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
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviations</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Use of quality data in the immunization decision-making process</td>
<td>2</td>
</tr>
<tr>
<td>JRF feedback</td>
<td>2</td>
</tr>
<tr>
<td>Presenting and communicating immunization data</td>
<td>3</td>
</tr>
<tr>
<td>Annex 1: Data resources</td>
<td>4</td>
</tr>
<tr>
<td>Annex 2: Data visualization notes</td>
<td>6</td>
</tr>
<tr>
<td>Annex 3: List of participants</td>
<td>9</td>
</tr>
</tbody>
</table>
Abbreviations

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

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: [http://www.who.int/immunization/](http://www.who.int/immunization/)
- Global Health Observatory: [http://www.who.int/gho/](http://www.who.int/gho/)
- Vaccine pricing database: [http://apps.who.int/immunization/vaccineprice](http://apps.who.int/immunization/vaccineprice)
- Global Vaccine Action Plan indicators portal: [http://apps.who.int/gho/cabinet/gvap.jsp](http://apps.who.int/gho/cabinet/gvap.jsp)

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/](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


- JRF summary data: Link to country profiles
- Disease incidence: Reported incidence time series
- (JRF sheet 1): Measles monthly report (XLS + PPT)
- Immunization coverage: Reported coverage estimates time series
- (JRF sheets 5, 4A and 4C): Administrative data time series
  - Subnational data summary
  - WUENIC estimates (WHO/UNICEF)
### Immunization system indicators
*(JRF sheet 6)*
- System indicators
- Financing indicators

### Immunization schedules
*(JRF sheets 2A and 3)*
- Reported schedules by vaccines
- Year of introduction of selected vaccines
- School-based immunization
- Home-based records

### Supplementary immunization activities
*(JRF sheet 8)*
- SIA calendar per Member State, vaccine and type of activity

### 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.

“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.

More than six numbers represented in a pie chart can become difficult to interpret.
Consultation with Member States on use of immunization data for decision making

Page 7

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.

Include the date of data being published.
Consultation with Member States on use of immunization data for decision making

Consider closing with a call to action.

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/](https://developers.google.com/chart/)
- Infogram: [https://infogram.com/](https://infogram.com/)
### Annex 3: List of participants

<table>
<thead>
<tr>
<th>Country</th>
<th>Participants</th>
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| **Albania**           | Ms Iria Preza  
Dr Erida Nelaj                                                               |
| **Armenia**           | Dr Svetlana Grigoryan  
Dr Gayane Sahakyan                                                             |
| **Azerbaijan**        | Dr Afag Aliyeva  
Dr Abbasgulu Ismailov                                                           |
| **Belarus**           | Dr Irina Glinskaya  
Dr Valiantsina Valchok                                                           |
| **Bosnia and Herzegovina** | Dr Sanjin Musa  
Dr Andrea Juric                                                              |
| **Belgium**           | Mr Clément Brasseur                                                          |
| **Croatia**           | Dr Bernard Kajić                                                            |
| **Czech Republic**    | Dr Jitka Částková  
Dr Jozef Dlhý                                                                 |
| **Denmark**           | Ms Lisbet Krause Knudsen                                                     |
| **Estonia**           | Dr Irina Filippova  
Mrs Kärt Söber                                                               |
| **Estonia**           | Dr Irina Filippova  
Mrs Kärt Söber                                                               |
| **Finland**           | Dr Jonas Sundman  
Dr Tuija Leino                                                                |
| **France**            | Dr Magid Herida  
Dr Sylvie Floreani                                                            |
| **Georgia**           | Mrs Tamta Komakhidze  
Mrs Tamar Sulkhanishvili                                                       |
| **Germany**           | Dr Ole Wichmann                                                              |
| **Hungary**           | Dr Zsuzsanna Molnár                                                           |
Consultation with Member States on use of immunization data for decision making

Iceland
Mrs Kamilla S. Jósefsdóttir

Portugal
Dr Paula Valente
Mrs Teresa Fernandes

Israel
Dr Chen Stein-Zamir

Republic of Moldova
Dr Veaceslav Gutu
Dr Anatolie Melnic

Italy
Dr Stefania Iannazzo

Russian Federation
Dr Marina Shevyreva
Dr Evgeniya Tsoi

Kazakhstan
Dr Nurshai Azimbayeva
Dr Ainagul Kuatbayeva

San Marino
Dr Micaela Santini
Dr Elena Sacchini

Kyrgyzstan
Dr Gulbara Ishenapysova
Dr Gulnara Zhumagulova

Poland
Dr Paweł Abramczyk

Latvia
Ms Jana Feldmane
Dr Jurijis Perevoščikovs

Slovakia
Mrs Adriana Mečochová
Prof Henrieta Hudečková

Lithuania
Dr Nerija Kuprevičienė

Slovenia
Mrs Marta Grgič Vitek
Dr Veronika Učakar

Malta
Mrs Clotilde Spiteri
Dr Victoria Farrugia Sant’Angelo

Spain
Dr Araceli Arce Arnaez

Montenegro
Mrs Karolina Hajduković
Dr Miro Knežević

Sweden
Mrs Tiia Lepp
Norway
Dr Didrik Frimann Vestrheim

Switzerland
Mrs Elise de Aquino
Dr Phung Lang
Consultation with Member States on use of immunization data for decision making

**Tajikistan**
Dr Zafarjon Azizov  
Dr Boir Shomudinov

**The former Yugoslav Republic of Macedonia**
Mr Ivan Petrushevski  
Dr Suzana Manevska

**Turkey**
Dr Halit Ümit Ozdemirer

**Turkmenistan**
Dr Muhammet Hojadov

**Ukraine**
Dr Olena Levchenko  
Dr Ihor Starychenko

**Uzbekistan**
Dr Venera Absattarova  
Dr Diloram Tursunova

**United Kingdom of Great Britain and Northern Ireland**
Ms Joanne White

**U.S. Centers for Disease Control and Prevention (CDC)**
Dr Angela Montesanti

**European Centre for Disease Prevention and Control (ECDC)**
Mr Gianfranco Spiteri

**UNICEF headquarters**
Dr Basil Rodriques

**UNICEF Bosnia and Herzegovina Regional Office**
Dr Fatima Cengic

**WHO Regional Office for Europe**
Ms Malika Abdusalyamova  
Dr Zhanara Bekenova  
Dr Myriam Ben Mamou  
Mr Oleg Benes  
Mr Robb Butler  
Dr Niyazi Cakmak  
Dr Paul Chenoweth  
Ms Danni Daniels  
Dr Siddhartha Datta  
Ms Catharina de Kat  
Dr Eugene Gavrilin  
Ms Katrine Bach Habersaat  
Dr Shahin Huseynov  
Mr Robert Jensen  
Mr Theodoros Kaloumenos  
Mrs Valentina Mingazzini  
Dr Liudmila Mosina  
Dr Mark Muscat  
Ms Holly Nielsen  
Ms Siff Malue Nielsen  
Dr Patrick O’Connor  
Ms Barbara Porton  
Mr Simarjit Singh

**WHO headquarters**
Dr Marta Gacic Dobo  
Dr Minal Patel  
Dr Antoni Sebastien

**WHO Country Office, Bosnia and Herzegovina**
Dr Boris Rebac  
Dr Mirza Palo  
Dr Sanid Vlajcic
WHO Country Office, Kyrgyzstan
Dr Yana Kirillova
Dr Kubanychbek Monolbaev

WHO Country Office, Tajikistan
Dr Nargis Maqsudova
Dr Umeda Sadykova

WHO Country Office, Ukraine
Dr Liudmyla Slobodianyk

WHO Country Office, Uzbekistan
Dr Renat Latipov
Dr Kamola Safaeva

Rapporteurs
Dr Ana Penedos
Dr Marina Yermalovich

Interpreters
Ms Olga Aleksinskaya
Ms Tatiana Gavrilenko
The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania
Andorra
Armenia
Austria
Azerbaijan
Belarus
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Kazakhstan
Kyrgyzstan
Latvia
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San Marino
Serbia
Slovakia
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Spain
Sweden
Switzerland
Tajikistan
The former Yugoslav Republic of Macedonia
Turkey
Turkmenistan
Ukraine
United Kingdom
Uzbekistan

World Health Organization
Regional Office for Europe

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark
Tel: +45 45 33 70 00 Fax: +45 45 33 70 01
Email: eurocontact@who.int
Website: www.euro.who.int