

23-22 أكتوبر 2024

#### **DOHA DATA FORUM**

FOR INNOVATION IN SUSTAINABLE DEVELOPMENT

October 22-23, 2024

# Harnessing Data for Public Health Decision-Making: Progress, Challenges, and Innovations

Dr Henry Doctor, *Coordinator, Information Systems for Health* Department of Science, Information and Dissemination WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt

# Outline

- Recent progress on the SDGs in the EMR
- Latest strategies to enhance national health information systems (HIS)
- WHO's methods for achieving measurable impact through efficient planning and implementation
- Practices and policies for proper data generation and governance
- Knowledge sharing and documenting best practices





# Valid and timely data is the key...



Data is the cornerstone of effective decision-making for health and saving lives

**But...** 

National HIS are the foundation of health data

منتدى الدوحة للبيانات من أجل الابتكار في التنمية المستدامة DOHA DATA FORUM FORINNOVATION IN SUSTAINABLE DEVELOPMENT In many countries of the Region, routine HIS <u>do</u> <u>not perform efficiently</u>





Progress on the health-related Sustainable Development Goals and targets in the Eastern Mediterranean Region, 2023

2nd progress report

SUSTAINABLE DEVELOPMENT GOALS Last year, WHO reported **slow progress** at regional level on health-related SDG indicators

### And a major gap in data:

Progress on 1 out of 3 SDG indicators could not be measured due to lack of data

Source: Progress on the health-related Sustainable Development Goals and targets in the Eastern Mediterranean Region, 2023: 2nd progress report. Cairo: WHO Regional Office for the Eastern Mediterranean; 2024.







3.1.1 Maternal mortality ratio 3.1.2 Births attended by skilled health personnel 3.2.1 Under-5 mortality rate 3.2.2 Neonatal mortality rate 3.3.1 New HIV infections (per 1000 uninfected population) 3.3.2 Tuberculosis incidence per 100 000 population 3.3.3 Malaria incidence per 1000 population at risk 3.3.4 Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years 3.3.5 Number of people requiring interventions against neglected tropical diseases 3.4.1 Probability of dying between age 30 and exact age 70 from CVD, cancer, diabetes, CRD 3.4.2 Suicide mortality rate (deaths per 100 000 population) 3.5.2 Alcohol consumption per capita (aged 15 years and older) 3.6.1 Death rate from road traffic injuries per 100 000 3.7.1 Demand for family planning satisfied by any modern method (%) 3.7.2 Adolescent (10-14 years) birth rate (per 1000 girls in that age group) 3.72 Adolescent (15-19 years) birth rate (per 1000 girls in that age group) 3.8.1 Coverage of essential health services (UHC service coverage index) 3.8.2 Large household expenditure as a share of total health care expenditure (>10%) 3.8.2 Large household expenditure as a share of total health care expenditure (>25%) 3.9.1 Mortality rate attributed to household and ambient air pollution 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene 3.9.3 Mortality rate attributed to unintentional poisonings 3.a.1 Prevalence of current tobacco use among persons aged 15 years and older 3.b.1 Vaccine coverage (DTP3 3.b.1 Vaccine coverage (MCV) 3.b.1 Vaccine coverage (PCV3 3.b.2 Total net official development assistance to medical research, by recipient countries (US\$) 3.b.3 Availability of a core set of relevant essential medicines in public health facilities 3.b.3 Availability of a core set of relevant essential medicines in private health facilities 3.c.1 Physicians per 10 000 population 3.c.1 Nurses and midwives per 10 000 population 3.c.1 Pharmacists per 10 000 population 3.c.1 Dentists per 10 000 population 3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness 3.d2 Percentage of bloodstream infections due to E. coli resistant to third-generation cephalosporing 3.d.2 Percentage of bloodstream infections due to MRSA No data One data point At least two data points Not applicable

Data availability varied considerably across 50 indicators over the period 2015 – 2022

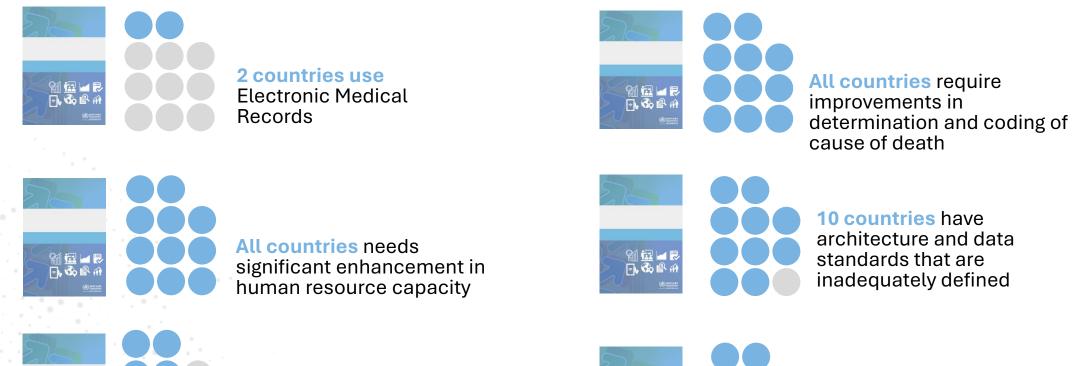
There were substantial gaps across indicators on **cause-specific mortality, tobacco use** and availability of **essential medicines** 



FOR INNOVATION IN SUSTAINABLE DEVELOPMENT

Source: Progress on the health-related Sustainable Development Goals and targets in the Eastern Mediterranean Region, 2023: 2nd progress report. Cairo: WHO Regional Office

### **Existing challenges based on HIS assessments in 11 countries**



21 🔁 🗠

منتدى الدوحة للبيانات من أجـل الابتكـار في التنميـة المستدامـة DOHA DATA FORU

7 countries either use DHIS2 or a have a customized national system



5 countries need to enhance data visualization mechanisms and strengthen data analysis

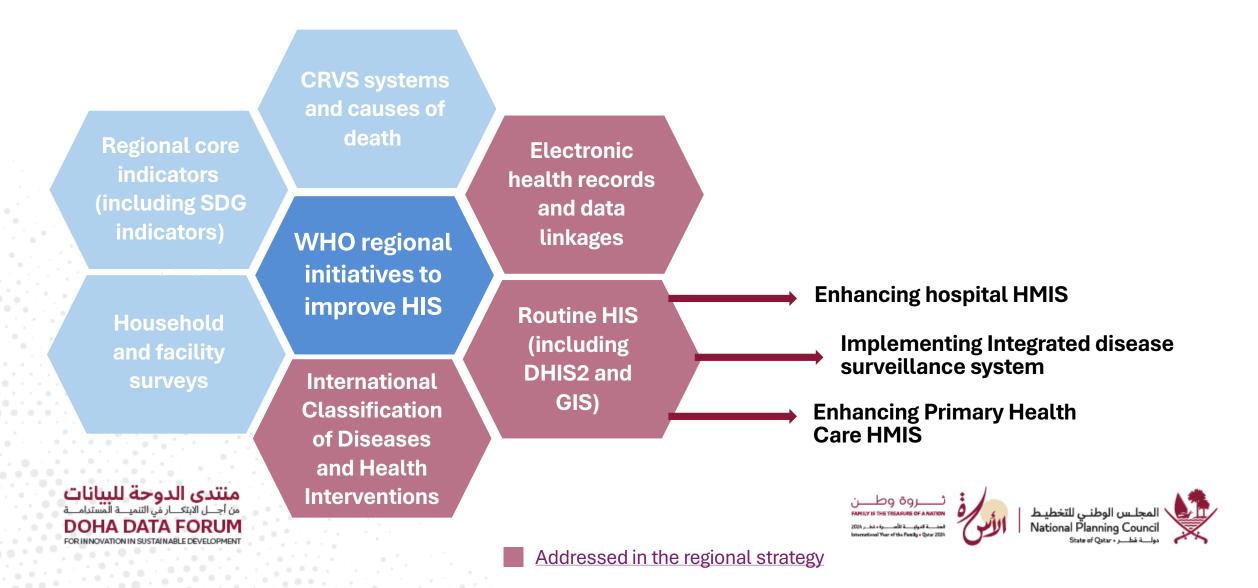
ئــــروة وطــــن ILV IS THE TREASURE OF A NATION





Source: Health information system assessments

### Strategies to enhancing national HIS



## **Regional strategy on digitalization of HIS**



Eastern Mediterranean Region Regional Committee for the Eastern Mediterranean Seventy-first session Provisional agenda item 4(d)

EM/RC71/6-Rev.2 October 2024

Enhancement and digitalization of health information systems in the countries of the Eastern Mediterranean Region: a regional strategy (2024–2028)

#### Executive summary

National health information systems (HIS) are the foundation of health data, helping to improve health outcomes for people globally through better-informed policies, planning and management of health services. A robust national HIS provides data to understand population health needs, monitor actions and use of resources, and guide health decision-making. However, in many countries of the WHO Eastern Mediterranean Region, HIS do not perform efficiently and health data are often incomplete, fragmented or of inadequate quality.

WHO works to strengthen national HIS through a range of activities, from enhancing the collection of data and information to developing costed action plans to guide investments. One key regional initiative is the comprehensive assessment of national HIS, conducted in half of the countries in the Region since 2016, which has led to identification of key priority areas for enhancing HIS. An effective HIS needs to be powered by the advantages of digital transformation and this requires the development of a digitalized and integrated data system that encompasses the data life cycle, from collection through to analysis, dissemination and use to improve decision-making.

This technical paper sets out a regional strategy for the enhancement and digitalization of HIS in countries of the Eastern Mediterranean Region. The aim is to ensure that countries generate high-quality, timely, relevant, disaggregated and reliable data to inform policies and programmes, as well as to monitor progress on the health-related Sustainable Development Goals (SDGs). The paper proposes four strategic goals and 10 specific objectives related to: (a) national HIS strategies/plans and governance mechanisms; (b) infrastructure and human/financial resources; (c) interoperability and data standards; and (d) identifying inequities and using data for decision-making. Country-level actions are proposed for all HIS stakeholders, with attention given to the use of interoperability and data standards as key opportunities for enhancing HIS in the Region. In addition, a set of indicators is proposed to measure progress in implementation of the regional strategy from 2024 to 2028.

The regional strategy highlights the need for strong governance and enhanced partnerships at the national level. It promotes the sharing and use of data for decision-making and has been developed in line with global calls to enhance national HIS to monitor progress on the health-related SDGs and measure the impact of WHO's General Programme of Work. WHO will provide guidance on making the best use of the available resources to promote digitalization, achieve interoperability, eliminate duplication, avoid gaps and make efficiency gains.



- Goal 1: National plans
- Goal 2: Capacity and

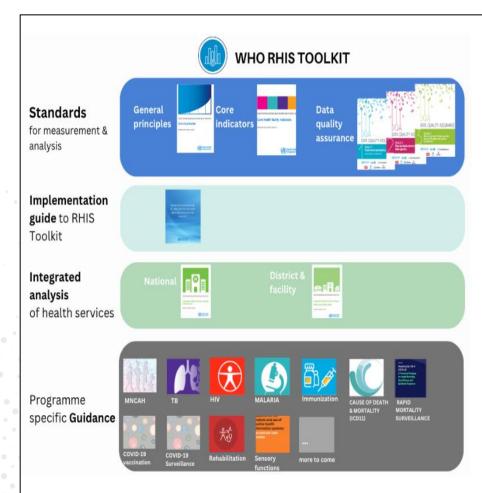
investment

- Goal 3: Interoperability and
  - standards
- Goal 4: Data use



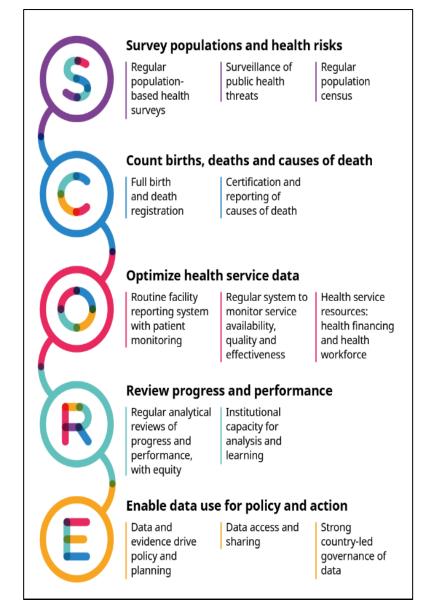


# Selected WHO initiatives to improve routine HIS



منتدى الدوحة للبيانات من أجل الابتكار في التنمية المستدامة DOHA DATA FORUM FOR INNOVATION IN SUSTAINABLE DEVELOPMENT

#### **SCORE for Health Data Technical Package**



## Approaches for achieving measurable impact

### • The <u>S-C-O-R-E</u>

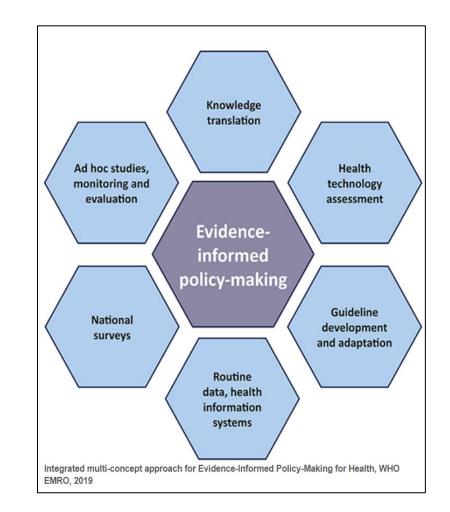
- Continuous improvements to key statistical reports and tools:
  - World Health Statistics Report
  - Global Health Estimates
  - Universal Health Coverage Global Monitoring Report
  - International Classification of Diseases
- The World Health Data Hub
- The WHO Hub for Pandemic and Epidemic Intelligence
- Global and Regional Digital Health Strategies
- Geographic Information Systems (GIS) Centre for Health
- Multi-sectoral partnerships





# **Enhancing evidence-policy making**

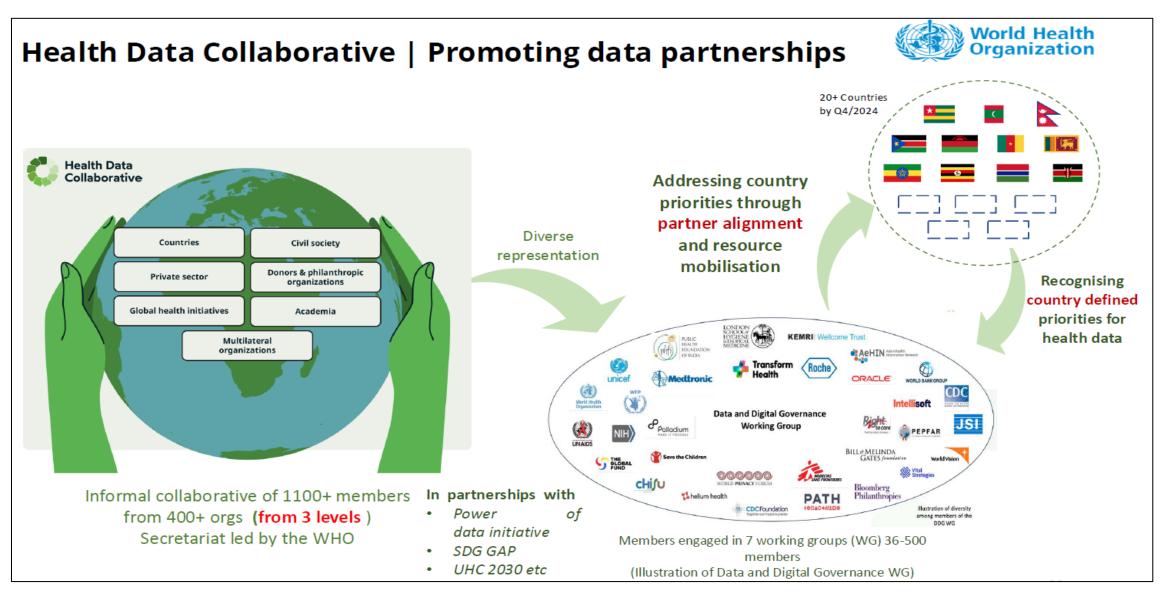
- Evidence-informed policy-making is essential to the achievement of SDGs
- WHO is supporting the establishment of national mechanisms and national capacity to use evidence in national policy-making for health
- Regional Network of Institutions for Evidence and Data to Policy (<u>NEDtP</u>) was established in 2020





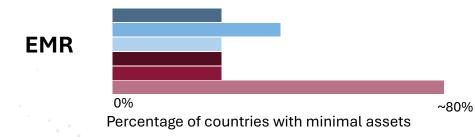
منتدى الدوحة للبيانات من أجل الابتكار في التنمية المستدامة DOHA DATA FORUM FORINNOVATION IN SUSTAINABLE DEVELOPMENT

# Comprehensive data governance is a priority for WHO, safeguarding the reliability and confidentiality of health information



## **Progress made by EMR countries**

- Each country in the Region is unique; and progress varies by country
- There is still significant work to be completed as a Region





2 countries (Saudi Arabia and UAE) at phase 5 of progress at Global Digital Health Index (highest phase)



منتدى الدوجة للبيانان

6 countries (Bahrain, I.R.Iran, Kuwait, Oman, Qatar and Tunisia) at phase 4 of progress at Global Digital Health Index





#### Eastern Mediterranean Health Journal



### **Call for Papers**

# Special edition on digitalization of health information systems

#### **Background and rationale**

A robust health information system (HIS) is the backbone of a well-functioning healthcare system. HIS is essential for providing timely and quality data to inform national, sub-national, and facility-level decision-making. At the global level, data from HIS is key for monitoring progress towards Universal Health Coverage, Sustainable Development Goals and World Health Organization's General Programme of Work.

Recent developments in HIS provide opportunities which, if leveraged, can contribute to increasing the efficiency, safety, and quality of healthcare delivery as well as reducing inequalities in access to services and health outcomes. These opportunities include the implementation of electronic systems that capture data at individual, health system and population levels; implementation of electronic medical records; availability of health insurance claims data; the potential to link clinical and service utilization data with other data sources; and linking hospital information systems with clinical guidelines and clinical decision support tools.

#### Objectives of the special edition

- 1. Document progress, review experiences, and share lessons learned by countries and partners in digitalizing HIS.
- 2. Document findings from research on digitalization of healthcare from different countries and research settings.
- 3. Highlight specific areas such as the often-neglected aspects of the institutional changes required to digitalize HIS and to respond to possible controversies.

#### Manuscripts should explore:

/orld Health

Eastern Mediterranean Region

- 1. Countries' experiences in strengthening HIS: challenges, successes and lessons learned
- 2. Developing sustainable HIS that can survive changing funding priorities
- 3. Institutional changes needed to digitalize data, e.g. capacity building
- 4. Going beyond data warehouses and dashboards: transforming data into information and evidence that can be used to inform decision-making and create an information culture
- 5. The holy grail: is digitalization the solution to all problems affecting HIS?
- 6. Contributions and limitations of HIS digitalization for improving health outcomes
- 7. Any other aspects relevant to HIS.

#### **Submission information**

Manuscripts can be submitted in Arabic, English or French in the form of original research articles, short research communication, commentaries, reviews, and reports. Interested authors should submit their manuscripts through the Editorial Manager at: https://www.editorialmanager.com/emhj/default.aspx

Manuscripts must comply with the "Information for authors" available at: https://www.emro.who.int/emh-journal/authors/

Send any enquiries to: emrgoemhj@who.int

#### Deadline for manuscript submission: 31 December 2024

**Expected date of publication: May 2025** 

ional Year of the Family + Qatar 2024

## Conclusion

- Reliable data are a key enabler for decision-making
- Digitalization and innovation is central to an effective national HIS
  - Successful innovation relies on national plans, governance and interoperability





منتدى الدوحة للبيانات من أجـل الابتكـار في التنميـة المُستدامـة DOHA DATA FORUM FORINNOVATION IN SUSTAINABLE DEVELOPMENT