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Community aspects of childhood vaccinations in rural Burkina Faso

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Summary

Vaccination is an important tool for reducing infectious disease morbidity and mortality. In the past, less than 80% of children 12-23 months of age were fully immunized in Burkina Faso. The interrelation between population and health systems, the way that the vaccination information is given to the community, and the organization of the health team during the vaccination sessions may play a major role in explaining vaccination completeness or refusal.

The objective of this study was to evaluate coverage, timeliness, and community perceptions and assess risk factors for non-adherence to the vaccination schedule in rural Burkina Faso.

This was an observational study which employed mixed methods design. The study population was extracted from the Nouna Health and Demographic surveillance system (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. This study 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.

In addition, from March to April 2014, this study employed a combination of in-depth individual interviews (n=29) and focus group discussions (n=4) including mothers of children, health workers, godmothers, community health workers and traditional healers. These

interviews are focus on community perception on childhood vaccination. All material was transcribed, translated and analyzed inductively using the software ATLAS.ti4.2.

The full vaccination coverage increased significantly over time (72% in 2012; 79% in 2013 and 81% in 2014, $p=0.003$), and the coverage was significantly lower in urban compared with rural areas (RR 0.84; 0.80-0.89). Vaccination coverage was neither influenced by sex, nor by place of birth or by maternal factors.

There was a better social mobilization in the rural compared to the urban area. Most of mothers know the EPI target diseases, but the great majority of informants reported that the mothers don't know the vaccination program. Nearly all respondents indicated that mothers of children know the importance to immunize the children. There is awareness that some children are incompletely vaccinated. Reasons mentioned for this were migration, mothers being busy with their work, the number of children required to open a vaccine vial (e.g. the strategy of not opening a BCG vial unless 10 children are present), poor interaction between women and health workers during immunization sessions, potential adverse events associated with vaccination, geographical inaccessibility during rainy season, and lack of information.

The study documented 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.

Well organized vaccination programs are an important factor for the improvement of child health and need to consider community perceptions.