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Impact of Using Telehealth to Improve Maternal Outcomes during Pandemic COVID-19

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Abstract

implementation of telehealth and telehealth during COVID-19 pandemic have become crucial to ensure the safe antenatal and delivery A developing country with relatively high maternal mortality number. One of the influencing factors for that condition is health services at antenatal, intranatal postnatal period and during women life span has not been optimized yet. The optimization effort has been done in several countries through health service based on utilization of technology. The literature study aimed to effect Tele health implementation in the maternity nursing care. The implementation of Tele health in maternity nursing care showed positive impact in knowledge, motivation, and health behavior of the mother. Developing country which can be strategic to utilizing tele-nursing support that help in reducing the Maternal Mortality Rate. Telehealth may provide a solution for maintaining continuity of care while practicing physical distancing. COVID-19 has prompted new temporary telehealth flexibilities, expanding access to care through virtual means. These new flexibilities provide an opportunity to expand access to pregnancy and childbirth services and may help to mitigate adverse health outcomes for pregnant women.

Keywords: Tele Health; Maternity; Nursing Care; COVID19

Abbreviations: WHO: World Health Organization; COVID: Corona virus; ACOG: American College of Obstetrics and Gynecology.

Introduction

The 2019-novel Corona virus (COVID-19), a severe acute respiratory syndrome caused by coronavirus 2, was first detected in Wuhan, China in December 2019, subsequently spreading around the world. By January, the first case of COVID-19 was reported in the United States in Washington State; and by March, COVID-19 had reached Florida. By January 27, a State of Emergency was declared by the U.S. On March 11, 2020 the disease outbreak was declared a pandemic by the World Health Organization (CDC 2020c). According to World Health Organization (WHO), approximately 830 women die, every day, from preventable causes related to pregnancy and childbirth, now with the events related to Corona pandemic, a dilemma between the compliance of antenatal care and the social distance was originated, so it is the time to utilize the information technology innovation especially with the increased Smartphone ownership rate. Remote Maternity Care is a solution for safely monitoring. Telehealth is the "delivery of health care services, where patients and providers are separated by distance.

Telehealth uses information technology for the exchange of information for the diagnosis and treatment of diseases and injuries, research and evaluation, and for the continuing education of health professionals. Telehealth can contribute to achieving universal health coverage by improving access for patients to quality, cost-effective, and health services

wherever they may be. It is particularly valuable for those in remote areas, vulnerable groups and ageing populations. Spread of mobile technologies and continued innovations in their application has left an impression on the whole world. Mobile devices can be regarded as one of the fastest adopted technology in human history which offers low-cost communication creating tremendous impact on the society as a whole. According to the International Telecommunication Union there are now close to 5 billion mobile phone subscriptions in the world, with over 85% of the world's population now covered by a commercial wireless signal [1-4].

Review

Today nursing services are affected by telehealth as well. Telenursing is considered as a subset of telehealth that focuses on the delivery, management, and coordination of care and services using telecommunications technology within the domain of nursing. The most common use of telenursing is to provide opportunities for patient education, nursing teleconsultations, examination of results of medical tests, and assistance to physicians in the implementation of medical treatment protocols [5]. The literature showed that the use of remote care has an impact on maternal care and women's health, Farrag, [6] concluded that, tele-nursing support could significantly enhance the health promotion lifestyle profile and self efficacy scores, as well as maintain blood glucose levels among mothers with gestational diabetes and also increase the adherence to antenatal visits [7]. Conducted a systematic review "Telehealth Interventions to Improve Obstetric and Gynecologic Health Outcomes" and showed that, telehealth interventions overall improved obstetric outcomes related to smoking cessation and breastfeeding. Telehealth interventions decreased the need for high-risk obstetric monitoring office visits while maintaining maternal and fetal outcomes, and reductions in diagnosed preeclampsia among women with gestational hypertension.

Telehealth interventions were effective for continuation of oral and injectable contraception. Now there is a dilemma between compliance of obstetric care and the social distance related to COVID19, so this is the time to utilize remote care, Aziz et al. [8] reported that Telehealth is effective to manage high risk cases as:

1. Hypertensive disorders of pregnancy including preeclampsia, gestational hypertension, and chronic hypertension.
2. Pregestational and gestational diabetes mellitus.
3. Maternal cardiovascular disease.
4. Maternal neurologic conditions.
5. History of preterm birth and poor obstetrical history including prior stillbirth.
6. Fetal conditions such as intrauterine growth restriction, congenital anomalies, and multiple gestations including monochorionic placentation.
7. Genetic counseling.
8. Mental health services.
9. Obstetric anesthesia consultations.
10. Postpartum care.

The American College of Obstetrics and Gynecology (ACOG) published recommendations for telehealth use in February 2020 in response to COVID-19 Potential uses include consultation with specialty services, remote observation of fetal monitoring by maternal fetal medicine and reproductive endocrinology specialists, bladder diary tracking with smartphone applications, postpartum blood pressure monitoring with synced Wi-Fi and data connection, remote provision of medically induced abortions, and fertility tracking with patient-generated data. These applications can be delivered through two modes:

1. Asynchronous, also known as store-and-forward, where patient's medication information is stored and reviewed later by a medical provider.
2. Synchronous, also known as live interactive consultations, where patient and physician interact remotely in real time to preserve physical distancing [8,9].

Brief saying: The expansion of telehealth services has the potential to reduce health disparities in maternity care, bridge cultural gaps, and improve health outcomes by increasing access to affordable services in the home. Nurses are often members of at-risk communities and offer a form of cultural alliance, advocacy, and emotional support for women impacted by racial biases experienced in the healthcare system. By utilizing text messaging and live-video platforms, nurses help clients communicate with their healthcare providers and maintain continuity of care during the postpartum period. Home-visiting offers culturally relevant services for mothers and links families to resources and education. Positive outcomes have been reported for home visiting telehealth programs as states partner with Medicaid agencies to redesign home visiting programs and expand access to telehealth services for families and nurses.

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