IMPACT OF THE VACCINATION STRATEGY ON VARICELLA BURDEN DISEASE IN ARGENTINA
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BACKGROUND:
Varicella (VZV) is one of the most frequent exanthematic diseases in childhood. In Argentina, around 150,000-180,000 total cases per year (p/y) are registered (Figure 1); however, underreport exists and some 400,000 cases are estimated to occur annually. Varicella vaccine (VV) was included in the national immunization schedule (NIS) in 2015, with a 1-dose schedule administered at 15 months of age. The information provided by epidemiological surveillance is essential to evaluate the impact of public health decisions.

AIM:
To describe and to compare the epidemiological situation of VZV infections in Argentina in two periods: pre (2010-2014) and post (2016-2017) vaccine introduction in NIS.

MATERIAL AND METHODS:
- Descriptive study.
- Comparison of cases and incidence rates (R) of VZV per 100,000 population (global and disaggregated by age group) reported to the National Health Surveillance System; in pre (Pre-VV) and post-vaccination (Post-VV) periods.
- The data analysis of 2015 was excluded since it was considered a transition year.

RESULTS:
- Vaccination coverage for 2015 was 44.7%; 74.4% in 2016 and 75.5% in 2017 (Figure 2).
- 728,392 cases of VZV were notified (R = 362.1) in Pre-VV period and 176,995 cases in Post-VV (R = 220.6), with a global incidence rate reduction of 39% (IC95% = 38.9-39.6 p =< 0.001) (Figure 3).
- Both 12-24 months of age and 2-4 years old groups (Pre-VV R 2.253 and Post-VV R 1.077; Pre-VV R 2.400 and Post-VV R 1.165, respectively) showed the greatest reductions in incidence rates .
- (-52.2% [IC95% 51.3-53) p <0.001 and -51.4% [IC95% 51-52] p <0.001). (Figure 4)
- Age groups not affected by vaccination (<1 year, 5-9 years and 10-14 years) presented minor but significant reductions (-49.1% [95% CI 44.5-53.4] p = 0.001; -23% [IC95% 22.4-23.6] p = 0.001, and -17% [IC95% 16.4-19] p <0.001 respectively). (Figure 4)

CONCLUSIONS:
Three years after the implementation of VZV vaccination strategy, a significant incidence rates reduction is recorded, especially in children <5 years old, despite suboptimal coverage. Improving vaccination coverage will likely reflect a greater impact on the burden of disease.

Figure 1: Number of cases per year, per age groups.
Figure 2: National coverages of varicella vaccine.
Figure 3: Number of global cases and incidence rates. Pre VV period (2010-2014) and Post VV period (2016-2017).
Figure 4: Varicella incidence rates per age groups. Pre VV period (2010-2014) and Post VV period (2016-2017).