

POLIO:

A PROPER GOODBYE

RESULTS



Social distancing, empty public places and the race to develop a vaccine are all defining features of the COVID-19 crisis, but for many they bring back memories of one of the 20th centuries other global pandemics: polio. Whilst the world is on the verge of eradicating this disease completely, it is important that we do not become complacent and allow a resurgence of polio to occur.

The COVID-19 pandemic has meant life-saving polio immunisation efforts have been halted, despite the fact that many countries were already at risk of the disease returning. However, this can, and must be prevented by continued political will for polio eradication. This global effort also presents a unique opportunity to leave a lasting legacy in the fight against other vaccine-preventable diseases, including coronavirus - a goal more vital now than ever.

The path to eradication



Polio is a highly infectious disease that has existed for thousands of years, although epidemics only truly began in the early 20th century. The virus enters through the mouth, attacking the nervous system, and can cause paralysis; if the breathing muscles are affected, it can be life-threatening. There is no cure for polio, but it is preventable with a vaccine.

The historic progress to eradicate polio has kept 18 million people walking who would otherwise have been paralysed, and shows that **vaccines work**. The Global Polio Eradication Initiative (GPEI), of which the UK is a key donor,

has played a leading role in this success, cornering the wild polio virus to just two countries (Afghanistan and Pakistan), and reducing the number of polio cases by over 99% since its inception in 1988.

However, serious challenges exist in keeping immunisation rates high and tackling the remaining cases, which are often found in hard-to-reach or insecure areas. The World Health Organisation (WHO) warns that failure to eradicate polio could lead to up to 200,000 new cases globally each year within 10 years.¹ Until every child is fully immunised, this devastating

outcome cannot be ruled out.

The COVID-19 pandemic has meant that most preventative polio immunisation campaigns and outbreak responses in GPEI-supported countries have been suspended, in order to protect health workers and the communities they serve. The focus on halting the spread of the pandemic is welcome, **but this pause will almost certainly increase the spread of polio and the number of children paralysed by the disease**. It is therefore vital that these activities are restarted to be stronger than ever, as soon as it is safe to do so.

Strengthening routine immunisation

Immunisation of WHO-recommended vaccines prevents 2-3 million deaths per year, but almost 20 million children under the age of one are not receiving them. Polio eradication cannot be achieved without the vaccine being part of strong national routine immunisation programmes, and at the same time the eradication effort can serve as an opportunity to improve childhood vaccination rates against other deadly diseases.

Multiple doses of the polio vaccine (explanation below) are needed to achieve full individual immunity, and en-

surging every last child is reached helps build population immunity too. The virus is unable to survive for long periods of time outside of the human body, so if it cannot find an unvaccinated person, it will die out.

Even in countries already declared polio-free, it is vital that coverage rates remain high due to the continued risk of the virus re-emerging (for example from mobile populations travelling across borders). **In the context of COVID-19 and the risks it brings to stalling immunisation rates, addressing this challenge is more important than ever.**



Collaboration between Gavi, the Vaccine Alliance and the GPEI has already been happening, the continuation of this will be crucial. Gavi works to achieve equitable use of vaccines in lower-income countries and its support for the introduction of the inactivated polio vaccine in the immunisation schedules of over 70 countries has been critical.

The GPEI's impact also goes well beyond just polio, and much of the world's polio infrastructure, from surveillance networks to community outreach staff, helplines to training, have been diverted to respond to COVID-19.

Furthermore, The GPEI's work provides human and physical resources that sustain wider routine immunisation systems, and delivering life-saving healthcare interventions:

- **The GPEI funds over 90% of all immunisation personnel in the WHO's Africa region and 85% of them give half their time to initiatives besides polio.ⁱⁱ**
- **In Nigeria, polio staff and resources helped respond to the Ebola outbreak in 2014.ⁱⁱⁱ**
- **The Democratic Republic of Congo has integrated measles vaccination campaigns into its polio efforts.^{iv}**
- **Nigeria and Central African Republic have utilised their polio programmes to deliver an integrated health package that includes other routine vaccinations.^v**
- **Over 1.5m child deaths from malnutrition have been prevented by polio workers delivering vitamin A.^{vi}**
- **Polio infrastructure also supports maternal and child health programmes, as well as vital sanitation and hygiene work.^{vii}**

Polio eradication and improving immunisation rates go hand-in-hand, and with millions of children not receiving life-saving vaccinations across the world it is critical that both goals are achieved.



ORAL AND INACTIVATED POLIO VACCINES

The oral polio vaccine (OPV) is one of two key vaccines used in the fight against polio, due to its relative low cost, ease of delivery and ability to stop transmission of the virus. OPV contains a live, weakened version of the virus which replicates in the intestines for a short while and is then excreted, meaning that in areas with poor sanitation, this weakened virus can be passed on to others who haven't been vaccinated, conferring onto them "passive immunity".

In **extremely rare cases**, in a community where polio immunisation rates are very low, the weakened virus in the OPV can circulate long enough that it may revert to a form that can cause paralysis. The OPV's unique ability to stop transmission of the disease means that it will continue to be used wherever outbreaks occur, but the risk of this 'vaccine-derived poliovirus' means that the oral vaccine will eventually be phased out.

The inactivated polio vaccine (IPV) cannot cause vaccine-derived poliovirus, but as an injection it is more expensive and difficult to administer, and whilst providing immunity to the recipient it does not stop further transmission of the virus. It is generally provided through national routine immunisation programmes, and will need continue to be given for several years after polio eradication is certified.

Both the OPV and IPV are vital to achieving and sustaining polio eradication, and protecting children across the world from being affected by this terrible disease.



Polio transition

As the world gets closer to wild polio eradication, the GPEI will wind-down and eventually cease to exist. This new phase presents a huge risk, not only to the achievement of polio eradication but also the wider health functions that the GPEI supports.

Some essential polio functions, including surveillance and vaccinations will need to continue after eradication has been certified, to sustain a polio-free world.



The loss of the GPEI's financial support means that these activities will need to be integrated into countries' own health systems. However, many of these GPEI-supported countries require strengthened routine immunisation and healthcare services to be able to take ownership of these essential functions, if the disease is to be eradicated for good.

In addition, because GPEI staff and resources do so much to deliver other healthcare interventions, in some countries the withdrawal of its funding puts their entire immunisation and health systems at risk. The huge contribution of the world's polio infrastructure in responding to COVID-19 highlights just how critical these assets are to global health security and defending against future pandemics. To ensure that these wider gains of the GPEI's work (and the UK's contribution to them) are not lost, the transition process must be effectively implemented and monitored.

Polio eradication and the transition of resources it will inevitably require can leave an important global health legacy. We have an opportunity to not only achieve eradication, but with support for routine immunisation we can build on the wider gains of the GPEI to ensure every child is vaccinated against other preventable diseases: a chance to give polio a proper goodbye

The UK's role

The UK's contribution has been critical in the fight against polio, and we welcome the recent commitment of up to £400m for polio eradication. It is vital that this total amount is fulfilled and the UK should also use its expertise and influence within the GPEI to enhance progress towards polio eradication and sustain the global political will necessary to achieve that.

In order to achieve and maintain a polio-free world, and ensure the wider benefits of the polio eradication programme are not lost, the UK should continue its support for routine immunisation programmes. The UK recently made a world-leading financial commitment to Gavi, and should use its position and maximise this investment by ensuring the organisation commits to ensuring equitable access to vaccines, to reach the most deprived and marginalised children.

WHAT YOU CAN DO

- Speak up in Parliament about the need for the UK to use its global leadership to improve progress towards polio eradication.
- Ask the Government what steps they are taking to ensure sustainable polio transition and strengthen routine immunisation systems.
- Call on the Government to ensure the UK's full pledge of £400million to the GPEI is fulfilled.
- Show your support in Parliament for vaccines and become a member of the APPG for Vaccinations for All.

i <https://www.who.int/news-room/q-a-detail/does-polio-still-exist-is-it-curable>

ii Rotary International: The plus in PolioPlus. <https://www.rotary.org/en/plus-polioplus>

iii <http://polioeradication.org/wp-content/uploads/2018/07/GPEI-fact-sheet-20191113.pdf>

iv http://polioeradication.org/wp-content/uploads/2016/07/BeyondPolio_FactSheet.pdf

v Craig AS, Haydarov R, O'Malley H, et al. The Public Health Legacy of Polio Eradication in Africa. *The Journal of Infectious Diseases*. 2017 Jul;216(suppl_1):S343-S350. DOI: 10.1093/infdis/jix034.

vi <https://www.who.int/news-room/fact-sheets/detail/poliomyelitis>

vii <http://polioeradication.org/polio-today/preparing-for-a-polio-free-world/transition-planning/>