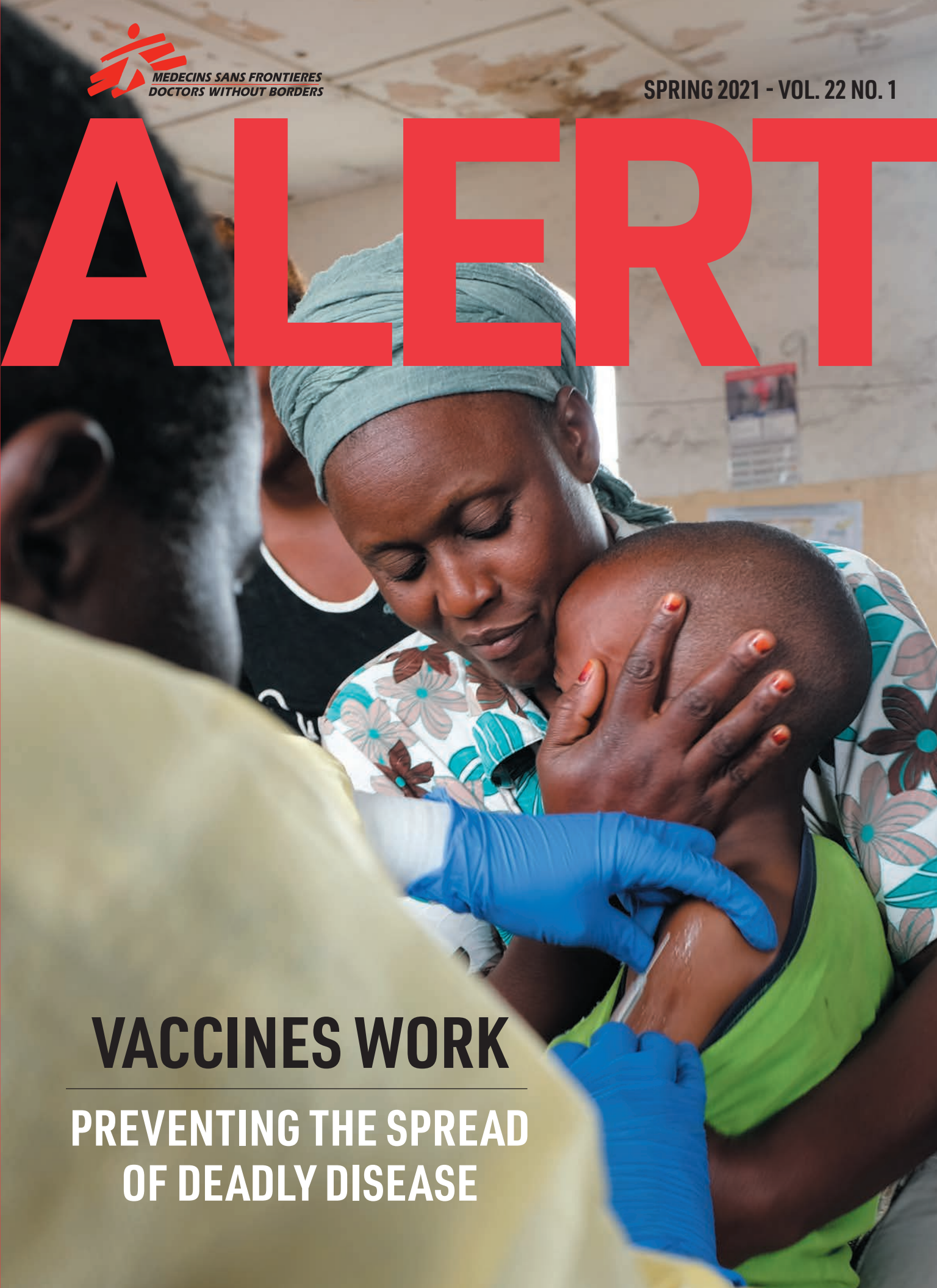


# ALERT



**VACCINES WORK**

**PREVENTING THE SPREAD  
OF DEADLY DISEASE**



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**ABOVE:** An MSF health worker immunizes a child against cholera during a 2016 vaccination campaign in Lusaka, Zambia, during which MSF pioneered partial dosing to control the spread of an ongoing outbreak. © Laurence Hoenig/MSF



Dear Friends,



**As a child, I never had a pediatrician. My health care was a patchwork of free clinics and emergency room visits.**

**The mobile clinics that traveled through the poor neighborhoods in and around Pittsburgh often landed at our local fire station. The place where our parents held social gatherings on Friday nights was transformed on Saturday mornings to accommodate those in need.**

**Our community leaders organized well-child checkups, scoliosis screenings, sports physicals, vaccinations, and everything in between.**

My parents lived through the polio era in the very city where the first injectable polio vaccine was developed in the 1950s. Families who had witnessed the polio epidemic firsthand were grateful and relieved to have this new vaccine. The work of Dr. Jonas Salk at the University of Pittsburgh is now part of the annals of history and intertwined with modern-day virology. My hometown drafted some of the key blueprints of public health and science.

Today, we should remember the good doctor's reply when a journalist asked him who owns the polio vaccine. "The people," Dr. Salk responded. "There is no patent. Could you patent the sun?"

Back when I was growing up, many parents purposely exposed their young children to chickenpox in an effort to exert some control over the timing and severity of what was considered an inevitable disease. Now the varicella vaccine is part of the routine immunization schedule across the US.

As a clinician, I began my internship in 2000, just as debates were swirling around the use of the traditional Papanicolaou test—better known as the Pap smear—to look out for cervical cancer. At the time, it was the only method but there was growing evidence around the role of the human papillomavirus (HPV) in precancerous changes to the cervix. As young physicians, we were vocal and adamant about the need to incorporate the new HPV testing in our clinical practices to reflect a more modern and patient-centered model of care. Now we know that cervical cancer is preventable with the HPV vaccine, part of a child's standard vaccine schedule in the US. Yet in many of the places where MSF works, HPV vaccinations remain out of reach and cervical cancer still claims too many lives.

With the world's focus today on the availability and usefulness of COVID-19 vaccines, I am reminded of those early mornings in a Pittsburgh firehall. The fear, the uncertainty, and the myriad practical logistics are still very much on my mind as MSF teams around the world

try to reach poor and vulnerable communities to deliver medical care. My experience with free clinics here in the US very much informs my commitment to underserved populations in other countries, and to the 45,000 staff members working hard in all of our medical projects.

I am thinking about the incredible impact of vaccines in my lifetime, and marveling at the breadth of MSF's work to expand access to these lifesaving tools. Right now, we are working hard to secure fair and equitable access to COVID-19 vaccines everywhere they are needed, including supporting vaccination efforts in Puerto Rico and New York City. At the same time, we've been conducting vaccination campaigns in response to other outbreaks overshadowed by the pandemic. We're also hustling to maintain routine vaccinations under extraordinary circumstances.

I hope this issue of *Alert* helps you understand more about how vaccines work, and how MSF works. As we prepare to mark the 50th anniversary of our founding in December 1971, we find ourselves looking back to reflect on lessons learned and looking ahead to anticipate future challenges. We'd love to hear from you. If you have a question or a story idea you'd like to see covered, drop us a line at [alert@newyork.msf.org](mailto:alert@newyork.msf.org)

Thank you for your support as we continue this vital work.

Sincerely,

**Dr. Africa Stewart**

President, MSF-USA Board of Directors



# EMERGENCY VACCINATIONS

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**WHAT WE'VE LEARNED FROM  
RESPONDING TO EPIDEMICS**



In 2015, MSF launched a vaccination campaign to immunize tens of thousands of children after a cholera outbreak in Tanzania's Nyarugusu refugee camp, where more than 100,000 people had arrived after fleeing unrest in neighboring Burundi. © Erwan Rogard/MSF





As people all over the world are confronting the COVID-19 pandemic, many are seeing for the first time the critical role vaccines can play in bringing deadly disease outbreaks under control.

“I think people in Western countries generally tend to forget about the importance of vaccination because we’re all vaccinated [against most common diseases],” said John Johnson, Doctors Without Borders/Médecins Sans Frontières (MSF) medical vaccination referent for epidemic response. “So people don’t see what happens when you’re not.”

MSF teams see firsthand what happens to communities when vaccines are out of reach—from measles epidemics in remote regions of Democratic Republic of Congo (DRC), to cholera outbreaks in war-torn Yemen, to a rare outbreak of diphtheria in refugee camps for Rohingya people in Bangladesh. In places with fragile or collapsed health systems, people often miss out on routine vaccinations that protect against certain diseases. This is especially true during humanitarian emergencies—including conflicts and natural and human-made disasters.

With decades of experience in outbreak response, we have learned some important lessons about how to use vaccines alongside other tools to effectively end an epidemic. We often have to adapt and innovate to meet the evolving needs.

### RECOGNIZING THE NEEDS

When an Ebola outbreak hit northeastern DRC in 2018, many people living in affected areas wondered why health workers from around the world rushed in to respond. They were facing many other imminent threats, including diarrheal diseases, malaria, and pneumonia. A major measles epidemic swept the country in the shadow of Ebola, ultimately killing more than 7,000 children—triple the official death toll of the headline disease.

“There were hundreds of thousands of cases of measles, and tens of thousands of deaths in DRC and neighboring countries between 2019 and 2020,” Johnson said. “At the same time, there’s a massive international response mobilized for an Ebola outbreak in DRC, where there were about 3,500 cases and nearly 2,300 deaths. Which is important, and it’s terrible—but what you see is this stark contrast. Measles is preventable, and yet there was so much less attention paid to that huge outbreak because everyone was focused on Ebola, and then, of course, on COVID.”

Throughout the measles epidemic MSF deployed emergency teams in 22 of DRC’s 26 provinces, vaccinating more than 2.3 million children. We also provided medical care for children sickened by the disease, and advocated for a stronger response from national and international actors.



During high-profile emergencies like Ebola and COVID-19, activities like routine vaccinations for measles are often put on hold, which can lead to a resurgence of preventable diseases, as in DRC, where cases of measles are once again on the rise despite health authorities declaring an end to the epidemic in August 2020. Additionally, moving staff and medical equipment to “new” emergencies can lead to gaps in care for those who fall ill from other diseases that are even more prevalent. “A one-track focus on COVID-19 will sow the seeds of other major health crises,” warned Emmanuel Lampaert, MSF operations coordinator in DRC.

That’s why it’s critical for the international aid sector to understand and address the real health needs of a community.

### EARNING THE COMMUNITY’S TRUST

Alongside the measles response, MSF was still working to bring an end to DRC’s Ebola epidemic in North Kivu, with the country’s tenth and largest-ever outbreak finally declared over in June 2020. (This year we supported the national response to the country’s twelfth Ebola outbreak, also centered in North Kivu.) However, we learned some crucial lessons over the course of this intervention—including that having a safe and effective vaccine is not enough. “The most important thing is to engage communities,” said Dr. Nicolas Peyraud, MSF vaccination advisor. “Vaccination campaigns cannot be effective if they don’t reach people.”

Many people here were understandably skeptical about getting the newly available vaccine—which went from being evaluated in a clinical trial and then more widely used over the course of the outbreak. Some people didn’t even believe Ebola existed. And, regardless, it wasn’t their main concern. This was a conflict-affected area



**CLOCKWISE FROM FACING PAGE:**

A mother holds her daughter as she receives a vaccine at MSF's primary health care clinic in the Kamrangirchar area of Dhaka, Bangladesh. 2014 © Brian T. Scott

An MSF health worker vaccinates a child at a camp in Phetchabun, Thailand, where thousands of Hmong people took refuge after fleeing Laos. 2007 © Francesca Di Bonito

An MSF team uses motorcycles to transport measles vaccines packed in insulated containers to maintain the cold chain during a massive measles vaccination campaign in Democratic Republic of Congo. 2021 © Franck Ngonga/MSF

When a truck that was part of a 2018 MSF vaccination campaign convoy broke down on its way to Mbera refugee camp in Mauritania, its cargo was redistributed to other vehicles and the team was on the road again in minutes. © Nyani Quarmyne



**DURING HIGH-PROFILE EMERGENCIES LIKE EBOLA AND COVID-19, ACTIVITIES LIKE ROUTINE VACCINATIONS FOR MEASLES ARE OFTEN PUT ON HOLD, WHICH CAN LEAD TO A RESURGENCE OF PREVENTABLE DISEASES.**





**TOP ROW, FROM LEFT:** An MSF health promoter spreads the word about a cholera vaccination campaign during a 2016 outbreak in Lusaka, Zambia.

Scores of people line up to receive cholera vaccinations in Lusaka.

"I came as soon as I heard about the vaccination," said Mathilda, who brought her daughter to be immunized in Lusaka. "The vaccine will help protect us against cholera. It can save lives."

**LEFT:** In Lusaka, children show their vaccination cards, proof that they have been immunized against cholera.

All photos © Laurence Hoenig/MSF

that had been largely neglected for years. How could we expect people to want a vaccine for a disease many had never heard of while the global health community ignored their other needs?

The key to ending this outbreak was informing and engaging with the community, reducing the stigma associated with Ebola, providing care closer to where people lived, and adapting aid to what people identified as their most urgent health needs. Once they felt more involved in the Ebola response, they were more likely to trust the vaccine.

During DRC's eleventh outbreak, centered in Équateur province, MSF supported community-based outreach and care that complemented vaccination efforts led by other partners. This time, the outbreak was brought under control within five months. Having a licensed Ebola vaccine was critical, but only as part of a more comprehensive approach.

## REACHING MORE PEOPLE

Since first responding to cholera epidemics in sub-Saharan Africa in the 1980s, MSF has been one of the lead organizations working to prevent and treat the disease. Cholera outbreaks happen in many of the settings where we operate, including remote villages, overcrowded cities, refugee camps, and conflict zones. These are all places where clean water and proper sanitation services can be extremely limited.

But carrying out vaccination campaigns can only work if there are enough vaccines to reach everyone in need, which is often not the case. When a major cholera outbreak struck Lusaka, Zambia, in February 2016, the World Health Organization's (WHO) emergency stockpile of cholera vaccines did not have enough to cover approximately 1.2 million people living in crowded, high-risk urban settlements.





**ABOVE LEFT:** A child is immunized against cholera during an MSF vaccination campaign in Lusaka, Zambia. 2016 © Laurence Hoenig/MSF.

**RIGHT:** Refugees who fled violence in Democratic Republic of Congo's Ituri province wait to receive measles and polio vaccines for children and tetanus shots for adults from an MSF team at the reception center in Kyangwali, Uganda. 2018 © Diana Zeyneb Alhindawi

## "SOMETIMES THE DISEASE IN QUESTION DOES NOT HAVE A TREATMENT YET, AND VACCINATION MAY BE THE ONLY TOOL AVAILABLE TO STOP THE OUTBREAK."

Though cholera immunization typically requires two vaccine doses, previous studies—including one conducted by MSF—showed that just one could be useful in curbing outbreaks of the disease. MSF's use of this strategy in Zambia during this emergency was nearly 90 percent effective and helped protect more people while bringing the outbreak under control.

Another way MSF teams have vaccinated more people against cholera is by administering the first of two oral vaccine doses and then giving the patient the second dose to take home. We provided instructions to keep the dose in a cool place, such as a clay pot, for later use. This proved quite successful in 2016, during an outbreak in hard-to-reach fishing towns and floating islands around Lake Chilwa, Malawi, where MSF teams had to deliver the vaccines by boat to people living in unmapped and nearly unreachable villages with limited access to health care.

### MAKING A GLOBAL IMPACT

While responding to epidemics with vaccines has helped MSF save countless lives, vaccinating the person in front of us isn't always enough. Our response to outbreaks and related research can also have much wider global impacts.

Earlier this year, a study conducted by MSF's research institute, Epicentre, in Uganda and Kenya showed that giving people one-fifth of the standard yellow fever vaccine dose is safe and effective. This fractional dosing could help stretch scarce supplies, making it possible to vaccinate millions more people during outbreaks in times of vaccine shortage. The WHO will now change its guidelines to recommend that all vaccinators use partial doses of the yellow fever vaccine during emergencies. There is no cure for yellow fever, so prevention is extremely important.

"Vaccination is important in halting the spread of outbreaks," said Juliet Mwanga, director of Epicentre's research center in Mbarara, Uganda. "Sometimes the disease in question does not have a treatment yet, and vaccination may be the only tool available to stop the outbreak. Even if treatments may already be available, vaccination prevents more people from catching the disease and reduces the load on the health systems and people's suffering."

## 1972

**MSF's first emergency response:** Vaccination has been an integral part of MSF's medical humanitarian work since its founding, when teams helped immunize children against measles during the organization's first project in 1972 following the devastating earthquake in Managua, Nicaragua.

## 1986



**MSF Logistique created:** This MSF purchasing and supply center ensures that MSF teams on the ground have everything they need to respond quickly to outbreaks and other emergencies. Logistique develops standardized supply kits along with internationally recognized clinical guidelines. In 1988, the World Health Organization (WHO) adopts the concept with its "emergency health kit." Vaccination kits developed for measles, meningitis, and yellow fever enable us to quickly set up a cold chain system to safely store doses.

## 1986

**Epicentre founded:** This MSF entity carries out epidemiological research and clinical trials during outbreaks and other humanitarian contexts. Epicentre regularly publishes findings in scientific journals to share data and analysis. Research on the use of fractional dosing, heat-stable vaccines, and preventive and outbreak response vaccination strategies can help us save more lives.

# MSF: 50 YEARS OF VACCINE HISTORY

## 2004

**Oral vaccines:** In collaboration with WHO, Epicentre, and others, MSF helps pioneer the use of oral cholera vaccines to control an epidemic in Mozambique, which has long been plagued by outbreaks of the waterborne disease. Previously, cholera interventions had focused on improving infrastructure and hygiene services to prevent outbreaks. This new, proactive approach proves successful, and lays the groundwork for future cholera responses in regions where the disease is endemic.

## 2007



**Pushing for vaccine equity:** Pneumonia can be prevented with the pneumococcal conjugate vaccine (PCV), but pharmaceutical companies Pfizer and GlaxoSmithKline have a global monopoly, putting it out of reach of children in many countries. In 2007 MSF begins pushing Big Pharma to lower PCV prices, but they refuse, instead offering unreliable and unsustainable vaccine donations. This is the beginning of years of effort by MSF to address PCV vaccine inequity.

**2010**  
**MenAfriVac:** MSF supports the ministries of health in Mali and Niger in implementing the distribution of MenAfriVac, a new meningitis vaccine that provides protection from the disease for up to 10 years and dramatically lowers the spread of meningitis across sub-Saharan Africa.

## 2013

**Pushing the limits of cold storage:** An Epicentre study finds that a tetanus toxoid vaccine normally stored near freezing remains stable and effective when kept at controlled temperatures of up to 104 degrees Fahrenheit for up to 30 days. It paves the way for other vaccines to be used in places where maintaining a cold chain is difficult, and pressures pharmaceutical companies to re-label and share data on heat-stable vaccines.

## 2017



**2019**  
**The Humanitarian Mechanism:** MSF, WHO, UNICEF, and Save The Children establish the Humanitarian Mechanism, which sets requirements for vaccine supplies in emergencies and allows humanitarian organizations to purchase vaccines from manufacturers at reduced prices during humanitarian emergencies.

## 2019

**Vaccinating refugee children in Greece:** The Humanitarian Mechanism is used for the first time in a high-income country as MSF vaccinates children stranded in refugee camps on the Greek islands of Chios, Samos, and Lesbos against pneumonia. The PCV vaccine normally costs \$168 per child in Greece, but through the program MSF is able to obtain it for \$9. Providing a lifesaving vaccine to refugee children in a country where they otherwise could not afford it is an important step, but until manufacturers make more affordable vaccines for childhood diseases the Humanitarian Mechanism remains a stopgap solution.





1996

**Meningitis outbreak in Nigeria:**

To confront the largest meningitis outbreak ever recorded in Nigeria, MSF mounts a



massive response supported by international staff and several tons of medical equipment. Nearly three million people are vaccinated against the disease and more than 30,000 cases are treated. While the scale of the response is impressive, it also leads to a worldwide shortage of vaccine stocks and questions about effectiveness.

1997

**An international partnership:**

Based on lessons learned during the meningitis vaccination campaign in Nigeria, MSF, WHO, and other partners establish the International Coordinating Group (ICG) on vaccine provision for epidemic meningitis control. The ICG evaluates vaccine needs in meningitis belt countries alongside available resources to guarantee the rational use of supplies. This innovative public health action group becomes a model for coordinating the response to yellow fever and drug-resistant tuberculosis.

1999

**Access Campaign is born:** MSF's Access Campaign is founded to advocate for available, affordable vaccines, drugs, and tests suited to the people we care for and adapted to the places where they live. In the years since, the Access Campaign has pushed for equitable access to HIV medicines, advocated for cheaper and more effective drugs to treat tuberculosis, and pushed corporations to drop the price of



pneumonia vaccines. We're now calling for global equitable access to COVID-19 vaccines.

Doctors Without Borders/Médecins Sans Frontières (MSF) teams vaccinate millions of people every year in some of the world's most challenging humanitarian contexts. Over the five decades that we've been running these campaigns, we've learned a lot, broken new ground, and consistently pushed for equitable access to vaccines. Here's a look back at our work to get lifesaving vaccines to the people who need them most.

2014



**Ebola in West Africa:**

MSF responds to the largest-ever Ebola outbreak by sending medical teams to Guinea, Liberia, Sierra Leone, and Mali. We are part of the first trial of the now-approved Ebola vaccine in Guinea, publishing the findings in the *New England Journal of Medicine* in May 2015.

2015

**A Fair Shot:**

On World Pneumonia Day, MSF launches a new campaign for more affordable PCV vaccines. We start a global petition calling on Pfizer and GlaxoSmithKline to reduce the price of the shot—the most expensive standard childhood vaccine—to \$5 in low- and middle-income countries.

2016



**Pioneering partial dosing:**

When a cholera outbreak strikes Zambia, MSF helps plan a campaign to vaccinate at least half a million people in the capital city of Lusaka. But the global emergency stockpile of the oral cholera vaccine is too low to supply the standard two doses per patient. To reach maximum coverage with limited supplies, MSF suggests providing single doses of the vaccine and distributing the second when more supplies became available, a strategy that had previously been proven effective. Nearly 1,700 volunteers work alongside 100 MSF and Ministry of Health staff to help implement the successful campaign. Partial dosing has since been used to curb disease outbreaks in diverse settings.

2021

**Fractional doses for yellow fever:**

Epicentre publishes a study that shows administering just one-fifth of the standard vaccine dose for yellow fever—a mosquito-borne disease that kills nearly 30,000 people every year—is an effective and safe way to prevent the disease. Fractional dosing means that MSF and other health organizations can vaccinate more people in response to outbreaks.

2021

**Ensuring supplies of Ebola vaccine:**

A global stockpile of the Ebola vaccine is created to ensure treatment providers like MSF have access to supplies in case of an outbreak. From 2018 to 2020 the vaccine was used during the tenth and largest Ebola outbreak in the history of Democratic Republic of Congo.

2021

**No profiteering in a pandemic:**

MSF calls for no patents or profiteering on vaccines, drugs, or tests used during the COVID-19 pandemic. We are demanding global equitable access to lifesaving coronavirus vaccines.



# HOW TO PULL OFF A MASS VACCINATION CAMPAIGN

Protecting as many people as possible under the most challenging circumstances





An MSF health worker prepares to vaccinate a child against pneumonia at a refugee camp on the Greek islands in March 2019. Anna Pantelia/MSF



Over 50 years of responding to crises, Doctors Without Borders/Médecins Sans Frontières (MSF) has seen time and again that vaccines are one of the most important tools we have. That's because immunizing people with a simple shot or oral dose is always easier and safer than treating them for a potentially deadly disease. By carrying out preventive vaccination campaigns, even amid other emergencies such as COVID-19, MSF has saved countless lives. MSF also carries out outbreak response vaccinations, often in settings where children and adults have not been covered by routine immunization programs.

On the Greek island of Samos, where thousands of refugees are still stranded, MSF teams providing mental health and sexual and reproductive health services moved quickly last spring to pick up vaccination activities suspended by the ministry of health due to COVID-19. "Our team decided we could not leave the children unvaccinated," said MSF medical activity manager Mirjam Molenaar. So they started a catch-up vaccination campaign to reach children under five. "That was done once a week on a soccer field in front of this camp, with all the measures in place for COVID." To keep patients safe, MSF teams vaccinated about 150 children at a time, making sure they kept six feet apart. "It went smoothly because of all these parts having been put into place. We set up hand sanitizers, water, soap, and masks that people had to [throw away] themselves at the end."

The team had to account for a wide diversity of backgrounds and vaccination histories to make sure everyone got the shots they needed to protect themselves and others. For example, some children who came from countries like Iraq and Syria—whose once robust immunization programs were disrupted by war—might be partially vaccinated. But children born after their families fled home might not have received any vaccines at all.

In September 2020, when COVID-19 rates began to rise in Greece, the camps went on partial lockdown and the vaccination campaign temporarily paused. MSF teams resumed as quickly as possible, hoping not to miss the opportunity to immunize people who would be transferred out of the camps.



**“[MASS VACCINATION CAMPAIGNS] ARE QUITE CHALLENGING TO EXECUTE, BUT BEAUTIFUL TO SEE. IT’S LIKE A BALLET, WHERE A TEAM WORKS IN UNISON TO ACCOMPLISH SOMETHING INCREDIBLE.”**

Plans were complicated once again in October, when an earthquake struck the island. By then, because people living in the camp had become familiar with the routines, MSF was able to keep vaccinations going. “Continuing our operations through the emergency brought calm to an already awful camp situation where people are in upheaval all the time,” said Molenaar. “Anything that can remain consistent, that shows that we are still here, is helpful.” Though the mass vaccination campaign ended in November, MSF continues to vaccinate new children arriving at the camp.

### A TEAM EFFORT

The goal of a mass vaccination campaign is straightforward: vaccinate thousands of people over a relatively short period to prevent or respond to a disease outbreak. But just as no two emergencies are alike, there is no one-size-fits-all way to organize a mass vaccination campaign. Instead, each response must be carefully planned and tailored to reach the most people possible with lifesaving vaccines, sometimes in the most challenging settings imaginable—often amid a slew of complicating variables.

“[Mass vaccination campaigns] are quite challenging to execute, but beautiful to see,” said Dr. Northan Hurtado, MSF deputy medical advisor. “It’s like a ballet, where a team works in unison to accomplish something incredible.” In addition to thorough pre-planning, substantial human, material, and financial resources are required. Medics, logisticians, community health promoters, human resources managers, and more must collaborate closely, combining their respective skills to make it happen.

First, teams investigate an outbreak to identify priority communities and age groups in need of protection. Then, while coordinators secure permissions from local health authorities, medical, logistics, and human resources teams carry out a series of critical calculations that provide a framework for the campaign. Priority age groups and areas are used to estimate the total number of people to be vaccinated. Then, the team calculates how many different vaccination sites must be set up in order to reach those people, and how many health workers are required to staff them.

With locations identified, health promoters begin circulating information to surrounding communities, ensuring that families know when and where they can receive free immunization. Health promoters rely on different communication methods depending on the context. In remote places, for instance, teams travel in advance to homes and meet with local leaders for support in informing rural communities. In urban areas, MSF

**FACING PAGE, CLOCKWISE FROM TOP LEFT:** A health worker prepares a dose of vaccine during a 2017 measles vaccination campaign in Conakry, Guinea. © Markel Redondo; A child is vaccinated at a health fair run by MSF and local authorities and the community in Venezuela’s Anzoátegui state in 2020. © Matias Delacroix; An MSF health worker vaccinates a child in Pakistan as part of the response to the 2005 Kashmir earthquake. © Ton Koene; When measles began to spread in the Asmat region of Papua New Guinea in 2006, MSF launched a mass vaccination campaign that immunized 80 percent of the target population in an area that previously had only about 38.7 percent vaccination coverage. © Jean-Pierre Amigo; MSF mobile medical teams are helping to vaccinate elderly people and frontline health workers against COVID-19 in Tripoli, Lebanon. © Mohamad Cheblak/MSF





**TOP ROW, FROM LEFT:** MSF community health workers spread the word ahead of a 2015 mass vaccination campaign to immunize children against measles and polio in Yida refugee camp, South Sudan. © Karin Ekholm/MSF; An MSF team packs vaccination supplies in insulated boxes to maintain the cold chain the night before the launch of a large-scale 2017 vaccination campaign in Conakry, Guinea. © Markel Redondo; An MSF team member prepares a dose of polio vaccine during a mass vaccination campaign in South Sudan's Yida camp in 2015. © Karin Ekholm; An MSF team prepares to admit patients at a measles vaccination clinic in Ndongue, Central African Republic. © James Oatway







publicizes vaccination campaigns through local radio announcements, text message alerts, or simply by driving through a city with megaphones to broadcast information far and wide.

As colleagues spread the word, human resources managers assess how many new staff members must be recruited. Every vaccination site operates like an assembly line, with each team member managing one specific responsibility in order to improve efficiency and maintain proper protocol. New hires are assigned clearly defined roles and trained in MSF guidelines for vaccine preparation and administration, aseptic measures, waste management, crowd control, and emergency procedures, like managing accidental exposure to blood.

Logistics experts also play a critical role. Because many vaccines must be stored at specific low temperatures to remain viable, each vial must be kept cold from the time it leaves an MSF storage facility in Europe to the moment a patient is vaccinated thousands of miles away. This requires a “cold chain,” a system of refrigeration, portable cooling, and temperature monitoring. In some places, weak local infrastructure combined with a warm climate make maintaining the cold chain a major challenge.

### TACKLING AN OUTBREAK

The logistical challenges are immense in Democratic Republic of Congo (DRC), where a deadly measles outbreak declared in June 2019 has infected more than 460,000 people and killed nearly 8,000 children. Although the government declared an end to the outbreak in August 2020, the epidemic rages on. MSF teams have provided patient care, surveillance to track the epidemic, and mass vaccination campaigns, immunizing millions of children.

In this vast country communities are often separated by great distances and unpaved, poorly maintained roads.

MSF teams must travel for hours or even days over rugged terrain by car and motorbike, or navigate rivers by boat. Vaccine vials are packed securely in portable coolers, using ice packs and insulating materials to keep the doses cold without freezing them.

MSF has long experience carrying out such campaigns in DRC and other places. “I’ll never forget working on measles vaccinations in DRC in 2010,” said Dr. Hurtado. “The sheer number of freezers we had to keep running, and the dozens of coolers we had to pack and carry six hours away, without the vaccines getting too warm or too cold, made me understand how complicated this work is.”

MSF team members typically wake well before dawn to pack their supplies and travel—sometimes for hours—to the vaccination sites. Upon arrival they set up fencing to direct lines of people and set up stations for patient registration, the vaccinations themselves, and supplementary services as needed.

During the latest measles vaccination campaign in DRC, triage staff worked the entrance, checking the ages of children in line and managing crowd control. Children and their guardians filed through registration, where they received a stamped vaccination card. At the following station, children were given vitamin A, which can become depleted by measles infection. Next was the vaccination station, where a team member loaded syringes before handing them to a vaccinator, who administered the shots. Nearby, another staff member was responsible for tallying each vaccination performed.

Each night, team members met to report on vaccination figures for the day before finally going to bed—only to wake up before dawn to do it all again. “It’s a very long day and they’re exhausted, but teams return at night feeling energized,” said Dr. Hurtado. “They’re excited to know they’ve reached thousands of people with lifesaving protection.”

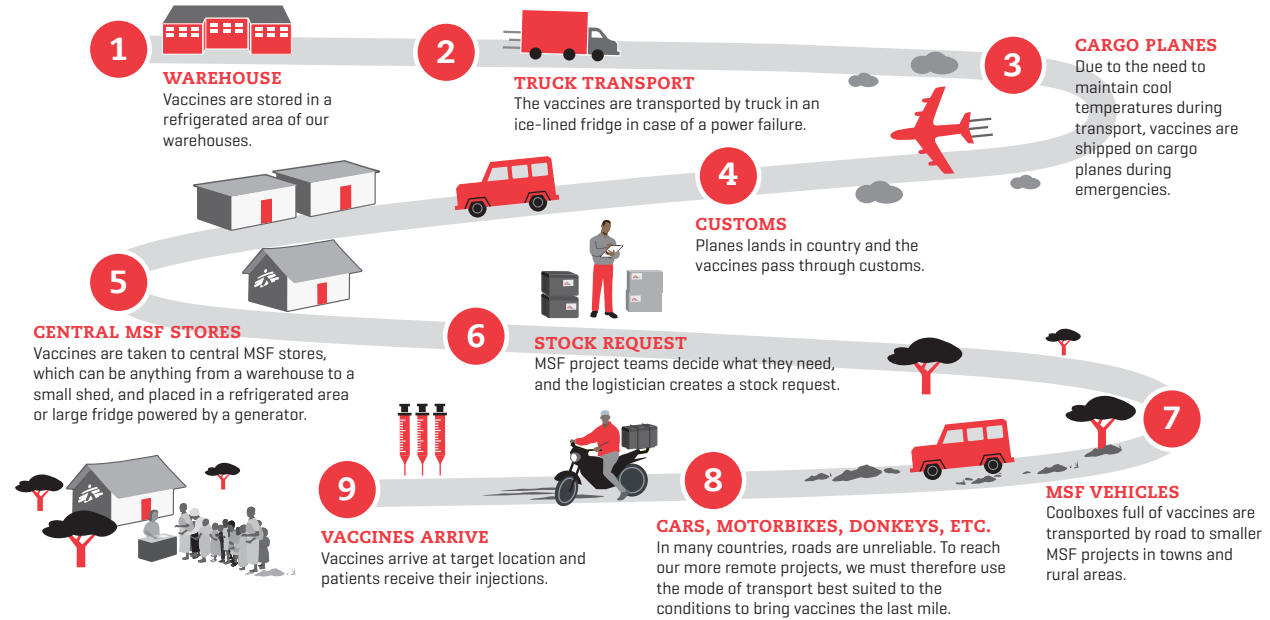


## Chain of Life

Getting lifesaving vaccines where they need to be

Ensuring that our teams on the ground have the right medicines and equipment is a major logistical challenge. We work hard to get supplies to our teams where and when they need them.

Vaccines are a particular challenge. From the moment of manufacture to the point of injection, they must be kept at certain temperatures to avoid spoilage. Here's a general overview of the cold chain procedure MSF uses in our medical projects:



**EVERY VACCINATION SITE OPERATES LIKE AN ASSEMBLY LINE, WITH EACH TEAM MEMBER MANAGING ONE SPECIFIC RESPONSIBILITY IN ORDER TO IMPROVE EFFICIENCY AND MAINTAIN PROPER PROTOCOL.**



**FACING PAGE TOP LEFT:** An MSF measles vaccination team crosses a river on their way to Bole-Bole health center in Wamba, Democratic Republic of Congo (DRC), in 2019. © Narcisse Mukembe Muzabula/MSF. **TOP RIGHT:** MSF team members unload insulated containers of measles vaccine in the village of Kwamouth in the Mai-Ndombe province of DRC, in 2013. © Franck Ngonga/MSF

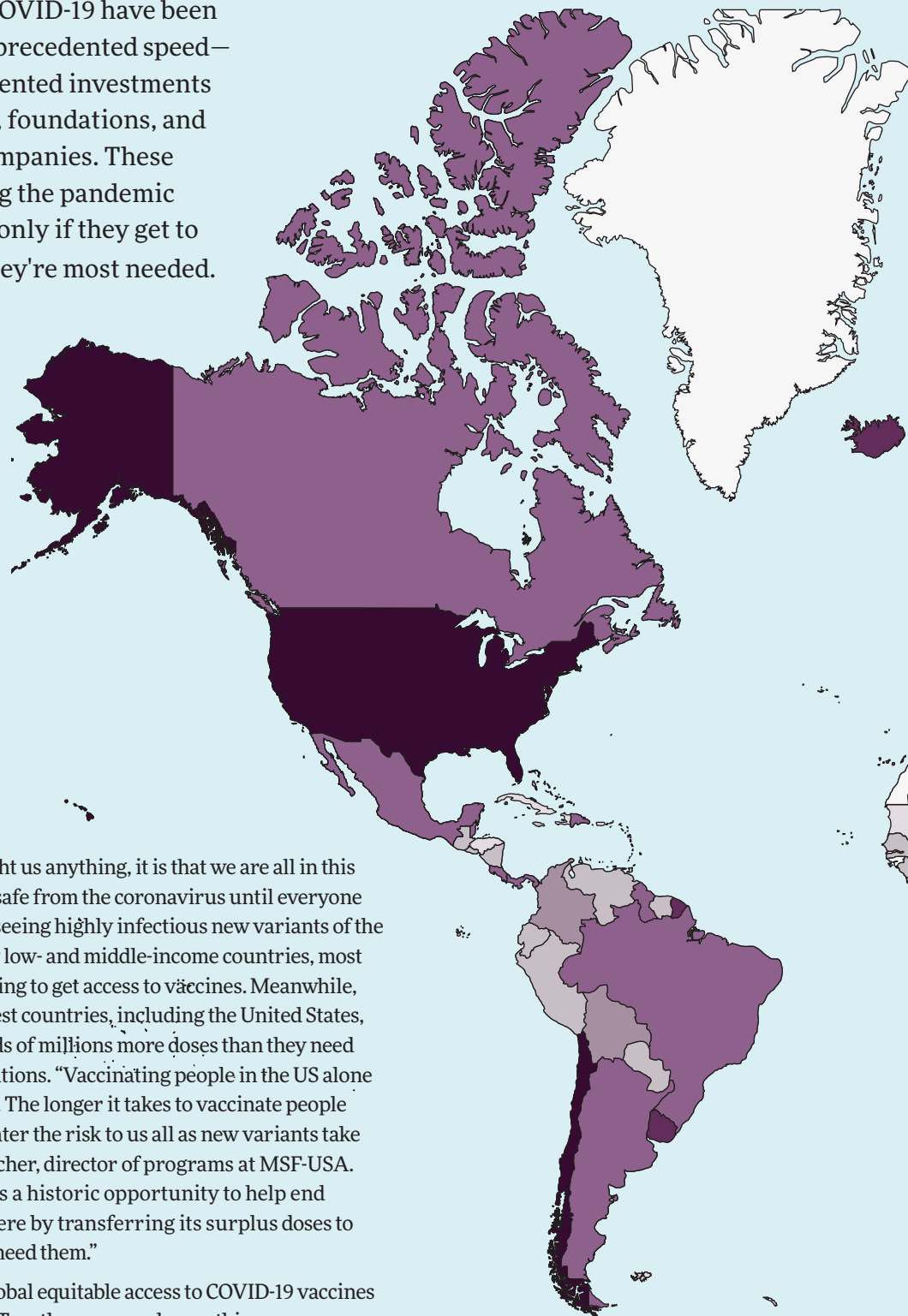


**ABOVE LEFT:** Two women register their children for measles vaccinations in the village of Likasa, Mongala province, DRC, in 2020. © Caroline Thirion/MSF

**ABOVE RIGHT:** An MSF nurse vaccinates a child against measles as part of a campaign in Kamweshwa health zone, in DRC's Kasai province, in 2019. © Pablo Garrigos/MSF

# EXPANDING ACCESS TO COVID-19 VACCINES

New vaccines for COVID-19 have been developed with unprecedented speed—thanks to unprecedented investments from governments, foundations, and pharmaceutical companies. These shots can help bring the pandemic under control, but only if they get to the places where they're most needed.



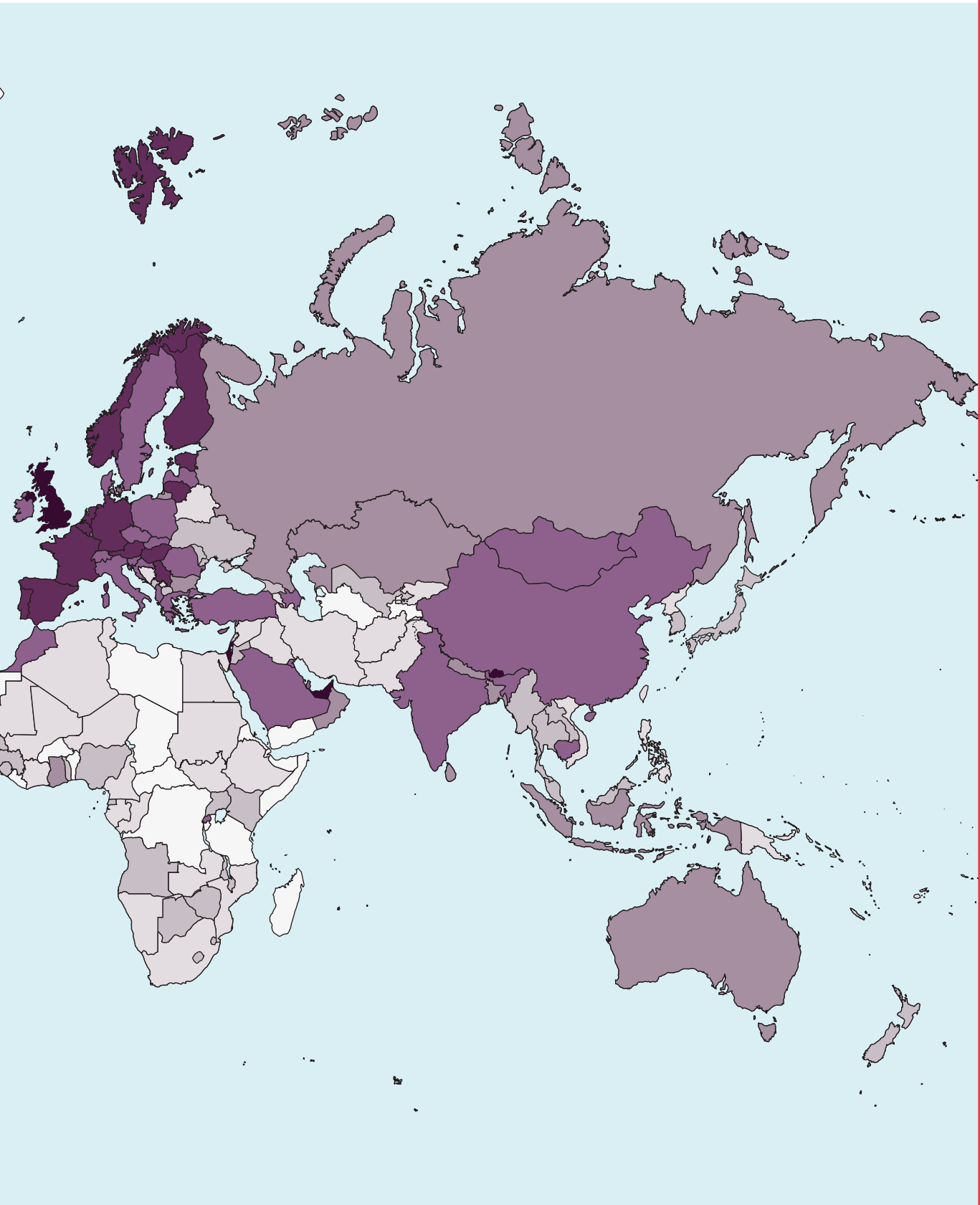
If the pandemic has taught us anything, it is that we are all in this together. No one will be safe from the coronavirus until everyone is safe. Right now, we're seeing highly infectious new variants of the virus spreading in many low- and middle-income countries, most of which are still struggling to get access to vaccines. Meanwhile, some of the world's richest countries, including the United States, have purchased hundreds of millions more doses than they need to inoculate their populations. "Vaccinating people in the US alone won't end this pandemic. The longer it takes to vaccinate people across the globe, the greater the risk to us all as new variants take hold," said Dr. Carrie Teicher, director of programs at MSF-USA. "The US government has a historic opportunity to help end this pandemic everywhere by transferring its surplus doses to countries that urgently need them."

MSF is advocating for global equitable access to COVID-19 vaccines and other medical tools. Together we can change this map.




Population receiving at least one dose of a Covid-19 vaccine, % of total

0 1 5 10 25 50 No reported vaccinations



Boundaries shown do not reflect any position by MSF on the legal status of countries or territories.  
Source: Economist.com/graphic-detail/tracking-coronavirus-across-the-world; April 21, 2021



A member of the health organization Puerto Rico Salud prepares a dose of COVID-19 vaccine. This spring MSF has partnered with the organization, along with the Puerto Rico Department of Health and the Colegio de Profesionales de Enfermería de Puerto Rico to vaccinate vulnerable and hard-to-reach communities across the island.  
© Puerto Rico Salud

# PUERTO RICO: GETTING COVID-19 VACCINES WHERE THEY'RE NEEDED

**Working with partners to reach vulnerable communities**

When Doctors Without Borders/Médecins Sans Frontières (MSF) wrapped up its COVID-19 response in Puerto Rico last September, it felt less like an end but a new beginning. That's because we were able to hand over medical activities to Puerto Rico Salud, an organization created by members of the original MSF team who wanted to continue offering health services to vulnerable groups on the island. The COVID-19 crisis had exposed some of the chronic needs and systemic failures of the local health system, issues that require more sustained attention and collaboration with community-based organizations.





**ABOVE LEFT:** MSF nurse Rolando Betancourt (right) and MSF physician Jonathan Caldera (left) tend to the wounds on a patient's foot during a medical consultation in 2020 in Arecibo, Puerto Rico. Last year we partnered with local organization Ángeles Anónimos to reach people who are homeless and in need of medical services. © Gabriella N. Báez/MSF.

**RIGHT:** MSF physician Jonathan Caldera evaluates a patient while MSF nurse Omar Martínez takes her blood pressure during an in-home medical consultation in the Buen Consejo community in Rio Piedras, Puerto Rico, in 2020. © Gabriella N. Báez/MSF



After the handover, Puerto Rico Salud continued monitoring COVID-19 patients and offering primary care services in some of the areas previously covered by MSF. In January, they started providing COVID-19 vaccinations. “We have seen that many people face barriers in accessing COVID-19 vaccinations because they lack transportation, live in remote areas, or have conditions that make it difficult to reach a vaccination site,” said Carla Sofia Gonzalez, a nurse with Puerto Rico Salud. “Now that vaccines are available, we are showing that it is possible to go into communities and ensure that people are not left out because of their circumstances.”

With support from MSF, Puerto Rico Salud was able to expand the vaccination campaign starting in April. The Department of Health is providing the doses, and the Colegio de Profesionales de Enfermería de Puerto Rico is aiding in the safe storage of the vaccines.

The team is reaching out to communities with certain risk factors, including people experiencing homelessness, living in long-term care facilities, or with disabilities. Vaccinations will be offered in Arecibo, Humacao, Aguadilla, Mayagüez, Ponce, Loiza, and La Perla, San Juan. This effort aims to help protect these communities who might otherwise be missed by local vaccination efforts due to geographic isolation or living conditions.

Puerto Rico Salud is building on the local networks established in 2020, when some of the founding members worked with MSF to provide home-based care and COVID-19 monitoring for people isolated at home in multiple communities across the island.

In early April, health workers from Puerto Rico Salud began visiting sites to vaccinate people whom community leaders identified as lacking access to existing services. The team plans to vaccinate people in local health centers or community buildings, or, when necessary, in private homes.

“Based on our experience in Puerto Rico, we understand the logistical challenges of bringing health care to geographically isolated areas, to people who are homeless, or to those who are home-bound due to chronic health issues,” said Sophie Delaunay, coordinator for MSF in Puerto Rico. “While all too often, health care providers lack the means to ensure that hard-to-reach people are vaccinated, we are showing a way to overcome these challenges.”

Even as the COVID-19 vaccination rollout ramped up across the US, Puerto Rico had one of the lowest vaccination rates, highlighting disparities in access to medical services. The numbers also reflected a lag in administering doses or recording them. According to the Centers for Disease Control's COVID Data Tracker, as of March 25, Puerto Rico had received 1,310,000 vaccine doses, of which 867,570 had been administered.

“Thanks to the commitment of our nursing professionals in Puerto Rico, we will have the opportunity to join with MSF and support this vaccination effort against COVID-19,” said Dr. Ana García, president of the Colegio de Profesionales de Enfermería de Puerto Rico. “Our goal is to reach places that are difficult to access in order to ensure that we can impact as many people as possible.”

Puerto Rico's vaccination efforts so far have targeted primarily health professionals, frontline workers, people 65 years old and above, people above 60 years old with chronic conditions, prisoners, and people with disabilities. The team from Puerto Rico Salud is working hard to expand access to these lifesaving vaccines and other essential health services.

## Donor Profile

# WORLD WINGS INTERNATIONAL

**World Wings International has raised tens of thousands of dollars for the Doctors Without Borders/Médecins Sans Frontières (MSF) COVID-19 Crisis Fund, which supports our dedicated COVID-19 medical programs, the continuity of other vital care, and assistance to health systems overwhelmed by the pandemic. This philanthropic organization of former flight attendants from Pan American World Airways—or “Pan Am”—was established in 1959.**



The iconic Pan Am served as the United States principal international air carrier for decades. It was the first American airline to operate permanent international air service, flying mail between Key West, Florida, and Havana, Cuba, in 1927. Fifteen years later, Pan Am completed the first round-the-world flight. Though the company ceased operations in 1991, many Pan Am staff still honor their commitment to service, hospitality, and safety on long-distance flights at other airlines.

World Wings International members seek to maintain the long tradition of providing global humanitarian assistance instilled in them by Pan Am, to safeguard and promote the airline’s place in aviation history, and to promote friendship among their members through cultural and civic actions. Through its philanthropic work, World Wings International has faithfully carried on that global legacy for 62 years.

In 2019, World Wings International nominated MSF as its international

charity. Since then, from Los Angeles to New York, Dallas to Portland, MSF aid workers have been welcomed into the homes of local World Wings chapter members to discuss their experiences working at MSF medical projects and in their own communities. At a World Wings International convention in Stockholm, a nurse-midwife presented her MSF story of completing six overseas assignments to a crowd of nearly 400 supporters.

World Wings International members also keep up to date on news from MSF’s lifesaving programs through online gatherings, participating in public events like our Let’s Talk web series, and hosting private virtual meetings for over 80 members from across the United States to meet with MSF staff. Further fundraising efforts are made by World Wings member David Hinson and his partner Jeff Chauvin, who, through their small business David Jeffrey Designs, are dedicating 20 percent of all retail sales to World Wings for the benefit of MSF.

“Our members flew the world seeing firsthand abject poverty and unending, all-encompassing needs,” said World Wings International president Nancy Gillespie McAllister. “We’re all familiar with the accurate saying, ‘If you have your health, you have everything.’ For 62 years, World Wings has raised millions of dollars to benefit countless people. We are immensely proud to partner with MSF by funding opportunities for medical treatments to those whose lives we can impact through our fundraising efforts. We are grateful for MSF’s dedication and tenacious work conducted in difficult circumstances to skillfully improve the fragile health of so many throughout the world.”

**ABOVE LEFT:** © Courtesy of World Wings International



## INCREASE YOUR IMPACT

Does your employer have a matching gift program? Many companies have matching gift programs that will double or even triple the impact of your gift. Companies will sometimes also match donations made by spouses, retirees, and board members. Because conditions and criteria for gift matching vary by employer, please check with your company's human resources department for details. MSF-USA is happy to confirm your gift or to satisfy any other requirements your company might have.

If you or your company are interested in learning more about our work, or have any questions about our matching gift program, please email [corporate.donations@newyork.msf.org](mailto:corporate.donations@newyork.msf.org) or call (212) 763-5745.

## THE MULTIYEAR INITIATIVE

MSF-USA would like to thank all of our donors who have made commitments towards the Multiyear Initiative. With annual commitments of \$5,000 or more, these generous supporters help provide MSF with a predictable revenue stream that better serves our ability to respond rapidly to emergencies and ensure the continued operation of our programs. To date, we have received commitments totaling more than \$74 million towards the initiative.

To find out how you can participate, please email us at [majorgifts@newyork.msf.org](mailto:majorgifts@newyork.msf.org) or visit [doctorswithoutborders.org/multiyear](http://doctorswithoutborders.org/multiyear).

## JOIN OUR LEGACY SOCIETY

MSF is able to provide independent, impartial assistance to those most in need thanks to the dedication, foresight, and generosity of our Legacy Society members. Every day, legacy gifts help us keep our commitment made 50 years ago to assist people in distress regardless of race, religion, creed, or political affiliation.

**RIGHT:** Vials of meningitis A vaccine at an MSF facility in Mali in 2010.  
© Julie Damond

To learn more about joining MSF-USA's Legacy Society by making a gift through your will or other legacy gift that will save lives for years to come, please contact Lauren Ford, associate director of planned giving, at (212) 763-5750 or [lauren.ford@newyork.msf.org](mailto:lauren.ford@newyork.msf.org).

## SET UP A GIFT ANNUITY WITH MSF

MSF's charitable gift annuities make it easy to provide for our future as well as your own. When you set up a gift annuity with MSF you will receive fixed payments for life and an immediate income tax deduction. The minimum age when payments begin is 65. We follow the ACGA suggested rates.

For more information, including a personalized proposal showing how a gift annuity can work for you, please contact Lauren Ford, associate director of planned giving, at (212) 763-5750 or [lauren.ford@newyork.msf.org](mailto:lauren.ford@newyork.msf.org).

## STOCK DONATIONS

Did you know you can donate gifts of securities to MSF-USA? Making a stock gift is simple and offers a number of valuable financial benefits. You can donate appreciated stocks, bonds, or mutual funds, and the total value of the stock upon transfer is tax-deductible. Also, there is no obli-

gation to pay any capital gains taxes on the appreciation.

MSF-USA currently maintains an account with Morgan Stanley Smith Barney to offer donors an easy way to transfer securities hassle-free. For more information on how to make a security donation, please visit our website [doctorswithoutborders.org/support-us/other-ways-give](http://doctorswithoutborders.org/support-us/other-ways-give). You can also call (212) 679-6800 and ask to speak to our donor services department.

## SHOP FOR GOOD

Did you know you can generate a donation to MSF every time you shop at Amazon? When you register with and shop through AmazonSmile, the company donates 0.5 percent of the price of your eligible purchases to MSF. Simply go to [smile.amazon.com](http://smile.amazon.com), type "Doctors Without Borders" into the search bar, and start shopping! Once you have signed up, remember to go to AmazonSmile for all future Amazon purchases.

If you have any questions or comments, contact our

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#### ALERT

is a quarterly newsletter sent to friends and supporters of Doctors Without Borders/Médecins Sans Frontières (MSF). As an independent international medical humanitarian organization, MSF delivers emergency aid to people affected by armed conflict, epidemics, natural and human-made disasters, and exclusion from health care.

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**LEFT:** A child holds up her vaccination card after being immunized as part of a vaccination campaign carried out by MSF for Miskito people displaced by violence in Nicaragua, 1991. © Roger Job

**COVER:** A mother holds her child at an MSF vaccination clinic in Democratic Republic of Congo in 2019. © Samuel Sieber/MSF