MATERN.LY - A CUSTOMIZED ELECTRONIC MEDICAL RECORD SYSTEM SPECIALIZING IN MATERNITY CARE FOR A PRIVATE HOSPITAL IN SRI LANKA

Sarah Ratnayake

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Department of Computing and Engineering

Informatics Institute of Technology, Sri Lanka in collaboration with University of Westminster, UK

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Abstract

The importance of documenting and reviewing medical records for pregnant women has been emphasized over decades, as they are critical in determining the country's maternal mortality rate. One of several perceived issues challenging private healthcare facilities in Sri Lanka is that the many of them continue to retain medical records by paper documents. Numerous problems arise when medical records are kept on paper, including inaccuracy and a severe lack of detail such as misplaced medical records by patients, excessive use of paper and other stationary materials which is not environmentally friendly and lack of updated medical folders. The project was carried out to investigate the challenges with the patient record management system at a Sri Lankan maternity care facility and afterwards plan, design, and evaluate an information management system which does serve both medical personnel and pregnant patients. As a technique, the project was developed using an agile framework for each stage. The web-based prototype was designed to alleviate the difficulties associated with keeping paper-based medical records for hospital staff and maternity care patients. An automated diet recommendation algorithm was constructed to provide dietary suggestions based on the patient's calcium, iron, and folate levels, three of the most common micronutrients that are routinely monitored throughout the period of pregnancy to ensure the health safety of the mother and the infant. It was embedded into the application as a feature that differentiates itself from other similar applications. A machine learning algortihm will be implemented in the future with the data gathered from the rule-based model to train the algorithm.

Keywords

paper based medical records, electronic medical records, maternity care, dietary recommendation