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Impact of COVID-19 on Immunization of Children in India

Sailee Bhambere[1], Snehal Hirve[2]

[1]BDS, MPH, College of Engineering, Pune
[2]B.Tech Biotechnology, MBA, College of Engineering, Pune

Corresponding Author: Sailee Bhambere

ABSTRACT

COVID-19 has caused devastation in every possible human endeavor since it started, and while the early hazards became obvious right away, others like the effect it has had on the Immunization of children, are just coming to surface. This review narrates how COVID-19 due to multiple factors has reduced the percentage of children getting immunized in developed & developing countries alike. One of the major sustainable development goals (SDGs) by the United Nations is to end preventable deaths in infants & children below 5 years of age. The pandemic has hurt the impetus that this mission had achieved. Authors further discuss the immunization schedule & guidance related to that in India. The authors also go on to break this problem into strategic categories & enumerate some simple short term and long-term steps that can be taken to prevent the children & their families from contracting COVID-19, but at the same time also receive vaccination & resume their immunization schedule safely.

Keywords- COVID-19, Coronavirus, Lockdown, Immunization, Vaccination, Children

INTRODUCTION

COVID-19 went on to affect all parts of the world in different & multiple ways. It has affected individual & population health severely. The world went in to lockdown in different measures to curb the disease, and while this was a wise & necessary step in controlling spread of the disease, it has had many unwanted effects that are being realized now & will keep doing so for years to come. One of the major areas of health that has suffered during this period is the pediatric health.[1] Parents & families did the right thing & followed what the CDC, WHO or their local health authorities advised during this period & stayed home. On the other hand, the healthcare systems across the world, big & small, developed or developing, have been all battered extensively. The Indian healthcare system has already been under tremendous load given the population it tends to & the limited resources amongst other factors.[2] Since the COVID-19 pandemic started, both hospitals & medical staff have been treading the difficult balance between tending to COVID-19 patients, preventing spread of the disease both within the hospitals & in the communities, safeguarding the front-line healthcare workers, as well as providing healthcare for non-COVID-19 related health needs safely. This, along with the families being in lockdown, the obvious risks of being in crowded hospital environments for parents & children & the overall anxiety & chaos along the path has led to an alarming reduction in immunization of children in most geographies.

IMPORTANCE OF IMMUNIZATION

Vaccination & Immunizations play a crucial role in keeping infectious diseases at bay. Many infectious diseases like Polio, measles, diphtheria & others can be prevented through vaccinations.

Immunization for the baby & mother's health starts even before the baby's birth. By not getting the vaccines against that infectious disease on the instructed time-schedule the baby is at risk of contracting the disease. A recent CDC study has shown an alarming decline in the immunization rate.[1] Although the study was conducted for the United States of America & examined data of children only in the states, that along with the parents & families in India voicing their concerns about the immunization & subsequently delaying the vaccination, it is safe to say that this decline is universal.

IMMUNIZATION SCHEDULE IN INDIA

The Indian ministry of health publishes detailed immunization schedule for pregnant mothers, infants & children. Pregnant women are advised to receive TT-1, TT-2 & TT Booster vaccines at recommended times during the course of their pregnancy. For infants, some vaccines like Hepatitis B birth dose, OPV birth dose or BCG are given at birth in most maternity hospitals. OPV 1, 2 & 3 doses, Pentavalent 1, 2, 3 & the Rotavirus vaccine are administered at 6, 10 & 14 weeks subsequently. The IPV (Inactivated Polio Vaccine) is recommended in fractional doses at 6 & 14 weeks of age. Measles/ MR 1st dose around 9-12 months of age & Vitamin A 1st dose along with that. For Children, DPT vaccine 1st booster is advised to be taken between 16-24 months of age. Measles/ MR 2nd dose & OPV booster dose between 16-24 months of age. Vitamin A 2nd to 9th dose starting at 16-18 months and getting it every 6 months up to the age of 5. DPT Booster 2nd dose is advised to be taken between 5-6 years of age & TT at 10 & 16 years.[3] Some of these vary according to regions. There are also some phased implementations in various Indian states. Many of these have a wiggle room for some delay which in the current pandemic situation is aggravated.

EFFECTS OF COVID-19 & LOCKDOWN

While the world is still grappling with the pandemic which soon might turn out to be an endemic for a long time to come, the disease's impact on people's health even outside the direct harm of COVID-19 disease has been immense. Since we are still very much in it & most of the primary research went in to finding ways to get out of the active phase of disease spread, as well as lack of extensive data at the moment, the amount of studies explaining the exact scope of the varied types of damage to people's health are scarce. Some early studies have shown that once the lockdown was declared, the mobility of people across different states went down drastically. This affected not only various businesses, economy & employment, but also caused resultant health issues.[4] Anxiety, mental health issues are become commonplace.[5] Seniors have suffered poor health outcomes due to not being able to receive treatment on time or in person checkups not being possible. Women, children or low socio-economic populations suffered a harder blow. They're also the ones who might be more undernourished, anemic or bereft of healthcare access.[6,7,11] This on the other hand makes them more vulnerable to contracting COVID-19 & having more serious symptoms of the disease. A recent retrospective observational study in Rajasthan found substantive decline in the rate of immunization in the state during the lockdown. This decline was higher for children from poorer, less educated background and residing in COVID-19 Red zones.[8]

MITIGATION MEASURES

Getting vaccinated

COVID-19 & the troubles it brings on day to day levels might remain around for a long time. If parents wait for the pandemic to be over for them to get their children vaccinated, it could be too little, too late. The WHO suggests that if you have

missed the date for a vaccination, then the next best thing to do is to get it done as early as possible.[12]

Use of Telehealth

In these difficult times of pandemic & social distancing, we are fortunate to have technology at our disposal. Doctors & Parents alike should utilize telehealth or video consultations more often & as early as possible. Doctors can have video consultations with Parents to debunk the myths & doubts around the children's health & immunization & encourage the parents to bring in their children for vaccinations in a safe manner.[13]

Guidelines & Recommendations by authorities

Local government authorities should give out more unambiguous & clear information for parents regarding the immunization & the policy changes in the wake of COVID-19. Guidelines for Health clinics & hospitals to adopt for safe immunization will be helpful. The local authorities can make use of digital health to identify zones with lower immunization in the recent months.

Outreach to families by Medical Doctors

Doctors, medical practices & hospitals should reach out to families in their regions via text messages, calls, online consultations & urge them to bring in their children for immunization. For the Pulse Polio program, patrons & volunteers went down from one house to another to identify children in the necessary age group & vaccinate them. Although this cannot be & should not be done in the current scenario, the social distancing equivalent of that could be reaching out to the masses using public census style data available at various levels to identify the children in that age group who need immunization.

Making in office/ hospital visit safe

Clinics & Hospitals should be made safe for the parents & children to come in for vaccinations. Constant sanitization of common areas, socially distanced seating arrangements should be made. Appropriate social distancing measures need to be put in place. Appropriate testing guidelines before/ after appointments should be conveyed to the Parents.

With proper coordination between the hospitals/ clinics & Parents, appointments can be set in ways that the common areas will be less crowded, people will have less or shorter period of face-to face time with others.

Mitigation of the risks & safe & timely immunization of children is possible & all effort should be taken to make that happen.

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