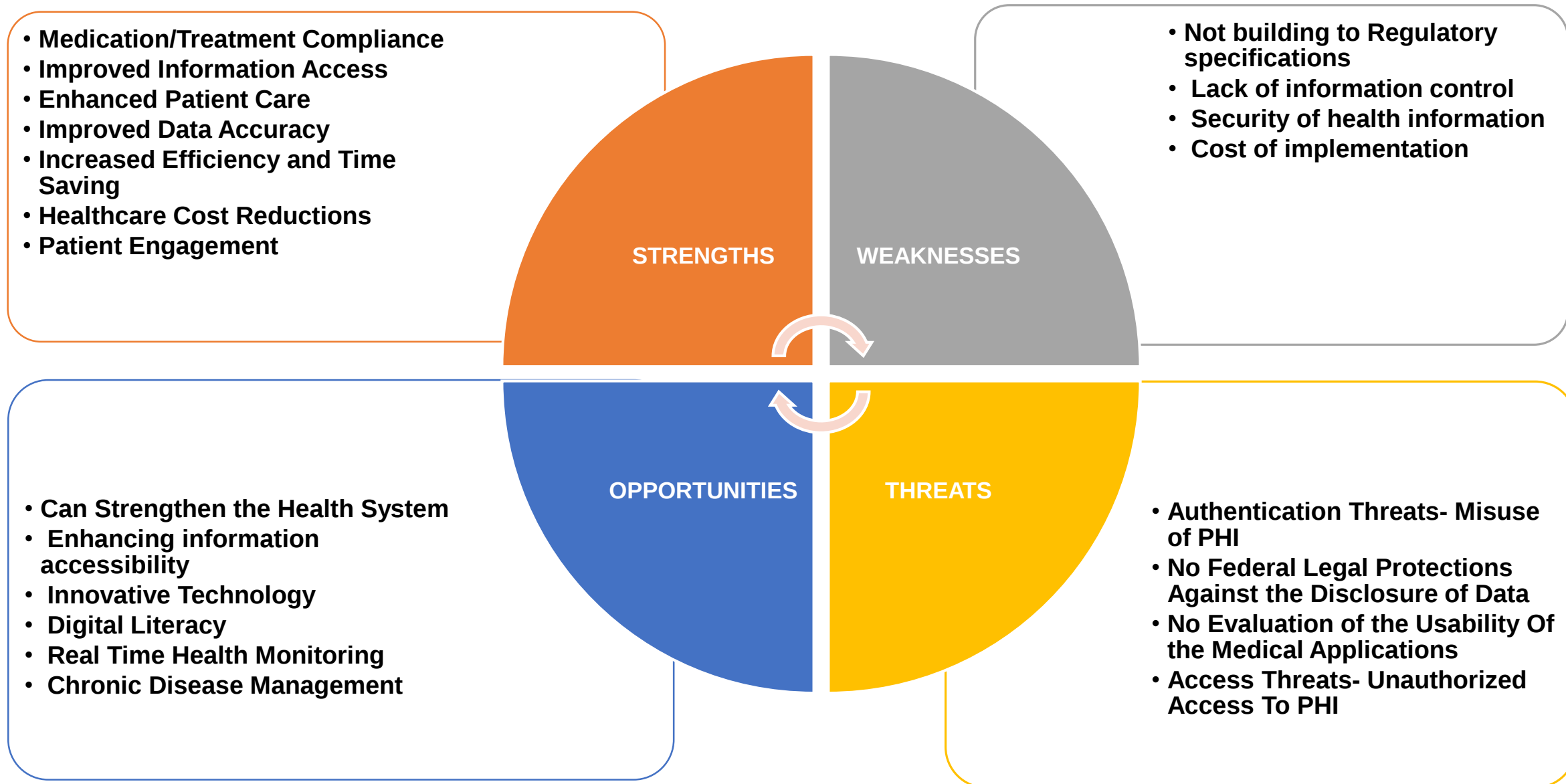
Problems Faced by Nurses While Using mHealth Applications/Devices



Study Findings- Objective 3

Market for mHealth and challenges of Implementing mHealth

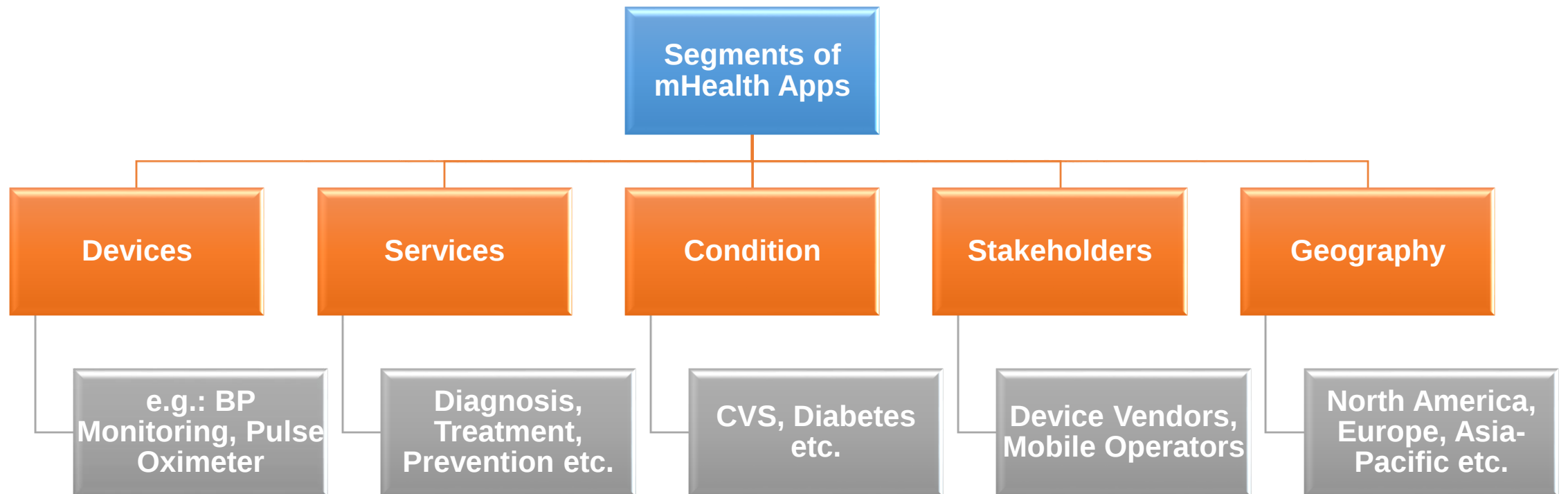
SWOT Analysis of mHealth



Challenges of mHealth

Study Finding	Secondary Review
Data security and Privacy	Regulatory Issues
Network/Connectivity Issue	Lack of resources (funding)
Data Inaccuracy	Confidentiality of Data
Cost	Market Evolution
Not User Friendly	Lack of Infrastructure
Others	Knowledge/Skill of use

Market Segments of mHealth Applications



Recommendations



User education and training

Application customization for hospital based on requirements

Maintenance of security guidelines and protocols

Regulation on use of such applications

Strengthening Infrastructure- Stable network and data connection

Conclusion

mHealth is a very significant platform which is being used by the healthcare professionals and is more likely to be incorporated because of its uses and benefits

Despite having potential advantages, there are certain risks associated with it

The various barriers and challenges needs to be addressed, so as to bring about improvement in quality of care by addressing the healthcare needs of people

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