



POLIO GLOBAL ERADICATION INITIATIVE

GLOBAL PUBLIC GOODS FOR HEALTH Lessons from the novel Oral Polio Vaccine (nOPV2)

“A global public goods lens [...] brings structure to a wide range of challenges and opportunities associated with global interdependence and can be leveraged to mobilize action at multiple levels.”¹ UNDP (2023:76)

The eradication of an infectious disease is an example of achieving a global public good in the health domain. To date, only one infectious disease in human beings, smallpox, has been eradicated. Polio eradication is considered as a global public good for health as once achieved it will provide universal benefits to all countries without excluding anyone or distinguishing between any groups. The eradication of polio requires a collective effort and brings health and economic benefits. The development of the novel Oral Polio Vaccine type 2 (nOPV2) can serve in this context as a model for developing and delivering other global public goods for health, such as the prevention of (re)emerging infectious diseases, for example of zoonotic diseases that constitute more than 75% of emerging diseases in the past decades.²

GLOBAL PUBLIC GOODS

The term global public goods often refers to programs, policies, and services that have a truly global reach, even if the distribution of benefits may be unevenly experienced or perceived across countries. They usually generate spillover effects, or externalities, when consumed and are characterized by their non-rivalrous and non-exclusive nature. While individual health is considered a private good, the positive externalities of health mean that population health can be considered a public good.

Source: Feachem R.G.A, Sachs J.D. (2002) Global Public Goods for Health. The Report of Working Group 2 of the Commission on Macroeconomics and Health. WHO: Geneva.

FAILURES IN THE PROVISION OF GLOBAL PUBLIC GOODS FOR HEALTH

Failures in science due to lack of research to understand the disease and provide the basis for its treatment

Failures in the market due to lack of financial incentives or rewards for R&D

Failures in public health due to lack of organization and resourcing to ensure access to and use of available treatments

Failures in the state due to lack of shaping markets to serve the public interests

Source: Matlin S.A., Told M. et al. (2013) Health R&D as a Global Public Good: A Brief for Policy-Makers. Graduate Institute: Geneva.



Learning from nOPV2: Non-commercial investment in R&D facilitates the creation of global public goods for health

The novel Oral Polio Vaccine type 2 (nOPV2) was conceived in 2011 at a time when absolute numbers of type 2 variant poliovirus were as low as 60 cases globally. Nevertheless, it was predicted that this variant may become a major hurdle to polio eradication once wild poliovirus cases decline towards zero. While incentives for the pharmaceutical industry were low to invest in product development of a new vaccine, the need for targeted, non-commercial R&D investment was evident to create a vaccine with much greater genetic stability and less tendency to revert to neurovirulent forms. More than 1.2 billion doses of the resulting nOPV2 have been administered in 42 countries since its first use in March 2021, contributing to greater global health security and coming closer to creating a global public good for health.

Learning from nOPV2: Equitable access and distribution are key features of global public goods for health

Global Public Goods for Health are characterized by their global reach, their inclusivity and their equitable access. Both equity of access in case of need and capacity to make effective use of the product are key factors in controlling a disease outbreak. Even though supplies of nOPV2 were limited in the first year of use due to limited manufacturing capacity and the COVID-19 pandemic, education campaigns, distribution mechanisms, and delivery modalities were designed to reach the most vulnerable, marginalized and hard-

to-reach communities, regardless of their background or socioeconomic status. Equitable access and distribution were boosted when WHO prequalification was granted to a second manufacturing site in July 2024.³

Learning from nOPV2: Prioritizing public health - collaboration with collective responsibility for shared benefits

A scientific consortium composed of a unique group of experts and organisations from all around the world came together to work together for a common goal: the development of nOPV2. This consortium was later interfaced with the Global Polio Eradication Initiative (GPEI) and a joint nOPV2 Working Group was set up to manage the late stages of clinical development, the regulatory approval and the roll-out. All stakeholders involved in these mechanisms have been able to overcome their differences and any barriers in the development and roll-out of nOPV2 due to their shared vision and determination to eradicate polio for all. Global public goods for health are driven by prioritizing, promoting and protecting public health interests first and foremost.

- 1 UNDP (2023) Breaking the gridlock: Reimagining cooperation in a polarized world. UNDP: New York. 76. <https://hdr.undp.org/system/files/documents/global-report-document/hdr2023-24chapter3en.pdf>
- 2 Jones K.E., Patel N., Levy M., et al. (2008) Global trends in emerging infectious diseases. *Nature*. 451:990-994. <https://doi.org/10.1038/nature06536>
- 3 Kumar N.V. (31 July 2024) WHO grants pre-qualification status to Biological E.'s novel oral polio vaccine type 2. *The Hindu*. <https://www.thehindu.com/sci-tech/health/who-grants-pre-qualification-status-for-biological-es-novel-oral-polio-vaccine-type-2/article68464617.ece>

This Information Brief is based on findings stemming from the following research project: Told M., Matlin S.A., Quigley P. (2024) Towards Polio Eradication: Insights from the Development and Rollout of the novel Oral Polio Vaccine nOPV2. HI5 Governance: Geneva.