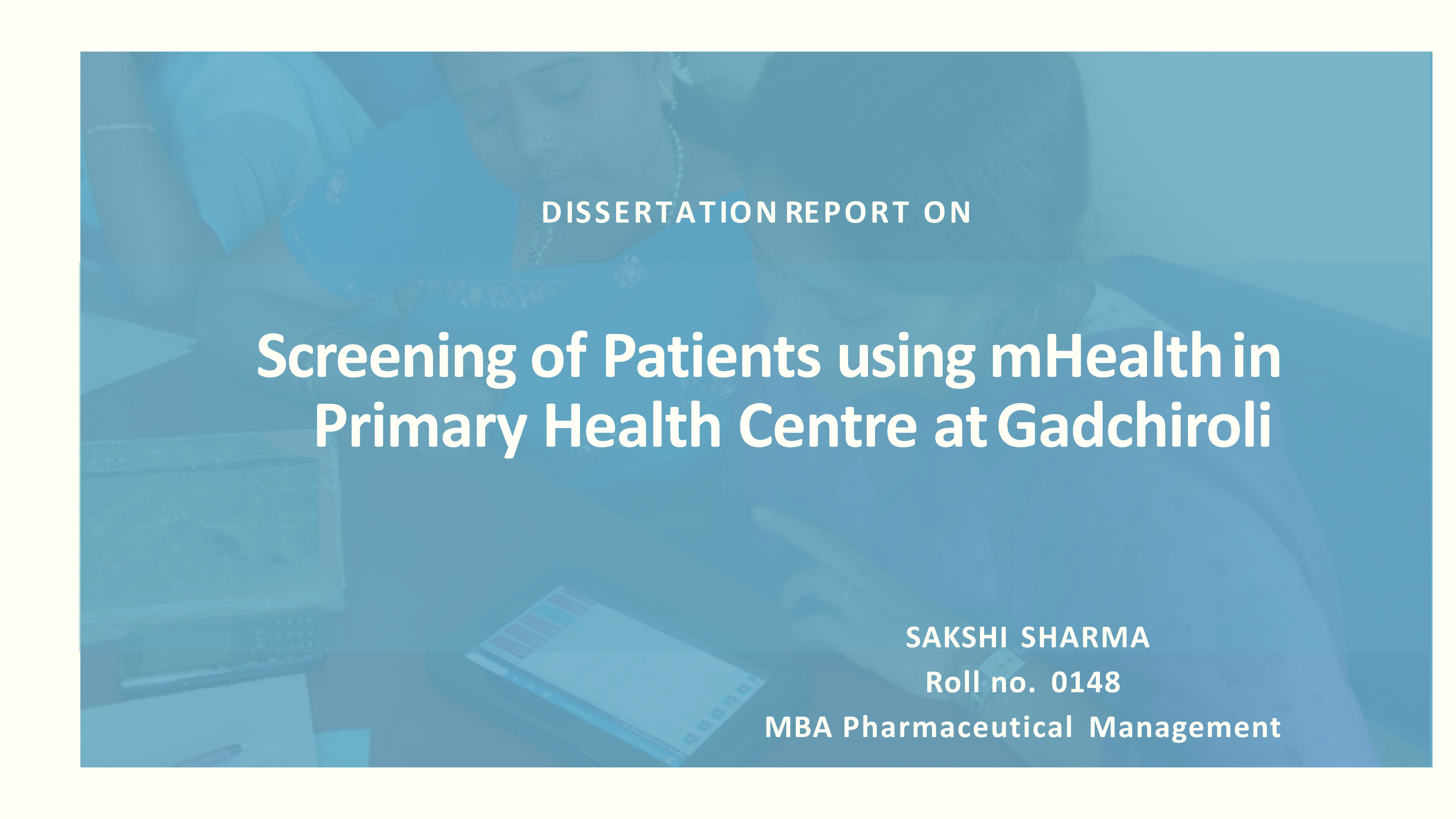


The background image shows two women in a health center setting. One woman, wearing a blue shirt and a necklace, is pointing at a tablet held by another woman. The tablet displays a colorful bar chart. The scene is overlaid with a semi-transparent blue filter.

DISSERTATION REPORT ON

Screening of Patients using mHealth in Primary Health Centre at Gadchiroli

SAKSHI SHARMA

Roll no. 0148

MBA Pharmaceutical Management

Organization Profile

- Mutelcor GmbH is a privately held consulting group with its headquarters in Dusseldorf (Germany) and regional offices in Amsterdam and New Delhi.
- Founded in 2008, Mutelcor has successfully helped the network operators to transition smoothly to intelligent – future proof networks. The company's end to end capabilities in the areas of telecom, strategy, technology, and project management it has enabled operators reshape their telecom business to meet ever evolving future digital demands.
- Mutelcor's Digital Health solutions have been thoughtfully curated in consultation with several healthcare industry experts with a sole aim to add a unique mobile dimension to your existing clinical workflows simplifying monitoring and management of patients with chronic health conditions.
- Mutelcor's diverse product range includes condition customized applications for pre and post-op bariatric and cardiac care, diabetes condition management, Hypertension, CKD, and rural healthcare all on a single platform that entails Patient Mobile App, Doctor Web Portal and Intelligent Patient Data Analytics.

mHEALTH

Mobile health is the monitoring and sharing of health information via mobile technology – such as wearables and health tracking apps. The use of mobile devices and wireless technology to monitor symptoms and deliver care allows physicians to make diagnoses quicker and with fewer errors.

mHealth technology refers to the issue of doctor inaccessibility in the Primary Health Centres as it not only connects the doctors and patients remotely but also uses mHealth devices for diagnosis of the patient's health

Benefits of mhealth technology

- Timely treatment can save a fatal health event.
- Patients are able to obtain expert medical attention, saving both time and money.
- Prevents overcrowding of District Hospitals by reducing visits.
- With the help of adequate training on mHealth solution to health workers, district hospitals, as well as mobile clinics, 'Health for all' dream can be a living reality in near future.

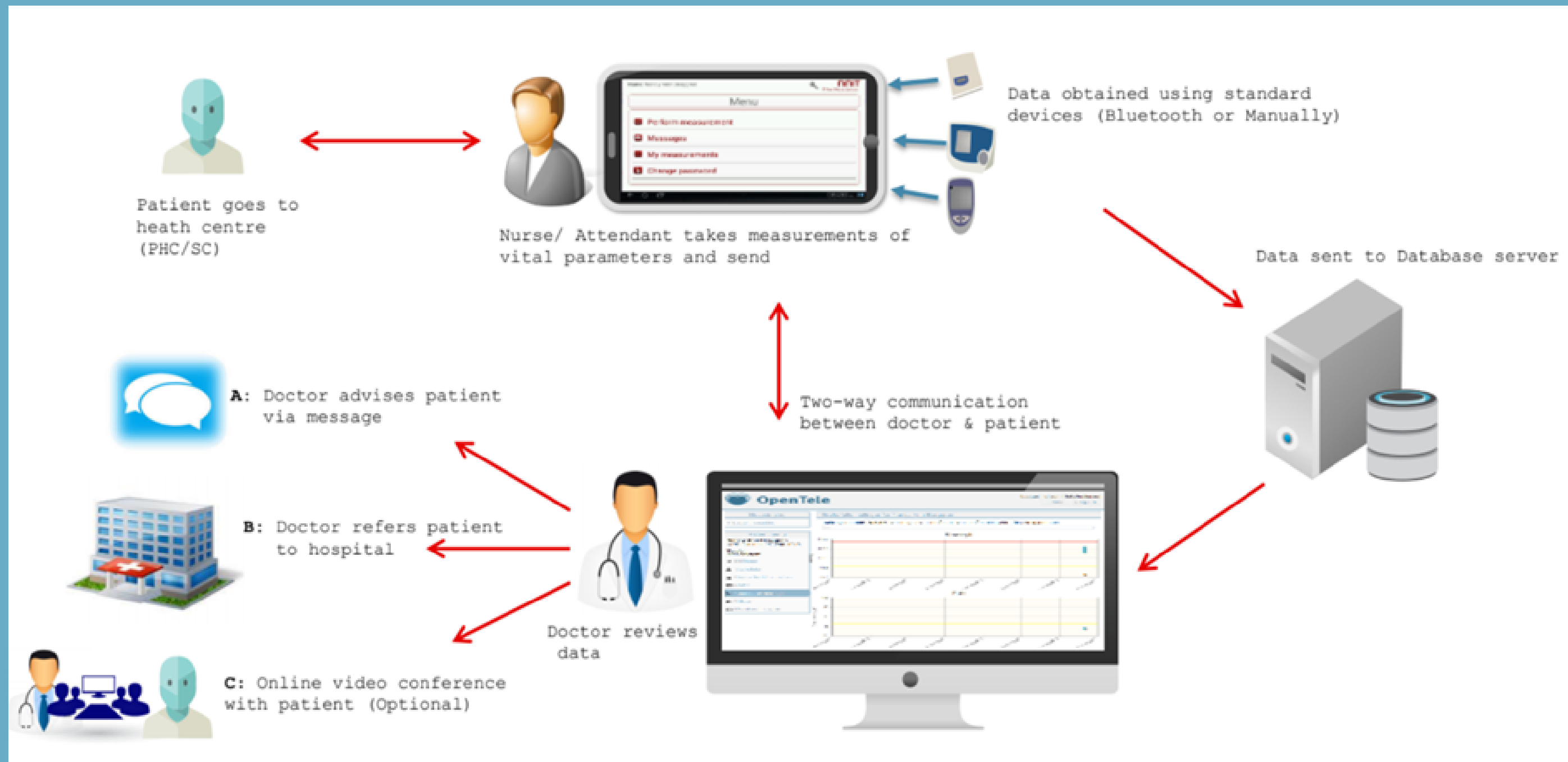
The logo for mHealth, featuring the text "mHealth" in a white, sans-serif font, centered within a solid blue rectangular background.

INTRODUCTION

Mutelcor mHealth team conducted 'mHealth for rural citizens' trial in a Primary Health Centre in Maharashtra, India to underline a benefits of mHealth in rural health centres where there is a shortage of Primary Care Physicians and to provide the public healthcare centre staff an experience of mHealth technology. During this experiment the diagnosis of patients in PHC were done by a doctor who was present in a district hospital using mobile Health app, portal and connected devices to provide consultation instantly.

Shortage of infrastructure, scantiness of qualified medical functionaries and inaccessibility to proper medication obstructs the reach of healthcare to 60% of the population of India. The majority of Indian population living in rural areas where the state of medical management is unpardonable. In view of the shabby healthcare conditions in rural areas, there is a dire need of implementation of new practices and methods to ensure that suitable healthcare extends up to the underprivileged Indian villages





WORKFLOW OF Mhealth solution.

OBJECTIVES

- To assess the attitude of rural people to accept mHealth technology.
- To understand barriers for reach of quality healthcare in rural population.
- To assess the feasibility mobile health technology in rural population.
- To Estimate or understand the market value of Remote patient monitoring in rural areas.

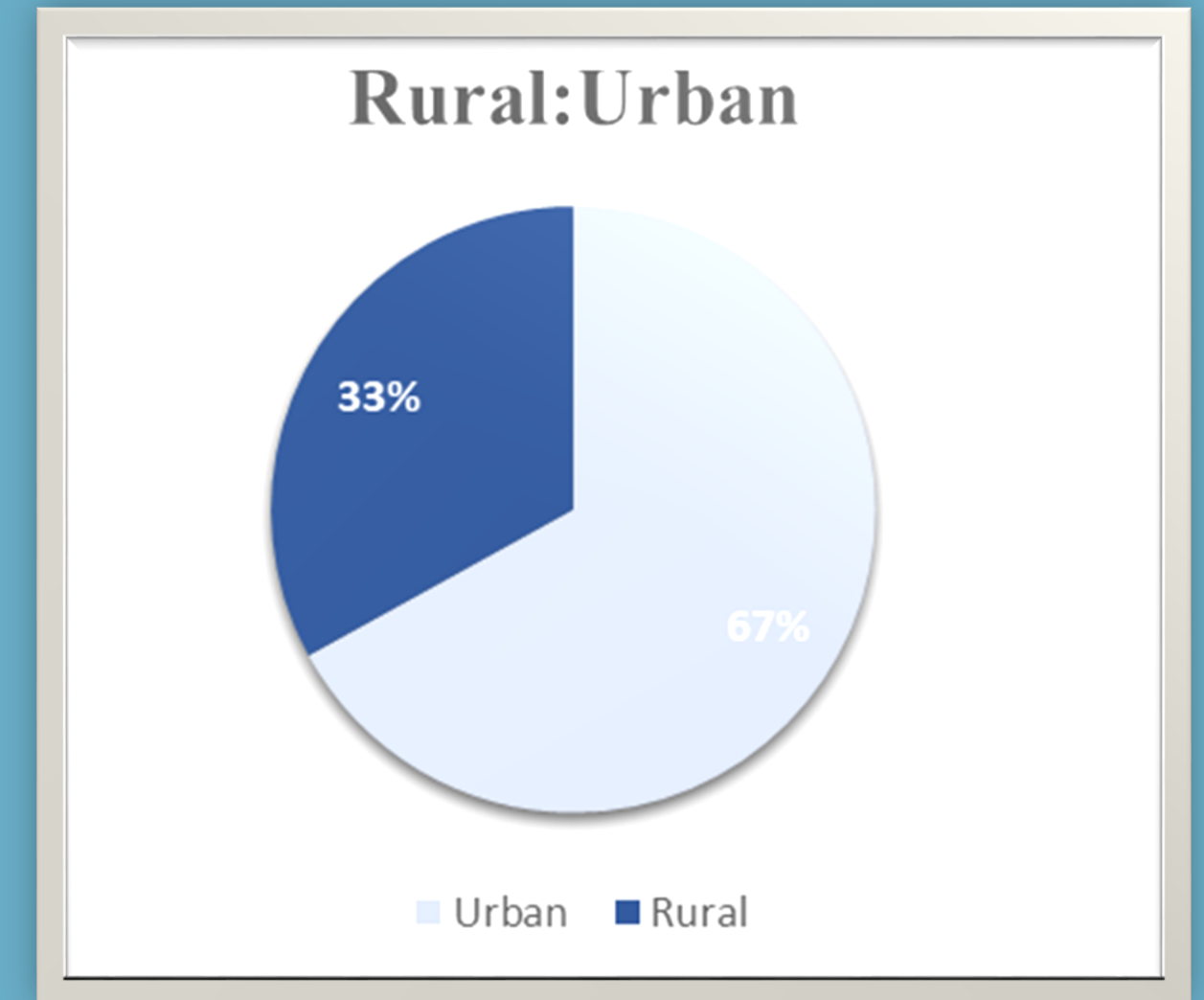
RESEARCH METHODOLOGY

Study Type	Descriptive Study
Data Type	Primary and Secondary Data
Sampling Technique	Non-Probabilistic Purposive Sampling
Duration	3 months
Sampling Area	Gadchiroli, Maharashtra
Sample Size	300 patients.

FINDINGS & INTERPRETATION

A). Doctor availability Rural: Urban

The shortage of doctors in rural areas as in contrast to the no. of doctors in urban areas is massive in India. Among India Rural areas having only a 33% of doctors positioned while 67% of doctors positioned in Urban India, In terms of numbers only 29,562 of India's 1,06,613 government doctors work in rural areas although, the population in rural areas is more,

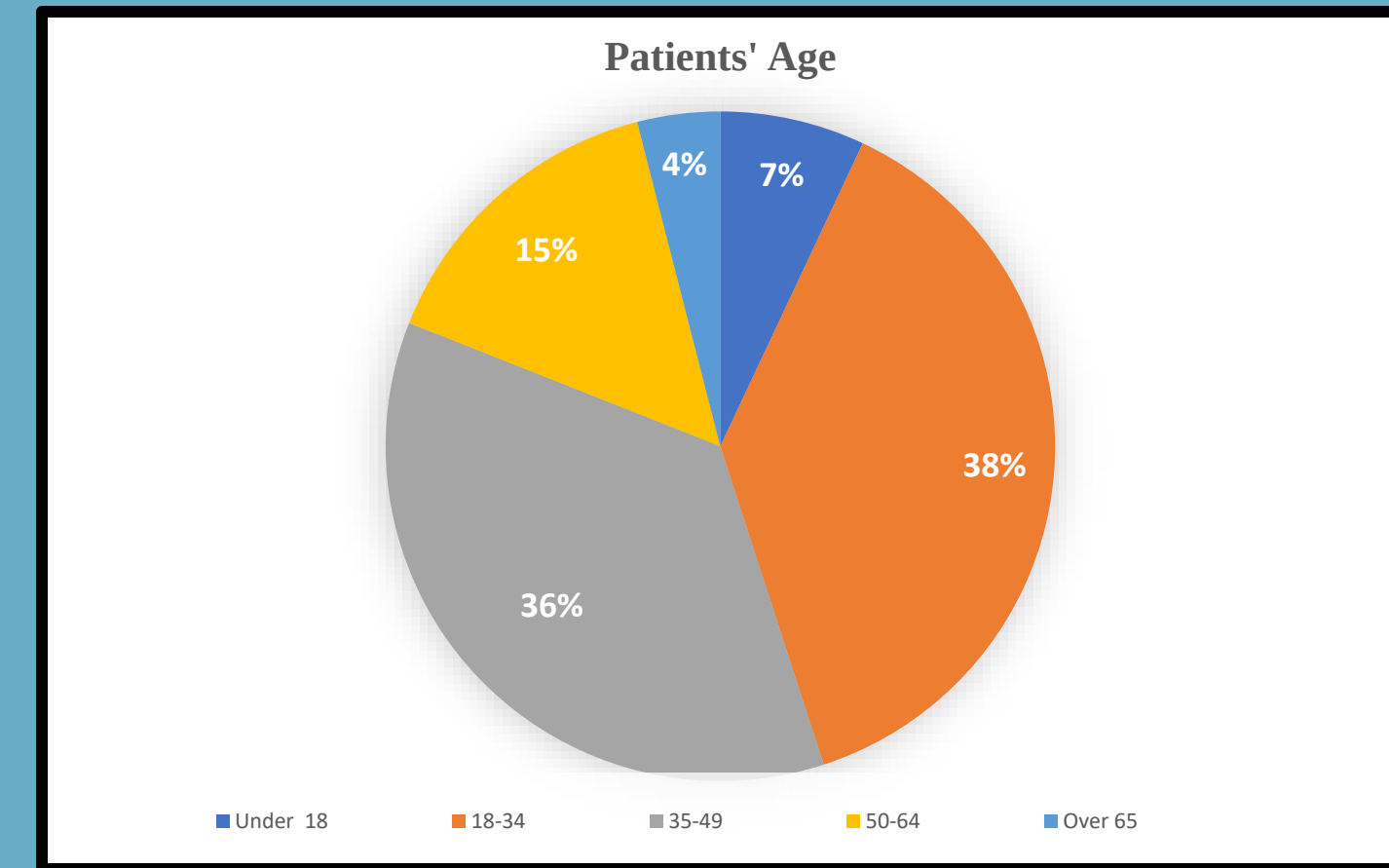


B). Split of doctor, Nurses per 1000 population.

There are 0.7 number of Doctors per 1000 population and 1.3 Nurses per 1000 population. There is shortage of qualified doctors and nurses in India. So, India needs mhealth like technology to meet the deficiency. So, the doctors sitting in cities can see the patients of rural by using this technology.

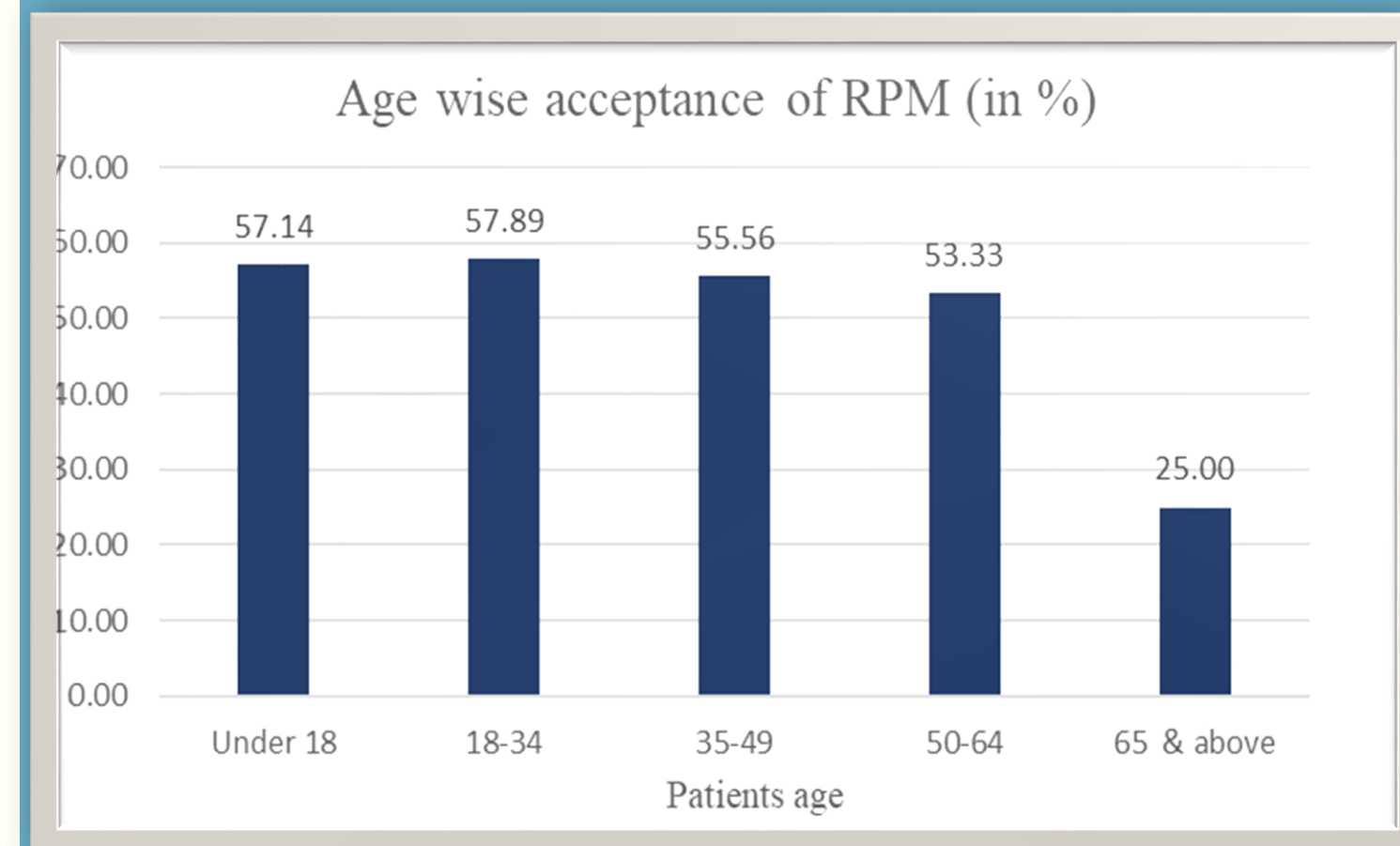
C). Patients differentiation on the basis of their age

The pie chart represents the differentiation amongst the ages of the 300 patients so that we can understand that which age people are accepting remote patient monitoring easily. It shows that 7% patients fall in the under 18 age (12-18), 38% fall under 18-34 age group, 36% fall under the age group of 35-49 and 15% are fall under 50-64 age group. Only 4% fall in over 65 age group because they were not easily ready to accept digital technology.



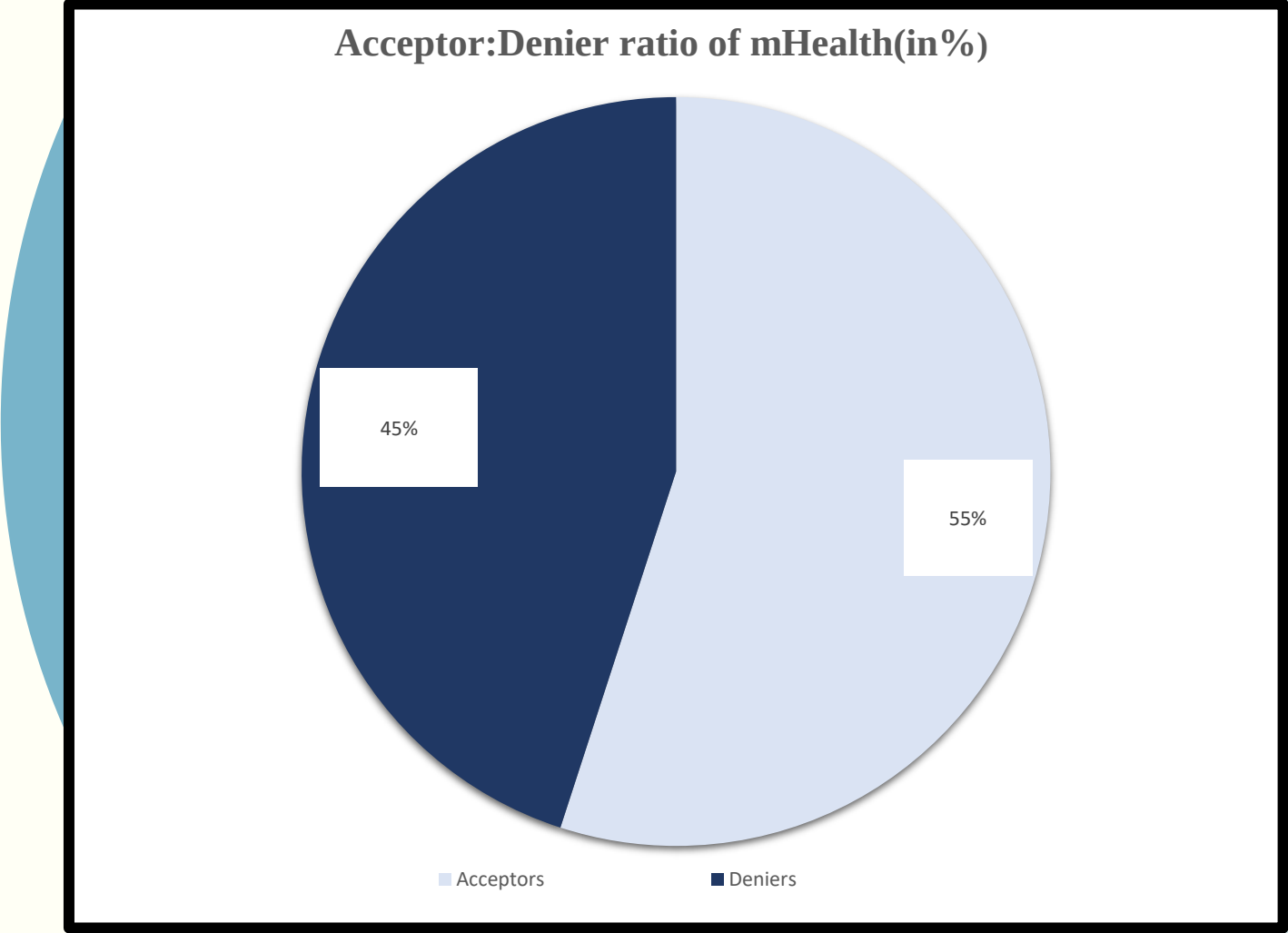
D).Acceptance of Remote Patient Monitoring by patients depending on their age

The Bar graph shows the result of survey that 57.14% proportion of the patients which fall in under 18 years accepted and were willing to adopt this digital technology. 57.89% patients of 18-34 age, 55.56% patients under 35-49 age and 53.33% patients under 50-64 age approved Remote Patient Monitoring. But only 25% patients of 65 and above age accepted this mHealth solution.

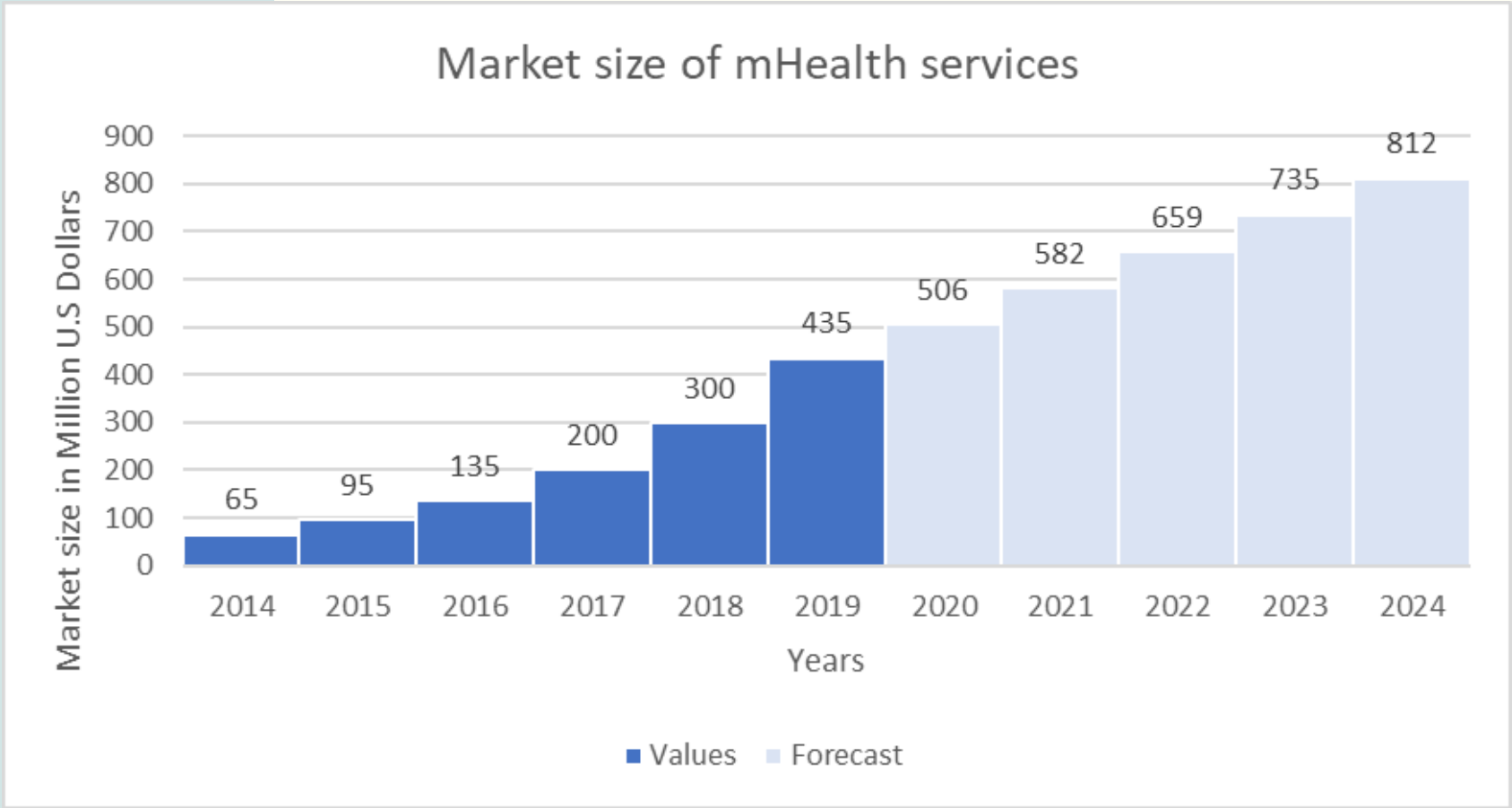


E).Percentage of patients who accepted mHealth.

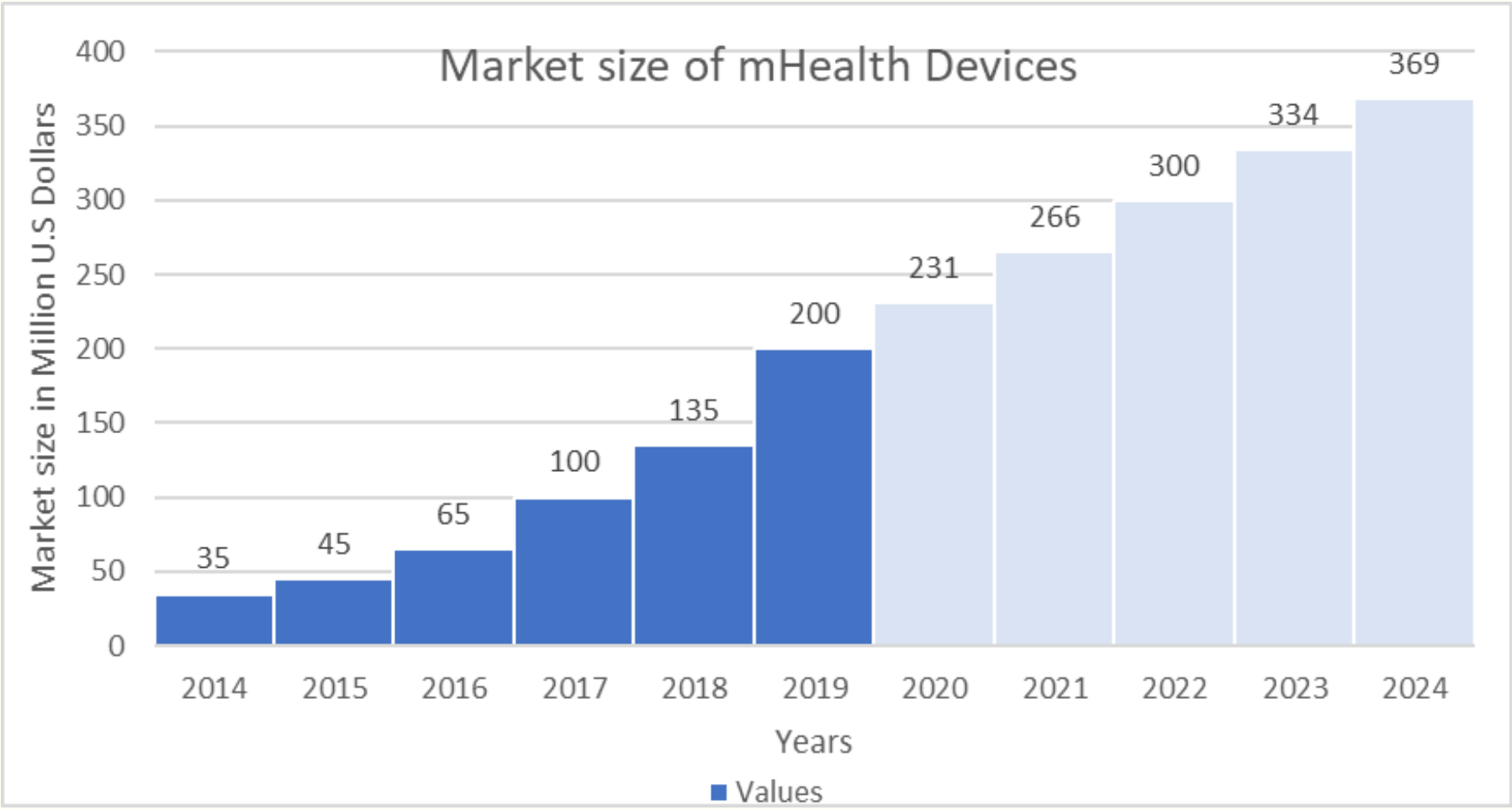
The pie chart shows the result of survey in which 55%patients accepted and were ready to adopt this mHealth solution and they like the solution as they want a e prescription from the doctor siting in a district hospital and 45% patients still doubted the capabilities and want to meet the doctor in person and want medication prescribed by the doctor in personal rather than e prescription



F). mHealth Indian Market size by device and services



The two graph shows the size of India's mHealth services and devices market from 2014 to 2024. These graphs show the forecasting for coming years. As graph shows the mHealth device and service was low in 2014 and increased in a coming years and it's expected to be in around 369 Million US dollars till 2024 for devices and for services it is expected to be 812 Million US Dollars till 2024.



CONCLUSION

The findings suggest that the government can promote this mhealth solution in rural areas as more than 50% people are satisfied with it. Implementation of RPM technology in rural areas will lead to a lot of development in the health conditions of people living in rural area and improve the situation of PHC's

Digitalization creates demand for digital skills and for people who are competent in using digital devices, understanding outputs and developing programmes and applications. This requires not only basic literacy and numeracy but also data handling. In rural areas where such skills are lacking, education must improve quickly. Education and smartphone at certain extent have definitely made rural people more open minded and they were able to accept the working of Remote Patient Monitoring.

The presence of doctors is very important but technology can substitute doctors in Primary Health Centre's to a reasonable amount. Therefore, introduction of Mobile Health technology in rural areas is a profitable proposal. And with the introduction of Digital technology the quality of healthcare can reach the deprived corners Of Rural area. The digital healthcare market in India |was valued at INR 116.61 Bn in 2018, and is estimated to reach INR 485.43 Bn by 2024, expanding at a compound annual growth rate (CAGR) of ~27.41% during the 2019-2024 period. It means the digitalization in field of Health increasing day by day.

The mHealth technology open up about the most fundamental issue of doctor inaccessibility in the Rural areas as it not only connects the patients to a doctor remotely but also uses mHealth devices for diagnosis of the patient's health



RECOMMENDATIONS

- The mHealth technology alone is not a replacement for care by doctors; while some ailments can be fully treated remotely, telemedicine practices still need physical facilities where trained personnel can perform procedures, take diagnostic images, and draw fluids for tests. However, these virtual visits offer a cost-effective way to deliver medical care, particularly in rural areas with relatively few hospitals and little or no physical access to specialists
- Awareness need to be done about the mhealth technology in rural areas
- The implementation of digital technology could save India \$4 billion to \$5 billion every year and replace half of in-person outpatient consultations in India so it is essential to implement this technology
- It is essential to implement the new digitized education tools in rural India. Introduction of such ed-tech tools can solve the problems of mass reach, quality and relevant education. And then trained personnel for digital technology easily available in rural areas. Teachers will be available via virtual classrooms, thereby plugging the problem of unwillingness in educationists to be physically present in many such areas.

LIMITATIONS

- mHealth depends heavily on an organization's ability to harness broadband technology. Wi-Fi networks are not reliable enough at a distance to support a fully functional mHealth deployment. Patient access to broadband technology is the biggest challenge mHealth faces
- lack of awareness: Maximum people in rural area don't know about the mhealth technology
- The access to mHealth apps is denied to a large section of the population because of their incapacity to afford it and the knowledge and skill to use it.
- These mHealth apps also make us dependent completely on the technology which might be a bane in the longer run. If one loses his or her mobile phones, often all the information is lost and can be misused too.
- Infrastructural inequities: A lot of villages deal with infrastructural lacunae related to electricity and potable water, apart from unavailable fundamental health and hygiene requirements.
- With an increasing number of companies trying to get a foothold in the mHealth market, it's also a challenge for practices and health systems to determine which mHealth apps are the most effective and will best meet the needs of their patients and providers.

THANKYOU