DEVELOPMENT AND IMPLEMENTATION OF A COMPUTERIZED MATERNITY RECORDS MANAGEMENT SYSTEM

Department of Computer and Information Sciences, Covenant University, Ota, Nigeria

Zacchaeus Oni OMOGBADEGUN and Olufisayo Titilope ABIODUN

Abstract

Having babies in the developing nations may be life threatening. Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age, especially in developing countries. 358,000 women die annually from largely preventable complications related to pregnancy or childbirth; millions more women suffer often debilitating pregnancy-related complications. Nigeria increasingly records over 59,000 maternal deaths yearly with a maternal mortality ratio of 1,100 per 100,000 per live births (second highest worldwide after India), following her weak and inequitable health systems. A developed computerized maternity records management system using HTML, PHP, MySQL, UML, and XAMPP server in this project attempts to reduce the mortality rates by providing healthcare services providers with real time information for evidence-based decision-making about each pregnancy.

Introduction

In many developing countries, over 500,000 women die from complications of pregnancy and childbirth. A woman’s lifetime risk of dying in pregnancy in developing countries is many folds of that of the developed countries but the difference is more marked when countries like Nigeria with a 1 in 18 maternal risk of dying is compared with 1 in 48,000 for Ireland. This amazingly amounts to recording a total under-five death of almost a million annually (Cousens et al, 2010).

Methodology

A woman’s chance of dying from pregnancy and childbirth is on the increase in Nigeria (1 in 13), compared with 1 in 35 in Ghana and 1 in 2800 in developed countries, and only about 40% of deliveries are attended to by skilled birth attendants.

Conclusions

Reducing maternal deaths and complications will depend on identifying and improving the services that are critical to the reproductive health of adult and adolescent Nigerian women. These include high-quality and accessible family planning services for women who want to space their next birth or have no more children, antenatal care, emergency obstetric care, intrapartum care, adequate postpartum care for mothers and infants, and services related to STIs and HIV/AIDS. This project represents one of the required collection of services with the aim of reducing maternal mortality by improving the availability, accessibility, quality and use of services for the treatment of complications that arise during pregnancy and childbirth. This in turn reduces the rate of maternal mortality in Nigeria caused by the improper keeping of pregnancy records.

Background

Pregnancy is the period from conception to birth, when a woman carries a developing fetus in her uterus (Advanced English Dictionary 2009). It is divided into 1st trimester, 2nd trimester, and 3rd trimester. Most Nigerian women of childbearing age live in rural areas and are married. Unplanned pregnancies and childbirth are increasingly common. Many women lack the autonomy to make decisions about their own health care. A low level of commitment has been a barrier to reducing maternal mortality (Bankole et al. 2008; Osibogun, 2012). Presently in Ogun State, the ratio of 60 doctors to 4 million population is grossly inadequate (Amosun, 2011). Complications during pregnancy and childbirth (such as obstructed and prolonged labour are established risks for perinatal mortality, yet they are common sights in our everyday practice) are a leading cause of death and disability among women of reproductive age, especially in developing countries (Neogu, 2009). 358,000 women die annually from largely preventable complications related to pregnancy or childbirth; millions more women suffer often debilitating pregnancy-related injury and infections. 215 million women want to avoid pregnancy but are not using a modern method of contraception, and two-fifths of all pregnancies in the developing world are unintended (USAGOV, 2011). 61% of maternal deaths occur in the first six weeks after birth, and nearly half of those occur in the first day after delivery (Ogunjimi et al. 2012). Most maternal deaths seem to occur between the third trimester and the first week after the end of pregnancy. Mortality can be extremely high on the first and second days after birth (Sokoto, 2009). Indicators such as near-miss morbidity, rates of caesarean section, and contraceptive prevalence rates are most closely aligned with maternal mortality outcomes.

Objectives

- Develop an evidence-based application that comprises a database of maternal information about women during pregnancy
- Provide a platform that will enable doctors view status of their patients from previous information provided by patient in determining the current pregnancy status of the patient

Model application

A mobile implementation for easy access and use without a computer system and internet. To facilitate receipt of health alerts via Short Messaging Service (sms).

Results

Future work

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