

## **A. National action plan to maintain the polio-free status**

## **B. National plan for responding to an imported or circulating poliovirus**

### **Czech Republic**

Any country of the WHO European Region is at risk of importation of wild poliovirus and/or poliomyelitis until global polio eradication is achieved. It is necessary for all countries of the WHO European Region to adopt, in line with the WHO-Euro recommendations, a "National action plan to maintain the polio-free status", with the objectives to maintain the polio-free status of the country, to submit a list of actions to be taken to detect the poliovirus when imported into the country, and in this context, to enumerate the actions to be taken in the case of re-introduction of poliovirus and re-emergence of poliomyelitis.

To meet these objectives, the Chief Public Health Officer of the Czech Republic expressed agreement with the Draft Plan of the National Commission for Polio Eradication, adopted the strategy below and called on the public health protection authorities to take the following steps in cooperation with the respective experts:

### **A. Measures to maintain the polio-free status of the Czech Republic in the era after certification of polio eradication in the WHO European Region:**

#### **1. Measures to prevent re-introduction of wild poliovirus or vaccine-derived poliovirus (VDPV) circulation**

- 1.1. To maintain a high vaccination coverage within the regular immunization scheme in accordance with Act No. 258/2000 on public health protection, as amended, Regulation No. 537/2006 on vaccination against infectious diseases, as amended, and Regulation No. 473/2008 on the epidemiological surveillance system for selected infections, as amended.
  - a) To continue achieving a vaccination coverage higher than 95% at the country level, with the regional rates reaching not less than 93%.
  - b) To conduct annual checks of vaccination coverage data and to report the results from the Regional Public Health Offices to the Ministry of Health of the Czech Republic.
  - c) While providing vaccination and checking the vaccination coverage, special attention needs to be paid to high-risk population groups, including immigrants, refugees and minorities (e.g. Roma), with the aim to achieve a high vaccination coverage in these groups as well.
  - d) To continue the monitoring of poliovirus circulation based on sewage water sampling and analysis, including sewage water sampling in selected refugee camps.
  - e) In the years when multi-purpose serological surveys will be conducted, to determine the seropositivity rates against different poliovirus types in a statistically significant population sample.
  - f) To take rapid remedial measures if failures are detected.
- 1.2. To achieve laboratory containment of wild polioviruses

In the Czech Republic, the laboratories where wild polioviruses might be available were checked in 2006-2007 according to the WHO guidelines and it was concluded that such viruses were not stored in any of 144 laboratories checked. Nevertheless, laboratories should continue to be checked.

## **B. National plan for responding to an imported or circulating poliovirus**

### **1. Measures for detecting and confirming wild poliovirus if imported into a polio-free country or VDPV circulation**

1.1 To continue high quality surveillance to allow early detection of wild poliovirus if imported or of VDPV circulation

a) To continue the surveillance of acute flaccid paralysis (AFP) in children under 15 years of age according to the guidelines of the Chief Public Health Officer of the Czech Republic, i.e. while meeting the following requirements:

- early stool sampling (two samples collected at an interval of at least 24-48 hours within 14 days of the onset of symptoms),
- early transport of samples to the National Reference Laboratory for Enteroviruses (NRLE) of the National Institute of Public Health, Prague (within 72 hours after sample collection),
- laboratory analysis quality assurance in accordance with the WHO guidelines
- conducting enterovirus surveillance also in other biological specimens (e.g. cerebrospinal fluid, throat swabs, etc.), in particular from patients diagnosed with aseptic meningitis,
- continuing enterovirus surveillance in the external environment, i.e. by analyzing sewage water samples.

b) To pay special attention to highly suspected cases, called "hot cases", to monitor such cases and to perform the analysis without delay.

c) To analyze all stool samples from AFP cases in children under 15 years of age in the WHO accredited NRLE.

d) To refer the polioviruses isolated to the WHO Regional Reference Laboratory (RRL) within 14 days from isolation for intratypic differentiation and identification as either wild poliovirus or VDPV.

e) The NRLE will be notified by WHO within one working day of the detection of non-polio Sabin-like virus (non-vaccine strain) or inconclusive intratypic differentiation (ITD) results.

f) To vaccinate sewage treatment plant workers from the defined areas with an inactivated polio vaccine.

g) In line with Guidelines No. 1/2007 of the Ministry of the Interior on vaccination against polio in applicants for international protection, to continue the vaccination of newly accepted children and possibly to vaccinate adult applicants from selected countries with an inactivated polio vaccine.

### **2. When a clinical case of polio is suspected or when poliovirus is isolated, to take the following measures according to the risk levels specified below:**

2.1 Level 1 "Highly suspected polio case" or "Highly suspected case of acute flaccid paralysis"

Definition:

- Acute flaccid paralysis in a child under 15 years of age, coupled with any of the following risk factors :
  - a history of less than three doses of oral or inactivated polio vaccine,
  - a recent traveller to an endemic area (i.e. within the last 60 days),
  - a member of a high-risk group (social or ethnic).
- A polio-like illness in a patient regardless of age.
- Poliovirus isolation from a person regardless of age (even if paralysis is not present), in the presence of any of the risk factors specified above.

Measures to be taken:

- a) To conduct epidemiological investigations of the suspected case and contacts without delay, to report the results within 24 hours to the Chief Public Health Officer of the Czech Republic who shall notify accordingly the WHO Regional Office for Europe (WHO EURO) and the European Centre for Disease Prevention and Control (ECDC).
- b) To check whether the stool samples were collected early, to refer the samples to the NRLE for analysis, and to refer the poliovirus isolated, if any, to the RRL (within one week).
- c) To vaccinate the non-vaccinated or under-vaccinated (with a history of less than three doses of polio vaccine) direct contacts (family members and health care setting and school contacts) with OPV.
- d) In areas with a vaccination coverage lower than 80%, more extensive vaccination will be provided with OPV.

2.2. Level 2 „A single suspected case with wild poliovirus suspected to be the cause “.

Definition:

- Acute flaccid paralysis in a person regardless of age with poliovirus isolation after referral for ITD and before obtaining ITD results.

Measures to be taken:

- a) To report the case within 24 hours to the Chief Public Health Officer of the Czech Republic who shall notify accordingly the WHO EURO and ECDC within 24 hours.
- b) To conduct epidemiological investigations of the suspected case and contacts without delay, to collect stool samples from family members and other close contacts for virological analysis and to perform the analysis.
- c) To vaccinate the close contacts with OPV regardless of whether and how they had been previously vaccinated.
- d) To take the following steps within 48 hours:
  - to implement active surveillance of both paralytic and non-paralytic polio cases in the suspected area,
    - to notify the respective clinical settings and laboratories of the situation,
    - to call for daily reports of new AFP cases from hospitals likely to admit AFP patients, to collect stool samples from children under 5 years of age in these hospitals and to consider whether to conduct a similar study in older children in these settings.

Active surveillance should continue until wild virus transmission is ruled out.

- e) To conduct retrospective epidemiological investigations in the suspected area or high-risk group(s) and to address the respective laboratories in order to obtain still untested or non-typeable enterovirus isolates.

- f) To check the vaccination coverage in a wider high-risk population group, to consider whether to complete pre-term vaccination with the remaining due doses with OPV in all

children of the critical age group (e.g. those under three years of age or those under five years of age), depending on epidemiological investigation results in the suspected area.

### 2.3 Level 3 „Confirmed case (cases) caused by wild poliovirus "

#### Definition:

A case of paralytic or non-paralytic poliomyelitis caused by wild poliovirus confirmed by poliovirus intratypic differentiation results.

#### Measures to be taken:

- a) To report such a case without delay, not later than within 24 hours, to the Chief Public Health Officer of the Czech Republic who shall notify accordingly the WHO EURO and ECDC within 24 hours.
- b) To conduct epidemiological investigations of the confirmed case and contacts without delay, to collect stool samples from family contacts for virological analysis and to perform the analysis.
- c) To vaccinate direct contacts with due doses to the full scheme without delay, regardless of their vaccination history – using OPV.
- d) To implement active surveillance of both paralytic and non-paralytic polio cases within 48 hours at the nationwide level and to take the following steps:

- to notify the respective clinical settings and laboratories of the situation,
- to call for daily reports of FPA cases from selected hospitals, including zero reports
- to conduct a nationwide study of stool samples from a sample population of children under five years of age from high-risk groups or selected hospitals and possibly also an additional study in healthy children,
- to consider whether to conduct an extended study of poliovirus circulation in sewage waters in selected areas.

Active surveillance should continue until further spread of polio at the nationwide level is ruled out.

- e) To conduct retrospective epidemiological investigations in the suspected communities or areas and in selected hospitals covering the period of the last 6 to 12 months and to address the respective laboratories to obtain data on non-typeable enterovirus isolates.
- f) To check the vaccination coverage of the high-risk population groups and to consider whether to complete pre-term vaccination with the remaining due doses to a wider extent (e.g. in all children under five years of age in selected areas or high-risk groups) – using OPV.
- g) After gathering enough data to consider whether to complete pre-term vaccination with the remaining due doses at the nationwide level – using OPV.
- h) To check the laboratories again to achieve laboratory containment of wild poliovirus.
- i) To conduct a targeted serological survey of a selected population and area.

