

The use of Health and Demographic Surveillance system (HDSS) data to assess risk factors for non adherence to the vaccination schedule in young children of a rural area in Burkina Faso

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Background

Vaccination is an important tool for reducing infectious disease morbidity and mortality. In Burkina Faso, less than 80% of children 12-23 months of age are fully immunized. This study was conducted to assess risk factors for non adherence to the vaccination schedule in rural area Burkina Faso.

Data and methods

The study population was extracted from the Nouna HDSS cohort. Data from four rounds of interviews conducted between November 2012 and June 2014 were considered. This study included 4016 children aged 12 to 23 months. We assessed the effects of several risk factors including sex, factors reflecting access to health care (residence, place of birth) and maternal factors (age, education, marital status), on being fully immunized defined as having received BCG, 3 doses of diphtheria-tetanus-pertussis and oral polio vaccine, and measles vaccine by 12 months of age. The risk factor analysis was carried out using binomial regression in univariate and multivariate regression models.

Results

The full vaccination coverage increased significantly over time (72% in 2012; 79% in 2013 and 81% in 2014, $p=0.01$), and the coverage was significantly lower in urban compared with rural areas (relative risk (RR) of being fully vaccinated: 0.84 (0.80-0.89)). There were no differences in vaccination coverage between boys and girls (RR: 0.99 (0.96-1.03)) or by maternal factors.

Discussion/conclusion

The study documented a further improvement of full vaccination coverage in Burkina Faso in recent years and better vaccination coverage in rural compared with urban areas. The organization of healthcare systems with systematic outreach activities in the rural areas may explain the difference between rural and urban areas.