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mHealth US end-user research: Beliefs, barriers, success factors and recommendations

Prepared for the GSMA by Ipsos Healthcare
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Background

There is considerable excitement around the potential for mobile health solutions (mHealth) to have a significant impact on the management of health across the world. It has been estimated that the mHealth industry may be worth up to US $30bn by 2015.

In order to maximise the potential of mHealth, it is imperative that solutions are developed and mobilised with the needs of the end users at the forefront. Solution design should start with an understanding of the current challenges facing healthcare practitioners (HCPs), patients and consumers.

The purpose of this paper is to provide an understanding of:

- The needs of HCPs, patients and consumers in the US,
- Their beliefs in the benefits of mHealth,
- Barriers to greater usage, and
- Assessment of key success factors.

Research Objectives

The GSMA wished to address the following objectives:

- Understand the challenges that HCPs, patients and consumers currently face regarding the management of chronic conditions and people's overall health
- Discover whether these end users believe in the benefits of mHealth and understand the nature of these benefits
- Understand barriers to end user adoption of mHealth and ways to overcome them
- Identify critical success factors for developing mHealth solutions

The GSMA commissioned Ipsos MORI to conduct research amongst potential end users of mHealth to address these objectives.

Research Approach

Respondents:

The research incorporated seven end user groups:

- **Secondary care HCPs:**
  - Cardiologists
  - Diabetes specialists
- **Primary care HCPs**:
  - Primary care practitioners (PCPs)
  - Community nurses
- **Chronic patients with:**
  - Cardiovascular conditions
  - Diabetes
- **General wellness consumers:**
  - Adults with a high level of interest in health and wellness who do not suffer from a chronic health issue

Methodology and Entry Criteria:

Qualitative Phase:

Ipsos conducted 2 focus group interviews (6 respondents per group) with each of the 7 end user groups (14 groups in total), providing in-depth exploration of the perceptions and usages of mHealth.

The interviews were conducted face-to-face between 6th and 9th March 2012 in New York and Philadelphia.

- Respondents were screened to encompass a broad range of ages (chronic patients/consumers) and professional experience (HCPs)
- Respondents were provided with a definition of mHealth and exposed to examples of potential applications and solutions

Quantitative Phase:

Ipsos conducted online surveys with the 7 end user groups, providing quantitative validation of themes uncovered during the qualitative phase.

Sample sizes were as follows:

- 50 cardiologists
- 50 diabetes specialists
- 50 PCPs
- 50 community nurses
- 100 diabetes patients
- 100 cardiology patients
- 100 general wellness consumers

The interviews were conducted between 22nd May and 16th June 2012.

- Respondents were screened to encompass a broad range of ages (patients/consumers) and professional experience (HCPs).
- Respondents were provided with a definition of mHealth and exposed to examples of potential applications and solutions

Current Challenges

HCPs and Patients:

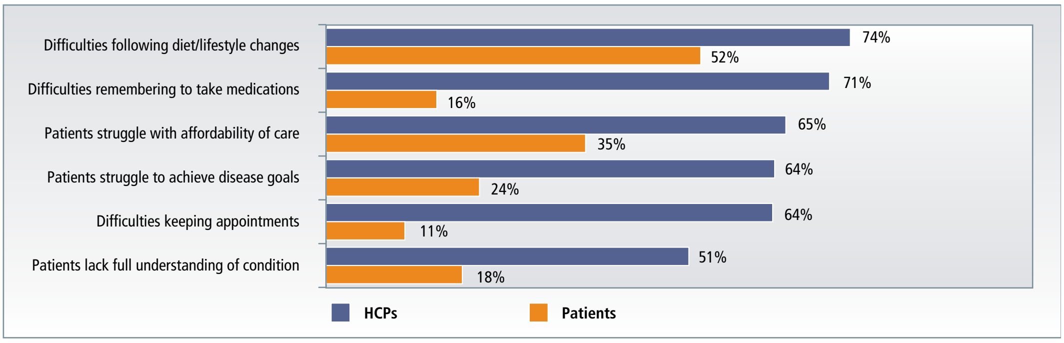
HCPs face far more current challenges related to the management of chronic conditions than patients. On average HCPs note five separate challenges compared to two for patients.

Three of the top five challenges experienced by HCPs relate to **patient behaviours.** Three-quarters of HCPs believe patients have difficulty following diet and/or lifestyle changes, and two-thirds believe patients are non-compliant with medication and fail to maintain appointments. Difficulty following diet/lifestyle changes is also the leading challenge for patients (52%), but in general they do not believe they have issues with non-compliance to medications and appointments. Nevertheless this demonstrates that there is a considerable need for solutions that will help patients to adhere to their treatment and disease management plans.

Affordability of care is a common challenge for both HCPs and patients. Two-thirds of HCPs believe their patients currently struggle with the cost of care, an issue also recognised by more than one in three of patients themselves. Both HCPs and patients need solutions that will allow care to be delivered more affordably.

The majority of HCPs identify that patients currently **struggle with achieving their disease goals,** a view shared by one in four patients. There is a need for solutions that can lead to better health outcomes for patients with chronic conditions.

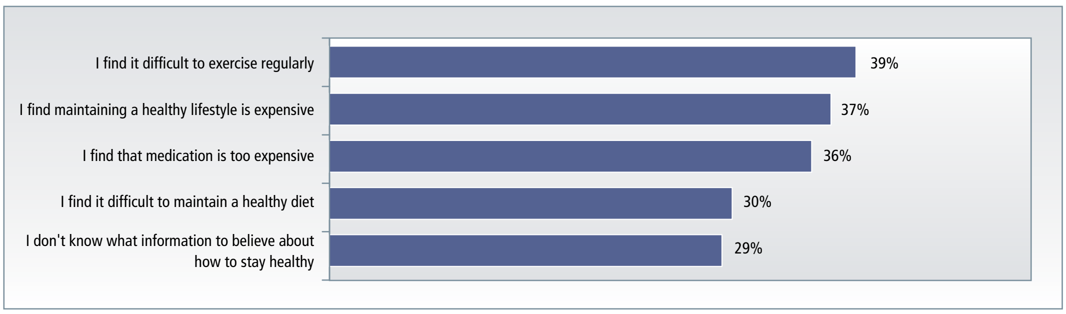
Fig. 1: Top Current Challenges for HCPs and Patients in Managing Chronic Conditions



Consumers:

In common with patients, general wellness consumers state adherence to regular exercise as their primary challenge, reinforcing the need for solutions that assist with maintaining a healthy lifestyle. The question of affordability is also paramount, both in terms of maintaining a healthy lifestyle and for medications.

Fig. 2: Top Current Challenges for General Wellness Consumers in Maintaining their Overall Health

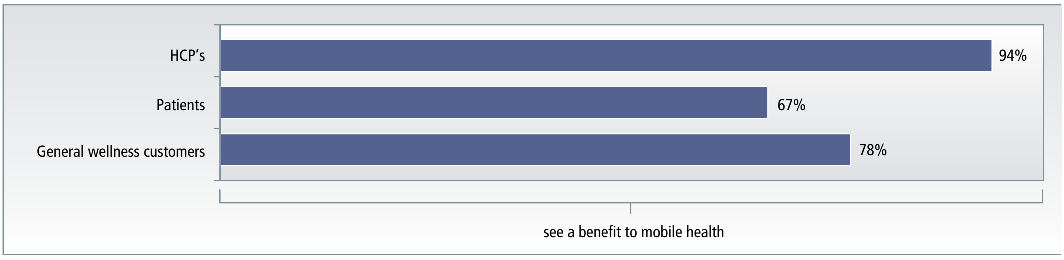


Benefits of mHealth

Overall Benefits to mHealth:

All end users groups strongly believe that mHealth has the potential to deliver significant benefits. This is particularly so for HCPs with near universal (94%) belief in the benefits of mHealth.

Fig. 3: Belief in the Benefits of mHealth

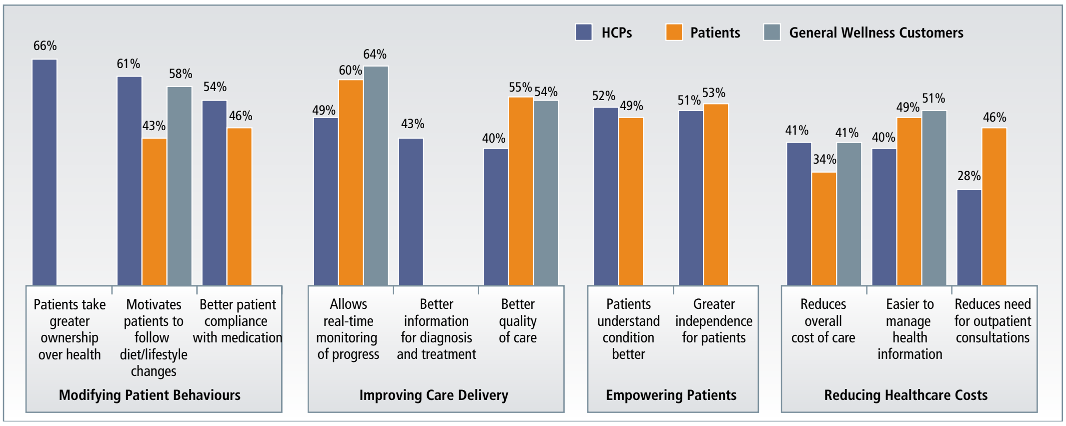


There are, however, key differences between the end user groups in how they believe mHealth will be of most benefit. HCPs believe the main benefits of mHealth relate to the ability to drive behavioural change by enabling patients to take greater ownership over their health. In contrast less than 50% of patients perceive these benefits.

Patients and consumers believe the primary benefit of mHealth to be allowing real-time monitoring of progress (60% and 64% respectively). Overall, patients and consumers are more convinced than HCPs that mHealth can lead to better quality of care.

50% of both HCPs and patients agree that mHealth can enable patients to take control in the management of their own condition through better understanding. In addition, almost 50% of patients see mHealth as allowing better management of health information and reduced outpatient consultations. Only a minority of HCPs agree with the latter benefit and 40% believe it will improve information management.

Fig. 4: Top Benefits of mHealth by End User Group

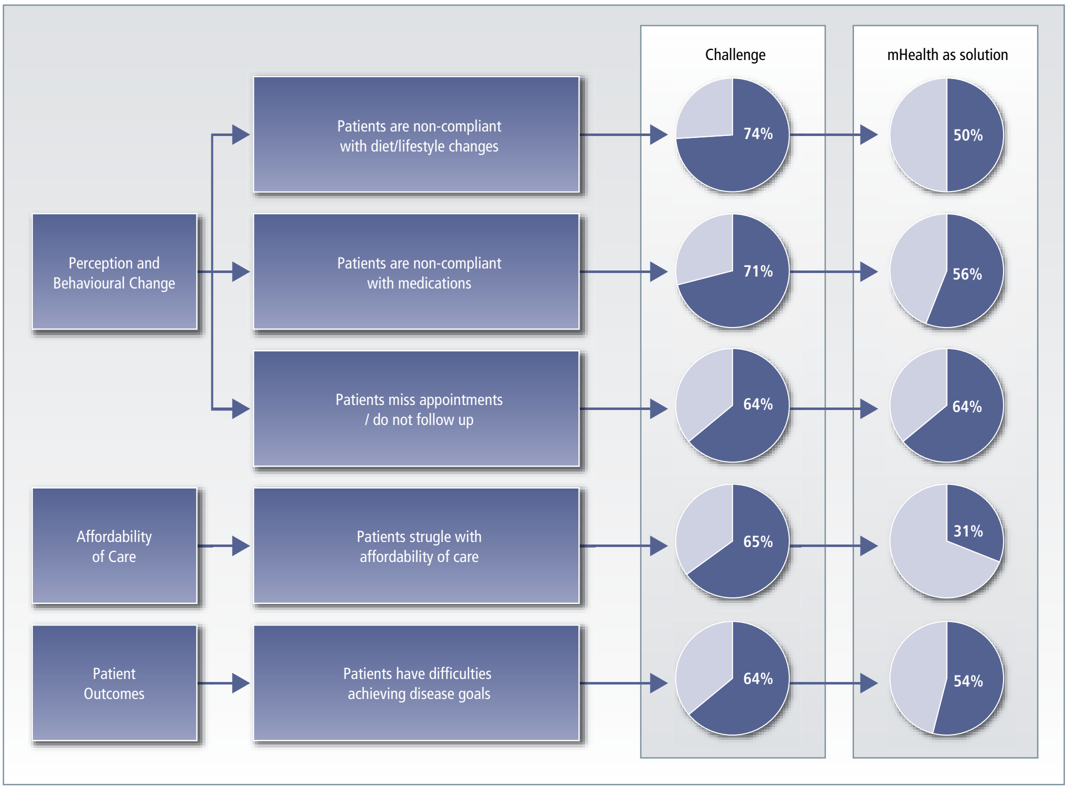


Mapping mHealth Benefits to Current Challenges:

HCPs believe that mHealth can address key challenges of patient perceptions and behaviour and difficulties achieving disease goals, but are more sceptical about the potential to make healthcare more affordable.

HCPs believe mHealth can be a key support in achieving improved patient health through better disease management and behavioural change. More than 50% of HCPs believe mHealth can directly address patient non-compliance with diet/lifestyle changes, medications and appointments. Similarly, 54% state that mHealth can assist patients to achieve their disease goals. However, only 31% are confident that mHealth can address issues around affordability of care for patients.

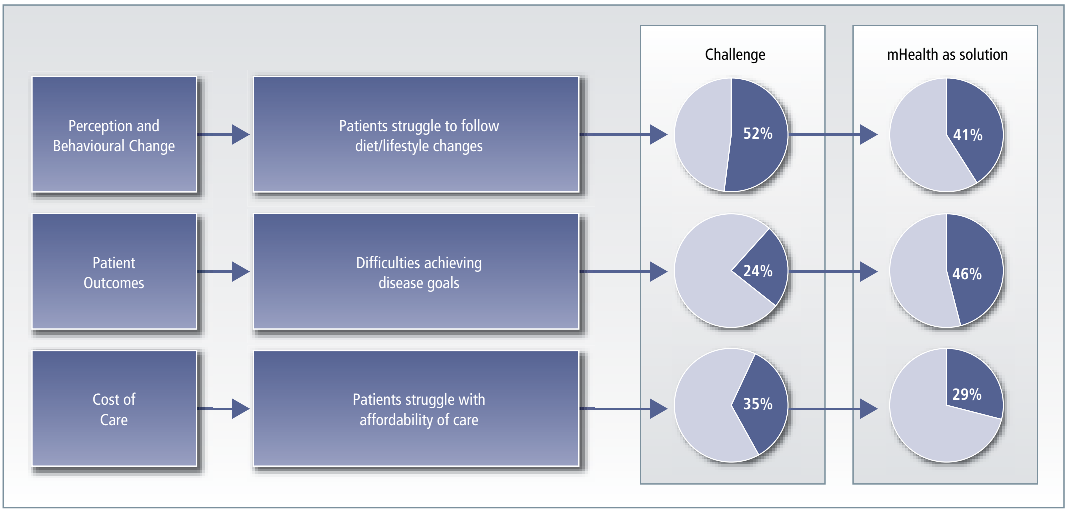
Fig. 5: Healthcare Practitioners: Challenges with Management of Chronic Conditions and Potential for mHealth to Address



Patients with chronic conditions are less confident than HCPs that mHealth can address their key challenges. 40% of patients believe that mHealth can support and motivate them to follow diet/lifestyle changes, compared to 50% of HCPs, and 46% believe that mHealth can be an ally to help them achieve health goals compared to 54% of HCPs.

In line with HCPs, patients are sceptical that mHealth can also be a tool to reduce the cost of treatment and management. 29% of patients are confident that mHealth can address this issue.

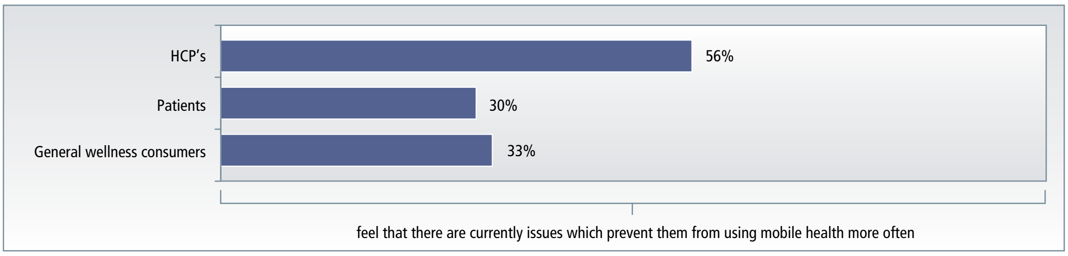
Fig. 6: Chronic Patients: Challenges with Management of Chronic Conditions and Potential for mHealth to Address



Barriers to mHealth

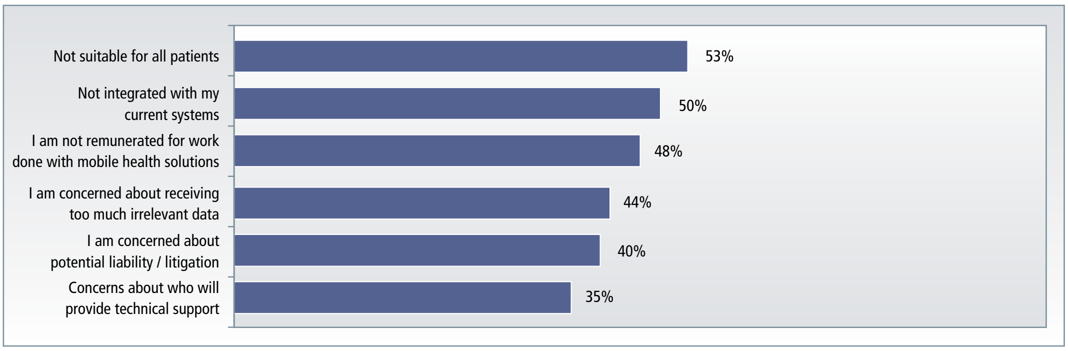
Whilst HCPs are the most positive towards the potential benefits of mHealth, they are also more likely than other end users to note barriers to greater usage. HCPs have the potential to be strong advocates for mHealth solutions, but they identify several areas that the mHealth industry must address in order to expand their adoption of these technologies. 56% of HCPs believe there are issues preventing greater usage of mHealth versus 30% of patients and 33% of general wellness consumers.

Fig.7: Belief in Barriers to Greater Usage Of mHealth by End User Group



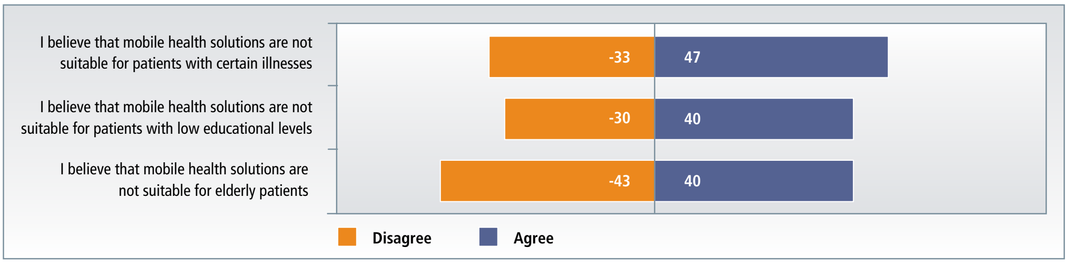
HCPs note a range of barriers to increased usage of mHealth. The main barrier to increased HCP usage of mHealth is the belief that not all patients will benefit (53%). HCPs are also worried about mHealth adding complexity to their practice. 50% of HCPs believe that mHealth will not be interoperable with their current systems, whilst more than 40% believe they will receive too much irrelevant data and mHealth will increase their workload. Nearly half of HCPs also believe they will not be remunerated for work done with mHealth, and 40% are concerned about potential liability associated with use of mHealth solutions.

Fig.8: Healthcare Practitioners: Barriers to Greater Usage of mHealth



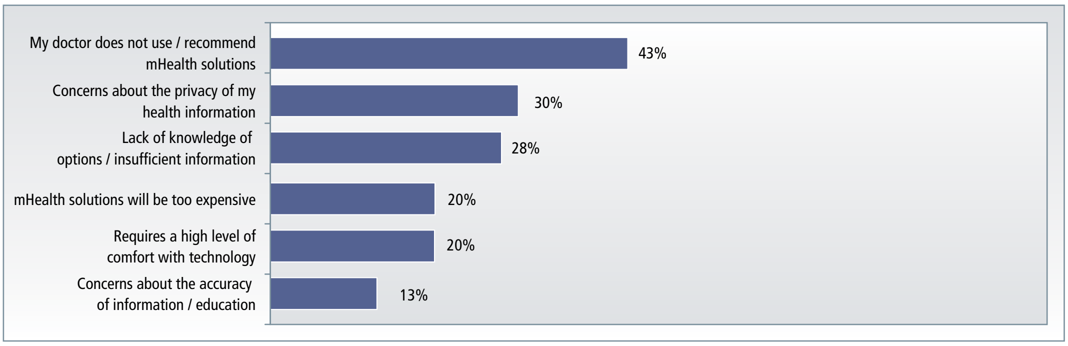
There is little consensus as to why HCPs believe that solutions are not appropriate for all patients. Nearly 50% of HCPs believe mHealth is not suitable for patients with certain conditions, but equally 33% disagree with this statement. Similarly, 40% of HCPs believe mHealth is not suitable for patients with low education levels, but again a high proportion (30%) demur. Ultimately, ensuring that mHealth solutions are presented in a way that reassures HCPs that all patients can benefit from them will be an important factor for growth. HCPs need mHealth solutions that are customizable and/or sufficiently intuitive for all patient types.

Fig.9: Healthcare Practitioners: Barriers to Greater Usage of mHealth: Not Suitable for All Patients



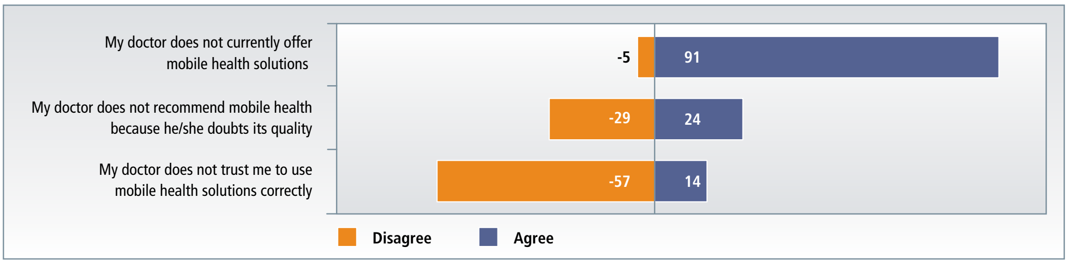
Patients have three primary barriers to increased usage of mHealth. The main issue that prevents further adoption of mHealth solutions is lack of recommendation from their HCP (43%). Developers must ensure solutions are advocated by HCPs. 30% of patients are also concerned about the privacy of their information. Although the research does not suggest privacy is a key concern, mHealth developers must be prepared to provide reassurance as needed. Lack of information about mHealth is also important, and is mentioned by 28% of patients. There is a need for awareness campaigns to promote the benefits of mHealth.

Fig.10: Chronic Patients: Barriers to Greater Usage of mHealth



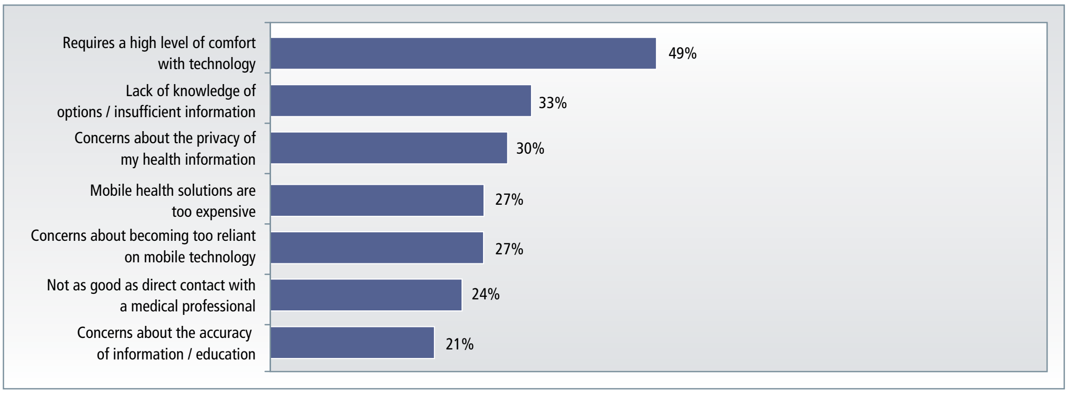
The primary factor preventing patients using more mHealth solutions is that HCPs do not offer them. However, patients appear to be open to HCPs prescribing mHealth solutions. They do not perceive that HCPs doubt the quality of mHealth solutions, nor their own ability to use the solution correctly.

Fig.11: Chronic Patients: Barriers to Greater Usage of mHealth: Not Recommended by HCP



The belief that mHealth will require a high level of technological knowledge is clearly the largest barrier to mHealth usage amongst consumers (49% overall). Underpinning this belief is the perception that mHealth solutions are reliant on the end user owning a smartphone. There is a need for mHealth developers and advocates to ensure that end users are aware of standalone solutions that do not require ownership of or comfort with smartphone technology.

Fig.12: General Wellness Consumers: Barriers to Greater Usage of mHealth



Factors for Success

HCPs, patients and consumers agree on three key success factors for increased usage of mHealth.

mHealth solutions should be affordable/reimbursed

Affordability / reimbursement of solutions was considered important by HCPs, patients and consumers. Developers of mHealth solutions should work with both the government and insurance companies to ensure affordable mHealth solutions can be achieved.

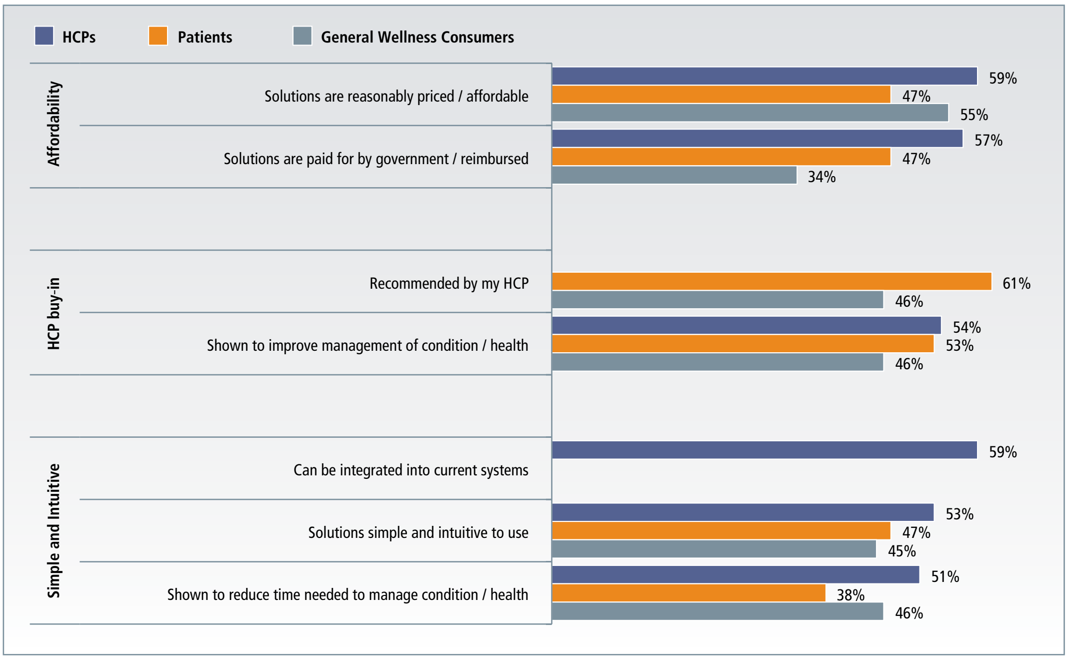
mHealth solutions should gain HCP buy-in

Evidence that mHealth solutions lead to better quality of care is seen as a key factor among HCPs and patients for increasing usage. Consumers and especially patients are looking for solutions to be recommended by their HCP. Developers should consider partnering with medical providers to help them demonstrate the benefits of mHealth and giving HCPs support when advocating specific solutions.

mHealth solutions should be simple and intuitive

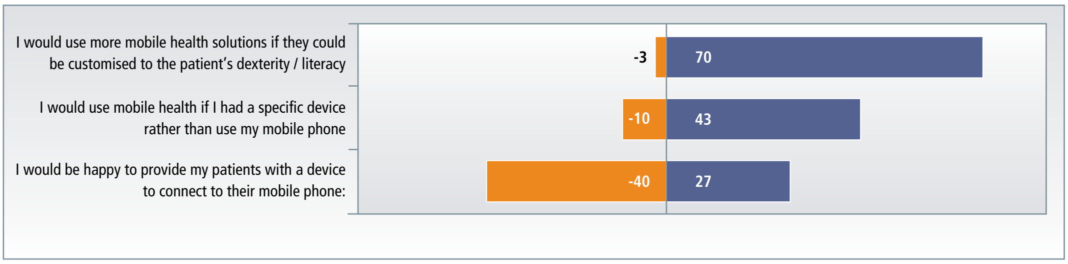
Nearly 60% of HCPs require mHealth solutions to integrate seamlessly into their current practice, making it the most important factor for success amongst this population. Around 50% of HCPs, and 40% of patients and consumers, believe mHealth solutions should be simple and intuitive to use, and similar proportions are looking for mHealth to reduce the complexity of managing their condition / health.

Fig.13: Factors Leading to Greater mHealth Usage by Respondent Group



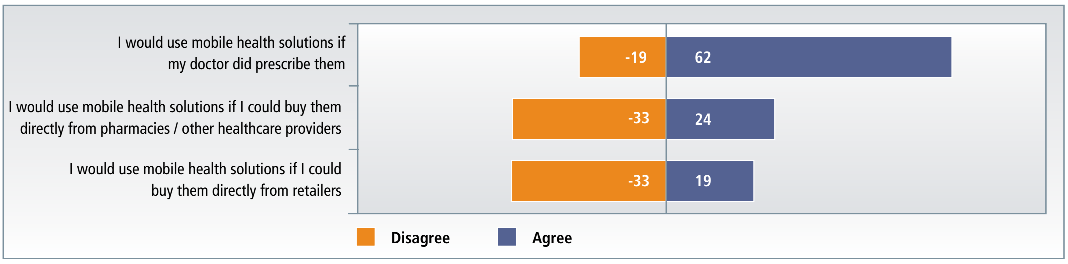
mHealth services need to have the flexibility to be tailored for individual patients, especially regarding literacy levels. This would lead to increased mHealth usage from the vast majority (70%) of HCPs who currently limit their usage due to patient suitability questions. HCPs are less convinced that the answer lies in offering patients either specific devices or devices that connect to their mobile phones. The solution lies in the ability to customise the offering rather than the mode of delivery.

Fig.14: Overcoming HCP Barriers to Greater Usage of mHealth: Not Suitable for All Patients



The vast majority of patients would use mHealth if it were offered by their HCP. Patients believe and trust that their HCP is the expert and as such advocacy should be built amongst HCPs. This advocacy can then be mobilised to ensure the benefits are promoted to patients, who then have the opportunity to access mHealth.

Fig.15: Overcoming Patient Barriers to Greater Usage of mHealth: Not Recommended by HCP



Implications and Recommendations

Overall, the study highlights the need for partnerships and cross-stakeholder engagement in order for HCPs, patients and consumers to derive the maximum benefits from mHealth. This will require mobile operators and solution developers, the healthcare industry and regulatory bodies / insurers to work together to create an environment in which mHealth is readily accessible and meets end users' needs.

In addition, the study reveals that awareness of mHealth is paramount. Although end users have a reasonable understanding of mHealth, awareness of the potential benefits and how to recognise optimal mHealth solutions for particular situations is inconsistent. There is a role for all stakeholders to play in enhancing overall knowledge of mHealth benefits and options.

This study informs a number of recommendations for each stakeholder.

Mobile Operators

- Develop simple, customisable solutions that will fit all patient types
- Provide a full service model, offering not only the mHealth solution but also education and technical support
- Promote mHealth solutions' ability to meet the big challenges of behavioural change, including diet/lifestyle support and medication compliance
- Seek partnerships with key medical associations / patient groups to promote wider adoption of mHealth solutions
- Ensure mHealth solutions adopt varying price structures, including fee-for-service models

Healthcare Industry

- Partner with mobile operators to tap into the expertise in designing solutions that are customisable and flexible to fit all end user groups and needs
- Support mobile operators in designing solutions that are interoperable with current healthcare systems

Patient and Consumer Groups

- Patients should seek advice from their HCP on how mHealth could benefit them and which solutions might be appropriate
- Patient associations should lobby for mHealth to be made available by federal agencies / payers to allow maximum access

Healthcare Practitioners

- Open the conversation with patients about mHealth and discuss whether and how it could benefit them
- Recommend mHealth solutions that are appropriate to individual patient circumstances

Governments, Regulators and Insurers

- Develop awareness campaigns for mHealth with HCPs and patients
- Ensure mHealth solutions that deliver patient and system benefits are reimbursed
- Work with mobile operators to develop solutions best suited to the needs of the population

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