

Large outbreak of measles in a community with high vaccination coverage: implications for the vaccination schedule.

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BACKGROUND: Attempts to eliminate measles from a country or region may be disrupted by an imported case that affects indigenous persons. The objective of this study was to analyze epidemiological and clinical characteristics of a measles outbreak in Catalonia, Spain, in 2006.

METHODS: Data on cases of measles reported to the Department of Health, Generalitat of Catalonia, during the period 28 August 2006 through 8 July 2007 were collected. Suspected cases were confirmed by determination of measles-specific immunoglobulin M antibodies and/or detection of virus genome. Incidences were calculated using the estimated population of Catalonia for 2006, and 95% confidence intervals were determined assuming a Poisson distribution. The association between proportions was determined using the chi(2) test and Fisher's exact test. The level of statistical significance was set at $\alpha = .05$.

RESULTS: A total of 381 cases were confirmed, for an incidence of 6.6 cases per 100,000 persons. A total of 89.5% of cases occurred in nonvaccinated persons, mainly those aged ≤ 15 months (incidence, 278.2 cases per 100,000 persons; mean age of patients, 12 months). Indigenous subjects accounted for 89.8% of cases, and laboratory confirmation of results was obtained for 87.1%. Measles genotype D4 was identified in all sequenced samples.

CONCLUSIONS: The age distribution of cases of measles among children aged < 15 months suggests that the first dose of vaccine should be routinely administered at the age of 12 months.

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