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Research Article

Bridging Gaps and Fostering Inclusivity: The Imperative Need to Improve Healthcare Mobile Applications for Technology-Shy Patients

Nour Kassem RPh[1]*[iD], Mohammed Al Hammadi[2], Yassir Jassim Mohammed MB ChB[3] and Zaki Almallah, MD[4]

[1]Research Department, Cleveland Clinic Abu Dhabi, Abu Dhabi, UAE

[2]Khalifa University, Abu Dhabi, UAE

[3]Department of Urology, Canadian Hospital, Dubai, UAE

[4]Department of Urology, Cleveland Clinic Abu Dhabi, Abu Dhabi, UAE

A B S T R A C T

The rapid rise of mobile healthcare applications is transforming patient care, providing tools for remote consultation, diagnosis and health monitoring. However, these advancements often fail to accommodate the needs of technology-shy users, a demographic that includes older adults and individuals with limited digital literacy. This paper highlights the barriers faced by technology-shy patients and presents strategies to enhance inclusivity in healthcare applications. By simplifying user interfaces, offering personalized onboarding and incorporating accessibility features, we can bridge the technological divide and foster an inclusive healthcare environment.

Keywords: Healthcare apps, Telehealth, Inclusivity, Technology-shy patients, Digital health equity, Mobile health, AI in healthcare, Elderly care, Patient engagement, Telemedicine.

1. Introduction

In the era of technology and digital innovation, mobile applications have taken center stage in transforming healthcare delivery. The growing demand for improved healthcare mobile apps reflects the diverse challenges experienced by patients and providers alike. These applications offer immense potential to bridge healthcare access gaps, promote patient engagement and support real-time health monitoring. However, the imperative to create better mobile applications extends beyond technological advancements; it embraces the challenge of inclusivity. As the adoption of healthcare mobile apps grows, an important demographic-technology-shy patients-often finds themselves excluded from these advances. Addressing their needs is critical to ensuring equitable healthcare for all and the demand for improved healthcare mobile applications tailored to this demographic resonates louder than ever.

This paper explores the current state of healthcare mobile applications and the unique barriers faced by technology-shy individuals. By highlighting strategies for improving mobile applications, we emphasize the importance of inclusivity in digital health.

2. Telehealth in the evolving field of healthcare innovation

Telehealth is the delivery of healthcare via technology and its services range from consultation, diagnosis, treatment and well-being management[1]. The global expansion of telehealth has been remarkable in recent years, with the United States projecting a market value of $64 billion by 2025[2]. The industry is responding to the escalating costs of primary care by shifting towards cost-effective alternatives. However, despite this growing availability, only 2% of patients have utilized telehealth services. Insights from a study revealed intriguing patterns in telehealth utilization. While seniors (> 65 y/o) have shown the lowest adoption rates at 5.3%, the younger demographic (18-24 y/o) has emerged as the most frequent users, with a substantial 13.1% utilization rate. Notably, individuals between the ages of 55 and 64 also demonstrate a significant interest, with 10.5% having tried telehealth services. The study further highlights a concerning trend, as 74.3% of consumers either lack awareness of telehealth (34.6%) or face barriers due to their health system or insurance not providing access (39.7%)[2,3]. As telehealth continues to reshape healthcare delivery, addressing these disparities in awareness and access becomes crucial for maximizing its potential benefits across diverse demographics and geographic regions.

Telehealth certainly has the potential to improve care equity for the aged population, but it can also, make discrepancies worse. According to Kruse et al, age-related challenges arise due to older patients' limited exposure to new technologies and insufficient training, which is consistent with their desire for in-person treatment[4]. According to recent research, 70% of elderly individuals own and regularly use a computer, smartphone or tablet at home with internet connection[5]. The older population, however, has restricted access to telemedicine services. This digital divide should be acknowledged and sorted by policymakers[6].

3. Impact of the COVID-19 Pandemic on digital health

The COVID-19 pandemic was a turning point in digital health, highlighting the significance of remote healthcare solutions[7]. Telemedicine has developed into a crucial tool for the public, healthcare professionals and patients during that time[8,9]. Better healthcare mobile applications can play a pivotal role in facilitating telemedicine, allowing patients to consult with healthcare professionals from the comfort of their homes. Additionally, despite the benefits provided by telehealth services for the elderly, particularly during the pandemic and social distancing restrictions, more services tailored to their needs are required to satisfy demands for this population[1].

3.1. Strategies for Enhancing Healthcare Apps to Support Technology-Shy Users

Improving healthcare mobile applications to accommodate technology-shy patients involves a combination of design, communication and support strategies to create an inclusive and user-friendly experience. **(Figure 1)** shows key strategies for enhancing inclusivity. Those strategies are further elaborated upon in **(Table 1)**.
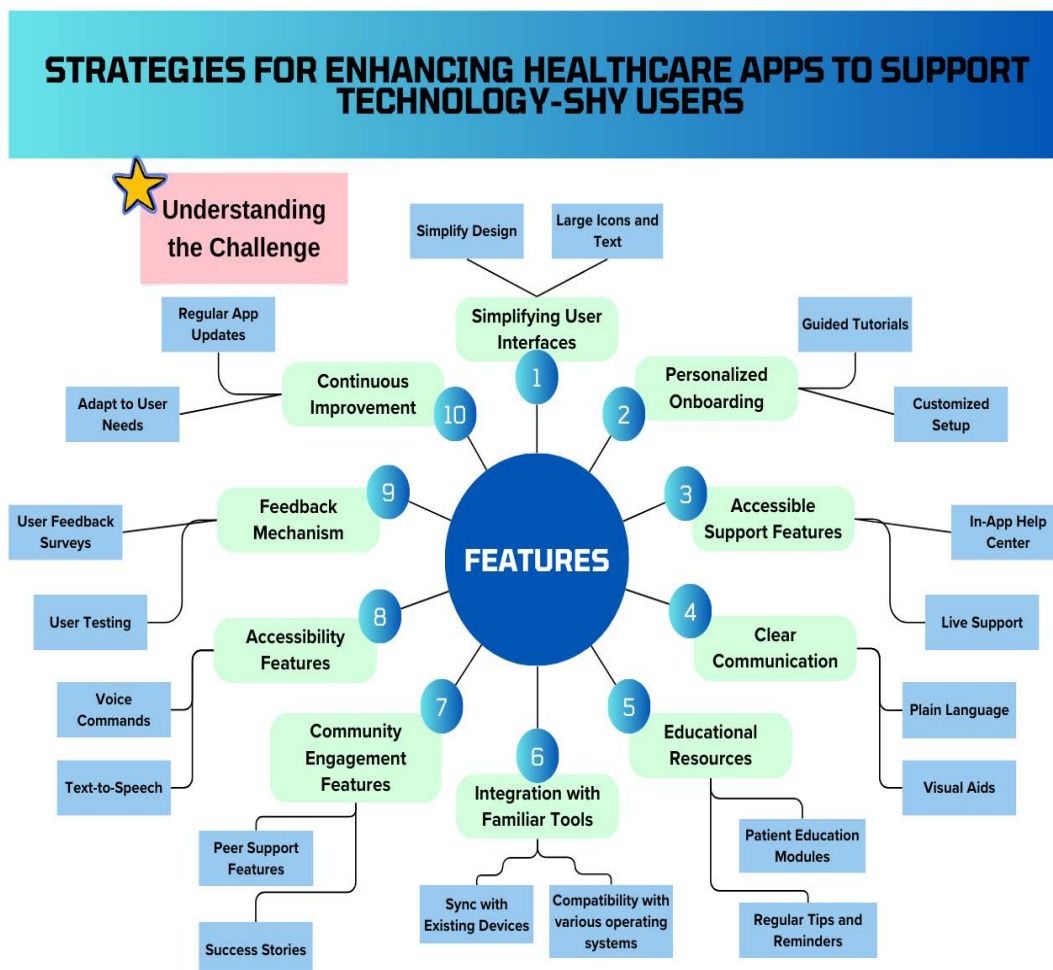

Figure 1: A Visual of Strategies for Enhancing Healthcare Apps to Support Technology-Shy Users.

Table 1: Detailed Strategies for Enhancing Healthcare Apps to Support Technology-Shy Users.

Recommendation	Description/Features
Simplifying User Interfaces	• Simplify Design: create a clean and intuitive interface with easy navigation. • Large Icons and Text: important for users who may have visual impairments.
Personalized Onboarding	• Guided step-by-step tutorials to help users familiarize themselves with the application's features. • Customized setup allows users to personalize their onboarding experience based on their preferences and needs.
Accessible Support Features	• In-App Help Center: provide an easily accessible help center within the application, offering FAQs and troubleshooting guides. • Live Support: Incorporate live chat or hotline support to assist users in real-time, addressing any concerns or difficulties they may encounter.
Clear Communication	• Plain Language: use plain language in all communications, avoiding technical jargon. Clearly explain the purpose and benefits of each feature. • Visual Aids: integrate visual aids, such as diagrams or videos, to complement textual instructions.
Educational Resources	• Patient Education Modules: interactive modules within the application to explain health concepts, conditions and the importance of using the app. • Regular Tips and Reminders: to help users maximize the benefits of the application in managing their health.
Integration with Familiar Tools	• Sync with Existing Devices: such as basic wearables or smartphones, to facilitate seamless data transfer. • Compatibility with various operating systems and devices to accommodate a range of user preferences.
Community Engagement Features	• Peer Support Features: to facilitate connections between users, such as forums or chat groups focused on shared health interests. • Success Stories: sharing stories from users who initially faced challenges but successfully embraced and benefited from using the application.
Accessibility Features	• Voice Commands: to allow users to interact with the application verbally. • Text-to-Speech: a functionality for users who may prefer to listen rather than read.
Feedback Mechanism	• User Feedback Surveys: regularly collect feedback from users, especially those who may be technology-shy. Use it to make continuous improvements. • User Testing: Conduct usability testing with a diverse group of users to identify any barriers or challenges early in the development process.
Continuous Improvement	• Regular Updates: keep the application updated with improvements based on user feedback and technological advancements. • Adapt to User Needs: be flexible, considering evolving user needs and preferences.

3.2. Empowering Wellness in a Fast-Paced World

The pace of modern life often leads to delays in seeking medical attention. Enhanced healthcare mobile applications can act as proactive wellness companions, providing real-time health monitoring, medication reminders and personalized health tips. These features empower users to take charge of their well-being, promoting preventive care and early intervention, which can ultimately lead to a healthier society.

3.3. Harnessing Artificial Intelligence to Revolutionize Healthcare

The integration of cutting-edge technologies, such as artificial intelligence and machine learning, further accentuates the need for better healthcare mobile applications. These technologies can analyze vast datasets, offer predictive analytics and assist in personalized treatment plans. This not only enhances the efficiency of healthcare delivery but also contributes to the advancement of medical research and evidence-based practices.

4. Conclusion

The need for better healthcare mobile applications is indisputable and the need for those tailored to technology-shy patients reflects a commitment to inclusivity and equity in healthcare. These applications have the potential to transform healthcare delivery, making it more accessible, proactive and patient-centered. By prioritizing user-friendly designs, personalized onboarding, clear communication and integration with familiar tools, these applications have the potential to bridge the technological gap and empower a wider demographic to actively participate in their health management. As we navigate the complexities of modern healthcare, investing in and advancing these technologies is not just a luxury but a necessity to build a healthier and more connected world. And as we strive for a more inclusive digital healthcare future, the development of such applications stands as a beacon of progress, ensuring that no patient is left behind in the pursuit of improved health outcomes. The future of healthcare is undoubtedly mobile and the time to embrace this transformative shift is now.

Conflict of Interest:

No potential conflict of interest relevant to this article was reported.

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