Role of mHealth applications for improving antenatal and postnatal care in low and middle-income countries: A systematic review

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Abstract

Background and Objective: The number of maternal deaths has dropped by 43% all around the world during 1990 to 2015. Apart from this, the progress in achieving MDG 5 is not exceptional in LMICs. Only 52% of pregnant ladies in LMICs obtain WHO suggested minimum of four antenatal counsels and the inclusion of postnatal consideration is generally poor. Now days, the expanded cellphone penetration has carried the potential for mHealth to improve preventive maternal medical care administrations. The objective of this review is to survey the viability of mHealth solutions on a scope of maternal health results by sorting the interventions as indicated by the types of mHealth applications.

Method: In between January 25, 2016 to January 1, 2000 three international online electronic databases were searched to distinguish studies investigating the role of mHealth solutions for the improvement of preventive maternal healthcare services. Of 1262 titles found after duplication, 69 possibly relevant abstracts were obtained. 42 abstracts were shortlisted out of 69 abstracts. Using data extraction sheet 42 full text articles were reviewed. In the final analysis total 14 full text articles were included.

Result: The 14 final full text articles were sorted in to five mHealth applications characterized in the conceptual framework. Based on this analysis, the most reported utilization of mHealth was for client education and behavior change communication, for example, SMS and voice reminders (n=9, 65%). The classification gave the understanding that much work has been done on behavior change communication and client education. Majority of the studies indicated that mHealth interventions have demonstrated to be viable to improve antenatal care and postnatal care services, particularly those that are pointed at changing behavior of pregnant women and women in postnatal period. However, little evidences are there on other sort of mHealth applications.

Conclusion: This survey proposes that mHealth solutions focused at pregnant women and women in postnatal period can improve preventive maternal healthcare services. However, there is a need to lead more controlled-trials and quasi-experimental studies to fortify the writing in this research area. The review suggests that mHealth researchers, sponsors and publishers should focus the transparent reporting of interventions to permit effective interpretation of extracted data.