

TRACKING OF
**COVID-19 POSITIVE
PREGNANT WOMEN IN SRI LANKA**
SECOND INTERIM REPORT



FAMILY HEALTH BUREAU
MINISTRY OF HEALTH, SRI LANKA
JANUARY 2022



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Family Health Bureau
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Summary

This is the second interim report of ongoing tracking of COVID-19 positive pregnant women by the Family Health Bureau, Ministry of Health, Sri Lanka.

An electronic system to capture all COVID-19 positive pregnant women was introduced on 1st of June 2021. Following one month of initiation of the online database, the 1st interim Report was prepared to identify the basic characteristics of the COVID-19 positive pregnant women in Sri Lanka.

This 2nd interim report further analyzes the data captured up to the 31st of December 2021.

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1. INTRODUCTION

Family Health Bureau, as the national focal point for Maternal and Child Health [MCH] in the Ministry of Health recognizes the importance of having accurate and timely information for planning and implementation of responsive health services during the challenging pandemic situation.

An online tracker information system was developed by the Monitoring and Evaluation Unit of the Family Health Bureau to collect information and report all COVID -19 positive pregnant women in Sri Lanka. Aims of establishing this information system were to understand the features of SARS-CoV-2 infection during pregnancy and the impact of COVID-19 positivity on the newborn and at 6 months of infancy.

It has been noticed that the number of COVID-19 positive pregnant women was rising during the 3rd wave of the pandemic that commenced after April 2021. On 1st of June 2021, all Medical Officers of Health [MOOH] were given instructions to report pregnant women who become COVID-19 positive in their respective areas. They were instructed to report all COVID19 positive pregnant women who were diagnosed from March 2020 onwards. Public Health Midwife [PHM] was required to complete a form at the time of a pregnant woman being diagnosed as COVID-19 positive and she was expected to follow her up to see the severity of the illness and outcome of the pregnancy after 14 days of diagnosis. Information pertaining to the deliveries of such patients and the effect of the illness on the newborn were to be reported at the end of first month of the delivery i.e. during the first postnatal clinic and then at 6 months of age of the infant on any significant growth or development delay.

Data collected includes the following:

- Basic demographic characteristics of the COVID-19 positive pregnant women
- Timing of infection during pregnancy
- Severity of COVID-19 disease
- Outcome of the pregnancy
- Newborn's details including whether the newborn was also diagnosed with COVID-19
- Selected infant outcomes at the end of first 6 months of age

For reporting of data, District Health Information Software 2 [DHIS2] based online tracker capture system was developed in the electronic Reproductive Health Management Information System [eRHMS]. eRHMS is the routine information system for monitoring the national programme of Reproductive, Maternal, Newborn, Child, Adolescent and Youth Health [RMNCAHY] programme in the country.

All 26 health districts in the country responded rapidly in collecting and reporting data and all information was entered into the online system the by Medical Officer of Health [MOH] teams at MOH levels under the supervision of the district MCH teams.

Such community-based findings will be used to improve the services for pregnant women who become COVID-19 positive in community as well as in institutions. The information would improve the public health response in supporting COVID-19 positive pregnant women, postpartum women, and their infants during this challenging pandemic situation.

2. BASIC CHARACTERISTICS OF THE COVID-19 POSITIVE PREGNANT WOMEN IN SRI LANKA

2.1 Geographic Distribution

A total of **11,214** COVID-19 positive pregnant women were reported by the MOOH from March 2020 till 31st of December 2021. During the year 2021, a total of 11,055 cases were reported from all 26 health districts. Based on the service delivery organizational structure, the Colombo Municipal Council area (CMC) in Colombo district and the National Institute of Health Science (NIHS) area in Kalutara district were considered as separate units in the analyses.

Table 2-1: COVID-19 positive pregnant women reported by districts from March 2020 till 31st December 2021

District	2020	2021
Gampaha	19	1513
Colombo	11	1153
Kalutara	47	887
Kurunegala	1	673
Ratnapura	7	579
Kandy	7	515
Galle	1	515
Kegalle	3	431
Badulla		424
Anuradhapura		376
Jaffna		364
Matara	4	355
Batticaloa		351
Trincomalee	1	351
Puttalam	2	281
Monaragala		278
NIHS	5	274
Hambantota		269
Polonnaruwa		244
Kalmunai	5	215
Ampara	1	188
Matale	1	185
CMC RD	40	176
Nuwara Eliya	4	169
Kilinochchi		99
Vavuniya		90
Mullaitivu		59
Mannar		41
Sri Lanka	159	11055

In 2021, most of the COVID-19 positive pregnant women were reported from Gampaha district followed by Colombo and Kalutara RDHS. The lowest number was reported from Mannar and Mullaitivu districts.

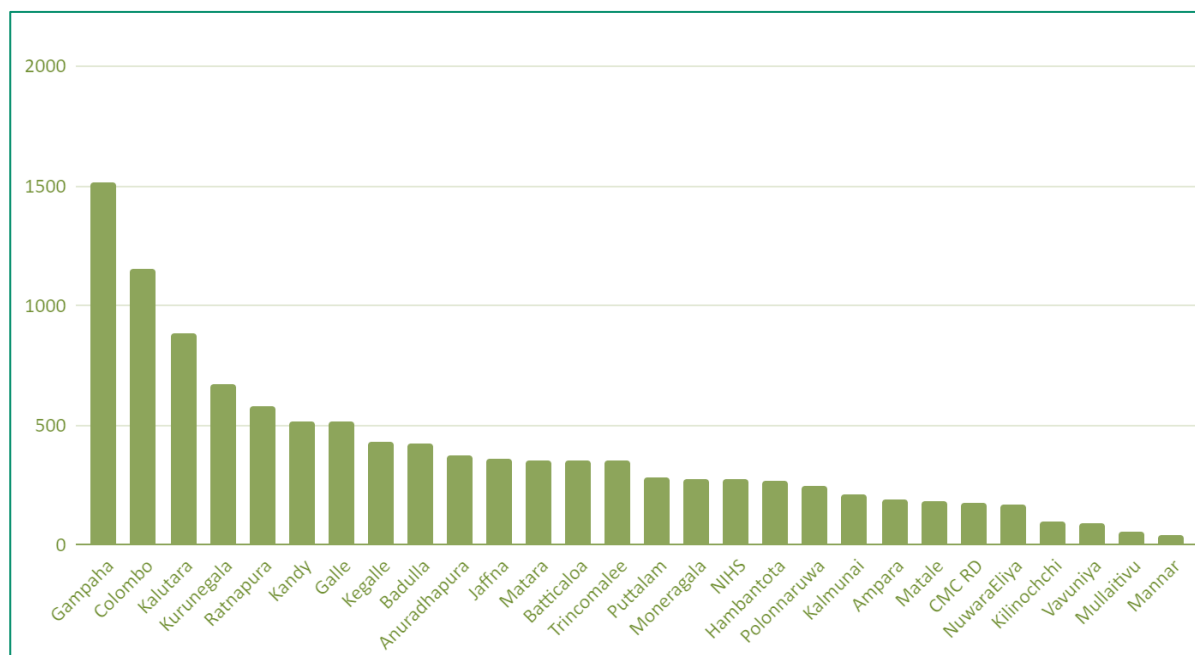


Figure 2-1: Number of COVID-19 positive pregnant women reported in 2021 by district

2.2 COVID-19 positive pregnant women reported by month

Number of cases reported increased dramatically during the month of May 2021 during the 3rd wave experienced following the Sinhala and Tamil New Year celebrations in the country. The highest number of cases of COVID-19 positive pregnant women was reported in August 2021 (3831), when the country was hit by the Delta variant.

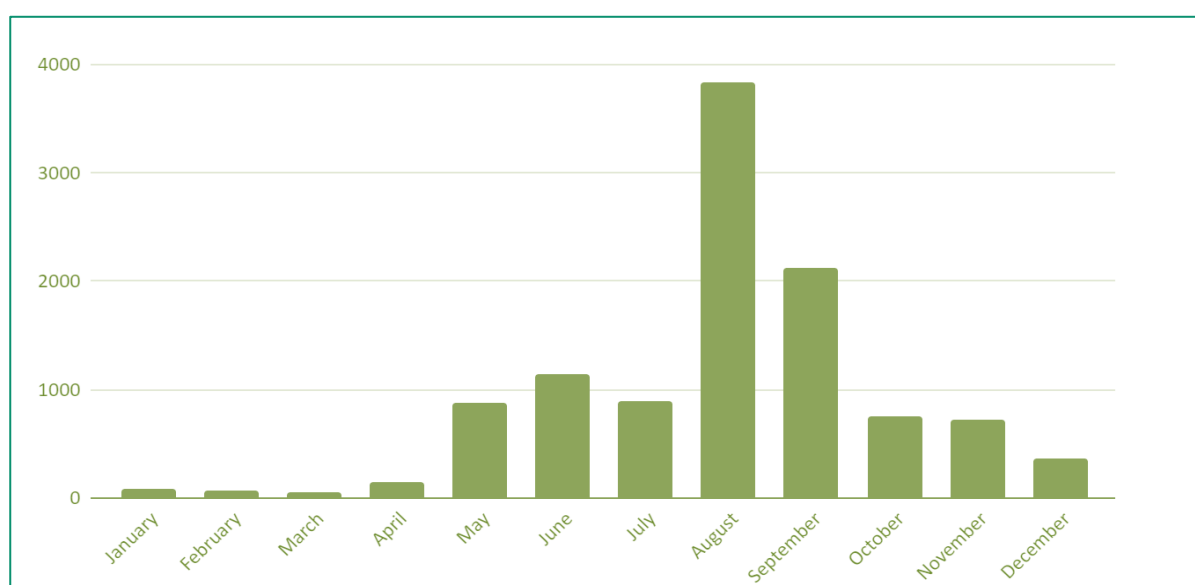


Figure 2-2: Number of COVID-19 positive pregnant women reported by month in 2021

2.3 Pregnant women with COVID-19 by ethnicity

Majority [74.2%] were Sinhala followed by Tamil [16.2%] and Muslim [9.4%] ethnicities

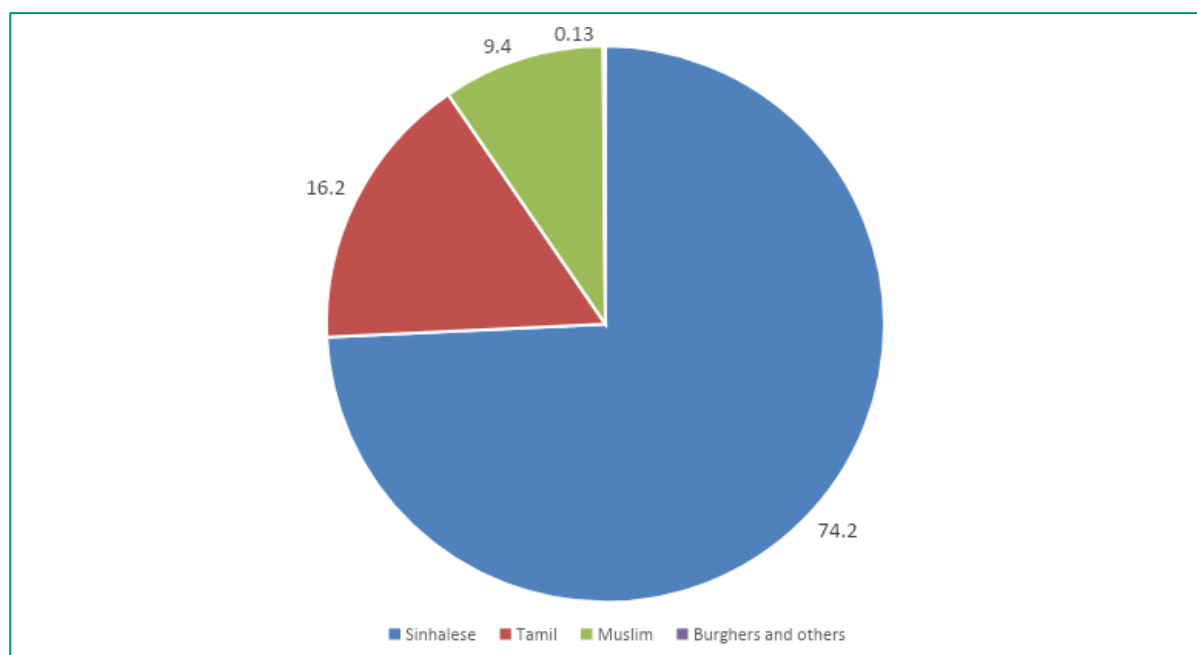


Figure 2-3: Percentage of COVID-19 positive pregnant women by ethnicity

2.4 Pregnant women with COVID-19 by age distribution

Majority [34.3%] of COVID-19 positive pregnant women were within the age group of 25-29 years, whereas 3.7% were less than 20 years and 3.3% more than 40 years of age.

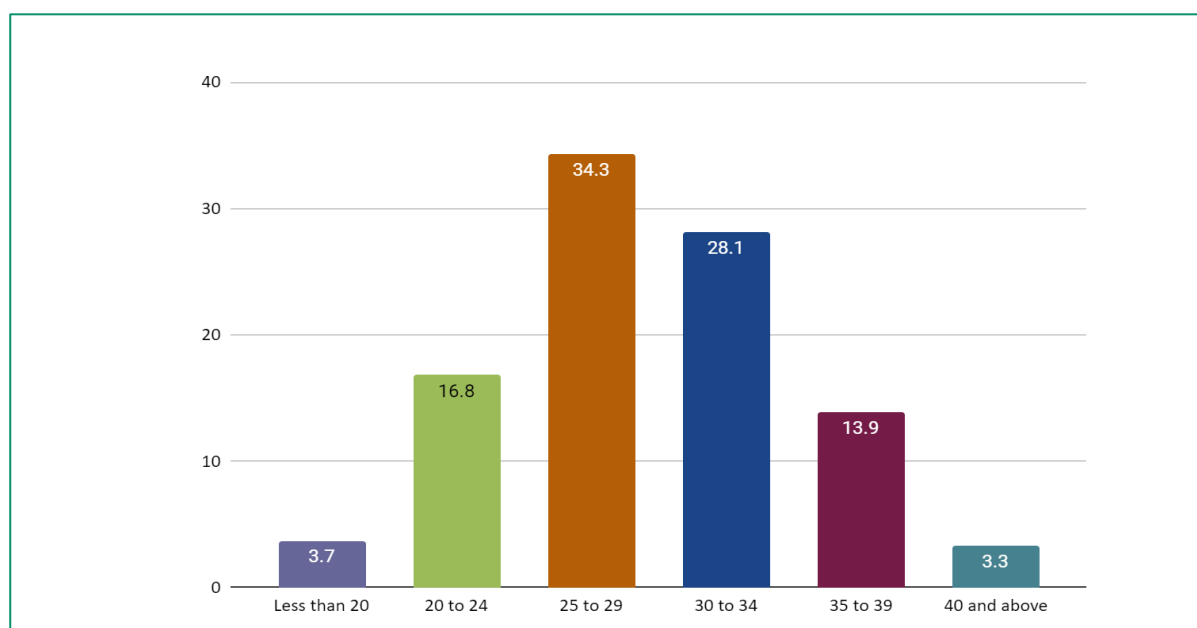


Figure 2-4: Percentage of COVID-19 positive pregnant women by age group

2.5 COVID-19 positive pregnant women by employment

Out of the COVID-19 positive pregnant women reported in 2021, the majority [69.1%] were unemployed.

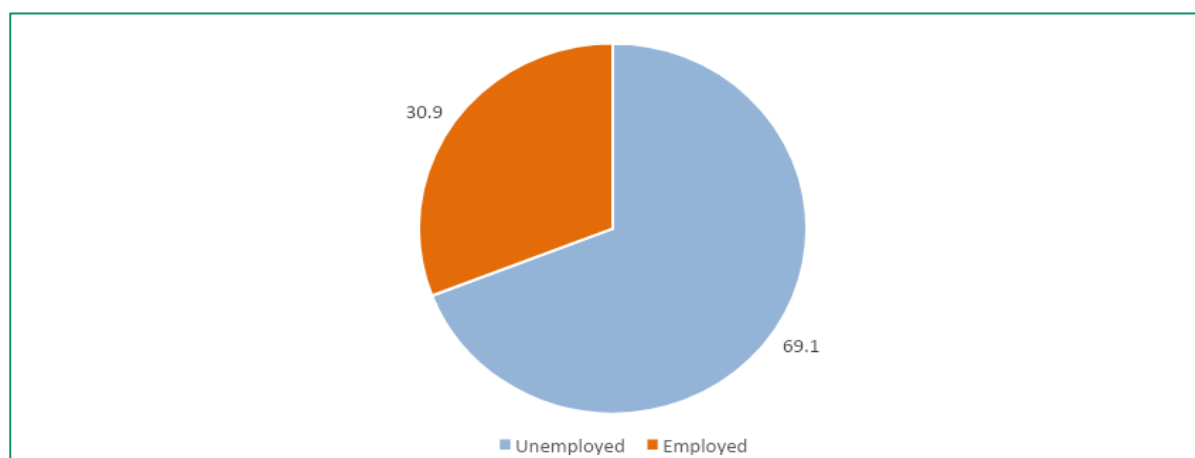


Figure 2-5: Percentage of COVID-19 positive pregnant women by employment

2.6 COVID-19 positive pregnant women by their monthly family income levels

Nearly 76% of reported COVID-19 positive pregnant women had a monthly family income less than Rs. 45,000 which is the median household income per month reported by the Central Bank of Sri Lanka. Twenty-one percent [20.9%] were below the poverty line having a household monthly income less than Rs. 16,000.

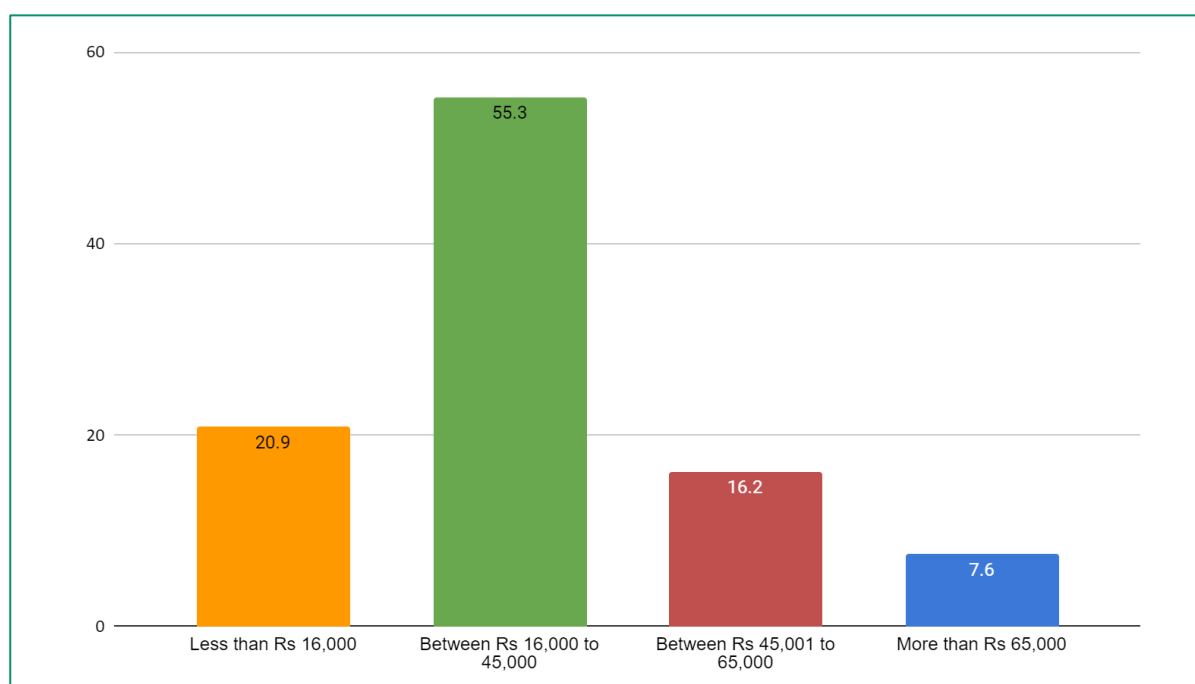


Figure 2-6: Percentage of COVID-19 positive pregnant women by monthly family income

2.7 COVID-19 positive pregnant women by sector

Majority [76.6%] of the COVID-19 positive women were from rural communities whereas 20.2% were from the urban sector and 3.2% were from the estate sector. This distribution is more or less compatible with the national statistics of urban 18.2%, rural 77.4% and estate 3.2% sector distributions.

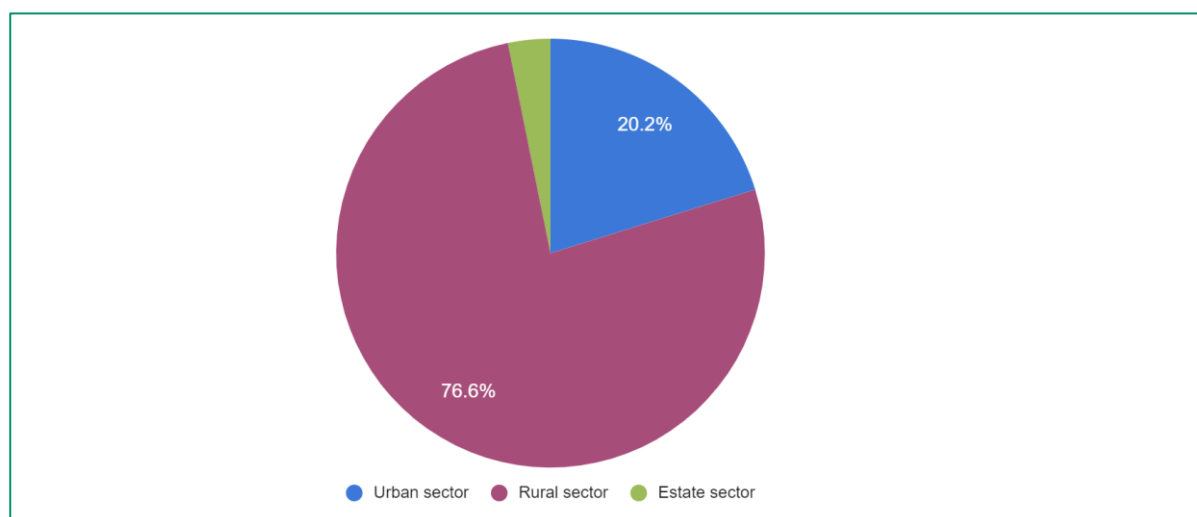


Figure 2-7 : Percentage of COVID-19 positive pregnant women by sector

2.8 COVID-19 positive pregnant women by gravida

Out of the COVID-19 positive pregnant women registered, 38.2% were primigravida and 61.8% were multigravida pregnancies. Three percent [3.2%] of the pregnant women were grand multigravida.

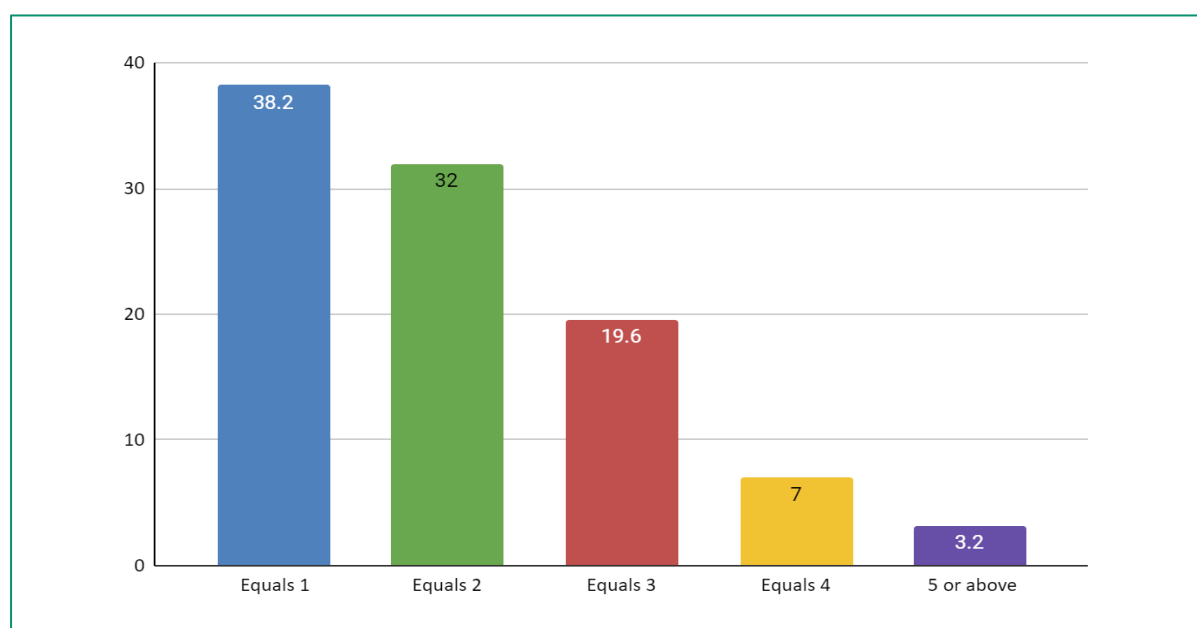


Figure 2-8: Percentage of COVID-19 positive pregnant women by gravida

2.9 COVID-19 positive pregnant women by Body Mass Index (BMI)

Out of COVID-19 positive pregnant women registered, the majority 56.8% were having a normal BMI between 18kg/m² to 25kg/m². Nearly one third of the women were overweight having a BMI more than 25kg/m².

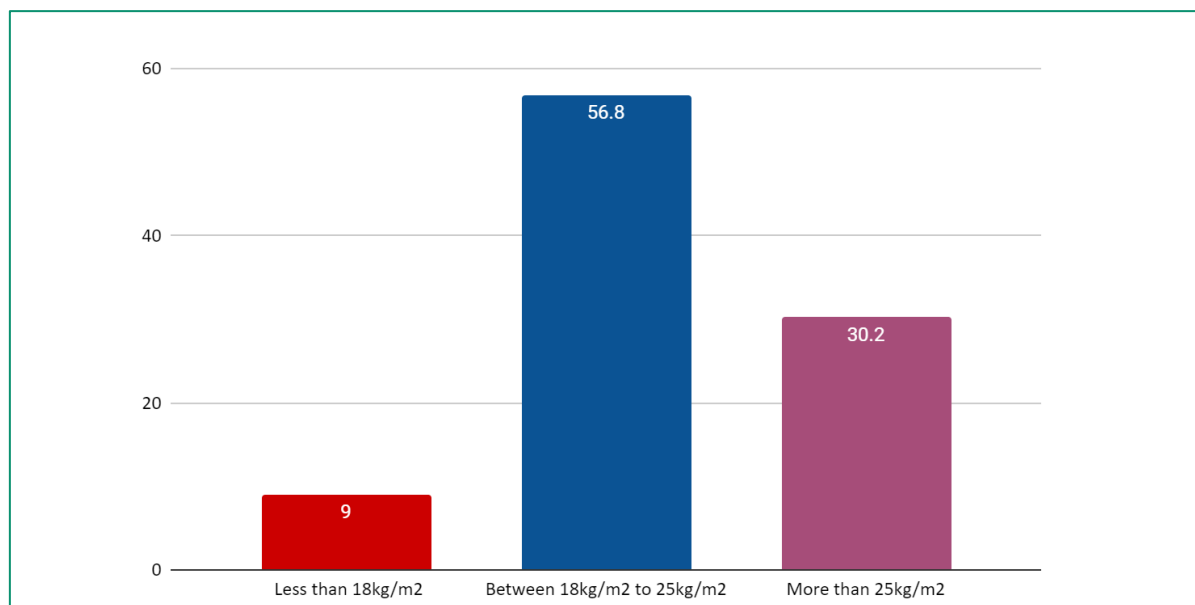


Figure 2-9: Percentage of COVID-19 positive pregnant women by Body Mass Index

2.10 COVID-19 diagnosis by the type of test

Of the COVID-19 positive pregnant women registered in 2021, 63.9% were diagnosed with a PCR test, while 33.7% were based on a Rapid Antigen Test (RAT) and in 2.4% of women both tests were being carried out.

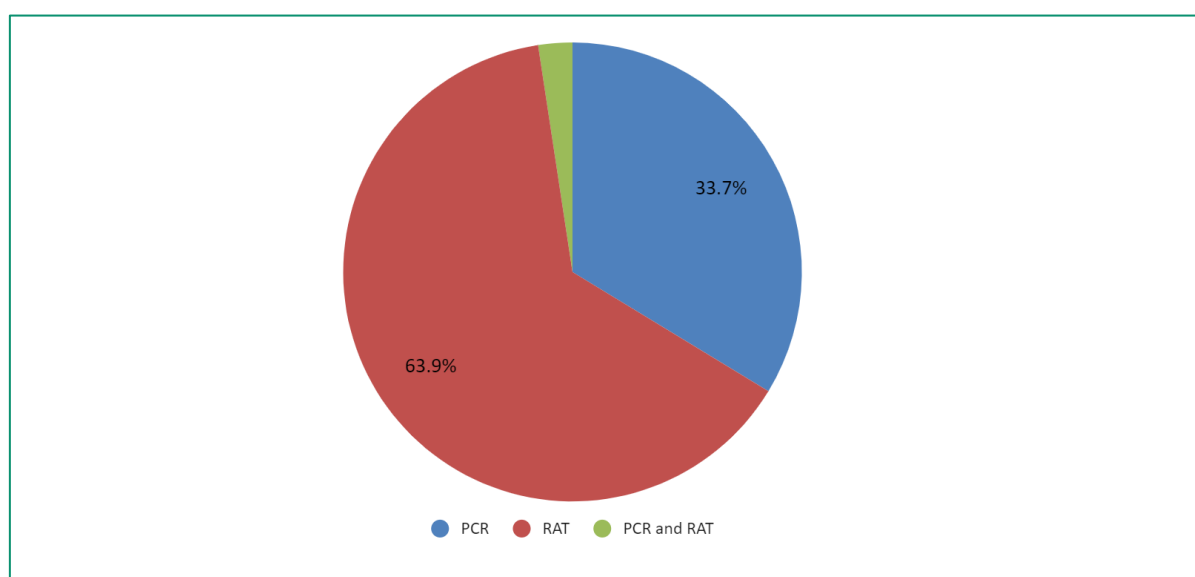


Figure 2-10: Percentage of COVID-19 positive pregnant women based on tests by which COVID-19 infection was diagnosed

2.11 Symptoms at diagnosis

Of the 11,214 COVID-19 positive pregnant women registered, the majority [69.1%] were symptomatic at the time of diagnosis.

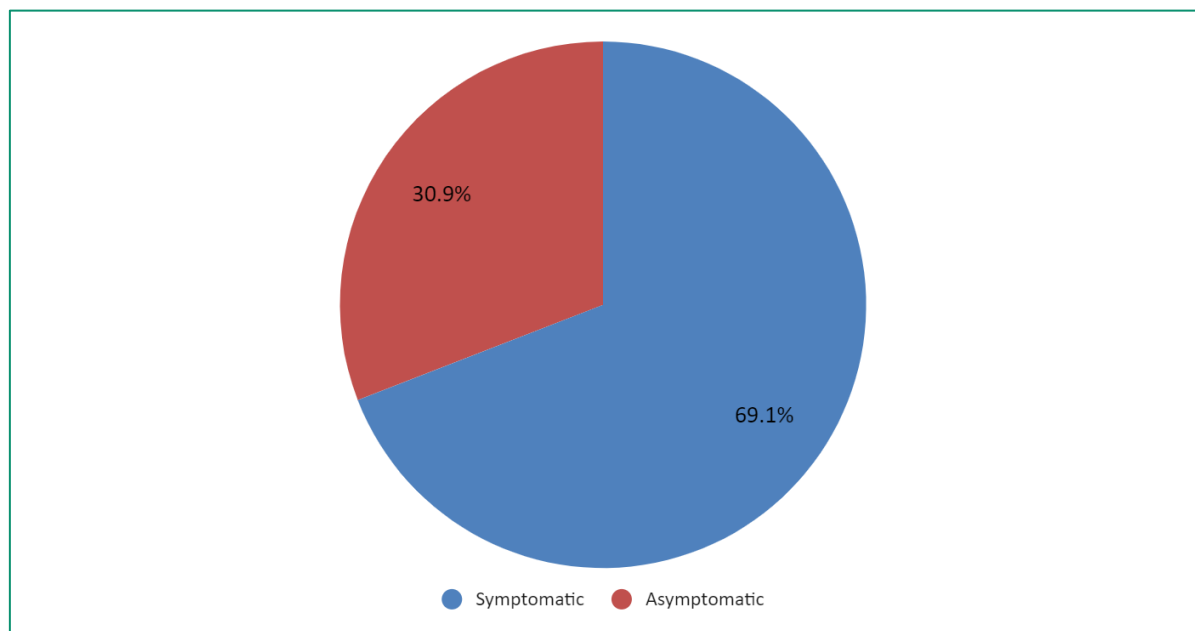


Figure 2-11: Percentage of COVID-19 positive pregnant women symptoms by diagnosis

2.12 Period of Amenorrhoea [POA] at diagnosis

Out of the 11,214 COVID-19 positive pregnant women registered, the majority [49.9%] were diagnosed at the third trimester.

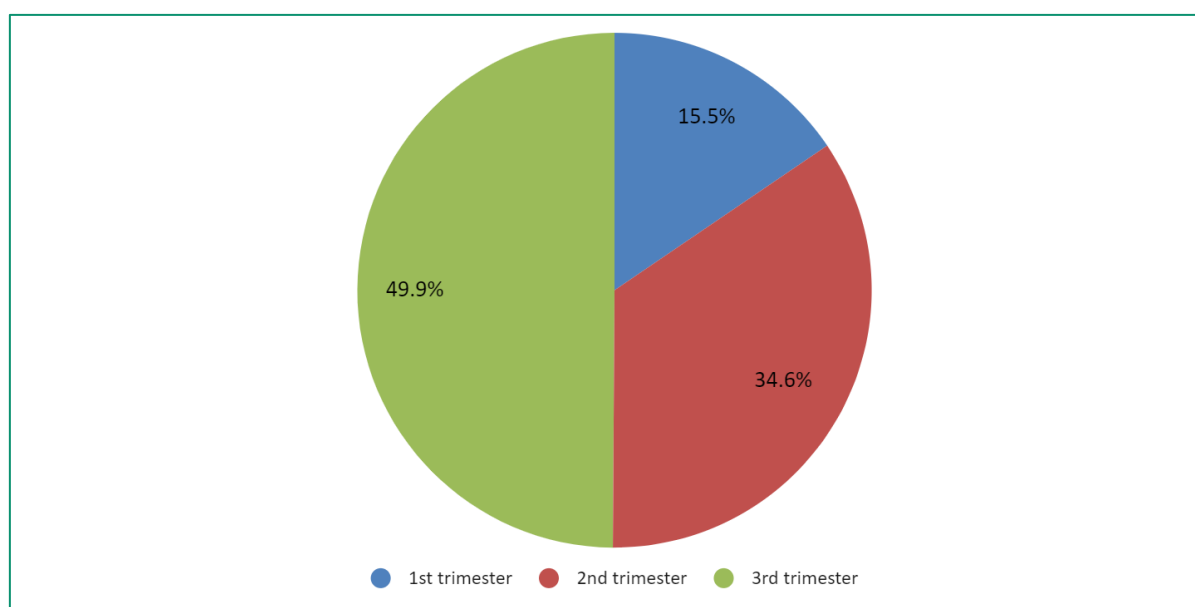


Figure 2-12: Percentage of COVID-19 positive pregnant women by the POA at the time of diagnosis of COVID-19

2.13 Vaccination status at the time of diagnosis

Vaccination for COVID-19 in Sri Lanka commenced in June 2021 and initially it was given only to the high-risk exposure groups. Among the COVID-19 positive pregnant women registered, it was reported that 54.1% of them were not been vaccinated at all. It was also reported that 26.1% of the women had received their first dose at the time of diagnosis and 19.8% had received both doses of COVID-19 vaccination at the time of diagnosis.

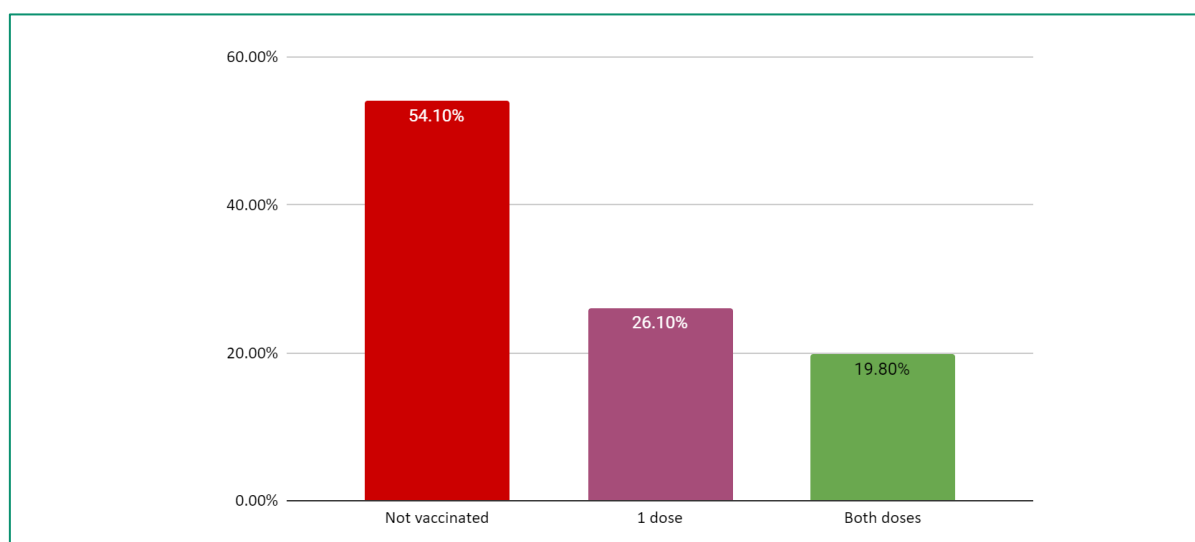


Figure 2-13: Percentage of COVID-19 positive pregnant women by vaccination status

2.14 Pregnancy associated comorbidities

Among the comorbidities reported among the COVID-19 positive pregnant women, Diabetes Mellitus was found to be common [7%].

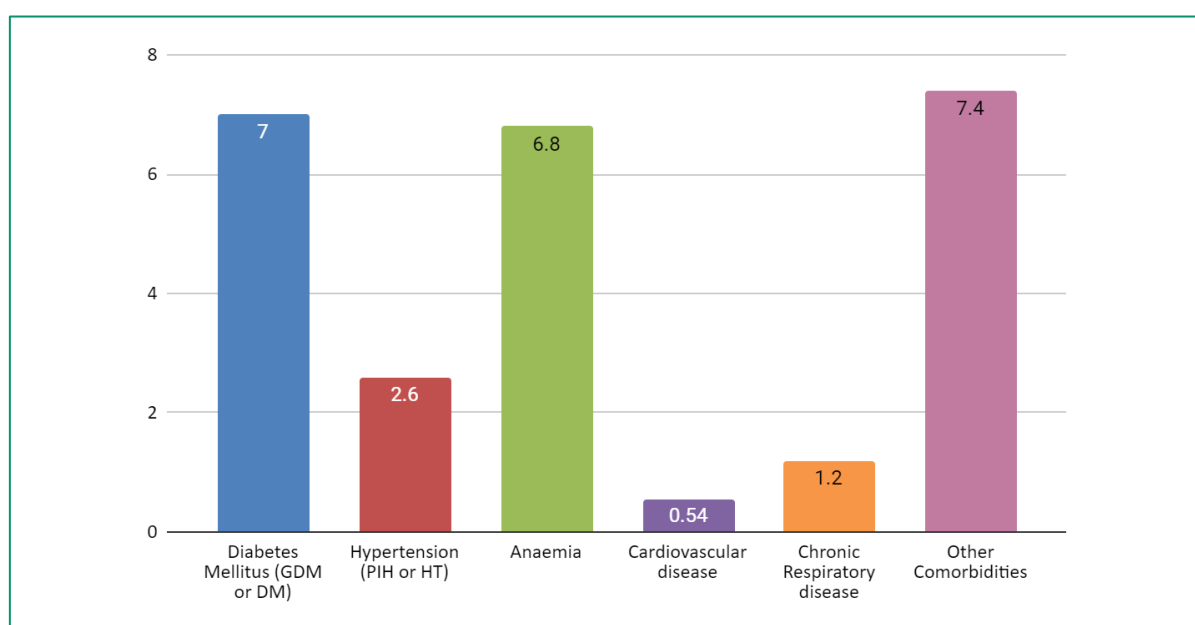


Figure 2-14: Percentage of COVID-19 positive pregnant women with comorbidities

3. FOLLOW UP INFORMATION OF COVID-19 POSITIVE PREGNANT WOMEN

All PHMs were instructed to report the severity of infection and the immediate outcome of the pregnancy after 14 days of diagnosis of COVID-19. They were instructed to pay a home visit or to contact the COVID-19 positive woman over the phone after 14 days of diagnosis to find out the outcome.

Follow up information, up to the end of December 2021, was reported in 66% [7,408] of total registered COVID-19 positive pregnant women.

3.1 Severity of the illness

Severity of the disease was assessed based on factors such as ICU admission, ventilation, ECMO treatment or death. Among the 7,408 COVID-19 positive pregnant women followed up after discharge, 73% of women were treated as inward patients. It was reported that 133 patients were treated in the ICU, out of which 96 were ventilated. Eleven pregnant women were managed with Extracorporeal Membrane Oxygenation [ECMO]. A total of 57 [0.76%] deaths among COVID-19 positive pregnant women were reported up to 31st of December 2021.

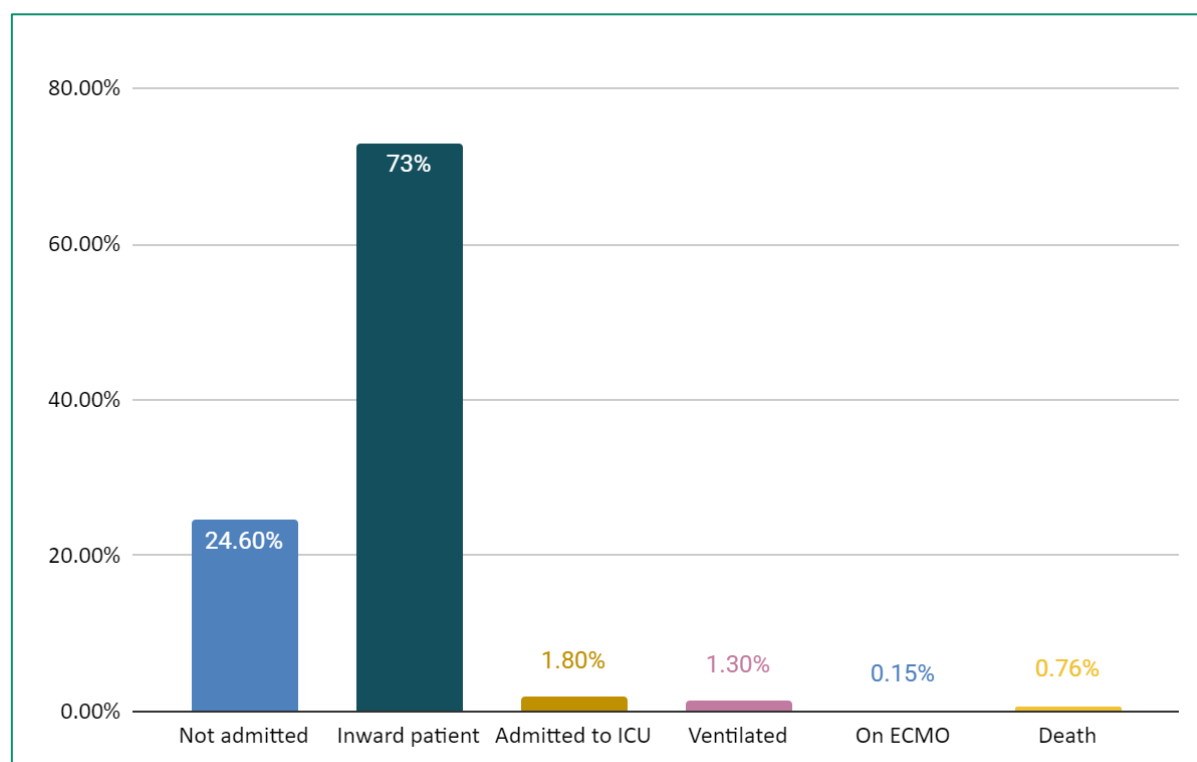


Figure 3-1: Percentage of COVID-19 positive pregnant women by severity of the illness

3.2 Outcome of pregnancy following the diagnosis

Among the 7,408 women whose follow up information was available, 63.5% continued their pregnancies and 33.8% had live birth at the time of discharge after treatment for COVID-19 infection. There were 33 (0.4%) neonatal deaths reported and 194 women [2.3%] were experienced a pregnancy loss.

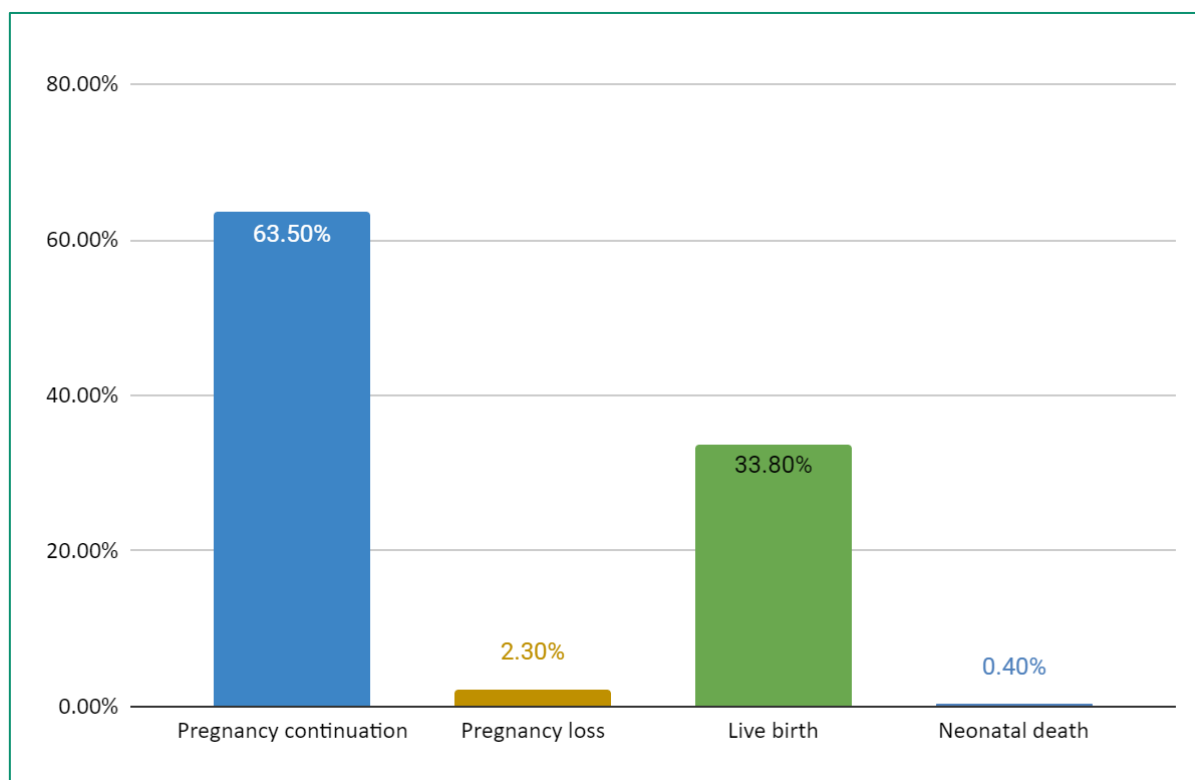


Figure 3-2: Percentage of COVID-19 positive pregnant women based on the outcome of pregnancy at the time of discharge

4. POSTNATAL ASSESSMENT OF INFANTS AT ONE MONTH

PHMs and the MOOH were instructed to pay special attention to these women and on reporting any significant impact on newborns who were exposed to the virus during pregnancy.

Out of the registered COVID-19 Positive pregnant women, postnatal assessments were reported only in 3,810 [34%] by the 31st of December 2021.

4.1 POA at the time of delivery

Out of the reported 3,810 postnatal assessments, 70.1% pregnant women delivered at POA of 38 weeks or more. Premature deliveries were encountered in 28.5% of which 0.52% were extreme premature deliveries, that is less than 28 weeks of POA.

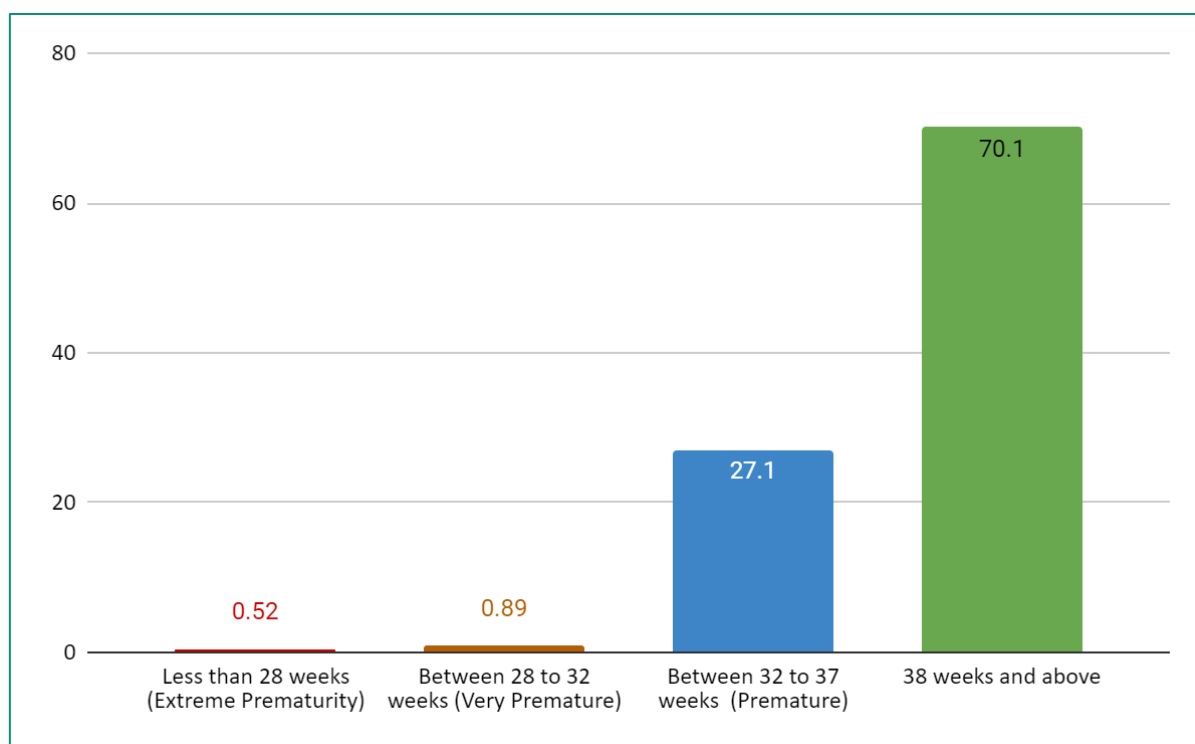


Figure 4-1: Percentage of COVID-19 positive pregnant women who were followed up by the POA at delivery

4.2 Mode of delivery

Out of the 3,810 postnatal assessments reported, 45.8% had normal vaginal deliveries, 35.7% had elective cesarean sections and 17.3% had emergency cesarean sections.

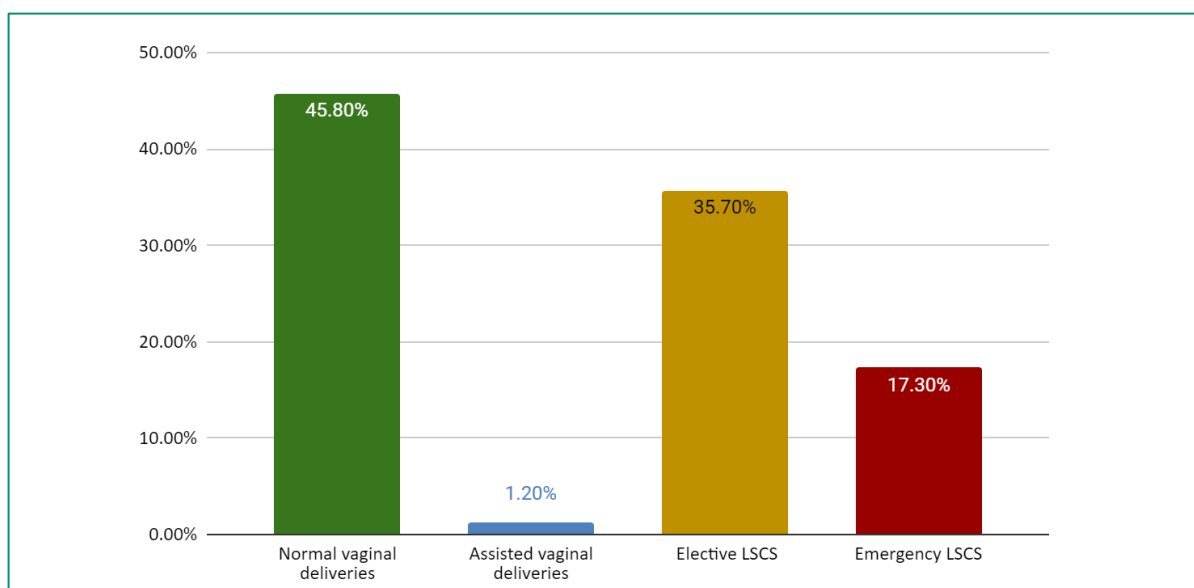


Figure 4-2: Percentage of COVID-19 positive pregnant women who were followed up by the mode of delivery

4.3. Newborn's COVID-19 status

In 2020, 6.4% of babies tested as PCR positive for COVID-19 infection at birth. PCR tests were negative in 27.2%. In 66.4% of the newborns, PCR testing had not been performed.

In 2021, 5.2% of babies tested as PCR positive for COVID-19 infection. PCR tests were negative in 36%. In 58.3% PCR testing had not been performed.

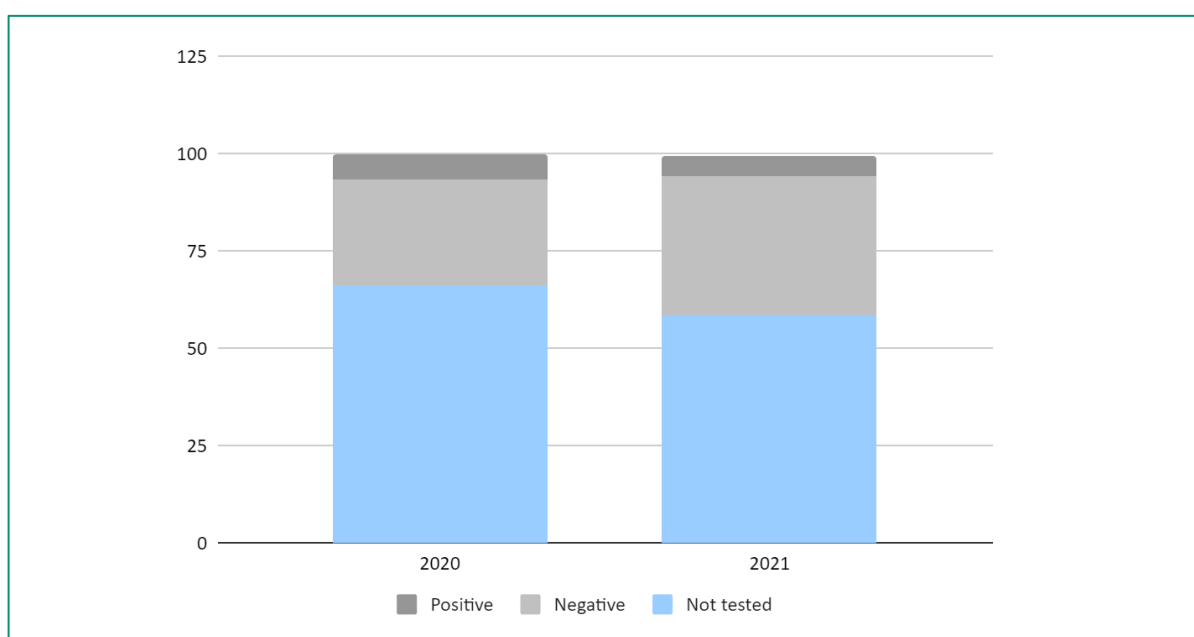


Figure 4-3: Percentage of COVID-19 positive pregnant women who were followed up by the newborns COVID-19 status

4.4 Birth weight of the newborn

Out of the 3,810 reported postnatal assessments by the end of December 2021, 82.41% had normal birth weight and 12.34% had birth weight from 2000g to 2499g. Extreme low birth weight (<1000g) were reported in 0.52%.

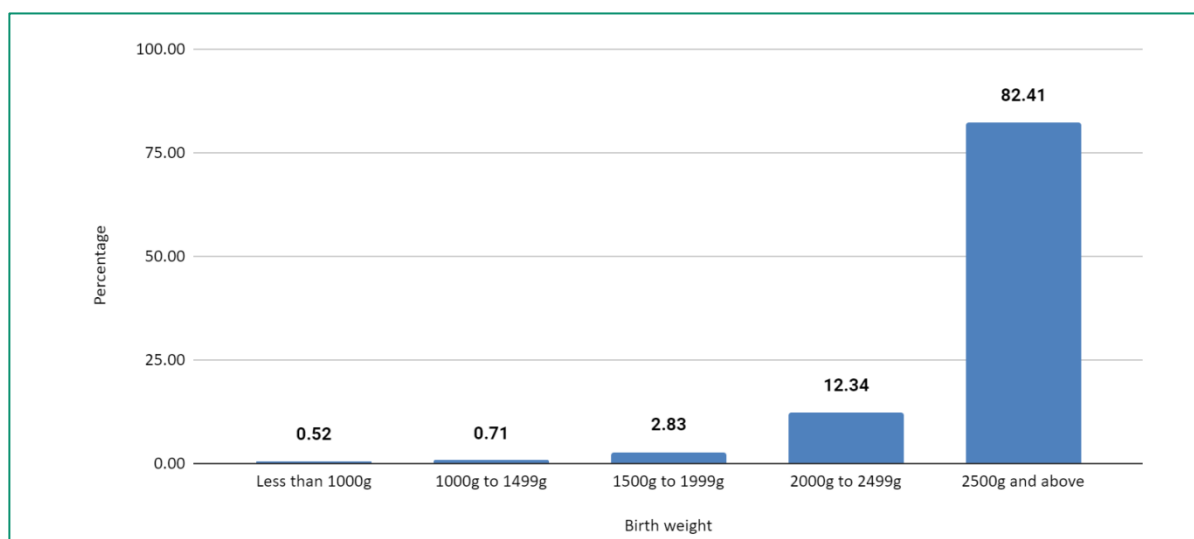


Figure 4-4: Percentage of COVID-19 positive pregnant women who were followed up by the birth weight of newborns

4.5 Newborn care.

Out of the 3,810 reported postnatal assessments by the end of December 2021, 5.7% newborns were managed in the Special Care Baby unit (SCBU) and 1.8% were managed in the Neonatal Intensive Care Unit (NICU).

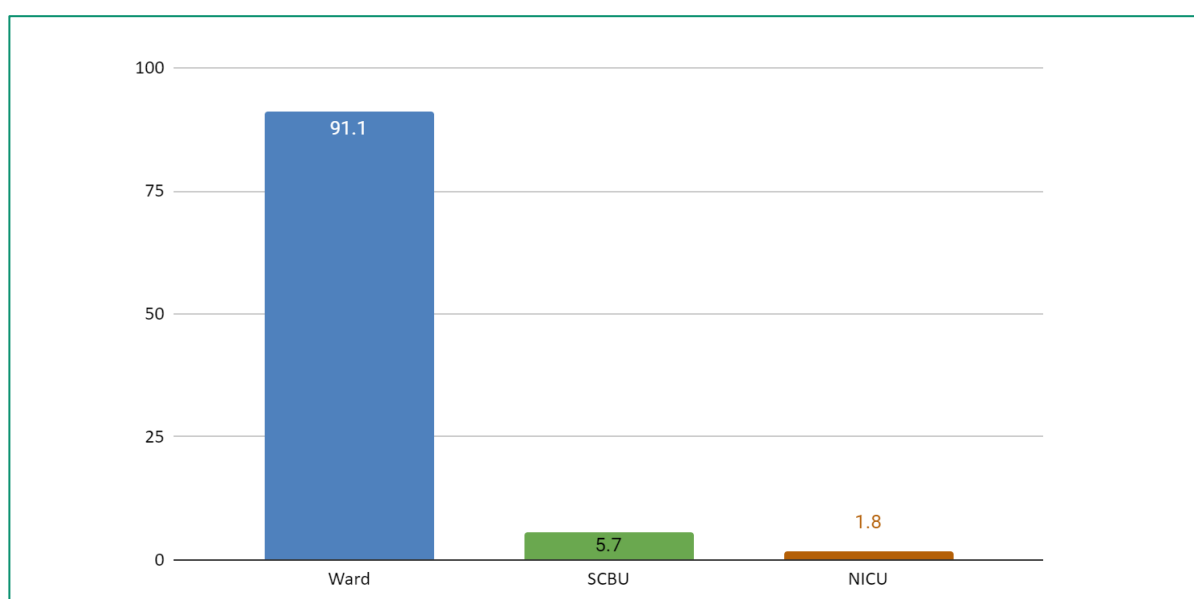


Figure 4-5: Percentage of COVID-19 positive pregnant women based on the care provided to their newborns

4.6 Congenital Anomaly

Out of the 3,810 reported postnatal assessments by the end of December 2021, congenital anomalies were detected in 3.1% of the newborns.

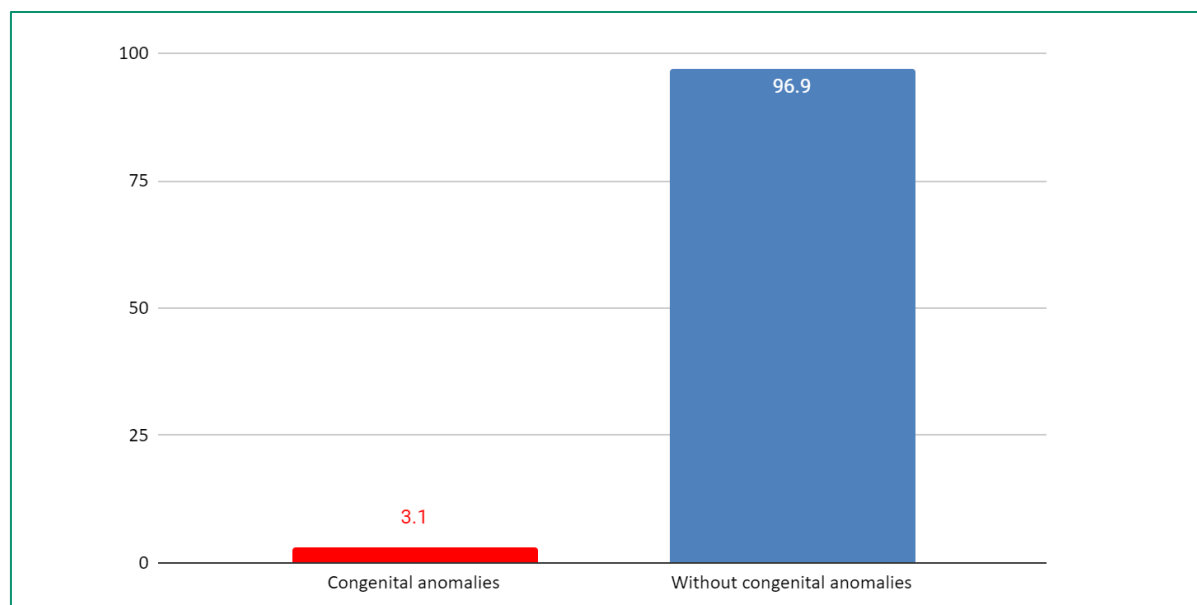


Figure 4-6: Percentage of congenital anomalies among the babies delivered by women who had COVID-19 infection during pregnancy

4.7 Breastfeeding status

Out of the 3,810 reported postnatal assessments by the end of December 2021, 96.1% were on exclusive breastfeeding at the end of one month.

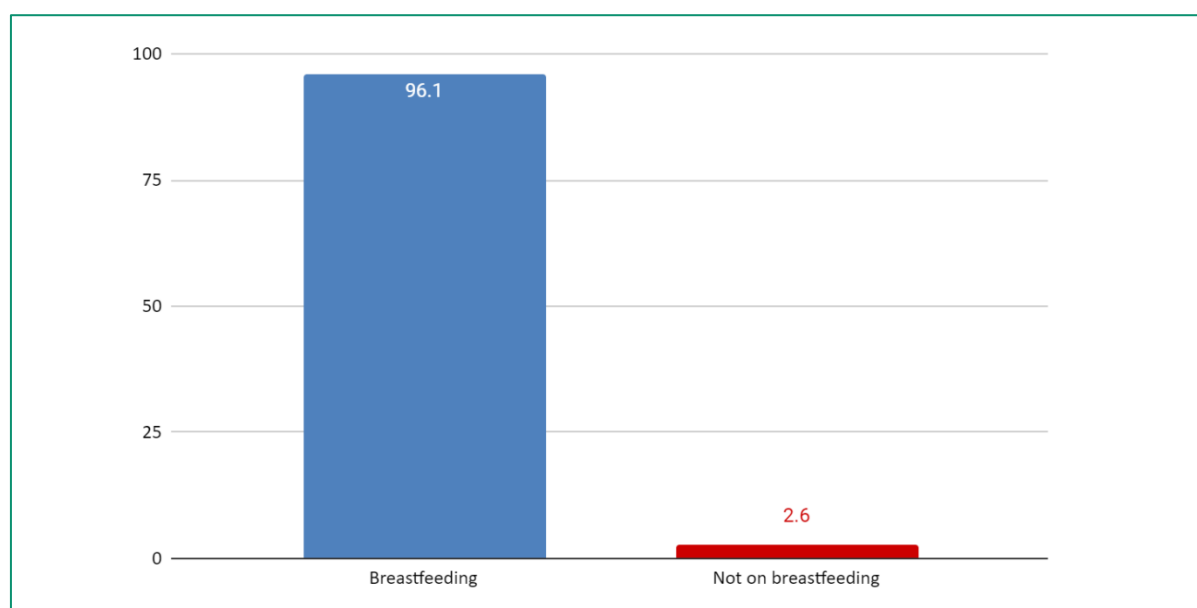


Figure 4-7: Percentage of newborns of COVID-19 positive pregnant women who were followed at one month by their breastfeeding status

5 POSTNATAL ASSESSMENT OF INFANTS AT 6 MONTHS

The infants of women who were diagnosed with COVID-19 infection during pregnancy were followed up and the information pertaining to their growth and development was captured at 6 months.

By the end of December 2021, only 476 [4.2%] out of the registered COVID-19 positive pregnant women's infants' data were available in the system.

5.1 Growth at 6 months

Out of the reported 476 women whose findings of their infants at 6 months were available, the majority had a normal growth and only 2.1 % of infants had unsatisfactory growth.

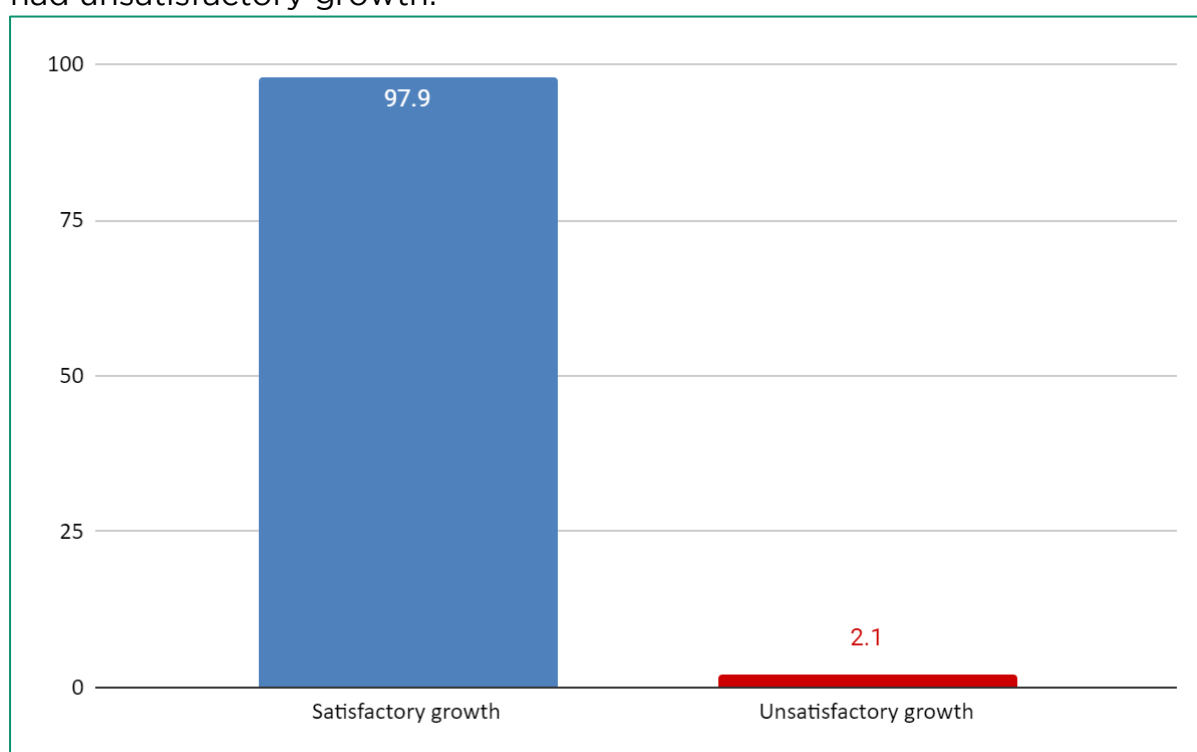


Figure 5-1: Percentage of COVID-19 positive pregnant women who were followed up by growth of the infant at 6 months postnatal assessment

5.2 Development at 6 months

Out of the 476 women whose infant's development assessment at 6 months reported by 31st December 2021, majority reported normal developmental milestones at 6 months whereas 0.84% reported developmental delays.

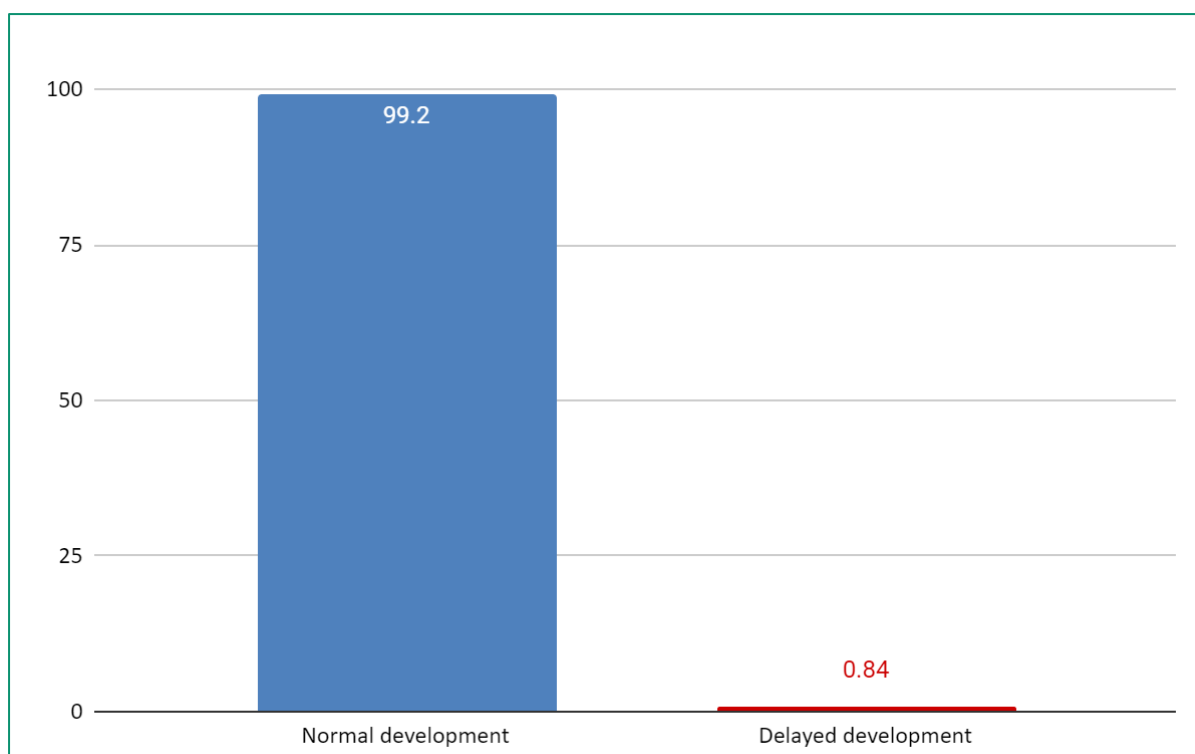


Figure 5-2: Percentage of COVID-19 positive pregnant women who were followed up by development of the infant at 6 months postnatal assessment

6 DISTRICT-WISE PRESENTATION OF SELECTED CHARACTERISTICS OF COVID-19 POSITIVE PREGNANT WOMEN

6.1 Ethnic composition

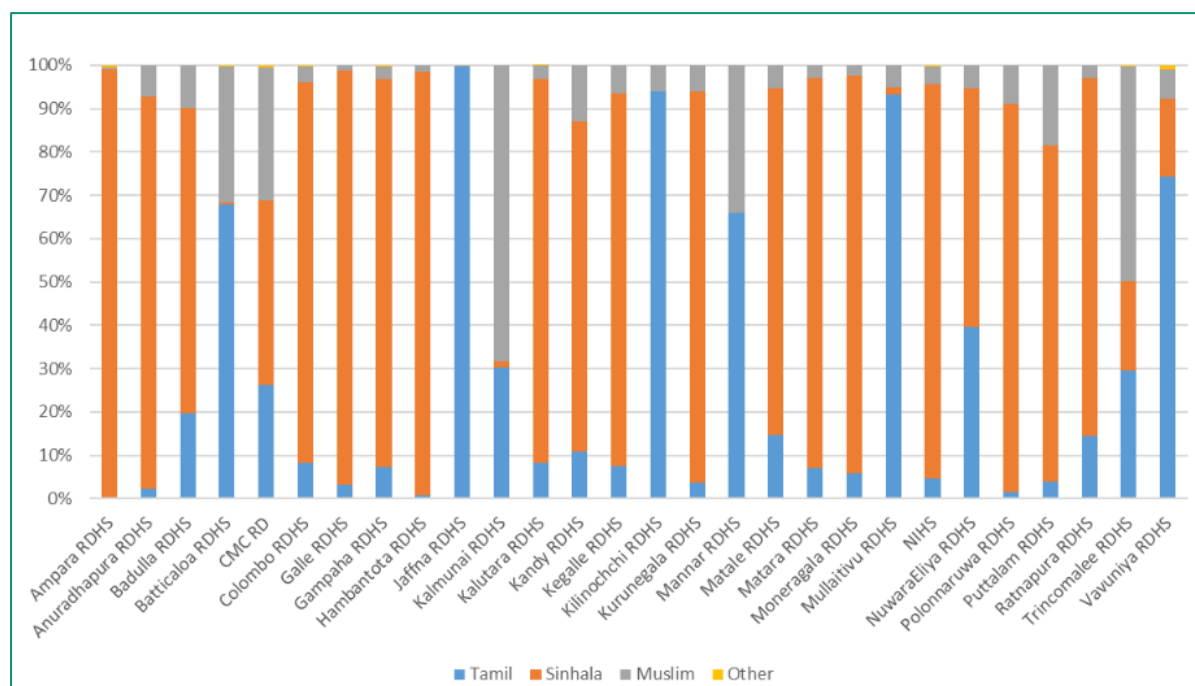


Figure 6-1: Percentage of COVID-19 positive pregnant women registered by ethnicity in each district

6.2 Sector-wise presentation

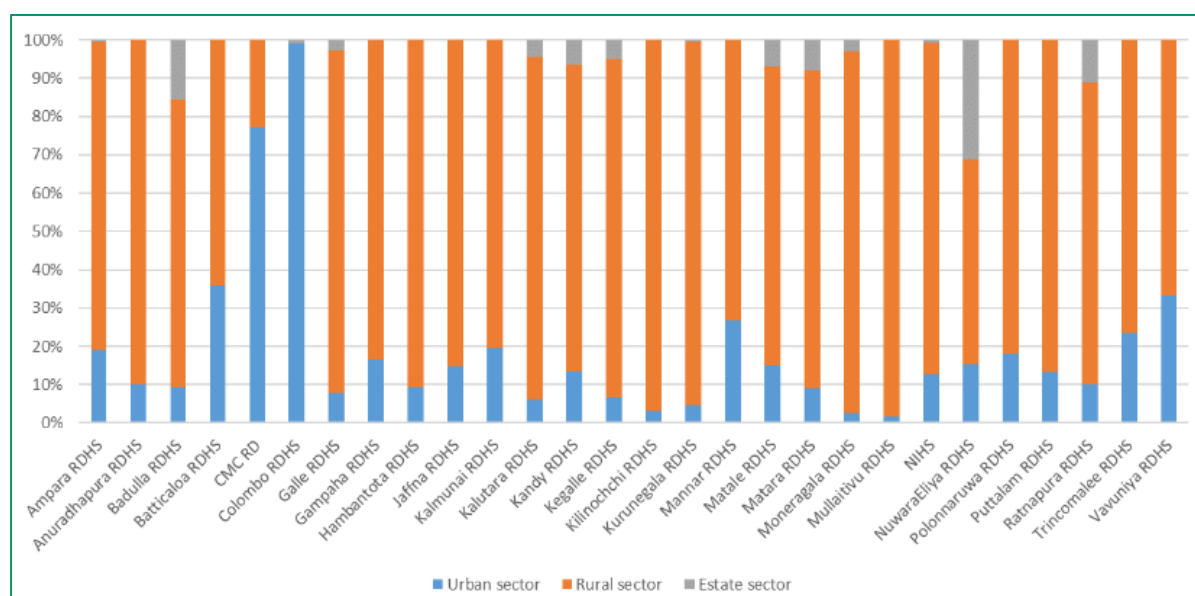


Figure 6-2: Percentage of COVID-19 positive pregnant women registered by sector in each district

6.3 Employment by district

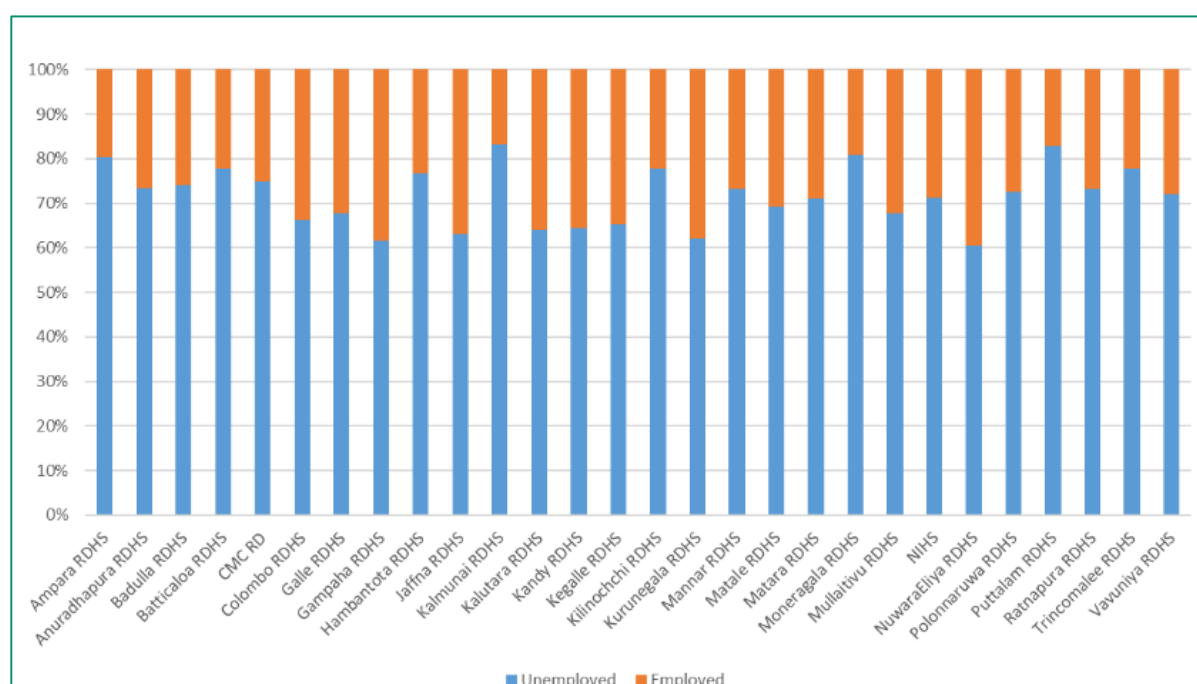


Figure 6-3: Percentage of COVID-19 positive pregnant women registered by employment in each district

6.4 Monthly family income

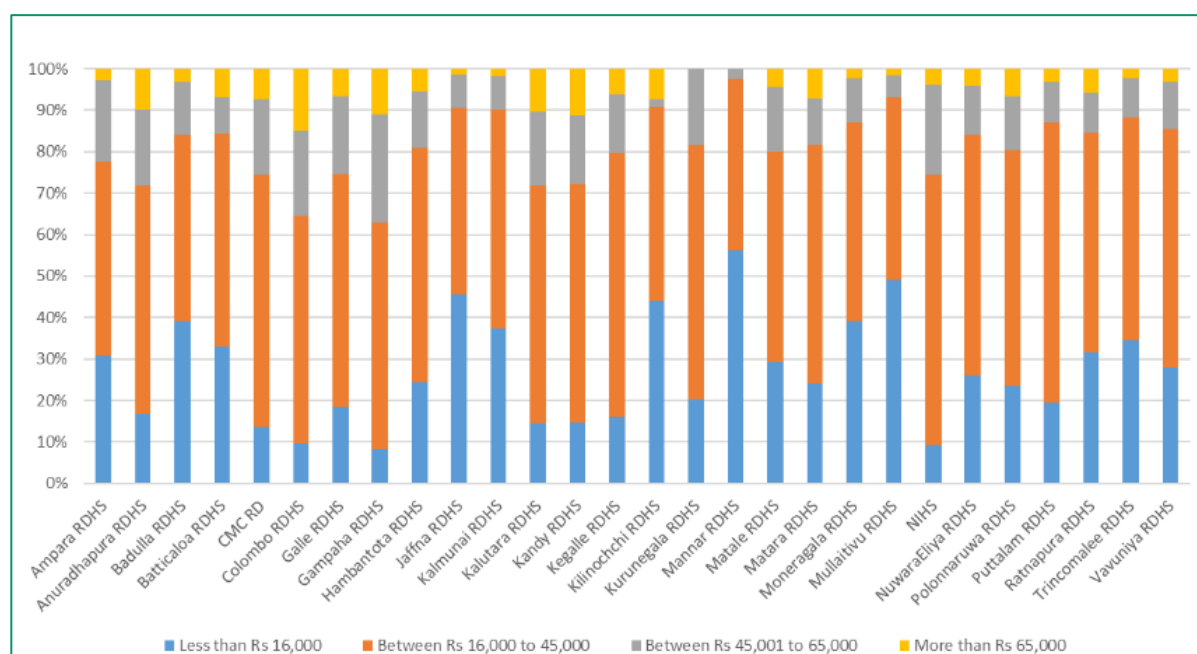


Figure 6-4: Percentage of COVID-19 positive pregnant women registered by monthly family income in each district

6.5 Pregnancy related comorbidities

District	Diabetes Mellitus (GDM or DM)	Hypertension (PIH or HT)	Anaemia	Cardiovascular disease	Chronic Respiratory disease
Ampara	5.3	2.1	7.4	0	0.53
Anuradhapura	3.5	2.7	6.9	0.27	1.1
Badulla RDHS	4.2	3.3	5.2	0.47	1.2
Batticaloa	6.6	0.85	6	0.57	2
CMC	13.1	5.1	11.4	0.57	2.8
Colombo	10.8	2.5	6.4	0.43	1.4
Galle	4.3	3.9	2.1	0.39	0.97
Gampaha	8.5	2.4	7.1	0.33	0.79
Hambantota	8.9	3.3	4.8	0.37	1.9
Jaffna	14.8	4.1	13.5	0.55	0.55
Kalmunai	12.6	0.93	14.4	1.4	1.4
Kalutara	5.7	1.7	5.3	0.9	0.9
Kandy	5.4	2.5	5.2	0.58	2.3
Kegalle	4.2	2.3	3.7	0.23	0.7
Kilinochchi	16.2	3	12.1	1	1
Kurunegala	4.5	1.5	5.8	0.59	1.6
Mannar	31.7	12.2	12.2	0	0
Matale	2.2	0.54	9.2	0.54	1.6
Matara	4.5	0.85	6.2	0.56	0.28
Moneragala	4	3.2	12.2	0.72	0.72
Mullaitivu	16.9	0	11.9	0.36	0
NIHS	6.9	4	5.8	0.41	2.2
NuwaraEliya	4.1	3.6	5.3	1.1	0
Polonnaruwa	1.6	0.82	4.1	0.86	2
Puttalam	6	5.3	8.9	2.2	2.1
Ratnapura	4.8	2.2	5.7	1.1	1.2
Trincomalee	9.1	2.8	4.6	0.86	0.85
Vavuniya	5.6	5.6	5.6	2.2	1.1

Table 6-1: Percentage of comorbidities among COVID-19 positive pregnant women by each district

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