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[Active surveillance of invasive pneumococcal diseases in Sicilian children (2009-2011)].

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S.pneumoniae is a major cause of morbidity and mortality among children globally.

Since 2007 the World Health Organization has recommended anti-pneumococcal vaccination to reduce the burden of invasive pneumococcal diseases (IPD). The aim

of this study was to estimate the incidence of IPD in Sicilian children and describe the distribution of serotypes in subjects with IPD following the recent introduction of a universal vaccination program. Active surveillance of IPD (PneumoNet) was carried out in Sicily from 2009 to 2011 by nine reference hospitals (one per province) and one-hundred randomly sampled family pediatricians. Hospital discharge data of participating hospitals were also analyzed and compared with regional surveillance data. During the three-year surveillance period, 136 children with a M/F ratio of 1.03 and a median age of 23.5 months (range 1-57 months), were included in the study (14 in 2009, 66 in 2010 and 56 in 2011). Of the 136 subjects, 43 (36.1%) were recruited from FPs whereas 93 (63.9%) from hospital personnel. Overall, 9 children (6.6%) were positive for IPD. *S. pneumoniae* serotype 19A was isolated from three children, serotype 15C from three, and serotype 23F from one child. Hospital discharge

data from 2009 to 2011 showed that a diagnosis of IPD was reported for 18 of 2,663 subjects, with decreasing annual trend from 1.1% in 2009 to 0.3% in 2011 (Chi-square for trend $p=0.063$). In conclusion, PneumoNet is shown to be an effective tool for identifying children with IPD. The estimated incidence of IPD in Sicily is lower than that observed in other Italian and European regions, especially before vaccine introduction. These results indicate a good level of pneumococcal disease control in the Sicilian population below 5 years of age and support the implementation of an universal vaccination program. Considering the emergence of serotypes 19A PCV13 vaccine may offer some advantages with respect to the seven-valent pneumococcal conjugate vaccine (PCV7) which does not include 19A.

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