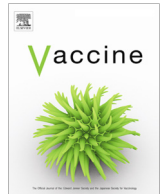




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Socioeconomic factors influencing childhood vaccination in two northern Italian regions



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ABSTRACT

Background: Infant vaccination rates have been declining in Italy over the past 5–7 years. The aims of this study were to assess the trend in the proportions of children unvaccinated at 24 months old, to identify sociodemographic factors associated with non-vaccination; and to examine changes in parental attitudes to vaccination over time.

Methods: We conducted a population-based birth cohort study by combining existing electronic data sets. The study population consisted of children born from 1995 to 2010 in the Friuli-Venezia Giulia (FVG) region, and from 2007 to 2011 in part of the Emilia Romagna (ER) region, in north-eastern Italy. The immunization registers were linked with the medical birth registers, which contain sociodemographic data on both parents and the newborn. Unconditional logistic regressions were used to identify associations between vaccine uptake at 24 months and maternal sociodemographic variables.

Results: Of 145,571 babies born in FVG and 75,308 in ER, there were 4222 (1.9%) who had not been vaccinated at all, and 23,948 (11.0%) without the optional measles, mumps and rubella (MMR) vaccination. The number of unvaccinated infants increased over time. Mothers who were over 35 or under 25 years old, unmarried, with a higher formal education, and citizens of highly-developed countries were less compliant with vaccination recommendations in both the regions. A cohort effect was observed in FVG, for both educational level and citizenship: babies born between 1995 and 2000 to mothers without an Italian citizenship and with a lower formal education were more likely to refuse vaccination for their offspring, while this association was reversed between 2006 and 2010.

Conclusions: Mothers who are Italian citizens and have a good formal education have begun to refuse vaccination for their children in recent years. Future public health action in this setting should target highly educated parents.