Abstract

In developing countries like India, providing healthcare services to the rural population having low income has been a challenge due to scarcity of medical practitioners. The distribution of available skilled healthcare resources is uneven with large concentration in urban areas and villages. This requires venturing into ways to increase the reach of healthcare services catering to low income rural population. One of such emerging ways of providing healthcare services is through smart phone applications. As per facts stated by Internet and mobile association of India in the 2015, India will reach 236 million smart phone users by 2016. One of the killing widespread diseases which require urgent attention is diabetes mellitus. India is called the diabetes capital of the world where according to a survey done in 2015. Contrary to popular belief, diabetes mellitus affects more people in rural areas (34 million) than affluent urban cities (28 million). Till date smart phone based apps such as Diabetes Logbook were used in diabetes healthcare as just reminders for insulin intake through syringe. In the implementation of smart phone hardware extension called PockeInjector, along with function such as notification for insulin intake through syringe, authors propose a hardware attached to smart phone that can
facilitate injecting of insulin into the patients body added with function of notifying family members or family doctors about the date, time and location of patient while taking the insulin dosage. The functioning of injecting insulin through syringe is carried out by the hardware that is controlled by Android® smart phone based application that also sends notification about the intake process and manages the reminders for taking insulin dosage.

This novel approach combines the traditional procedure with a smart phone application.

References

untreated diabetes mellitus


Index Terms

Computer Science
Information Sciences

Keywords
PocketInjector, Smart Phone Based Insulin Delivery System, Android® based Diabetic Application, Android® based healthcare automation.