



mHealth: LEADING THE CHARGE

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Abstract: *Information technology has revolutionized the way businesses are carried out, education is imparted, and healthcare is delivered. A promising development in the domain of information technology has been the widespread adoption of mobile phones in the country. Technology forecasters have indicated that the mobile devices have immense potential and when compared with other domains, the potential with respect to the delivery of healthcare services seems to be much more than all other domains. In this article we would like to cite a couple of recent developments in the domain of mHealth those have the potential to spark-off numerous applications of mHealth. uCheckis an apple IOS and Android based application that carries out urine analysis and is available on the Internet for free.*

Keywords: *IT, m-Health, uCheckis, apple IOS, Android*

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BACKGROUND

Information technology has revolutionized the way businesses are carried out, education is imparted, and healthcare is delivered. Although healthcare has been one of the domains those can be considered to be the slowest in adopting the applications of information technology, but the domain stands to gain the most from information technology that is being touted as the lifesaver technology for millions of people in the under privileged regions of the world. The fact that information technology is gaining grounds in healthcare can be understood from the rate at which the IT spendings in healthcare in India have grown, as per a report published by Springboard Research, in a span of 4 years (2009-13) the IT spendings in Healthcare have almost tripled and the industry has witnessed a compounded annual growth rate of around 22%. [1(Healthcare Financial, 2012)]. It is interesting to note that the IT spendings in healthcare has exceeded the forecasts of India's overall IT spendings – which were pegged to grow at around 16% [2. ((ENN), 2012)]

MOBILE TECHNOLOGIES

A promising development in the domain of information technology has been the widespread adoption of mobile phones in the country. Last year in July India crossed a mark of selling 50 million mobile handsets and out of these over 5% were smartphones. [3. (Sharma, 2012)] It is worth inclusion here that India is world's second largest mobile handsets market, and China wouldn't be surprised to see India surpassing them in very near future. Smartphones would cover over 25% of the market of mobile handsets in the country. The industry experts have considered the following as the reasons for such a rapid growth of smartphones in the country [4. (Advisors, 2012)]:

- Emergence of Multi-SIM smartphones
- - Shift in the OS
- - Faster Processor
- Near Field Communications

MOBILE TECHNOLOGIES AND HEALTHCARE

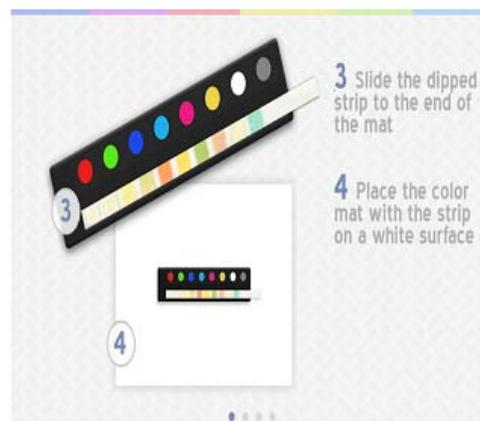
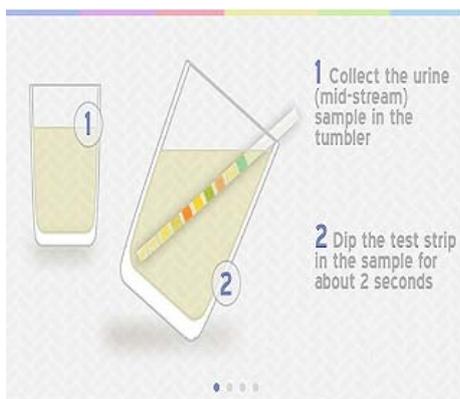
Technology forecasters have indicated that the mobile devices have immense potential and when compared with other domains, the potential with respect to the delivery of healthcare services seems to be much more than all other domains. This is so because the mobile devices are the only pieces of technology those are accessed and owned by the poor

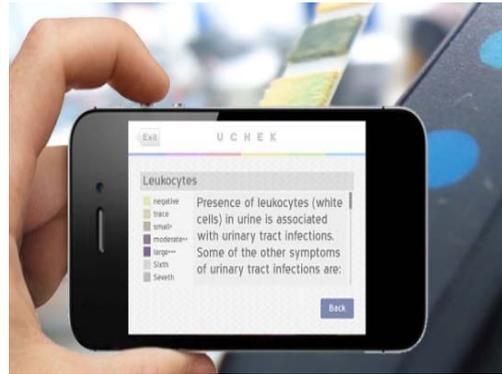
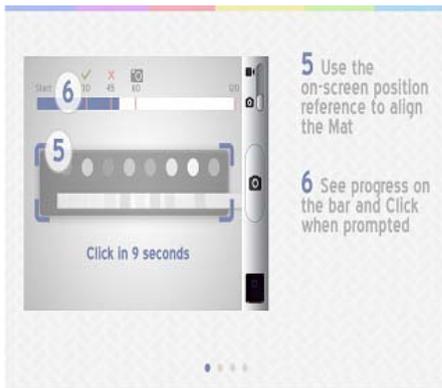


masses. Hence mobile devices form a perfect case for bridging not only the digital divide but also the wide divide pertaining to the healthcare services and facilities that exists between the rural and urban India. Pricewaterhouse Coopers in their report have indicated that by 2017 mobile health services could save upto 300 billion Euros every year. These savings would flow from reduced visits to doctors and hospitals, reduced costs and fewer expensive medications. Smartphones – be it Android based, IOS based or Blackberry IOS based would have mHealth applications those would enable the patients and the doctors alike not only to stay in touch with eachother but also save time.

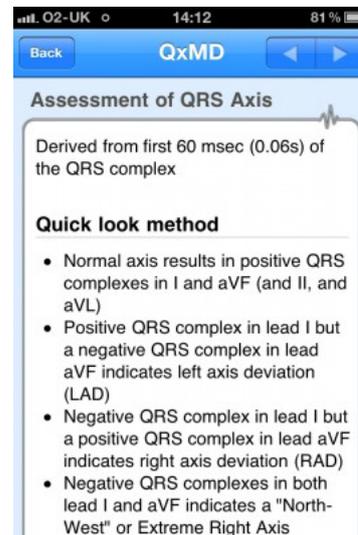
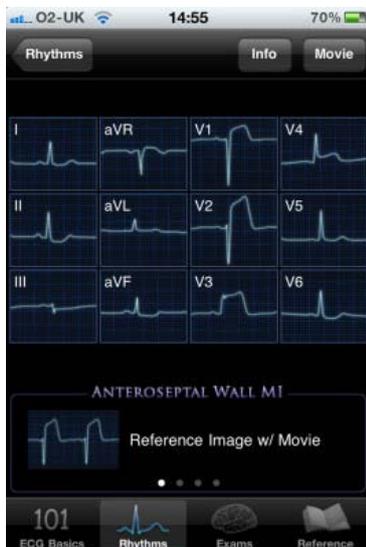
mHealth: MOBILE APPS

In this article we would like to cite a couple of recent developments in the domain of mHealth those have the potential to spark-off numerous applications of mHealth. uCheck is an apple IOS and Android based application that carries out urine analysis and is available on the Internet for free. It is a well established fact that Urine Analysis is one of the common clinical laboratory test that helps the doctors to know about poor health of the patient including urinary infections and dehydration. The mobile app that has been recently launched on Android as well as IOS has gained immense popularity. These apps capture image of the dipstick on which a sample of urine has been touched. The analysis of the dipstick facilitates detection of around 25 medical conditions such as urinary tract infection, diabetes etc. The images below show various stages of the test as it is performed with uCheck application.





There are numerous ECG Apps available in the market. These apps are based on almost all mobile operating systems. Some of the most popular ECG Apps are ECG Guide by QxMD, Instant ECG by iAnesthesia and ECG Notes.



Some of these ECG apps have immense utility for general physicians or junior cardiologists as these apps also act as reference tools. They contain numerous samples of rhythms, rhythm interpretations, clinical correlations, which are interpreted and can be compared with present patient's real ECGs too. The cost of these apps too is nominal. ECG Notes by Skyscape is considered to be the most comprehensive app on ECGs and it aids even senior cardiologists who have a sound understanding about pathologies pertaining to ECGs. Some of the apps are so advanced that the beginners or freshers in cardiology practice find these apps difficult to be used.



CONCLUSION

Time is not far when mHealth would merge into mainstream healthcare and those in the resource limited settings, worldwide, would stand to gain the most from the application of mobile technologies and mobile devices. Someone has forecasted that mobile devices could save around a million lives in Africa alone. The only issue that could act as a bottleneck in the growth and spread of mHealth could be the business model. But looking at the promising nature of mHealth it is being anticipated that all the stakeholders associated with mHealth industry would be able to put collectively address all the issues those are seemingly unyielding as of now.

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