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Vacunas

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Editorial

Collateral effects of Covid-19 pandemic emergency response on worldwide immunizations



Efectos colaterales de la respuesta de emergencia pandémica de Covid-19 en las inmunizaciones mundiales

“Immunization is one of the most powerful and fundamental disease prevention tools in the history of public health”

Tedros Adhanom Ghebreyesus, World Health Organization Director-General

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the causative agent for the disease named as Covid-19 (coronavirus disease-19) which has become a worldwide epidemic threatening many lives especially of those at greater risk of severe outcomes. Intense efforts have been set to describe clinical and epidemiological features to guide both the interruption of transmission, prevention and treatment. These emergency efforts have been resource consuming, affecting human and economical capacities worldwide, as well as a potential impact on other research and on the quality of everyday healthcare activities. Needless to say the effect this sudden overload of work and resources can have over preventive immunization activities. According to data collected by the World Health Organization (WHO), UNICEF, Global Alliance for Vaccines and Immunization (Gavi) and the Sabin Vaccine Institute, provision of routine immunization services is substantially hindered in at least 68 countries and is likely to affect approximately 80 million children under the age of 1 living in these countries.¹

Disruption of immunization services around the world puts children at risk of diseases like diphtheria, measles and polio. Efforts have to be deployed to help maintain immunization programs and mitigate the impact of the pandemic, especially in lower-income countries. The Covid-19 pandemic has turned on an alert on how much collective health depends on the responsibility of each individual and

also on how important the role of vaccines is to keep global population safe and healthy.

Since March 2020, routine childhood immunization services have been disrupted on a global scale in a way that has not been ever seen since expanded programs on immunization (EPI) in the 1970s were implemented. More than half (53%) of the 129 countries where data were available reported moderate-to-severe disruptions, or a total suspension of vaccination services during March–April 2020. The reasons for disrupted services vary. Some parents are reluctant to leave home because of restrictions on movement, lack of information or because they fear infection with SARS CoV-2 virus. Also, many health workers are unavailable because of restrictions on travel, or redeployment to Covid-19 response duties, as well as a lack of protective equipment.²

The progress achieved worldwide for polio eradication is now under threat, risking the resurgence of the disease even though 2 wild polioviruses have been already eradicated. On the 25th of March, the Global Polio Eradication Initiative (GPEI) circulated the first update of the interim guide to help ensure continuity of the program’s operations in the context of the Covid-19 pandemic, as well as its support to the pandemic response while also ensuring the safety of its personnel and the communities it works with. SARS CoV-2 transmission will likely continue worldwide in multiple overlapping waves throughout 2020 and, possibly 2021 until sufficient herd immunity to the virus is achieved either through populations’ exposure to the virus or mass vaccination. Until that happens, countries will focus on achieving containment of transmission keeping it at a low level whilst enabling a “new normality” of economic and social life.

Table 1 – List of vaccination campaigns postponed due to the Covid-19 pandemic.

Vaccination campaigns	Total number of countries with postponed campaigns as of 15 May
Measles/Measles Rubella/Measles Mumps Rubella (M/MR/MMR)	27
Polio (IPV)	7
Bivalent oral poliovirus vaccine (bOPV)	26
Monovalent Oral Poliovirus Type 2 (mOPV2)	13
Meningitis A (MenA)	2
Yellow Fever (YF)	4
Typhoid (TCV)	2
Cholera (OCV)	5
Tetanus (Td)	7

In late March, concerned that mass gatherings for vaccination campaigns would enhance transmission of Covid-19, WHO recommended countries to temporarily suspend preventive campaigns while assessments of risk, and effective measures for reducing Covid-19 transmission were established.³

Many countries have temporarily and justifiably suspended preventive mass vaccination campaigns against diseases like cholera, measles, meningitis, polio, tetanus, typhoid and yellow fever, due to risk of transmission and the need to maintain physical distancing during the early stages of the Covid-19 pandemic.

Measles and polio vaccination campaigns, in particular, have been badly hit, with measles campaigns suspended in 27 countries and polio campaigns put on hold in 38 countries. At least 24 million people in 21 Gavi-supported lower income countries are at risk of missing out on vaccines against polio, measles, typhoid, yellow fever, cholera, rotavirus, HPV, meningitis A and rubella due to postponed campaigns and introductions of new vaccines³ (Table 1).

WHO has since monitored the situation and has now issued advice to help countries determine how and when to resume mass vaccination campaigns. The guidance notes that countries will need to make specific risk assessments based on the local dynamics of Covid-19 transmission, the health system capacities, and the public health benefit of conducting preventive and outbreak response vaccination campaigns.⁴

Based on this guidance, and with great concerns about observed increase in polio transmission, the Global Polio Eradication Initiative (GPEI), is advised countries to start planning for the safe resumption of polio vaccination campaigns, especially in high-risk countries.⁵

The bold funding commitments achieved by the Gavi Alliance at the Global Vaccine Summit, hosted virtually by the UK government on June 4th 2020, enabled immunization in lower-income countries, mitigating the impact of the Covid-19 pandemic in their immunization coverage.⁶ But this caveat is not only for lower-income countries, the United States has also observed a decline in vaccination coverage in part because of financial reasons but also because of parental concerns about potentially exposing their children to Covid-19 while attending healthcare facilities for immu-

nization and thus leaving young children and communities vulnerable to vaccine-preventable diseases such as measles or meningitis.^{7,8} In the United Kingdom, a 20% decline in routine immunizations was observed during the first three weeks of lockdown.⁹ According to Moraga et al.,¹⁰ in Spain, despite recommendations from Ministry of Health and the Committee on Vaccination¹¹ a decline that ranged from 5% to 60%, depending on age and vaccine, has been observed in different regions.^{12,13}

The current pandemic highlights the importance of having a vaccine to prevent an infectious disease, especially in those at higher risk of severe outcome or death. This is also a grant to endorse the importance of vaccines to save lives and should enhance community trust in them. Of course a Covid-19 vaccine is indeed eagerly expected but in no case must it despise the benefits all other vaccines have achieved to improve community health. It is a must to alert healthcare professionals of the need to maintain high uptake of routine schedule vaccines for the preservation of the well-being of the population especially when it is faced by this unprecedented pandemic threat.

REFERENCES

1. World Health Organization W. At least 80 million children under one at risk of diseases such as diphtheria, measles and polio as COVID-19 disrupts routine vaccination efforts, warn Gavi, WHO and UNICEF. WHO Newsletters 2020.
2. GAVI. Chair's summary. Glob Vaccine Summit 2020. Available from: <https://www.gavi.org/sites/default/files/2020/06/4-June-2020-Global-Vaccine-Summit-Gavi-3rd-Replenishment-Chairs-Summary.pdf> [accessed 20.06.20].
3. World Health Organization W. Protecting lifesaving immunization services during COVID-19: New guidance from WHO 2020. Available from: https://www.who.int/immunization/news_guidance_immunization_services_during_COVID-19/en/ [accessed 20.06.20].
4. World Health Organization W. Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19: Interim guidance. Geneva: 2020. Available from: https://doi.org/WHO/2019-nCoV/Framework_Mass_Vaccination/2020.1 [accessed 20.06.20].
5. Polio global eradication Initiative. Polio eradication programme continuity: implementation in the context of the COVID-19 pandemic. May 26th 2020:16. Available from: <http://polioeradication.org/wp-content/uploads/2020/03/COVID-POL-programme-continuity-guide-May-upd-v2.0-20200512.pdf> [accessed 20.06.20].
6. GAVI. PREVENT PROTECT PROSPER. Exec Summ 2020. Available from: https://media.gavi.org/pages/view.php?search=%21collection2864+%&k=&modal=&display=xlthumbs&order_by=collection&offset=0&per_page=240&archive=&sort=ASC&restypes=&recentdaylimit=&foredit=&ref=31924# [accessed 20.06.20].
7. Bramer CA, Kimmins LM, Swanson R, Kuo J, Vranesich P, Jacques-Carroll LA, et al. Decline in child vaccination coverage during the COVID-19 pandemic – Michigan care improvement registry May 2016–May 2020. MMWR Morb Mortal Wkly Rep. 2020;69:630–1, <http://dx.doi.org/10.15585/mmwr.mm6920e1>.
8. Santoli JM, Lindley MC, DeSilva MB, Kharbanda EO, Daley MF, Galloway L, et al. Effects of the COVID-19 pandemic on routine pediatric vaccine ordering and administration —

- United States, 2020. MMWR Morb Mortal Wkly Rep. 2020;69:591–3, <http://dx.doi.org/10.15585/mmwr.mm6919e2>.
9. Saxena S, Skirrow H, Bedford H. Routine vaccination during Covid-19 pandemic response. *BMJ*. 2020;m2392, <http://dx.doi.org/10.1136/bmj.m2392>.
 10. Moraga Llop FA, Fernández-Prada M, Grande-Tejada AM, Martínez-Alcorta LI, Moreno-Pérez D, Pérez-Martín JJ. Recovering lost vaccine coverage due to COVID-19 pandemic. *Vacunas*. 2020;21.
 11. Ministerio de Sanidad SS e ID general de SP. Prioridades del Programa de Vacunaciones durante las fases de transición de la pandemia de COVID-19 2020. Available from: https://www.mscbs.gob.es/va/profesionales/saludPublica/prevPromocion/vacunaciones/docs/COVID-19_Vacunacionprioritaria2.pdf [accessed 20.06.20].
 12. Moraga Llop FA. Las vacunaciones caen durante la pandemia. *Adolescere*. 2020;8.
 13. Moreno-Pérez D. Webinar. Vacunas en todas las edades. Que el COVID-19 no nos frene. Available from: <https://www.vacunas.org/webinar-vacunas-en-todas-las-edades-que-el-covid-19-no-nos-frene/> [accessed 20.06.20].

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