

Current Practice

Experiences of vaccinating pregnant women against COVID-19 in Sri Lanka

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Coronavirus disease 2019 (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has created a global pandemic in 2020. Following the reporting of the first confirmed case of the virus in Sri Lanka on 27th January 2020, Sri Lanka too had to face many repercussions. The first detected case) was a 44-year-old Chinese woman from Hubei, China, admitted to the Infectious Disease Hospital in Angoda.

Although, Sri Lanka was successful in handling the first and the second waves of the pandemic, handling the third wave of the pandemic was challenging and showed a sharp spike in COVID-19 cases and deaths. Many health restrictions were introduced during the first wave in April 2020 and the second waves of the pandemic on October which were later released in April 2021 following the seeming control of the disease. After the relaxation of these health restrictions, during the Sinhala and Tamil New Year in April 2021, the highly contagious delta variant has been responsible for the third wave with a considerably high fatality rate.

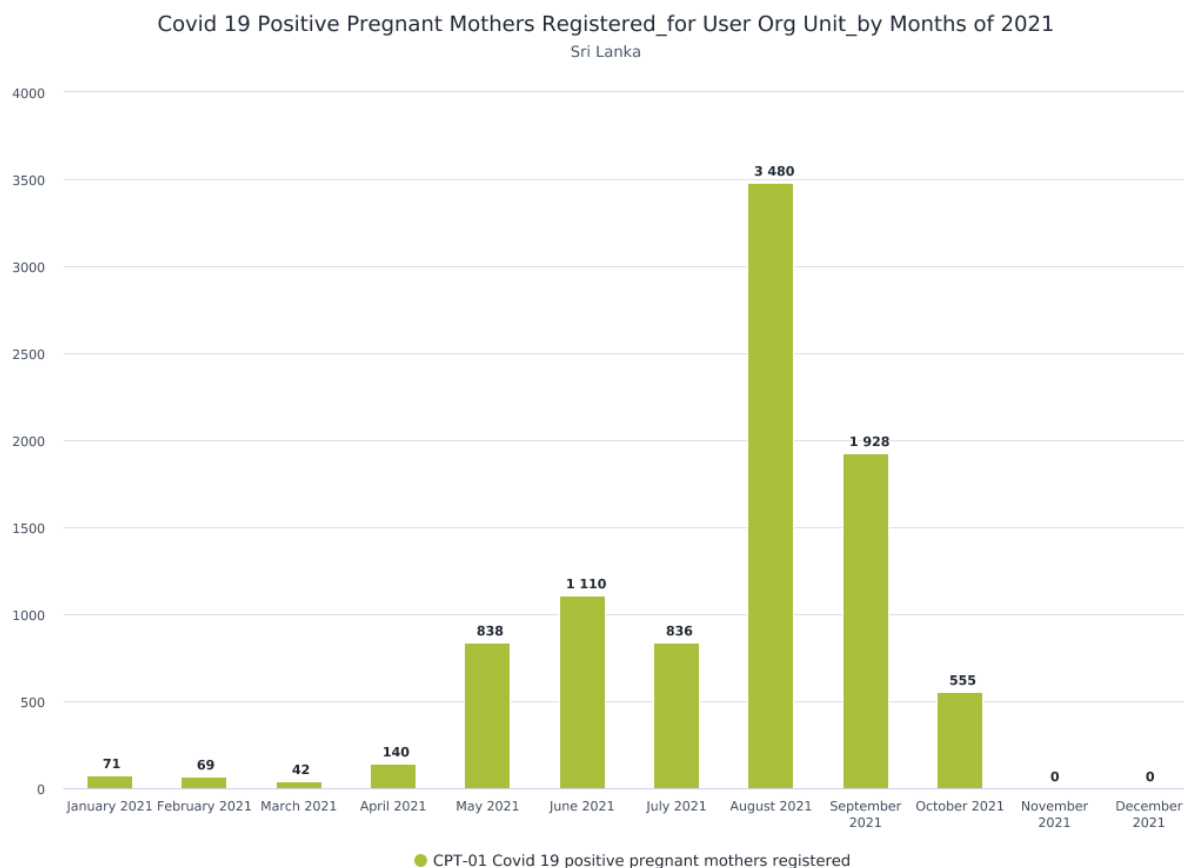
During first and the second waves of the pandemic, Sri Lankan pregnant women were not affected severely. However, the number of COVID-19 positive pregnant women increased dramatically in the third wave commencing from April 2021. During the year 2020, only 115 pregnant women were reported as COVID -19 positive cases. However, in 2021, number of pregnant women contracting the infection increased drastically in all districts in the country. By the 30th October

2021, a total of 9, 178 COVID -19 positive pregnant mothers were reported out of which 9,063 reported in 2021 (Table1). The highest number of cases was reported in August 2021 (Figure 1). The number of positive cases and maternal deaths due to COVID-19 reported in 2021 was significantly higher than in 2020 (MDPSR, FHB).

Table 1: Reporting of COVID -19 positive pregnant women by districts

District	2020	2021
Ampara	1	148
Anuradhapura	0	240
Badulla	0	367
Batticaloa	0	343
Colombo Municipal Council	40	168
Colombo	11	960
Galle	1	429
Gampaha	15	1067
Hambantota	0	162
Jaffna	0	344
Kalmunai	5	211
Kalutara	9	784
Kandy	7	471
Kegalle	3	295
Kilinochchi	0	76
Kurunegala	0	528
Mannar	0	30
Matale	1	172
Matara	4	292
Moneragala	0	202
Mullaitivu	0	40
NIHS	5	264
NuwaraEliya	4	161
Polonnaruwa	0	191
Puttalam	2	263
Ratnapura	6	455
Trincomalee	1	322
Vavuniya	0	78
Sri Lanka	115	9063

Source: eRHMS, FHB 2021



Source: eRHMIS, FHB 2021

Figure 1: COVID-19 positive pregnant women reported in 2021 by months

National programme of vaccination against COVID 19 for pregnant women

Sri Lanka started its vaccination drive on 29th January 2021 with AstraZeneca vaccine administering to healthcare workers on the frontline of COVID-19 prevention as well as to the Tri-Forces and Police.

Given the production delays of the AstraZeneca vaccine, Sri Lanka procured the Sinopharm and Sputnik V vaccines and commenced community vaccination programme with these two vaccines. Initially vaccines were given only for over 60 years of age.

At the meantime, the World Health Organization (WHO) highlighted that pregnant woman with COVID- 19 may have a higher risk of developing severe

disease with adverse pregnancy outcomes. They may be needing increased hospitalizations, ICU care and mechanical ventilation compared to their non-pregnant counter parts. WHO further added that even though the risk factors for severe disease and risk of acquiring the disease by pregnant women are similar to the general population, pre-existing comorbidities, advanced maternal age (>35 years) and high BMI (>30) were suggested to be considered as risk factors for developing severe disease among pregnant women (WHO, May 5, 2021). The main preventive and management strategies recommended by the WHO were distancing, respiratory etiquette, aseptic techniques (hand washing), wearing masks, fast tracking identification & hospitalization of suspected or confirmed COVID-19 cases with specialized management of confirmed

COVID -19 pregnant women. Vaccination against COVID -19 for high-risk pregnant women was also recommended.

In view of the increasing number of COVID -19 positive pregnant women reported with complications, maternal deaths due to COVID -19, availability of the vaccines in the country and scientific evidence together with World Health Organization (WHO) recommendations, the Advisory Committee on Communicable Diseases (ACCD) of the Ministry of Health chaired by the Director General of Health Services, decided to vaccinate pregnant women with a high risk of developing severe disease and those who are at high risk of getting exposed to the disease, with the Vero cell inactivated (BIBP) vaccine (Sinopharm vaccine).

This national programme was launched on 9th of June 2021 from the Western Province.

Initially, pregnant women with high risk of developing severe COVID - 19 were given the vaccine. These high risk groups include; pregnant women more than 35 years of age, obese mothers (BMI >30), diabetes, hypertension, malignancy, heart Disease, chronic respiratory disease including bronchitis, emphysema or asthma, renal disease, chronic liver disease, lowered immunity due to disease or treatment (such as HIV infection, on steroid medication, chemotherapy or radiotherapy), rheumatoid arthritis, lupus or psoriasis (who may require long term immunosuppressive treatment), organ transplant recipients, history of a stroke or a transient ischaemic attack (TIA), splenic disorder / splenectomised women and severe mental illness. In addition, pregnant women with high risk of exposure to a COVID-19 infected individuals such as health care workers and pregnant women who are working in the frontline and involved in COVID-19 control activities and continuation of essential services were also offered the vaccine. Initially, it was

decided to vaccinate only the women in their second and third trimesters.

Later, in the ACCD it was decided to offer the vaccination to all pregnant women irrespective of the trimester and high risk status.

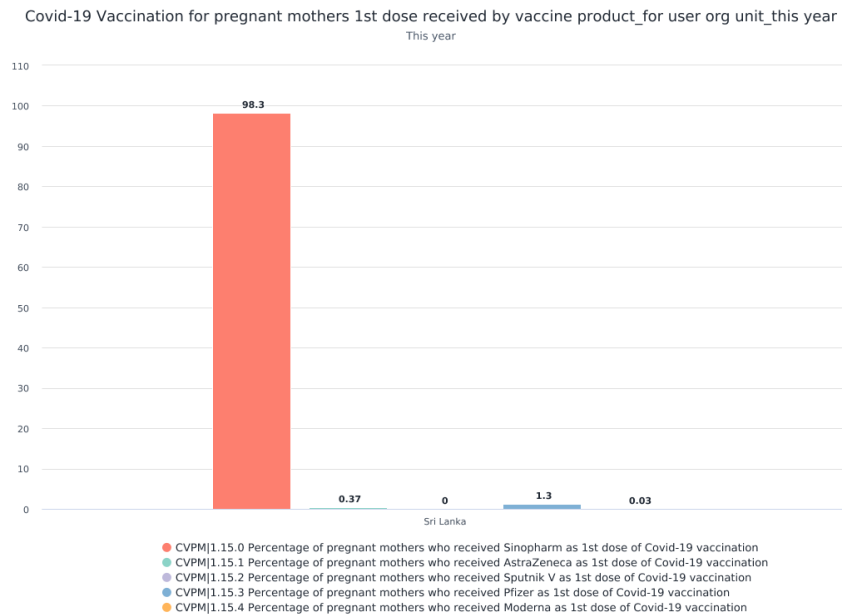
Monitoring of pregnant women following COVID-19 vaccination

Special emphasis was made in close follow up of pregnant women who receive vaccine during pregnancy. For this purpose, specific instructions were given to the Medical Officers of Health (MOH) and their teams who run ante natal and post natal clinics. Considering the novelty of the vaccine and anticipated concerns, network of specialist hospitals and Obstetricians were identified to cover all MOH areas and seek specialist guidance. District and provincial Consultant Community Physicians and Medical Officers of Maternal and Child Health were instructed to facilitate to follow up the pregnant women and obtain necessary information at the district level. A special register [COVID - 19 Vaccination Register for Pregnant Mothers] was introduced and maintained at the Central Clinic at the MOH and in all vaccination clinics in the institutions. An online tracker database was introduced to capture required information of these pregnant women including information on follow up and to monitor the outcome of pregnancy. Public Health Midwives (PHM) were instructed to follow up the vaccinated pregnant women closely by calling the women 48 hours following the administration of the vaccine to report side effects. PHMs were also instructed to follow them up closely and to report information on POA at delivery, outcomes of the pregnancy including miscarriage, live Birth, still birth and birth weight of the new born together with congenital malformation or neonatal deaths, if any.

By 30th of October 2021, Individual information on 136,565 pregnant women

who have received COVID -19 vaccines during pregnancy were entered into the electronic Reproductive Health Management Information System (eRHMIS) maintained by the Family Health Bureau. This covered a 76.1% of the

under care pregnant women during this period. Second doses were given to 63.9% of the pregnant women under care. Out of all vaccinations given, 98.3% were Sinopharm followed by 1.3% Pfizer vaccine (Figure2).

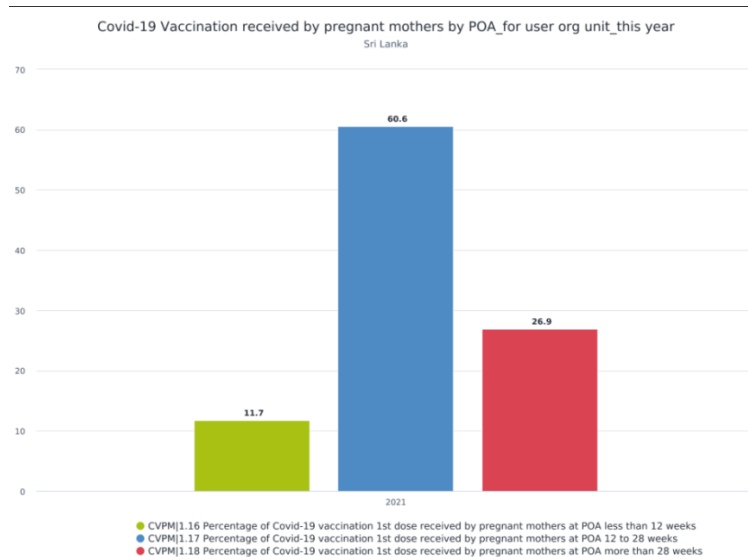


Source: eRHMIS, FHB 2021

Figure 2: Type of vaccine administered to pregnant women

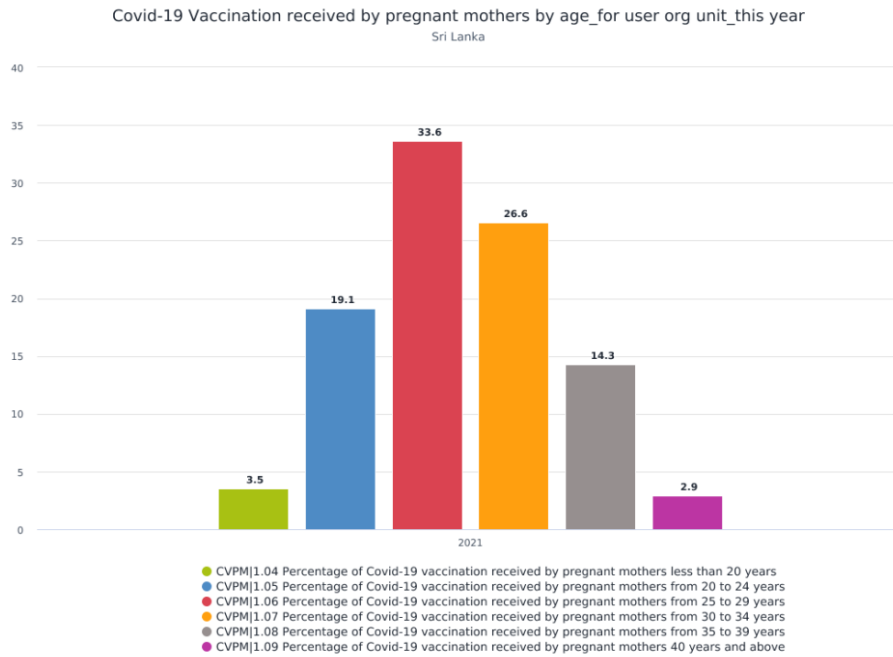
Majority (60.6%) pregnant women were observed to have taken their first dose in their second trimester and most of them (32.6%) were in the age group of 25-29

years. Teenage pregnant women consisted of 3.5% out of total vaccinated pregnant women (Figures 3 &4).



Source: eRHMIS, FHB 2021

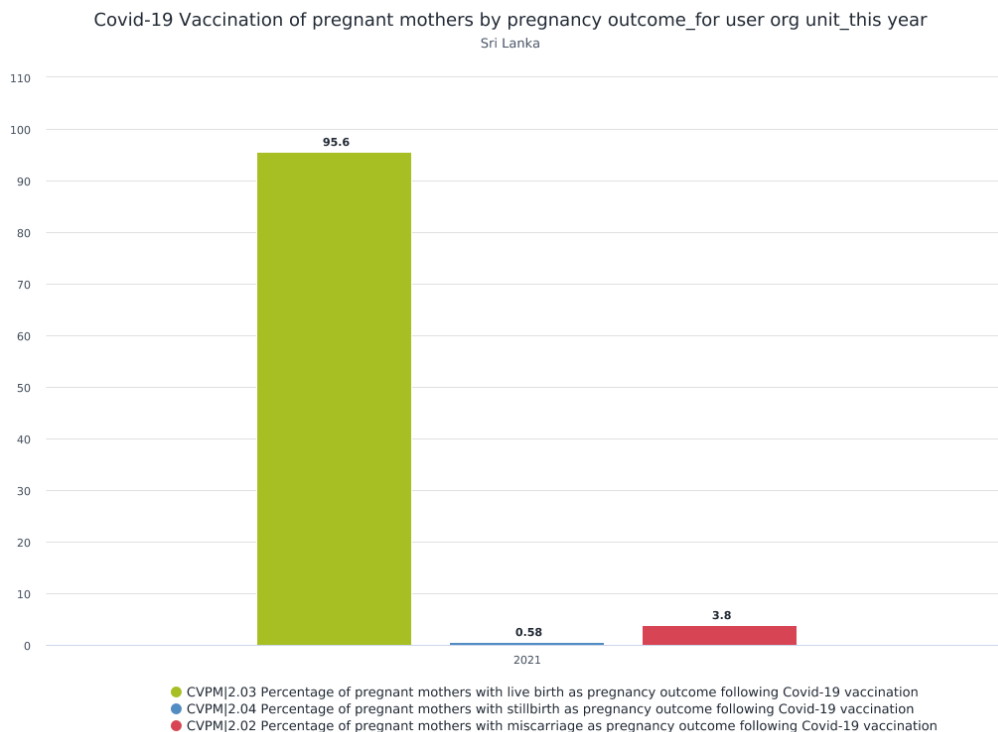
Figure 3: Vaccines received for COVID-19 by pregnant mothers by their POA



Source: eRHMIS, FHB 2021

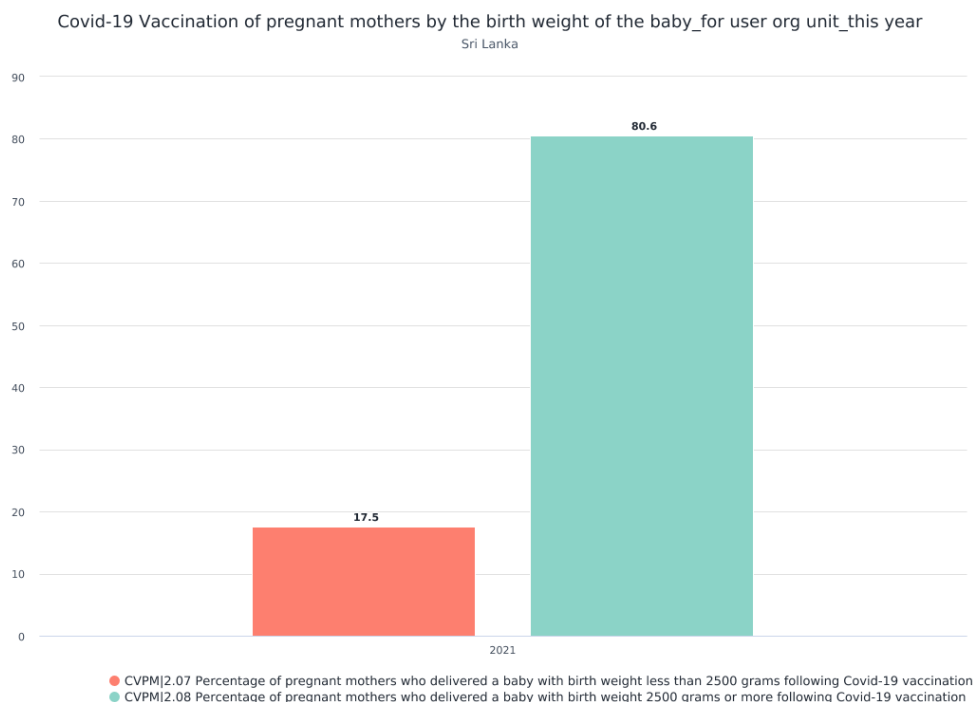
Figure 4: Vaccinations of pregnant women by their age

Considering the outcome of pregnancies, 95.6% had a live birth as a pregnancy outcome and 17.5% were reported as low birth weight babies.



Source: eRHMIS, FHB 2021

Figure 5: Outcome of pregnancy among women received vaccination during pregnancy



Source: eRHMIS, FHB 2021

Figure 6: Pregnancy outcome: birth weights of the new born of pregnant mothers who were vaccinated during pregnancy

Vaccination of pregnant women programme is ongoing and more details on follow up information will be available once data is entered into the online system.

Community vaccination above 18 years and school children vaccination above 16 years

have already begun. Therefore, in time to come all women above 16 years will receive the both doses and will be fully vaccinated against COVID-19. Until such time, programme on vaccination against COVID-19 during pregnancy will continue.

References

1. Ministry of Health. (23/08/2011). Guidelines for initial management of anaphylaxis at the field setting. Colombo: Ministry of Health Retrieved from https://www.epid.gov.lk/web/images/pdf/Circulars/anaphylaxis_circular.pdf.
2. Epidemiology Unit. (2021). SARS-CoV-2 Vaccine (Vero Cell), Inactivated (BBIBP-CorV) vaccination campaign. Guidelines for COVID 19 vaccine. Retrieved 25/05/2021, from https://www.epid.gov.lk/web/images/pdf/Circulars/Corona_virus/Sinopharm%20vaccine%20Guidelines_08_05_2021.pdf
3. Epidemiology unit. (26/05/2021). Guidelines for Covid-19 VaccineSARS-CoV-2 Vaccine(Vero Cell), Inactivated (BIBP)vaccination Campaign (update 26/05/2021). In E. Unit (Ed.): Ministry of Health. https://www.epid.gov.lk/web/images/pdf/Circulars/Corona_virus/sinopharm_vaccine_guidelines_26_05_2021.pdf

4. Epidemiology unit. (2012). Immunization handbook (3rd edition). Colombo.
https://www.epid.gov.lk/web/images/pdf/Publication/Immunization_Guide_2012.pdf
5. WHO. (April 21,2021). Interim recommendations for use of the ChAdOx1-S [recombinant] vaccine against COVID-19 (AstraZeneca COVID-19 vaccine AZD1222, SII Covishield, SK Bioscience): World Health Organization.
6. WHO. (May 5, 2021). Update on COVID-19 vaccination in pregnant women and children. Paper presented at the Update on COVID-19 vaccination in pregnant women and children, Geneva.
7. WHO. (May 7, 2021). Interim recommendations for use of the inactivated COVID-19 vaccine BIBP developed by China National Biotec Group (CNBG), Sinopharm. Retrieved 28/05/2021, from <https://www.who.int/publications/item/WHO-2019-nCoV-vaccines-SAGE-recommendation-COVID-19-vaccine-BIBP>
8. WHO. (May 10, 2021). The Sinopharm COVID-19 vaccine: What you need to know. Retrieved 16/05/2021, from <https://www.who.int/news-room/feature-stories/detail/the-sinopharm-covid-19-vaccine-what-you-need-to-know>
9. Vaccination of pregnant women against COVID-19, Family Health Bureau, <https://fhb.health.gov.lk/index.php/en/covid-19>

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