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REVIEW ARTICLE

THE GLOBAL REPERCUSSIONS OF THE COVID-19 PANDEMIC ON THE AVAILABILITY AND DELIVERY OF MATERNAL AND CHILD HEALTHCARE SERVICES

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ABSTRACT

The impact of the COVID-19 pandemic on maternal and child healthcare services, and its subsequent effects on pregnancy outcomes, is complex. The pandemic posed an unparalleled challenge, especially to essential maternal and child health services in resource-limited countries. This review seeks to examine how the pandemic has affected the accessibility and delivery of these services globally, with a focus on resource-constrained settings. Our review identified a significant decline in several key areas, including family planning visits, antenatal and postnatal care, pediatric consultations, emergency visits, and child immunization rates compared to pre-pandemic levels. The literature points to issues such as uncertainty, overwhelmed healthcare systems, challenges for healthcare workers, and barriers for service users. Overall, our findings indicate that the COVID-19 pandemic has significantly disrupted essential healthcare services for mothers and children, highlighting the need for attention to all health system components. Further systematic research and meta-analyses are necessary to fully understand the pandemic's impact on women and children, helping policymakers and healthcare managers improve system preparedness for future challenges. The COVID-19 crisis has underscored the need to reconfigure health systems, which could help build resilience, particularly in low-resource settings.

KEY WORDS: COVID-19; Developing countries; Health system; Maternal; Newborn and child healthcare services.

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INTRODUCTION

The COVID-19 pandemic has had overwhelming effects on the world, causing extensive disturbances to daily life and a momentous global loss of life. According to the World Health Organization (WHO) data, there are nearly 800 773 million confirmed cases of COVID-19 and approximately 7 million deaths.[1] Responding to this scale of pandemic, various countries took multiple steps to curtail the spread of virus and to protect their people.[2] Most common and notable measures recorded during the pandemic were lockdowns, movement restrictions, extensive testing, contact tracing, mandatory masks, and hygiene practices.[3] The pandemic grossly affected the access to essential healthcare and delivery of services. There was disruption of routine services, including medical procedures, screenings, as well as the preventive care. Healthcare personnel were directed to prioritize the COVID-19 cases.[4] Restrictions on public movement and transport services resulted in restricted access of the masses waiting to reach the hospitals.[5] Knowing the burden of COVID cases on the hospitals, patients too felt hesitated to seek healthcare, being afraid of contracting the virus in the hospital setting.[6] Further affected was the vulnerable segments of population particularly in developing countries, where COVID-19 extremely compressed the opportunity to seek healthcare for them, aggravating the already prevailing health inequalities.[7] According to the reports by WHO, the disturbances in healthcare delivery services were much more marked in developing countries[8], mainly affecting the maternal, newborn, and child health care. There were reports of higher maternal deaths, stillbirths, ruptured ectopic pregnancies, and maternal depression.[9,10] Another report projected that the weakened coverage of MNCH services could have caused a million extra child demises.[11]

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MATERIALS AND METHODS

To develop this review paper, we searched PubMed Central and Google Scholar for published peer-reviewed papers, using the MeSH words: COVID-19; maternal, newborn and child healthcare services; health system; developing countries. Papers published during or a year after the pandemic was over were included in the review. We also conducted a backward citation search, in which we looked at the reference list on the most recent published articles on the subject.

RESULTS

COVID-19 and its effects on various MNCH services

Family planning services: Family planning services were found to be disturbed the most[12], manifesting a decline in the clientele of family planning centers[13], in the total number of consultations[14,15] and the contraceptives uptake rate as compared to the pre-pandemic times.[16] Few studies have reported a great deal of difficulty in accessing the birth spacing services.[17,18] Another study particularly reported drop in the uptake of intrauterine contraceptive device during a specific period when the pandemic was full blown.[19]

Antenatal and postnatal care: Many developing countries recorded a significant drop in the utilization of antenatal clinics[20,21], booking of new cases was also reduced[22], and the number of women registering for their expected deliveries also declined.[23,24] Most of the hospital resources and staff re-appropriated to deal with COVID cases, the reproductive health was given a low priority by the service providers.[25] Similarly, number of women seeking postnatal care was also significantly dropped.[26,27]

Institutional deliveries: As regards the hospital based deliveries, a clear reduction was noticed in the low resourced countries.[14,22,28,29] Due to a tightly regulated public mobility and lockdowns, the number of home based deliveries increased[26,30,31], with many people fearing COVID infection in the hospitals.[32]

Peri-natal outcomes: Besides a significant rise in the number of maternal deaths[33,34], there was a sudden increase reported regarding the stillbirths.[35,36] There were reports of adverse birth outcomes and women recording the obstetric complications they had to face.[37,38] Higher odds of complications were also reported in expecting mothers with a prior medical history.[39,40]

Child service utilization and provision: Number of sick newborns admitted to hospitals was seen to be declined[34,41], so was the case with number of sick children brought to the emergency departments of the hospitals.[23,42,43] Unfortunately, number of early neonatal deaths reported also saw a sharp rise in many resource constrained settings.[31,34,44] People avoided or missed their children's immunization appointments.[14,23,45,46] Moreover, the routine immunization program in the developing countries had to be stopped[47], resulting in decreased vaccination coverage during COVID times.

DISCUSSION

In the early days of the COVID-19 pandemic, it was completely understandable for people to feel uncertain. Everything was changing so quickly, and no one had all the answers. Not knowing much about the illness, dealing with misunderstandings, facing social stigma, and worrying about spreading the virus all added to the anxiety people were experiencing.[48,49] COVID-19 wasn't just a health crisis-it also took a toll on society and mental well-being, making it easier for misinformation to spread quickly. People believed all kinds of misconceptions, from false claims about where the virus came from to conspiracy theories denying it even existed.[50] COVID-19 wasn't just a threat to our health-it also deeply affected our daily lives and mental well-being, creating the perfect conditions for misinformation to spread. People grappled with all sorts of false claims, from confusion about where the virus originated to wild conspiracy theories questioning whether it was real at all.[51,52] Hospitals and healthcare facilities struggled to keep up with the surge of COVID-19 patients. They faced a shortage of staff, disruptions in getting essential supplies, and a lack of resources to handle an outbreak of this magnitude.[53,54] The quality of care suffered greatly during the pandemic, making many patients hesitant to seek medical help. Hospitals were overwhelmed, focusing most of their resources on treating COVID-19 cases, leaving little room for other patients in need.[34,55] Ultrasound check-ups and laboratory services were harder to access, and new mothers were discharged earlier than usual after giving birth. This made it difficult for them to receive proper care both before and after delivery, impacting the quality of maternal health services.[56] Worried about safety, many parents skipped their children's immunization appointments, leaving them vulnerable to preventable diseases.[57] Healthcare workers faced severe shortages of personal protective equipment, making it harder for them to stay safe while caring for patients.[50,58] Healthcare workers faced immense pressure during the COVID-19 crisis, leading to increased levels of stress, anxiety, and even depression as they worked tirelessly to handle emergencies.[59] During the pandemic, many public transportation services were reduced or shut down, making it much harder for people-especially women and children-to get to hospitals and clinics when they needed care.[60] The COVID-19 pandemic hit developing countries especially hard, worsening existing struggles. Many businesses had to shut down or cut back, leaving countless people without jobs and struggling to make ends meet.[61] The rising cost of healthcare during the pandemic put a huge strain on families with limited finances. Many people, including

women and children, had to skip medical care simply because they couldn't afford.[62,63] Absence of safety nets and narrow fiscal space of many governments aggravated the situation even more.[64]

There are critical operational strategies which are needed to be employed for the continuum of essential MNCH services during pandemic like times.

- Prioritize essential health services and adapt to changing contexts and needs.
- Establish secure and efficient patient flow across all levels and enhance infection prevention measures in healthcare facilities.
- Swiftly optimize the capacity of the healthcare workforce.
- Ensure the continual availability of essential medications, equipment, and supplies.
- Strengthen communication strategies to promote the appropriate utilization of essential services.
- Enhance the monitoring of vital health services.
- Utilize digital platforms to support the delivery of essential health services.

We underscore certain implications for future research and policy for safeguarding maternal and child healthcare during a pandemic like situation. Understanding RMNCH health-seeking behaviors, and barriers to healthcare delivery during the COVID-19 pandemic, can help ensure a proactive and adaptive response to the health needs of affected communities. Engaging with affected communities is vital to understand the context, identify barriers to intervention implementation and uptake, and co-design practical, workable solutions that can reduce risk and protect the most vulnerable.[65] There is a need to perform a comprehensive analysis of actions to be undertaken for improving pandemic preparedness of the health systems in all developing and resource constrained countries.[66] In most of the countries, governance was disorderly, financing was inadequate, human resources were not trained, supplies and logistic were not stocked, information system was patchy, and research capacity was limited, and most of all the service delivery was in a biggest chaos of times.[67,68] COVID-19 demanded to re-configure the health systems, resilient enough to face the challenges of pandemic like emergencies particularly in low-resource settings.

The COVID-19 pandemic has had a deep and far-reaching impact on maternal and child health services, affecting families in multiple ways. While the severity of its effects varies across regions, certain challenges have been felt worldwide. Lockdowns, travel restrictions, and overwhelmed healthcare systems disrupted routine maternal and child health services. Many hospitals and clinics had to shift their focus to COVID-19 cases, leaving fewer resources for essential care. Beyond physical health, the pandemic also took a toll on mental well-being. Isolation, financial struggles, and the fear of infection increased stress and anxiety for both mothers and children. Healthcare workers, including those in maternal and child health services, faced immense pressure, which impacted the quality and availability of care. On top of that, the economic hardships brought on by the pandemic-such as job losses and financial instability-made it even harder for families to afford medical care and nutritious food, further affecting the health of mothers and children. In short, the pandemic has created a complex web of challenges, underscoring the urgent need for stronger healthcare systems and better support for vulnerable families.

CONCLUSION

In developing countries, natural disasters and crises always put a strain on maternal, newborn, and child health services, but the COVID-19 pandemic made things even worse. Limited healthcare resources, financial hardships, and existing challenges meant that essential services like family planning, prenatal and postnatal care, and child health programs were severely disrupted. This review highlights how the pandemic created an unprecedented crisis for mothers and children in resource-limited settings. To reduce its lasting impact, more research is needed to understand the full extent of the damage and find ways to protect women and children's health on a global scale. Strengthening healthcare systems, ensuring access to vital services, addressing mental health concerns, and embracing innovative solutions in healthcare delivery are all crucial steps in overcoming these challenges. Ongoing monitoring and flexible strategies will be key to preventing long-term harm to maternal and child health. Additionally, investing in better healthcare preparedness will help countries respond more effectively to future pandemics and unexpected crises. This kind of resilience is essential to achieving universal health coverage and the ambitious Sustainable Development Goals by 2030.

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CONFLICT OF INTEREST
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All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.