**Web-Based Intervention Proposal**

**Web-based interventions in healthcare**

The healthcare profession is undergoing tremendous changes due to the development of health information systems that is utilizing the use of telecommunication devices and networks such as the use of Telehealth-Webinars. Health information technology is transforming the healthcare delivery system in the country through providing new opportunities to come up with effective healthcare delivery systems (Joost, Ferraez & Fenton, 2012). Web-based interventions that utilizes the frameworks provided by the health information systems is one of the common use of healthcare information systems to effectively connect with at-risk population such as pregnant women in the society. This paper will highlight the usefulness of using Telehealth-Webinar for pregnant women living in rural or remote areas as a method of using the healthcare information system to ensure effective prenatal care is provided. As a web-based intervention towards ensuring quality of care for women during the prenatal period, telehealth-webinar provides women in remote areas with access to care through physician interactions on the web platform. Therefore the women can immensely benefit from the valuable information and interaction with healthcare providers online thus ensuring quality and safe prenatal care.

**Description of the proposed PICOT**

Health information technology is important in targeting the at-risk population in the society that is highly vulnerable due to physical and socio-economic factors in the society. The at-risk population that will be addressed through the use of Telehealth-Webinar will be 6-8 pregnant women that are at least 8 weeks pregnant, living in a non-urban area. The use of Telehealth-Webinar during the prenatal period is emerging as an effective solution towards resolving healthcare crisis associated with lack of adequate access to healthcare facility due to remoteness of rural areas that has a great impact on the health of pregnant women. The benefits that will be realized through the provision of telemedicine to pregnant women living in a non-urban area include increasing access to prenatal services during the entire period and even after delivery hereby the women will be able to obtain quality healthcare (Bredfeldt, Awad, Joseph & Snyder, 2013). This is because through the use of Telehealth-Webinar, healthcare facilities located in non-urban areas that provide healthcare services to the women can attain valuable information to enhance their evidence based approach in providing intensive care services to pregnant women thus improving health outcomes.

In undertaking a further discussion of web-based intervention to promote the quality of health among pregnant women living in non-urban areas, the interventions provided through Telehealth-Webinar such as recorded session twice a week promote prenatal health among women. Telehealth-Webinar will provide a platform for pregnant women to benefit from a multidisciplinary approach into the prenatal care whereby specialists such as dietitians, counselors, or a pediatric specialist will hold sessions spanning over 40 minutes each fortnight to create awareness regarding the significant of diet during pregnancy, self-care, danger signs during pregnancy and how to prepare oneself for delivery.  The information provided to the women through the use of health information systems such as Telehealth-Webinar will be of great importance in promotion of health during the prenatal period because of the increased risk of complication that the women experience (Lyon et al., 2015). During the one on one session, the women can effectively consult with a specialist regarding the various concerns that might arise during the pregnancy. Therefore the women can effectively benefit from interacting with specialists at a low cost and within the convenience of their community.

In the society, access to quality care especially among women living in non-urban areas is still a concern due to lack of adequate staffing and resources in non-urban hospitals. Therefore in establishing a comparison between the provision of prenatal care to women in non-urban areas through the use of Telehealth-Webinar and lack of access to prenatal care, lack of access to quality prenatal care will compromise the outcome of pregnancy. In regard to challenges faced in the provision of specialized prenatal care to women in non-urban areas such as lack of specialist, high cost and inadequate resources, the use of web-based interventions such as providing access to specialist is designed to promote the quality of health in remote areas (Yen, McAlearney, Sieck, Hefner & Huerta, 2017). In the provision of maternal care during the prenatal period, intervention such as counseling, intrauterine fetal growth monitoring and birth readiness are designed to improve the outcome of pregnancy. Therefore, in a situation hereby web-based interventions are not effectively implemented; the population at-risk such as pregnant women will lack proper access to specialist care.

Therefore based on the analysis of the population needs, implementation of web-based interventions and comparing lack of interventions, it is evident that the desired outcome is to improve maternal and infant health. Through the use of Telehealth-Webinar, the strategies that have been put in place to improve maternal and infant health include creating awareness and strategies that are directed towards improving maternal and infant health in the community (Smith & Koppel, 2014). The prenatal period increases the health risk among women living in remote regions that lack the essential healthcare facilities that can respond effectively to obstetric emergencies. The use of web-based interventions such as Telehealth-Webinar provides an opportunity for specialists to provide care to women in non-urban areas so as to improve obstetrics outcome through minimizing emergencies that might occur during the prenatal period.

Also, web-based intervention through the use of Telehealth-Webinar is designed in such a way that care is provided throughout the entire period which is divided into 40 minute sessions that also include a 10 minute section of questions and answers. The sessions are conducted twice a month alongside other procedures such as monitoring the health status of the women as well as intrauterine fetal growth. The sessions will be scheduled systematically divided so that the women can get information from various specialists such as dieticians, pediatrics, obstetricians and counselors. Therefore the sessions provides the women with an opportunity of experiencing a multidisciplinary approach in the provision of prenatal care.

**Reflection on the Web-based intervention from a HIT perspective**

In regard to the health outcomes of pregnant women during the prenatal period, the use of Telehealth-Webinar for pregnant women living in rural areas of the country, improved health outcome is realized because during the prenatal period the women can effectively be monitored and diagnosis developed early enough. This is because patients in a telehealth supported institution can effectively have a substantial contact with the healthcare practitioners whereby an individual can be diagnosed and treated early enough so that possible complications that are associated with the condition are effectively minimized (Bredfeldt, Awad, Joseph & Snyder, 2013).  Furthermore, in regards to the care of pregnant women during the prenatal period, the use of Telehealth-Webinar will significantly reduce the cost of accessing healthcare services non-urban areas which include the high cost of transferring patient to other hospital to seek specialized care. Also, the cost of providing quality and specialized care to the non-urban hospitals will be reduced because Telehealth-Webinar enables a single specialist to attend to several hospitals from one location thus significantly cutting down on the cost of running such healthcare centers.

The web-based intervention will address among others parenting classes and counseling, information regarding labor such as the signs of preterm labor or false labor and how to prepare for hospital visit or home delivery. On the other hand, the access to specialist care that women from non-urban areas will attained through the use of Telehealth-Webinar will be also of great importance to the healthcare professional at the non-urban healthcare premises. This is because the content recorded can be used as a basis of creating a clinical education programs that the healthcare practitioners can use as a means of professional development that will enhance their clinical decision making patterns resulting in safe and quality care.

Despite improving the health outcome, Telehealth-Webinar is designed in such a manner that the distance beaten the patient and the care is greatly reduced through the use of healthcare information systems that provide a real time interaction between women in non-urban areas and healthcare specialists (Yen, McAlearney, Sieck, Hefner & Huerta, 2017). Other desirable outcomes that will be achieved through the use of healthcare information systems include increasing access to skilled providers that are located outside the community. Also during the prenatal period, the use of web-based interventions in the provision of prenatal care is cost-effective, less stressful and promotes self-efficacy in the healthcare sector.  Also the provision of education during the prenatal period, recording the sessions through the use of information technology devices enhances the efficacy of the session since the women can replay the sessions that they interacted with the health practitioners therefore benefiting from the intervention.

The success of the session ensures that the women can effectively benefit from the holistic prenatal care that is coordinated by the healthcare providers at the healthcare facility (Salahuddin & Ismail, 2018). Coordinating sessions and effectively planning the interaction between the women and the specialist ensures that the pregnant women actually benefit from the use of web-based intervention in the promotion of health during the prenatal season. On the other hand, the 10 minute question and answer session at the end of the session is designed to gauge the understanding of the pregnant women after each session. The session is important to identify any need of training or re-education among the omen so that the healthcare practitioners can identify the need of putting emphasis on certain points.

**Conclusion**

Based on the analysis of the use of web-based interventions frameworks provided by the health information systems in practice, the cost effectiveness and quality outcome can easily be achieved. The use of web-based interventions is emerging as one of the common use of healthcare information systems to effectively connect with at-risk population such as pregnant women in the society. This paper has highlighted the usefulness of using Telehealth-Webinar for pregnant women living in rural or remote areas as a method of using the healthcare information system to ensure effective prenatal care is provided. This is because Telehealth-Webinar will promote the quality of health and wellbeing of pregnant women through increasing access to specialized care, provide a multidisciplinary team to ensure holistic care and reduce cost of providing healthcare in remote areas of the country.

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