



## **The Importance of Varicella Vaccination on Public Health and the Economy in Latin America**

The webinar ‘Vaccinating the Americas: Lessons from Varicella Vaccination’, organized by the Wilson Center and Americas Health Foundation, brought together public health experts to highlight the widespread challenges facing routine immunization programs following COVID-19 and to discuss how governments can strengthen public health systems to respond more efficiently to vaccination needs in Latin America and the Caribbean. More specifically, the discussion focused on the impact on varicella vaccination, which saw rates drop up to 20% due to re-direction of healthcare priorities and resources during the pandemic. Panelists emphasized the importance of including varicella vaccination in public health programs and described its economic benefit to society.

Felicitas Colombo, Director of Government and Public Affairs at the Americas Health Foundation, opened the panel with an irrefutable statement by WHO: Immunization is a global public health and development achievement that saves millions of lives every year.

Vaccines are currently available to prevent more than 20 life-threatening diseases. However, despite the enormous progress made, it is estimated that around 20 million infants each year do not have access to vaccination. This includes, among other diseases, the case study of varicella in which experts have emphasized with clear data the widespread benefits of regular access to vaccination in public health in Latin America.

## **Varicella in Latin America**

Varicella, also known as chickenpox, is a serious disease in young children, and must be prioritized in public health programs, stated Dr. Mirella Vázquez Rivera, the treasurer of the Mexican Association of Pediatric Infectious Diseases. She noted that while the mortality rate of varicella is fairly low, 40 percent of children who contract varicella will experience some sort of side effect or complication. For example, children under 5 have the highest mortality rate from varicella and are also vulnerable to secondary complications such as pneumonia, encephalitis, skin and soft tissue infections, or sepsis.

In Latin America, the incidence of varicella is about 22 cases per 1,000 people - well above the global average of 2 to 16 cases per 1,000 people. To Dr. Vázquez, this difference suggests that varicella is an important issue in Latin America that deserves immediate attention. Dr. Cristina Mariño, a member of the Society of Pediatrics, Society of Infectious Diseases, and National Committee on Immunization Practices from Colombia, underscored this point, adding that the incidence of varicella may be even higher than reported, in part because not all countries in Latin America require mandatory reporting of varicella infections.

Dr. Mario Melgar, from the Guatemalan Association of Infectious Diseases and the National Council of Immunization Practices, illustrated that it is extremely difficult to understand the disease burden of varicella in Guatemala, since there is no varicella surveillance program.

Dr. Vázquez Rivera echoed this point in Mexico, arguing that varicella cases must be reported in order to understand the prevalence of the disease and to assess whether vaccines are working. Consequently, panelists agreed that mandating the reporting of varicella cases is a crucial step in understanding and reducing the incidence of varicella in Latin America.

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## **The Economic Cost of Varicella in Mexico**

Panelists highlighted the economic cost of varicella at the national level in Mexico, where varicella is not included in their National Immunization Program, given associate cost to treat the disease and secondary complications. Dr. Vázquez Rivera elaborated on these economic costs, which include doctor's visits, hospital stays, medications, tests, and procedures. It was calculated that the total outpatient mean cost in U.S. dollars equals roughly \$240, or \$4718 Mexican pesos. The total inpatient mean cost includes hospitalization, and is estimated to be \$5,786 U.S. dollars, or \$113,454 Mexican pesos.

On a national scale, pediatric infectious disease specialist Dr. Enrique Chacón-Cruz discussed the economic impact of varicella in Mexico, as U.S.\$165 million are spent on treating varicella cases every year. Therefore, after presentation of an economic analysis, it was clearly that varicella poses a significant financial burden for governments and families, especially if a patient is hospitalized. The large amounts of money spent on treating varicella in Mexico indicates the need for public health efforts and political will to mitigate varicella infections.

Vaccinating against varicella reduces medical costs, as it is cheaper to vaccinate than to treat varicella cases. Offering varicella vaccinations reduces infection rates and hospitalizations, hence reducing the economic burden on both public health agencies and patients alike.

## **The Importance of Varicella Vaccination**

While varicella can be a dangerous disease in young children and places a considerable financial burden on the public health sector, panelists emphasized that the impact of varicella can be mitigated through regular vaccination. As an example, Costa Rica experienced a 73 percent reduction in the incidence of varicella cases and a 94 percent decrease in the rate of hospitalization in children under 5, following to the introduction of the varicella vaccine in their NIP.



## **The Impact of COVID-19 on Vaccination**

Dr. Alejandro Cravioto, president of the WHO Strategic Advisory Group of Experts on Immunization, indicated that the COVID-19 pandemic created a large delay in world vaccination systems. As vaccination clinics either closed or reduced services during the pandemic, millions of children missed out on vaccines against vaccine-preventable diseases. Thus, the public health community faces a serious challenge in recovering and prioritizing vaccination especially during times of disruptions to the system. Chickenpox and measles infections has seen serious consequences of skipped vaccines due to the pandemic. Given the impact of the disease, this could create grave consequences in health care systems in Latin America as more children become exposed to the disease.

## **Policy Recommendations to Address Varicella Disease in Latin America**

1. Improve data systems to monitor vaccine administration and identify pockets of under-vaccinated to inform catch-up campaigns and enhance surveillance capability to ensure accurate reporting of varicella disease burden.
2. Implement tailored catch-up programs to identify and locate children who missed doses to quickly recover varicella vaccination coverage rates.
3. Expand access to varicella vaccination through innovative mechanisms to optimize service delivery and ensure no child is left behind.
4. Engage a diverse set of stakeholders to increase public awareness of varicella disease and confidence in vaccination.
5. Generate data on the health, economic, and societal benefits of varicella vaccination to drive political will for inclusion in National Immunization Programs utilizing evidence-based decision-making methodology, varicella vaccination should be included in all National Immunization Program recommendations in Latin America.

