TESTIMONY OF
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THE AMERICAN NATIONAL RED CROSS

AND ON BEHALF OF
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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 SENATE
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Chairman Roy Blunt, Ranking Member Patty Murray, and Members of the Subcommittee, the American Red Cross and the United Nations Foundation appreciate the opportunity to submit testimony in support of measles control activities of the U.S. Centers for Disease Control and Prevention (CDC). The American Red Cross and the United Nations Foundation recognize the leadership that Congress has shown in funding CDC for these essential activities. For FY17, we request that this subcommittee support CDC's global measles control activities at $50 million.

In 2001, CDC – along with the American Red Cross, the United Nations Foundation, the World Health Organization (WHO), and UNICEF – founded the Measles Initiative, a partnership committed to reducing measles deaths globally. In 2012, the Initiative expanded to include rubella control and adopted a new name, the Measles & Rubella Initiative. In 2013, all WHO regions established measles elimination goals by 2020. The Measles & Rubella Initiative is committed to reaching these goals by providing technical and financial support to governments and communities worldwide.

The Measles & Rubella Initiative has achieved impressive results by supporting the vaccination of more than 2 billion children since 2001. In part due to the Measles & Rubella Initiative, global measles mortality dropped 79%, from an estimated 548,000 deaths in 2000 to 114,900 in 2014 (the latest year for which data is available). During this same period, measles deaths in Africa fell by 88%. However, about 315 children still die from measles each day from a virus that can be countered with a safe, effective and inexpensive vaccine. Measles is among the most contagious diseases ever 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. Measles spreads much more easily than the flu or the Ebola virus. In fact, one person infected with measles can infect up to 18 others if s/he has not been vaccinated. In addition, each year more than 100,000 children are born with congenital rubella syndrome (CRS). CRS can cause severe birth defects, including blindness, deafness, heart defects and mental retardation. CRS treatment 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 immunization campaigns since 2001. The Initiative mobilized more than $1.3 billion and provided technical support in more than 88 developing countries on vaccination campaigns, surveillance and improving routine immunization services. From 2000 to 2014, an estimated 17.1 million measles deaths were averted as a result of these accelerated measles control activities, making measles mortality reduction one of the most cost-effective public health interventions.

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 accessing mothers and young children, and "integrating" the campaigns with other life-saving health interventions has become the norm. In addition to measles vaccine, other health interventions are often distributed during campaigns including vitamin A which is crucial for preventing blindness in under nourished children, de-worming medicine to reduce malnutrition, and screening for malnutrition. Doses of oral polio vaccines are also frequently distributed during measles campaigns in polio endemic and high-risk countries. The delivery of polio vaccines in conjunction with measles vaccines in these campaigns strengthens the reach of elimination and eradication efforts of these diseases. The delivery of multiple child health interventions during a single campaign is far less expensive than delivering the interventions separately, and this strategy increases the potential positive impact on children's health from a single campaign.

The extraordinary reduction in global measles deaths greatly contributed to reducing under-five child mortality. However, large outbreaks in several African, European and Asian countries from 2011 to 2014 compromised 2015 measles elimination goals of 90% national coverage rates and 95% reduction in mortality, resulting in a plateau in progress towards measles elimination due in large part to decreased funding support from donors and host governments. These outbreaks highlight the fragility of the last decade of progress. If mass immunization campaigns are not continued with robust funding and support, measles deaths will rapidly increase.

In addition to the lifesaving benefits of measles vaccines, immunization makes sound economic sense. A recent study by Johns Hopkins University revealed the economic benefits of increased investment in global vaccination programs. The study compared the costs for vaccinating against 10 disease antigens in 94 low- and middle-income countries during the period 2011-2020 versus the costs for estimated treatments of unimmunized individuals during the same period. Their findings show that - across the board - prevention of diseases results in an average return on investment, with $58 saved in future costs for every $1 spent.

To achieve 2020 elimination goals and avoid a resurgence of measles, the following actions are required:

- Sustaining the gains in reduced measles deaths, especially in Africa, by strengthening immunization programs to ensure that more than 90% of infants are vaccinated against measles through routine health services as well as conducting timely, high quality mass immunization campaigns. Routine immunization is the foundation to achieving and sustaining high levels of immunity to measles in the community.
- Accelerating the introduction of a second dose of measles containing vaccine into the routine immunization program of eligible countries with support from Gavi, the Vaccine Alliance.
- Fully implementing activities, both campaigns and strengthening routine measles vaccination coverage, in Democratic Republic of Congo, Ethiopia, India, Indonesia, Nigeria, and Pakistan which together account for the majority of measles cases and 65% of measles deaths.
- Securing sufficient funding for measles and rubella-control activities both globally and nationally. This year the Measles & Rubella Initiative faces a funding shortfall of an estimated US $73 million. Implementation of timely measles campaigns is increasingly dependent upon countries funding these activities locally. The decrease in donor funds available at a global level to support measles elimination activities makes increased political commitment and country ownership of the activities critical for achieving and sustaining the goal of reducing measles mortality by 95%.

If these challenges are not addressed, the remarkable gains made since 2000 will be lost and a major resurgence in measles deaths will occur.

By controlling measles and rubella cases in other countries, U.S. adults and children are also being protected from the diseases. Measles can cause severe complications such as pneumonia, encephalitis, and even death. A resurgence of measles occurred in the United States between 1989 and 1991, with more than 55,000 cases reported. This resurgence was particularly severe, accounting for more than 11,000 hospitalizations and 123 deaths.

Measles is one of the most contagious diseases know to humans and, due to our highly interconnected world, measles can be spread globally including to 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. The occurrence of measles cases in a country is a reliable indication that a country's routine immunization system is not vaccinating all children. Additionally, the ability of a country to rapidly detect and respond to measles cases is a marker of the quality of a routine immunization system to identify and respond to disease outbreaks more generally.

In the United States, measles control measures have been strengthened, and endemic transmission of measles cases have been eliminated since 2000 and rubella in 2002. However, importations of measles cases into this country continue to occur each year. Since 2000, the annual number of people reported to have measles ranged from a low of 37 in 2004 to a high of 667 people across 27 states in 2014; the greatest number of cases reported in the U.S. since measles was declared eliminated in 2000. Additionally, on July 2, 2015, Washington State Department of Health confirmed a measles-related death. The human and financial impact of

measles cases, deaths, and outbreaks are substantial, both in terms of the costs to public health departments to conduct contact tracing and in terms of productivity losses among people with measles and parents of sick children. Studies show that a single case of measles in the United States can cost between $100,000 and $200,000 in government expenditures to control.

The Role of CDC in Global Measles Mortality Reduction

Since FY 2001 and until 2015, Congress has provided funding for the purchase of measles vaccine for use in large-scale measles vaccination campaigns in more than 88 countries in Africa and Asia, and for the provision of technical support to Ministries of Health. Specifically, this technical support includes:

- Planning, monitoring, and evaluating large-scale measles vaccination campaigns;
- Conducting epidemiological investigations and laboratory surveillance of measles outbreaks; and
- Conducting operations research to guide cost-effective and high quality measles control programs.

In addition, CDC epidemiologists and public health specialists have worked closely with WHO, UNICEF, the United Nations Foundation, and the American Red Cross to strengthen measles control programs at global and regional levels, and will continue to work with these and other partners in implementing and strengthening rubella control programs. While it is not possible to precisely quantify the impact of CDC's financial and technical support to the Measles & Rubella Initiative, there is no doubt that CDC's support – made possible by the funding appropriated by Congress – was essential in helping achieve the sharp reduction in measles deaths in just thirteen years.

The American Red Cross and the United Nations Foundation would like to acknowledge the leadership and work provided by CDC and recognize that CDC brings much more 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 work well with other organizations and provide solutions to complex problems that help critical work get done faster and more efficiently.

In FY 2015, Congress appropriated $49.8 million to fund CDC global measles control activities, and $50 million in FY 2016 for such activities. In FY 2017, the American Red Cross and the United Nations Foundation request sustained funding at the level approved by this committee last year for CDC's measles and rubella control activities to protect the investment of the last decade, prevent measles cases and deaths in the United States. We hope this committee will also look at how we can address the shortfall in funding within the Measles and Rubella Initiative in future years.

Your commitment has brought us unprecedented victories in reducing measles mortality around the world. In addition, your continued support for this initiative helps prevent children from suffering from this preventable disease both abroad and in the United States.

Thank you for the opportunity to submit testimony.