Determinants of Bacillus Calmette–Guérin (BCG) vaccination among Québec children

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ARTICLE INFO

Available online 16 June 2014

Keywords:
BCG
Childhood vaccination
Determinant
Developed country
Socio-demographic
Non-mandatory vaccination

ABSTRACT

Objective: To identify determinants of Bacillus Calmette–Guérin (BCG) vaccination among children born in Québec, Canada, in 1974, the last year of the systematic vaccination campaign.

Method: A retrospective birth cohort was assembled in 2011 through probabilistic linkage of administrative databases (n=81,495). Potential determinants were documented from administrative databases and by interviewing a subset of subjects (n=1643) in 2012. Analyses were conducted among subjects with complete data, 71,688 (88%) birth cohort subjects and 1154 (70%) interviewed subjects, then re-done using multiple imputation. Determinants of BCG vaccination during the organized vaccination program (in 1974), and after the program (1975 onwards) were assessed separately. Logistic regression with backward elimination was used to estimate odds ratios (ORs) and 95% confidence intervals (CIs).

Results. Overall, 46% of subjects were BCG vaccinated. 43% during the program and 4% after it ended. BCG vaccination during the program was associated with parents’ birthplace and urban or rural residence. BCG vaccination after the organized program was only related to ethnocultural origin of the child’s grandparents.

Conclusion. Different factors were related to vaccination within and after the organized program. Determinants of BCG vaccination in Québec, Canada, have never been studied and will be useful for future research and vaccination campaigns.

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