

---

**Abstract**

# Evaluation of Routine Immunization Coverage in 12- to 23-Month Children in Sarepol Province, 2018: Descriptive Cross-sectional Study

---

Abdul Shakour Karimi Sr, BSc

Nation Public Health Institution of Afghanistan, Ministry of Public Health, Kabul, Afghanistan

---

**Corresponding Author:**

Abdul Shakour Karimi Sr, BSc

Nation Public Health Institution of Afghanistan

Ministry of Public Health

Masood Square

Wazir Akbar Khan Road

Kabul,

Afghanistan

Phone: 93 780620510

Email: [karimi.afetp@gmail.com](mailto:karimi.afetp@gmail.com)

---

**Abstract**

**Background:** Afghanistan has the lowest routine immunization coverage, according to the WHO-UNICEF reports. The coverage rate of Penta3 in Iran, India, Pakistan, and Afghanistan are estimated to be 99%, 89%, 75%, and 66%, respectively.

**Objective:** This study aimed to find the real immunization coverage in urban areas and factors related to vaccinated and unvaccinated 12- to 23-month children, in 2018, in Sarepol province.

**Methods:** A descriptive cross-sectional study with probability proportional to size (PPS) cluster sampling was conducted and modified for application to surveys of immunization coverage. We selected 30 clusters and randomly selected 7 households from each cluster in the urban setting of Sarepol province. The children's age was calculated, in months, with respect to the 1st day of the survey. We designed a comprehensive questionnaire, and 210 questionnaires were filled. The data were managed and analyzed in Epi Info v.7.

**Results:** This survey shows EPI routine coverage for 12- to 23-month children for BCG, Meales-1, Penta1, and Penta3, which were 97.14%, 77.14%, 93.81%, and 83.81%, respectively. A full immunization coverage by gender—80.18% for girls and 71.15% for boys—was reported. The dropout rate of vaccination among Penta1, Penta3, and BCG was 9.27%, and for Measles-1 was 18.90%. Moreover, 2.86% of 12- to 23-month children did not receive any vaccine in these urban areas. Children's illness, emigration, distant health facilities, and the gaps between the doses were reported by the respondents as the main reasons for incomplete or no vaccination. The valid doses administered for BCG, measles, and Penta3 were calculated to be 93.80%, 71.43%, and 80%, respectively.

**Conclusions:** It is observed that access and use of immunization services in urban areas have improved because full immunization was 75% compared with the AHS-2018 survey's 61%. However, there are still many children who have not received any vaccine. High immunization dropout rates could be overcome by creating awareness of the program and of the importance of second and third doses of penta, polio, and measles vaccines. Measles coverage is very low, and we are expecting more outbreaks in urban areas. We therefore suggest that the Ministry of Public Health better enhance awareness and implement measles campaigns.

(*iproc* 2022;8(1):e36536) doi: [10.2196/36536](https://doi.org/10.2196/36536)

---

**KEYWORDS**

immunization survey; Sarepol; EPI

---

*Edited by Y Khader; this is a non-peer-reviewed article. Submitted 17.01.22; accepted 28.01.22; published 21.02.22.*

*Please cite as:*

*Karimi Sr AS*

*Evaluation of Routine Immunization Coverage in 12- to 23-Month Children in Sarepol Province, 2018: Descriptive Cross-sectional Study*

*iproc 2022;8(1):e36536*

*URL: <https://www.iproc.org/2022/1/e36536>*

*doi: [10.2196/36536](https://doi.org/10.2196/36536)*

*PMID:*

©Abdul Shakour Karimi Sr. Originally published in Iproceedings (<https://www.iproc.org>), 21.02.2022. This is an open-access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in Iproceedings, is properly cited. The complete bibliographic information, a link to the original publication on <https://www.iproc.org/>, as well as this copyright and license information must be included.