



Measles vaccine marks 50th anniversary

World sets sight on measles, rubella elimination this decade

by **Trisha Koriath** • Staff Writer

Will global elimination of measles occur this decade, along with rubella?

All six World Health Organization (WHO) global regions are committed to eliminating measles by or before 2020, a decision announced in September just before a meeting that marked the 50th anniversary of the measles vaccine.

Although measles elimination in the United States was declared in 2000, the disease continues to be imported and spread in unvaccinated populations, according to *Morbidity and Mortality Weekly Report* (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6236a2.htm>). The highly infectious disease claimed 158,000 lives worldwide in 2011.

While rubella is a mild disease, it can have serious consequences for pregnant women and their children. More than 100,000 children annually are born with congenital rubella syndrome (CRS), which often presents with multiple birth defects, including deafness, blindness and heart problems. Most cases occur in Africa, Southeast Asia and the Western Pacific, according to the Measles & Rubella Initiative.

'Guardian angels' honored

The measles vaccine was licensed in 1963. One year later, rubella infected 50,000 pregnant U.S. women with devastating outcomes.

Global eradication of both diseases couldn't come soon enough for Samuel L. Katz, M.D., FAAP, and Louis Z. Cooper, M.D., FAAP, who have dedicated their lives to stopping the spread of measles and rubella. Dr. Katz co-invented the measles vaccine, and Dr. Cooper's intensive work on rubella and CRS led to elimination of the disease in the United States and improved care for affected families. Both expressed their hope of witnessing eradication in their lifetime.

The Measles & Rubella Initiative honored senior advisers Dr. Cooper and Dr. Katz with Special Achievement Awards at its September meeting. Dubbed the "guardian angels" of the AAP-supported initiative, the senior advisers' perspective and guidance reminded pediatricians of how far the world has come, even in the face of measles outbreaks.

"The continuing problems of measles morbidity and mortality

Elimination goals by WHO region

Region	Measles	Rubella
African	2020	—
Americas	2010	2012
Eastern Mediterranean	2015	—
European	2015	2015
Southeast Asian	2020	Control
Western Pacific	2015	Control

Source: Measles & Rubella Initiative

are not due to vaccine failures," said Dr. Katz. "They are attributable to the remaining large numbers of unvaccinated infants and children in disadvantaged countries, added to annually by their birth cohorts."

Measles deaths worldwide have been reduced by 71% since the Measles Initiative was formed in 2001, dropping from about 548,000 to 158,000 cases in 2011. This success rate is greater than any other single health intervention for reducing mortality in a short time span,

the Measles and Rubella Initiative notes.

Investing in low-income countries

The United States' aggressive approach to introducing routine childhood immunization with both vaccines gave a major push toward worldwide eradication, according to Stephen L. Cochi, M.D., M.P.H., FAAP, senior adviser of the Global Immunization Division at the Centers for Disease Control and Prevention's Center for Global Health. This year marks the 20th anniversary of the legislation that created the Vaccines for Children Program (VFC), sparked by a measles epidemic in 1989-1991 that was traced to unimmunized children. Thanks to



Dr. Cochi

VFC, all children have access to lifesaving vaccines in the United States.

"Immunizations are the only human development activity in our country where we've created equity. There is no disparity in which children get vaccinated in this country," said Dr. Cooper.

Now, with another \$500 million from the Global Alliance for Vaccine Initiatives through the end of the decade, many more low-income countries will be introducing the combined measles-rubella vaccine. Currently, 59 countries have not yet introduced rubella vaccines.

That investment will save lives and money on U.S. soil as well. When measles spread here, "(the cost is) often in the hundreds of thousands of dollars to control an outbreak and do mass vaccinations, catch-up vaccination, investigate, find and track cases," said Dr. Cochi. The annual cost of supportive care for a single case of CRS

in the United States is about \$150,000.

“Am I happy about these outbreaks? Of course not. But, we have to put them in perspective. The vaccines are very good. They’re the best investment that we could make,” said Dr. Cooper. “One of our challenges is making clear to the developed and resourced countries that one of the best investments they can make in global health is providing adequate resources for the less resourced countries.”

Caring equally for the health of all nations matches with the philosophy and mission of the Academy, which Dr. Cooper said is continuing to make strides via its Office of International Affairs (see resources).

“Sam and Lou are a prime example of a whole legion of pediatric leaders who got us where we are today, not just in the United States but in the world. That is something to celebrate on the occasion of the 50th anniversary of the measles vaccine,” said Dr. Cochi. “It’s going to be very important that the pediatric societies in every country play a strong leadership and advocacy role.”

RESOURCES

- AAP Global Initiatives, <http://www2.aap.org/international/index.html>
- Measles & Rubella Initiative, a global partnership of the American Red Cross, United Nations Foundation, Centers for Disease Control and Prevention, and World Health Organization, www.measlesrubellainitiative.org



The Measles & Rubella Initiative Special Achievement Awards honored two AAP members who have helped the world make strides in measles and rubella elimination. Louis Z. Cooper, M.D., FAAP, (left), served as AAP president in 2001-'02 and is AAP liaison to the International Pediatric Association. He created the Rubella Project in New York in the 1960s, studied and defined the clinical features and long-term health impact of rubella and congenital rubella syndrome, and advocated for families. Samuel L. Katz, M.D., FAAP, worked in the laboratory of John Enders, Ph.D., and co-invented the measles vaccine that was licensed in 1963. He helped prioritize immunization for children abroad and in the United States as chair of the Advisory Committee on Immunization Practices and AAP Committee on Infectious Diseases, among many other groups.