

# Consultation with Member States of the WHO European Region on use of immunization data for decision-making

Sarajevo, Bosnia and Herzegovina

15–18 May 2018

Copenhagen, Denmark

23–24 May 2018



## ABSTRACT

A consultation with and workshop for Member States of the WHO European Region on the use of immunization data for decision-making took place in Sarajevo, Bosnia and Herzegovina and in Copenhagen, Denmark in May 2018. The goal of this consultation and workshop was to facilitate the exchange of practices, challenges and solutions between participants and for WHO/Europe to develop ways of supporting countries in the Region in the collection, analysis and usage of data for awareness raising and decision-making.

## Keywords

COMMUNICABLE DISEASE CONTROL  
DISEASE ELIMINATION  
SURVEILLANCE  
LABORATORIES  
VERIFICATION  
MEASLES  
RUBELLA

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## Abbreviations

ECDC	European Centre for Disease Prevention and Control
GVAP	Global Vaccine Action Plan
JRF	WHO/UNICEF Joint Reporting Form
SAGE	Strategic Advisory Group of Experts on Immunization
SIA	supplementary immunisation activities
UNICEF	United Nations Children's Fund
CDC	United States Centers for Disease Control and Prevention
VPD s	vaccine-preventable diseases
WUENIC	WHO/UNICEF Estimates of National Immunization Coverage

## Introduction

A strong immunization programme in a country is characterised by well-trained, competent staff, high-quality data and information, laboratory-based surveillance of vaccine-preventable disease, coordinated systems management and effective monitoring, evaluation and communication. European Vaccine Action Plan 2015-2020 (EVAP) outlines strengthening monitoring of immunization performance and surveillance systems as one of the priority action areas.

In resolution WHA65.17, the World Health Assembly urged Member States to report every year to the regional offices on progress made to reach the national immunization targets. Thus, it is essential that annual reporting on the WHO/UNICEF Joint Reporting Form (JRF) by Member States is timely and complete with high-quality data. Based on the guidance from European Technical Advisory Group of Experts on Immunization (ETAGE), a regional monitoring and evaluation framework assesses implementation of EVAP goals and objectives. The WHO Regional Office for Europe (Regional Office) contributes to the biannual revision of the JRF to align with the reporting requirements of the global and regional vaccine action plans.

Recognizing the need to further strengthen data-driven decision-making at the national and subnational levels and building upon the JRF regional data meeting held in February 2017, the Regional Office held consultative workshops with the European Member States in May 2018. The workshops focused on practical issues around quality of available immunization data and use of available data for immunization decision-making by the national immunization programme managers and immunization data managers. Bringing immunization programme managers and data managers together for the workshops ensured a better understanding of analysis and use of data by incorporating various elements of an immunization system.

Three identical workshops were organized to facilitate collaboration among countries and to identify practical challenges and opportunities to improve the quality and presentation of immunization data. Two consecutive workshops organized in Sarajevo, Bosnia and Herzegovina were attended by a total of 32 countries and the third workshop organized in Copenhagen, Denmark was attended by 11 countries. The workshops were also attended by representatives of the United States Centers for Diseases Control and Prevention (CDC), the European Centre for Disease Prevention and Control (ECDC), the United Nations Children's Fund (UNICEF), WHO headquarters and the WHO Country Office in Bosnia and Herzegovina (Sarajevo workshops only). The list of participants is provided in Annex 2 of this report.

## **Use of quality data in the immunization decision-making process**

The immunization data collected from each WHO Member State are essential for monitoring the local, national, regional and global health situation, progress towards goals in the global and regional vaccine action plans, implementation of recommended actions and detecting of health trends. Information gathered on vaccination coverage, disease incidence rates, immunization schedules, vaccine supply/stock-outs, pricing and other indicators are crucial for strategic planning at the technical programmatic levels and by policy-planners. To facilitate the adequate assessment of the immunization situation in a country, it is prudent that immunization coverage data be analysed together with vaccine-preventable disease surveillance and health system resource data. The data provided by countries to WHO are compiled, analysed, summarized and made available through various channels, a list of which is included in Annex 1. In addition, the information available through the Vaccine Product, Price and Procurement (V3P) project has provided a platform for increasing price transparency and has helped countries towards decision-making around vaccine introduction and implementation. At the regional level, these data are essential in evaluating the national immunization programmes and monitoring progress towards the goals of the European Vaccine Action Plan. Globally, many publications make use of immunization data including the WHO and UNICEF estimates on national immunization coverage (WUENIC). WHO-UNICEF Joint Reporting Form data are also used for assessment of disease burden, the WHO vaccine prequalification process, published articles, and analyses performed for the Strategic Advisory Group of Experts (SAGE) on Immunization and other regional advisory bodies.

The processes used in countries to make use of the available data vary widely.

### **JRF feedback**

Since 1998, WHO and UNICEF have been jointly collecting data through the JRF and disseminating annual immunization information on the structure, policies, performance and impact of national immunization systems and incidence of vaccine-preventable diseases. Accomplishing a comprehensive and coherent reporting system that collects the relevant data throughout all the WHO regions in a way that is not onerous for the countries is a challenge due to the variety of systems in place in the countries, the diversity of socio-economical, disease and political contexts, and the constant need to reflect upon the programmatic requirements.

WHO aims to move toward a more structured data collection process and improve the available tools to facilitate better measurement of countries' progress towards regional and global immunization goals.

One of the main means of immunization reporting currently in place, the JRF, is being revised in 2018, as part of a regular biannual revision process. Taking the opportunity provided by this workshop, the participants were asked to provide feedback on the JRF's format and content.

Some of the main points raised by the participants were related to the appropriateness of the language (including the Russian translation of specific terms), mode of reporting and use of different data elements requested in the JRF. As JRF reporting is not necessarily carried out by the Ministry of Health and various entities may be involved in providing the required information, the participants requested that any change to the form be communicated well in advance to the countries so that relevant departments responsible for its completion are made aware of upcoming data needs. To facilitate reporting, participants believed that an electronic form and the possibility of copying and pasting available data would be useful, as well as

additional fields for comments. Although many countries report that much of their data may not be available at the time of submission of the JRF, WHO emphasized that data updates are accepted and welcome once the information becomes available. Finally, there were concerns about ever-growing data-related demands. To minimize the reporting burden, the participants felt that WHO/Europe should coordinate with other regional organizations and explore the possibility of extracting information from other reporting channels such as TeSSy, ECDC, the Centralized Information System for Infectious Diseases and the European Medicines Agency to minimize duplication of reporting especially for European Union/European Economic Area countries. As not all questions in the JRF are relevant for all countries, the participants requested the option of filtering out questions for which the countries do not have relevant data, thereby reducing the form's size and better reflecting the immunization data available in the countries.

### **Presenting and communicating immunization data**

Despite challenges and fluctuations, global trends show that immunization rates have drastically improved in the last 30 years and many lives have been saved through vaccination. However, there is no room for complacency as many goals are yet to be achieved, such as polio eradication and measles and rubella elimination.

Countries must collect good-quality data and make use of it to sustain efficient decision-making. Complete data that is representative of a population and gathered in a timely manner plays an essential role in measuring the progress towards immunization goals. However, data on its own is of limited use. To make a set of data actionable and coherent, it must be consolidated, analysed, synthesized and comprehensively reviewed. Once these steps have been concluded, data should be communicated - to increase population awareness, to inform healthcare professionals and/or to support policy-planners and decision-makers.

To maximize impact, data should be communicated in a way that is tailored to fit the communication objective and target audience, with careful consideration of the optimal format and presentation for this purpose. In general, communication products should be easy to interpret with images favoured over descriptions, as visualized data is processed more efficiently than text. The content can be used to tell a story, kept simple and to the point so that the audience is not overwhelmed by excessive information.

A short summary of best practice in visualizing data for various audiences is provided in Annex 2.

Working in groups, participants were given an exercise based on hypothetical scenarios in which data needed to be communicate to a target audience to achieve a specific goal. Each group developed a concept for a communication product to address the described need. The participants requested WHO/Europe to develop this exercise further into a practical handbook on presenting and communicating immunization data to be used by immunization programme managers at the national and subnational levels.

## Annex 1: Data resources

### Main websites

WHO website	<a href="http://www.who.int/immunization/">http://www.who.int/immunization/</a>
Global Health Observatory	<a href="http://www.who.int/gho/">http://www.who.int/gho/</a>
Vaccine pricing database	<a href="http://apps.who.int/immunization/vaccineprice">http://apps.who.int/immunization/vaccineprice</a>
Global Vaccine Action Plan indicators portal	<a href="http://apps.who.int/gho/cabinet/gvap.jsp">http://apps.who.int/gho/cabinet/gvap.jsp</a>
TechNet (forum and immunization resources)	<a href="http://www.technet-21.org">http://www.technet-21.org</a>

### Mobile app

Search for “Immunization summary” on the play store or apple store of a mobile phone or tablet. The app can be used to obtain summaries by country or topic and to access analyses and maps.

### WHO immunization website

<http://www.who.int/immunization/>

### Global Vaccine Action Plan

[GVAP reports and access to indicators portal](#)

### WHO policy recommendations

[Strategic Advisory Group of Experts on Immunization \(SAGE\)](#)  
[WHO recommendations for routine immunization - summary tables](#)  
[WHO vaccine position papers](#)

### National programmes and systems

[Vaccine product, price and procurement platform \(V3P\)](#)  
[Sustainability of immunization programmes](#)  
[Immunization planning and financing](#)

### WHO Immunization data website

[http://www.who.int/immunization/monitoring\\_surveillance/data/en](http://www.who.int/immunization/monitoring_surveillance/data/en)

### JRF summary data

#### Disease incidence

(JRF sheet 1)

[Link to country profiles](#)

[Reported incidence time series](#)

[Measles monthly report \(XLS + PPT\)](#)

### Immunization coverage

(JRF sheets 5, 4A and 4C)

[Reported coverage estimates time series](#)

[Administrative data time series](#)

[Subnational data summary](#)

[WUENIC estimates \(WHO/UNICEF\)](#)

Immunization system indicators ( <i>JRF sheet 6</i> )	<a href="#">System indicators</a> <a href="#">Financing indicators</a>
Immunization schedules ( <i>JRF sheets 2A and 3</i> )	<a href="#">Reported schedules by vaccines</a> <a href="#">Year of introduction of selected vaccines</a> <a href="#">School-based immunization</a> <a href="#">Home-based records</a>
Supplementary immunization activities ( <i>JRF sheet 8</i> )	<a href="#">SIA calendar per Member State, vaccine and type of activity</a>

### **WHO Regional Office for Europe publications**

- [European Vaccine Action Plan 2015–2020](#)
- [European Vaccine Action Plan midterm report](#)
- [European Regional Commission for the Certification of Poliomyelitis Eradication](#)
- [European Regional Verification Commission for Measles and Rubella Elimination](#)
- [WHO EpiData](#)
- [WHO EpiBrief](#)
- [Measles and rubella country profiles](#)

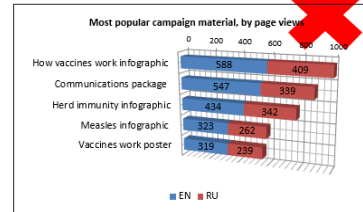
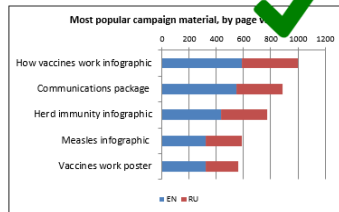


Annex 2: Data visualization notes

Examples of best practice

Keep it simple with graphs and charts – less is more. Avoid unnecessary visual enhancements, such as 3D, extra lines, etc.

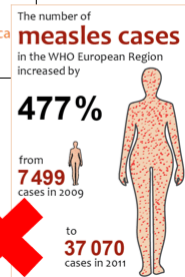
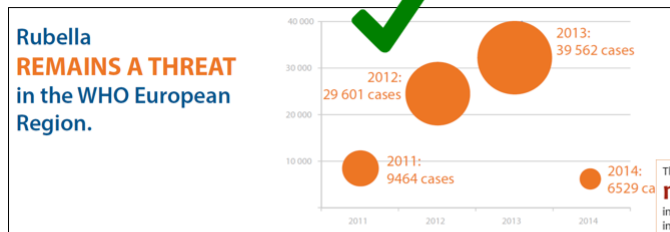
Bar charts



“Good design is as little design as possible”

- Dieter Rams

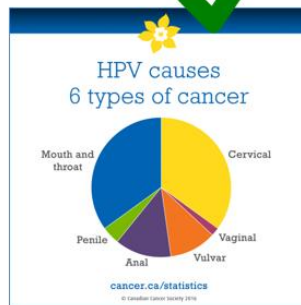
It is difficult for our eyes to judge the area of circles unless there is a large difference in size. Stick to basic shapes as it is difficult to judge and calculate the volume of unusual or complicated shapes.



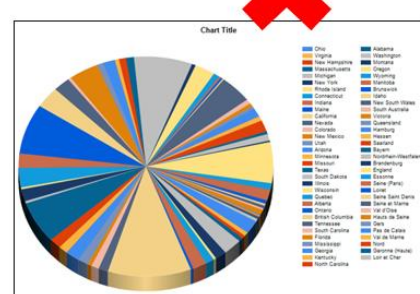
<http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/data-and-statistics/infographic-rubella-remains-a-threat-2015>

Pie charts

More than six numbers represented in a pie chart can become difficult to interpret.



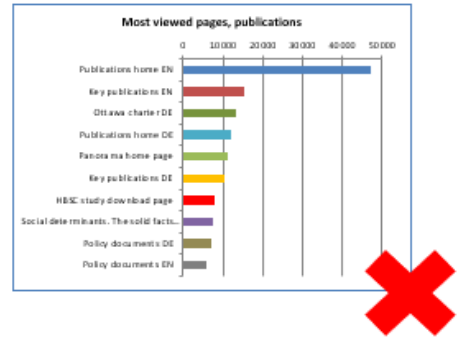
<https://www.elginhealth.on.ca/your-health/immunization/school-age-immunizations/grade-7-human-papillomavirus-hpv-immunization>



<http://blog.hoegaarden.be/2009/10/25/pie-chart-techniques/>

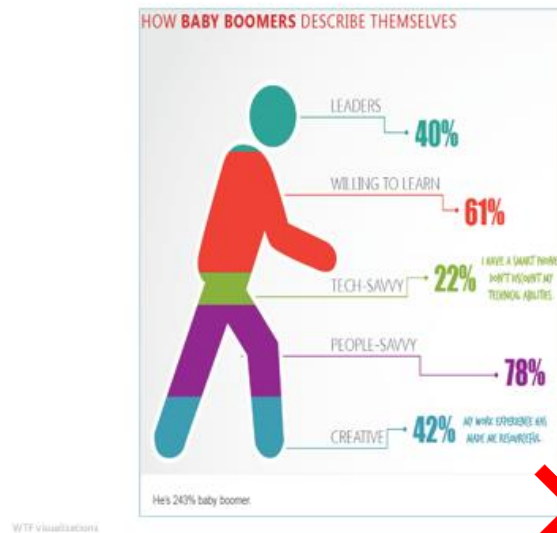
## Don't overcomplicate with color

Use colour to encode information. However, remember that too many colours can be distracting. Colour can have special significance depending on the context.



## Do your math!

Shapes should be drawn with mathematical calculations – not just by estimating size. And always make sure the math is correct.



$$\begin{array}{r}
 40 \\
 +61 \\
 +22 \\
 +78 \\
 +42 = \\
 \hline
 243\%
 \end{array}$$

Include the date of data being published.



Consider closing with a call to action.

## YOU CAN STOP MEASLES



Do your part to  
#immunizeEurope



Know your target audience and craft your messages and visualizations accordingly. You can get to know their preferences and assumptions by holding a focus group discussion or pilot testing your product.



### Resources

Examples of free online resources for developing graphics or working with designers

- Google charts: <https://developers.google.com/chart/>
- Infogram: <https://infogram.com/>
- Inkscape (free image creator): <https://inkscape.org/en/>
- Gimp (free image manipulator): <https://www.gimp.org/>

*Annex 3: List of participants*

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**Ukraine**

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**Uzbekistan**

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**European Centre for Disease Prevention  
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