

Outbreak in the Middle East

July 2014

War in Syria Opens the Door to an Old Enemy

# Polio



More than eight months after the start of the polio outbreak in the Middle East, mass global action is needed to guard the progress made in protecting children in Syria and across the region. The challenges are immense, especially how to gain regular access to approximately 3 million children in Syria and some 25 million in the region as a whole.

This report sets out the steps needed to stop the outbreak and eradicate polio in the Middle East. This is the only way to ensure no more children in Syria, or the region, are affected by this crippling and incurable virus.

Driving home the need for decisive action, the Director-General of the World Health Organization (WHO) declared on 5 May 2014 that the international spread of polio is a Public Health Emergency of International Concern<sup>1</sup>. This is only the second time WHO has ever issued such a declaration. The international spread of polio during what is normally the low-transmission season, including within the Middle East, is an extraordinary event that constitutes a major public health risk to other countries and requires a concerted international response.



April 2006 - A child receives a dose of oral vaccine from a member of a mobile vaccination team in the Karm Al Afandi neighbourhood of the city of Aleppo. At that time, Syria had made considerable progress towards improving the situation of children and women and was on track to achieve almost all Millennium Development Goals.

1. WHO statement on the meeting of the International Health Regulations Emergency Committee concerning the international spread of wild poliovirus, May 2014.

## Collateral Damage of Syria's War

In a Syrian city shattered by war, a small boy peers from a bullet-pocked doorway. His eyes go wide when he sees Salma, before he runs off into the rubble.

Meanwhile, vaccine cooler strapped across her shoulder, Salma keeps knocking on one door after another. A mother squints as she comes into the stark sunlight. She holds a baby at one hip, while a toddler tugs at the hem of her tunic.

Across Syria and another six countries in the region<sup>2</sup>, medical staff and volunteers are facing – and overcoming – daunting obstacles on their mission to reach every last child with polio vaccine.

Vaccinators go from door to door, travel in mobile clinics, and set up in medical centres in war-torn Syrian cities, villages and towns. To reach children they may have to cross up to 50 military checkpoints, where their vehicles are sometimes stopped at gunpoint.

In neighbouring countries, medical teams and vaccinators are travelling from one tent to another in refugee camps and informal settlements, providing vaccines in schools, hospitals and medical centres, at border points and at airports.

The region's largest-ever mass polio immunisation campaign is reaching more than 25 million children with multiple doses of the vaccine. But many children in Syria and Iraq remain unreached because they live under siege or in areas where the conflict is escalating. As long as this is the case, polio – a virus that does not need permission to travel – will never be contained and the risk of it spreading within Syria and to neighbouring countries and beyond will continue to threaten the lives of millions of children.

“Some villages in Syria are currently inaccessible due to ongoing violence and fighting. We missed many children living north of the Euphrates River in Deir Ezzor over the past two rounds,” says a UNICEF facilitator in eastern Syria. “However, we will not give up. We will continue to push for access to all Syrian children, wherever they live.”



2. Phase 1 (initial six months of the response) included seven countries (Syria, Iraq, Lebanon, Jordan, Turkey, Palestine, and Egypt). Phase 2 of the response (from May 2014) covered eight countries with Iran added after the first case was reported in Iraq

## War Paves Way for Return of Polio

In March 2011, Syria's crisis began. The fighting, and a failure by parties to the conflict to respect the neutrality and sanctity of health facilities, have destroyed the country's once highly developed health services. Now, as well as opening the door to grave physical dangers, the war has also ushered in life-threatening health problems, ranging from malnutrition to polio, a long forgotten enemy in the region.

On 29 October 2013, WHO reported that the first case of polio since 1999 had been detected in Syria.



A number of factors have contributed to its return:

### 1. Disruption of routine immunization

Most children born since the Syrian war have missed some or all of the four (or more) polio vaccinations they should have received as part of the routine immunisations children need in their first five years, and which newborns and young children require to remain healthy even in regular times, let alone in a warzone.

Immunization rates across Syria have fallen from 99 per cent pre-war to just 52 per cent in 2012<sup>[3]</sup>.

### 2. Devastating damage to Syria's health infrastructure and an exodus of health workers

An estimated 60% of Syrian hospitals have been destroyed or damaged, 70% of health centres are either damaged or out of service, and fewer than a third of public ambulances and health centres still function. Production of medicines has fallen by 70% and prices have risen so high that few people can afford to buy them<sup>[4]</sup>.

Many of Syria's first responders and emergency room medics, including doctors and nurses, have been killed or injured. Half of Syria's doctors have left the country<sup>[5]</sup>. In Aleppo, it is reported that there are now only 40 doctors for a population of 2.5 million people. Once there were more than 2,000<sup>[6]</sup>.

Nearly all vaccination, supply and service vehicles have been damaged or are permanently out of service<sup>[7]</sup>. Most critically for polio response, cold chain equipment that keeps polio vaccine at the right temperature until it is administered has been lost in a number of districts.

### 3. Continuous displacement and crowded, unhygienic living conditions

The polio virus is particularly active in areas with poor water and sanitation services as it spreads by contact with, or consuming food and drinks contaminated by faeces.

In crowded environments, the speed of transmission can be amplified when vulnerable children are exposed to the virus.

The number of Syrian children forced to flee their homes, either as refugees or within the country's borders, is staggering. More than 3 million children are internally displaced while about 1.5 million children are refugees in neighbouring countries.

Both inside and outside Syria, places of refuge are crowded and often highly unsanitary. Some families are squatting in public shelters where 70 or more people share a single toilet. Others have moved into already crowded family homes, tents, chicken coops and garages. A third of Syria's water treatment plants no longer function. The amount of water consumed by Syrian families has fallen by 40% compared to pre-crisis levels in 2011 and treatment of the country's sewage has halved<sup>[8]</sup>.

These conditions provide a perfect environment not only for the spread of polio but also for typhoid, an infection caused by the salmonella bacterium with 1,650 cases of typhoid have been reported in Deir Ezzour<sup>[9]</sup>; for hepatitis A, a highly contagious viral liver disease; and for leishmaniasis, a skin infection that flourishes in situations where people's immune systems are weakened and conditions are unsanitary.

### 4. Missing children

An estimated 765,000 children under the age of five currently live in hard-to-reach areas within Syria and lack regular access to vaccines. Over a two-year period during the conflict, at least 500,000 children did not receive the polio vaccine, due to violence, population displacement and access restrictions from both parties to the conflict<sup>[10]</sup>.

When aid convoys have managed to enter besieged areas they have carried polio vaccine as a priority item. However, even when children are physically accessible, they may not receive the vaccine due to the ongoing violence. Syria does not have recent experience of polio and caregivers sometimes hesitate before taking their children to get vaccinated, do not prioritize polio vaccination among the other survival challenges they face, or do not realize the importance of ensuring children receive multiple doses of the vaccine.

3. UNICEF and WHO Polio Response Strategy, November 2013

4. Save the Children: A Devastating Toll. The impact of three years of war on the health of Syria's children. March 2014

5. UNICEF: Under Siege. The devastating impact on children of three years of conflict, March 2014.

6. Joint statement by heads of UN humanitarian agencies on Syria, April 2014.

7. OCHA Humanitarian Bulletin, Issue 36, 8 October-4 November 2013.

8. UNICEF: Drying up. The growing water crisis facing Syria and the region, June 2014.

9. UNICEF and WHO call on parties to the conflict to stop targeting access to safe water, 3 July 2014

10. Press release: UNICEF and senior Syrian officials agree on urgency of reaching more war-affected children, as UNICEF Executive Director Visits Syria, 29 October 2013.

## Inside Syria: Vaccination in the Line of Fire

Since the announcement of the polio outbreak in the Middle East, 36 Syrian children have been paralysed by polio. Of these, 25 are in the contested governorate of Deir Ezzour, five are in Aleppo, three in Idlib, two in Al-Hasakah and one in Hama.

In a country facing one of the most violent conflicts in recent history, the obstacles to reaching every last child with multiple doses of the vaccine are extreme. But the goal is clear.

“We need to get two drops of polio vaccine into the mouth of every child under the age of five, regardless of their previous immunization history, every time there is a campaign,” says Khoussama, a medical worker at a health centre in Qudssaya, Rural Damascus. “If we can do that, the virus won’t be able to find a single child to infect, and we can put a stop to this disease.”

Inside Syria, despite heavy fighting in many areas and challenges of access, seven vaccination rounds took place between December 2013 and June 2014 through close cooperation with local partners and volunteers. They were held in schools and health centres, on public buses and at the doorsteps of Syrian homes.



*A volunteer from the Syrian Arab Red Crescent crosses a river during a polio campaign in Al-Mayadin, Deir Ezzour.*

UNICEF led the communication campaigns and has provided 18 million doses of polio vaccine, four freezers and 8,661 cold boxes. WHO has deployed international consultants to assist with the strengthening of acute flaccid paralysis surveillance and the training of Ministry of Health staff at the national, governorate and district level. In addition to covering the implementation costs of polio campaigns, WHO facilitated the revision of micro-plans, the training of vaccinators, and the training and deployment of 445 independent monitors to conduct monitoring after every campaign.

A UNICEF health facilitator in the northeastern province of Deir Ezzour has braved intense fighting to deliver vaccines, often carrying vaccine coolers on foot to reach remote communities. “An airstrike in May last year destroyed the bridge that connects the two river banks. Now, together with two or three brave volunteers, we take the boat to reach the other side,” he says.

In a vaccination round in April 2014, 4,580 health workers participated in the campaign at fixed health centres, and an additional 2,563 travelled around the country in mobile clinics. In Deir Ezzour, where the first polio cases were found, vaccinators reached 60,000 children in October 2013, just days after these cases were announced.

“In the beginning people felt afraid. They started to ask us who we are,” says Muhammed, a local volunteer working to immunise children against polio in Syria’s Al-Hasakah governate, where heavy fighting has taken place. “I have taken the vaccine myself in front of the families, just to show them it is safe.”

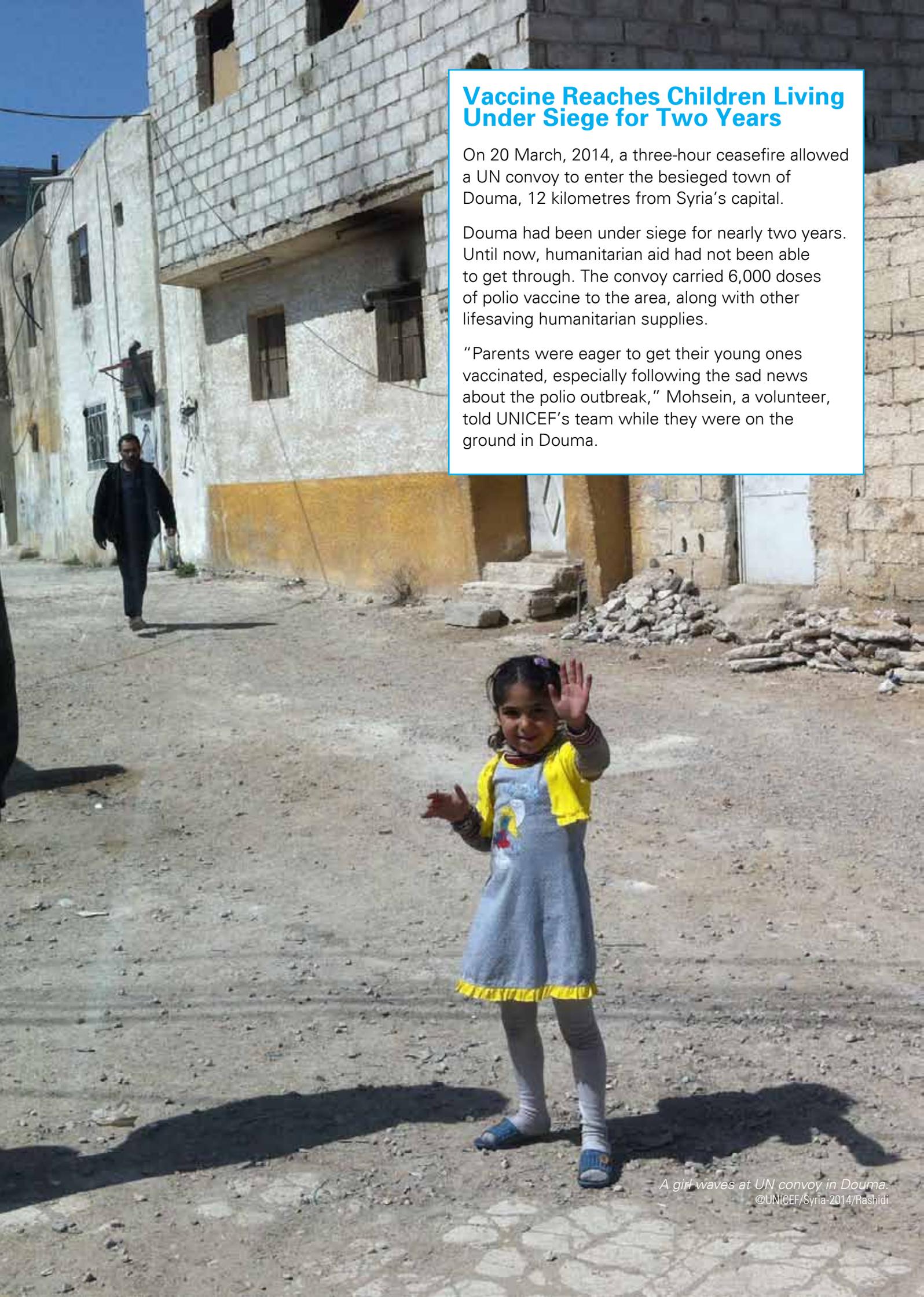
It is people like Muhammed and other volunteers, social mobilizers, and polio vaccinators who are the real “polio warriors” in this humanitarian crisis. They are on the front lines of this fight against polio in very demanding, often insecure areas, and they all have one goal – to protect the children by getting two drops of polio vaccine into their mouths during each and every campaign, averting the risk of life-long disability and death.

## Vaccine Reaches Children Living Under Siege for Two Years

On 20 March, 2014, a three-hour ceasefire allowed a UN convoy to enter the besieged town of Douma, 12 kilometres from Syria's capital.

Douma had been under siege for nearly two years. Until now, humanitarian aid had not been able to get through. The convoy carried 6,000 doses of polio vaccine to the area, along with other lifesaving humanitarian supplies.

"Parents were eager to get their young ones vaccinated, especially following the sad news about the polio outbreak," Mohsein, a volunteer, told UNICEF's team while they were on the ground in Douma.



*A girl waves at UN convoy in Douma.*  
@UNICEF/Syria-2014/Rashidi

## A Mega-Vaccination Campaign in a Battered Region

Polio does not respect borders. Recognising the risk of further spread, eight countries across the Middle East have launched vaccination campaigns since the detection in Syria of a strain of the polio virus that originated in Pakistan.

Across the Syrian border in Iraq, chubby-cheeked, six-month-old Moossa is a heart-wrenching reminder of polio's threat to spread within the region. Iraq declared a polio outbreak on 31 March, 2014, when six-month-old Moossa's paralysis was confirmed as polio. Moossa had not been immunized. Nor had his four siblings.

"I am working so hard to support my family, and had no time to think about taking my children for vaccinations," says Moossa's father, Abood Hezam, who works as a driver to support his family in a poverty-ridden neighbourhood outside Baghdad. "I truly regret this now. If only Moossa had been vaccinated, he would have been polio free now. I never thought my child could be paralyzed."

Moossa's story proves yet again that wherever one child goes unvaccinated, every child is at risk. Since Moossa became ill, another child in Iraq has already contracted the virus.

"The case in Iraq after a 14-year absence is a reminder of the risk currently facing children throughout the region," says Maria Calivis, UNICEF Regional Director for the Middle East and North Africa. "It is now even more imperative to reach every child multiple times, and to do whatever we can to vaccinate children we could not reach in previous rounds."

In the months since Syria's polio outbreak began, the region's largest-ever mass immunisation campaign has been carried out. The Global Polio Eradication Initiative, which includes UNICEF, WHO and other key global partners, has led the effort along with national governments and local partners on the ground. Children across Iraq, Egypt, Lebanon, Jordan, Turkey, Palestine and Iran are being reached with the vaccine between three and six times, and the aim is to repeatedly cover more than 25 million.

Challenges around the region are immense. The vaccine must be swiftly and repeatedly delivered to children across eight countries. Mobile medical teams travel long distances to remote areas to reach children. In some parts of the region, door-to-door campaigns where vaccinators go directly to people's homes are being conducted. The campaigns aim to reach every refugee child crossing Syria's border – a challenging task, since many refugees remain unregistered with local authorities, and more than

70% of Syrian refugees live outside refugee camps in urban areas.

Lebanon hosts the largest number of Syrian refugees. There are no official refugee camps in the country, yet more than 1 million Syrians have been registered<sup>[11]</sup>. Many live in informal tented settlements with little or no access to basic services, and over half are children<sup>[12]</sup>.

To help ensure all children crossing into countries receiving refugees are vaccinated, polio drops have been given upon arrival at airports, and vaccination stations have been set up at official border points.

UNICEF, WHO, Ministries of Health and other partners have launched regional and national public awareness campaigns to reach parents with the message that it is crucial for children under the age of five to take the vaccine multiple times.



Moossa, Iraq's first case of polio in 14 years.

11. Syria Regional Refugee Response. Inter-agency Information Sharing Portal. UNHCR, July 2014

12. UNICEF Syria Crisis Monthly Humanitarian Situation Report, June 2014

# Ending Polio in Syria and Iraq – Not a Mission Impossible

UNICEF and WHO are calling for the following critical actions be taken to end the polio outbreak in Syria and Iraq before it spreads further.

## 1. End the violence in Syria now

Children have suffered for far too long. Syria's polio outbreak is firm evidence of war's far-reaching impact on children. It threatens individual children and the future of generations of children across the region.

## 2. Grant immediate and unhindered access to more than 765,000 children under the age of five in hard-to-reach areas inside Syria

Some children living in hard-to-reach areas in Syria and where heavy violence is ongoing have received polio vaccine thanks to commitments from concerned parties on the ground. But these children are not being reached as often or as consistently as is needed. Children's health and immunity levels must be prioritised by all parties to the conflict, to stop the spread of the virus.

All parties to the conflict are urged to facilitate unconditional, ongoing humanitarian access to children in need, using all available routes.

## 3. Within Syria, guarantee the safe passage of health workers and protect medical vehicles and other cold chain equipment

Health workers and vaccinators are acting heroically every day to deliver the polio vaccine to children in Syria. These workers must be guaranteed protection and safe access to continue their mission to vaccinate all children, wherever they are across Syria. The cold chain, including medical vehicles, is vital to ensure the efficacy of the vaccine. It must never be targeted.

## 4. Raise awareness on polio and champion the need to vaccinate all children under the age of five across the region

Region-wide public awareness must be drummed up, and caregivers inspired to take action. Caregivers may not have a full understanding of the risk to their own children, especially in countries where polio has not been seen for many years.

Within Syria, war already poses families with many daunting challenges to raising healthy, happy children. Polio may be perceived by some as a lower risk than venturing out onto still-volatile streets. It is important to ensure caregivers understand the clear and present risk of polio not just in Syria but throughout the region.

## 5. Secure funding for continuous vaccination campaigns across the region

To stop the virus from spreading any further inside Syria and beyond its borders, more vaccination campaigns are planned from now until the end of 2014. These campaigns aim to reach 25 million children in eight countries.

The cost to implement the second phase of the campaign comes to US\$59 million. This covers procuring and delivering vaccines to children, including the hardest-to-reach; providing technical assistance to Ministries of Health for the training and recruitment of health workers; raising awareness on the need to vaccinate children among local communities; and maintaining the cold chain to ensure the vaccine remains safe and effective.



Image from awareness raising campaign

# Polio Crisis In Numbers

Since October 2013:

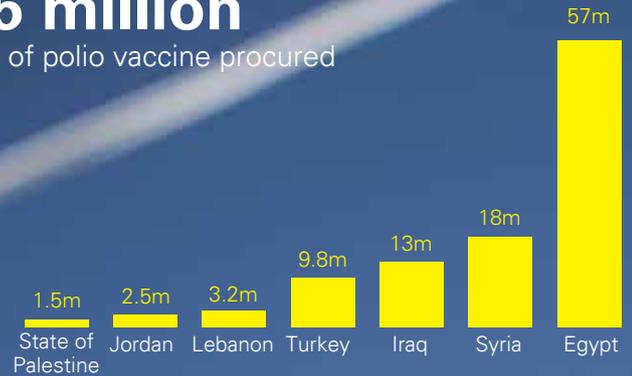


**38** polio cases **confirmed**,  
36 in Syria and 2 in Iraq

**105 million**  
doses of polio vaccine procured



**25 million** children under the  
age of 5 **reached**, multiple times in **Syria**,  
**Lebanon, Iraq, Jordan, Turkey, Egypt**,  
**Palestine** and **Iran**.



**13,819** cold boxes to transport the vaccines  
**544** freezers to keep them safe

Inside Syria:



**7,143** health workers  
participated in the campaign



**4,580** in health centres



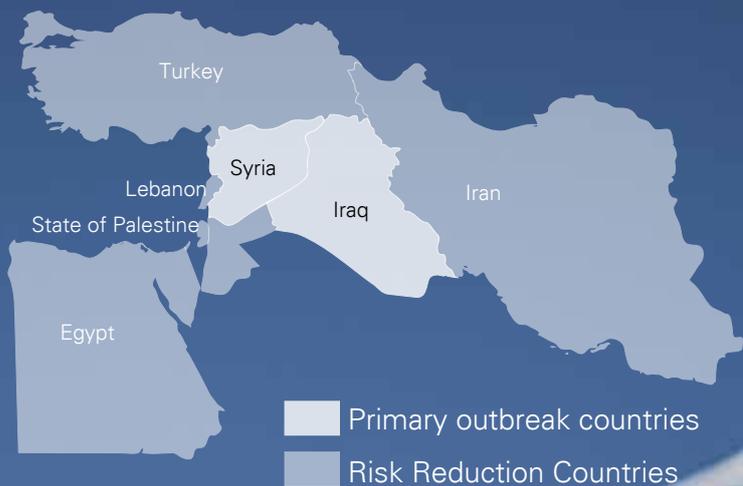
**2,563** in mobile teams



**765,000** children under the age of 5 living in hard-to-reach areas in Syria not  
vaccinated on a regular basis with Polio vaccine.



**59.3 million** (US\$) is the cost of the campaign's second phase



*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.*



*Children in the Domiz refugee camp in Northern Iraq.*

**Cover Photo:**

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