

The Effect of COVID - 19 pandemic on the Utilization of Reproductive, Maternal, Newborn and Child Health (RMNCH) Services in Nigeria

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ABSTRACT

OBJECTIVES: To determine how the onset of COVID - 19 Pandemic affects the utilization of Family planning, maternal and child health services in Nigeria.

METHODS: This was a comparative cross - sectional study on the utilization of family planning, antenatal care, deliveries, and immunization services in Nigeria using secondary analysis of DHIS₂. Service utilizations from 1 / 1 / 2020 to 31 / 12 / 2020 were compared to similar periods in 2019. Results were summarized using descriptive statistics.

RESULTS: There was a 25.4 %, 30.2 %, 21.0 %, and 9.6 % reduction in OPD, ANC, Caesarean Section, and Total Deliveries in 2020 when compared to 2019. Family planning counseling and new acceptors however increased by 14.8 % and 7.2 % respectively. While the measles vaccine increased by 5.2 %, Penta 3 vaccine dropped by 7.1 %. In a pandemic paradox, there was a reduction of 66.5 % and 49.6 % in pregnancy - related deaths and under - five mortalities, respectively. New family planning acceptors increased in all the zones of the country apart from North Central, Measle utilization increased only in Northwest, Northeast, and Southwest. Pregnancy - related death increased in Northwest while fewer than five mortalities increased in South - South Zone.

CONCLUSION: Apart from Family planning, and the Measles vaccine, there were reductions in the utilization of intrapartum care in Nigeria during the pandemic. Although pregnancy - related deaths decreased, the study showed that in similar pandemic responsiveness, emphasis should be placed on improving access to intrapartum care.

KEYWORDS

COVID - 19, Reproductive, Maternal, Newborn, Child, Services, Nigeria

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INTRODUCTION

The novel coronavirus disease 2019 (COVID - 19) outbreak emerged in Wuhan city, China in November 2019 and was declared a pandemic by World Health Organization (WHO) in March 2020.¹ Government around the world responded to mitigate the spread of the virus by implementing drastic measures such as border closures, physical distancing, hand hygiene and lockdown measures.² the advent of the virus has overwhelmed the health system, affected international trade and the social lives of people. COVID - 19 was first reported in Nigeria on 24th February 2020 and confirmed on February 27th, 2020. This was followed by epidemiological responses by the Federal Ministry of Health.³ Since then, the number of cases has increased and the case fatality rate in Nigeria was fairer at 1.5 %. Government responded by initially imposing lock down. These prevented women and children from seeking medical help, as well as limiting the supply of various healthcare commodities like contraceptives, vaccines, and essential drugs.⁴ Also, some people refrained from visiting the health facilities to assess RMNCH care for fear of contracting COVID - 19 in the process. Evidence from World Health Organization (WHO) survey revealed that across 105 countries, 90 % have experienced health service disruptions as a result of the pandemic.⁵ One of the most commonly disrupted areas includes Family Planning (FP) services, with 68 % of countries reporting service disruptions. In particular, women and youth face heightened direct and indirect risks of unintended pregnancy as a result of lockdowns, service disruptions, stockouts, and financial hardships. Another study on the effect of COVID - 19 infections and responses in India showed a 45.1 % reduction in institutional deliveries, One - third reduction in antenatal visits, percentage point increase of 7.2 in high - risk pregnancy, and 2.5 - fold rise in admissions to the intensive care unit of pregnant women during the pandemic. Fear of contracting the disease and the lock down resulted in 44.7 % of the pregnancies developing complications.⁶ So far, little is known about the effect of COVID - 19 on RMNCH care in Nigeria. Hence, this study aimed at identifying this by comparing the utilization of RMNCH care before and after COVID - 19.

MATERIAL AND METHODS

This was a comparative cross-sectional study on the utilization of reproductive, maternal, newborn, and child health services using the secondary analysis of data in the District Health Information System (DHIS₂ Version 2013). Service utilization in the continuum of care from January 1st, 2020, to December 31st, 2020, was compared to similar period on January 1st to December 31st, 2019. Data elements were extracted for antenatal care, total deliveries, immunization coverages (measles and Penta 3), family planning counseling and acceptance. Others were maternal and child mortalities for the same period. Data were analyzed using descriptive statistics and categorized into geopolitical regions or zones (North - Central, North - East, North -West, South - East, South - South and South -

West, and the entire country. Ethics and dissemination: Formal ethical approval from an institutional review board or research ethics committee is not required as primary data will not be collected.

RESULTS

There was a total of 52,729,721 outpatient attendance in 2019 compared 39,310,720 in 2020. There was similar decrease in the Antenatal care utilization and facility deliveries as shown in (Tables 1-5).

RMNCH Services	2019	2020	Percentage decrease
OPD attendance	52,729 721	39,310 720.0	25.4
ANC Attendance total	14,299 266	9, 979, 319.0	30.2
Normal deliveries	1, 985, 666	1, 464, 970.0	26.2
Caesarean section	1,44,450	1,14,107.00	21
Total deliveries	25,46,508.00	23,01,459.00	9.6

Table 1. Overall RMNCH Services Utilization.

Family Planning Services	2019	2020	Percentage increase
Family planning counselling	7E + 06	8E + 06	15
New FP acceptors	4E + 06	4E + 06	7.2
Percentage acceptance	49	46	3

Table 2. Overall Family Planning Service Utilization.

Immunization Services	2019	2020	Percentage Decrease
BCG Coverage annualized	81.5	76.1	6.6
HBV Coverage annualized	58.9	57.2	2.8
IPV Coverage annualized	78.8	74.2	5.9
Measles dose coverage annualized	85.2	89.6	+ 5.2
OPV Coverage annualized	81.5	75.8	7
Penta 3 coverage annualized	81.6	75.9	7.1
Yellow fever coverage	75.6	57	24.6

Table 3. Immunization Service Utilization.

Mortalities	2019	2020	Percentage decrease
Pregnancy related deaths	11125	3722	66.5
Under five mortalities	37919	19108	49.6

Table 4. Mortality Indices.

RMNCH Services	Nigeria (%)	North Central (%)	North East (%)	North West (%)	South East (%)	South South (%)	South West (%)
OPD Attendance	25	31	29	15	18	17	27
ANC Attendance total	30	34	28	28	19	18	23
Normal deliveries	26	33	23	23	22	3	22
Family planning counselling	15	10	38	24	3	8	1
New FP acceptors	7	14	16	15	8	7	9

Caesarean section	21	34	38	11	29	14	16
Total deliveries	10	23	9	7	10	4	7
BCG Coverage annualized	7	15	8	2	10	11	8
HBV Coverage annualized	3	13	2	3	7	9	16
IPV Coverage annualized	6	10	5	2	8	8	10
Measles dose coverage annualized	5	4	15	22	15	2	22
OPV Coverage annualized	7	15	7	2	9	11	12
Penta 3 coverage annualized	7	15	7	2	8	12	11
Yellow fever coverage	25	34	32	16	24	21	8
Pregnancy related deaths	67	54	60	13	9	36	19
Under five mortalities	50	16	19	30	32	2	3

Table 5. Percentage Decrease in RMNCH Services in the Six Geopolitical Zones of the Country (+ Indicate Increase in Services Rather than Decreased Services).

DISCUSSION

The ongoing COVID - 19 pandemic is the greatest threat to the health sector in recent times. Just like in the Spanish flu of 1918, the collateral damages were as high as the effect on health. The study showed how the health users react to the service utilization in the continuum of care during the pandemic in 2020 with particular focus on routine antenatal care, family planning, delivery in the health facilities and childhood immunization. Compared to same period there were drops in the utilization of RMNCH services despite the expected population growth of 2.1 % where it's expected that utilization should increase. In this study, there were varying levels of decrease in health service utilization. Although the total hospital deliveries which inclusive both assisted and abdominal has the least decrease at 9.6 %, ANC utilization has the highest decrease at 30.2 % followed by normal spontaneous vaginal deliveries at 26.2 % . These were similarly found in India where the ANC and facility deliveries were decreased.

CONCLUSION

Family planning counseling and new acceptors had an overall increase at 14.8 % and 7.2 % respectively. These service disruptions were recorded in the World Health survey. Unlike in the survey where family planning was most affected, in our study, there was an increase. Skilled birth is generally low in Nigeria with many cases of home deliveries. The pandemic aggravated this as there was a drop in facility deliveries including abdominal deliveries and antenatal care services. The pooling of health workers into emergency responses affected maternity services including the restriction. The fear of acquiring the infection in crowded environments and health facilities may have prevented many pregnant women from seeking care.

Family planning service was high because of many targeted gender related publicities, health education among others. Women were also freer to attend the family planning clinics as the pressure of career, trading and other social activities reduced due to the lockdown, social distancing and other measures introduced to curb the spread freed women to seek health care. Many contraceptives can also be obtained through the counter without prescription implying that the absence of prescribing physicians did not drastically affect services. The improved share of media coverage on health during the pandemic may have also contributed. Nigeria has very low immunization services making many vaccines preventable diseases endemic in the country with the attendant morbidities and mortalities. The pandemic affected the utilization of almost all the childhood immunizations except measles vaccines. Yellow fever vaccination was most affected at over 24 % drop followed by Penta 3 at 7.1 %. Penta 3 is measure of immunization coverage while Measles is a measure of full immunization.⁷ this may imply that coverage was drastically reduced during the pandemic. When the different regions of the country were compared, the northwest were most affected by pregnancy related deaths. This is consistent with many national data where the region also has one of highest maternal mortality ratio. The northern part of the country has very low contraceptive prevalence but fared very well in the study. This is a positive sign which if strengthened post epidemic can improve family planning utilization in the region. The southwest performed very well on immunization services which is consistent with the indices in the state from many other studies including the NDHS.⁸

RECOMMENDATIONS

In preparation for subsequent pandemics, the country should prioritize immunization, Antenatal and delivery services. Pandemic response should ensure that other service delivery points are included in the package of care to minimize disruptions and associated morbidities and mortalities.

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