

Development Plan for the Clinical Application of Maternity and Child Health Mobile App

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Abstract. In 2021, the World Health Organization designated the theme for World Patient Safety Day as "Safe Maternal and Newborn Care" with the aim of raising awareness of the importance of maternal and newborn safety and improving their overall safety. Many healthcare institutions in Taiwan currently provide printed materials such as childbirth guidelines and nursing instructions to patients. However, mobile applications in the current digital world might be more handy to assist pregnant women in understanding the changes during pregnancy and provide relevant health education in order to help reduce pregnancy and childbirth complications, as well as decrease maternal and neonatal mortality rates. **Keywords.** Maternity and Child Health Mobile App, Maternity and Child Health, Application, Clinical Decision-Making, Evidence-based practice

1. Introduction

In 2022 According to the World Health Organization, approximately 810 women and 6,700 newborns die daily worldwide from preventable pregnancy and childbirth-related complications. Therefore, seven children preventive healthcare services and ten prenatal examinations during pregnancy were set up in 1995 at the start-up of Taiwan National Health Insurance Bureau to reduce pregnancy and childbirth complications and decrease maternal and neonatal mortality.

Prenatal data and neonatal data were extracted from the Maternal and Child Health App and the data were adapted to assist patients' decision making on health related problems. Through actual health-related medical scenarios and evidence-based reports on the operational model of promoting health services, we would be able to provide strategies and specific policy recommendations for the effective promotion and utilization of digital care interaction models and health databases in the future.

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2. Methods

This App is designed, planned, and developed according to the needs of pregnant women and infants. It integrates the prenatal examination records from A medical center hospital in northern Taiwan with a total of 807 beds healthcare system and establishes interactive digital care models between healthcare providers and care recipients. This app serves as a decision making tool for pregnant women and their caregivers in making health behavior decisions, tracking their health status, and their childbirth process. Furthermore, it provides clinical references for healthcare professionals. Through continuous monitoring and AI learning technology, this app can detect potential problems and alert nurses to prevent deterioration of the condition.

3. Results

Currently, this app is at the development planning phase. The expected outcomes are as follows: (1)Through internal testing and verification, the system's error rate can be controlled under 1%. (2)Through internal testing and user feedback, the overall user satisfaction with the app is expected to reach over 80%. (3)After launching this app online, we expect to generate 1,000 downloads in the first month. (4)We value health-profession related personnel's opinions and expect to receive feedback from at least 200 healthcare professionals in the first month.

4. Conclusions

The Maternal and Child Health Mobile App is a valuable tool that can assist with pregnancy and parenting. It provides comprehensive information, personalized health plans and services, as well as an interactive social platform to pregnant women and their caregivers, which will greatly enhance users to better deal with the challenges during pregnancy and parenting while provide support and guidance.

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