



Research Article

ROUTINE IMMUNIZATION IN LOW AND MIDDLE INCOME COUNTRIES AMID COVID -19 PANDEMIC

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ARTICLE INFO

Article History:

Received 24th March, 2020

Received in Revised form 21st

May, 2020

Accepted 7th June, 2020

Published online 28th June, 2020

Key words:

COVID-19, Routine Immunization, LMICs

ABSTRACT

Disruption of routine immunization services, even for small periods, can result in outbreak prone vaccine preventable diseases (VPDs) such as Measles and Polio. Such VPD outbreaks may result in increased morbidity and mortality predominantly in young infants and other vulnerable groups; this can cause greater burden on health care system already strained by the COVID-19 response especially in low and middle income countries (LMICs). The decision to maintain immunization services will be influenced by local mandates, hence stake holders are requested to liaise with local health authority for any discrepancy in local byelaws in civil administration regarding immunization services. COVID-19 leaves some of the world's most vulnerable communities facing 'a crisis within a crisis'. Balance between the safety of health care workers delivering vaccination services and protection against VPDs in LMICs is the need of hour. Though various guidelines on routine immunizations are available but its difficult to generalise or extrapolate one country model to another and therefore tailor made specific approach as per the country resources and its capability to cope with COVID-19 scenario to be implemented.

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INTRODUCTION

Disruption of routine immunization services, even for small periods, can result in outbreak prone vaccine preventable diseases (VPDs) such as Measles and Polio. Such VPD outbreaks may result in increased morbidity and mortality predominantly in young infants and other vulnerable groups; this can cause greater burden on health care system already strained by the COVID-19 response especially in low and middle income countries (LMICs). The vicious cycle of malnutrition, Vitamin A deficiency and lack of accessibility of routine immunisation (eg. measles vaccine) will lead to increase child morbidity and mortality in LMICs. Routine immunization services are basic for any country and should be prioritized for the prevention of communicable diseases and should continue during the COVID-19 pandemic, where ever feasible. Therefore, it is recommended by various health agencies worldwide that fixed site immunization services and VPD surveillance should be carried out meanwhile maintaining social distancing and infection control measures. The decision to maintain immunization services will be influenced by local mandates, hence stake holders are requested to liaise with local health authority for any discrepancy in local byelaws in civil administration regarding immunization services.

COVID-19 leaves some of the world's most vulnerable communities facing 'a crisis within a crisis', the UN has warned. Many mass vaccination campaigns are being temporarily suspended. Immunization services are at the risk of being neglected by policy makers and can result in outbreaks of VPDs especially in LMICs.

Vaccination Programmes in LMICs During Covid-19

Routine immunization programmes are being postponed especially measles and polio amid fears that the contact needed to deliver them could spread COVID-19. At the end of March, the World Health Organization released guidance to help countries to sustain immunization services but recommended mass vaccination campaigns be temporarily suspended, emphasizing how dicey it is to balance ensuring the safety of health care workers and protecting against VPDs. Recently studies conducted by scientists at the London School of Hygiene and Tropical Medicine (LSHTM) shows without vaccination deaths could result from a range of diseases including measles, yellow fever, pertussis, meningitis, pneumonia and diarrhoea. The research suggests that the health benefits of deaths prevented by sustaining routine childhood immunization in Africa outweigh the excess risk of COVID-19 deaths associated with vaccination clinic visits. Recently published study in The Lancet Global Health by Timothy Robertson and colleagues quantifies the potential indirect effects of COVID-19 and maternal and child mortality. It is a modelling study to estimate the indirect effects of

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the coronavirus pandemic on maternal and child mortality in LMICs.¹ Findings of this study are devastating with astronomical rise in additional under-5 child deaths resulting from the potential disruption of health care systems. Researchers estimated that reductions in the coverage of essential maternal and child health services of around 45% for 06 months would result in 1, 157, 000 additional child deaths. They estimate that this data would represent a 9.8–44.7% increase in under-5 deaths per month across the 118 countries included in their analysis.¹

COVID-19 pandemic disrupted routine immunization services in the entire world especially in LMICs. In country like India, rural provision of health services declined in February 2020 and crashed in the next month. Hundreds of thousands of children might already have missed vital immunizations as the lockdown came into force. This analysis is based on data recently released by the National Health Mission, which usually covers all sub-centres, primary health centres, community health centres, district hospitals and sub-district hospitals, as well as some private facilities in India. Though Ministry of health and family welfare (MoHFW) of India vide letter dated 14th April 2020 has issued a 'Guidance Note' on continuation of essential services including immunization but implementation of routine immunization services still remains challenging.² MoHFW of India has issued guidelines for COVID-19 areas. Places from where COVID-19 cases are reported and surrounding areas with risk of COVID-19 spread are classified as 'Containment Zone' and 'Buffer Zone' respectively while area outside the buffer zone is identified as 'Area beyond Buffer Zone'. This categorization of zone is a dynamic process and is usually updated every week. Strategies would be adopted for immunization as per various zones. Both Health Facility based session and Outreach session should be closed in Containment and Buffer zone and open in Areas Beyond Buffer Zone. Birth dose vaccination at health facilities is an exception to this zone categorization as it should continue irrespective of zones. By providing timely immunizations, individuals and communities remain protected and the likelihood of a VPD outbreak decreases. WHO states that newborn vaccination programmes (e.g. BCG, OPV, Hepatitis B) should be continued as planned during the COVID-19 pandemic. School-based vaccination initiatives should continue only if infection prevention and control measures are implemented to avoid increased risk of transmission of the corona virus among the students, school personnel and health care providers. School-based delivery is an important mode of vaccine delivery for children and adolescents against several vaccines such as booster doses of tetanus and diphtheria, measles-rubella vaccines, HPV vaccine, meningococcal vaccines, and typhoid conjugate vaccines. Countries can follow recommended guidance on the rational use of personal protective equipment for COVID-19 and considerations during severe shortages.³ Advice on the use of masks in the context of COVID-19 and encourage immunization providers to perform hand hygiene frequently.⁴ The vaccination sessions should be conducted in well-ventilated areas and the areas should be disinfected often.⁵

CONCLUSION

Even if routine services have continued throughout the COVID-19 pandemic, service delivery may have been sub optimal, or beneficiaries may not have been able or willing to access services. Therefore, intensification of immunization

services and demand generation activities will be a priority. If immunization services are suspended or reduced, countries need to conduct catch-up immunization activities. Strategies for catch-up may should be based on local epidemiology of outbreak prone VPDs such as measles, polio, diphtheria, pertussis, meningococcus, and yellow fever; activities could include additional outreach and/or mobile sessions or the conduct of periodic intensification of routine immunization services. Clear communication with the health care service providers and community should be there to gain and sustain their trust. Reassurance of parents regarding resumption of vaccination services and information about how to catch up the missed doses should be provided. Suspended immunization services in LMICs should be restarted at the earliest. Two factors which will determine whether routine immunization to be resumed or not are reduced risk of COVID-19 transmission and capacity of health system. Surveillance systems should be continued for early detection and management of VPDs especially active surveillance for acute flaccid paralysis cases, polio environmental surveillance and surveillance for outbreaks. Community based surveillance to be discouraged in COVID-19 scenario since personal visits are there. Worldwide production of vaccine is also disturbed, leading to delays in vaccine imports and exports to countries especially LMICs. Vaccine availability should be there for at minimum 03 months at national level. Measles rubella elimination verification activities can continue during COVID-19 but should be according to the country's COVID-19 response capacity. Any delayed measles rubella verification activities should be included in the post-COVID-19 recovery plans and depends on the local policies prevailing in a particular country. Balance between the safety of health care workers delivering vaccination services and protection against VPDs in LMICs is the need of hour. Though various guidelines on routine immunizations are available but its difficult to generalise or extrapolate one country model to another and therefore tailor made specific approach as per the country resources and its capability to cope with COVID-19 scenario to be implemented.

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