

DASHBOARD FOR MMR VACCINATION COVERAGE IN MONTENEGRO AS THE INNOVATIVE COMMUNICATION TOOL

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Background: Despite being included in the mandatory vaccination calendar and used for over three decades, MMR vaccine coverage has significantly declined in Montenegro over the last decade, especially the first dose, which is often delayed until preschool age. This was exacerbated by the COVID-19 pandemic, however, the pandemic accelerated digital innovations in public health, leading to a greater presence of dashboards as a primary communication tool for public health authorities, aimed at timely and comprehensive information sharing. Consequently, the Institute for Public Health of Montenegro (IPHMNE) developed a dashboard for MMR immunization coverage in early 2024 available at: <https://www.ijzcg.me/me/male-boginje-morbili>.

Methods and Objectives: Data for the MMR vaccination dashboard are derived as a CSV file from the IPHMNE National immunization registry, within an integrated health informatics system. Exported data are converted to a MySQL database through an extract-transform-load phase, serving as the data source. Visuals for the dashboard are created using Microsoft Power Bi Desktop. The dashboard is updated weekly and it provides vaccine coverage by different birth cohorts, genders, and municipalities, as well as timeliness of vaccination.

Results: Since the MMR vaccination dashboard's publication in April 2024, IPHMNE has referred to it in all public statements regarding the current epidemiological situation related to measles. This approach allows IPHMNE to communicate the importance of vaccination in preventing measles outbreaks more comprehensively and highlights fractions of the population at increased risk due to lack of vaccination. This has led to a more than 80% reduction in requests about current MMR vaccination coverage, as the information is publicly available to both professional and general audiences.

Conclusions: Dashboards for data visualization are an effective way to utilize information technology to improve communication on different public health topics. They ensure timely and accurate information dissemination and reduce the need for information-sharing requests by providing updated data access to all interested parties.

Keywords: MMR vaccination, measles, dashboard, data visualization, vaccine coverage