UK Health Security Agency

Briefing Note 2025/005 **Date: 24/01/2025**

Event: Vaccine Derived Poliovirus Type 2 (VDPV2) detected in five countries in Europe: Spain, Poland, Germany, the United Kingdom (UK), and Finland

Notified by: Vanessa Saliba

Authorised by: Gayatri Amirthalingam, Deputy Director, Immunisation and Vaccine Preventable Diseases Division
Derren Ready, Deputy Director, of Public Health Microbiology Reference Services
Emmanual Okpo, Regional Deputy Director
Meera Chand, SRD on call
Shaun Whelan, Communications

Contact: incident043.nrc@ukhsa.gov.uk

IRP Level: National Standard Response

Incident Lead: Vanessa Saliba

Instructions for Cascade

- UKHSA Private Office Groups to cascade within Groups
- UKHSA Health Protection in Regions Directorate
    - UKHSA Field Services
    - UKHSA Health Protection Teams
    - Deputy Directors in Regions Directorate
- UKHSA Lab Management Teams
- UKHSA Regional Communications
- Generic inbox for each of the Devolved Administrations
- Inboxes for each of the Crown Dependencies
- DHSC CMO
- OHID Regional Directors of Public Health
- National NHSE EPRR
- NHSE National Operations Centre to cascade to paediatrics, infectious disease, neurology and NHS labs

Please note:

- **Devolved Administrations** to cascade to CMOs, Medical Directors and other DA teams as appropriate to their local arrangements
- **Crown Dependencies** to cascade to teams as appropriate to local arrangements
- **Regional Deputy Directors** to cascade to Directors of Public Health
- **UKHSA microbiologists** to cascade to non-UKHSA labs (NHS labs and private)
- **UKHSA microbiologists** to cascade to NHS Trust infection leads

Summary:

Routine environmental surveillance for poliovirus (PV) identified a Vaccine Derived Poliovirus Type 2 (VDPV2) in sewage samples from London, Leeds and West Sussex in November 2024 and one sample from London in December 2024. The same

VDPV2 strain has also been recently found in sewage samples from sites from four other European countries: Spain, Poland, Germany and Finland. Sewage sampling in positive UK sites has increased to fortnightly. All UK sites (including all those with VDPV2 detections in November) have tested negative for poliovirus (to date) in January.

To date the detections in the UK appear to be due to parallel importations from different parts of Europe and there is no evidence of community transmission; therefore the risk to the public is low.

A national standard incident has been declared by UKHSA and an Incident Management Team established to coordinate the investigation and response. Leeds, London and West Sussex UKHSA public health colleagues have been alerted and are liaising with the NHS and other partners to optimise efforts to catch-up under-vaccinated communities.

Clinicians and laboratories are reminded to:

1. report all suspected polio cases and all patients presenting with Acute Flaccid Paralysis / Acute Flaccid Myeltis (AFP/M) not explained by a non-infectious cause to their local Health Protection Team (HPT).
2. follow existing guidance around recommended sampling and testing for AFP/M cases
3. forward on local enterovirus positive samples to the Enteric Virus Unit in Colindale for further characterisation.

Background and Interpretation:

Routine environmental surveillance for poliovirus (PV) is undertaken by the UK Health Security Agency (UKHSA), working with the World Health Organization (WHO) Polio Global Specialised Laboratory at the Medical and Healthcare products Regulatory Agency (MHRA). The surveillance is undertaken at 26 sites, with monthly sampling, across England. It is part of the UK's commitment to the Global Polio Eradication Initiative and provides an early warning system of PV importations which may then lead to community transmission.

Testing of the samples by the MHRA during November 2024 identified a Vaccine Derived Poliovirus Type 2 (VDPV2) in 1 sample from East Worthing Sewage Treatment Works (STW) (which covers some of West Sussex local authority and adjacent areas), in 2 samples from Leeds Knostrop STW, 1 sample from the London Beckton STW and 1 sample from the London Crossness STW. Sampling at the sites where the VDPV2 was detected has increased to fortnightly to inform a timely investigation and any necessary response.

Testing of sewage samples in December detected VDPV2 from a single sample collected from London Beckton STW on the 10 December. All other sites tested negative for poliovirus in December.

All sites (including all those with VDPV2 detections in November/December) have tested negative for poliovirus (to date) in January.

The PV isolates found are genetically linked to a VDPV2 strain that has been widely circulating in several African countries in recent months, unrelated to any previous PV found in the UK. The same VDPV2 strain has also been recently found in sewage samples from sites from four other European countries: Spain, Poland, Germany and Finland, as reported in a Rapid Communication published in Eurosurveillance on the 23 January 2025. All strains are genetically linked, classifying these isolates as circulating VDPV2 (cVDPV2). Sequence analysis showed high genetic diversity among the strains identified within individual sewage sites and countries and an unexpected high genetic proximity among isolates from different countries.

As part of routine surveillance, PVs are detected from time to time; these are normally one-off findings due to:

i) individuals being vaccinated overseas with the live attenuated oral polio vaccine (OPV), entering the UK and briefly 'shedding' traces of the 'vaccine-like' poliovirus in their faeces. Several countries offer OPV on exit as part of their response to polio outbreaks. Individuals who are immunosuppressed may shed virus for a long period of time.
ii) visitors entering the UK from a country where vaccine derived polio viruses have been circulating.

When there is community transmission, the PV would be detected over a period of weeks and months. One-off or brief detections do not require any public health action. Whilst there is currently no evidence of community transmission, vaccine-derived poliovirus, like the ones detected, have the potential to spread, particularly in communities where vaccine uptake is lower. On rare occasions it can cause paralysis in people who are not fully vaccinated.

The WHO European Region has remained polio-free since 2002. However, this incident illustrates that until polio is eradicated globally the risk of the virus being reintroduced into Europe and the UK remains. Although overall uptake of the polio containing vaccines is high in the UK, coverage has fallen well below the 95% WHO target over the last decade. Coverage in London is significantly lower, and some of the sites where the poliovirus has been detected are home to pockets of under vaccinated communities which could allow a VDPV to spread.

Implications & Recommendations for UKHSA Regions:

All Health Protection Teams should:

- continue to support cross-system partnership work to improve uptake through the routine childhood immunisation programme and strengthen tailored approaches to reach under vaccinated communities
- be aware of the AFP/M HPT SOP and guidance, particularly the need for clinicians to complete the Patient Summary Form and the appropriate samples for testing
- use appropriate local fora to remind NHS laboratories that they should refer all local enterovirus positive samples to the Enteric Virus Unit in Colindale.

Implications & Recommendations for UKHSA sites and services:

Consultants in Public Health Infection and Regional Heads of Laboratory Operations are requested to forward this briefing note to their local NHS Laboratories / microbiologists and any clinical colleagues who may be involved in testing for suspected cases of AFP/M. For sample referral from AFP/M case use E72 form. In addition, please remind local and regional laboratories that they should refer all local enterovirus positive samples to EVU Colindale using the E1 request form.

Implications & Recommendations for NHS:

Front line clinicians are asked to:

i) report all suspected polio cases and AFP/M cases not explained by a non-infectious cause to their local UKHSA Health Protection Team
ii) note AFP/M guidance and arrange appropriate sampling (stool, respiratory, and CSF is available)

Local liaison with virology/microbiology departments is important to ensure that appropriate specimens are taken. **Stool specimens** are the optimal sample types to exclude polio. Two unadulterated stool samples (minimum 2g each and collected 24-48h apart) to be submitted to the Polio Reference Service, UKHSA Colindale, for exclusion of poliovirus infection using E72 form.

NHS laboratories are reminded that all enterovirus positive samples should be referred to the Enteric Virus Unit (EVU) using the E1 form which can be found here. If all samples cannot be referred to EVU, then priority should be given to samples from severe presentations such as AFP/M, meningitis, severe respiratory illness and myocarditis and EV positive stool samples.

Implications and recommendations for Local Authorities:

This incident is a timely reminder of the need for ongoing prioritisation of cross-system partnership work to:

1. improve uptake in the routine childhood immunisation programme to achieve the 95% WHO target and reduce inequalities in uptake
2. ensure opportunities for catch up are embedded and optimised in a range of settings
3. strengthen tailored approaches to reach under vaccinated communities and address inequalities in uptake

---

References/ Sources of information:

1. Acute flaccid paralysis syndrome - GOV.UK (www.gov.uk)
2. Polio: national guidelines - GOV.UK (www.gov.uk)
3. HPR volume 18 issue 11: news (10 and 20 December) - GOV.UK
4. HPR volume 18 issue 1: news (23 January 2025) - GOV.UK
5. Eurosurveillance | Detection of circulating vaccine-derived poliovirus type 2 (cVDPV2) in wastewater samples: a wake-up call, Finland, Germany, Poland, Spain, the United Kingdom, 2024
