JIDC | THE JOURNAL OF INFECTION IN DEVELOPING COUNTRIES

Letter to the Editor

Global Health priorities: repositioning routine immunization for infants

Saverio Bellizzi[1], Giuseppe Pichierri[2], Khalid Kheirallah[3], Catello M Panu Napodano[4]

[1] *Medical Epidemiologist, Independent Consultant, Geneva, Switzerland*
[2] *Microbiology, Torbay and South Devon NHS Foundation Trust, Torquay, United Kingdom*
[3] *Department of Public Health, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan*
[4] *University of Sassari, Sassari, Italy*

Abstract

The first year of the Coronavirus disease (COVID-19) pandemic registered the highest number of children under the age of one year who did not receive basic vaccines since 2009. The pronounced rise in vaccine-preventable diseases in 2020 and 2021 was largely attributable to the disruption of the vaccine schedule for children around the world. Routine vaccinations were missed in consideration of movement restrictions to prevent the spread of COVID-19. On the other hand, health resources were re-allocated to COVID-19, resulting in strained health care systems and the marginalization of essential health services like routine vaccination campaigns. The COVID-19 pandemic has clearly illustrated the potential of vaccines in saving lives and preventing disabilities. The unequal roll-out of vaccination programmes has simultaneously deepened the existing gaps between high and low-income countries. Disruption in other key life-saving immunization programmes is driving these inequalities even further. Prompt and sustainable investments in routine immunization programmes, including catch-up vaccination strategies, are essential to avert the impact of years of neglect of this important public health issue. In particular, the recent declining trends in vaccination coverage are putting decades of progress at risk.

Key words: Immunization; children; equity.

J Infect Dev Ctries 2022; 16(10):1648-1649. doi:10.3855/jidc.17165

(Received 27 July 2022 – Accepted 25 August 2022)

Dear Editor,

The first year of the Coronavirus disease (COVID-19) pandemic registered the highest number children under the age of 1 year who did not receive basic vaccines since 2009 [1]. Six out of 10 of the estimated 23 million children (17% of the total infants worldwide) who missed their routine vaccine coverage lived in ten countries: Angola, Brazil, the Democratic Republic of the Congo, Ethiopia, India, Indonesia, Mexico, Nigeria, Pakistan, and the Philippines [1]. Such global health inequity translates into a less than 20% likelihood of a child to be fully vaccinated by the time he is 5 years old [2].

Evidence of this impact on disruption of the expanded programme of immunization at the national level during 2020 is mounting; as of the first quarter of 2022, there has been a 400% increase (17,500) in cases of measles in Africa compared to the same period in 2021 [3].

This rise in vaccine-preventable diseases and associated deaths was highlighted before the onset of the pandemic due to reasons such as resource shortages and vaccine hesitancy. Specifically, the rates of measles, diphtheria, mumps, hepatitis B, meningitis, tetanus, and yellow fever increased in 2019 [4]. While routine immunization coverage has been steadily decreasing in Latin American countries like Brazil, Bolivia, Haiti, and Venezuela since 2010, displaced population bear the highest burden in terms of measles and cholera [5].

The pronounced rise in vaccine-preventable diseases in 2020 and 2021 was largely attributable to the disruption of vaccine schedule for children around the world. Routine vaccinations were missed in consideration of movement restrictions to prevent the spread of COVID-19. On the other hand, health resources were re-allocated to COVID-19, resulting in strained health care systems and the marginalization of essential health services like routine vaccination campaigns.

In addition, conflicts and weak governance in fragile settings have been a consistent barrier to global child vaccination efforts. In this regard, polio, cholera, and measles are typical examples of preventable diseases that continue to generate outbreaks in areas facing political instability. While all the countries of the

world have accomplished impressive targets of eradicating polio (On August 2020, Nigeria was declared "wild polio-free country" after completing three years without any case of wild poliovirus [6]), Afghanistan is still lagging due to violence against polio teams that have resulted in delayed polio vaccine campaigns for children [7]. To further complicate the situation, economic collapse and weakened health sector in countries like Venezuela resulted in outbreaks of diphtheria and measles that have spilled over into neighboring countries [8].

Of particular concern is the current situation in Ukraine were the combined effect of disrupted routine vaccine programmes due to COVID-19 and the attacks against health facilities and forced displacement, which prevents scheduled vaccine appointments, may result in sudden spread of vaccine-preventable diseases. Ukraine has had one of the lowest routine vaccination coverages in Europe [9]. A study by the Wellcome Trust indicated that only 50% of the Ukrainians were convinced of the effectiveness of vaccines [10]). Therefore, it is not surprising that Ukraine contributed almost two third (53,000 out of a total of 82,000) of the total cases of measles in Europe during 2018 [4].

The COVID-19 pandemic has clearly illustrated the potential of vaccines in saving lives and preventing disabilities. The unequal roll-out of vaccination programmes has simultaneously deepened the existing gaps between high and low-income countries. Disruption in other key life-saving immunization programmes is driving these inequalities even further.

Prompt and sustainable investments in routine immunization programmes, including catch-up vaccination strategies, are essential to avert the impact of years of neglect of this important public health issue. In particular, the recent declining trends in vaccination coverage are putting decades of progress at risk.

Hence, the cost-effectiveness of vaccines needs to be repositioned at the community level. As mentioned by the World Health Organization (WHO) Director-General, "Vaccines are one of the most powerful tools in the history of public health".

As outlined by the Global Alliance for Vaccine Immunization (GAVI), targeted approaches to respond to specific needs of communities, with an emphasis on localized solutions and partnerships are needed, with focus on populations in fragile, conflict and cross-border settings outside government reach [11].

References

1. World Health Organization (WHO) (2022) Immunization coverage. Available: https://www.who.int/news-room/fact-sheets/detail/immunization-coverage. Accessed: 3 August 2022.
2. World Health Organization (WHO) (2022) WHO and UNICEF warn of a decline in vaccinations during COVID-19. Available: https://www.who.int/news/item/15-07-2020-who-and-unicef-warn-of-a-decline-in-vaccinations-during-covid-19. Accessed: 3 August 2022.
3. World Health Organization (WHO) (2022) Vaccine-preventable disease outbreaks on the rise in Africa. Available: https://www.afro.who.int/news/vaccine-preventable-disease-outbreaks-rise-africa. Accessed: 3 August 2022.
4. Institute of Biomedical Science (IBMS) (2019) Vaccine-preventable diseases on the rise. Available: https://www.ibms.org/resources/news/vaccine-preventable-diseases-on-the-rise/. Accessed: 3 August 2022.
5. Desai AN, Ramatowski JW, Marano N, Madoff LC, Lassmann B (2022) Infectious disease outbreaks among forcibly displaced persons: an analysis of ProMED reports 1996-2016. Confl Health 14: 49.
6. Ekwebelem OC, Nnorom-Dike OV, Aborode AT, Ekwebelem NC, Aleke JC, Ofielu ES (2021) Eradication of wild poliovirus in Nigeria: lessons learnt. Public Health in Practice. 2: 100144.
7. FRANCE24 (2022) Eight polio vaccinators killed in series of Afghan attacks: UN. Available: https://www.france24.com/en/live-news/20220224-eight-polio-vaccinators-killed-in-series-of-afghan-attacks-un. Accessed: 3 August 2022.
8. Center for Disaster Philanthropy (CDP) (2022) The dangers of forced displacement. Available: https://www.simonbolivarfoundation.org/presentations/2022REVISEDVenezuelanMigrationChronic%20EmergingHealthNeeds.pdf. Accessed: 3 August 2022.
9. The Conversation (2022) Vaccine uptake in Ukraine has been low - countries receiving refugees need to help people get their jabs. Available: https://theconversation.com/vaccine-uptake-in-ukraine-has-been-low-countries-receiving-refugees-need-to-help-people-get-their-jabs-179181. Accessed: 3 August 2022.
10. Wellcome (2022) Chapter 5: Attitudes to vaccines. Available: https://wellcome.org/reports/wellcome-global-monitor/2018/chapter-5-attitudes-vaccines. Accessed: 3 August 2022.
11. GAVI (2022) "Zero dose" children: almost 14 million get no vaccines. Available: https://www.gavi.org/vaccineswork/zero-dose-children-almost-14-million-get-no-vaccines. Accessed: 3 August 2022.

Corresponding author

Saverio Bellizzi, MD, MSc, PhD
Avenue Appia 20, 1202, Geneva, Switzerland
Phone: +39 339 5381265
Email: saverio.bellizzi@gmail.com

Conflict of interests: No conflict of interests is declared.