



Maternal and Child Health (MCH) Programs: A Comprehensive Review of Interventions Policies and Community Impact

Harini Rajagopalan^{1*}, Shivani S Mahadik², Jazeela AbdulRahim³, Mayuri D Ghawat⁴ and Hanudha NK⁵

¹Indian Council of Medical Research (ICMR), India

²Sir HN Reliance Foundation Hospital, India

³Kerala State Disaster Management Authority, India

⁴ICMR National Institute for Research in Reproductive and Child Health, India

⁵Independent Researcher, India

Review Article

Volume 9 Issue 1

Received Date: February 12, 2024

Published Date: February 28, 2024

DOI: 10.23880/pnboa-16000191

***Corresponding author:** Dr Harini Rajagopalan, Indian Council of Medical Research (ICMR), New Delhi, India. Email: harini.vr30@gmail.com

Abstract

Maternal and Child Health (MCH) programs are pivotal in global public health, focusing on the well-being of mothers and children from conception to adolescence. This comprehensive review critically examines MCH interventions and policies, emphasizing accessibility, affordability, and cultural sensitivity. The impact of MCH programs on communities, including contributions to development, socio-economic stability, and healthcare equity, is explored. Challenges, such as resource constraints and cultural barriers, are discussed, along with opportunities for innovation and improvement, including technological advancements and interdisciplinary collaboration. Looking forward, the abstract outlines future directions, advocating for adaptability, evidence-based practices, increased research investment, and preventative measures. The review underscores the transformative potential of MCH programs in shaping the health and well-being of current and future generations.

Keywords: Community Impact; Evidence-Based Practices; Maternal and Child Health; MCH Interventions; MCH Policies

Introduction

Maternal and Child Health (MCH) stands as an indispensable pillar within the realm of global public health initiatives. Its overarching objective is to safeguard the health and well-being of mothers and children, spanning the entire spectrum from conception to adolescence. Recognizing the multifaceted challenges and vulnerabilities faced by this demographic, MCH programs are designed to provide targeted interventions and implement policies aimed at ensuring optimal health outcomes [1]. This paper embarks on a comprehensive exploration of the myriad interventions

and policies embedded within MCH programs. It seeks to unravel the complexities of these initiatives, delving into their effectiveness and critically assessing their impact on communities. By undertaking this in-depth examination, the intent is to contribute valuable insights to the ongoing discourse on refining MCH strategies, ultimately enhancing the quality of care provided to mothers and children worldwide.

Context of MCH Initiatives: MCH initiatives operate within the dynamic context of reproductive health, pregnancy, childbirth, and the early stages of childhood development.

The multifaceted nature of these programs necessitates a nuanced understanding of the distinct healthcare needs and challenges faced by mothers and children. Addressing issues such as maternal mortality, infant mortality, and child malnutrition, MCH interventions aim to create a comprehensive support system that fosters the health and well-being of both individuals and communities [2].

Rationale for Review: The rationale behind delving into MCH interventions and policies lies in their pivotal role in shaping the trajectory of maternal and child health outcomes. As societies evolve and healthcare landscapes continue to transform, it becomes imperative to critically examine the efficacy of existing interventions. By doing so, this review seeks to identify successful practices, areas for improvement, and emerging trends within the realm of MCH, fostering a foundation for evidence based decision-making.

Scope of the Review: The scope of this review extends beyond a mere compilation of interventions and policies; it endeavors to provide a nuanced understanding of the broader implications these strategies have on communities. Recognizing that the impact of MCH programs transcends individual health outcomes, the review explores the intricate interplay between healthcare policies, community dynamics, and socio-economic factors. Through this holistic lens, the aim is to unravel the ripple effects that MCH initiatives can have on the overall well-being and resilience of societies.

MCH Interventions: Nurturing Health Across Generations

Maternal and Child Health (MCH) interventions form a robust framework, strategically designed to cater to the distinctive health needs of mothers and children. These interventions, ranging from prenatal care to nutritional support, constitute a frontline defence against maternal and child morbidity and mortality. In this section, we critically examine the effectiveness of key MCH interventions, taking into account crucial factors like accessibility, affordability, and cultural sensitivity [3].

Prenatal Care: Prenatal care serves as the cornerstone of MCH programs, offering a continuum of healthcare during pregnancy. This encompasses regular check-ups, screenings, and educational sessions for expectant mothers. The effectiveness of prenatal care hinges on timely initiation, continuity, and the depth of medical and educational support provided. Accessibility to quality prenatal services, especially in underserved communities, remains a pivotal consideration. Additionally, the review scrutinizes the integration of prenatal care with other health services to ensure a holistic approach to maternal well-being [4].

Immunizations: Immunizations play a pivotal role in safeguarding both maternal and child health by preventing infectious diseases. The effectiveness of immunization programs relies on the coverage rates, vaccine quality, and equitable distribution. This section evaluates the success of immunization interventions in meeting global health targets, addressing vaccine hesitancy, and overcoming barriers related to logistics and community awareness. Furthermore, the review explores innovative approaches to enhance vaccine accessibility and acceptance [5].

Family Planning: Family planning interventions empower individuals and couples to make informed choices about the timing and spacing of pregnancies. The review critically assesses the accessibility and affordability of family planning services, considering the diversity of cultural norms and societal attitudes towards family planning. It also delves into the integration of family planning into broader healthcare systems and explores community-based initiatives that promote reproductive health education and decision-making autonomy [6].

Nutritional Support: Nutritional interventions aim to address maternal and child malnutrition, promoting healthy growth and development. The effectiveness of nutritional support programs is examined in terms of their reach, the nutritional quality of interventions, and their adaptability to diverse cultural dietary practices. The review assesses the integration of nutrition education and counseling, exploring the role of community engagement in fostering sustainable dietary improvements [7].

Evaluation Criteria

In evaluating the effectiveness of these interventions, the review employs a multifaceted approach. Accessibility is scrutinized in terms of geographical proximity, affordability, and the removal of economic barriers. Cultural sensitivity is assessed to ensure interventions resonate with diverse populations, respecting local customs and beliefs. Affordability encompasses considerations of economic disparities and the financial burden on individuals and communities [8].

Identifying Best Practices and Areas for Improvement

The ultimate goal of this critical review is to identify best practices within MCH interventions while pinpointing areas requiring improvement. By amalgamating evidence-based insights, the paper aims to contribute to the refinement of MCH strategies globally. Through a thorough examination of accessibility, affordability, and cultural sensitivity, the

intention is to lay the groundwork for enhancing the impact of MCH interventions and ensuring that they effectively meet the diverse and evolving health needs of mothers and children [9].

MCH Policies: Navigating the Path to Optimal Maternal and Child Health

Effective policies serve as the guiding compass for Maternal and Child Health (MCH) programs, shaping the trajectory of maternal and child health outcomes on a broader scale. This section delves into the intricate landscape of governmental and non-governmental policies, exploring their roles in MCH initiatives. The review examines legislative frameworks, funding mechanisms, and collaborative efforts among stakeholders while critically assessing the adaptability of policies to the ever-evolving healthcare landscapes and emerging challenges [10].

Legislative Frameworks: Legislation forms the bedrock upon which MCH programs are built. This review scrutinizes the existing legislative frameworks at both governmental and non-governmental levels. It assesses the comprehensiveness of laws governing maternal and child health, including provisions for access to healthcare, reproductive rights, and child protection. An analysis of the enforcement mechanisms and the alignment of laws with international standards is crucial for evaluating the legal foundation supporting MCH initiatives [11].

Funding Mechanisms: The financial underpinning of MCH programs is pivotal for their sustained success. This section explores the funding mechanisms supporting maternal and child health interventions, considering governmental budgets, international aid, and philanthropic contributions. The review critically assesses the adequacy and equity of funding distribution, examining whether financial resources are directed towards areas with the highest burden of maternal and child health challenges. It also explores innovative financing models that enhance financial sustainability [12].

Collaboration among Stakeholders: MCH programs thrive on collaborative efforts, involving various stakeholders such as governments, non-governmental organizations, healthcare providers, and community-based organizations. The review investigates the effectiveness of collaborative mechanisms, exploring successful models of multi-sectoral engagement. It analyzes the coordination and communication channels among stakeholders, emphasizing the importance of partnerships in achieving comprehensive and sustained maternal and child health outcomes.

Adaptability to Evolving Healthcare Landscapes: Healthcare landscapes are dynamic, influenced by technological advancements, demographic shifts, and emerging health threats. This section evaluates the adaptability of MCH policies to these evolving landscapes. It considers the integration of digital health solutions, the incorporation of evidence-based practices, and the flexibility of policies to accommodate changing demographic trends. The review also addresses the resilience of policies in the face of unforeseen challenges such as pandemics or environmental crises [13].

Emerging Challenges: The healthcare domain continually faces new challenges, and MCH policies must be responsive to these emerging issues. The review explores how well existing policies address contemporary challenges such as the impact of climate change on maternal and child health, emerging infectious diseases, and disparities exacerbated by socio-economic factors. Identifying gaps in policy responses to these challenges is essential for fostering resilience in MCH programs [14].

Evaluation Criteria: The effectiveness of MCH policies is evaluated through a lens that considers their alignment with global health standards, their impact on health outcomes, and their ability to address health inequities. The review also examines the inclusivity of policies, ensuring they consider diverse populations and vulnerable groups in their scope [15].

Community Impact: Maternal and Child Health Programs as Catalysts for Holistic Well-being

Maternal and Child Health (MCH) programs are not isolated endeavors; they radiate a profound impact that transcends individual health outcomes, resonating within the very fabric of communities. This section delves into the multifaceted contributions of MCH initiatives to community development, socio-economic stability, and healthcare equity. Moreover, it explores the symbiotic relationship between community engagement, empowerment, and the sustenance of positive MCH outcomes over the long term [16].

Community Development: MCH programs act as agents of community development, fostering environments where the health and well-being of mothers and children are interwoven with broader community aspirations. This review examines how MCH initiatives contribute to the enhancement of community infrastructures, the establishment of healthcare facilities, and the creation of educational resources. Additionally, it assesses the role of MCH programs in

promoting community resilience by addressing social determinants of health, ultimately fostering environments conducive to comprehensive well-being [17].

Socio-Economic Stability: The socio-economic stability of communities is intricately linked to the health of its maternal and child populations. This section investigates the ways in which MCH programs contribute to economic stability, including the reduction of healthcare-related financial burdens on families, the enhancement of workforce productivity through improved maternal and child health, and the potential for breaking cycles of poverty. The review critically assesses the economic efficiency of MCH interventions and their potential to act as long-term investments in community prosperity [18].

Healthcare Equity: Ensuring equitable access to healthcare services is a cornerstone of MCH programs. This review explores how MCH initiatives address disparities in healthcare access and outcomes, considering factors such as geographic location, socio-economic status, and cultural diversity. It examines the effectiveness of MCH interventions in reducing health inequities, fostering inclusivity, and promoting healthcare equity as a fundamental principle of community well-being [19].

Community Engagement and Empowerment: Community engagement is a linchpin in the success of MCH programs. This section evaluates the strategies employed by MCH initiatives to engage communities actively, seeking to understand how community involvement contributes to program effectiveness. It explores empowerment models that prioritize community participation in decision-making processes, program design, and implementation. The review assesses the impact of community-driven initiatives on sustainability, scalability, and the fostering of a sense of ownership among community members [20].

Sustaining Positive MCH Outcomes: Positive outcomes in Maternal and Child Health are not fleeting achievements but rather enduring manifestations of sustained efforts. The review investigates the strategies employed by MCH programs to ensure the longevity of positive outcomes. It explores the role of education, capacity building, and the establishment of community-led support systems. Additionally, it scrutinizes the adaptability of MCH programs to changing community dynamics, ensuring that interventions remain relevant and effective over time [21].

Evaluation Criteria: The evaluation of community impact relies on assessing the depth and breadth of MCH contributions to community well-being. Criteria include the degree of community involvement, the measurable improvements in socio-economic indicators, and the

establishment of sustainable healthcare practices within the community [22].

Challenges and Opportunities in Maternal and Child Health Programs: Navigating Hurdles, Forging Paths of Progress

Resource Constraints: Resource limitations stand as a perennial challenge for MCH programs globally. This section addresses the impediments posed by inadequate funding, shortages in healthcare personnel, and limited infrastructure. The review explores how resource constraints impact the delivery of essential MCH services and hinders the implementation of comprehensive interventions. It also delves into strategies for optimizing resource allocation, innovative funding models, and the potential role of public-private partnerships in overcoming financial hurdles [23].

Cultural Barriers: Cultural nuances can pose significant challenges to the implementation and acceptance of MCH programs. This section examines how deeply ingrained cultural beliefs, practices, and stigmas can impede access to maternal and child healthcare services. The review explores strategies to overcome cultural barriers, emphasizing the importance of culturally sensitive program design, community engagement, and partnerships with local influencers and community leaders. It aims to provide insights into fostering cultural competence within MCH frameworks [24].

Disparities in Healthcare Access: Disparities in healthcare access persist as a critical challenge, contributing to divergent maternal and child health outcomes. This section scrutinizes the root causes of access disparities, including geographical, economic, and sociocultural factors. The review assesses the effectiveness of existing strategies aimed at reducing healthcare inequities, such as mobile clinics, telehealth services, and community health workers. It also explores policy interventions that target systemic barriers to access, aiming for more inclusive MCH programs [25].

Opportunities for Innovation and Improvement

Technological Advancements: Technological innovations present unprecedented opportunities for enhancing MCH programs. This section explores how telemedicine, mobile health applications, and digital health platforms can bridge geographical gaps, improve access to healthcare information, and facilitate remote consultations. The review discusses the potential of wearable devices for monitoring maternal and child health parameters, fostering a new era of personalized

and tech-enabled MCH interventions [26].

Interdisciplinary Collaboration: The intersection of various disciplines can bolster the effectiveness of MCH programs. The review examines opportunities for collaboration between healthcare professionals, researchers, policymakers, and community advocates. It explores how interdisciplinary approaches can lead to more holistic and patient-centered care, leveraging diverse expertise to address complex challenges faced by mothers and children [27].

Integration of Mental Health Services: Mental health is an integral component of maternal and child well-being often overlooked. This section emphasizes the need to integrate mental health services seamlessly into MCH frameworks. The review explores how addressing maternal mental health concerns, postpartum depression, and childhood mental health issues can contribute to better overall outcomes. It highlights opportunities to destigmatize mental health discussions and implement comprehensive, integrated care models [28].

Strengthening Health Systems: Building resilient health systems is an overarching opportunity for improvement. The review assesses strategies to strengthen primary healthcare infrastructure, enhance workforce capacity, and streamline supply chain management for essential MCH commodities. Strengthening health systems also involves advocating for policy changes that prioritize maternal and child health, ensuring sustainability and continuity of care [29].

Future Directions for Maternal and Child Health (MCH) Initiatives: Navigating Evolving Landscapes with Adaptability and Innovation

As the landscape of public health undergoes continuous transformation, Maternal and Child Health (MCH) programs must anticipate and adapt to emerging challenges and opportunities. This section outlines potential future directions for MCH initiatives, emphasizing the paramount importance of adaptability and evidence-based practices in ensuring the ongoing success and relevance of these programs [30].

Increased Investment in Research: A cornerstone of future MCH success lies in advancing our understanding of maternal and child health through robust research initiatives. This section advocates for increased investment in research to fuel evidence-based decision-making. By supporting studies on epidemiology, health disparities, and the effectiveness of interventions, MCH programs can refine their strategies, stay

abreast of evolving health trends, and continuously improve health outcomes for mothers and children [31].

Enhanced Collaboration between Public and Private Sectors: Future MCH initiatives should prioritize fostering stronger collaborations between public and private sectors. The integration of public and private healthcare resources can amplify the reach and impact of MCH programs. This collaborative approach can harness the strengths of both sectors, leveraging innovation, technology, and resources to deliver comprehensive and accessible maternal and child healthcare. Strategic partnerships can enhance service delivery, improve infrastructure, and contribute to sustainable MCH outcomes [32].

Focus on Preventative Measures: The shift towards preventative measures represents a critical trajectory for future MCH programs. Rather than solely addressing health issues reactively, there is a need to proactively invest in preventative strategies. This includes interventions such as health education, early screenings, and vaccination campaigns. By focusing on prevention, MCH programs can mitigate the impact of health issues before they escalate, promoting long-term health and well-being for mothers and children [33].

Embrace Technological Innovations: The future of MCH programs lies in embracing and leveraging technological innovations. This section advocates for the integration of telemedicine, artificial intelligence, and digital health solutions to enhance service delivery, increase accessibility, and improve health outcomes. Telehealth platforms can facilitate remote consultations and monitoring, especially in underserved areas. Embracing technology also opens avenues for data-driven decision-making, personalized healthcare, and efficient healthcare management [34].

Addressing Social Determinants of Health: Future MCH initiatives should place a heightened emphasis on addressing social determinants of health. This involves recognizing and mitigating the impact of socio-economic factors, education, housing, and cultural influences on maternal and child health outcomes. By implementing strategies that address the root causes of health disparities, MCH programs can foster more equitable access to healthcare and improve overall community well-being [35].

Strengthening Health Systems Resilience: Anticipating future challenges necessitates the strengthening of health systems' resilience. This includes investing in healthcare infrastructure, bolstering healthcare workforce capacity, and ensuring the availability of essential supplies. Strengthening health systems will enable MCH programs to respond effectively to unforeseen events such as pandemics, natural disasters, or health emergencies, ensuring continuity of care

for mothers and children [36].

Conclusion

Maternal and Child Health (MCH) programs stand as pillars of public health initiatives, profoundly impacting communities globally. This comprehensive review illuminates the indispensable role of MCH interventions and policies in safeguarding the health and well-being of mothers, children, and, by extension, entire communities. The importance of a continual, critical assessment and refinement of MCH strategies emerges as a recurrent theme, ensuring that these programs remain responsive to the evolving needs of diverse populations. The holistic review explored the multifaceted dimensions of MCH interventions, scrutinizing the effectiveness of prenatal care, immunizations, family planning, and nutritional support. Through this lens, the aim was to identify best practices and areas for improvement, with a focus on accessibility, affordability, and cultural sensitivity. Recognizing the interconnectedness of maternal and child health, the review emphasized the need for comprehensive and evidence-based strategies to foster optimal outcomes. Examining the realm of MCH policies, the review highlighted the foundational importance of legislative frameworks, funding mechanisms, and collaborative efforts among stakeholders. Acknowledging the dynamic nature of healthcare landscapes, the emphasis was placed on the adaptability of policies to address emerging challenges. Effective MCH policies, as delineated, act as linchpins for sustainable, equitable, and impactful maternal and child health outcomes. The exploration of community impact showcased the far-reaching influence of MCH programs beyond individual health outcomes. The intricate relationships between MCH initiatives, community development, socio-economic stability, and healthcare equity were dissected. The pivotal role of community engagement and empowerment in sustaining positive MCH outcomes over the long term emerged as a key theme, underlining the importance of fostering collaboration and shared responsibility.

Challenges and opportunities within MCH programs were analyzed, acknowledging the hurdles of resource constraints, cultural barriers, and healthcare access disparities. Simultaneously, the review illuminated opportunities for innovation, from technological advancements to interdisciplinary collaboration and the integration of mental health services. This dual perspective provided a roadmap for overcoming challenges while seizing opportunities to elevate the efficacy of MCH initiatives. Looking towards the future, the conclusion outlined potential directions for MCH programs. It advocated for increased investment in research, enhanced collaboration between public and private sectors, and a focus on preventative measures to address emerging

health concerns. The overarching theme was adaptability, emphasizing the need for MCH programs to evolve alongside the dynamic public health landscape.

References

1. Ashish K, Gurung R, Kinney MV, Sunny AK, Moinuddin M, et al. (2020) Effect of the COVID-19 pandemic response on intrapartum care stillbirth and neonatal mortality outcomes in Nepal a prospective observational study. *Lancet Glob Heal* 8(10): e1273-e1281.
2. Baumann S, Gaucher L, Bourgueil Y, Saint Lary O, Gautier S, et al. (2021) Adaptation of independent midwives to the COVID-19 pandemic A national descriptive survey. *Midwifery* 94: 102918.
3. Belizan M, Maradiaga E, Roberti J, Casco Aguilar M, Ortez AF, et al. (2020) Contraception and post abortion services qualitative analysis of users perspectives and experiences following Zika epidemic in Honduras. *BMC Womens Health* 20(1): 199.
4. Camara B, Delamou A, Diro E, Beavogui AH, El Ayadi A, et al. (2017) Effect of the 2014/2015 Ebola outbreak on reproductive health services in a rural district of Guinea: an ecological study. *Trans R Soc Trop Med Hyg* 111(1): 22-29.
5. Cella A, Marchetti F, Iughetti L, Biase AR Di, Graziani G, et al. (2020) Italian COVID-19 epidemic effects on paediatric emergency attendance a survey in the Emilia Romagna region. *BMJ Paediatr Open* 4(1): e000742.
6. Delamou A, Sidibe S, El Ayadi A, Camara B, Delvaux T, et al. (2017) Maternal and Child Health Services in the Context of the Ebola Virus Disease Health Care Workers' Knowledge Attitudes and Practices in Rural Guinea. *Afr J Reprod Health* 21(1): 104-113.
7. Dopfer C, Wetzke M, Scharff AZ, Mueller F, Dressler F, et al. (2020) COVID-19 related reduction in pediatric emergency healthcare utilization a concerning trend. *BMC Pediatr* 20(1): 427.
8. Fumagalli S, Ornaghi S, Borrelli S, Vergani P, Nespoli A (2021) The experiences of childbearing women who tested positive to COVID-19 during the pandemic in northern Italy. *Women Birth* 35(3): 242-253.
9. Gizelis TI, Karim S, Ostby G, Urdal H (2017) Maternal Health Care in the Time of Ebola A Mixed Method Exploration of the Impact of the Epidemic on Delivery Services in Monrovia. *World Dev* 98: 169-178.
10. Gomez HM, Arbelaez CM, Cañas JAO (2020) A qualitative

- study of the experiences of pregnant women in accessing healthcare services during the Zika virus epidemic in Villavicencio Colombia 2015-2016. *Int J Gynecol Obstet* 148(2): 29-35.
11. Hermans V, Zachariah R, Woldeyohannes D, Saffa G, Kamara D, et al. (2017) Offering general pediatric care during the hard times of the 2014 Ebola outbreak looking back at how many came and how well they fared at a Medecins Sans Frontières referral hospital in rural Sierra Leone. *BMC Pediatr* 17(1): 34.
 12. Homer CSE, Davies-Tuck M, Dahlen HG, Scarf VL (2021) The impact of planning for COVID-19 on private practising midwives in Australia. *Women and Birth* 34(1): e32–e37.
 13. Jardine J, Relph S, Magee L, von Dadelszen P, Morris E, et al. (2021) Maternity services in the UK during the coronavirus disease 2019 pandemic a national survey of modifications to standard care. *BJOG* 128(5): 880-889.
 14. Jensen C, McKerrow NH (2020) Child health services during a COVID-19 outbreak in KwaZulu-Natal Province, South Africa. *S Afr Med J* 0(0): 13185.
 15. Jones S, Gopalakrishnan S, Ameh C, White S, van den Broek N (2016) “Women and babies are dying but not of Ebola” the effect of the Ebola virus epidemic on the availability uptake and outcomes of maternal and newborn health services in Sierra Leone. *BMJ Glob Heal* 1(3): e000065.
 16. Kotlar B, Gerson E, Petrillo S, Langer A, Tiemeier H (2021) The impact of the COVID-19 pandemic on maternal and perinatal health a scoping review. *Reprod Heal* 18(1): 10.
 17. Lassi Z, Naseem R, Salam R, Siddiqui F, Das J (2021) The Impact of the COVID-19 Pandemic on Immunization Campaigns and Programs A Systematic Review. *Int J Environ Res Public Health* 18(3): 988.
 18. Li D, Yibin G, Mengqing C, Wenxian L, Jie W, et al. (2021) Survey on the needs of 2002 pregnant women during pregnancy and childbirth in Shanghai during the epidemic of novel coronavirus pneumonia 4-11.
 19. Liguoro I, Pilotto C, Vergine M, Pusiol A, Vidal E, et al. (2021) The impact of COVID-19 on a tertiary care pediatric emergency department. *Eur J Pediatr* 180(5): 1497-1504.
 20. Luginaah IN, Kangmennaang J, Fallah M, Dahn B, Kateh F, et al. (2016) Timing and Utilization of Antenatal Care Services in Liberia Understanding the Pre-Ebola Epidemic Context. *Soc Sci Med* 160: 75-86.
 21. Mansi J (2020) Coronavirus Pregnant Women Struggle to Access Healthcare Facilities Amid Lockdown. *Business Today*.
 22. McDonnell T, Nicholson E, Conlon C, Barrett M, Cummins F, et al. (2020) Assessing the Impact of COVID-19 Public Health Stages on Paediatric Emergency Attendance. *Int J Environ Res Public Health* 17(18): 6719.
 23. Miller S, Abalos E, Chamillard M, Ciapponi A, Colaci D, et al. (2016) Beyond too Little too Late and too Much, too soon A Pathway Towards Evidence-Based, Respectful Maternity Care Worldwide. *Lancet* 388(10056): 2176-2192.
 24. Minckas N, Medvedev MM, Adejuyigbe EA, Brotherton H, Chellani H, et al. (2021) Preterm Care During the COVID-19 Pandemic A Comparative Risk Analysis of Neonatal Deaths Averted by Kangaroo Mother Care Versus Mortality Due to SARS Cov-2 Infection. *E Clinical Medicine* 33: 100733.
 25. Nicholson E, Conlon C, Barrett M, McDonnell T, Cummins F, et al. (2020) Parental Hesitancy and Concerns around Accessing Paediatric Unscheduled Healthcare during COVID-19 A Cross-Sectional Survey. *Int J Environ Res Public Health* 17(24): 9264.
 26. Palo SK, Dubey S, Negi S, Sahay MR, Patel K, et al. (2022) Effective Interventions to Ensure MCH (Maternal and Child Health) Services During Pandemic Related Health Emergencies (Zika Ebola and COVID-19) A Systematic Review. *PLoS One* 17(5): e0268106.
 27. Pant S, Koirala S, Subedi M (2020) Access to Maternal Health Services during COVID-19. *Eur J Med Sci* 2(3): 46-50.
 28. Sahoo KC, Negi S, Patel K, Mishra BK, Palo SK, et al. (2021) Challenges in Maternal and Child Health Services Delivery and Access during Pandemics or Public Health Disasters in Low and Middle Income Countries A Systematic Review. *Healthcare* 9(7): 828.
 29. Salsi G, Seidenari A, Diglio J, Bellussi F, Pilu G, et al. (2020) Obstetrics and Gynecology Emergency Services During the Coronavirus Disease 2019 Pandemic. *Am J Obstet Gynecol MFM* 2(4): 100214.
 30. Saso A, Skirrow H (2020) Impact of COVID-19 on Immunization Services for Maternal and Infant Vaccines: Results of a Survey Conducted by Imprint the Immunising Pregnant Women and Infants Network. *Vaccines (Basel)* 8(3): 556.
 31. Shannon FQ, Horace-Kwemi E, Najjemba R, Owiti

- P, Edwards J, et al. (2017) Effects of the 2014 Ebola Outbreak on Antenatal Care and Delivery Outcomes in Liberia A Nationwide Analysis. *Public Heal Action* 7: S88-S93.
32. Sigurdsson EL, Blondal AB, Jonsson JS, Tomasdottir MO, Hrafnkelsson H, et al. (2020) How Primary Healthcare in Iceland Swiftly Changed its Strategy in Response to the COVID-19 Pandemic. *BMJ Open* 10(12): e043151.
33. Sochas L, Channon A, Nam S (2017) Counting Indirect Crisis-Related Deaths in the Context of a Low Resilience Health System The Case of Maternal and Neonatal Health during the Ebola Epidemic in Sierra Leone. *Health Policy Plan* 32(S3): iii32-iii39.
34. WHO (2012) Countdown to 2015 Building a Future for Women and Children The 2012 Report.
35. Williams T, MacRae C, Swann O, Haseeb H, Cunningham S, et al. (2021) Indirect Effects of the COVID-19 Pandemic on Paediatric Healthcare use and Severe Disease: A Retrospective National Cohort Study. *Arch Dis Child* 106(9): 911-917.
36. Zhong Y, Clapham H, Aishworiya R, Chua Y, Mathews J, et al. (2021) Childhood Vaccinations: Hidden Impact of COVID-19 on Children in Singapore. *Vaccine* 39(5): 780-785.

