Abstract

Measles Vaccine Effectiveness Among Children - Morocco - 2017

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Abstract

Background: Measles are one of the leading causes of vaccine-preventable death among young children in the worldwide. In Morocco, vaccination against measles has been introduced into the National Immunization Program (NIP) since 1987, as a single dose at nine months old. A second dose has been introduced since 2003 as part of the elimination strategy.

Objective: The of our work was to evaluate the vaccine effectiveness of measles vaccination after the first and the second dose among children aged between 12 and 60 months, from 2010 to 2016 in Morocco.

Methods: We conducted a test negative design using data from the measles surveillance system. Only children aged 12-60 months with laboratory result recorded was included. The vaccine status (unvaccinated, vaccinated one dose, vaccinated two doses) was defined among cases: children who had confirmed infection (presence of IgM specific antibodies for measles) and controls: children who had negative lab result (absence of IgM specific antibodies for measles). Vaccine effectiveness (VE) was estimated using the formula VE = [1-odds ratio (vaccinated/ unvaccinated)] _ 100.

Results: In total 897 children were included from January 2010 to December 2016. The mean age was 36 months. The male female sex ratio was 0.8:1. According to the vaccination status, 785 were vaccinated, 79% of them have received one dose and 21% have received two doses. Lab result was positive for 186 (21%) of 897 patients. VE was 87% (CI 95%: 82%-93%) after one dose and 97% (CI 95%: 93%-99%) after two doses.

Conclusions: The field assessment of vaccination effectiveness confirms that measles vaccine is an effective way to prevent measles especially with two doses. The NIP should be reinforced by more vaccination campaign to cover all children who have not received the second dose.

(iproc 2018;4(1):e10625) doi: 10.2196/10625

Edited by Y Khader; this is a non–peer-reviewed article. Submitted 29.03.18; accepted 29.03.18; published 29.03.18.

Please cite as:
Zahra Benfouila F, Merabet M, Rguig A, Khatri K, Khattabi A, Meski F
Measles Vaccine Effectiveness Among Children - Morocco - 2017
iproc 2018;4(1):e10625
URL: http://www.iproc.org/2018/1/e10625/
doi: 10.2196/10625
PMID: