



ASSESSMENT OF KNOWLEDGE, ATTITUDES, and PRACTICES on COVID-19 VACCINE AMONG HIGH-RISK PREGNANT AND LACTATING WOMEN: A CROSS-SECTIONAL STUDY IN A PHILIPPINE TERTIARY HOSPITAL
Manila, Philippines

Iris A. Soria-Arikan, MD, DPOGS

Valerie P. Tiempo-Guinto, MD, MSc, FPOGS, FPSMFM, FPSUOG

Background: COVID-19 infection is still a problem in our country for the past two years. The pandemic severely affected the immunocompromised and high-risk group of patients such as the pregnant and lactating women. Research shows that this group has higher risk of being critically ill as well as dying. However, there are only few studies on how COVID-19 vaccine is perceived among this vulnerable group. Hence, this study aims to assess the knowledge, attitude and practices on COVID-19 vaccine among high-risk pregnant and lactating women. Moreover, the results will be use in crafting health policies that affects this specific group of patients.

General Objective: To assess the knowledge, attitudes, and practices of COVID-19 vaccine among high-risk pregnant and lactating women in a tertiary hospital.

Specific Objectives:

1. To describe the socio-demographic characteristics of patients seeking high- risk antenatal care
2. To determine the co-morbidities of the study population and their COVID-19 vaccine history
3. To evaluate the knowledge on COVID-19 vaccine of high-risk patients
4. To identify attitude affecting women's decision-making regarding COVID-19 vaccine
5. To determine the practices regarding COVID-19 vaccine among high-risk women

Methods: A prospective cross-sectional study was conducted on high-risk pregnant and lactating women who sought antenatal consults at the High-Risk Clinic in a tertiary training hospital. Participants were asked to answer a validated questionnaire assessing their knowledge, attitudes, and practices on COVID-19 vaccine. They were also asked about their socio-demographic characteristics, co-morbidities, history of COVID-19 infection and vaccination status as well as the source of their information regarding the vaccine. Descriptive statistics was used to summarize in this study. In addition, frequency and proportion were used for nominal variables, median and range for ordinal variables, and mean and standard deviation for interval or ratio variables. MINITAB 20 was used for data analysis.

Results: A total of 323 high-risk pregnant and lactating women were enrolled in the study with an average age of 29 years old. Socio-demographic characteristics of the participants showed that they were high-school graduate, single, mostly financially disadvantaged and resides in CALABARZON area. Majority have diabetes mellitus as their co-morbidity, were not infected with COVID-19 and had already been vaccinated. The significant source of information of vaccine information was mainly from social media. The study presented that more than 90% were aware that COVID-19 vaccine was recommended by professional organizations however only 55-59% only agree that it is safe during pregnancy and breastfeeding. The result also conveyed a positive attitude towards vaccination as the pregnancy progresses as well as during lactation. As to practices, 80% of the participants were told by their health care providers to get vaccinated and 72% of them reported vaccine side effects. Furthermore, 58% of the participants would recommend vaccination during pregnancy while only 54% will recommend it while breastfeeding.

Conclusion: Assessment of knowledge, attitudes, and practices of COVID-19 vaccine among high-risk pregnant and lactating women gave an understanding on how a vulnerable population perceive vaccination. In general, this research study presented high percentage COVID-19 vaccine awareness and acceptance however it can also be seen that there is a mixed perception regarding vaccine safety during pregnancy and lactation. Strategies to improve health literacy which are evidenced based that can be carried out by a health care provider could be established to achieve maximum vaccination coverage among high-risk group of patients.

REFERENCES

1. <https://covid19.who.int>
2. <https://doh.gov.ph>
3. Clemente MJ, Amosco M, Octavio MB, Bravo SL, Villanueva-Uy E. Maternal and Neonatal Outcomes of Pregnant Women with Clinically Confirmed COVID-19 Admitted at the Philippine General Hospital. *Acta Medica Philippina*. 2021; 55 (2): 183-190.
4. COVID-19 Vaccines While Pregnant or Breastfeeding (cdc.gov)
5. The American College of Obstetrician and Gynecologists, Society for Maternal-Fetal Medicine. ACOG and SMFM Joint Statement on WHO Recommendations Regarding COVID-19 Vaccines and Pregnant Individuals. 2020.
6. Philippine Obstetrical and Gynecological Society. POGS Practice Bulletin: COVID-19 Vaccination of Pregnant and Breastfeeding Women. 2022.
7. The American College of Obstetrician and Gynecologists. Vaccinating Pregnant and Lactating Patients Against COVID-19. December 2020. Soria-Arikan IA and Tiempo-Guinto VP 18
8. Stuckelberger S, Favre G, Ceulemans M, Nordeng H, Gerbier E, Lambelet V, Stojanov M, Winterfield U, Baud D, Panchaud A, Pomar L. SARS-CoV-2 Vaccine Willingness during the First Pandemic Wave: Cross Sectional Study in Switzerland. *Viruses* 2021. 2021; 13(8)
9. Skjefte M, Ngirbabul M, Akeju O, et al. COVID-19 Vaccine Acceptance Among Pregnant Women and Mothers of Young Children. *European Journal of Epidemiology*. 2021.
10. Sutton D, D'Alton M, Zhang Y, Kahe K, Cepin A, Goffman D, Staniczenko A, Yates H, Burgansky A, Coletta J, Williams, Z, Gyamfi-Bannerman. COVID-19 vaccine acceptance among pregnant, breastfeeding, and nonpregnant reproductive-aged women. *AJOG MFM*. 2021; 3: 100403.