

**WRITTEN TESTIMONY OF  
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THE AMERICAN NATIONAL RED CROSS**

**AND ON BEHALF OF  
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UNITED NATIONS FOUNDATION**

**IN SUPPORT OF FUNDING FOR THE CENTERS FOR DISEASE CONTROL AND  
PREVENTION (CDC)**

**APPROPRIATIONS SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN  
SERVICES, EDUCATION, AND RELATED AGENCIES**

**UNITED STATES HOUSE OF REPRESENTATIVES  
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Chairwoman Rosa DeLauro, Ranking Member Tom Cole, and Members of the Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, the American Red Cross and the United Nations Foundation appreciate the opportunity to submit testimony. We are writing to request that Congress invest \$60 million for CDC's global measles and rubella elimination efforts for fiscal year 2022.

The American Red Cross and United Nations Foundation recognize the leadership that Congress has shown in funding CDC in prior years and urge Congress to protect the CDC's funding necessary for their global measles elimination activities for FY2022 at \$60 million, which is part of the overall Global Immunization Division line.

**COVID-19 Environment**

COVID-19 has had an unprecedented impact on global immunization programs. In 2020, twenty-five out of twenty-eight measles and rubella vaccination campaigns were postponed because of the COVID-19 pandemic. Of the postponed campaigns, only fifteen have been completed as of March 2021, leaving an estimated thirteen million children unvaccinated and vulnerable to the diseases. This growing immunity gap is creating a looming cliff in global public health, as social distancing measures are lowered, the measles virus will quickly spread amongst unvaccinated individuals and communities. Because the measles virus is one of the most transmissible human viruses – with each infectious person capable of infecting as many as 18 unvaccinated individuals – a drastic increase in measles outbreaks around the world is anticipated. Failing to close these immunity gaps will leave millions of children at risk and will compromise U.S. global health security by disrupting economies, trade, and country stability, and also increasing the likelihood of the virus infecting U.S. communities with unvaccinated individuals. Investments that will quickly close these global immunity gaps will help to ensure that gains made in reducing maternal and child mortality and morbidity are maintained, and that the global health infrastructure established through these investments is preserved and strengthened. Among other benefits, this global health architecture is vital to protecting global

health security. Measles investments have established networks of laboratories around the world capable of processing diagnostics and has bolstered the global public health workforce of trained professionals and volunteers who are often the first responders during health crises. During the pandemic, for instance, these assets and infrastructure investments were pivoted to detect and test cases of COVID-19, giving vulnerable countries a head start in their pandemic response. With this context in mind, we respectfully provide the following justification for continued robust investment in CDC's global measles and rubella elimination efforts.

### **Why Measles and Rubella?**

U.S. leadership has saved the lives of 25.5 million children between 2000 and 2019, with the Measles & Rubella Initiative driving measles deaths down by 62%.

Measles is a highly contagious disease that can cause blindness, swelling of the brain, and death. Nine out of ten people who are not immune to measles will contract the disease if they come into contact with a contagious person, and there are long-term damages to the immune system for those who contract the virus. The rubella virus is a leading infectious cause of birth defects in the world despite availability of an affordable, effective vaccine since 1969. Every day, roughly 567 children still die of measles-related complications. When rubella occurs early in a pregnancy, it can cause miscarriages, stillbirths, or a constellation of severe birth defects that can impact vision, hearing, heart health, overall development.

Since 2000, measles vaccines have been the single greatest contribution in reducing preventable child deaths globally. We have had safe and effective vaccines against both rubella and measles for over 50 years, but unfortunately vaccination rates globally have stagnated for over a decade.

### **Domestic Implications**

In the U.S., measles control measures have been strengthened, and endemic transmission of measles cases has been eliminated since 2000 and rubella in 2002. However, importations of measles cases into this country continue to occur each year. In 2019, for example, the U.S. reported 1,282 cases of measles in 32 states, the largest number of cases since 1992. Major outbreaks in New York and Washington state have been linked to importation of the disease by unvaccinated U.S. residents returning from trips to Israel and Ukraine. Controlling measles and rubella around the world reduces the likelihood of similar disease importations in the future.

Measles spreads much more quickly than the flu or the COVID-19 virus. On average a single person infected with the influenza virus or the COVID-19 virus can infect up to 2.3 or 2.5 individuals, respectively. However, a single individual infected with measles can infect up to 18 other unvaccinated people. Measles can also cause severe complications such as pneumonia and encephalitis and in 2019 over 207,000 deaths were attributed to measles infections around the world. In addition, each year more than 100,000 children are born with congenital rubella syndrome (CRS). CRS is the leading vaccine preventable cause of severe birth defects worldwide. These birth defects can include blindness, deafness, and heart defects. CRS is very costly to treat, yet very inexpensive to prevent. Working closely with host governments, the Measles & Rubella Initiative has been the main international supporter of mass measles and rubella immunization campaigns since 2001.

Responding to measles outbreaks is resource intensive and costly for health systems, including in the U.S. In a literature review that included 10 studies on measles outbreaks from 2001 to 2018 in the U.S., researchers estimated the cost per case to range from about \$7,000 to \$76,000 and the total cost per outbreak ranged from \$10,000 to \$1 million. A recent study of a 72-case outbreak in the U.S. cost local public health and government authorities an estimated \$3.4 million for response activities, medical costs, and productivity losses.

Eliminating measles and rubella is also a moral imperative, so that children everywhere can achieve their full potential. A 2016 Johns Hopkins University study found that for every \$1 dollar invested in measles vaccinations in a low to middle income country returns \$58 dollars in future savings from averted healthcare costs and disability. This \$58-to-\$1 return on investment, coupled with the benefit of protecting American children against importation of measles into the U.S., represents a public health “best buy” and demonstrates that investments in CDC’s measles and rubella elimination program are a responsible use of taxpayer dollars.

### **The Measles & Rubella Initiative**

The Measles & Rubella Initiative (M&RI) – which includes the American Red Cross, CDC, UNICEF, the United Nations Foundation, and WHO, all working in collaboration with Gavi, the Vaccine Alliance as well as the Bill & Melinda Gates Foundation – supports countries to prevent, identify, and respond to measles outbreaks through key interventions like surveillance, supplementary vaccination campaigns, and emergency response.

M&RI has achieved outstanding results by supporting the vaccination of nearly three billion individuals in over 90 countries since 2001, saving the lives of more than 25.5 million children. In part due to M&RI, global measles mortality has dropped 62%, from an estimated 545,000 deaths in 2000 to an approximately 207,000 in 2019 (the latest year for which data is available), mostly children under the age of five. During this same period, measles deaths in Africa fell by 57%.

Despite these gains, we continue to see unfortunate and preventable deaths and complications due to both measles and rubella. In 2019, every day approximately 567 children died of measles-related complications. That same year, the number of reported measles cases increased to 869,770 globally, a 567% increase from the historically low number of cases achieved in 2016. Large-scale outbreaks in 9 countries (Central African Republic, DRC, Georgia, Kazakhstan, Madagascar, North Macedonia, Samoa, Tonga, and Ukraine) accounted for 73% of these cases (631,847 cases).

These deaths could have been prevented with a safe, effective, and inexpensive vaccine that is typically available for less than \$2 USD in lower income countries, which protects against both measles and rubella. Measles is among the most contagious diseases known, and a top killer of children in low-income countries where children have little or no access to medical treatment and are often malnourished. The rubella virus is also a leading infectious cause of birth defects in the world even though an affordable, effective vaccine has been available since 1969.

Thanks to M&RI leadership, the majority of measles vaccination campaigns have been able to reach more than 90% of their target populations. Countries recognize the opportunity that measles vaccination campaigns provide in reaching mothers and young children and integrating

the campaigns with other life-saving health interventions. These include administering vitamin A, which is crucial for preventing blindness in under nourished children; de-worming medicine to reduce malnutrition; doses of oral polio vaccines; and distributing insecticide treated bed nets to help prevent malaria and screening for malnutrition. The provision of multiple child health interventions during a single campaign is far less expensive than delivering the interventions separately and has a far greater impact on a child's health.

In addition to the lifesaving benefits of the measles-rubella vaccine, immunization makes sound economic sense. The aforementioned Johns Hopkins University study compared the costs for vaccinating against 10 disease antigens in 94 low- and middle-income countries between 2011-2020 versus the costs for estimated treatments of unimmunized individuals during the same period. Their findings show, on average, every \$1 invested in these 10 immunizations produces \$44 in savings in healthcare costs, lost wages, and economic productivity. The return on investment for measles immunization was particularly high, at \$58 saved for every \$1 invested.

Securing sufficient funding for measles and rubella-elimination activities both globally and nationally is critical. The decrease in donor funds available at a global level to support measles and rubella elimination activities makes increased political commitment and country ownership of the activities critical for achieving and sustaining the goal of increasing measles vaccination coverage to 95%. Implementation of timely measles and rubella campaigns is increasingly dependent upon countries funding these activities locally, which can be challenging under such downward financial pressure.

If such challenges are not addressed, the remarkable gains made since 2000 will be lost and a major resurgence in measles death and disability will occur. The combined factors of a highly contagious disease, growing immunity gaps exacerbated by COVID-19 disruptions, and our highly interconnected world means measles is poised to spread quickly, with devastating results that could even threaten countries that have already eliminated the disease. The threat of importation of measles was one of the reasons that the Global Health Security Agenda has selected measles as an important indicator of whether a country's routine immunization system is able to effectively reach and vaccinate all its children.

### **The Role of CDC in Global Measles Mortality Reduction**

Since FY 2001, Congress has generously provided funding to protect children and their families from the threat of measles and rubella in developing countries, thereby also protecting the U.S. population from the threat of measles importations. Funding for measles and rubella globally has remained level since FY 2010, at the \$50 million dollar level. The COVID-19 pandemic has gravely disrupted immunization systems around the world and postponed preventative immunization campaigns. Millions of children are currently vulnerable to measles and other vaccine-preventable diseases. We have a window of opportunity now to quickly "catch up" vaccination coverage rates to reach these unvaccinated populations and prevent devastating measles outbreaks. The CDC plays an essential role within this space by providing support for vaccination programs and surveillance to detect outbreaks early and stop them at their source. An increase in resources for these and other critical activities provided by the CDC are needed to prevent needless childhood deaths around the globe.

In 2019, thanks in part to U.S. funding, M&RI supported 62 immunization campaigns in 53 countries, resulting in the vaccination of nearly 203 million children. For this support, we extend our deep appreciation to Congress. This funding for CDC also permitted the provision of technical support to Ministries of Health that included: 1) planning, monitoring, and evaluating large-scale measles vaccination campaigns; 2) conducting epidemiological investigations and laboratory surveillance of measles outbreaks; 3) CDC's Global Measles Reference Laboratory serving as the leading worldwide reference laboratory for measles and rubella. The reference laboratory network provides specimen confirmation and testing as well as training for country and regional labs; and 4) conducting operations research to guide cost-effective and high-quality measles and rubella elimination programs.

In addition, CDC epidemiologists and public health specialists have worked closely with the WHO, UNICEF, the United Nations Foundation, and the American Red Cross to strengthen measles and rubella elimination programs at global and regional levels. There is no doubt that CDC's financial and technical support – made possible by the funds appropriated by Congress – were essential in helping achieve the sharp reduction in measles deaths in just fifteen years.

The American Red Cross and United Nations Foundation would like to acknowledge the leadership and work provided by CDC and recognize that much more is brought to the table than just financial resources. The Measles & Rubella Initiative is fortunate to have a partner that provides critical personnel and technical support for vaccination campaigns and in response to disease outbreaks. CDC personnel have routinely demonstrated their ability to effectively coordinate and plan with international organizations and provide solutions to complex problems that help critical work get done faster and more efficiently.

Since FY10, the CDC's measles and rubella elimination program has been funded at approximately \$50 million. In FY 2022, the American Red Cross and United Nations Foundation respectfully requests an increase of \$10 million to raise funding to \$60 million. This investment will allow CDC to help countries to close the immunization gap created by COVID-19, safeguard the progress made over the last decade and protect Americans by preventing measles cases and deaths in the U.S. The CDC Global Immunization Division, through which the Measles & Rubella Initiative is funded, has been highly effective and we strongly support fully funding this work. All the programs funded through the Global Immunization Division budget line also help to build stronger health systems. We respectfully request \$60 million for CDC's measles elimination activities, as part of the overall funding for the entire Global Immunization Division account in FY2022.

Thank you for the opportunity to submit testimony, and for your continued commitment to ending preventable death and disability from measles and rubella.