

1096. Impact of Universal Pneumococcal Vaccination in Children in Argentina

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Background. Universal pneumococcal vaccination (UPV) in Argentina began in January 2012 using a 2 + 1 schedule using PCV13; vaccine coverage rate reached 50% in 2012, 75% in 2013. The objective was to evaluate the PCV13 impact 2 years after implementation.

Methods. Multicenter (5 hospitals), prospective study. Hospitalized children (CH) < 60 months with confirmed Invasive Pneumococcal Disease (IPD) and/or consolidated pneumonia (CP) (WHO criteria) during 5 years (prevaccine period: 2009-2011 and post-vaccine period: 2012-2013) were included. Patients (pts) with CP or empyema (E) confirmed by any other agent than *S.pneumoniae* were excluded. Demographic and clinical data were recorded.

Results. Pts included 1528; 1194(78%) CP, of 51/1120(4,5%) defined as Pneumococcal-CP (P-CP); E:249(16.3%), 84/234(35.9%) of them confirmed as Pneumococcal-E (PE) by culture; Meningitis 38(2,5%); other IPD:51(3,3%), including bacteremia, peritonitis, arthritis. The coverage rate in 2012 was 50% and 75% in 2013.

The decrease of IPD, CP and Pneumococcal Pulmonary Disease (PPD) (defined as P-CP + PE), after vaccination was:

Period	Average of Admissions	Global IPD		CP		PPD (P-CP + PE)	
		Average No cases	Rate* (95%CI)	Average No cases	Rate* (95%CI)	Average No. of cases	Rate* (95%CI)
2009-2011	34,038	56	16,5 (12,0 - 20,9)	300	88,1 (78,1 - 98,2)	37	10,9 (7,2 - 14,5)
2012-2013	32,952	28	8,5 (5,2 - 11,8)	147	44,6 (37,5 - 52)	12,5	3,9 (1,6 - 6,2)
Decrease			-50%		-51,00%		-67,80%
<i>p</i>			0,003		<0,0001		0,001

* Rate/10,000 admissions

The number of admission decreased 738 (-65.1%) and admission to ICU also was reduced 45(-38.8%); in addition the decrease of number of invasive procedures avoided was: central line 30 (-37%), thoracoscopy: 20 (-83%), pleural drainage 82(-59.4%), pleural decortication 22(-48.9%); the average days of antibiotic use was reduced in 1154 (-55.08%) after vaccination program implementation

2. Hospitalizations by IPD and/or CP decreased 65.1% and requirement of ICU 38.8% after 2 years of UPV using PCV13 in our setting.

Conclusion. A rapid and statistically significant decrease of IPD, CP and PPD was observed after 2 years of UVP in Argentina with a non-high coverage rate.

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