





## **POLIO OUTBREAK IN UKRAINE, 2015-2016**

**Unique Challenges, Comprehensive Response** 

December 2016

This report presents background, data, and analysis on the response to the 2015 outbreak of circulating vaccine-derived poliovirus in Western Ukraine. Global Polio Eradication Initiative partners developed innovative solutions to build capacity among health workers and educators, to strengthen surveillance, and to communicate essential information on the outbreak and vaccines to a variety of audiences.

This publication summarizes the factors underlying Ukraine's unique situation, the implementation of Standard Operating Procedures in response to the outbreak, successes achieved in increasing knowledge and vaccine coverage, and lessons learned. It is hoped that these lessons will remain relevant and of use to donors, polio partners including those in the Ukrainian government, media in Ukraine and elsewhere, public health experts and practitioners, and the general public.

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#### FOREWORD

Directly following the 2015 circulating vaccine-derived poliovirus type 1 outbreak in the Zakarpatiya region of Ukraine, international partners worked with key state institutions to increase knowledge, remove barriers to vaccination, and improve immunization coverage. All players sustained an extraordinary degree of coordination and dialogue in support of a nimble, aggressive response.

The success achieved during the outbreak response, however, is fragile. Ukraine still has the lowest routine immunization rates in the world, with the Ministry of Health reporting in August of 2016 that only 30% of children are fully immunized against measles, 10% against hepatitis B, and 3% against diphtheria, pertussis, and tetanus.

This report, *Polio Outbreak in Ukraine: Unique Challenges, Innovative Response (2015-2016)*, highlights the factors underlying the low polio vaccine coverage that preceded the 2015 outbreak, the elements of the response, and the challenges moving forward. It describes strong technical expertise, a creative and data-driven communications campaign, and vibrant teamwork in the face of uncommon political and logistical obstacles.

Critical lessons have emerged from this experience. These include the need to be politically strategic, particularly with the highest levels of government, to remain flexible and responsive during the course of a campaign, and to continue to tackle the challenges inherent in keeping polio high on the political agenda.

The 2015 cVDPV1 outbreak drew national and international attention to the lack of vaccines in the country and to the critically low vaccine coverage. As a result, issues related to public procurement have been highlighted, and professional capacity of health workers and others has been strengthened.

At the request of the Ukraine Ministry of Health, UNICEF has procured vaccines, including bivalent oral polio vaccine (bOPV), to protect children from these dangerous vaccine-preventable diseases. These vaccines are sufficient to cover four to six months of routine immunization needs. A 2016 agreement between UNICEF and the health ministry for further procurement of vaccines was signed, and UNICEF continues to render support towards the reform of the procurement system to be effective, well planned, and timely.

Ukraine needs to remain under the spotlight. Strong, sustained and effective advocacy for vaccination as a fundamental child right in Ukraine is more important now than ever.

Giovanna Barberis, UNICEF Representative in Ukraine



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This report provides documentation and analysis of the response to the summer 2015 outbreak of circulating vaccine-derived poliovirus (cVDPV) in Western Ukraine. As referenced in the report, the external assessment of the outbreak response conducted in April 2016 declared that the circulation of cVDPV had likely stopped.

On 26 August 2016, a VDPV type 2 event was confirmed in the Odessa region of Southern Ukraine. In line with Global Polio Eradication Initiative (GPEI) Standard Operating Procedures, within 24 hours a prompt field investigation of the event was initiated. The source was a healthy three-year-old girl who had been reported as fully vaccinated with two doses of inactivated polio vaccine and three doses of oral polio vaccine. She was born in Ukraine to a family of Somali origin and lives in a modern government accommodation center for refugees. Although UNICEF training and capacity-building efforts during the response to the 2015 outbreak raised polio vaccine coverage rates significantly in parts of the Odessa region, overall coverage in that region remained below national averages, with 67.2 percent of children receiving three doses during the response efforts. As of early October 2016, enough bivalent oral polio vaccine (bOPV) has been procured by UNICEF, at the request of the Ukraine Ministry of Health, to cover four to six months of routine immunization, and those vaccines are available at health facilities across the country. The preparedness of the Ministry of Health along with international organizations in Ukraine uniquely positions it to respond quickly and effectively to the Odessa event.

Although confirmation of this event falls outside of the documentation and analysis period of this report, the authors feel that its importance warrants an editorial note, highlighting the 2015 GPEI Annual Report's emphasis on vaccine-derived polioviruses and the imperative for Ukraine fully to implement the switch from trivalent (tOPV) to bivalent (bOPV) oral polio vaccine.

#### List of Acronyms

AEFI: Adverse events following immunization	OPV: Oral polio vaccine
AFP: Acute flaccid paralysis	PS: Procurement services
bOPV: Bivalent oral polio vaccine	PSA: Public service announcement
C4D: Communication for Development	RFE/RL: Radio Free Europe/Radio Liberty
CDC: United States Centers for Disease Control and Prevention	SIA: Supplemental immunization activities
cVDPV: Circulating vaccine-derived poliovirus	SITREP: Situation report
ECDC: European Centre for Disease Prevention and Control	SOPs: Standard operating procedures
EU: European Union	tOPV: Trivalent oral polio vaccine
GPEI: Global Polio Eradication Initiative	TV: Television
IEC: Information, education, and communication	UNICEF: United Nations Children's Fund
IHR: International Health Regulations	USAID: United States Agency for International Development
IPV: Inactivated polio vaccine	VAPP: Vaccine-associated paralytic polio
LQAS: Lot Quality Assessment Sampling	VoA: Voice of America
MOH: Ministry of Health	WHO: World Health Organization
NGO: Non-governmental organization	WHO EURO: World Health Organization Regional Office
NP-AFP: Non-polio acute flaccid paralysis	for Europe

#### **EXECUTIVE SUMMARY**

On September 1, 2015, the Ukrainian Ministry of Health confirmed two cases of circulating vaccine-derived poliovirus type 1 in young children in the far Western part of Ukraine. While it was a wake-up call to the international community, the polio outbreak came as no surprise to observers closely following events in the region. Beginning with a measles outbreak in 2008 in which the death of a teenager was wrongly linked to receiving a vaccine, routine immunization coverage rates, including polio, plummeted across Ukraine between 2008 and 2014, despite consistent and concerted efforts by international partners to reverse the dramatic decline in vaccination rates. UNICEF, WHO, and key members of the Ukraine Ministry of Health were battling a unique environment of public mistrust of vaccines, misconceptions among health care providers, vaccine shortages, and a restrictive legislative and regulatory environment. This context stemmed directly from the aggressive anti-vaccine efforts of powerful and politically well-connected business lobby groups who benefited from a labyrinthine public procurement system and restrictions on international procurement.

Immediately after the outbreak was declared, international partners activated pre-existing plans to implement outbreak Standard Operating Procedures (SOPs), which were adapted to the Ukrainian context. In March 2015, the Canadian government had financed the purchase of 4.8 million doses of the oral polio vaccine (OPV) and inactivated polio vaccine (IPV) through UNICEF for an accelerated routine immunization program that was supposed to start in September 2015. UNICEF, WHO, Rotary, RFE/FL, and others teamed with the Ministry of Health for technical support, surveillance, capacity development, field monitoring, and vaccine delivery. UNICEF spearheaded a communications task force to educate the public, health care providers, and the media on the importance of vaccination, adapting messaging and delivery channels in response to real-time analysis of reception and impact. The team launched a wide mix of communication approaches, many of which had never before been deployed in Ukraine. These included placards in subway cards, digital signage in supermarkets, and life-sized "pink drop" costumed characters engaging children and encouraging their parents to consult with pediatricians stationed at shopping malls and street fairs. The Canadian government provided US\$ 2.5 million for vaccine procurement, and the United States provided US\$ 1 million in support of the polio response in 2015.

The three rounds of vaccination campaigns encountered a number of roadblocks. The highest levels of government never declared a national public health emergency as required by the SOPs, and initiation of the first round was delayed, impacting the effectiveness of all three rounds. Anti-vaccine rumors and frenzy continued to circulate in the media, especially social media. However, thanks to aggressive and creative pushback against these obstacles, vaccine coverage increased significantly: from below 17 percent (three doses in children under one year of age) in 2015, to 65 percent in Round 1 and 75 percent in Round 2 (age two months to six years), and 82 percent in Round 2 (age two months to 10 years). While falling below the 95 percent international standard, these results are significant within Ukraine's unique and challenging context. Levels of knowledge and acceptance of vaccines have increased among parents and the medical community; the percentage of parents who know that polio causes paralysis, for example, more than doubled. The external assessment of the outbreak response conducted in April 2016 declared that the circulation of circulating vaccine-derived poliovirus (cVDPV) had likely stopped.

Maintaining the hard-won momentum and preventing a repetition of the events of 2015-2016 depends largely on sustained political commitment to the fight against polio and infectious disease in general, and more broadly to much-needed health systems strengthening in Ukraine. Challenges remain with procurement and registration of vaccines, and it will take a concerted, deliberate effort to counter the vested interests who are working against the reform of purchasing processes. However, the well-educated Ukrainian public has responded to a data-driven, fact-based campaign emphasizing the importance of vaccinating their children. The Ukrainian government and the international community have a responsibility to consolidate and sustain progress toward provision of this core child right.

	2008	<ul> <li>MAY: A 17-year-old boy in the Donetsk region dies after receiving a measles vaccination. Although there is absolutely no connection between the vaccine and his death, uninformed media coverage sparks widespread distrust of vaccines.</li> <li>UNICEF begins efforts to restore public trust in vaccination, including education, behavior change, and capacity-building activities.</li> </ul>
	2010	WHO Regional Office for Europe (WHO EURO) declares Ukraine a high-risk country for polio.
Ш Z	2013 2014	UNICEF, WHO, and Ukrainian Ministry of Health develop public outbreak communication plan.
T I M E L		<ul><li>APRIL-MAY: 4.8 million doses of UNICEF-procured polio vaccine, requested by the Ukrainian government and funded by Canada, are delivered.</li><li>MAY: Independent Monitoring Board includes Ukraine on "polio watch" of countries at highest risk for polio outbreak.</li></ul>
$\triangleleft$		<b>AUGUST 28:</b> EURO is notified of two cases of circulating vaccine-derived poliovirus (type 1) in Ukraine: two unvaccinated children, one aged four years and the other 10 months.
• •		AUGUST 29: WHO EURO alerts Global Polio Eradication Initiative.
		<b>SEPTEMBER 1:</b> Ukrainian Minister of Health publicly announces the two polio cases.
Z	2015	OCTOBER 25 – NOVEMBER 7: Round 1 of nationwide vaccination campaign.
R		<b>NOVEMBER 10:</b> Seventh meeting of the Emergency Committee under the International Health Regulations regarding the international spread of poliovirus expresses concern about the cVDPV1 outbreak in Ukraine.
X U		<b>NOVEMBER:</b> Communications Task Force begins weekly meetings that continue through April 2016.
		<b>NOVEMBER 30 – DECEMBER 18:</b> Round 2 of nationwide vaccination campaign.
Z		<b>DECEMBER 9-17:</b> An inter-agency team of external experts visits Ukraine for three-month assessment of outbreak response.
0		<b>DECEMBER:</b> Ukrainian Parliament adopts news Law "On Public Procurement," designed to increase access to affordable and quality pharmaceuticals.
L L		JANUARY 25 – FEBRUARY 26: Round 3 of nationwide vaccination campaign.
_	2016	<b>MARCH:</b> An independent post-outbreak response campaign coverage survey is conducted to assess coverage over the three vaccination rounds.
		<b>APRIL:</b> Ukraine, with the rest of the world, switches from trivalent to bivalent OPV.
		<b>APRIL 19-28:</b> An inter-agency team of external experts visits Ukraine for six-month assessment of outbreak response. The team concludes that the transmission of cVDPV has likely stopped, but that significant programmatic gaps in immunization and surveillance put Ukraine at high risk for possible emergence and circulation of another vaccine-derived poliovirus.
		As a result of procurement through UNICEF Procurement Services (PS) in 2016 the following vaccines were registered and delivered to Ukraine: BCG, DT, Td, wDTP, rabies, bOPV, MMR, and HebB.

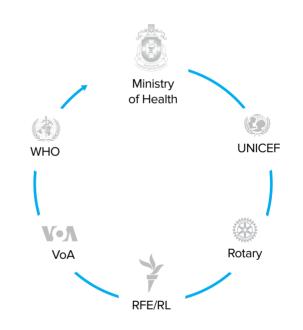


# **The Outbreak**

On August 28, 2015, the World Health Organization (WHO) Regional Office for Europe was notified that circulating vaccine-derived poliovirus (cVDPV) had been identified in two children with paralysis in the Zakarpatiya region of southwest Ukraine. The following day, WHO alerted the Global Polio Eradication Initiative (GPEI) partnership about these two cases — a non-vaccinated four-year-old boy and ten-month-old girl — and on September 1, the Ukrainian Minister of Health made a public announcement of the outbreak. GPEI Standard Operating Procedures (SOPs, February 2015) formed the blueprint for the response to the outbreak. A National Task Force was the main vehicle for outbreak response and had been in place since May 2015, preparing for an acceleration of routine immunization. International agencies, particularly UNICEF and WHO, mobilized immediately to provide daily advice to the Ukrainian health ministry.

Coordinating and advisory bodies were established immediately. The technical committee, with representatives from WHO, UNICEF, the national regulatory authority, the Academy of Sciences, the National Certification Committee, and the Ministry of Health, developed draft field guidelines and a manual for vaccinators. WHO and the US Centers for Disease Control and Prevention provided key data and the evidence base required to support policy development and overall strategy. A parallel Communications Task Force, spearheaded by UNICEF and including representatives from the Ministry of Health (MoH), WHO, Rotary, Radio Free Europe/Radio Liberty (RFE/ RL), and Voice of America (VOA), updated and activated its existing plan to respond to the outbreak.

UNICEF assisted the ministry with the development of a crisis communication plan, including the designation of approved spokespersons, suggested talking points, and decision trees governing appropriate communications actions in response to a range of events and inquiries. UNICEF had already supported the Ministry and other partners to design and implement a nationwide communication-for-behavior change campaign, raising the urgency of the need for multiple vaccination rounds to contain the outbreak. The polio vaccine needed to initiate the outbreak response was already in the country with additional shipments scheduled subsequently to arrive, thanks to the efforts of partners and donors to close the population's immunity gap months before the cVDVP cases were identified.



**Communications Task Force** 

According to GPEI SOPs, the government of a polio-infected country should declare a national public health emergency. Two response teams are to be established: Rapid Response Team A, composed of on-call interagency staff who can be rapidly deployed to the outbreak zone within 72 hours for a duration of up to one month; and Surge Team B, a set of multidisciplinary, trained professionals available within three weeks to support the longer-term surge response. Supplementary immunization activities should begin within 14 days of notification with a minimum of three large-scale rounds, spaced at short intervals (2-3 weeks apart) and targeting all children under five years old in the affected and adjacent geographic areas.

#### SOP compliance during the Ukrainian outbreak

WITHIN 24 HOURS	Notify government and GPEI of outbreak	✓
	Initiate epidemiological and social investigations, plus rapid assessment of surveillance and laboratory databases	<ul> <li>Image: A start of the start of</li></ul>
	Assess on-the-ground human resource capacity	<b>√</b>
	Alert UNICEF and other suppliers of imminent need for vaccine and logistics	<b>v</b>
WITHIN 72 HOURS	Share initial reports, ensure situational data analysis and outbreak grading, communicate risk assessment through IHR	<ul> <li></li> </ul>
	Deploy pre-identified "Team A" rapid response team, convene initial meeting	<b>√</b>
	Establish outbreak response cells with designated focal points from government and partners, monitored and supported by UNICEF and WHO Regional Offices and Headquarters	<b>√</b>
	Declare a national public health emergency	ARED
	Develop and disseminate communications plan, including media focal person and protocols, and finalize key C4D messages	<b>√</b>
	Develop initial and six-month immunization response plans	<b>v</b>
	Initiate enhanced surveillance capacities	<ul> <li></li> </ul>
	Allocate necessary UNICEF/WHO funding and check availability of vaccines	<b>v</b>
WITHIN 14 DAYS	Establish weekly key stakeholder meetings	
	Deploy appropriate surge staff	<b>√</b>
	Establish a system to produce weekly SITREPs, media brief, other communication and advocacy products, and develop/activate media response plan with strategic communication campaign, availability of IEC materials, training of health care professionals	<ul> <li>✓</li> </ul>
	Implement first of three large-scale, short-interval immunization campaigns, with appropriate monitoring	D
	Review/assess budget, cold-chain, vaccine, staffing issues	<b>v</b>
WITHIN 14 DAYS TO CLOSURE	Weekly meetings/calls of stakeholders, partners	✓
	Implement comprehensive strategic communication response plan, with attention to training of vaccinators on communication messages, engagement of media, high-risk areas and refusals/issues of mistrust	<ul> <li></li> </ul>
	Continue producing weekly SITREPs, media briefs, other communication and advocacy products, ensuring that data are sent to relevant regional offices	<ul> <li></li> </ul>
	Conduct supplemental immunization activities according to response plan	D
	Maintain enhanced surveillance activities	<ul> <li></li> </ul>
WITHIN 3 WEEKS	Deploy multidisciplinary surge "Team B"	<ul> <li></li> </ul>
AT 3-MONTH INTERVALS	Conduct external outbreak assessments, including a final assessment to close the outbreak	<ul> <li></li> </ul>
AFTER FINAL ASSESSMENT	Document the response process and share lessons learned	

Although the government and international partners effectively deployed Teams A and B with both international and national staff in a timely manner, the mandated national emergency was never declared. The government was hesitant to enter "campaign mode," given low levels of trust in public institutions; parents were unlikely to take action that they perceived as being required or forced. There was also controversy over the Polio vaccine (IPV, OPV) type to be used for the outbreak response. The result on the ground was something of a hybrid between a campaign and routine immunization, with repeated delays and lack of clarity about exact dates and timetables for movement forward. Ultimately, initiation of the first round of the campaign followed the declaration of the outbreak by seven weeks.

Ukraine's formal nationwide vaccination rounds were conducted from October 19 – November 9, 2015, November 30 – December 19, 2015, and January 25 – February 26, 2016. Round 1 launched with the vaccination of the deputy health minister's child in front of the public, immediately followed by a "road show" to several regions featuring health ministry

#### Factors underlying delay in Round 1

- Lack of clear official information
- Hyperbolic and misleading media reports
- Unfamiliarity with concept of vaccine-derived poliovirus
- Failure to perceive significant threat
- Disagreement over which vaccine to use
- Vested political and business interests lobbying against international vaccine procurement



**Inactivated polio vaccine** — contains inactive poliovirus strains. It is given by intramuscular injection and must be administered by a trained health care worker.



**Oral polio vaccine** — contains live, weakened poliovirus strains. It is administered orally and can be given by volunteers with minimal training. It is safe and produces life-long immunity after three doses in 95+ percent of recipients. Very rarely, the virus in the vaccine may change genetically and start to circulate among a population, known as cVDPV (circulating vaccine-derived poliovirus).



officials and other opinion leaders. The first two rounds targeted children aged 2 months to 6 years (target population: 2.3 million), and the third expanded to include children up to 10 years (target population: 3.7 million). More than 12 million doses of OPV and 1.5 million of IPV were made available through UNICEF, along with support for cold rooms and cold chains to preserve the integrity of the vaccines.

The effectiveness of the response was probably damaged by the delay of Round 1, pushing Round 2 into the Christmas holiday period (extending well into the New Year in Ukraine) and winter flu season (when people are less likely to be vaccinated due to misunderstanding of contraindications). The original timetable would have seen all three rounds completed before the end of calendar year 2015. Instead, Rounds 2 and 3 were significantly more difficult on the ground than they may have been otherwise.

Nonetheless, all three scheduled Rounds were completed, and in May/June 2016,the external six-month assessment report declared that

	IDEAL TIMING	ACTUAL TIMING
ROUND 1	Last two weeks of September	October 19 – November 9
ROUND 2	Last two weeks of October	November 30 – December 19
ROUND 3	Last two weeks of November	January 25 – February 26

#### Declaration of outbreak: September 1, 2015



#### **UNICEF: Vaccine Procurement** and Management:

- UNICEF provided more than 12 million doses of OPV and 1.5 million doses of IPV
- Cold rooms and cold chains to preserve vaccine integrity



#### Percent of children vaccinated per round

An internal assessment performed by an independent consultant for UNICEF compared official government administrative data, independent monitoring data, and Lot Quality Assurance Data on national dosewise OPV coverage among children aged six months to two years. This assessment found rough comparability among all three sets of numbers, increasing confidence that vaccine coverage across all three rounds was as reported.

the transmission of cVDPV in Ukraine had likely stopped. Over three million children were vaccinated more than one time, and over 95% were reached with at least one medium or channel of communication about the outbreak and response. At the national level, according to administrative data, 59.5 percent of children under age 6 received three doses of tOPV during the outbreak response (including those vaccinated between rounds, and after the third round until the withdrawal of tOPV as part of the global switch on April 18, 2016). Round 1 reached 64.4 percent of the target, Round 2 reached 71.7 percent, and Round 3 reached 80.7 percent.

There was tremendous variation in coverage across the country's regions, and administrative data from some areas is thought to be more reliable than others. Furthermore, although authorities in the eastern part of Ukraine currently not under government control report also having conducted three immunization rounds, with coverage of 95-97 percent with tOPV from Russia, representatives of WHO's two field offices in the region were not permitted to visit field sites. Without independent monitors, the situation in non-government-controlled areas cannot be verified.

These coverage results fall below the GPEI standard of 95 percent. Given Ukraine's unique context and the starting point, however, they were far better than expected. The combined response of the Ukrainian government, NGOs, and international partners required innovative approaches to break old patterns and set the stage for sustained movement forward.

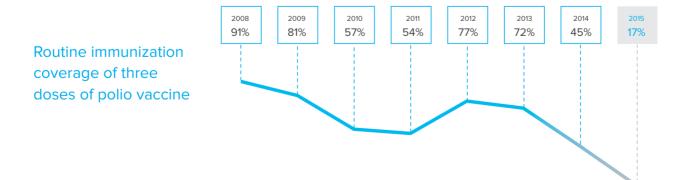
## Ukraine's Unique Challenges

A number of factors had converged to produce marked declines in routine polio immunization coverage with an IPV-OPV sequential schedule in the years preceding the outbreak, resulting by 2015 in the lowest rates in Europe. Prompted by these alarming trends, and having been repeatedly designated as a high-risk country by the Regional Certification Commission, the Ukrainian government had begun discussing the risk of polio with international organizations as far back as 2012. Vaccine supply had been at a standstill for two full years. Some vaccination using existing stocks had been taking place, though these stocks were dwindling.

In March 2015, the Canadian government had financed the purchase of 4.8 million doses of OPV and IPV through UNICEF, ready for distribution in the field to strengthen routine immunization coverage. When allegations arose that the first shipment of trivalent oral polio vaccine (tOPV) of 1.5 million doses had thawed during transport and was put back in freezer storage — even though all procedures were completely in line with international guidelines — a powerful anti-vaccine lobby group seized the opportunity to sow doubt and mistrust among the public by leaking rumors to the press. In technical terms, this batch of vaccines remained absolutely safe and effective, but it took months for authorities and international agencies to convince political leaders, health workers, parents, and the media that this was the case. Ultimately, this batch of tOPV vaccines was never used.

A thorough analysis of this unfortunate event led to significant discussions to ensure lessons learnt were taken into account in moving forward with state procurement of vaccines.

#### In March 2015, the Canadian government had financed the purchase of 4.8 million doses of OPV and IPV through UNICEF — ultimately these vaccines were never used for routine immunization



#### Ukraine's unique context

- Widespread public mistrust of vaccines, resulting from the negative campaign and strong messaging about vaccines in traditional and social media
- Challenges with public procurement resulting in shortages of vaccines
- Misconceptions and fear among some health care providers about contraindications and use of vaccines
- Laws/regulations against door-to-door campaigns

- Prohibition of vaccinations at any location other than clinics and (some) kindergartens
- Need for written consent of parent prior to administration of vaccine (even during campaign)
- Requirement for anti-shock kits at vaccination locations
- Legal liability and even criminal prosecution of vaccinators for adverse events following immunization

#### MISTRUST — PUBLIC PROCUREMENT

In 2008, following a measles outbreak, 11 million doses of internationally procured measles/rubella vaccine worth US\$ 5 million were eventually destroyed because of public outcry over completely unfounded rumors that a teenager had died following immunization. Local pharmaceutical suppliers, who had imported vaccines under government tenders and through the private market for many years, were spearheading not only aggressive opposition to rational purchase of vaccines, but also damaging anti-vaccine media coverage.

#### MISTRUST — PUBLIC CONFIDENCE

The resulting vaccine shortages were a major contributor to decayed trust. When local physicians encouraged parents to have their children vaccinated, but then the vaccines were unexpectedly unavailable, confidence in those doctors' expertise and advice plummeted. Furthermore, local suppliers promulgated the myth that a more expensive, locally sourced vaccine was safer, and that cheaper

## 2008 measles vaccination campaign

#### 2005-2006

Measles/rubella outbreak: 4,600 cases, 4 deaths.

Herd immunity was insufficient, at 93 percent.

Pressure from Ukraine's aspirations to EU membership and plans to host European Soccer Cup in 2012.

#### May 2008

Ministry of Health orders measles vaccination campaign, target age 15-29, with WHO funding of US\$ 5.3 million.

Widespread media coverage of side effects and parental anxiety over vaccine.

#### May 2008 death of 17-year-old boy in Donetsk is wrongly linked to vaccine.

#### Vaccination campaign is cancelled.

Several health workers and officials are held legally liable for the boy's death, facing penalties of fines, revocation of medical license, and imprisonment.

## Public procurement challenges: well-connected "middleman" businesses oppose international procurement of vaccines and other medications\*

- A small number of companies controls the market to purchase drugs overseas and repackage/label them for sale in Ukraine.
- Tenders frequently involve artificial competition between several companies owned by the same person.
- These companies collude to coordinate bids and increase prices.
- These companies also own or influence key media outlets that deliberately mislead the public and health professionals about the quality and safety of vaccine products.
- The bottom line: Regulatory/state authority is captured by the pharmaceutical industry in the absence of a strong state agency responsible for the identification, procurement, and distribution of pharmaceuticals. These companies profit handsomely from limited competition and high markups, even as government resources for vaccine purchase are scarce. They have a vested interest in opposing any UNICEF procurement of vaccines that would circumvent their easy profits.

Source: Anti-Corruption Action Center, a local non-governmental organization

vaccine provided through UNICEF was therefore somehow less safe. The mass media, including social media, was full of sensationalized stories on the danger of vaccines, adverse events following immunization, and questionable motives of the international organizations involved. WHO and UNICEF were accused of harboring mysterious hidden agendas, including attempting to dump old vaccines not wanted elsewhere. Despite years of dedicated efforts by UNICEF and WHO to train health professionals and educate the public - efforts that resulted in a remarkable recovery in positive perception of vaccines among Ukrainian mothers, from 28 percent after the measles outbreak in 2008 to 72 percent in 2014 — there was still a lack of understanding of how vaccines worked, why parents should have their children vaccinated, and especially why more than one dose of vaccine was necessary both in general and during the outbreak response. Ironically, the lack of additional cVDPV cases decreased the level of perceived threat: the international partners had been warning that additional polio cases would emerge if the vaccination campaign were delayed, but no new cases were found even after Round 1 started weeks later than expected.

#### LESSON:

It's very hard to facilitate the appropriate high-priority response when there are only a few cases of cVDPV. Maintaining the perception of danger from polio is key to sustaining momentum.

#### UNCERTAINTY AMONG THE MEDICAL COMMUNITY

Even professional health workers were often confused, telling parents different stories in public and in private. The medical community was both the largest supporter and most significant opponent of vaccination, confusing caregivers and parents. There was overly broad interpretation of contraindications by health professionals and legal restriction of immunization activities to health centers, preventing any house-to-house activity or vaccination in public places. In addition to low levels of knowledge about polio vaccination and side effects, health workers feared negative interpretations of side effects or deaths following vaccines (including legal liability and criminal prosecution), lacked knowledge about types of viruses and the criteria used to declare outbreaks, and, in general, lacked interpersonal communication



skills. Behind closed clinic doors, they were often colluding in fear of complications from immunization, counseling caregivers to wait a while before vaccinating their children or to purchase allegedly "safer" vaccines on the private market.

#### **GOVERNMENT COMMITMENT**

Implementation of the response did not receive consistent, whole-of-government support. Instead, there was initial denial by some national and regional government authorities that there was an outbreak at all. An advocacy task force at the global level was in place to bring governmental authorities on board. Despite entreaties from WHO, ambassadors from donor governments, and prominent NGOs, however, officials at the highest levels of the Ukrainian government - the president, prime minister, parliament, minister of health - refused to declare a public health emergency, a departure from World Health Assembly-established standards. The lack of commitment and oversight from the highest political level departed significantly from a standard polio response.

Furthermore, the national government did not adequately communicate news of the outbreak to regional and district authorities. The lack of high-level acknowledgment of the outbreak did not go unnoticed by others in government, or by the general public. It sent a message. The country's key leaders were not on board, and therefore the response was not a priority.



#### LESSON:

Deep, informed analysis of the local political economy is essential. International partners had been working in and with Ukraine for several years preceding the outbreak, effectively pre-positioning essential elements of the crisis response. Yet the politics of the situation might have been handled more effectively and transparently at the outbreak's early stages, especially when communicating with regional and local officials.

Thanks largely to the prior efforts of international partners, and overcoming considerable obstacles, at the time of the outbreak Ukraine had the OPV, the vaccinators, and the logistics in place. Unique to Ukraine, however, were its lack of political commitment and leadership, its aggressive anti-vaccine lobby promoted by corporate interests opposed to international vaccine procurement, and widespread distrust by the public and medical professionals regarding the outbreak and vaccination. These challenges required an extraordinary and unique response.



High-level advocacy from global donors and institutions can have a direct impact on increasing levels of immunization coverage. Given Ukraine's unique international position, influential voices and well-positioned political pressure helped trigger the start of Round 1.



#### LESSON:

Immunization supply chain managers and other health workers must be adequately trained on international standards of vaccine management, including vaccine arrival, cold chain, storage, shipping procedures, transport, distribution, and stock management, to ensure confidence in the safety and effectiveness of vaccines.

# **The Response**

The international response, within the constraints presented by this unprecedented situation, adhered to international best practice and innovated where necessary to adapt to local conditions.

## WHO: Coordination and Technical Support for Immunization & Surveillance

WHO support for the cVDPV type 1 outbreak response was delivered in line with GPEI expectations and where possible followed the written standard operating procedures for responding to a polio outbreak. While leading coordination of outbreak activities among stakeholders at country level, WHO also led the engagement of GPEI partners globally, including for high-level advocacy and resource mobilization.

Upon outbreak confirmation, WHO (jointly with the United States Centers for Disease Control and Prevention, CDC) immediately deployed a senior polio outbreak coordinator to lead WHO's multidisciplinary team. Experts in surveillance, lab, communication and immunization safety were deployed from WHO Headquarters and the European Region to support the country office. Within weeks, the group worked with national authorities and partners to conduct a detailed clinical, epidemiological, and social investigation of the case and contacts, establish a coordination and oversight mechanism (the National Polio Task Force), and build consensus for the outbreak response targeting vulnerable children across the country using oral polio vaccine (OPV). At all times this work was done in close coordination with technical as well as political stakeholders, especially UNICEF, Rotary Ukraine, USAID, and the Canadian government. To ensure a coordinated approach, an evidence-based outbreak response plan was written by WHO, approved by the National Polio Task Force and endorsed by the Government. The integrated plan included the number, scope, and type of vaccination rounds to be conducted, and detailed enhanced surveillance benchmarks for Ukraine. Communication and social mobilization strategies and action plans, developed by UNICEF, were integrated into the comprehensive national outbreak response plan to effectively sensitize caregivers to the importance of supplementary polio vaccinations.

In the early days following the outbreak, there were several different positions among representatives of the National Polio Task Force on what vaccines should be used and which children should be targeted for an effective response. WHO led the extensive discussions and negotiations with task force representatives, finally leading to the endorsement of the plan.

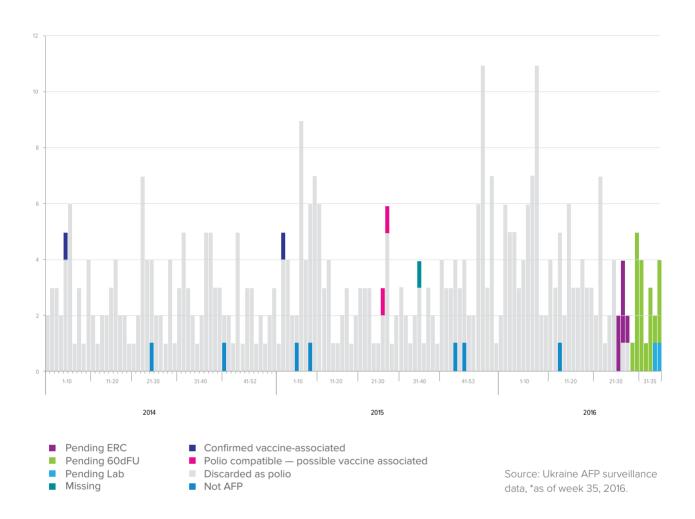
To ensure local political buy-in and an opportunity for feedback into the plan, a number of briefings and capacity development activities with different government authorities and local stakeholders were organized. Joint missions to highest-risk regions were organized to brief local authorities on the importance of their oversight. As part of preparation for supplementary immunization Rounds 2 and 3, the Ministry of Health, with WHO support, conducted two country-wide teleconferences, with participation from health focal points in every region and district of the country. These calls were critical to improved macro- and micro-planning and a sharpened understanding of target populations in each local area.

To help local health workers understand their roles and ensure their active participation in the response, WHO also provided a technical guide for local health staff. This guide detailed the steps for preparation, implementation, and monitoring of a polio campaign and answered questions about the safety and efficacy of OPV. During the immunization campaigns, data was collected and reported by local, district and regional authorities and reported to the national level. WHO worked with national counterparts to clean and package the data into daily reports to monitor campaign progress and flag as early as possible emerging challenges.

While oversight of outbreak response quality was critical for the rapid interruption of poliovirus from Ukraine, generally increased acute flaccid paralysis (AFP) surveillance sensitivity throughout 2016 provided the evidence for this decision to be made. Immediately after confirmation of the outbreak and following SOP guidelines, WHO recommended that the Ukraine Ministry of Health increase its AFP surveillance sensitivity at both national and sub-national levels to a rate of three non-polio acute flaccid paralysis (NP-AFP) cases per 100,000 children under the age of 15.

To help the ministry achieve this goal, WHO provided specific technical assistance to improve both AFP and environmental surveillance systems across the country. In the weeks immediately following the confirmation of poliovirus, an assessment team arrived in Zakarpatiya to review AFP and environmental surveillance collection procedures and provide recommendations to improve both systems. A national workshop on poliomyelitis surveillance was conducted in December focusing on all three surveillance systems -- AFP, environmental and enterovirus -- and was followed by region- and district-level trainings. Regular desk reviews and monitoring of AFP and environmental surveillance quality are now continuously performed to ensure the rapid detection of any importation or emergence of poliovirus.

In 2015, about a quarter of Ukraine's regions achieved this enhanced AFP surveillance rate standard, and

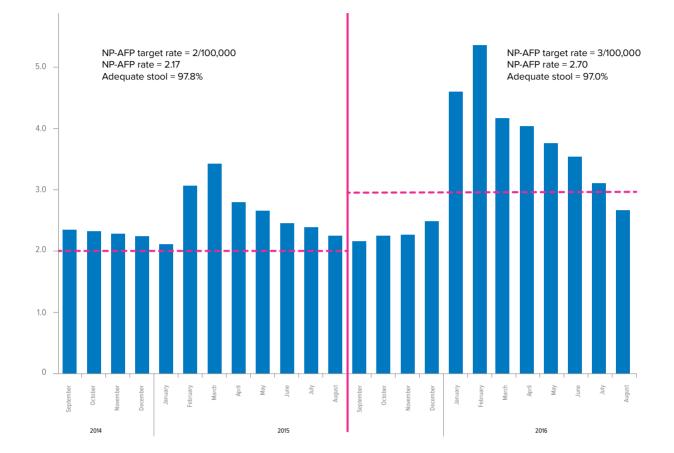


#### UKRAINE - AFP SURVEILLANCE, 2015-2016

about half of the regions achieved the pre-outbreak surveillance requirement of two cases per 100,000 children under the age of 15. Similarly, standardization of AFP contact sample collection has improved across the country but has not been standardized or consistently applied. Significant progress was made in AFP surveillance in 2016, resulting in an increased reporting rate of over three AFP cases per 100,000 children under 15 years of age at the national level compared to a 2.5 AFP reporting rate in 2015, and standardized contact enrollment by all regions. Accordingly, the number of regions achieving the surveillance requirement of three AFP cases per 100,000 children under 15 years of age has doubled against 2015.

The number of samples collected from environmental and enterovirus surveillance also nearly doubled compared to a similar period prior to the outbreak. Although the detection of the enteroviruses and Sabin viruses improved at the national level, performance remained inconsistent across the regions. A pilot project to improve environmental surveillance is planned for 2017.

#### **OUTBREAK CONFIRMATION**



Source: Ukraine AFP surveillance data as of week 35, 2016.

Given the complex social, economic, and political bottlenecks around the delivery of a robust vaccination program in Ukraine, one of the most consistent challenges to the full delivery of the polio outbreak response was the irrational fear of adverse events following immunization (AEFI) by both caregivers and health workers across the country. This fear has been propagated by a number of external events and exploited by different groups with different political agendas for a number of years and is not specific to polio vaccination. WHO along with UNICEF worked continuously throughout the course of the outbreak to manage these fears and build trust in all vaccination services in Ukraine. Specifically, WHO deployed a regional expert who travelled to Kiev several times to brief government officials responsible for investigating AEFI, advise on crisis preparedness, and provide regular technical guidance on vaccine pharmacovigilance, procedures, and algorithm for review of reported cases. A roundtable discussion was organized at the end of supplementary immunization activities to review a State Expert Center report and to discuss next steps for strengthening Ukraine's AEFI surveillance and reporting system. To monitor quality of the response, independent monitoring of the supplementary immunization activities was conducted under WHO supervision. Data collection was undertaken by the "Alliance Ukraine Consultancy" in collaboration with specialists from the "Public Health Alliance." During each Round, the monitoring data was used to guide improvements and reach more children. Monitoring focused on performance of health facilities, including review of macroplanning, training, social mobilization, and observation of vaccine handling and administration practices. Monitoring also assessed awareness and attitudes of caregivers/ parents to polio outbreak response immunization. The city of Kyiv and 60% of regions were covered in each round by the independent monitors, and about 3500 caregivers in total were interviewed.

In April 2016, upon completion of the three planned rounds of polio supplementary immunization, WHO organized for a Lot Quality Assessment Sampling (LQAS) survey to be conducted to verify vaccination coverage. The survey covered 1600 children between two months and six years of age, selected randomly. The survey reported that 48.4% of children under six years of age received three doses of trivalent oral polio vaccine during the supplementary immunization activities (SIA). Based on the results of the LQAS, a recommendation for post-SIA vaccination was provided to the Ministry of Health and endorsed by the National Polio Task Force.

In line with global recommendations and to ensure that Ukraine remained on track to interrupt poliovirus transmission within six months of detection, WHO organized and led two comprehensive external assessments of the response at three and six months after the outbreak was confirmed. The assessments were conducted by international and national representatives from a number of stakeholder organizations and looked at all facets of outbreak response including coordination, government ownership, and the quality of vaccination, surveillance, and communication strategies. The external assessment results and recommendations were provided to the Ministry of Health and in-country stakeholders during de-briefing sessions, and were further used to adjust the country polio outbreak response, including activities planned and implemented with the support of international organizations. The findings from these assessments will also be fed into the planning and preparation of the country twelve-month progress review.

Finally, WHO provided technical support for the successful planning and implementation of the globally synchronized switch from tOPV to bOPV for routine immunization. As part of this support, WHO helped organize the switch workshop for region-level coordinators. A national conference on global polio eradication, featuring global experts on polio, representing the US CDC, the European Centre for Disease Prevention and Control, and European Regional Certification Commission for Poliomyelitis Eradication external experts, was held in Kyiv on March 16-17, 2016, significantly furthering the national dialogue on immunization with Ukraine's scientific and technical professionals, and also contributing to a smooth implementation of the switch.

## ROUND 2-3 CAMPAIGN DELIVERABLES, WHO:

- Technical trainings for health workers and supportive supervision including communications segments
- National conferences on polio eradication
- Continuous dissemination of messages on social media
- Articles on WHO and GPEI web site
- National and international media interviews
- Production of information materials on vaccine safety, contraindications, and other issues
- Regular desk review and monitoring of surveillance
- Independent monitoring of supplementary immunization rounds
- Organization and leading of external assessments of polio outbreak
   response

## **UNICEF: Communications and Training**

The communications response adhered to GPEI guidelines, the polio communication global toolkit, and best practice for handling polio outbreaks, taking full advantage of local knowledge and available opportunity. As part of its organizational preparedness efforts, UNICEF had already drafted a detailed crisis communication plan in the event of a polio outbreak, updating it periodically since its first iteration in November 2013. This plan contained analyses of Ukraine's political and media landscape, reputation risk to UNICEF, and technical communication risks. It specified personnel roles and responsibilities, authorization procedures, coordination requirements with the UNICEF Regional Office and Headquarters, monitoring and evaluation of communication activities, and a step-by-step timeline spanning the first hours and days after the outbreak. In addition, UNICEF had drafted a detailed Communication for Development (C4D) strategy. This strategy, originally intended to support the kickoff of an Expanded Program for Immunization program with a focus on polio outbreak prevention, was realigned to address the new challenge of the cVDPV outbreak.

Weekly meetings of the Communications Task Force were held from October of 2015 through April 2016. Through strong interpersonal collaboration, harnessing of comparative advantage, and effective managerial leadership, this team produced an innovative and adaptive communications response.

Its relatively small size made it nimble, able to exchange information and ideas effectively. The WHO and UNICEF country, regional, and global offices offered consistent support.

UNICEF led the communications task force, setting the agenda for meetings based on the rapidly changing environment and emerging opportunities, and

#### LESSON:

BE PREPARED. It's rare that a polio outbreak would emerge without warning. In this case, public advocacy with donors and the government had already taken place, and a detailed internal crisis communications plan as well as vaccine supplies were ready for mobilization. When the outbreak finally occurred, the communications team was able immediately to launch a carefully tailored and targeted response.

ensuring that the division of labor was appropriate. Most members of the team were from Ukraine, but others were international, bringing outbreak experience from other countries. The local communications staff was of very high caliber. One of the ministry representatives also worked as managing director of a private advertising agency with prior experience in public health, lending valuable experience and perspective. The surge staff deployed by UNICEF, WHO, and other international partners, including polio communications experts from headquarters and regional offices, provided consistent guidance and encouragement, as well as skills development, to the core Ukrainian responders. As a result, UNICEF and WHO had all the required human resource needs from early on the outbreak response. The Ministry of Health, represented most of the time by the deputy minister, provided key advice on what was likely to work (and not work) in the Ukrainian context, as well as a legitimizing presence on frequent trips to the regions.



#### LESSON:

The right mix of international and local expertise is essential to a comprehensive outbreak response. With unusually complex challenges in overcoming vaccine hesitation and refusal, the engagement of a private public relations firm with deep local knowledge and health communications experience proved invaluable.



ї та Ізраїлі. Для хвороби не існує кордонів.

Зробіть щеплення від поліомієліту!

unicef 🥨



#### ЩЕПЛЕННЯ — ЄДИНИЙ ОБЕРІГ

Ліків від поліо не існус. В Україні вакциновано менше половини діте

Зробіть щеплення від поліомієліту!

unicef 🙆

#### Sample of Round 1 materials **A**

#### **COMMUNICATION OBJECTIVES:**

- Parents, decision makers, and the health sector understand and feel the urgency of the polio outbreak.
- Parents with children of appropriate age understand polio and its implications, the benefits of the polio vaccine, and its safety.
- Parents with children of appropriate age are aware that polio vaccine is available at their local health facility and informed about the dates of the campaign prior to each campaign.
- Roma parents and caregivers are aware that they are able to take their children to any health facility and receive polio vaccine regardless of their home address or status.
- Internally displaced person parents and caregivers are aware that they are able to take their children to any health facility and receive polio vaccine regardless of their home address or status.

- Parents with children of appropriate age bring their children to the health facility for polio vaccination during each campaign.
- Health workers and pediatricians regularly provide guidance to parents on the risk of polio, inform parents on supplementary vaccination activities, and respond quickly and confidently to any perceived adverse or vaccine safety event.
- There is supportive media coverage of immunization activities and increased public support for the outbreak response.
- The relevant government authorities at the national and local levels provide increased support to polio immunization activities and have increased ownership over vaccination programming.

The outbreak response explicitly followed the parameters outlined in the GPEI global polio communication toolkit. It took its primary objectives from that toolkit: to promote vaccination as a universal social norm, and to build trust and goodwill for and among health workers. Many of the elements of the immediate response communications phase were already in place at the time of the outbreak, including analysis of the media landscape and creation of straightforward announcement messages, with the goal of maximizing awareness of the outbreak and impending vaccine campaigns. Health professionals were featured prominently in communications, portraying them as trustworthy, admirable, compassionate, helpful, and professional. The strategy capitalized on the trust Ukrainian parents placed in the medical community.

The UNICEF-led Communications Task Force coordinated an evidence-based, data-driven, context-appropriate campaign. The premise underlying the C4D strategy was the imperative to overcome vaccine hesitancy – derived from an array of factors including denial of the outbreak, fear of adverse consequences of vaccination, and lack of trust in

#### LESSON:

Adaptation of global guidelines to the local context is essential. In Ukraine, where access to television, the internet, and social media is almost universal, parents were susceptible to misinformation and would not simply follow instructions to have their children vaccinated.

the source of the vaccines — among two key populations: parents/caregivers and health workers. A detailed but flexible message map was constructed to link desired knowledge and behavior outcomes with narrative focus, message approach (factual, emotional, fear appeal), and specific tactics and platforms. Adaptations were made as ongoing research uncovered specific fears, rumors, and other new issues. The campaign was creative and innovative, not afraid to take risks and try new approaches. It capitalized on the existence of an educated, sophisticated Ukrainian population that is, on the whole, unwilling to act solely on government orders or suggestions, but that responds positively to convincing evidence presented by authoritative sources.

#### Images tested after Round 1









#stopPolio #стопПоліо

# Щеплення — єдиний оберіг



Я захистила своїх дітей від поліо. Зробіть щеплення своїм дітям.

— Тетяна Балтян, лікар-педіатр



#### LESSON:

Court international as well as national and local media. UNICEF and WHO regional representatives were featured in international publications that received important next-day play in Ukraine, legitimized key messages, and put useful pressure on government.

Although the communications strategy was drafted and approved promptly after confirmation of the outbreak, its initial implementation was complicated by delays in confirming the dates and target populations for immunization activities. Uncertainty over timing presented significant challenges in providing the public with early and accurate information on the outbreak response. Information about Round 1 was effectively communicated; however, the initial messaging relied primarily on materials that had been developed for distribution of the vaccine that had been funded by the Canadian government earlier in 2015. Although gains were not universal, coverage increased from 17 percent in early 2015 before the outbreak (coverage with three doses) to 64.7 percent vaccinated in the first Round.

As the campaign continued, so did the frustrating series of acute challenges. When unusually harsh winter influenza (causing around 400 deaths from H1N1) erupted, health workers in many districts became reluctant to administer polio vaccines. Health officials at the national and regional levels debated postponing vaccination until the flu season had passed, fearing complications from vaccinating sick children (a standard response in Ukraine, not specific to this situation). Ultimately, the campaign was not formally suspended for this reason, but it was further delayed in many areas. The powerful political and financial interests fighting the import of good, affordable vaccines continued to hurl attacks through conventional and social media, taking advantage of every opportunity to increase the level of sensationalized anti-vaccine rhetoric. The communications plan was realigned to respond more systematically to these attacks as the campaign moved forward. The media mix was diversified and made more aggressive. Collaborative efforts were launched directly with media producers to bring key messages directly to parents and health care providers with more intensity. A wider array of trusted local, national, and international health care experts was harnessed to deliver this more aggressive messaging.

Just before Round 2 was scheduled to begin, a fouryear-old child in Bila Tserkva (a town close to Kyiv) was reported, incorrectly, to have died as a result of a polio vaccine. Local and then national media coverage erupted in a frenzy threatening to overwhelm the immunization campaign. The Communications Task Force responded immediately with a series of emergency meetings and then concrete products, following established crisis communication guidelines

#### **EVOLUTION OF COMMUNICATIONS APPROACH**

#### PHASE 1: Promoting vaccination as a child right

#### PHASE 2:

Increasing trust in health workers and vaccination, and increasing the perception of risk of polio outbreak by tackling rumors and barriers to vaccination

PHASE 3: Reaching more remote regions with lowest coverage



#### **EVOLUTION OF MESSAGING**

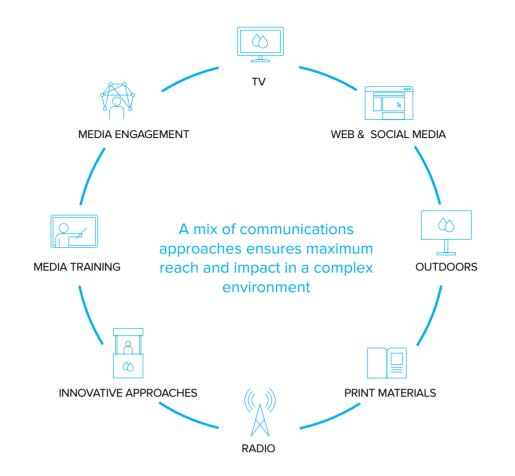


- Ukraine is in the midst of a polio outbreak, with risk of further spread of the virus.
- The only way to protect your children is to vaccinate them.
- All children below the age of six (Rounds 1 and 2) and ten (Round 3), in order to be fully protected, must be vaccinated during each round of the immunization campaign.
- Full immunity happens only when all children are vaccinated in every campaign round.
- Vaccines are used around the world. They are safe and effective. They meet international standards.
- The experienced doctors who care for your children advise you to protect them by vaccinating them if they are ages 0-10.



**Rounds 2-3:** heightened perception of threat, more direct information about vaccine quality and safety

- There is a polio outbreak in Ukraine.
- Polio can lead to **paralysis** and even **death**.
- The only way to protect your children against polio is to vaccinate them.
- Vaccines are safe and effective. They are produced in France.
- Multiple doses of the polio vaccines are required to achieve full immunization.
- All children between the ages of two months and 10 years much be vaccinated across multiple rounds.



and practices: an official statement clarifying the facts surrounding the case, official information on the health ministry web site on adverse events following immunization, question/answer sheets for caregivers and health workers, talking points for addressing the media, and support to the health ministry in dealing with the press. The deputy health minister, leading the communications team, conducted an off-therecord meeting with influential print and broadcast media editors to spearhead a change in the narrative of reporting. Information materials stressed vaccine safety, accurate information on contraindications, the appropriate response to adverse events following immunization, and the scheduled April 2016 switch to bivalent vaccine.

In preparation for Rounds 2 and 3 as well as for post-campaign catch-up activities scheduled to precede the tOPV-bOPV switch in April 2016, an adaptive communications phase strategy was deployed. Message content and form, following the global polio communication toolkit, were adjusted to the specific causes for missed children. Most importantly, the level of threat perception was raised: based on testing of four alternate sets of approaches, the images used shifted from confident statements by well-known pediatricians to photos of children who had been affected by polio. The approach also increased focus on areas with low vaccination coverage, identifying and responding to negative rumors, and tackling doubts about the quality of vaccines through increased and novel messaging and platforms.

#### LESSONS:

Adjustments based on in-depth evidence and careful analysis are key to identifying and reaching target audiences effectively.

Quick assessment of early results is key, balancing depth with speed, so that analytic findings can emerge in time for their immediate application.

## ROUND 2-3 COMMUNICATIONS CAMPAIGN DELIVERABLES: UNICEF

- MOH, UNICEF, WHO vaccine-promotion trips to regions
- Animated public service announcement on national and regional television, reaching 92 percent of population
- Animated videos and banners on internet and social media, reaching more than 45 percent of population
- Dedicated vaccination page on parenting website, reaching millions of parents
- Outdoor advertisements reaching 60 percent of population
- Print materials distributed to polyclinics, kindergartens, and schools: 400,000 posters, 500,000 leaflets for parents, 200,000 children's coloring books
- Radio PSA (sound bite of TV PSA) aired on 17 stations, reaching 35 percent of target audience
- Radio PSAs featuring well-known pediatricians aired nationally and in targeted low-performing regions
- PSAs aired in closed-circuit system of subways, banner/poster advertisements in subway cars, stations, escalators reaching 1.2 million passengers daily
- Digital signs in four major supermarket chains (38 stores) reaching 3.5 million customers
- Branded stands with UNICEF doctors and "pink drop" characters at five shopping malls in three low-performing regions, distributing 44,000 leaflets to 188,000 people
- Road shows and direct mail delivery in Odesa and Kyiv, directly reaching 212,000 people
- Street fairs and festivals in low-performing regions, distributing 25,000 leaflets to 63,000 people

# Broadcast media

Various forms of video advertising were developed to address both emotional and rational arguments. Many featured testimonials from local doctors, based on their own personal experiences, advising parents to vaccinate. UNICEF supported the creation and broadcast of 15- and 30-second versions of an animated video on polio vaccination that aired initially on the top 15 national television channels and eight radio stations, expanding in January to a wide number of high-viewership television channels totaling 36 national and regional outlets. These animated spots provided information about the outbreak and vaccination campaign, including key messages on the origin and safety of the vaccines and the need for repeated

doses. Interviews on popular television programs with international experts from UNICEF, USAID, and other agencies were intended to enhance the technical credibility of the messaging. For the first time, UNICEF paid for television air time, increasing public exposure to these messages. Radio advertising in both Ukrainian and Russian was also intensified, with increased use of well-known physicians (especially pediatricians) targeting low-performing regions. By the end of the third round, 91 percent of caregivers said they had seen a polio-related advertisement on television or the internet, and 60 percent remembered the specific ad. These results compare favorably with the market benchmark of 50-65 percent coverage.

#### **NATIONAL & REGIONAL TV**

NOVY	SonIse	TRC Kyiv
STB	7 Kanal	The First National Channel
QTV	Pervy Gorodskoi	Lviv oblast Tele Radio
M1	Grad	Company
M2	Dumskaya TV	ZIK
Inter	ZIK	Odesa Oblast TRK
NTN	ATN	The First City channel
Zoom	21 Uzhgorod	VIKKA TV
Mega	Do Tebe	ODTRC Ros
Pixel	Tele Radio company	Local National Channel
Ukrania	Avers Channel	UA Pershiy
Indigo TV	Tysa Tele-Radio COMPANY	
NLO TV	21st channel	

#### RADIO

Nashe Radio
Pyatnitsa
Relax
Pyatnitsa
Hit FM
Nashe Radio
Pyatnitsa
Europa Plus
Nashe Radio
Retro
Pyatnitsa

Nashe Radio Pyatnitsa Retro Avtoradio Lux FM (for Lviv, Volyn and Zakarpattya regions) Hit FM (for Kyiv, Odessa and Cherkasy regions)

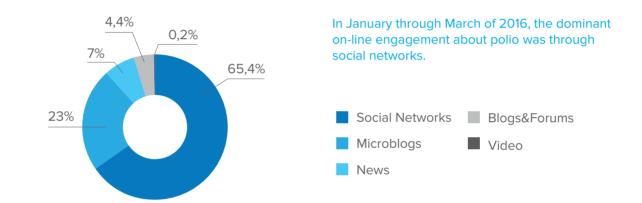
of caregivers said they had seen 91% a polio-related advertisement on television or the internet by the end of the third round

60% remembered the specific ad

# **Internet and social media**

The Internet and social media presence was expanded. UNICEF launched dedicated vaccination pages on its Ukrainian-language "UAUA" parenting website that reached millions of parents and caregivers. Its distinct polio logo and slogan, adopted at the beginning of the campaign — #stopPolio – created local visual identity and a strong call for action. Additional videos and banners were launched to various web sites, with a particular focus on encouraging vaccination and dispelling myths. The tone turned more humorous, employing ridicule to discredit misinformation about vaccine safety and contraindications. UNICEF Ukraine's Facebook page has over 70,000 followers and its Twitter feed almost 5,000 subscribers; during the outbreak, these outlets reached about a half million engagements per month.

Throughout the campaign, UNICEF engaged in daily media monitoring that covered both traditional and social media. Proactive listening tools were deployed to monitor on-line conversations about polio and detect negative rumors in real time. A team was assigned to respond immediately to rumor alerts, with counter messaging prioritized.



Prevention of polio Attract attention / to inform about the problem

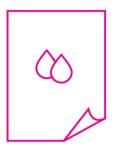
#### Protect child health Safe vaccine The need for vaccination Vaccination propaganda

Vaccination — the only protection against polio



# Print

Print media, including posters (400,000), leaflets for parents (500,000), and coloring books for children (200,000), were produced and disseminated to health clinics all over the country, and in the latter rounds, to kindergartens, schools, and community events. Materials were placed directly in residential mailboxes in low-performing areas, with additional distribution at street fairs, marketplaces, parks, town and city squares, and subway stations.



**400,000** posters



500,000 leaflets for parents



**200,000** coloring books for children









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### 

### ▼ Direct mails







# **Outdoors**

One of the hallmarks of the campaign in the later rounds was the innovative thinking on message placement. Public billboards were strategically placed in low-coverage areas. As of Round 3, 60 percent of caregivers had seen an outdoor advertisement about polio, a very strong result compared to the market benchmark of 15-25 percent.

Over 1.2 million passengers daily were exposed to banners and posters in subway and train stations, including on walls and in subway car windows, and a public service announcement was broadcast on the closed circuit network in subway stations – the first time public service video messages were broadcast via public transportation in Ukraine.

Branded vehicles with microphones and speakers broadcasting pro-vaccination messages toured low-performing regions in 18 separate road shows reaching up to 2.2 million people. The vehicles stopped at locations where large numbers of people were congregated, allowing promoters to distribute educational materials and answer questions.



## people reached

daily in subway and train stations and were exposed to the outbreak communication campaign

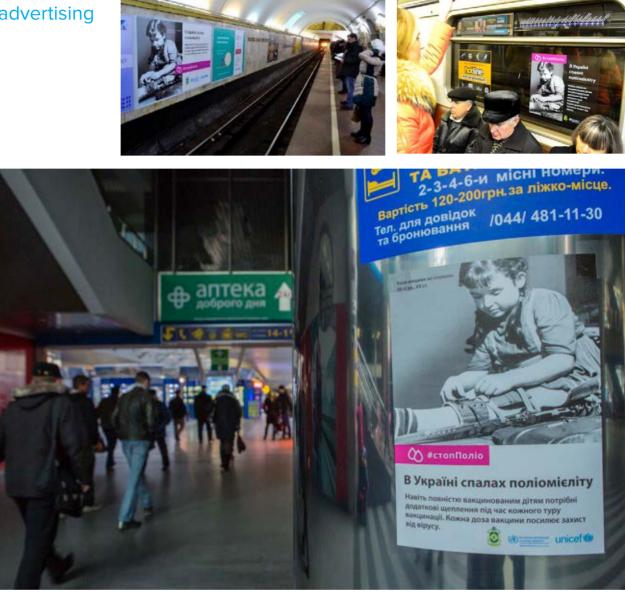


# 2.2 million people reached

by branded vehicles with microphones



### Transit advertising



### Road shows





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# Retail

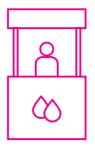
At five shopping malls in three low-coverage regions, physicians working with UNICEF were stationed at branded stands; parents and children were lured into discussions and consultations by promoters in colorful branded clothing and by staff dressed as smiling "pink drop" mascots (symbolizing the oral polio vaccine drops) to entertain and engage children. These five information points alone engaged 188,000 visitors and distributed 44,000 leaflets. Participation by the "pink drop" mascot at street festivals, again in low-performing regions, produced another 63,000 contacts and distribution of 25,000 leaflets.

Digital signs at points of sale in four major supermarket chains, never before used for a polio campaign, reached over 3.5 million customers. Shoppers were estimated to spend a average of 15 minutes in supermarkets, representing an excellent communication opportunity.

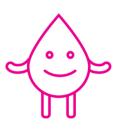
### In mall activations







**188,000** information points visitors



63,000 "pink drop" contacts



**3.5 million** supermarket customers by digital signs





▲ Digital signage

# **Capacity Building**

UNICEF had been training teams of experts on maternal and child health at the regional level since 2008, with these pediatricians, family medicine specialists, and others in turn building capacity of other health staff. When the polio outbreak started, about half of Ukraine's regions were able to benefit from these high-capacity teams who were shifted to polio relatively quickly and easily with minimal additional briefing. This aroundwork formed the foundation of UNICEF's continued training-of-trainers in the remaining regions throughout the course of the outbreak response, as part of longer-term capacity building and system support.

Health care providers and educators were invited to training sessions intended to enhance their skills in communicating with parents and children about polio and immunization. Well over 100 training activities covering 18 of the country's 27 regions reached almost 5,000 health workers, and 21 workshops for school and kindergarten staff reached 1,400 teachers in eight low-coverage regions. An in-depth training-of-trainers strategy was put in place in some low-coverage regions. The sessions covered the outbreak itself, the vaccination campaign versus routine immunization, myths about vaccines, injection safety, IPV and OPV, cold chain management, effective counseling on immunization, contraindications, communications for managers, surveillance, vaccine

licensing and registration, international involvement with Ukraine's outbreak, and the global situation with polio. Health workers' specific fears and concerns were openly solicited and explicitly addressed through these trainings. Their impact is clear: vaccine coverage increased, and refusals and contraindications decreased, significantly more in specific geographic areas and clinics where training of health providers and educators was focused.

However, coordination across sectors was inadeguate, with different ministries conveying contradictory recommendations. Following the SOPs, the Ministry of Health recommended immunization in schools and kindergartens, resulting in a large increase in the number of children vaccinated and showcasing significant improvement over the fixed-sites vaccination strategy. Following training during the response, both education institutions and parents were much more accepting of vaccinating at kindergartens.



LESSONS:

Health workers on the ground, at regional and district health points, are key to moving forward. Investment in their training and curriculum, using expert local speakers and opinion leaders, is a cornerstone of a long-term strategy to fight misinformation and thereby increase vaccine coverage.



### 6.00

health providers and educators reached through 119 events across the country, with focus on low-performing areas



FOCUS on polio response and effective patient counseling





educators (kindergarten

and school staff) trained in 21 workshops

### Impact of training on vaccine coverage in Vinnytsia oblast

Vinnytsia oblast					
	Oblast/region as a whole	Town of Kalynivka	City of Haisyn		
PRE-CAMPAIGN		11.6%			
ROUND 1	74.9%	81.2% Refusals: 3.2% Contraindications: 5.6%	80.0% Refusals: 123 persons Contraindications: 22 persons		
ROUND 2	78.6%				
BEFORE/ DURING ROUND 3		Trained 9 doctors, 22 nurses, 70 medical staff in educational institutions	Trained doctors, nurses, kindergarten and other health workers		
ROUND 3	82.0%	94.5% Refusals: 1% Contraindications: 3.9%	95.1% Refusals: 73 persons Contraindications: 13 persons		

### Impact of training on vaccine coverage in L'viv oblast

L'viv oblast						
	Oblast/region as a whole	City of L'viv City of Chervonohrad		City of Boryslav		
PRE-CAMPAIGN	59% (children under one year of age, early 2015)					
ROUND 1	64.5%	64.5% Contraindications: 2,893				
ROUND 2	66.8%	66.8%	51.8%	35%		
BEFORE/DURING ROUND 3		Trained 60 city physicians and other health workers at children's medical center	Trained two family physicians. Number of contraindications decreased from 79 (Round 2) to 20 (Round 3).	Trained family physicians, pediatri- cians, and nurses		
ROUND 3	67.6%	73.1% Contraindications: 451	67%	46.5%		

### Impact of training on vaccine coverage in Kyiv city

City of Kyiv					
	City as a whole	District of Shevkenchivskyi, Primary Health Care Center # 1	District of Darnytskyi, Primary Health Care Center # 2		
ROUND 1	37.1%	33.3%, Refusals: 8%	15%		
ROUND 2	58.1%	31.4%	20%		
BEFORE/DURING ROUND 3		Trained 34 medical staff	Trained clinic staff who then conducted field campaigns		
ROUND 3	96.9%	98.2%, Refusals: 0.6%	43%		

#### Impact of training on vaccine coverage in Ivano-Frankivsk oblast

Ivano-Frankivsk oblast							
	Oblast/region as a whole	District of Bohorodchany	City of Sniatyn	Town of Yaremche	City of Horodenka	City of Dolyna	City of Ivano- Frankivsk
BEFORE/DURING ROUND 1		22 doctors, nurses, other health workers completed training	18 staff completed training	8 staff completed training			
ROUND 1	64.3% Refusals: 4.3%	93.7%	77.2%	91%	52%	46%	53%
BEFORE/DURING ROUND 2					15 staff completed training	12 staff completed training	150 staff completed training
ROUND 2	80.1% Refusals: 5.9%	87.8%	91.3%		72.2%	86.1%	90%
BEFORE/DURING ROUND 3			9 staff complet- ed additional training	6 staff completed additional training	10 staff completed additional training		42 staff complet- ed additional training
ROUND 3	90.1% Refusals: 3.6%	95.4%	94.1%	91.8%	91%		94.8%

## Impact of training on vaccine coverage in Odessa oblast

Odessa as a whole						
ROUND 1	34.6%	ROUND 2	62.49%	ROUND 3	67.91%	
Areas with UNICEE-provided training for physicians						

and parents:			
	Bolhrad district	Bilyayivka district	Bilhorod-Dnis- trovskiy district
ROUND 1	47.3%	39.6%	53.6%
ROUND 2	97.25%	89.57%	82.45%
ROUND 3	99.3%	85.3%	81.3%

Areas without UNICEF-provided training for physicians and parents:

	City of Ilyichevsk	City of Odessa	Kiliya district
ROUND 1	15.4%	19.7%	45.6%
ROUND 2	45.24%	43.71%	61.46%
ROUND 3	46.4%	58.7%	45.2%

#### MEDIA WORKSHOPS

 Regional media workshops covered 14 regions of the country and trained 50 journalists, jointly sponsored by UNICEF, Rotary, Radio Free Europe/Radio Liberty, WHO UNICEF was also active with the medical-scientific community. It partnered with national- and city-level government and several Ukrainian medical associations to sponsor scientific conferences on pediatric immunology, and it sponsored a workshop in Kyiv specifically for pediatric neurologists on contraindications to immunization.

Extensive training also targeted the media. More than 50 journalists from 14 regions attended RFE/ RL- and WHO-organized media training workshops on effective pro-vaccine media management. These workshops included in-depth sessions on holding press conferences, crafting effective sound bites, and conducting individual interviews. UNICEF media events reached 91 journalists and generated 184 separate instances of media coverage of the outbreak and response.

Additional media trainings and roundtables conducted separately by RFE/RL, UNICEF, Ministry of Health, Rotary, and Voice of America, involving hundreds of participants and generating media clips reaching hundreds of thousands of readers/viewers

## Rotary: Communications and Civil Society Mobilization

Rotary's 49 clubs across Ukraine were key players in the response. Rotary has been in Ukraine for 25 years, but this was its first project that required coordination among all the clubs across the country. Its national plan, drafted in September 2015, was deliberately coordinated with WHO and UNICEF and financed through Rotary headquarters. Key outputs included a special 36-page, polio-themed edition of the local Rotary magazine reaching about 75,000 people, internet and Facebook pages (stoppolio.ua), leaflets and billboards, advocacy kits (containing brochures, videos, and flash drives) for medical experts, videos highlighting the historical impact of polio, and most importantly, public events. The Rotary campaign staged bicycle tours, ran ads on the sides of buses and other outdoor mass transit, established and promoted a telephone hotline, visited kindergartens, distributed leaflets in crowded places (markets, parks, town squares) and through direct mail in target towns, and lit up the side of a major building in downtown Kyiv with

the "stopPolio" logo. Rotary's "stopPolio" website reached about 48,000 people between December and April; its Facebook page had 1.7 million viewers and 156,000 direct engagements; and its YouTube channel, with about 50 video spots and interviews, was viewed 6,200 times. Rotary's contributions highlight one of the key instances of partners harnessing their comparative advantage: UNICEF organized parent education seminars and provided the speakers, while Rotary mobilized audiences.

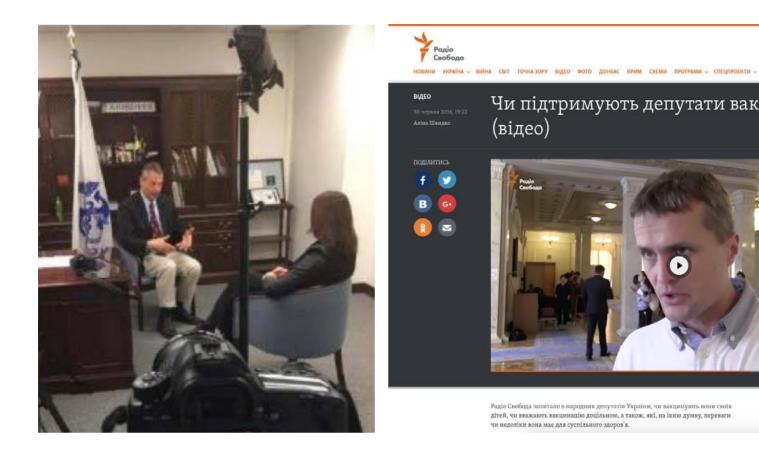
In addition, after observing the negative impact of several vocal anti-vaccine groups, Rotary supported the creation of the pro-immunization organization "Parents for Vaccination." Officially registered as an NGO in April 2016, "Parents for Vaccination" serves as a voice not only for polio, but the entire childhood immunization calendar. These parents form a nascent community that can address on-the-ground questions from their peers, and they are already lobbying for policy changes on vaccine supply.



## ROUND 2-3 COMMUNICATIONS CAMPAIGN DELIVERABLES: ROTARY

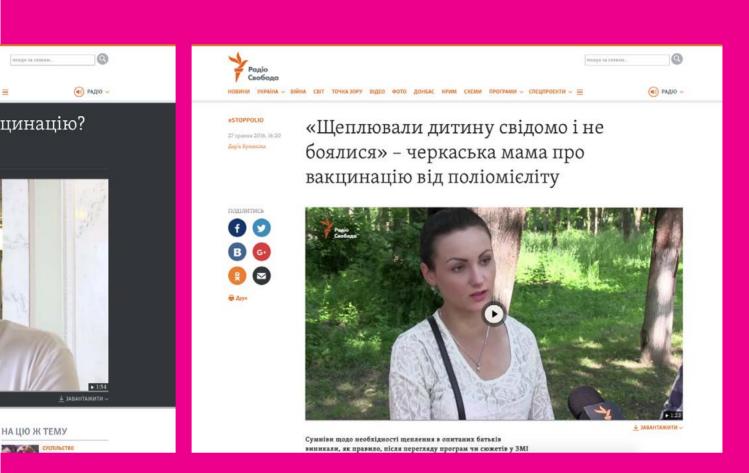
- Website: 200 posts reaching 48,000 people
- Facebook page reached 1.7 million people, with 156,000 direct engagements
- YouTube: 50 video spots and interviews, with 6,200 hits and almost 250 hours viewing time
- Hundreds of thousands of print materials distributed during public events, promotional activities, meetings with parents
- Bicycle tour, outdoor and transit advertising, and other promotional activities
- Special 36-page polio edition of Rotary Magazine (Rotariets), with a print run of 5,000 reaching 74,000 people, as well as several polio-themed editions of Weekly Rotary News Ukraine
- Support for new non-governmental organization "Parents for Vaccination," began meeting in March 2016





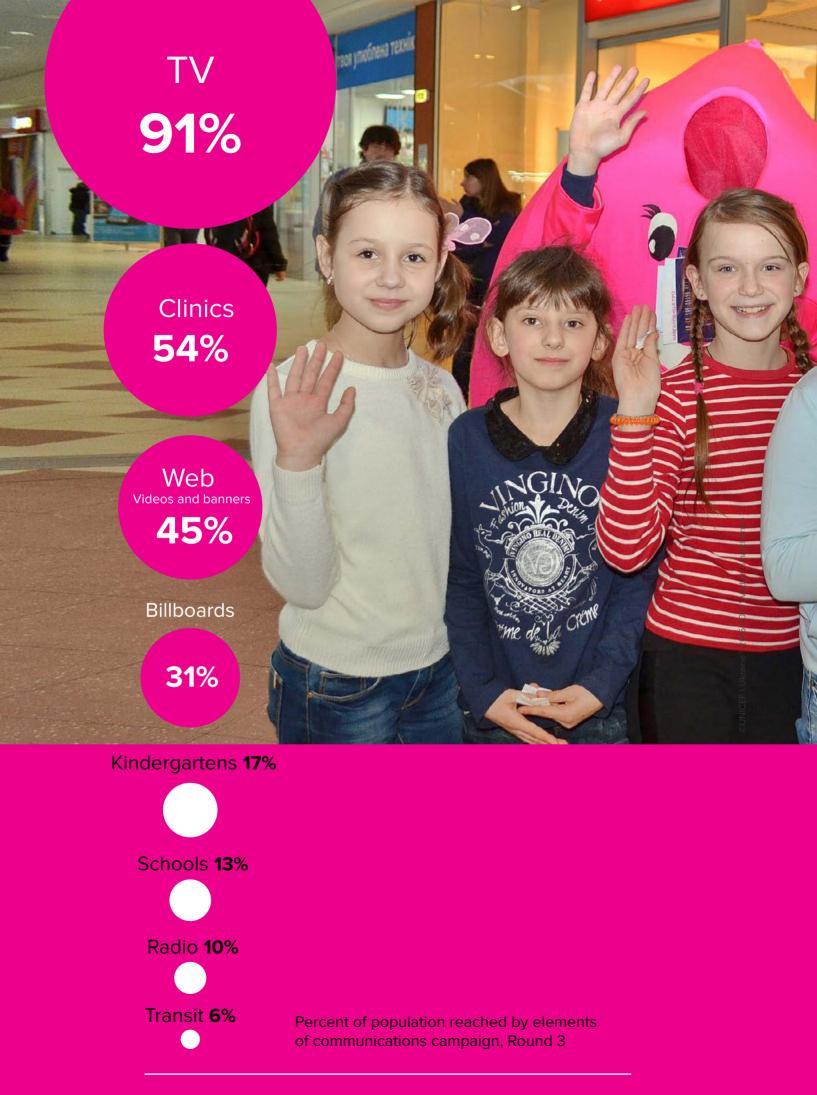
# **RFE/RL: Social Media** and Internet Outreach

The Ukrainian service of RFE/RL posted a series of video graphics, cartoons, and infographics that reached over 400,00 Twitter and 170,000 Facebook followers. Around 60 separate news features on polio were posted on the Radio Liberty website, which launched a dedicated "What do we need to know about vaccination?" page. RFE/RL aired stories featuring polio survivors and detailed polio updates from various regions of the country. Materials produced by UNICEF, WHO, and the health ministry were published on the RFE/RL website, with traffic exceeding two million hits each month. Voice of America conducted similar efforts in parallel.



## ROUND 2-3 COMMUNICATIONS CAMPAIGN DELIVERABLES: RADIO FREE EUROPE/RADIO LIBERTY

- Multiple Twitter posts, 407,000 followers
- Facebook posts, 170,000 "likes," some posts had 10,000 engagements
- Materials produced by UNICEF, WHO, and Ministry of Health were republished on web site (over 2 million hits/month)





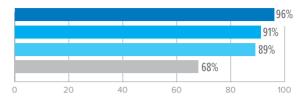
# **Results**

UNICEF commissioned three post-campaign monitoring reports to a local research institution to provide comparable data across a set of variables on the impact of the communications efforts. Overall, monitoring found that more than 95 percent of Ukrainians were aware of the polio vaccination rounds and were reached through at least one medium of a diverse media mix. Post-campaign monitoring showed that 91 percent of caregivers had seen polio-related messages on television, 54 percent in clinics, 45 percent in banners on web sites, 31 percent on billboards, 17 percent in kindergartens, 13 percent in schools, 10 percent on the radio, and 6 percent in metro and train stations. Overall, 57 percent of parents found the polio ads to be credible, 73 percent thought they were easy to understand, 42 percent were inclined to tell others about the ad, and 42 percent were further motivated to vaccinate their children.

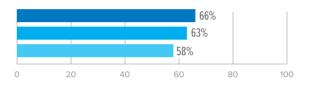
Awareness of polio among caregivers and parents increased from 68 percent before the outbreak to 89 percent during Round 1, 91 percent during Round 2, and 96 percent during Round 3. The percentage of parents who were aware of the polio outbreak in the country increased from 58 percent in November 2015 to 66 percent in February 2016, and almost all of those who knew about the outbreak were also aware of the response: 50 percent of all respondents during the first round, increasing to 63 percent in the second and 70 percent in the third. The percentage knowing that polio can cause paralysis increased from 27 percent at baseline to 49 percent in Round 1, 47 percent in Round 2, and 56 percent in Round 3. By the end of the third round, 71 percent of caregivers understood that an additional polio vaccine was necessary for their children, up from 50 percent in Round 1.

The percentage of vaccine refusals due to fear of side effects or complications decreased from 67 percent before the outbreak to 38 percent by the third round. Of those who did not vaccinate their children in the third round, 21 percent made that decision because their child was ill (down from 38 percent in Round 1), 19 percent because they believed that their child was fully vaccinated, 16 percent due

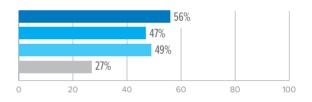
## Awareness of polio among parents and caregivers



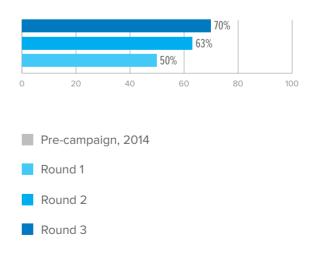
## Awareness of polio outbreak in Ukraine

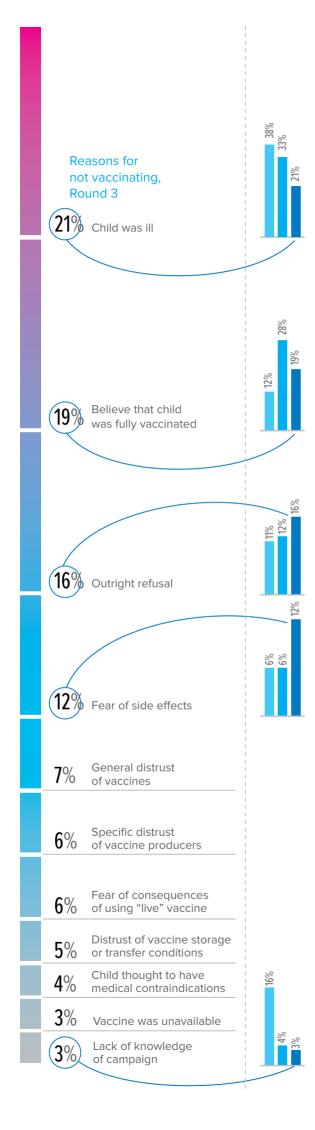


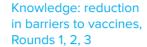
## Knowledge that polio causes paralysis



## Heard about the polio vaccination rounds







to outright refusal, 12 percent because of fear of side effects, 7 percent because of general distrust of vaccines, 6 percent because of specific distrust of producers of the vaccine, 6 percent due to fear of the consequences of using "live" vaccine, 5 percent because of distrust of vaccine storage or transfer conditions, 4 percent because the child was thought to have medical contraindications at the time of the procedure, 3 percent because vaccine was unavailable, and 3 percent due to lack of knowledge of the campaign.

Deeper analysis of the reasons for non-vaccination is required going forward. Even after months of intensive communications, it is clear that some people remain reluctant to vaccinate their children. Reaching their specific concerns is a puzzle unlikely to be solved at the national level; it requires activities tailored to each specific recalcitrant region and district.

The impact of the communications campaign extended far beyond parents and the general public. Many significant public figures in the health field, from academics and physicians to government officials, shifted over the course of the campaign from the role of outbreak denier to that of immunization promoter. This conversion and mobilization of key opinion influencers had a synergistic effect in turn on parents and caregivers. UNICEF and WHO field monitors were also important in this respect. Their extensive tours of the country, providing motivation, technical support, and confidence for health workers and parents, encouraged vaccination at every opportunity.

### QUALITATIVE ANALYSIS IN LOW-COVERAGE REGIONS (KYIV, LVIV, AND ODESSA) FOUND THE FOLLOWING KEY BARRIERS TO VACCINATION:

- Vaccine supply shortages
- Fear of potential vaccine side effects
- Lack of confidence in conditions related to vaccines, including vaccine quality, effectiveness, and transportation/storage, medical checkups of children prior to administration of vaccines, and appropriate treatment in case of adverse events
- Low levels of knowledge about vaccines, widespread misconceptions, and myths, including lack of confidence that a polio outbreak actually happened in Ukraine
- Low levels of knowledge about potential risks and consequences of refusing vaccines
- General distrust in the public health care system in Ukraine
- Powerful anti-vaccine propaganda
- Low levels of competency of district doctors working in public polyclinics
- Need for written consent of parent prior to administration of vaccine
- Legal liability of vaccinators for adverse events following vaccination
- Long waiting time for vaccination and/or vaccination nurse's hostile attitude
- Religious and cultural beliefs (among Seventh-Day Adventists and Jehovah's Witnesses)



### MAINTAINING MOMENTUM AND PRESERVING COMMITMENT

The six-month outbreak assessment, conducted in late April 2016, concluded that transmission of cVDPV has likely stopped. Ukraine's focus now shifts to restoration of routine immunization, as well as strengthening preparedness for potential future outbreaks using lessons learned from the 2015-2016 experience. Replenishment of routine immunization antigens across the country is essential. The government has collected all tOPV from the field back to the central level and transferred US\$ 13.5 million to UNICEF to procure vaccines, including 2.7 million doses of bOPV. The first tranche of 1.3 million doses of bOPV is to be distributed following final clearance by the government. UNICEF has committed over US\$ 200,000 for logistics and distribution.

Overall, the Ukrainian public reacted appropriately and well to this outbreak. Many parents were relieved to have their children vaccinated after so many years of low coverage. The communications campaign set a new, high bar for planning and delivering evidence-based communication strategies and activities in the country. Continued and even accelerated engagement with civil society organizations is key to maintaining this momentum, helping caregivers to insist on their rights to protect their children's health. Trust has been built, but it is fragile. The work to further sensitize and mobilize parents and caregivers is far from over.

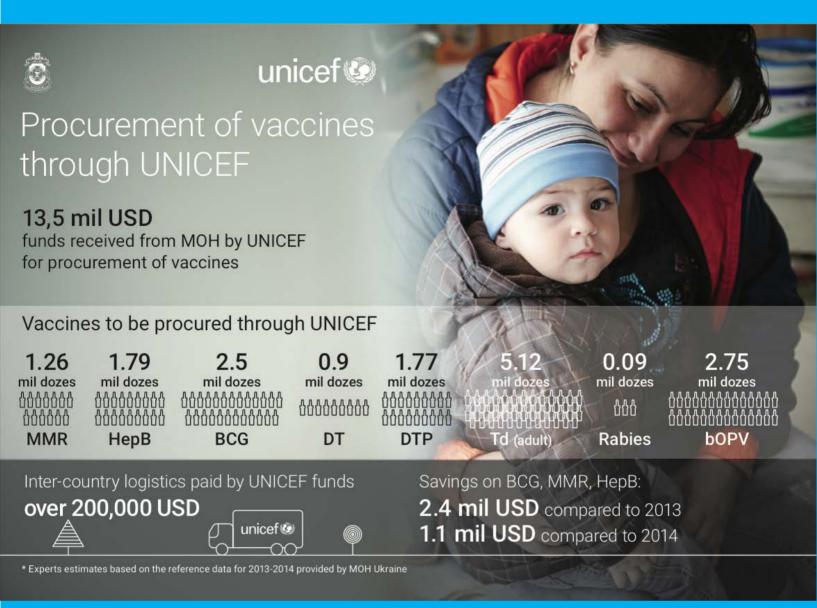
Ukrainian health workers remain understandably cautious. They fear becoming scapegoats if something goes wrong with a vaccinated child in a sensationalized media environment. International teams can usefully prioritize continued engagement with frontline vaccinators, encouraging them to understand the importance of active promotion of vaccines. Equally importantly, pressure must continue for legislation that removes the threat of sanction – or jail – for health workers and officials in the case of adverse events following immunization.



#### THE APRIL 2016 OPV "SWITCH"

- Trivalent OPV (tOPV) contains all three poliovirus serotypes (1, 2, and 3).
- The last case of wild poliovirus type 2 occurred in 1999.
- Bivalent OPV (bOPV) removes type 2. This is a major step toward elimination of cVDPV and VAPP (vaccine-associated paralytic polio). Over 90 percent of cVDPV cases were due to the type 2 component of tOPV.
- The global switch from tOPV to bOPV was coordinated in April 2016 to avoid any risk of new cVDPV type 2 emergence.
- The two cases of cVDPV in Ukraine in 2015 were type 1.

Ironically, the 2015 outbreak enabled strengthening of Ukraine's immunization team and coverage in ways that would not have been possible otherwise. It shook up the situation. Professional capacity was strengthened. The lack of vaccine in the country came into the spotlight and captured the global attention of GPEI and donors. Now, UNICEF is procuring vaccines (as well as antiretroviral drugs), with government funds, on behalf of the health ministry. International procurement procedures are becoming better



## MOVING FORWARD: UNICEF EFFORTS ON ROUTINE IMMUNIZATION

- Vaccine procurement and management.
- Focus on routine immunization using capacity created during polio campaign
- Routine immunization communication campaign
- Television, posters, flyers
- Fact sheets for health care providers
- Ongoing capacity development



understood and accepted, with local suppliers invited to submit bids for some medicines. Efforts are under way to establish a national system of procurement that is transparent and efficient, so that Ukraine can eventually shed its reliance on global partners and build its own capacity to forecast, stock, distribute, and replenish vaccine. The prime minister has promised to appoint a high-level technical working group on the health sector.

Licensing and registration issues, however, are a source of concern. Through new rules being imposed for registration, competition between suppliers continues to be effectively suppressed. Vaccines for polio and tuberculosis are currently pre-positioned in Ukraine, but registration chokeholds are preventing their distribution. The government has introduced short-term procedures that apply to humanitarian purchases, but vaccines bought with government money fall outside these new rules. Ukraine has seen multiple plans for health sector reform in recent years, but very few have come to fruition. Political advocacy must be sustained until results materialize in the form not of mere words and promises, but of tangible action. International norms include the expectation that governments will provide minimum standards of public services; those services include childhood vaccines. Ukraine has proven that it can fulfill this obligation to its citizens, and it should be expected to continue. Turning the polio crisis into an opportunity requires building on acquired trust at all levels: harnessing accumulated skills and energy, documenting learning, and maintaining collaboration and coherence around messaging, all to create

confidence not just in the polio vaccine, but in all vaccines.

After an April 2016 change of government, Ukraine was left for two months without a permanent health minister (the only cabinet department in this situation). Reform momentum in the sector decelerated. Without political pressure, polio will once again recede into the background, the vaccine agenda dominated by vested business interests. It is critical to be strategic in emphasizing the level of threat still posed by polio and other infectious diseases in Ukraine, and to implement bold, coordinated strategies to press this agenda at the country's highest political levels.

The political agenda surrounding Ukraine is complicated. Infectious disease in general, and polio in particular, are at risk of being lost inside the larger narrative of ongoing humanitarian conflict, sanctions, and non-government-controlled regions in the eastern part of the country. Well-known issues with public sector management might discourage investment of health resources into a country with such significant public procurement challenges. But donors must not become distracted or complacent. Until Ukraine's unique challenges preventing the immunization of each child are fully addressed, it remains an obstacle on the path to a polio-free world. Only sustained, strategic, high-level political will and advocacy, coupled with regained commitment within Ukraine to immunization as a core child right, can prevent loss of momentum, accelerate change, and solidify hardwon gains.

### **ACKNOWLEDGEMENTS**

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- UNICEF Country Office, Regional Office, and Headquarters
- WHO Country Office, Regional Office, and Headquarters
- United States Centers for Disease Control and Prevention (CDC)
- Bill and Melinda Gates Foundation
- Global Polio Eradication Initiative (GPEI)
- United States Agency for International Development (USAID)
- European Commission Humanitarian Aid and Civil Protection (ECHO)
- Rotary International
- Radio Free Europe/Radio Liberty (RFE/RL)
- Voice of America (VoA)
- Swiss Government

Their contribution to containment of the outbreak and restoring vaccine coverage across Ukraine in a uniquely challenging environment is recognized and applauded.

This report was generated through the collaboration of those partners, with generous contributions of time and expertise from the following international colleagues and representatives of regional and country offices. The authors express their sincere and significant thanks to:

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