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Simulation Exercises to Strengthen Polio Outbreak Preparedness: Experience of the World Health Organization European Region

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Abstract

Background.—Poliovirus importations and related outbreaks continue to occur in polio-free countries, including those in the World Health Organization (WHO) European Region. National preparedness plans for responding to poliovirus introduction are insufficient in many countries of the European Region. We describe a series of polio outbreak simulation exercises that were implemented to formally test polio outbreak preparedness plans in the European Region.

Methods.—We designed and implemented the exercises, reviewed the results, made recommendations, and assessed the role of outbreak simulation exercises in maintaining regional polio-free status. In addition, we performed a comprehensive review of the national plans of all WHO Member States in the European Region.

Results.—Three exercises, delivered during 2011–2013 (for the Balkans, United Kingdom, and the Caucasus and Ukraine), revealed that participating countries were generally prepared for poliovirus introduction, but the level of preparedness needed improvement. The areas in particular need of strengthening were national preparedness plans, initial response, plans for securing vaccine supply, and communications.

Conclusions.—Polio outbreak simulation exercises can be valuable tools to help maintain polio-free status and should be extended to other high-risk countries and subnational areas in the European Region and elsewhere.

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Keywords

poliovirus; polio outbreak simulation exercise (POSE); preparedness exercise; polio eradication

Despite progress made by the Global Polio Eradication Initiative [1–3],wild poliovirus (WPV) remains endemic in 3 countries (Afghanistan, Nigeria, and Pakistan), and importation-related outbreaks continue to occur in polio-free areas, most recently in the Syrian Arab Republic. Until polio is eradicated worldwide, all polio-free regions remain at risk for importation. In 2010, the World Health Organization (WHO) European Region experienced the first importation-related outbreak since it was certified in 2002 to be free of polio. Imported WPV type 1 (WPV1) of Indian origin led to 461 laboratory-confirmed cases in Tajikistan with subsequent spread to the Russian Federation (15 cases), Turkmenistan (3 cases), and Kazakhstan (1 case) [4, 5]. More recently, in 2013, WPV1 that genetically matched WPV1 isolated from sewage samples in Egypt in 2012 was isolated in environmental samples in Israel, but no case of paralytic polio has been reported [6].

Although risk of poliovirus transmission following WPV importation remains low for the European Region, annual risk assessments conducted by the WHO Regional Office for Europe (WHO/Europe) [7] show that there are several countries or subnational territories at high or intermediate risk of transmission due to suboptimal population immunity and/or inadequate surveillance (Table 1).

In 2009, the 22nd Meeting of the European Regional Commission for the Certification of Poliomyelitis Eradication (RCC) noted that “national plans of action for responding to poliovirus circulation were missing or incomplete for many countries” and recommended “conducting a formal test of the national preparedness plan in one or more appropriate Member States” [8]. This recommendation led to the series of tabletop polio outbreak simulation exercises (POSEs) to explore national planning and coordination in response to detection of poliovirus circulation (Public Health England, unpublished data, 2012–2013).

The first pilot exercise, POSE I, for countries in the Balkans region, took place in Sarajevo, Bosnia and Herzegovina, in December 2011. The second exercise, POSE UK, was conducted in London, United Kingdom, in January 2013. The third exercise, POSE II, for Ukraine and the South Caucasus countries, took place in Kiev, Ukraine, in May 2013 (Table 2).

The exercises were designed to stimulate participants to critically review and update their national plans to respond to detection of WPV or circulating vaccine-derived polioviruses (cVDPVs), to increase preparedness. The exercises addressed aspects of response, such as coordination, communication, and collaboration at international and national levels.

The objectives of the exercises included assessing preparedness for a possible event of WPV importation or cVDPV circulation in a poliomyelitis-free WHO Member State, identifying preparedness strengths and challenges in individual countries, strengthening capacity to respond rapidly to poliovirus detection, improving country response and use of the International Health Regulations (IHR) mechanism in case of WPV detection, and

exploring the communications response, including strengthening communications planning, use of social media tools, and management of traditional media outlets.

Participants considered that the exercises fulfilled the aim and objectives, and discussions are ongoing regarding the planning of further exercises in other countries of the WHO European Region. This report reviews POSE I, POSE UK, and POSE II and explores their role in maintaining the polio-free status of the European Region.

METHODS

The POSE series of tabletop exercises was designed and delivered by a team from Public Health England (PHE; formerly known as the Health Protection Agency) in conjunction with WHO/Europe. PHE, a United Kingdom public sector body that combines public health, science, research, emergency planning, and training, has considerable experience in the development and delivery of a wide range of exercises to test preparedness of the health community, government departments, and other supporting partners within the United Kingdom and Europe. Specialists from the WHO Bosnia and Herzegovina country office, the United Kingdom Department of Health, and the WHO Ukraine country office provided input in the selection of participants and the development and delivery of the respective exercises.

The exercises were implemented over 1 or 2 days. PHE exercise staff arrived 1 day before to set up the venue and conduct briefings for local facilitators, translators, and venue staff. Exercise participants were grouped by country or national or international organization and were appropriately senior strategic decision makers from local level to national government who would be involved in responding to an importation. Participants received exercise-specific scenarios and acted upon this information to simulate realistic response activities. The exercises encouraged interaction and communication between groups. Participants had access to the Internet, plans, information sheets, and simultaneous translation. All documentation was provided in English and local languages.

The scenarios, outlined in Table 2, were designed specifically and realistically for each exercise. Scenarios were spread over phases covering a period of approximately 6 months. Early sessions encompassed scene setting, review of preparedness, initial outbreak response, risk assessment (based on data from the most recent national annual reports for POSE I [from 2010], POSE UK [from 2012], and POSE II [from 2012] submitted to the RCC), reporting, and informing. As the simulated outbreaks developed, sessions covered local, national, and international communications; supplementary immunization activities (SIAs); enhanced surveillance; and local and reference laboratory activities. Each exercise also allowed participants to consider budget for the response.

Discussions and feedback after each session were guided by an experienced facilitator. The evaluations were based on the review of feedback from facilitators, observers, participants' responses, and debrief sessions.

In this report, we review the key aspects of the exercises under the following categories: review of national plans, initial response, reporting and informing, risk assessment,

vaccine supply and immunization, communications, and budgetary considerations. We also summarize strengths and challenges identified in the exercises and reviewed resulting recommendations.

RESULTS

Review of National Plans

All participant countries had approved or draft national polio plans available. The importance of comprehensive national plans was acknowledged in each exercise. All participating countries used the document *Guidelines* on *Responding to the Detection of Wild Poliovirus in the WHO European Region* [14]as the basis for the development of their plans. Plans varied in degree of detail, review date, and connectivity to generic disease outbreak plans. National plans were too general and failed to specify all details important for their implementation. Major weaknesses identified in national plans included planning assumptions based on unreliable routine immunization coverage data, weak communications components, and lack of clarity on national vaccine policies and sources of procurement in case of an outbreak. In addition, there were country-specific issues that needed to be addressed in the respective country plans. For example, the plan for Bosnia and Herzegovina needed amalgamation of separate entity plans into a single national document to ensure coordinated response. The United Kingdom plans [15, 16] needed updating to account for changes due to restructuring within health and public health organizations as outlined in the United Kingdom Parliamentary Health and Social Care Act 2012 [17], to be implemented shortly after the exercise, in April 2013.

All participants agreed that effective national plans should link to local circumstances and that this aspect could be improved in all plans. Participants also noted that the WHO/Europe polio response guidelines from 2007 [14] needed updating to reflect the current Global Polio Eradication and Endgame Strategic Plan [18].

Initial Response

The groups in each exercise were broadly confident in their initial response abilities and that any polio outbreak would be managed using national disease outbreak procedures and according to their polio plans. Despite this overall positive assessment, several challenges to initial response were identified. Insufficient awareness of poliomyelitis among clinicians was of concern because the participant countries have been free of polio for decades and the majority of clinical staff would be too young to recognize or consider polio in differential diagnosis if patients presented with symptoms. However, as noted during POSE II, the exercise could encourage the development of materials for specialist education.

Timely laboratory confirmation of poliovirus infection in suspected cases is crucial for curtailing further spread. Laboratory readiness level in participating countries was variable. Some countries (eg, Armenia and Azerbaijan) do not have WHO-accredited national polio laboratories, while others do, and the United Kingdom has a global specialized polio reference laboratory. Timely specimen collection and the logistics of specimen transportation, particularly their international shipment to reference laboratories, posed

substantial challenges for all participating countries except the United Kingdom, especially those that rely on the reference laboratory in the Russian Federation. Administrative requirements were often complicated and time-consuming, and there was a clear need to develop a robust method for specimen shipping to ensure their timely delivery to the laboratory.

Crisis management and appropriate communications, particularly at the initial stages of the outbreak, were recognized as very important but challenging. Participants noted that the 2007 polio response guidelines do not address crisis management issues and suggested that WHO/Europe revise the guidelines to include this component or to reference appropriate publications.

Reporting and Informing

Each country had national reporting structures outlined in their plans based on notifiable disease outbreak response procedures. All groups in each exercise were clear that any case of poliomyelitis due to WPV constitutes a public health emergency of national and international concern and must be reported to the WHO under IHR [19]. However, countries noted a need to clarify procedures and increase awareness of IHR requirements.

Risk Assessment

All participants acknowledged that the level of immunization coverage and quality of surveillance are the most important determinants of the risk of poliovirus spread following importation. All participants were aware that the WHO stipulates 95% immunization coverage with 3 doses of poliovirus vaccines as an optimal level to ensure population immunity [20]. Both POSE I and POSE II noted suboptimal coverage in countries as a factor that increases the risk of spread of imported poliovirus and identified strategies to overcome challenges caused by suboptimal coverage, including SIAs.

The countries with increased risk of poliovirus transmission due to suboptimal immunization coverage were Bosnia and Herzegovina (90.7% coverage with 3 doses of polio vaccine), Georgia (90.5% with 20 districts reporting 49%–89% coverage), Montenegro (93.1%), and Ukraine (57%–58% since 2009 and as low as 10% in some districts). Azerbaijan reported high coverage (97.8%), but the administrative report differed substantially from the WHO/United Nations Children’s Fund (UNICEF) estimate (80%) [21].

For countries with high coverage (eg, the United Kingdom [98%] and Serbia [97.1%]), the major risk is within undervaccinated, possibly unregistered populations, such as the Roma, immigrant or traveler groups, or those opposed to vaccination on religious or philosophical grounds. This risk is difficult to address with mop-up vaccination campaigns because of the nature of the subgroups involved. However, community and religious leaders working within local authorities could have a part to play in educating and reassuring minority groups about the importance and safety of vaccination.

All participating countries in POSE I and POSE II conduct AFP surveillance and submit findings for the WHO weekly epidemiological record; the United Kingdom conducts supplementary enterovirus surveillance. The quality of surveillance was assessed by

participants as either good or very good for all participating countries except Bosnia and Herzegovina, which was rated as average [9] and acknowledged the need for measures to strengthen this. Participants recognized the importance of high-quality surveillance and of additional enhancement of surveillance once a hot case had been identified (eg, hospital case-based reviews of recently paralyzed individuals and review of all AFP cases especially those geographically close to the importation). These actions must be clearly detailed in plans to ensure an imported WPV would be identified promptly, thus helping to prevent further spread.

Environmental surveillance is conducted on an ad hoc basis and was not discussed in much detail during the exercises.

In all 3 exercises, participants widely acknowledged that heightened surveillance for polioviruses should continue for at least 6 months after the last reported case. This would be essential for documenting to the RCC and WHO that the transmission of imported poliovirus has been interrupted and the country is once again free of polio.

Vaccine Supply and Immunization Response

Vaccine availability and effective procurement mechanisms were recognized as essential for a successful polio response plan. The exercises revealed the challenge countries would have during an outbreak with accessing the most appropriate vaccine for the implicated poliovirus type. The national preparedness plans should specify the type of vaccine to be used for the outbreak response, the sources of funding, and the source of vaccine supply in case of emergency. However, only the United Kingdom had adequate measures in place to ensure access to vaccine in case of an outbreak. The United Kingdom plan specifies the use of inactivated polio vaccine (IPV) as a part of Td/IPV, a combination vaccine containing adult formulation tetanus and diphtheria toxoids and IPV, and the United Kingdom Department of Health holds a strategic reserve in case of emergency. During POSE UK, participants acknowledged that mass vaccination with IPV would be resource intensive, although local pandemic influenza preparedness plans provide specific logistical details that would apply to mass polio vaccination, as well.

During discussions, POSE I and POSE II countries recognized their plan’s deficiencies and the need to identify a source and funds for vaccines and update national preparedness plans accordingly. Ukraine and Georgia faced particular challenges to ensuring vaccine supply for the outbreak response. Ukraine has experienced a sharp decline in immunization coverage in recent years because of the failure to procure adequate vaccine supplies for routine programs and the existence of an active antivaccination lobby. Participants recognized the seriousness of problems with the routine immunization program in Ukraine, which put the country at risk of a significant outbreak in case of WPV importation. POSE II reaffirmed an urgent need to secure adequate vaccines for outbreak response catch-up SIAs and to restore public and provider trust in vaccines. In Georgia, the current procurement system does not secure a reliable supply of vaccine, although changes have been undertaken recently to procure a continuous supply through UNICEF. Georgia also noted the need for developing plans for immunization campaigns in response to poliovirus introduction, an important aspect not always covered in the national plans.

Communications

Participants recognized the importance of a prompt, honest, and balanced media strategy. The strategy should inform the public about the risk from the importation, tempered with reassurance that immunization will grant protection, that all is being done to control likely transmission routes, and that the public should ensure that vaccinations are up to date. Participants also acknowledged that national spokespersons should frequently engage the media to provide accurate and timely information to address public concern. Consideration should be given to the appropriate choice of spokespersons and to which clinical staff should be designated to participate, because in all countries, the media are eager to speak to a representative “in a white coat.”

One of the communication challenges identified was the difficulty of operating in multiethnic and multilingual settings. To overcome this challenge, participants recommended that communications should be available in all required languages and be accessible to target populations.

All countries acknowledged that a communications plan is an essential component of outbreak response plans, while acknowledging that this was lacking in country plans. A communication workshop looking into the communication aspects of vaccination campaigns held prior to POSE II was regarded as a beneficial component that should be included in future exercises.

Budgetary Considerations

There is always a risk that exercise participants would behave as if available resources (human and financial) were unlimited. This was observed to a greater or lesser extent in all the POSE exercises even though participants recognized the reality of budgetary constraints and that there was a lack of secured funds for response to importation in all countries except the United Kingdom, which has contingency arrangements for vaccine supply.

Generally the response, including additional staff costs, would be covered by existing funds, and any shortfall would be dealt with later, as has been their previous experience. There was recognition and reassurance during both POSE I and POSE II that any country reporting a case due to WPV or cVDPV would not be left unaided and could seek support for access to vaccines from the WHO-led Global Polio Eradication Initiative, which holds virtual stocks of 50 million doses of OPV to ensure a rapid response to importation.

Participant Evaluation of the POSE Exercises

After each exercise, all participants agreed that the exercises were worthwhile and addressed the objectives. All facilitators for each exercise, as well as 100% of participants in POSE I and POSE II and 97% of participants in POSE UK, agreed that the aim of the exercise was achieved.

Few participants of POSE I and POSE II indicated that they had ever taken part in an exercise like this. This contrasts with the experience in the United Kingdom, where exercising emergency plans across health organizations has been mandated since 2005 in accordance with the United Kingdom Civil Contingencies Act [22].

Participants, observers, and facilitators of all 3 exercises had positive comments. First, all participants were interested, motivated, open, and honest about preparedness and response arrangements for polio. Second, all were confident in their ability to respond rapidly and appropriately to poliovirus importation. Third, the exercises allowed the participants to critically review and update their existing polio plans to sustain polio-free status. Fourth, participant countries were invited to develop action plans to take forward issues highlighted by the exercises. Fifth, the exercises provided opportunities to meet and share good practices and increase awareness of challenges and possible solutions.

Participants gave no substantial negative comments about any of the exercises, but they made suggestions on how to further improve them. These suggestions, along with the more important recommendations from the POSE exercises, are summarized in Table 3.

DISCUSSION

Overall, the exercises demonstrated that the participating countries are generally prepared for potential poliovirus introduction but that the level of preparedness needs improvement. The exercises helped reveal strengths and weaknesses in preparedness and provided useful information for addressing identified shortcomings, which should help strengthen the capacity for maintaining the region’s polio-free status.

Identified challenges of a subject-specific, technical nature can be addressed by the national programs in collaboration with the WHO, UNICEF, and other relevant partners. However, some of the major challenges noted, including those related to legislative and administrative issues, functioning of immunization programs, and budgetary constraints, are of a systemic nature and go beyond specific polio preparedness issues. Addressing these challenges will require coordinated efforts of the national and international partners, as well as political will and high-level support. The outcomes of the exercises can serve as advocacy tools to help achieve improvements in these areas.

POSE I and POSE UK had substantial positive impacts, which have been included in their polio exercise updates contained in national documentation submitted to the RCC. Since POSE UK, national plans have been updated to account for the recent restructuring within health and public health organizations. Ongoing consideration has also been given to reaching subpopulations with suboptimal coverage and to determine how best this can be achieved through local authorities. Country reports to the RCC in 2012 and 2013 [6, 9] indicated that much has been done since POSE I, especially in the case of Bosnia and Herzegovina. Since POSE I, pediatricians and epidemiologists have defined common strategies between the Federation of Bosnia and Herzegovina and Republika Srpska for immunizing the Roma population, training Roma mediators, mapping Roma settlements, developing promotional materials in Romani and local languages, identifying the cohort of Roma children for immunization, and continuing education for health professionals. As reported to the RCC in June 2012 [9], an action plan to sustain the country’s polio-free status was being considered by the Council of Ministers. The timescale since POSE II is not sufficient to assess the impact from the exercise, but the recognition of problems and commitment from all participating countries to update and regularly review national plans

was clearly evident. A polio outbreak communications plan for Ukraine is being developed as a direct result of the review of the existing national polio outbreak plan during POSE II.

The impact of simulation exercises to date, along with positive feedback from the delegates, suggested that the POSEs have become valuable tools that are helping to maintain the polio-free status. The exercises helped familiarize participating countries with each other's preparedness plans and practices and promoted better understanding and cooperation between countries and international organizations. They fostered discussions, proposed realistic actions, and identified important issues and areas for development. The experiences and lessons learned from these exercises are transferable to other vaccine-preventable diseases.

The participants' recommendation to extend polio exercises to other countries and subnational areas to enable them to benefit from the experience has been endorsed by the RCC [6]. The exercises would be particularly useful in the areas at high risk for an outbreak after WPV importation as determined by WHO/Europe. In light of the recent WPV importation into Israel (a country using only IPV for routine immunization), where widespread WPV transmission in the absence of clinical cases was detected by environmental surveillance [23], other IPV-only countries in the European Region would likely have to take into account the possibility of such a scenario in their future exercise plans.

Similar exercises could also be valuable in settings that have recently interrupted WPV transmission, such as India and countries in the African Region, with importation-related outbreaks. Simulation exercises are likely to become an increasingly important tool for maintaining polio-free status at the final stage of the Global Polio Eradication Initiative, as more WHO regions and countries interrupt poliovirus transmission and confront the challenges of remaining free of polio.

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Disclaimer.

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Table 1.

Countries Ranked by the European Regional Certification Commission for Poliomyelitis (RCC) at High or Intermediate Risk for Poliomyelitis Outbreak Following Importation, 2009–2013

Year of the RCC Meeting	Countries at High Risk	Countries at Intermediate Risk
2009	Bosnia and Herzegovina, Georgia, Tajikistan, Turkey	Albania, Armenia, Austria, Greece, Moldova, Montenegro, Netherlands, Portugal, Poland, Russian Federation (North Caucasus), Turkmenistan, Ukraine, Uzbekistan
2010	Bosnia and Herzegovina, Georgia, Malta, Montenegro, Tajikistan, Turkey, Ukraine, Uzbekistan	Albania, Andorra, Armenia, Austria, Bulgaria, Denmark, France, Greece, Hungary, Ireland, Kyrgyzstan, Luxemburg, Moldova, Monaco, Netherlands, Poland, Portugal, Romania, San Marino, Slovakia, Turkmenistan
2011	Austria, Azerbaijan, Bosnia and Herzegovina, Georgia, Greece, Kyrgyzstan, Montenegro, Russian Federation (North Caucasus), Tajikistan, Ukraine, Uzbekistan	Armenia, Bulgaria, Hungary, Italy, Ireland, Latvia, Serbia
2012	Greece, Bosnia and Herzegovina, Romania, Ukraine, Georgia, Uzbekistan	Austria, Malta, Poland, Azerbaijan, Kyrgyzstan, Tajikistan
2013	Bosnia and Herzegovina, Georgia, Romania, Ukraine	Austria, Bulgaria, Croatia, Denmark, Germany, Greece, Iceland, Kyrgyzstan, Latvia, Malta, Poland, Republic of Moldova, San Marino, Serbia, Tajikistan, Turkey, United Kingdom, Uzbekistan

Data are from [6, 8–11].

Table 2.

Characteristics of Polio Outbreak Simulation Exercises (POSEs) Held During 2011–2013

Characteristic(s)	POSE I	POSE UK	POSE II
Date(s); location	14–15 December 2011; Sarajevo, Bosnia and Herzegovina	17 January 2013; London, UK	15–16 May 2013; Kiev, Ukraine
Attendees, no.	37 (including participants, observers, film crew, and exercise staff)	47 (including exercise support personnel and facilitators)	37 (including participants, exercise staff, and observers)
Participants	Bosnia and Herzegovina, Montenegro, Serbia, WHO/Europe, UNICEF CEE/CIS, European Polio Laboratory Network	UK Department of Health (immunization. emergency preparedness, resilience and response), UK Public Health England (national level, local health protection units), UK National Health Service organizations from London, Chair for the UK Panel for the Certification of Elimination of Polio	Armenia, Azerbaijan, Georgia, Ukraine, WHO/ Europe, UNICEF CEE/CIS, USAID
Observers	EU-funded Public Health Reform Project II, WHO Headquarters, RCC	WHO/Europe	The Russian Federation, European RCC for Poliomyelitis Eradication
Scenario	A suspected polio case detected in Bosnia and Herzegovina. The index case: a young child from a Roma traveling family that had been traveling within a large group that had recently visited Bulgaria, the Former Yugoslav Republic of Macedonia, Serbia, Montenegro, and Croatia. The scenario continued with all participant countries across the Balkan region receiving reports of increased cases of AFP and confirmed cases of polio. The exercise concluded with a scenario 25 wks after the last case was reported.	The scenario opened with a confirmed case of WPV infection in London, in a 5-year-old HIV-positive child who recently arrived via Eurostar rail with his family from Kano State, northern Nigeria. The family had flown from West Africa to France. The family visited members of the Nigerian community across South and North London and close contacts traveled to Leeds. The scenario progressed with a small number of further cases among underserved subpopulations in London and Leeds. The exercise concluded 25 wks after the last case was reported.	The background scenario began with environmental poliovirus surveillance detecting WPV type 1 in a sewage sample around the Ivane Javakhishvili State University in Tbilisi, Georgia. The scenario continued with a suspect polio case being detected in Georgia. The index case was from a family who had returned from Ukraine. The scenario progressed with increased AFP cases in Georgia and Ukraine, with >50 cases of confirmed WPV type 1 infection, the majority in the Ukraine. The exercise concluded with a time jump to 5 months after the outbreak.
Additional background information	Estimated Roma populations [12]: Serbia, 400 000–800 000; Bosnia and Herzegovina, 40 000–60 000; Montenegro, 15 000–25 000	Although the UK has excellent immunization coverage (98%), an estimated 524 000–947 000 immigrants reside in the country without authorization [13]. Their vaccination status is unknown, and a significant proportion may be from countries with low coverage.	Tbilisi State University is the oldest university in Georgia and the Caucasus. Over 19 000 students are enrolled, many originating from overseas.
Media-related activities	During the exercise spokespeople from each country were interviewed and filmed in realistic “live” press conferences as a test of responding to the media under pressure.	A guest reporter from the BBC joined the exercise at the start of the extended outbreak phase to give an insight into the information the media would request, the key elements of the story on which they would focus their reports, and to whom they would turn for expert opinion.	A communication workshop was held at the start of the exercise, which included recorded one-on-one interviews with a film crew and trained journalist, an exercise in the use of social media, and a “live” recorded press conference.

Data are unpublished materials from Public Health England, 2012–2013.

Abbreviations: AFP, acute flaccid paralysis; HIV, human immunodeficiency virus; RCC, European Regional Certification Commission for Poliomyelitis Eradication; UNICEF CEE/CIS, UNICEF Regional Office for Central and Eastern Europe/Commonwealth of Independent States; WHO, World Health Organization; WHO/Europe, World Health Organization Regional Office for Europe; WPV, wild poliovirus.

Table 3.

Summary of Major Recommendations and Participant Suggestions for Improving Polio Outbreak Simulation Exercises (POSEs)

Recommendations, Improvements
Participant countries to continue to review and update their national polio response plans on a regular basis
Recommendation
Participant countries to implement the actions to address issues identified in the national polio action plan reviews
WHO/Europe to consider updating the guidelines on responding to the detection of wild poliovirus in the WHO European Region, to reflect current strategic plans for polio eradication and the endgame and to include a crisis-management component
WHO/Europe to consider subnational exercises, to engender advocacy from government officials in understanding the value and necessity of communications
Participant countries to develop specific communication plans for responding to polio in a crisis, including specific public and social media strategies
WHO/Europe and participant countries to work on developing a robust dispatch method, to increase shipment speed to reference laboratories
WHO/Europe and participant countries to raise awareness in the participating countries of IHR regulations, procedures, and implementation
Participant countries to continue work on developing and refining vaccine strategies, to ensure the most appropriate vaccine is procured and deployed in the case of outbreak
WHO/Europe to consider expending POSE-type exercises to other Member States and at subnational level in so-called at-risk countries as part of a coordinated exercise program
Improvement
WHO/Europe to consider inclusion of a communication workshop in the POSE program
Future exercise organizers to provide an opportunity for delegates to interact and network in a less formal setting
Future exercise organizers to formally capture the event with the use of certificates and a photographic record

Data are unpublished materials from Public Health England, 2012–2013.

Abbreviations: IHR, International Health Regulations; WHO, World Health Organization.