

What Impact Have SARS-CoV-2/Covid-19 Pandemic on the Reproductive and Child Health Programme of *India* over the 3 months after nationwide Lock down announcement in March 2020? How SARS-CoV-2 Pandemic era does influence RCH Programme? ? Immunisation? Maternal Health? Family Planning?

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Abstract

Background: The delivery of reproductive and child health services is of utmost importance and prime concern in India particularly because of huge population with limited resources, poor infrastructure and huge demand on healthcare system. The SARS-CoV-2 pandemic had presented a challenge even for developed healthcare systems around the world. **Objectives:** The main aim of this research is to find out Impact of SARS-CoV-2 pandemic on the Reproductive and Child Health Programme in India over the 3 months after Lock down imposition countrywide in March 2020 due to Covid-19 pandemic. **Settings & Design:** Different indicators group of RCH programme 2020 (immunisation, maternal & child health, family planning) for India were collected from Ministry of Health & Family Welfare, Government of India and compared from previous year 2019 data for the period of three months (April/May/June) and presented in tables and graphs to understand the situation. **Materials & Methodology:** Secondary data from HMIS of Ministry of Health & Family Welfare Government of India for 3 month of April, May, June 2019 & 2020 were taken for analysing and understanding the impact of pandemic on RCH programme over 3 months after nationwide lock down announced in march 2020 viz. April/May/June 2020. The data obtained is analysed by using Microsoft Office software. **Result:** The analysis of secondary data obtained from HMIS of Ministry of Health & Family Welfare website (Provisional figure & mentioned free for distribution) for RCH programme of India shows that the lock down period & initial early phase of SARS-CoV-2 during above mentioned 3 months pandemic have a negative impact over the delivery of Reproductive & Child Health services reflected through important indicators of which are also affected negatively. Besides the pandemic the Nation is also having lack of resources, manpower poor infrastructure as well as lack of positive deviance at community level. These are the barriers in fact beside the epidemic. It seems that there is lack of proper plan to deal with such pandemic situation. **Conclusion:** India has taken various strategies to ensure delivery of RCH services but it seems to be insufficient to give the desired results. The barriers of healthcare system and delivery of services constraints should be rectified added with a proper dynamic plan to carry on usual RCH services even in pandemics and natural disasters. India needs to develop an exclusive plan to tackle such situations such as establishment of separate cadre of health worker for RCH services to ensure the healthcare of women and children's in any natural disasters and calamities.

INTRODUCTION

The delivery of reproductive and child health services is of utmost importance and prime concern in India particularly due to high population load with limited resources, poor infrastructure and huge demand on

healthcare system. The women & child group are considered vulnerable group hence this topic needs essential attention.

The SARS-CoV-2 pandemic had presented a challenge even for developed healthcare systems around the world. A sense of fear gripped the whole world due to pandemic and India is not an exception. The scarce healthcare resources including manpower, infrastructure, transportation (ambulance services) etc. have been largely deployed to tackle the situation of pandemic of Covid-19. This shift has tremendous effect of ongoing various health programmes running previously before the pandemic era. The women and children's seem to suffer more.

Pregnant mother & children's are especially more vulnerable groups. The OPD/IPD services also suffered a lot due to pandemic impact as well as field health services are also compromised. The Pandemic situation challenged not only the health system but also community. The people have a sense of fear in meeting others particularly with peoples of healthcare system until unless there is some sort of acute emergency. Moreover most of the beds were reserved for covid-19 patients and as per protocols the community and system both have constrains erupting from the sudden situations of pandemic.

The advocacy for maternal and child health, women empowerment have been done and emphasised by many national and international organisation for several decades considering them especially vulnerable groups in times of disaster such as pandemic. The Covid-19 pandemic has clearly disclosed the weakness of health system to protect above mentioned vulnerable groups. The situation also produced a demand of separate cadre to protect mother and child health in situations of disaster like pandemic. It seems many protective beneficial health services were not delivered in covid-19 era which may produce undesirable and detrimental effects at mass level in coming future.

To understand the real impact of covid-19 on maternal and child health the data analysis for the month of April to June 2020 is compared with previous year 2019 data of 3 months and the facts are presented as table and charts.

OBJECTIVES

The main aim of this research is to find out impact of SARS-CoV-2 pandemic on the Reproductive and Child Health Programme of India over the next 3 months after Lock down imposition countrywide in March 2020. For this purpose important indicator related to child & mother health protection i.e. immunisation, maternal health and family planning were taken into consideration.

MATERIALS AND METHODOLOGY

Materials

Secondary data from HMIS of Ministry of Health & Family Welfare Government of India for 2019 & 2020 were taken for analysis and understanding of impact of pandemic on RCH programme over 3 months after lock down viz. April/May/June 2020 in India. The data obtained is analysed by using Microsoft Office software.

Following items are considered to know the impact of Pandemic on delivery of health services to mother and child under RCH programme.

See Table 1-Immunisation Items India & Table 2 – Maternal Health & Family Planning - India

Table 1-Immunisation Items India

1.Immunisation
BCG-BACILLUS CALMETTE GUERIN
PENTA 3+DPT 3
DT (2 ND DOSE) OR DPT-5
MEASLES + MR

1.Immunisation
POLIO (OPV 3)
TETANUS TOXOID (TT10)
TETANUS TOXOID (TT16)
VITAMIN A (1 ST DOSE)
VITAMIN A (5 TH DOSE)
VITAMIN A (9 TH DOSE)

Table 2 – Maternal Health & Family Planning - India

2.MATERNAL HEALTH	3.Family Planning
ANC	Condom user
MATERNAL HEALTH- HOME DELIVERIES	Oral Pill user
MATERNAL HEALTH – INSTITUTIONAL DELIVERIES	IUD insertion
	Sterilisation
	Tubectomy
	Vasectomy

Settings & Design:

Different indicators group of RCH programme (immunisation, maternal & child health, family planning) for India were collected and compared from previous year for the month of April/May/June -2019 & 2020. The percentage increase & decrease is calculated from the available data to know the status of delivery of important & essential health services. The data is also shown in tabulated as well as graphical form for ease of understanding. All the data obtained were analysed using Microsoft office software. The analysis report is presented as graphs and also in letters.

Methodology

All the data obtained were analysed using Microsoft office software. The analysis report is presented as graphs and also in letters. The data for analysis is obtained from MoHFW Govt. Of India web site services.

RESULTS

Results of data analysis regarding RCH performance of India during the month of April to June 2020 as compared to previous year 2019 for same months were compared for RCH services.

The immunisation services had been adversely affected during the months analysed as compared to previous year 2019. It seems that not only newborn children but even the older ones have missed proper immunisation services as evident from the data analysis. Table no. 3 shows that for BCG immunisation there is a decrease of 19.9% as compared to previous year 2019 data. Since BCG is given at birth it seems that either less no. of children's is born during this period or many have not received it.

For Penta3+DPT3 the decrease was 30.8%.

For DT or DPT5 the decrease was 31.9%.

For Measles+MR the decrease was 19.7%.

For OPV3 the decrease was 30.9 %.

For TT10 the decrease was 37.0%.

For TT16 the decrease was 38.8%.

For vitamin A which is given from 9 months of age 1stdose decreased by 5.3 %

Vitamin A 2nd to 9th dose starts from 16 months of age (one dose every 6 month).

Vitamin A 5th dose decreased by 30.4%, Vitamin A 9th dose decreased by 32.2 %

Here it is important to mention that vitamins A as well as OPV both are administered orally. The only difference is that OPV3 is given at the age of 14 weeks whereas vitamin A is started from 9 month onwards. This shows that the immunisation coverage for children of all ages decrease in 2020 April/May/June as compared to 2019 when the pandemic was not in existence. The full scenario is as follow: see Table 3 - Comparison on immunisation coverage for 2019 & 2020 for the month of April to June (all India) & Figure 1 - Comparison on immunisation coverage for 2019 & 2020 for the month of April to June (all India)

Table 3 - immunisation coverage for 2019 & 2020 for the month of April to June (all India)

Immunisation	ITEM CODE	NUMBERS ACHIEVED DURING APRIL TO JUNE -2020
BCG-BACILLUS CALMETTE GUERIN	9.1.2	4302783
PENTA 3+DPT 3	9.1.5,9.1.8	3996769
DT (2 ND DOSE) OR DPT-5	9.5.2	2391113
MEASLES + MR	9.2.1,9.2.2	4727480
POLIO (OPV 3)	9.1.12	3968965
TETANUS TOXOID (TT10)	9.5.3	1599129
TETANUS TOXOID (TT16)	9.5.4	1487006
VITAMIN A (1 ST DOSE)	9.8.1	3585146
VITAMIN A (5 TH)	9.8.2	1572917
VITAMIN A (9 TH)	9.8.3	1472555

Figure 1 - Comparison on immunisation coverage for 2019 & 2020 for the month of April to June (all India)

[CHART]

The ANC services and institutional deliveries are important to assess the status of maternal care.

Although home deliveries are reduced but at the same time the institutional deliveries also reduced which is a matter of great concern. The scenario is as below: see Table 4 - Comparison on maternal health coverage for 2019 & 2020 for the month of April to June (all India) & Figure 2- Comparison on maternal health coverage for 2019 & 2020 for the month of April to June (all India)

Table 4 - Comparison on maternal health coverage for 2019 & 2020 for the month of April to June (all India)

MATERNAL HEALTH	ITEM CODE	NUMBERS ACHIEVED DURING APRIL TO JUNE -2020	NUMBERS ACHIEVED DURING APRIL TO JUNE -2019	% IN-CREASE/DECREASE IN 2020 COMPARED TO 2019
ANC	1.1	6471349	7459628	Decrease 13.2%
MATERNAL HEALTH- HOME DELIVERIES	2.1.1.a,2.1.1.b	222369	275670	Decrease 19.3%

MATERNAL HEALTH	ITEM CODE	NUMBERS ACHIEVED DURING APRIL TO JUNE -2020	NUMBERS ACHIEVED DURING APRIL TO JUNE -2019	% IN-CREASE/DECREASE IN 2020 COMPARED TO 2019
MATERNAL HEALTH – INSTITUTIONAL DELIVERIES	2.2	3645173	4503217	Decrease 19.1%

Figure 2-Maternal health coverage for 2019 & 2020 for the month of April to June (India)

[CHART]

Although there is a general trend of increase in all above indicators every year as the population of India is growing rapidly. The decrease of such important indicators clearly signifies that covid-19 pandemic have a negative impact on delivery of important health services such as maternal and child health. The role of family planning is very important in context of India. All important family planning programmes show a decrease from previous year timeline for the same months indicating that the population control strategy of India also suffered during this period. See **Table 5 & Figure 3** - Comparison on family planning

Table 5 - Comparison on family planning coverage for 2019 & 2020 for the month of April to June (all India)

Family Planning	ITEM CODE	NUMBERS ACHIEVED APRIL TO JUNE -2020	NUMBERS ACHIEVED APRIL TO JUNE -2019	INCREASE/DECREASE IN 2020 COMPARED TO 2019 %
Condom user	8.13	3364444	4140417	Decrease 18.8%
Oral Pill user	8.12, 8.14	2610841	2963675	Decrease 11.9%
IUD insertion	8.3,8.4,8.5	920990	1283163	Decrease 28.2%
Sterilisation	8.2.1,8.2.2, 8.2.3,8.2.4,8.1.1	199900	622479	Decrease 67.9%
Tubectomy	8.2.1,8.2.2, 8.2.3,8.2.4,	199041	616972	Decrease 67.7%
Vasectomy	8.1.1	859	5507	Decrease 84.4%

Figure 3 - Comparison on family planning coverage for 2019 & 2020 for the month of April to June (all India)

[CHART]

DISCUSSION

The analysis of secondary data obtained from HMIS of Ministry of Health & Family Welfare website for RCH programme India shows that the lock down period & initial early phase of SARS-CoV-2 pandemic have a negative impact over the delivery of RCH health services as well as the indicators are also affected negatively.

Besides the pandemic India is also having lack of resources, manpower poor infrastructure as well as positive deviance at community level. These are the barriers in fact beside the epidemic. It seems that there is lack of proper plan to deal with such pandemic situation. Providing RCH (reproductive and child health)

service is always a big concern for populous nations particularly India with high levels of fertility. During the pandemic era it's more challenging to deliver such essential services due to fear factors at community as well as personal level of healthcare staff. Decreasing rate of immunisation can lead to emergence of diseases which is being controlled by such programmes. At the same time poor ANC services can put maternal as well as foetus life in danger. The decrease in family planning services might add more to ongoing population explosion putting more stress on available resources.

Although the Nation have imposed various measures but it seems to be ineffective to get positive results on RCH programme. The need is to develop a separate cadre for RCH services in order to reap the benefits of demographic dividend in coming years. The Government of India should develop a strong strategy to protect maternal and child health in conditions of distress such as covid-19 pandemic. For this the barriers and promoters of RCH programme needs to be dealt in proper way to achieve the maximum output.

CONCLUSION: India has done a lot to deal with covid-19 pandemic but it seems that insufficient attention have been paid to very essential services such as RCH to give the desired results. The barriers of healthcare system and delivery of services should be rectified added with a proper dynamic plan to carry on usual health delivery services even in pandemics & other situations of distress. The country needs to develop an exclusive plan to tackle such situations to ensure delivery of very essential services such as RCH during pandemics or any other natural calamities.

- Establishment of exclusive Reproductive and child health department is required at central level as well as at all the states and union territories of India.
- Covid-19 pandemic has given us a lesson that we must have equity in healthcare & the child and women's who are considered most vulnerable in situations of distress must have adequate supportive healthcare all the times especially during pandemics and other natural calamities. Women of reproductive age group and children's constitutes a large portion of population and the country and state must have a separate department to ensure the delivery of health services to this vulnerable section of the population.
- India being the second most populous country in the world should have a robust population control strategy to operate in any situations.

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REFERENCES

Ministry of Health & Family Welfare Web Services-2021.

THANK YOU