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Measles Control in Bolivia

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Commentary

Historically the Plurinational State of Bolivia had one of the highest mortality rates of measles among children less than 5 years of age in Latin America, since the 1970s, there was a great effort to control the spread of measles [1]. This effort has included training and monitoring in combination with national immunization programs and other organizations such as the World Health Organization, the Pan American Health Organization. Since 1979 in Bolivia to control the disease has been used strategy measles vaccination under the Expanded Program on Immunization (EPI) to all children 12 to 23 months are given a single-vivo attenu dose - vaccine ated [2], as part of routine childhood immunization.

To maintain herd immunity and prevent outbreaks of measles, immunization coverage rate should be between 83 to 95% [3]. In this range, it is unlikely that the spread of measles is from person to person. The endemicity of the disease decreases when a high proportion of the community is a contagious disease vaccine.

In 1992, there was the largest epidemic in the last 10 years with the record 4,937 cases, in 1994, it carried out a national vaccination campaign targeting children <15 years old and has achieved a vaccination coverage of 96% [4]. In 1995 to 1997, measles cases were reduced, while routine coverage was quite low (<90%), there was a national epidemic in 1998 to 2000 that involving 2,567 people, most of whom had not been vaccinated [5]. In 1999, the second generation of PAI introduced some new vaccines (DTP-Hib-HepB) and replaced with others, such as measles, MMR (measles, mumps and rubella), at the end of the year, a national vaccination campaign was carried out in areas with low coverage; there were only 122 cases confirmed with measles in 2000 [6]. The rate of coverage of official immunization has decreased dramatically from 99 % in 2000 to 79% in 2010 [7]. Since 2002, Bolivia has not reported any cases of measles to the World Health Organization.

In May 2010 we made (Cristina Masuet, Maria del Rosario Dávalos and others) research, Measles in Bolivia: A "honeymoon period", in children aged 5-16 years in Cochabamba, Bolivia, as conclusion, this study found a high prevalence of measles susceptibility in Bolivian children. Thus, herd immunity may not have been established, and some outbreak could occur.

Authorities should redress this situation before endemic measles transmission occurs nationally and regionally and there is an urgent need to conduct more seroprevalence studies in the region [8]. Despite the recommendation made with the results of this investigation, the Ministry of Health of Bolivia, in December 2010 Bolivia sent a report to the World Health Organization on the situation of measles in the country, in order to get certified "Bolivia free of measles", however, the agency asked to Bolivia vaccinate all children under 5 year.

For total control of measles in Bolivia, was made 2 vaccination campaigns in the years 2011 and 2012, with both campaigns was achieved 95% coverage [9], what allowed coverage to keep the herd immunity and prevent measles outbreaks.

In 2012, the Pan American Health Organization (PAHO) declared free of measles virus to Bolivia considering that since 2002 to date not registered sick with measles [10]. Since 2012 it has good coverage in vaccination dose of MMR (measles, rubella, mumps), which protects children from measles, but every year there are small groups of children who do not access the doses, either by religion , culture or lack of interest [11]. Which makes unvaccinated children for any reason, are exposed to the disease

The World Health Organization had planned, eliminate measles in the Americas region until 2016, but produced an outbreak in the United States in late 2014 and its expansion to Canada, Mexico, Brazil and Chile, had to turn the health emergency in the area of South America [12]. US one death was reported, and if not adequate control is performed there is the possibility that expands to everything South America.

Given the possible presence of the virus in the Bolivia after 15 years of have not confirmed any case, the Ministry of Health, conducted a vaccination campaign on 29 November 2015 against measles, rubella and mumps called "farewell to measles," in which it was achieved up to 85% coverage of children between 2 and 5 years, in the country, Campaign that in the departments of Santa Cruz and Beni could not reach the target set by the Ministry of Health, due to weather conditions [13]. With the threat of the spread and low achieved immunization in this vaccination campaign, continuous vaccination in Bolivia, especially, in the departments where it not achievement vaccination coverage.

In conclusion, at present in Bolivia there is still no certainty of having the immunization coverage rate of 95%. Aspect by which still exists the risk of the virus from entering the territory, there is no total control, an outbreak could occur in not immunized children that remain at risk of contracting this disease than in previous years has caused the death of many infants, therefore there is an urgent need to complete the immunization of all children susceptible to this diseases.

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