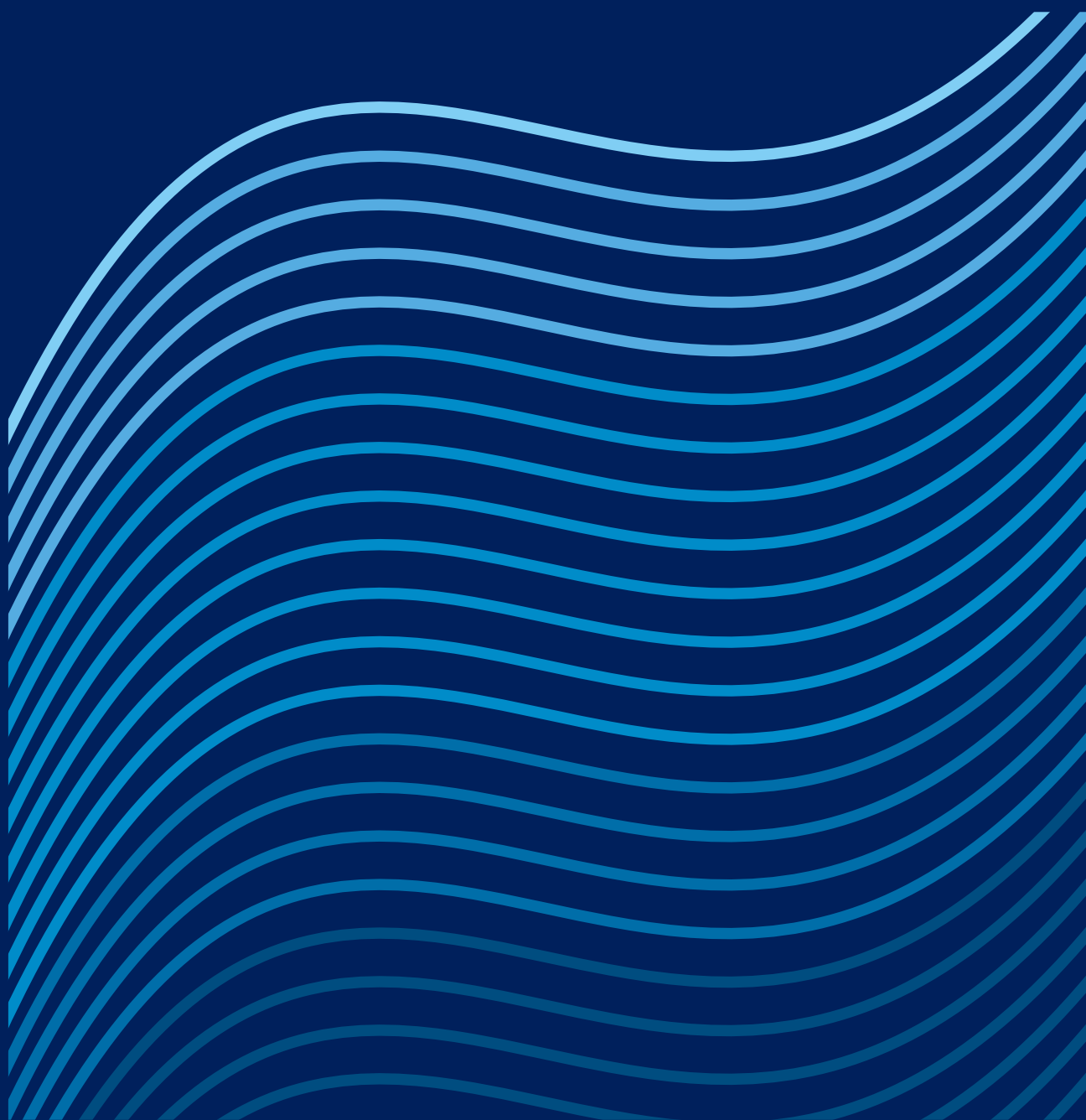

DATA, ANALYTICS AND DELIVERY FOR IMPACT

IN FOCUS 2024

Measuring progress to make progress



World Health
Organization

Data, analytics and delivery for impact in focus 2024: measuring progress to make progress

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Foreword

Four words – measurable impact in countries – are the foundation of WHO’s transformation, which began in 2018. They remain at the centre of our mission and vision as we look to the future, one that will be shaped by the WHO’s strategy, the fourteenth General Programme of Work 2025–2028 (GPW 14).

The revolution of GPW 13 was the Triple Billion targets, an ambitious strategy to reach the Sustainable Development Goals (SDGs) by improving the health of billions. But progress has been slow, not least because of the far-reaching harm caused by COVID-19, climate change and conflict. We need a better way to measure and manage how WHO supports countries to accelerate progress towards the SDGs.

Recognizing this urgent need, WHO has developed the Delivery for Impact approach. Turning data into real-world results, it creates a clear plan with accountability – using continuous progress monitoring and course correction – to meet each country’s priority targets and make faster progress towards global goals.

Over 50 countries have been applying the Delivery for Impact approach, ensuring that WHO-supported activities are planned and delivered with greater rigour, and more strongly linked to desired outputs and outcomes.

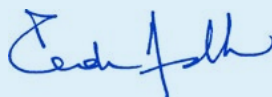
Embedding it in management – the investment case, programme budget, and incentives –

will be the great contribution of GPW 14. Committed financing for health information systems is vital.

This approach in health can be a pathfinder for other SDGs and results-based multilateralism. Since its creation, the Division of Data, Analytics, and Delivery for Impact has revolutionised the use of health data to drive progress towards a healthier world. The Division has played a vital role in supporting the Delivery for Impact approach, increasing the effectiveness of WHO at all levels and using data to deliver measurable impact in countries.

Its work will continue to be pivotal as GPW 14 provides a powerful framework to help the world get on track to the health-related SDGs.

I look forward to celebrating many achievements in the years to come.



Dr Tedros Adhanom Ghebreyesus

Director-General, World Health Organization

Preface

Partnerships are the superpower of WHO. In 2023, DDI advanced work together with our partners in three key areas:

- **Better data availability** through deeper partnerships with countries, experts, and organizations. We are committed to closing life-threatening gaps in data availability – something that can only be achieved through partnerships.
- **Improved data access** through further development of the World Health Data Hub as the central location for global, regional, and country health-related SDG data. With advances in technology and expanded partnerships, we will move closer to real-time data and to more timely health trend predictions.
- **Increased data use to improve policies and programmes** through the Data for Impact approach. This requires partnerships to set data-driven priorities with each country then to marshal and optimize the collective resources of countries, WHO and partners to achieve high-impact targets for health protection and improvement.

At the DDI, we never forget that data reflects lives – and that timely, reliable and accessible data is central to health and wellbeing for all. We look forward to further progress in 2024, to continuing to work with partners to deliver on the commitments of WHO's Thirteenth General Programme of Work (GPW 13), and to updating these with ambitious, measurable, and achievable targets in GPW 14.

To all our partners, thank you for being part of this journey. And for those with whom we have yet to engage, we look forward to learning from and with you in 2024 and beyond!



Dr Samira Asma

Assistant Director-General,
Division of Data, Analytics and Delivery for Impact,
World Health Organization

Executive summary

About the Division of Data, Analytics, and Delivery for Impact

"We can only make progress where we can measure progress", Dr Tedros Adhanom Ghebreyesus.

Since its creation in 2019, the Division of Data, Analytics, and Delivery for Impact (DDI) has modernised, revolutionised, and spearheaded partnerships to transform the use of data to define priorities and drive progress at all levels of the organization.

True to its name, DDI's role is to make significant progress in three areas: **data**, **analytics**, and **delivery**.

Data: To become better at tracking health trends, we require much better data systems around the world. Especially for the number and causes of death in each country.

Analytics: Understanding trends accurately will require many more public health staff who can assess the accuracy of reported data – and interpret it correctly.

Both these things will only be accomplished by building countries' capacities to do so. DDI works with every country, at local and national level, to improve the accuracy, completeness, timeliness, analysis, presentation and use of data.

Delivery: The purpose of data is not analysis, but action. The Delivery for Impact approach creates a

clear plan – with continuous progress monitoring and course correction – to meet a country's targets.

There are major challenges to promoting data as a global good. It is now clearly understood that timely, reliable and actionable data is the key to achieving the SDGs and building a healthier world for all. Yet such data is often not readily available, due to the various challenges.

- Data is fragmented, leading to data gaps.
- The data that exists is often collected and shared in ways that make a common perspective nearly impossible.
- Many countries lack strong health information systems.
- Tools are needed to monitor global data, reveal trends, and track progress on global goals.

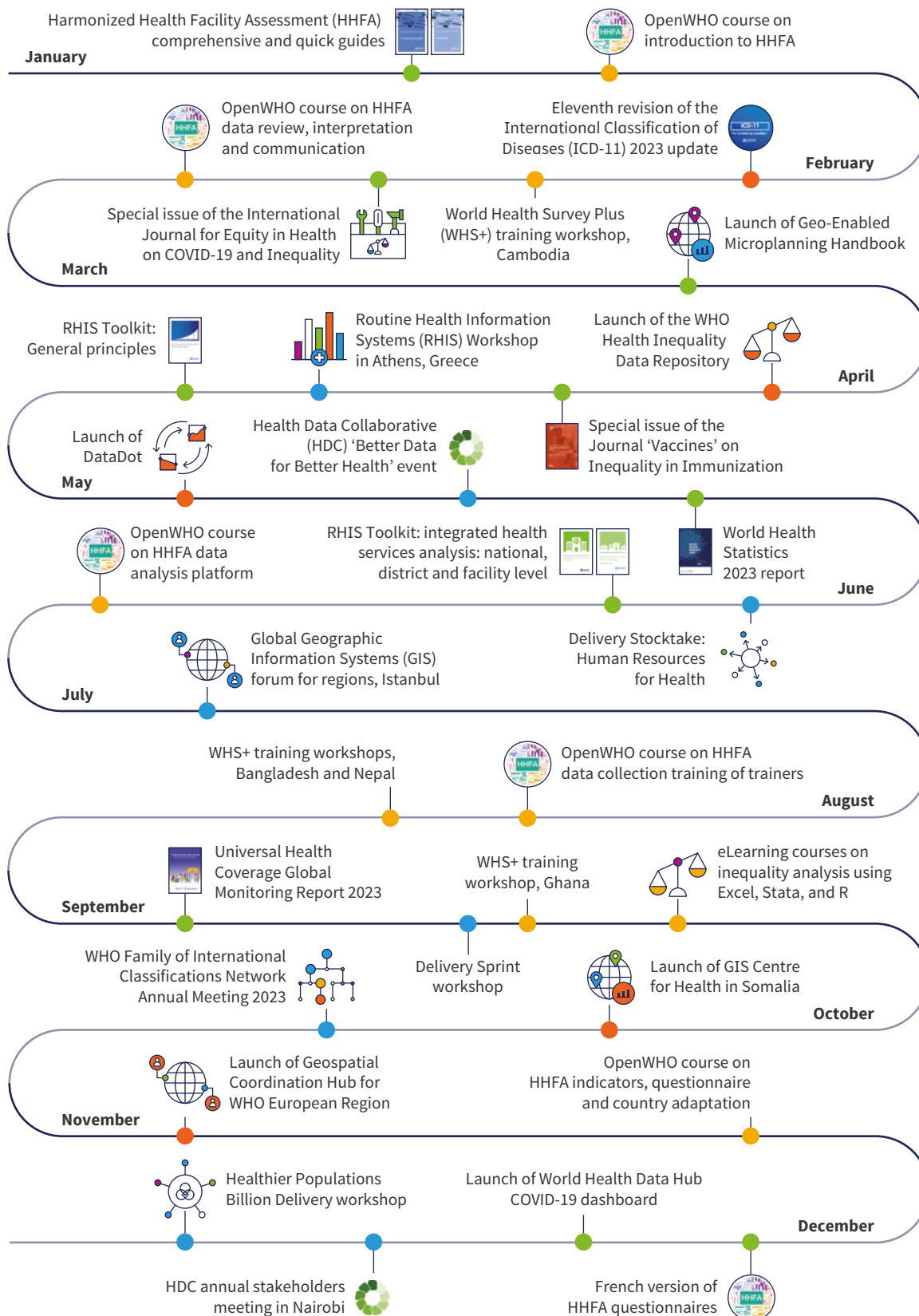
Our crucial role is to address exactly these challenges. DDI leads WHO's collective efforts to accelerate information systems and digital transformation at the country level in the following ways:

- monitoring global data
- global data standards
- equitable access to global data
- country capacity assessment and interventions

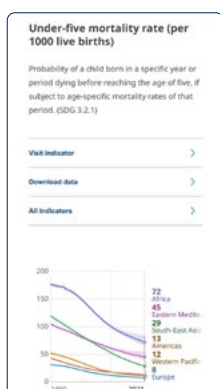
These are the four cornerstones for harnessing the power of data to create a healthier world for all. In Focus 2024 will guide you through DDI's most important work and progress in each of these areas.

WHO data and delivery milestones: 2023

- Training
- Platform/resource
- Guidelines/publications
- Consultation



10 highlights



1. World Health Data Hub

This world-class interactive digital platform launched in 2023, provides WHO, partners, countries, and the public with access to usable, trusted health data.

2. WHO Mortality Database

For the first time ever, seven decades of mortality data for 120 countries are now available through this easy-to-use resource.



3. World Health Statistics with Global Health Estimates

Our flagship World Health Statistics report is now joined by the new Global Health Estimates, provides the first comprehensive update on mortality and morbidity since GHE 2019.

4. Delivery for Impact in 50 countries

Fifty countries are using delivery tools to monitor and manage accelerated progress towards their national targets, the Triple Billion targets and the SDGs.



5. WHO GIS Centre

Established and expanded to support countries and partners, the WHO GIS Centre enables faster, more informed public health decisions using geospatial data.



6. ICD-11

The new International Classification of Diseases and Related Health Problems is now used in 76 countries and, soon, 30 different languages.

7. World Health Survey Plus and Harmonized Health Facility Assessment

15 countries are now using World Health Survey Plus to address critical data gaps, and 15 countries are using HHFA to perform in-depth reviews of its health services.



8. Delivery dashboards

Delivery dashboards support countries, and facilitates WHO and partner efforts to accelerate progress and improve accountability.

9. 100-day delivery challenges

These 'delivery sprints' bring urgency, rapid prioritization in countries and WHO. They increase integration and innovation to produce tangible results.



© WHO / Antoine Tardy

10. Universal Health and Preparedness Review

The first global peer review held a global platform for Member States to review capacities and share best practices.

1.

Better data for better health

A summary of WHO's work in promoting data as a global good to accelerate progress towards a healthier, fairer world

Equitable access to global data

Fragmented datasets and databases make it hard for people to find and make sense of public health information. This has been a key challenge to WHO's commitment to ensure health data is accessible to all.

Released in May 2023 (1), the public face of the **World Health Data Hub (WHDH), data.who.int** (2), addresses this challenge by consolidating WHO's public databases and datasets into one single, highly accessible and secure location including country (3) and indicator (4) views.

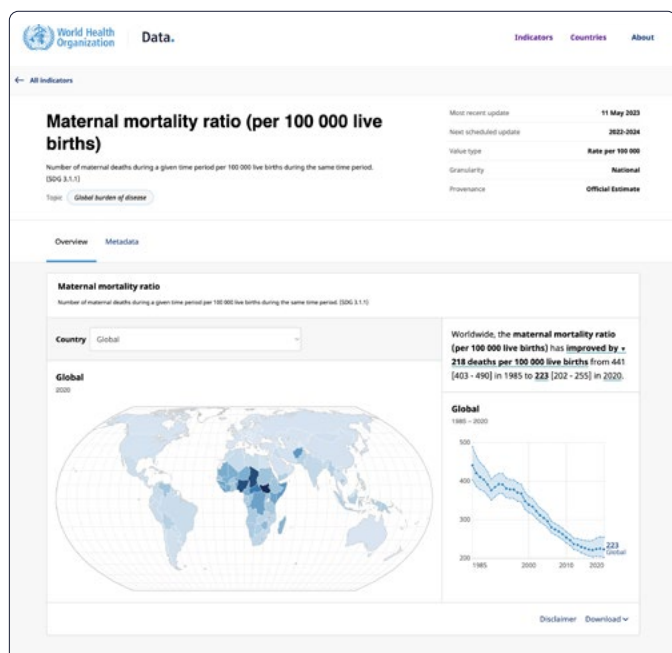
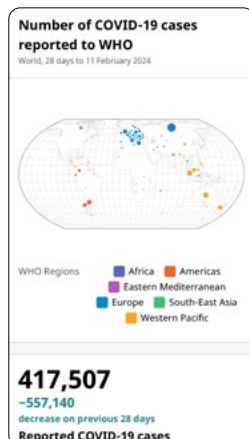
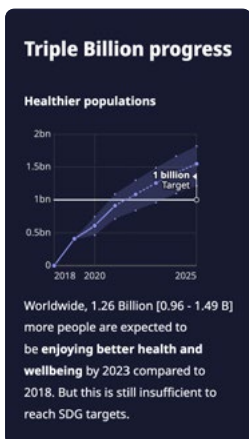
Partnering with the World Health Emergencies programme, an updated COVID-19 dashboard is now available (5). As a global beacon of information on the pandemic and its ongoing impacts, the dashboard receives on average 1.2 million visits per month. The new dashboard consolidates WHO's emergency monitoring across hundreds of datasets at varying levels and jurisdictions while improving the usability, accessibility, and richness of this crucial data.

New chart types developed specifically for the COVID-19 dashboard have also pioneered innovative ways of communicating data to support programmes and policies which improve health. This includes both global and country-level trends, as well as the number of weekly COVID-19 cases reported by both WHO region and World Bank income group.

Most importantly, the new dashboard reaches everyone, everywhere, on any device. Access to vital information is now faster across different screen sizes, bandwidth capacities, and geographies. A crucial need in emergency settings and amongst the most vulnerable populations.

Data dissemination via data.who.int is the tip of the iceberg. Underpinning data.who.int is a platform of end-to-end data solutions including data acquisition, storage, preparation, and science all of which foster increased Member State engagement.

These best-in-class solutions empower WHO technical programmes to share data across the Organization in a central data repository,



data.who.int displays WHO's data assets in an easily accessible format.



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Nurse Carol treats Memory, 3 (held by her mother Alice), for a severe ear infection at the Lukomba Rural Health Centre in Kapiri Mposhii District, Zambia.

leverage cutting-edge applications in data science and artificial intelligence, and collaborate with Member States on data.

At the start of 2023, 15 WHO technical programmes were onboarded to the WHDH. Today, over 48 programmes are actively using one of its functions, with many more exploring its services.

WHO continues to innovate data visualizations that highlight which indicators or populations are falling behind, where and how much acceleration is needed, and what additional resources will have the most impact – supporting the Delivery for Impact approach.

In 2024, WHO has an ambitious work programme with some core products transitioning fully to the WHDH including the **WHO Mortality Database** (6).

For the first time ever, WHO has now made available seven decades of mortality data for 120 countries through this easy-to-use, downloadable resource. Dr Samira Asma

emphasizes, “Mortality statistics are a mirror of population health,” particularly as we reflect on the COVID-19 pandemic.

Over the past two years, the WHO Mortality Database has allowed this essential data to be easily explored in greater depth, by more people, than ever before. It has provided powerful information to track the impact of diseases on population health, measure the efficacy of health programmes and interventions, improve policy design, and reduce inequalities both within and between countries.

Monitoring global data

Our flagship **World Health Statistics** (WHS) report reveals the most recent health statistics for the WHO Member States, using elegant data visualizations to clearly communicate the important trends and insights.

The 2023 report (7) called for urgent action to reverse stalled progress towards the health-related

SDGs. Notably, following the 2022 publication of excess mortality associated with COVID-19 pandemic (8), last year's report estimates that during 2020–2021 the pandemic resulted in 337 million years of life lost globally. This is equal to 22 years of life lost for every excess death.

The report also provided updated figures on the growing burden of non-communicable diseases – projected to account for nearly 90% of global deaths by 2048 – and includes for the first time a dedicated section on health and climate change.

This year's report is now complemented by the **Global Health Estimates** (GHE) 2021, which this year will provide the first comprehensive update on mortality and morbidity since GHE 2019, as

well as recalibrated projections towards the Triple Billion targets and SDGs.

Furthermore, tracking and advancing the world's painfully slow progress advancing universal health coverage (UHC) and primary health care (PHC), WHO produces the **UHC Global Monitoring Report** (UHC GMR) (9). UHC GMR 2023 paints an alarming picture.

We see stagnating progress towards SDG 3.8.1 (coverage of essential health services) and 3.8.2 (catastrophic health spending), with a staggering 4.5 billion people – more than half the world's population – not fully covered by essential health services in 2021.

Moreover, as of 2019, two billion people were facing some form of financial hardship, including 344 million being pushed or further pushed into extreme poverty due to out-of-pocket healthcare costs.

UHC GMR 2023 reinforces calls made at the UN high-level meeting on UHC (10): that timely, reliable data is crucial to meaningfully improve policies, performance and quality of care. See more details in the press release (11), video (12), and event page (13).

Addressing the crucial issue of health inequalities, WHO has made available for the first time a vast new repository and in-depth resources to track and catalyse progress reducing inequalities.

Launched in April 2023, the **Health Inequality Data Repository** (HIDR) (14) is the most comprehensive global collection of publicly available disaggregated data and evidence on population health and its determinants.

Moving far beyond simply counting births and deaths, the HIDR includes nearly 11 million data points from 16 sources, including over 2000 indicators broken down by 22 dimensions of inequality.

Global data standards

The **WHO Family of International Classifications** (FIC) provides a way of overseeing a foundation for health with its global common language for health data. Now in its 11th revision, the International Classification of Diseases and Related Health Problems (ICD-11) (15) provides a universal standard for recording, reporting, analysing and comparing causes of illness and death.

Fully digital and more accessible than ever, 134 countries are at various phases of adopting ICD-11, which is now available in 10 languages.

It provides access to 17 000 diagnostic categories and is continuously updated with the latest medical coding. For example, data and terminology relating to diseases based on traditional Ayurveda, Siddha, and Unani medicine have recently been included.

New tools are also being added, such as the Digital Open Rule Integrated Cause of Death Selection Tool (DORIS) (16), which automatically reviews death certificates to determine the leading cause of death. Given the challenges around accurately counting and classifying, DORIS and other tools will provide vital insights going forward.

Country capacity assessment and interventions

At the core of strengthening country capacity is the **WHO SCORE for Health Data Technical Package**, a comprehensive suite of proven strategies for strengthening health information systems (HIS).

The SCORE Package encompasses a wide array of functions, including surveying population health risks, tracking births, deaths, and causes of death, optimizing health service data, reviewing progress and performance, and enabling data use for policy and action.

This multifaceted approach covers diverse sources of health data, ranging from public and disease surveillance systems to civil registration and vital statistics, hospital records, and health facility data.

Improving global health data collection and analysis, the **World Health Survey Plus** (WHS+) leverages the WHO's extensive experience from surveys in 101 countries to fill critical data gaps.

Household surveys are crucial for 80 out of 232 SDG indicators and 29 health-related SDG targets, across 12 goals. By exploring a broad spectrum of health topics through 27 standard



Nurses work at the clinic at Samut Sakhon Hospital for people with suspected COVID-19.

modules, WHS+'s household survey enhances data collection efficiency, alleviates reporting burdens, and elevates data quality.

The WHS+ Mobile Phone Survey Technical Package also exemplifies WHS+'s ability to adopt innovative collection methods. This swift, cost-effective approach has proven especially beneficial during the COVID-19 pandemic in many countries.

Supporting healthcare workers and managers, **Routine Health Information Systems (RHIS)** is a modernized, powerful toolkit for reporting data.

Modules of the RHIS Toolkit are being geared towards specific programmes (such as HIV and Tuberculosis), while others (such as data quality [\(17\)](#)) are cross-cutting. These modules have been digitized and adapted to the District Health Information System (DHIS2) [\(18\)](#) platform, currently deployed in 114 countries.

Promoting sustainable systems within countries is paramount to enhancing healthcare delivery, improving health outcomes, and advancing public health interventions.

In collaboration with a technical programme, 10 African countries are actively engaged to improve maternal health outcomes by strengthening data and analytics capabilities, enabling identification and targeted addressing of key driving factors, and facilitating efficient and effective interventions.

Meanwhile, WHO has also created **Harmonized Health Facility Assessment (HHFA)**, a resource that enables countries to perform a comprehensive review of the availability and quality of health services.

For example, in December 2022, Ghana conducted a national survey [\(19\)](#) of 1443 health facilities in just 22 days, gaining crucial insights that now inform national strategies towards achieving universal health coverage and other health priorities.

Ghana previously had only 66% of the data needed to monitor progress towards the SDGs [\(20\)](#), so this is a huge step towards making more evidence-based decisions by filling critical data gaps. Many countries currently lack the benefits of Geographic Information Systems (GIS) to strengthen their HIS. Not least, because geospatial data is an effective tool to monitor progress and provides a strong basis for policy-making to achieve the SDGs.

Established in 2022, the **WHO GIS Centre** is dedicated to support countries and partners to make informed public health decisions faster. By connecting maps, apps, data and people, the WHO GIS Centre aims at bridging inequalities within and across countries.

GIS collaboration with partners has expanded: in October 2023, the first ever GIS Centre for Health in a WHO Country Office was launched in Somalia. It will provide critical insights into public health planning and resource allocation.

2.

Delivery for Impact

How WHO's approach enables countries to accelerate progress toward their priorities, the health-related SDGs and the Triple Billion targets

The challenge: where the world stands at the halfway point to the SDGs

Most health-related SDG indicators need to double their rate of progress to achieve the SDG targets by 2030.

The impact of the COVID-19 pandemic reminded us that health drives progress on every SDG. This was why, even before the pandemic, WHO Member States approved the Thirteenth General Programme of Work (GPW 13) to deliver measurable impact in countries.

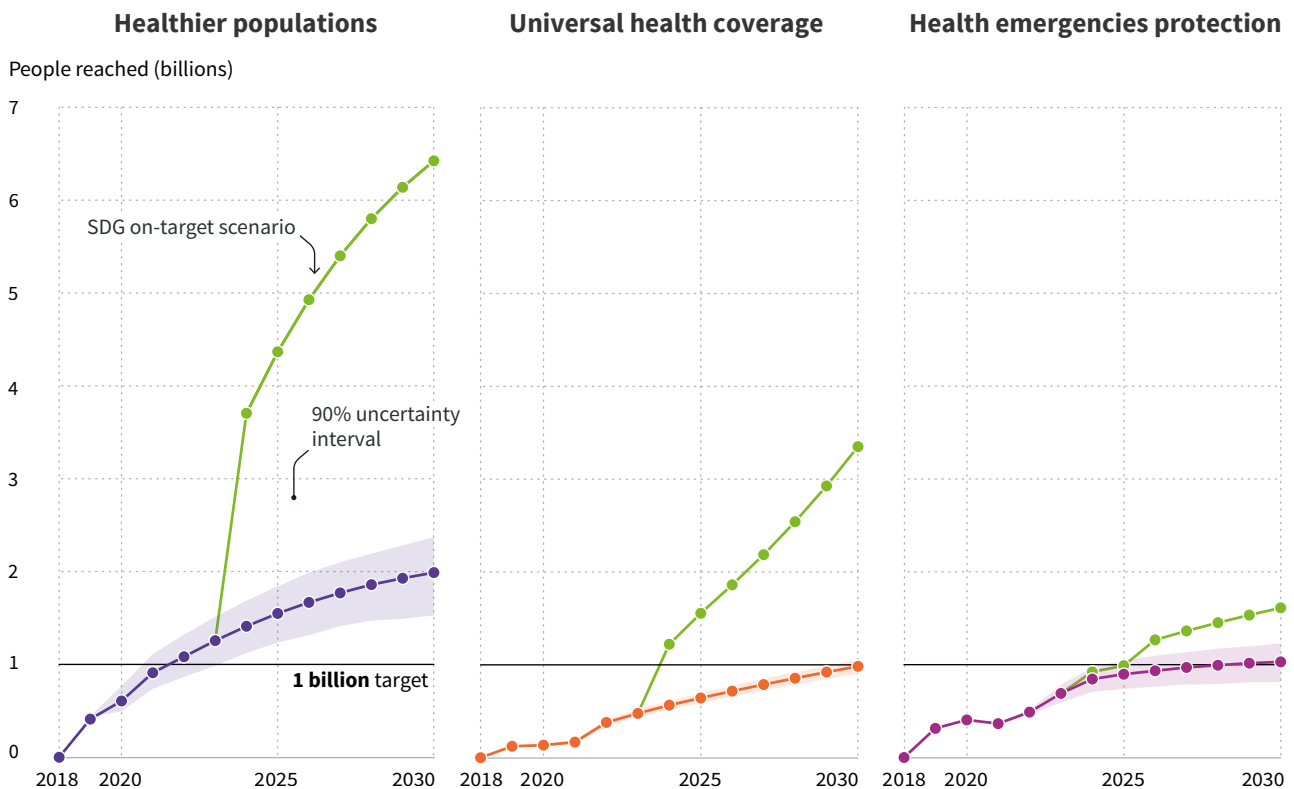
The foundation of GPW 13 was the Triple Billion targets: one billion more people enjoying better health and well-being, one billion more people benefitting from universal health coverage and one billion more people better protected from health emergencies.

As we are planning for the GPW 14 we are calibrating the Triple Billion targets as shown in the graphs below.

Based on the SDGs, these three targets are designed not just to track progress but to dramatically accelerate towards key targets at country level. They focus on delivering major improvements in population health through stronger HIS and evidence-based interventions.

Although countries have made progress since 2018, too many gaps remain. The Healthier Populations billion is on track to meet its target by 2025, but this is unlikely to reach related SDG targets. Universal Health Coverage billion and Health Emergencies Protection billion are off-track, with shortfalls worsened by the pandemic. If we are to meet these targets, we must more than double the current rate of progress of most health-related SDG indicators.

Triple Billion target projections, 2018–2030



Source: Forecasts based on data from World Health Statistics 2023.

WHO's response: turning data into real-world results

The purpose of data is not just analysis, but action. **Delivery for Impact** is WHO's response to the slow pace of implementing solutions.

Delivery for Impact is an approach that uses clear, quantifiable objectives and a plan, which will result in a country's targets being met, with continuous progress monitoring, evaluations and course correction.

WHO convenes stocktakes and reports on global and country progress using delivery dashboards. At the country level, these dashboards support the Secretariat and our partners to manage and accelerate country priorities. At the global level, delivery dashboards provide accountability and constructive collaboration.

Over 50 countries across all six WHO regions have now embraced the Delivery for Impact approach, developing acceleration scenarios by applying WHO's guidance.

Success story: lymphatic filariasis in Madagascar

The challenge: Madagascar has embarked on an ambitious plan towards eliminating lymphatic filariasis in 98 endemic districts. Commonly known as elephantiasis, lymphatic filariasis is a priority area for the WHO Neglected Tropical Diseases Roadmap (2021–2030). Elimination is possible by stopping the infection through preventive chemotherapy (PC). However, Madagascar's PC services suffered an exacerbated decline due to the COVID-19 pandemic.

Delivery for Impact country support

- 100-day challenge to accelerate delivery of health priorities
- STOP obesity acceleration action plan initiative
- Road safety delivery support
- PHC-oriented model of care support
- Delivery Labs on Sustaining Impact: Maternal Mortality
- Other country support



Source: Headquarters / Division of Data, Analytics and Delivery for Impact / Department for Delivery of Impact

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Delivery for Impact: how it works

1. Targets: understand each country's priorities

We look at every country's unique priorities, setting clear goals and identifying measurable targets.

2. Implementation: make a plan

We have country-led dialogues that inform robust implementation plans to reach these targets.

3. Stocktakes: regular reviews

We monitor progress at regular 'Stocktakes' that bring together key stakeholders. These help identify lagging areas, solve problems, and develop acceleration plans.

4. Dashboard: stay on track

We track this entire process through a Delivery Dashboard that helps us stay on track, with areas of focus mapped to specific policy packages and tools.

Delivery for Impact: Analysis revealed an opportunity to get on track towards the goal of 65% effective PC coverage by 2028. By applying a Delivery for Impact approach with support from WHO, Madagascar has achieved 100% geographic coverage of PC treatment in four affected districts, with treatment rates ranging from 66–81% (acceleration scenarios below).

priorities with acceleration scenarios and 2024-2025 operational plans. This approach has already yielded significant results.

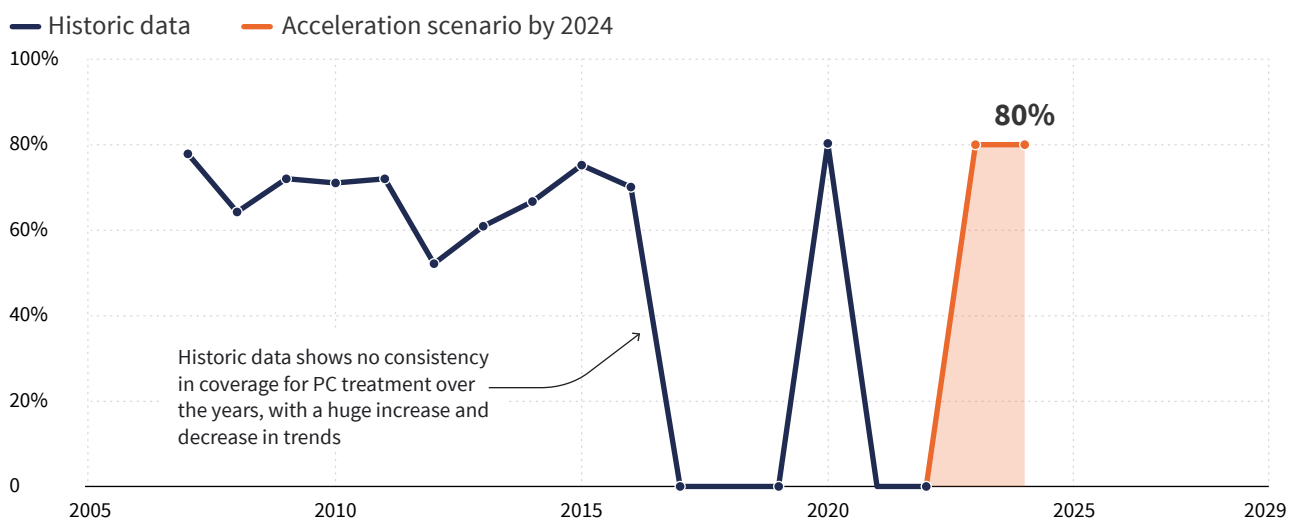
The 100-day challenge

To further integrate data and the Delivery for Impact approach, WHO worked closely with nine early-adopter countries in a series of 100-day challenges. Between October 2022 and September 2023, workshops were held with colleagues from Bahrain, Dominica, the Islamic Republic of Iran, Republic of Moldova, Nepal, Rwanda, Tajikistan, Viet Nam and Zambia. These 'Delivery sprints' helped to further align country

Acceleration scenarios

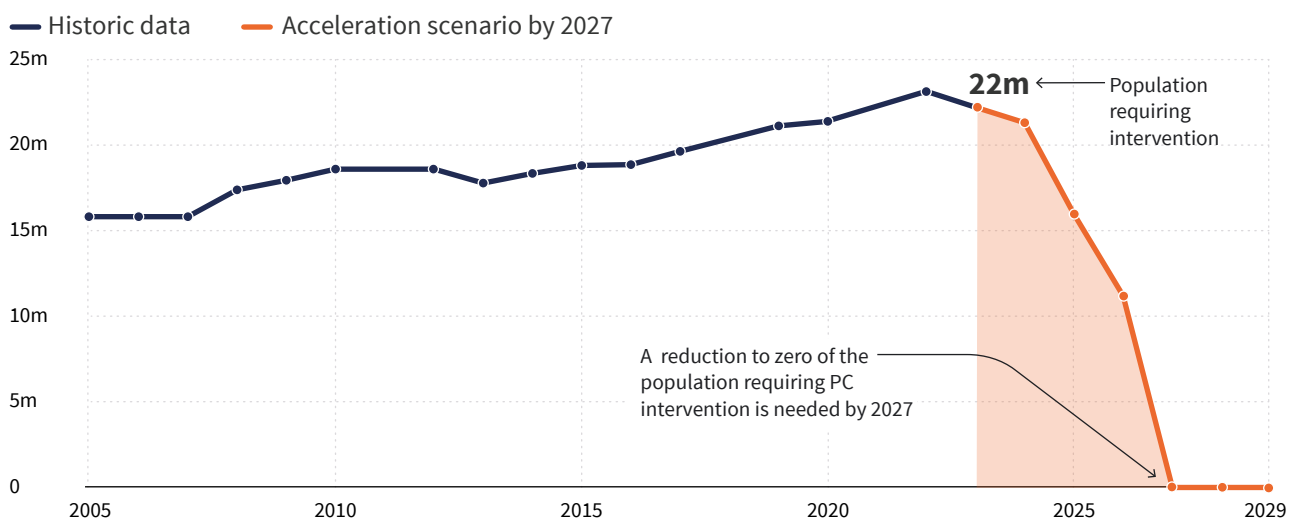
Increase and achieve effective treatment coverage of 80% in the remaining 83 endemic districts and further reduce the number of people requiring intervention against lymphatic filariasis disease in Madagascar from baseline 22.2 million in 2023 to zero by 2027.

Treatment coverage for preventive chemotherapy against lymphatic filariasis in Vavatenina



Source: Department of Control of Neglected Tropical Diseases (NTD), World Health Organization (WHO)

Population requiring preventive chemotherapy against lymphatic filariasis in Madagascar



Source: Department of Control of Neglected Tropical Diseases (NTD), World Health Organization (WHO)

3.

Partnerships

Highlights of how WHO leverages partnerships at global, regional and country level

Partnerships are essential for global health in countless ways. From technology partners who bring expertise in scaling progress to advisory groups that provide accountability, peer-to-peer review and feedback. They are also vital to how we share knowledge and strengthen coordination at the global, regional and country level.

In December 2023, the first **Universal Health and Preparedness Review (UHPR)** global peer review was organized with pathfinder countries. UHPR aims to create a global platform for Member States to review each other's national preparedness capacities, share best practices, and foster cooperation, solidarity, and mutual accountability for health. Since 2021, the Central African Republic, Iraq, Portugal, Thailand and Sierra Leone have completed their respective national reviews.

Meanwhile, the **Global Action Plan for Healthy Lives and Well-being for All (SDG3 GAP)** is a set

of commitments by 13 agencies that promote health, development, and humanitarian responses. It aims to align global resources and support countries in areas like sustainable financing, primary healthcare, and health data.

The fourth annual progress report for the SDG3 GAP [\(21\)](#) looks at what has worked and what hasn't since it was launched in 2019, with WHO leading technical collaboration with UNFPA and UNICEF on accelerating data and digital health.

Two missions (to Malawi and Nepal) have been accomplished, with white papers developed on policy options for strengthening civil registration and vital statistics (CRVS) and GIS in both countries.

This digital health accelerator group has been brought together with the **Health Data Collaborative (HDC)**. This is an informal network of more than 1000 members and 220 organizations from seven constituencies that aims to strengthen country HIS, align partner resources with country priorities, and adapt global health tools to local contexts.

For example, in January 2023, HDC-partnered WHO, UNICEF and UNFPA visited Nepal to support strengthening the country's CRVS [\(22\)](#) system. And in May 2023, the HDC hosted a 'Better Data for Better Health' [\(23\)](#) summit. This event – and resulting report [\(24\)](#) – highlighted country voices and partner commitments around areas like the high reporting burden for frontline healthcare workers in Nigeria.

The HDC also publishes case studies to support peer-to-peer learning, such as how Uganda used health data to support access to health services during the pandemic [\(25\)](#).

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WHO's Dr Koné Foussemi speaks to a community member in a district in Madagascar about the impact of tropical cyclone Batsirai.

4.

Future work

There are many exciting strides
forward to come in 2024 and beyond

Better data and analytics

Our hope is that, from 2024–2025, many countries will have moved the needle in using health data to make timely decisions. Certainly, the **WHDH** will deliver unprecedented access to better data for countries and stakeholders. Furthermore, the **GHE 2021** will also soon provide the first comprehensive update on mortality and morbidity since GHE 2019. Our annual flagship report, the **WHS report 2024**, is also due for publication by this year's World Health Assembly in May. It provides the most up-to-date data on progress towards health-related SDGs and spotlight the most vital issues in global health and climate change.

Better solutions

Data-driven and impact-focused methods will continue to be applied and scaled up to deliver greater results in more countries. Our ambitious plans for delivering impact this year include **expanded country participation** (our objective is to have 50 interested countries present their priorities and delivery dashboards) and **sustained delivery stocktakes and deep dives**.

Better accountability

Fully updated, the **WHO Results Framework** is a central part of our commitment to improving the performance of WHO to support countries. It provides more coherence, improved efficiency, better transparency, and deeper accountability. WHO is recalibrating the Triple Billion targets so that impact measurement can be better used as a practical policy tool to improve mortality and quality of life. As such, the **new Triple Billion dashboard** will launch in April 2024. We will establish delivery milestones across our strategic priorities and finalise the draft global delivery dashboard, keeping WHO accountable and transparent to achieving global targets.



© WHO / HRP / Uma Bista

A youth mobilizer (left) and health worker, or 'Marie Stopes Lady' (right), walk to their clients' homes to provide sexual and reproductive health services in rural Nepal.

Better capabilities

Finally, we continue to increase support for countries to build stronger HIS. SCORE assessments will reveal how and where countries have made strides forward and where there is room for improvement and opportunities for investment. Alongside the SCORE for Health Data Technical Package, WHO is further scaling up the **WHS+**. Many countries now use this powerful, flexible survey platform that enables them to track population health, address their critical data gaps, and see if interventions are working. **Global Delivery and Accelerators Ambassadors Programme** will be launched, providing transformative training resources that empower participants with advanced delivery tools.

None of what we have achieved and will achieve is possible without the support of our partners, collaborating centres, and experts. We look forward to many continued successes in the years to come – and accelerated progress towards a healthier world for all.

Please contact us at ddi@who.int and visit <https://www.who.int/data> to learn more.

5.

Regional focus

Working together to create stronger health
information systems and data capacities



A mother receives care from a ‘Marie Stopes Lady’ health worker at her home in rural Nepal.

Building country capacity to fill in critical information gaps

Among the areas that most urgently require investment in the **African Region** is civil registration and vital statistics.

The COVID-19 pandemic has underscored the risk of fragmented or absent cause of death data which hinders an effective response and has long-term implications for policy design. For example, only 44% of births and 10% of deaths were registered in the African Region in 2020 (26).

To strengthen HIS, countries in the African Region have been supported to develop strategic plans and enhance systems for RHIS data generation.

Côte d’Ivoire, Eritrea, Eswatini, Guinea-Bissau and South Sudan have completed the development of their HIS strategic plan and are now using these plans to guide the implementation of HIS

activities. Botswana, Mauritius, Seychelles, and South Sudan were also supported to establish a RHIS.

For the 43 countries in the African Region implementing RHIS, the availability, quality and use of routine health data has greatly improved.

In the **Eastern Mediterranean Region**, more than half of countries lack good capacity in their CRVS system, with only 69% of births and 55% of deaths registered in 2020 (26). To strengthen country capacity in data collection, reporting, and use, Ministries of Health have been supported to conduct comprehensive national health information system assessments (27).

In 2022, comprehensive HIS assessments were conducted in Djibouti, Somalia and Yemen, with a planned assessment in Sana’a. Rapid mortality surveillance (28) has also become

a new capacity-building programme in the Region, which is being implemented through a mortality surveillance training package and implemented in Iraq, Jordan, and Syrian Arab Republic.

In Somalia, population-based and facility assessment surveys are being implemented with a focus on health workforce capacity for data standards and analytics. Pakistan and Somalia are also being introduced to integrated disease surveillance systems to monitor UHC and PHC in line with the SDGs.

Counting and classifying births, deaths, and causes of death is a priority area for the **South-East Asia Region**. In alignment with WHO's global CRVS objectives, the Regional Strategy for Strengthening the Role of the Health Sector for Improving CRVS (2015–2024) (29) assists countries in intensifying their CRVS improvement activities. Focused technical assistance is being provided

to seven countries: Bangladesh, Bhutan, India, Indonesia, Myanmar, Nepal, and Timor-Leste.

The regional strategy is coming to an end in less than a year. Acknowledging that every country in the South-East Asia Region is in a different stage of maturity in their CRVS system, the Regional Office has been working closely with its Member States to provide country-tailored support to ensure system-wide CRVS implementation.

This includes hands-on training on the ICD-11 suite of tools and the analysing cause-of-death tool (ANACoD3) for a comprehensive and systematic analysis of mortality and cause-of-death data.

Countries in **Western Pacific Region** have been consistently enhancing strategic and integrated health information system and emphasizing the health sector's roles in CRVS system strengthening through effective cross-sector communication and collaborations. Countries



A woman from the local Maasai community laughs when she gets a mark on her finger to indicate that she's received the oral cholera vaccine (OCV) by the roadside in Ilkilunyeti, Kajiado, on 6 August 2023.

© WHO / Billy Miaron

across the region, despite wide disparities in resources and capacities, are adopting innovative approaches to improve system interoperability and develop norms and standards.

The Regional Office for the Western Pacific has been actively promoting and supporting the transition to ICD-11 in the region through innovative and practical approaches in countries for better mortality and morbidity data reporting, quality control, and interpretation for policy through digital solutions.

A series of ICD-11 orientation workshops, advocacy webinars, and system assessments have been organized in Mongolia, Malaysia, Philippines, and Pacific Island Countries. Tailored ICD-11 transition plans have also been developed or initiated in at least four countries.

Pilot roll-out, capacity building activities, and revisions to information systems are in progress in three countries and one country has started transitioning at the national scale.

Leveraging digital technologies to strengthen country data

As countries in the **European Region** transition towards digital health systems – a shift accelerated by the COVID-19 pandemic – they must strike the right balance between data privacy and transparency.

The WHO Regional Office for Europe is calling on all countries (30) to establish a robust data governance plan to make sure critical decisions are timely and data driven. This plan should outline how to coordinate, process, and exchange data and include steps to build a data culture that empowers users to act.

Additionally, the 53 Member States in the European Region have adopted their first-ever

digital health action plan (31) to leverage digital transformation in Europe and central Asia with the aim of improving people's health and well-being.

In the **Region of the Americas**, a series of tools have been developed to strengthen information systems for health (IS4H). This includes a recently launched Digital Transformation Toolkit for the Americas (32), the continuous implementation of the Rapid Assessment Tool for Critical Data Gathering (33) and the IS4H Maturity assessment tool (34).

The latter allows Member States, institutions, and local governments to access data, tools, and information through an integrated approach for IS4H assessments across the region and has been adopted by critical partners for supporting the IS4H initiative.

A regional meeting was held in Panama (35) with the participation of Member States, critical partners and donors for supporting information systems and digital health in the Americas. The Regional Office is actively working with Member States in the adoption of the eight principles for the digital transformation of the health sector (36).

A call for action and investment was launched at the RELAC SIS (37) 4.0: Information Systems and Digital Health in the Americas, 12–15 November 2023 in São Paulo, Brazil.

Developing regional data hubs

WHO regional offices serve as trusted health data hubs for their Member States, tailored to respective regional context.

In the **African Region**, the Regional Office has made progress in improving the consolidation and sharing of health data and statistics. The 2022 Atlas of African Health Statistics (38) combines various health and related data and statistics

across the SDGs into a single, interlinked source. The Atlas also included country-specific profiles for all 47 African Member States (39) for the first time.

With the support of the Regional Office, several countries in the African Region are developing their National Health Observatories (NHOs) as ‘one-stop shops’ within the integrated African Health Observatory (iAHO) (40) to better encompass knowledge generation. Several knowledge-capacity-building workshops have further enhanced country capacity and provided an avenue for hands-on practice with succinct results.

This is evidenced by the 34 knowledge products generated by Member States, involving five distinct types: Analytical Fact Sheets, Knowledge Fact Sheets, Blogs, Policy Briefs, and Infographics (41).

This is a significant step forward in equipping NHOs with the tools and skills necessary to generate valuable knowledge products that can advance health information and evidence-based decision-making.

Region of the Americas’ ongoing efforts to implement open data platforms that promote evidence-based policy design and decision-making are well reflected in three recent releases.

First, the Core Indicators Portal (42) presents a dataset composed of more than 140 health and health-related indicators for 49 countries and territories of the Region, spanning from 1995 to 2022.

Second, Health in the Americas (43) is a centralized platform focusing on different topics as defined by the Executive Management of the Regional Office. It offers new and more interactive ways to view and compare data between regions and countries, going back to 1954.

Third, the Monitoring Dashboard for SDG 3 Targets, Indicators and Inequalities (44) tracks and visualizes progress towards SDG 3 and monitors broader inequality trends and progress towards the 2030 global goals.

The Regional Health Observatory (RHO) (45) for the **Eastern Mediterranean Region** is a gateway to health-related statistics.

The RHO tracks progress for nearly 95 regional indicators and is a key source for the annual Core Indicator report (46), the Health and well-being profile of the Eastern Mediterranean Region (47), and the Health-related SDG progress report (48). In addition, the RHO provides access to profiles and briefs (49) that monitor population health and health-related programmes.

It also includes statistics and thematic areas (50) that highlight key indicators such as maternal mortality and life expectancy using GIS along with metadata (51) for all the core indicators.

All countries in the **European Region** have access to the European Health Information Gateway (52) which is a hub for health information and data visualization. This powerful bi-lingual platform empowers policymakers, WHO staff, and the public to better understand and act on data trends.

It informs two flagship publications in the region. The European Health Report (53), which summarizes population health status, progress towards the SDGs, and priority actions. And the Core Health Indicators (54) report, which provides an annual progress review of 50 key indicators with a two-page spread on a topical theme each year. A selection of other peer-reviewed publications (55) are available through the Regional Office website (56).



Shagufta (right) and Khadija (left) receive mosquito nets during a door-to-door campaign for malaria treatment and prevention in Sohbatpur, Balochistan.

Alongside the European Observatory on Health Systems and Policies, WHO co-produced 13 Health Systems in Action Insights country profiles. These profiles highlight core data and information on health systems, outline the health system context in which the European Programme of Work (EPW) is set, flag key concerns, progress and challenges faced by each health system, and build a baseline for comparisons to provide benchmarks for health system development over time and in relation to other Member States.

To improve data use for policy and planning, all countries in the **South-East Asia Region** are taking full advantage of the health information platform (57). This is an integrated database of country health indicators and user-friendly, interactive dashboards based on the SDGs and on regional health themes

such as mental health and reproductive, maternal, newborn, child and adolescent health.

It informs the South-East Asia Region's annual flagship publication: Monitoring progress towards UHC and health-related SDGs (58), which is currently in its eighth year of production. It summarizes population health status, overall progress towards the SDGs at the regional level, and provides an annual progress review of 46 health-related indicators with a different thematic focus each year. In 2023, the report's thematic area presents a rapid assessment of digital health implementation in the Region.

In September 2023, with close collaboration across departments, the first ever report on mental health was launched, titled 'Mental health conditions in the WHO South-East Asia Region' (59). The report



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Yenni (seated, left) is about to be vaccinated against COVID-19 in the indigenous community of Concordia, Colombia on 16 March 2021. Before the injection she answers a health questionnaire and vaccinators prepare her booklet where the date of vaccination, type of vaccine, and date of second dose are recorded.

and country profiles provide a comprehensive overview of the burden of mental, neurological and substance use disorders and self-harm in the South-East Asia Region.

This serves as an actionable tool to help countries expand their community-based mental health services as a response to the increasing burden of disease in the Region. The **Western Pacific Health Data Platform** ([60](#)) offers a single

destination that compiles multiple data sources and products where countries can easily monitor and compare their progress towards national and global health objectives. The platform has undergone continuous improvement to include more data tools for ease of retrieval and use.

Regional partnerships

Partnerships are a key factor for mobilizing support in priority areas such as improvements to health information systems including CRVS and rapid mortality surveillance systems, harmonized health facility assessments, and population-based surveys. This includes collaboration with UN agencies, academic institutions, and other development partners.

The Regional Office for Africa's call for knowledge exchange is enhanced by regional participation in policy dialogue and partnerships.

These include the African Health Observatory Platform on Health Systems and Policies (AHOP) (61), African Advisory Committee on Health Research and Development (AACHRD) (62), WHO Regional Office for Africa's partner institutions (API) (63), HDC (23) and the Global Evidence-to-Policy Summit. HDC implementation is ongoing in Botswana, Cameroon, Kenya, Malawi, and the United Republic of Tanzania to align technical and financial investments with country priorities.

To further strengthen work on information systems for health and data management, the Regional Office for the Americas has collaborated with a variety of knowledge networks and partners.

This includes consolidating an alliance with the Inter-American Development Bank, using the IS4H framework to help guide investments that support countries in strengthening their HIS and partnering with Vital Strategies and the Swiss Tropical and Public Health Institute to strengthen CRVS. The application of the CRVS Process Improvement Framework in Dominican Republic, Ecuador, and Trinidad and Tobago has resulted in CRVS system improvement planning. The Dominican Republic has also identified a need for birth and death standards development and initiated efforts to update and

further develop standard operating procedures for birth and death registration. Ecuador and Trinidad and Tobago are planning for ICD-11 implementation and are taking initial steps in the transition process such as revitalizing or establishing a national interinstitutional vital statistics committee.

Networks of Member States and health information system stakeholders, such as the European Health Information Initiative (EHII) (64), catalyze collaboration across the European Region.

Contributions to the EHII come from the Central Asian Republics Information Network (CARINFONET) (65) and the European Burden of Disease Network (EBoDN) (66). The European Region also participates in the Regional Coordination Group on Data and Statistics, which focuses on improving data collection, analysis, and dissemination to monitor national policies and practices.

The Regional Office for South-East Asia works closely with several partners to strengthen national HIS to support countries' unique plans and priorities.

Extended collaborations include key UN agencies such as UNESCAP, UNFPA, and UNICEF, health development partners, academic institutions, regional networks and civil society groups to improve countries' health data and CRVS systems for monitoring national health priorities and driving progress towards UHC, WHO's Triple Billion targets, and the health-related SDGs. Partnering with the editors of Palgrave handbook, a state-of-the-art course is being developed for improving health data analytics and reporting for policy and practice. The course is tailored to each country's needs to build the skills of country teams, particularly senior data producers and analysts, to respond to growing demands for reliable and timely information. This course also

serves as a foundational intervention to support countries to introduce actions that enhance the availability, quality and use of HIS in their routine decision-making.

A variety of partners and WHO Collaborating Centres are working closely with the Regional Office for the Western Pacific to strengthen HIS and promote a culture of data use for decision-making.

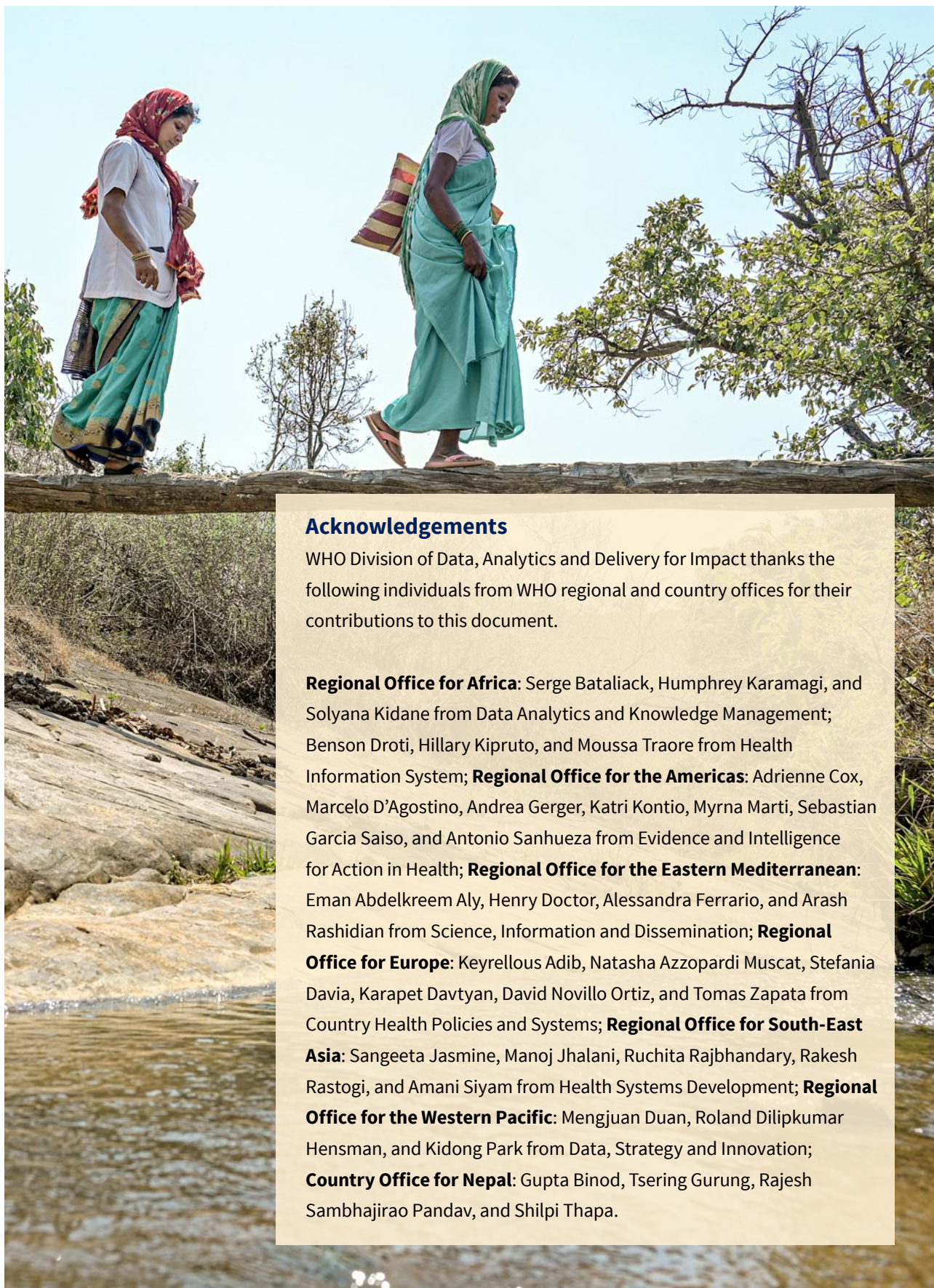
This includes the Asia eHealth Information

Network, Australian Institute of Health and Welfare, Bloomberg Philanthropies Data for Health Initiative, CDC Foundation, China Academy of Information and Communication Technology, Health Information Systems Programme Viet Nam, University of Oslo, and Vital Strategies to deliver tailored country support based on national priorities.



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A WHO team meets with health authorities at the Zhytomyr Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine on 23 February 2023.



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Health workers Kanduri and Sumati travel on foot during malaria surveillance activities around Kandamar village in Bastar district of Chhattisgarh, India.

Abbreviations

ANACoD3	Analysing Cause-of-Death Tool
CDC	United States Centers for Disease Control and Prevention
CRVS	Civil Registration and Vital Statistics
DDI	Division of Data, Analytics and Delivery for Impact
DHIS2	District Health Information System
DORIS	Digital Open Rule Integrated Cause of Death Selection Tool
GHE	Global Health Estimates
GIS	Geographic Information Systems
GPW 13	WHO's Thirteenth General Programme of Work
HDC	Health Data Collaborative
HHFA	Harmonized Health Facility Assessment
HIDR	Health Inequality Data Repository
HIS	Health Information System
IAHO	Integrated African Health Observatory
ICD	International Classification of Diseases and Related Health Problems
IS4H	Information Systems for Health
PC	Preventive chemotherapy
RHIS	Routine Health Information Systems
RHO	Regional Health Observatory
SCORE	Survey, Count, Optimize, Review, Enable

SDGS	Sustainable Development Goals
SDG3GAP	Global Action Plan for Healthy Lives and Well-being for All
UHC GMR	Universal Health Coverage Global Monitoring Report
UHPR	Universal Health and Preparedness Review
WHDH	World Health Data Hub
WHO-FIC	WHO Family of International Classifications Network
WHS	World Health Statistics
WHS+	World Health Survey Plus

References

1. World Health Organization. WHO releases data.who.int. (<https://www.who.int/news-room/feature-stories/detail/who-releases-data.who.int/>, accessed 25 May 2023).
2. World Health Organization. World Health Data Hub. (<https://data.who.int/>, accessed 15 April 2024).
3. World Health Organization. World Health Data Hub: Countries. (<https://data.who.int/countries>, accessed 15 April 2024).
4. World Health Organization. World Health Data Hub: Indicators. (<https://data.who.int/indicators>, accessed 15 April 2024).
5. World Health Organization. World Health Data Hub: Coronavirus (COVID-19) Dashboard. (<https://data.who.int/dashboards/covid19>, accessed 15 April 2024).
6. World Health Organization. WHO Mortality Database: Interactive platform visualizing mortality data. (<https://platform.who.int/mortality>, accessed 13 April 2024).
7. World Health Organization. World health statistics 2023: monitoring health for the SDGs, Sustainable Development Goals. 2023. (<https://iris.who.int/handle/10665/367912>, accessed 13 April 2024).
8. World Health Organization. Global excess deaths associated with COVID-19, January 2020 - December 2021. 2022. (<https://www.who.int/data/stories/global-excess-deaths-associated-with-covid-19-january-2020-december-2021/>, accessed 13 April 2024).
9. World Health Organization, International Bank for Reconstruction and Development, The World Bank. Tracking universal health coverage: 2023 global monitoring report 2023. (<https://iris.who.int/handle/10665/374060>, accessed 14 April 2024).
10. United Nations. High-level political forum on sustainable development 2023: Under the auspices of the ECOSOC. New York; 10-19 July 2023. (<https://hlpf.un.org/2023>, accessed 15 April 2024).
11. World Health Organization. Billions left behind on the path to universal health coverage. 2023. (<https://www.who.int/news/item/18-09-2023-billions-left-behind-on-the-path-to-universal-health-coverage>, accessed 15 April 2024).
12. World Health Organization. 2023 Universal Health Coverage Global Monitoring Report. (<https://www.youtube.com/watch?v=ioLM2zwo-4s>, accessed 15 April 2024).
13. World Health Organization. Launch of Universal Health Coverage Global Monitoring Report 2023. (<https://www.who.int/news-room/events/detail/2023/09/18/default-calendar/launch-of-universal-health-coverage-global-monitoring-report-2023>, accessed 15 April 2024).
14. World Health Organization. Health Inequality Data Repository. (<https://www.who.int/data/inequality-monitor/data>, accessed 15 April 2024).
15. World Health Organization. International Statistical Classification of Diseases and Related Health Problems (ICD). (<https://www.who.int/standards/classifications/classification-of-diseases>, accessed 13 April 2024).
16. World Health Organization. Digital Open Rule Integrated cause of death Selection tool. (<https://icd.who.int/docs/doris/en/>, accessed 15 April 2024).
17. World Health Organization. Data Quality Assurance (DQA). (<https://www.who.int/data/data-collection-tools/health-service-data/data-quality-assurance-dqa>, accessed 13 April 2024).
18. University of Oslo HISP Centre. DHIS2. (<https://dhis2.org/>, accessed 15 April 2024).

-
19. Ghana Health Service. Ghana's Story On Harmonised Health Facility Assessment (HHFA) Implementation. 2023. (<https://ghs.gov.gh/2023/03/14/ghanas-story-on-harmonised-health-facility-assessment-hhfa-implementation/>, accessed 15 April 2024).
 20. World Health Organization. SCORE for Health Data Technical Package. SCORE for Ghana. (<https://www.who.int/data/data-collection-tools/score/dashboard#/profile/GHA>, accessed 16 April 2024).
 21. World Health Organization. What worked? What didn't? What's next? 2023 progress report on the Global Action Plan for Healthy Lives and Well-being for All. 2023. (<https://iris.who.int/handle/10665/367422>, accessed 16 April 2024).
 22. World Health Organization. Collaborating for an improved civil registration system to advance health and population data system in Nepal. 2023. (<https://www.who.int/news-room/feature-stories/detail/collaborating-improved-civil-registration-system-advance-health-population-data-nepal>, accessed 13 April 2024).
 23. Health Data Collaborative. Better Data for Better Health: Investing in Country Health Information Systems to Accelerate Progress Towards Health-related SDGs. (<https://www.healthdatacollaborative.org/meetings-events/events/better-data-for-better-health-investing-in-country-health-information-systems-to-accelerate-progress-towards-health-related-sdgs>, accessed 13 April 2024).
 24. Health Data Collaborative. Event report - Better Data for Better Health: Investing in country health information systems and health data governance to accelerate progress towards health-related SDGs, 18 and 19 May, Geneva, Switzerland. 2023. (https://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Event_files_Alternate/Better_Data_for_Better_Health_-_Event_Report.pdf, accessed 15 April 2024).
 25. Health Data Collaborative. Data, decision making and innovations to support continuity of essential RMNCAH service during COVID-19: Insights from Uganda. (https://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Documents/2023/Documents/Data_use_for_CEHS_in_Uganda.pdf, accessed April 16 2024).
 26. World Health Organization. SCORE global report 2020: A visual summary. 2021. (<https://www.who.int/data/stories/score-global-report-2020---a-visual-summary>, accessed 16 April 2024).
 27. World Health Organization. SCORE for health data technical package: global report on health data systems and capacity, 2020. 2021. (<https://iris.who.int/handle/10665/339125>, accessed 13 April 2024).
 28. World Health Organization. Revealing the Toll of COVID-19: A Technical Package for Rapid Mortality Surveillance and Epidemic Response. 2020. (<https://www.who.int/publications/i/item/revealing-the-toll-of-covid-19>, accessed 16 April 2024).
 29. WHO Regional Office for South-East Asia. Regional strategy for strengthening the role of the health sector for improving CRVS (2015-2024). (<https://iris.who.int/handle/10665/205842>, accessed 16 April 2024).
 30. Natasha AM, et al., A call to strengthen data in response to COVID-19 and beyond. Journal of the American Medical Informatics Association, 2021. 2(3): p. 638-639.
 31. WHO Regional Office for Europe. Regional digital health action plan for the WHO European Region 2023–2030. 72nd session of the Regional Committee for Europe. 2022. (<https://iris.who.int/bitstream/handle/10665/360950/72wd05e-DigitalHealth-220529.pdf?sequence=2&isAllowed=y>, accessed 16 April 2024).
 32. WHO Regional office for the Americas. Transformación Digital del Sector Salud - Caja de herramientas (2023). (<https://www.paho.org/es/documentos/transformacion-digital-sector-salud-caja-herramientas-2023>, accessed 16 April 2024).
 33. Pan American Health Organization. Rapid Assessment Tool for Critical Data Gathering 2021. (<https://iris.paho.org/handle/10665.2/53614>, accessed 16 April 2024).
 34. WHO Regional Office for the Americas. About the IS4H-MMAssessment. (<https://www3.paho.org/ish/index.php/en/about-mm>, accessed 16 April 2024).

-
35. Pan American Health Organization. Reunión sobre la transformación digital del sector de la salud en la Región de las Américas Ciudad de Panamá, del 14 al 16 de noviembre del 2022. 2023. (<https://iris.paho.org/handle/10665.2/57294>, accessed 16 April 2024).
 36. Pan American Health Organization. Eight Guiding Principles of Digital Transformation of the Health Sector. A Call to Pan American Action. 2021. (<https://iris.paho.org/handle/10665.2/54256>, accessed 16 April).
 37. Pan American Health Organization. RELAC SIS: Shared experiences. Better health information. (<https://www.paho.org/en/relacsis>, accessed 16 April 2024).
 38. WHO Regional Office for Africa. Atlas of African Health Statistics 2022: Health situation analysis of the WHO African Region. 2022. (<https://iris.who.int/handle/10665/364851>, accessed 16 April 2024).
 39. WHO Regional Office for Africa. Atlas 2022 – Country profiles. Integrated African Health Observatory. (<https://aho.afro.who.int/atlas-profiles/af>, accessed 16 April 2024).
 40. WHO Regional Office for Africa. Integrated African Health Observatory (IAHO). (<https://aho.afro.who.int/>, accessed 16 April 2024).
 41. Integrated African Health Observatory (IAHO), WHO Regional Office for Africa. Knowledge generation capacity building workshops. May 2023 (Livingstone and duala). 2023. (https://files.aho.afro.who.int/afahobckpcontainer/production/files/Knowledge_Generation_Workshops-May_2023_Report.pdf, accessed 13 April 2024).
 42. WHO Regional Office for the Americas. Core Indicators Portal. (<https://opendata.paho.org/en/core-indicators>, accessed 14 April 2024).
 43. WHO Regional Office for the Americas. Health in the Americas. (<https://hia.paho.org/en>, accessed 16 April 2024).
 44. WHO Regional Office for the Americas. SDG 3 Portal. (<https://opendata.paho.org/en/sdg3>, accessed 13 April 2024).
 45. WHO Regional Office for the Eastern Mediterranean. Eastern Mediterranean Health Observatory. (<https://rho.emro.who.int/>, accessed 16 April 2024).
 46. WHO Regional Office for the Eastern Mediterranean. Framework for SDG and Core Health Indicators. Eastern Mediterranean Health Observatory. (<https://rho.emro.who.int/emr-hf>, accessed 16 April 2024).
 47. WHO Regional Office for the Eastern Mediterranean. Health and well-being profile of the Eastern Mediterranean Region: an overview of the health situation in the Region and its countries in 2019. 2020. (<https://rho.emro.who.int/Article/health-and-well-being-profile-of-the-eastern-mediterranean-region>, accessed 16 April 2024).
 48. WHO Regional Office for the Eastern Mediterranean. Progress on the Health-related Sustainable Development Goals and targets in the Eastern Mediterranean Region, 2023. 2023. (<https://applications.emro.who.int/docs/Progress-health-related-SDGs-targets-EMR-2023-eng.pdf?ua=1&ua=1>, accessed 16 April 2024).
 49. WHO Regional Office for the Eastern Mediterranean. Profiles and briefs. Eastern Mediterranean Health Observatory. (<https://rho.emro.who.int/profiles-and-briefs>, accessed 16 April 2024).
 50. WHO Regional Office for the Eastern Mediterranean. Statistics and themes. Eastern Mediterranean Health Observatory. (<https://rho.emro.who.int/Set-of-themes>, accessed 13 April 2024).
 51. WHO Regional Office for the Eastern Mediterranean. Metadata. Eastern Mediterranean Health Observatory. (<https://rho.emro.who.int/metadata>, accessed 16 April 2024).
 52. WHO Regional Office for Europe. European Health Information Gateway. (<https://gateway.euro.who.int/en/>, accessed 16 April 2024).

-
53. WHO Regional Office for Europe. The European Health Report 2021: highlights. Taking stock of the health-related Sustainable Development Goals in the COVID-19 era with a focus on leaving no one behind. 2022. (<https://iris.who.int/handle/10665/352131>, accessed 16 April 2024).
 54. WHO Regional Office for Europe. Core health indicators in the WHO European Region. Special Focus: European Programme of Work Measurement Framework. 2022. (<https://iris.who.int/handle/10665/362397>, accessed 16 April 2024).
 55. WHO Regional Office for Europe. Publications. (<https://www.who.int/europe/publications>, accessed 16 April 2024).
 56. WHO Regional Office for Europe. Publications overview. (<https://www.who.int/europe/publications/i>, accessed 16 April 2024).
 57. WHO Regional Office for South-East Asia. Health Information Platform for the WHO South-East Asia Region. (<https://hip.searo.who.int/dhis/dhis-web-commons/security/login.action>, accessed 16 April 2024).
 58. WHO Regional Office for South-East Asia. Monitoring progress on universal health coverage and the health-related Sustainable Development Goals in the WHO South-East Asia Region: 2022 update. 2022. (<https://iris.who.int/handle/10665/362046>, accessed 16 April 2024).
 59. WHO Regional Office for South-East Asia. Mental health conditions in the WHO South-East Asia Region. 2023. (<https://iris.who.int/handle/10665/372954>, accessed 13 April 2024).
 60. WHO Regional Office for the Western Pacific. Western Pacific Health Data Platform. (<https://data.wpro.who.int/>, accessed 13 April 2024).
 61. WHO Regional Office for Africa. African Health Observatory Platform on Health Systems and Policies (AHOP). (<https://ahop.aho.afro.who.int/>, accessed 13 April 2024).
 62. WHO Regional Office for Africa. The African Advisory Committee on Health Research and Development. (<https://www.afro.who.int/about-us/leadership/aachrd#%3A~%3Atext%3DAACHRD%20members%20are%20recruited%20and%20Cof%20the%20World%20Health%20Organization4>, accessed 16 April 2024).
 63. Heidelberg Institute for Global Health, Universitäts Klinikum Heidelberg. DZIF African partner institutions (API). (<https://www.klinikum.uni-heidelberg.de/heidelberger-institut-fuer-global-health/partner/partner/dzif-african-partner-institutions-api>, accessed 16 April 2024).
 64. WHO Regional Office for Europe. European Health Information Initiative (EHII). ([https://www.who.int/europe/groups/european-health-information-initiative-\(ehii\)](https://www.who.int/europe/groups/european-health-information-initiative-(ehii)), accessed 14 April 2024).
 65. WHO Regional Office for Europe. Central Asian Republics Information Network (CARINFONET). ([https://www.who.int/europe/groups/central-asian-republics-information-network-\(carinfonet\)](https://www.who.int/europe/groups/central-asian-republics-information-network-(carinfonet)), accessed 14 April 2024).
 66. WHO Regional Office for Europe. The European Burden of Disease Network (EBoDN). ([https://www.who.int/europe/groups/the-european-burden-of-disease-network-\(ebodn\)](https://www.who.int/europe/groups/the-european-burden-of-disease-network-(ebodn)), accessed 14 April 2024).

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