



Improving healthcare using m- health- insurance professional perspective

Sanjay Kumar¹

¹ Research Scholar, Department of Management, Kalinga University, Naya Raipur, Chhattisgarh, India

Abstract

Healthcare Management at recipients' level has great opportunity for improvement and Its progress compared to the other sectors of India is limited. The objective of this study is to understand the need of m-health and its implantation contests and bottlenecks in India. I had graphed Insurance payers to understand their view, need, reception and willingness for m-health through a multiple structured questionnaire including 1) need of m-health towards patients, 2) support by Government for m-health, 3) Willingness of investment from patient towards the cost in the field, 4) issues related educational problems for the implementation of M-Health, 5) Policies in terminology and availability & understanding of infrastructure along with scope of expansion. The respondents answered affirmatively in these proportions where 100 % agreed on the fact the m-health is the need of the hour. The survey has also highlighted the operational problems of m-health implementation in India due to its wide variety of demographic, cultural and educational, economic resources, long term policies around that.

Keywords: healthcare, m-health, patients

1. Introduction

"M-health is a service or application that involves voice or data communication for health purposes between a central point and remote locations. M-Health is consumer focused because almost all customer uses mobile and they can manage their health through this. One of the key stakeholder is Insurance payer who make the payments and I met the representatives of insurance payers and consolidated their opinion and their awareness, acceptability, efficiency and effectiveness of the m-health based systems in health services. The paper attempts to analyze the role of different stakeholders and make a suggestion for the improvement of health service delivery.

In the age of artificial intelligence, m health has emerged as a sub-sector of e health, which is used for the practice of medicine and public health supported by mobile communication devices. Generally, M-health is used for denoting the use of mobile devices, tablets, computers, smart watches and other wearable devices for health services. India has moved far ahead in health sector following the Millennium Development Goals. The area of M-health is universal in nature for delivering health care from the most developed to the least developed economies of the world. The use of mobile technology in health sector in the developing world is rapidly expanding to include chronic, and communicable diseases. Technology like m-health can be useful to address the challenges of health sector in the developing countries like India.

The number of mobile user is increasing day by day in all over the world. On the other side, most of the mobile users do not have knowledge about its health applications. The present situation is worse in the developing and the undeveloped countries because of the lack of proper education. The other side of coin is positive in the developing countries. The

mobile use in health sector in the developing world is rapidly expanding to include severe and contagious diseases. M Health and other technologies such as wireless system can be useful to address the challenges of health sector. According to Ian Leslie Freng, Simon Sherrington and Danny Dicks (2011) "mHealth is an application that involves voice or data communication for health purposes between a central point and remote locations, which includes eHealth applications (if delivery over a mobile network adds utility to the application), the use of mobile phones and other devices as platforms for local health-related purposes as long as there is some use of a network." India ranks second among developing countries in the adoption of m Health. Increased adoption of mobile technology or m Health is supposed to be essential by more than half of doctors and healthcare providers in developed and emerging markets around the world including 60% in India. At this time, m Health applications in the maternal and newborn health field are in the formative stage, but rapidly evolving. The United Nations Foundation in its studies entitled "m Health for Development: The Opportunity of Mobile Technology for Healthcare in the Developing" has shown the immense potential of mobile technology in the developing countries like India. William C. Philbrick has published his report entitled "m Health and MNCH: State of the Evidence Trends, Gaps, Stakeholder Needs, and Opportunities for Future Research on the Use of Mobile Technology to Improve Maternal, Newborn, and Child Health" in 2013 showing problem in mission and strategy of the current mHealth projects.

Research methodology

A detailed survey questionnaires was used to collect data. Data was collected on various data variables such as Mobile Health uses, missed does and prescription, key challenges,

solutions and Geographic Location. Data collection was done using automated data capture software on smart phone through a online software comm Care. The survey tool was uploaded on software and downloaded on phone. Data was sent to the online database server by cellular, Wi Fi, or cable internet connection from the mobile device.

Manual for data collection

Field guide/manual was prepared before the field start and keep updating the manuals on the learning obtained from field.

Data collection

Data was collected on Cool pad Android using Comm. Care mobile application software, which facilitates online data collection.

Study limitations

There are few limitations of the survey and should be considered at the time of interpretation of results:

- Non-Response Bias: Survey findings are based on available data.
- Interview Bias: Respondents self-reported actions related to smart phone, Patient load experience, which were not confirmed by further document review.

Key challenges during data collection

There are few challenges while conducting the survey that includes

- The physical in-convenience of transport
- The doctors or Chemist most of the time were apprehensive in sharing the information
- Due to non- availability and prior commitment, needed to conducts many revisits.
- Many times the respondent denied for conducting the interview.
- Many time the respondent was not present at the location and I have wait for him untile he comes because he or she was being the important stakeholders.
- Even sometimes the interview with them things was not smooth. In the beginning, the respondents did not co-operate properly and created problem. But we managed to established close rapport with the respondents and eventually succeeded in knowing their views and attitudes in depth.
- The interview schedule was the main tool used for collecting primary data, supplemented by field notes based on observation. Although some structured questions were included to get specific background data. The quantitative data collected through interviews was supplemented and cross-checked by qualitative data obtained though observation. Contacting the respondents and visiting their households posed serious problems.

Setting up field

Gujarat a Western Indian state covering 75,685 sq mi and its population is 60 million. The State encompasses of 33 districts and the State is doing well in Health parameters. A comparative study indicate that the State has 12th ranking on health indicator performance and lagging behind from many

states including Kerala, Goa, Himachal, Punjab, Tamil Nadu, Maharashtra and Haryana.

Table 1

Possession of Smart Phone	Count
Basic Phone	0
Smart Phone	4
Grand Total	4

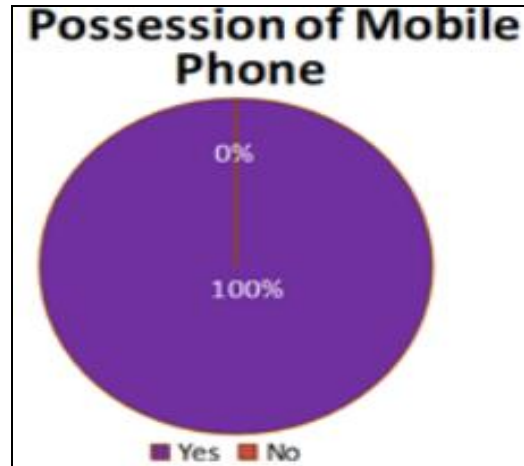


Fig 1

100 percent of the payers or the insurance providers are using smart phones. With the advanced communication system and devices the payers would be in touch with the data online which will keep them updated and will enhance their response time in providing service thus creating trust among their customers

Table 2

Usages of Online Application	Count
Yes	4
No	0
Grand Total	4

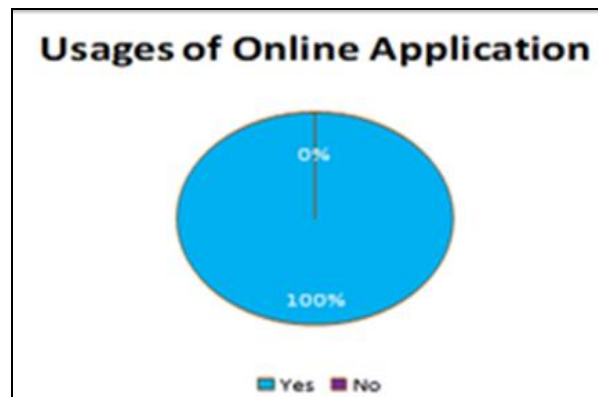


Fig 2

Table 3

Usages of Applications	E- Health & Other App	Not E-Health but other APP	Only E-Health
Yes	1	3	0
No	0	0	0
Grand Total			

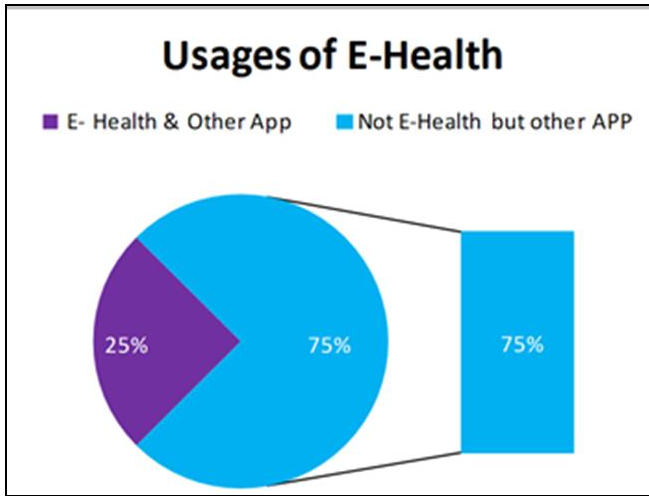


Fig 3

It is also being reflected that the percentage of payers who are utilizing any type of online applications is 100 percent. It is being inferred that although 25 percent are aligned with e health applications and 75 percentage with other online applications but their access to and uses of online applications will not be a limiting factor in providing fast services to the customer, rather would be encouraging factor to support and advocate for M-health application.

Table 4

Missed Claim	Patient Percentage of Missed Claim
Yes	1
No	3
Grand Total	4

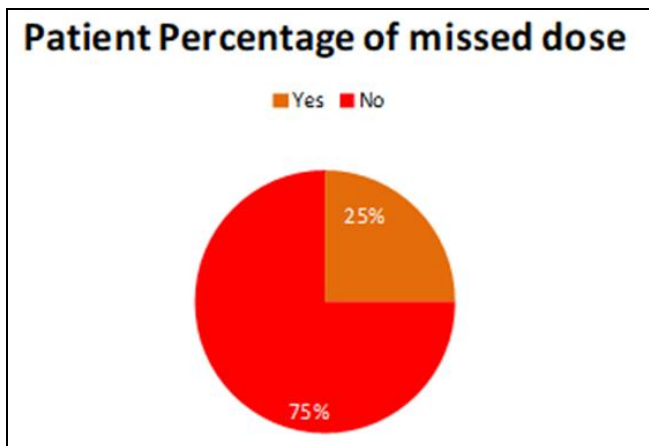


Fig 4

It is also noticed that 25 percent of the payers are indicating that the claim of the patients were we rejected due to their non-adherence to medicine dose schedules. The analysis of the data forces us to make a positive inference towards forming the positive attitude by the customer towards adopting the M-Health applications.

Table 5

Lost Prescription	Patient Percentage of lost prescription slips
No	3
Yes	1
Grand Total	4

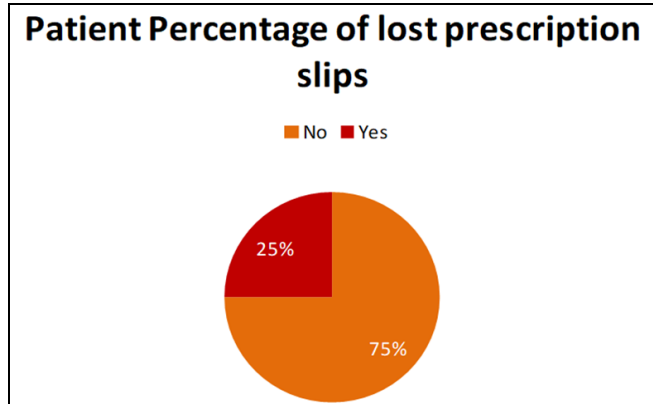


Fig 5

On probing upon the regions for claim rejection, 25 percent of the payers reiterated that since patients were not keeping / maintaining their prescription slips properly, hence misplacing or losing the prescription slips. Lost prescription slips is emerging as one of the main region for the claim being rendered non payable for lack of proper paper work. The above data also indicate strong case in favor of M-Health applications to be implemented and accepted by the customer.

Table 6

Claim Reimbershment	m-Health app helps in claim reimbershment
No	1
Yes	3
Grand Total	4

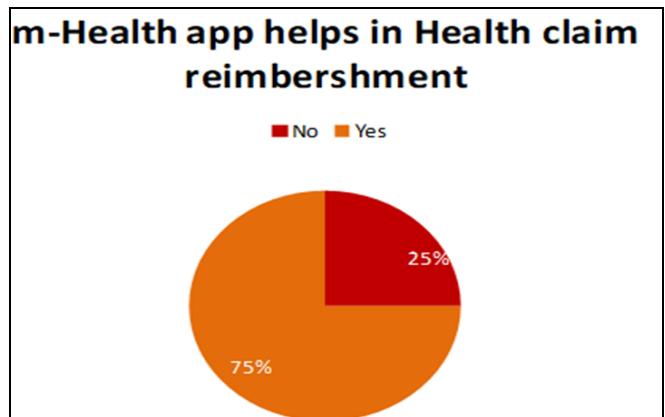


Fig 6

75 Percent of the payers agreed that M-Health application if executed will ease out the pains related with claim reimbursements and facility the whole process for the benefit of the customer

Table 7

Row Labels	Recommendation for m- Health
Yes	3
No	1
Grand Total	4

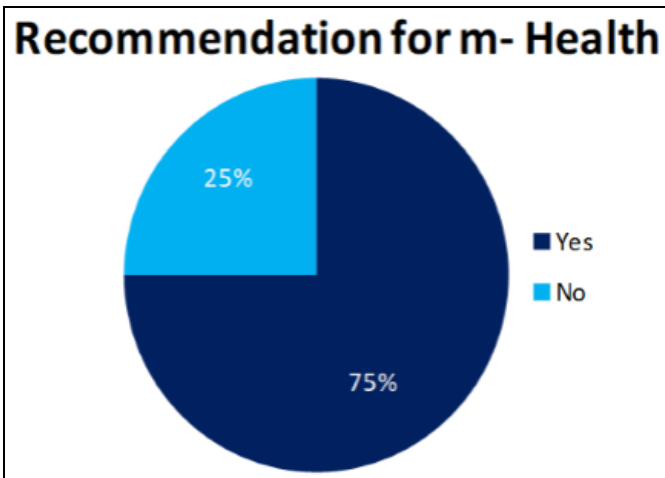


Fig 7

Table 8

Row Labels	Recommendation of m-Health usages to patient
Yes	3
No	1
Grand Total	4

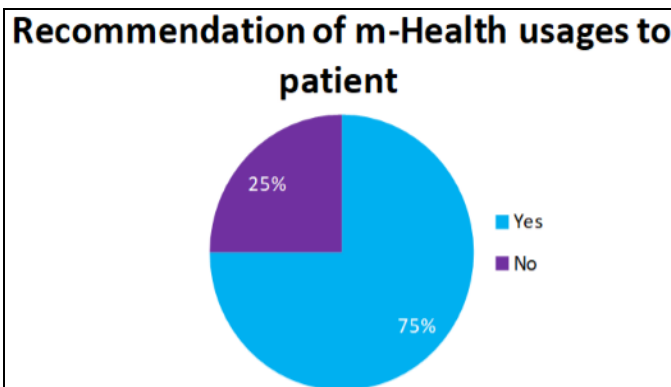


Fig 8

Further corroborating the fact that M-Health application will be accepted by the customer, is the data verifying the recommendation of 75 percent of the payer for the implementation of M-Health. In the similar fashion again 75 percent of the payers recommended the usage of M-Health application of the patients.

Table 9

Row Labels	Would the Payers reimebersh such application cost?
No	1
Yes	2
Canot Say	1
Grand Total	4

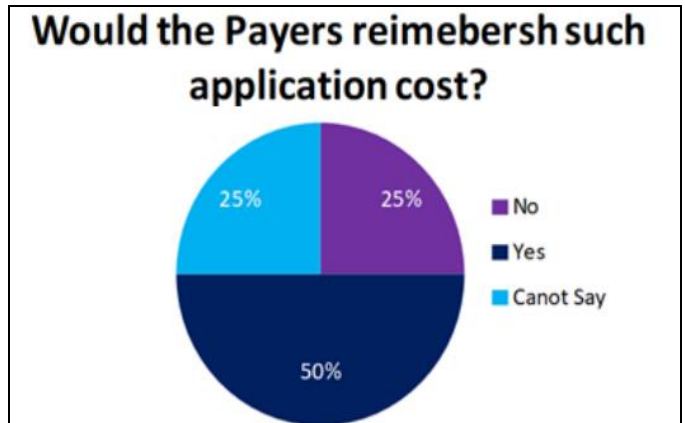


Fig 9

In the study a majority of the payers are recommending the usage of M-Health application but as per the viability for the implementation of any application, cost is the deciding factor. On the question of payers agreeing to reimburse the cost of the application only 50 percent agreed to reimburse, 25percent denied reimbursing the cost and 25 percent of the payers were still not clear whether to say yes or no.

Table 10

Row Labels	unt of Would patient/care taker pay for such applicatio
No	4
Yes	0
Grand Total	4

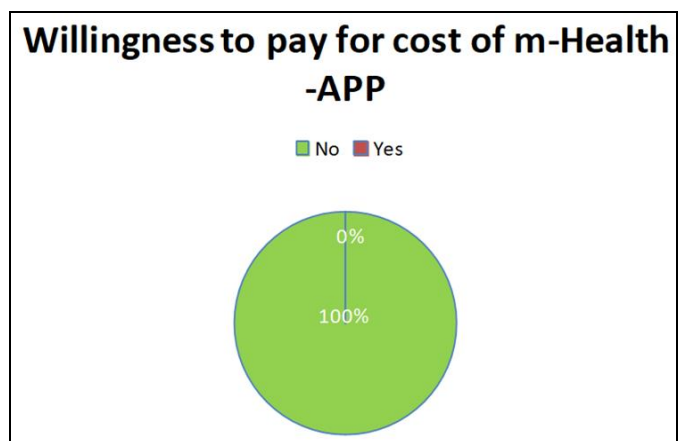


Fig 10

Although majority of the payers had recommended that M-Health should be implemented but when payers were asked their opinion has to whether their patients will pay for this application, their answer was 100 percent no.

Table 11

Key Challenges	Implementation Key Challenge indicated by Doctors	Percentage
Cost of application	5	20
Lack of Access	4	16
Lack of evidence	1	4
Lack of Knowledge	3	12
Limited Infrastructure	4	16
Limited Policy Support	5	20
Privacy and Security	1	4
Reliability	2	8
Grand Total	25	

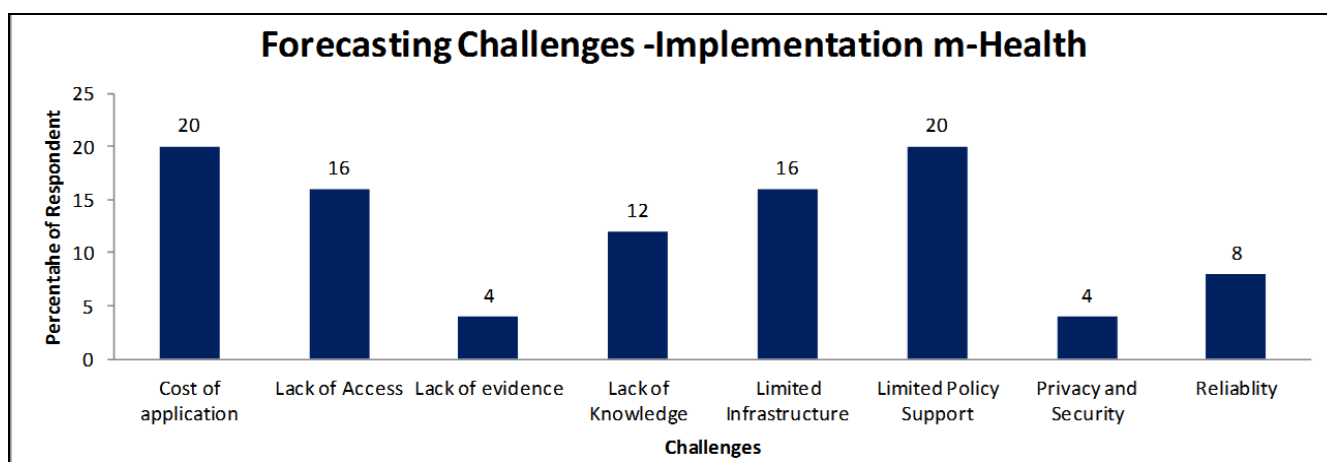


Fig 11

Although data and information pouring in is varying but at the same time the challenges were also listed by the payers in the M-Health Implementation. The challenges listed were cost of application, lack of access, lack of evidence, lack of knowledge, limited infrastructure, limited policy support, privacy and security, reliability. 20 percent of the payers

mentioned cost of application and limited policy support as main challenge. Lack of access and limited infrastructure was given by 16 percent payers. Only 4 percent of the payers mentioned lack of evidence and privacy & security as a challenge.

Table 12

Key Solutions	Sum of Number	Percentage
Awarness Camps	5	19
Chemist should Install the application	4	15
Data Security	2	7
Free of cost application	3	11
Government Policy	4	15
Mandatory for all Doctors to perscribe	4	15
Setting up Infrastructure	3	11
To take Internet connectivity to Deep pockets of country	2	7
Grand Total	27	

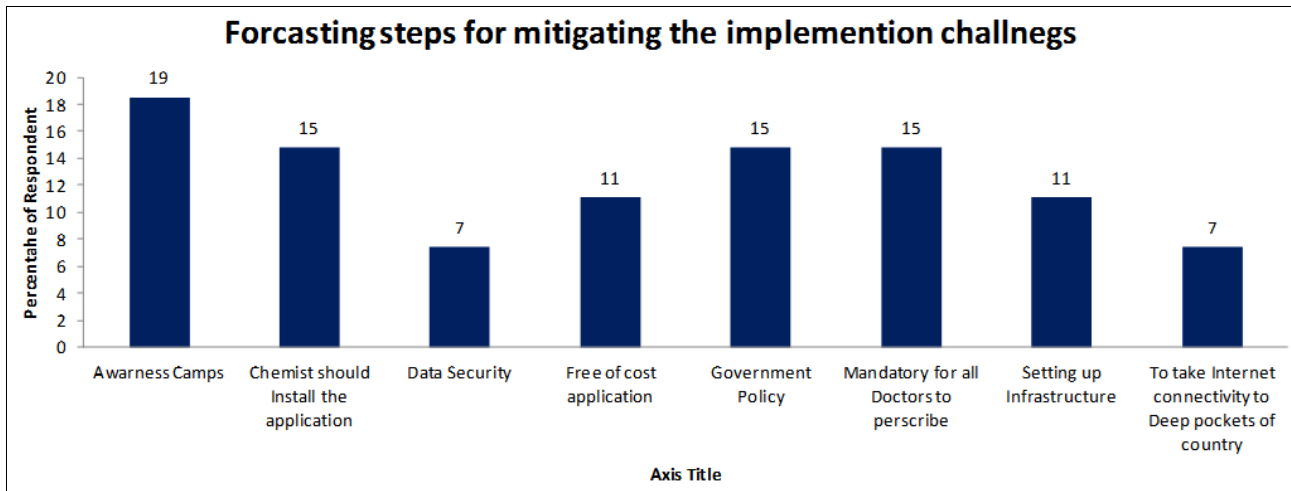


Fig 12

The solution to these challenges will be many like awareness campus, chemist should install the application, Data security, Free of cost application, Government Policy, Mandatory for all doctors to prescribe, setting up infrastructure, to take internet connectivity to deep pockets of country. Organizing awareness camp was mentioned by 20 percent payers which can minimize the implementation challenges.

Conclusion

Health care is one of the key indicators of the nations development. Technological sub systems can bridge the implementation gaps for standardized practices as observed by the major linking blocks in the whole system. M-Health is emerging as one of the key perpetuators in bridging the gap.

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Table 13

Medium of Communication	Count
Regional Language	4
Hindi	0
English	0
Grand Total	4

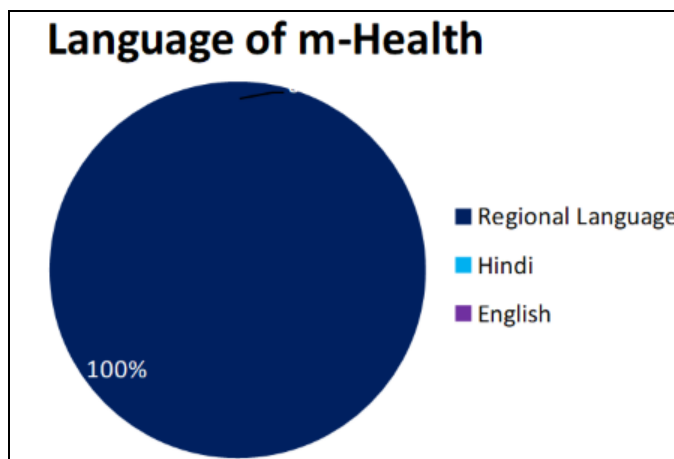


Fig 13

100 percent of the payers insisted the language of the application should be in regional language.