The WHO Hub for Pandemic and Epidemic Intelligence: Annual report 2024

World Health Organization | HUB

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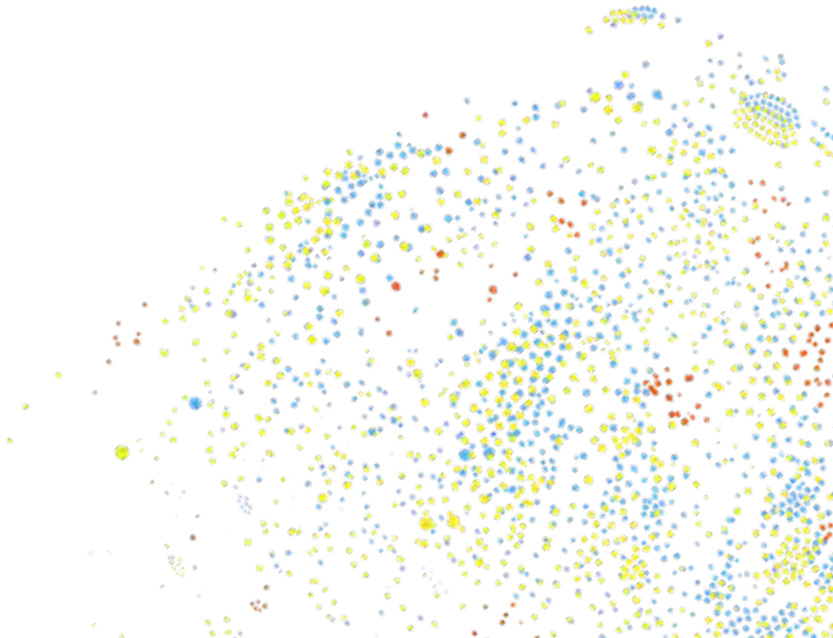


1 Introduction

Established in September 2021 with the foundational support of the Government of Germany, the World Health Organization Hub for Pandemic and Epidemic Intelligence (WHO Hub) envisions a world that is better prepared for health emergencies.

The coronavirus disease 2019 (COVID-19) pandemic exposed significant weaknesses in how countries detect, monitor and respond to public health threats. In response, the WHO Hub was created to transform the global surveillance of emerging public health threats.

As an integral part of the WHO Health Emergencies Programme (WHE), the WHO Hub plays a crucial role in supporting Member States in detecting risks earlier, fostering collaboration in data sharing and joint analysis, and enhancing decision-making.

The Hub works closely with WHO regional and country offices, connecting diverse partners and developing innovative solutions, thereby driving a fundamental transformation in global public health intelligence.

Our primary instrument for this work is Collaborative Surveillance, which is "the systematic strengthening of capacity and collaboration among diverse stakeholders, both within and beyond the health sector, with the ultimate goal of enhancing public health intelligence and improving evidence for decision-making".

The WHO Hub has scaled up operations and rapidly accelerated implementation across all projects since it was established.

This report highlights the impact of the WHO Hub's work in 2024 and demonstrates its role as a catalyst for implementing Collaborative Surveillance worldwide.

Our vision

A world where Collaborative Surveillance empowers countries and communities to minimize the impacts of pandemic and epidemic threats.

Our mission

We catalyse transformation in Collaborative Surveillance across all levels, and serve countries by connecting, innovating and strengthening capabilities to produce better data, analytics and decisions.

© WHO / Christopher Black

When former Chancellor Angela Merkel and I established the WHO Hub for Pandemic and Epidemic Intelligence just over three years ago, we wanted to change forever the world's experience of public health emergencies.

Now an indispensable part of the WHO Health Emergencies Programme, the Hub is ensuring that the most robust tools and analytics are available to enhance early threat detection and rapid response and support decision-makers around the world.

I have urged all WHO Member States to work closely with the Hub, not only to strengthen their own national and regional health security, but also to contribute to global preparedness and response.

Dr Tedros Adhanom Ghebreyesus
Director-General, World Health Organization

© WHO / Yoshi Shimizu

As part of the WHO Health Emergencies Programme, the WHO Hub for Pandemic and Epidemic Intelligence builds on proven surveillance approaches while continuously developing and integrating new, innovative methods for detecting and responding to health threats.

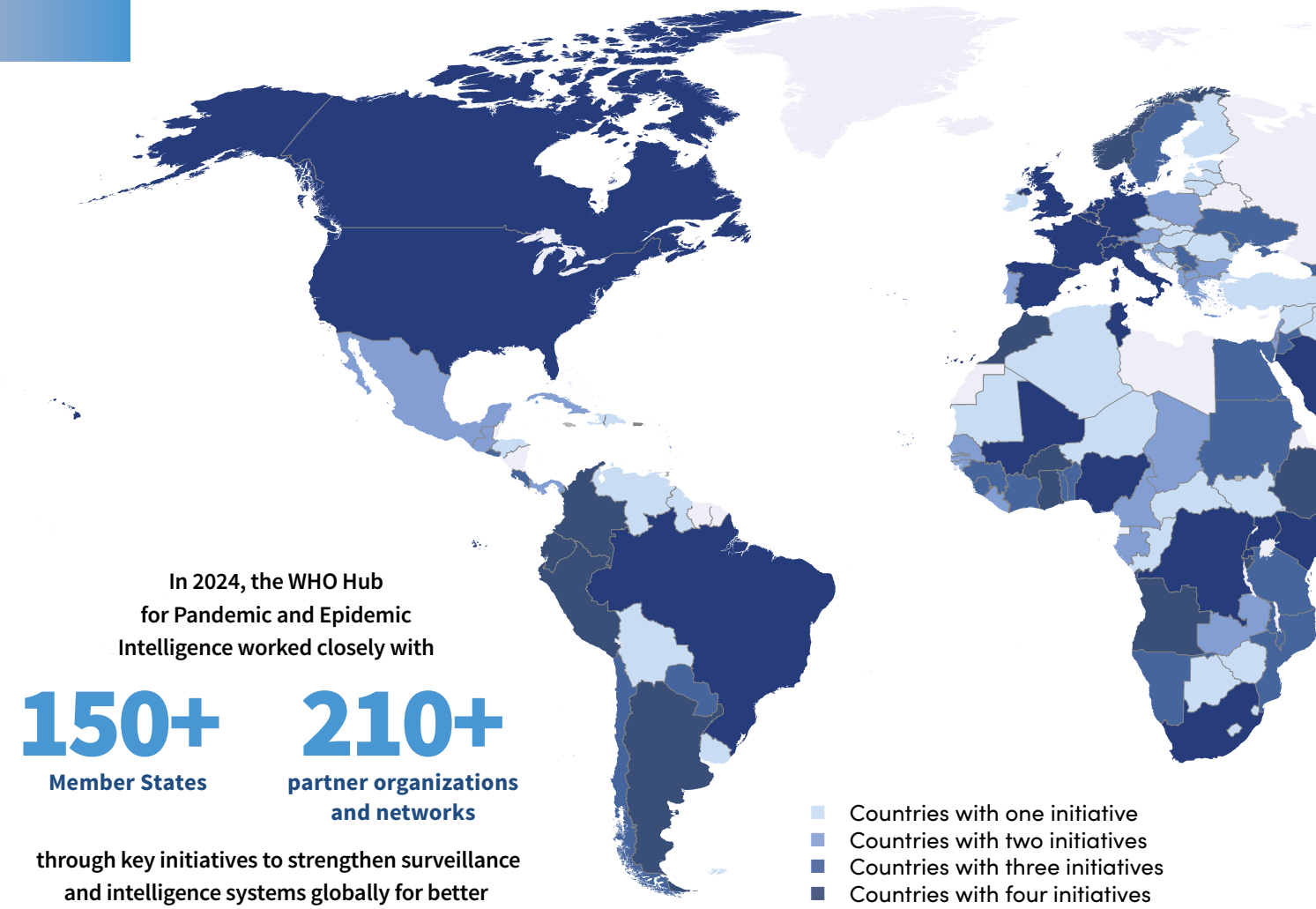
Dr Mike Ryan
Deputy Director-General, World Health Organization and Executive Director, WHO Health Emergencies Programme

© WHO

It has been my privilege to lead the WHO Hub for Pandemic and Epidemic Intelligence during the last three years. Our commitment to fostering trust, building partnerships and driving innovation has never been stronger. Together, we are building a safer, healthier world for all.

Dr Chikwe Ihekweazu
Deputy Executive Director, WHO Health Emergencies Programme and Assistant Director-General, World Health Organization

2 Key achievements



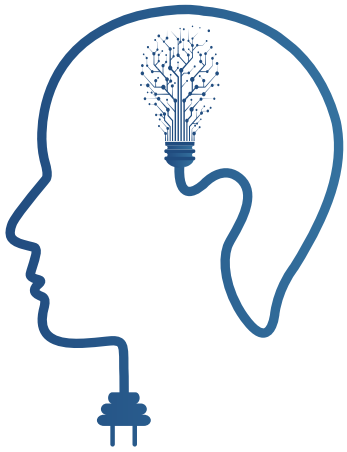
In 2024, the WHO Hub for Pandemic and Epidemic Intelligence worked closely with

150+ Member States

210+ partner organizations and networks

through key initiatives to strengthen surveillance and intelligence systems globally for better emergency preparedness and response

Intelligence capacity strengthened



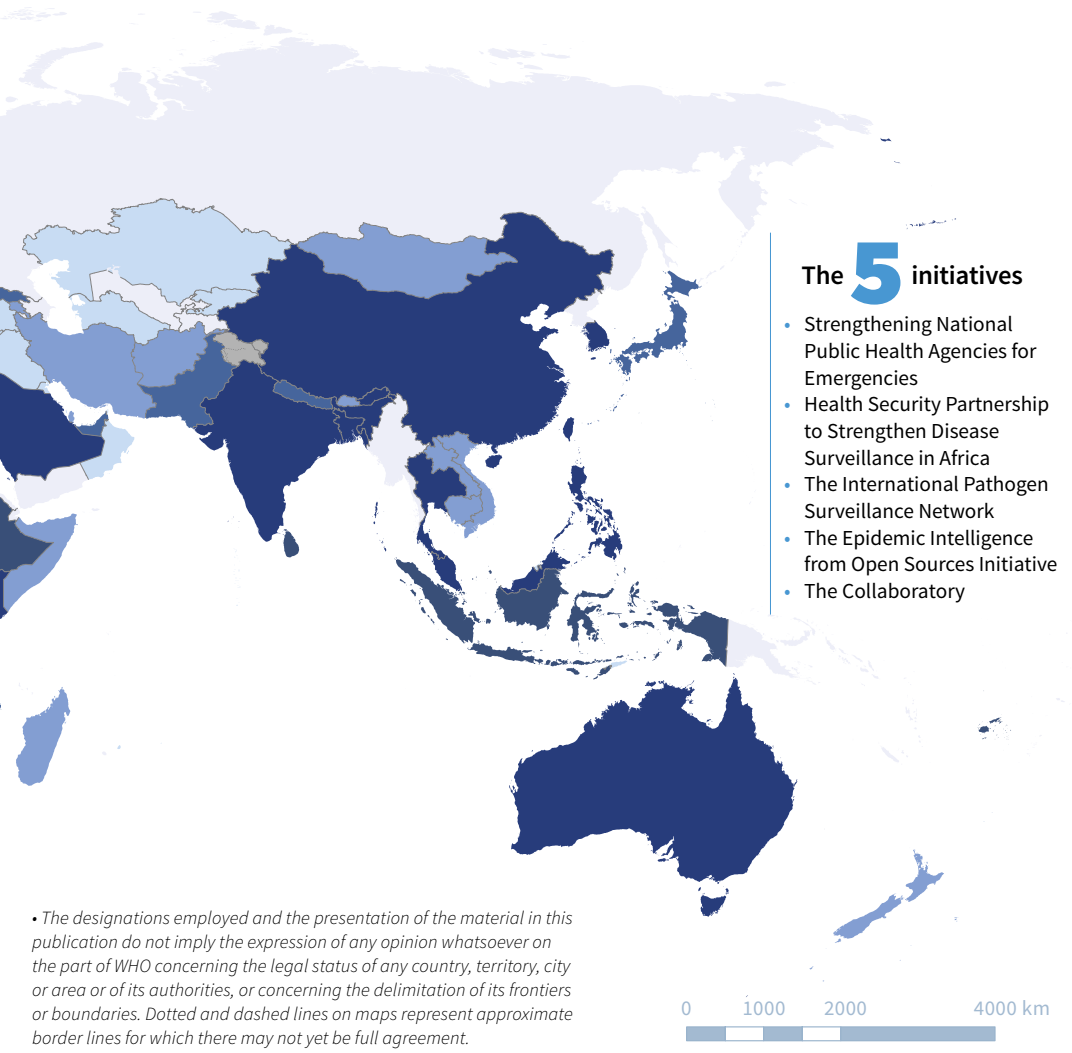
The Epidemic Intelligence from Open Source (EIOS) initiative surpassed **100** Member States

103 countries + **28** organizations are leveraging their community, collaboration and AI-powered systems to strengthen global public health intelligence

Stronger partnerships

The National Public Health Agencies (NPHA) initiative has engaged over **105** Member States to strengthen NPHA capacities for health emergency preparedness and response

# of 2024



• The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The 5 initiatives

- Strengthening National Public Health Agencies for Emergencies
- Health Security Partnership to Strengthen Disease Surveillance in Africa
- The International Pathogen Surveillance Network
- The Epidemic Intelligence from Open Sources Initiative
- The Collaboratory

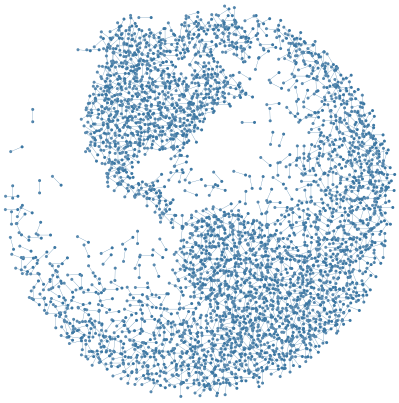
Stronger capacity for detection

The International Pathogen Surveillance Network (IPSN) works with

235
Member States and organizations
in
85
countries

to connect surveillance actors worldwide for improved access to pathogen genomics tools

Better insights for outbreaks



Modelling and genomics for the mpox outbreak through the Collaboratory brings over

600
analysts and experts

together to reduce global fragmentation

A Hub for the world

Each year, the Hub welcomes about

2500
visitors

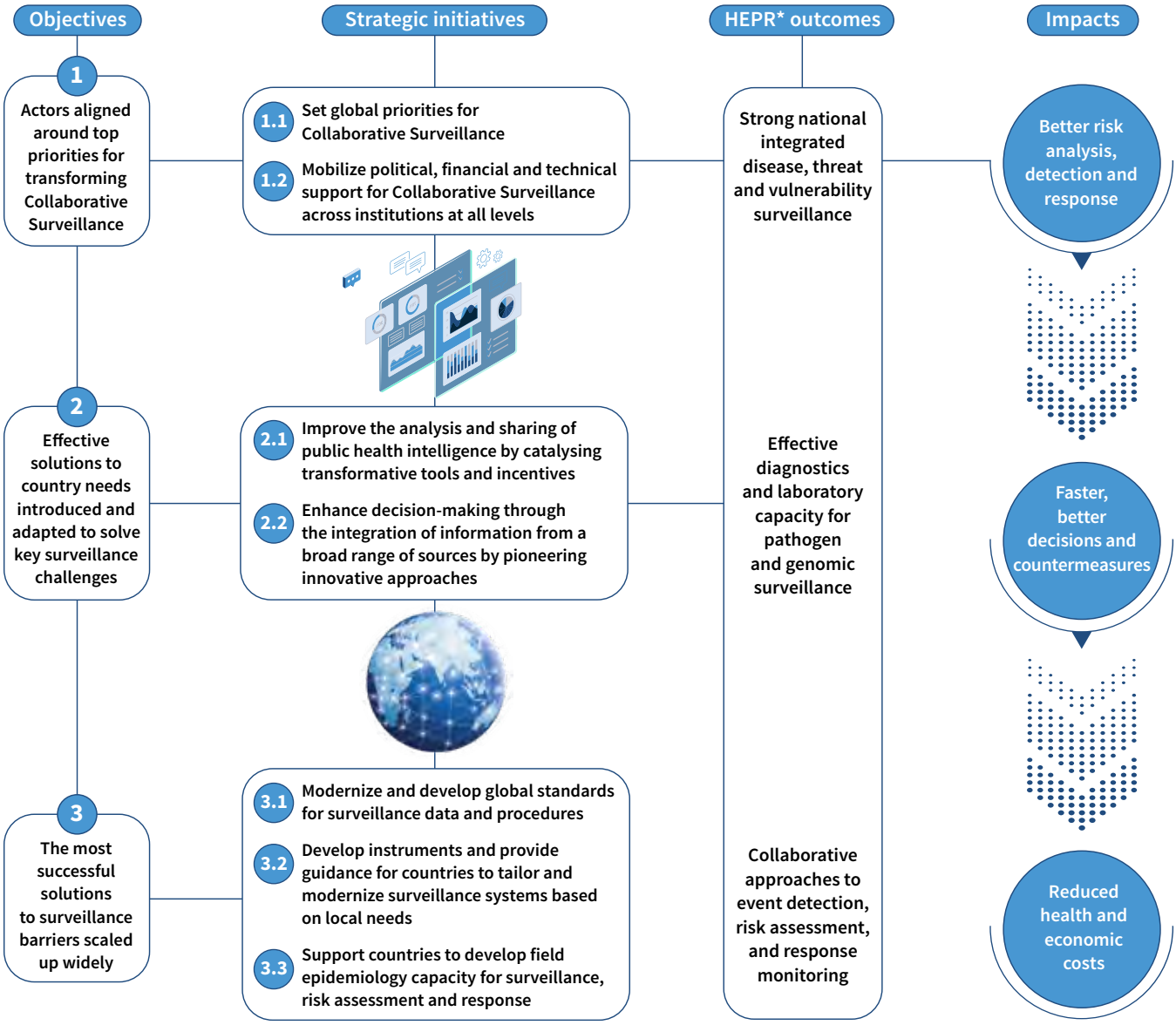
to its premises in Berlin and hosts around

60
onsite meetings

3 The WHO Hub's strategy

The WHO Hub's work is guided by our strategy, which defines our vision and mission and our strategic objectives (Fig. 1). The strategy also includes five principles that guide how the division works and makes decisions (Fig. 2).

Fig. 1. **The WHO Hub Strategy**

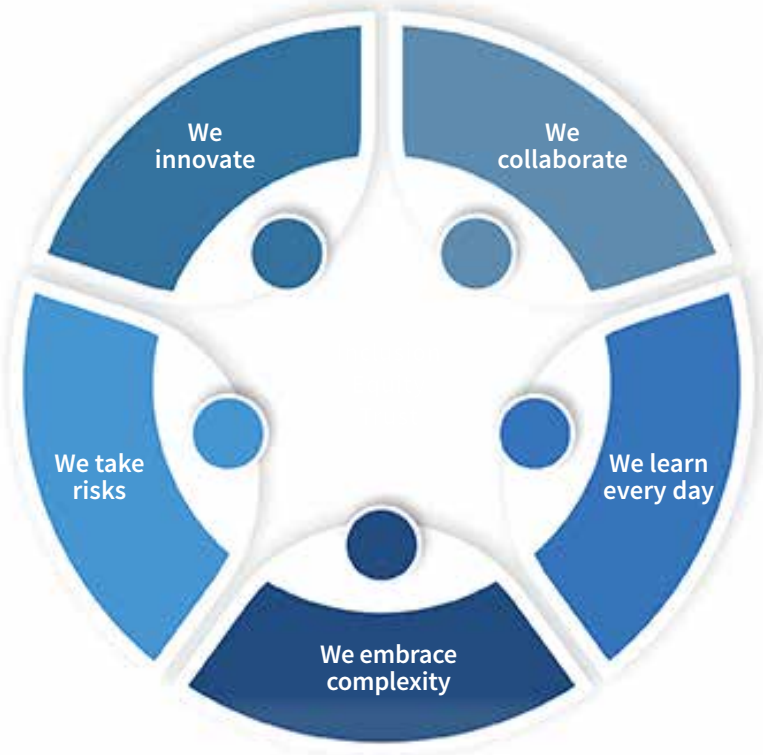


* Health Emergency Prevention, Preparedness, Response and Resilience (HEPR)

Strategic management of the WHO Hub's programme

A fit-for-purpose project management approach was adopted, enabling us to prioritize, execute and track projects while embracing uncertainty through structured experimentation and innovation. This approach has required our teams to adopt a new way of working that enables learning, delivery and effective decision-making.

Fig. 2. **Our five principles**



We channel the best minds and innovations towards serving the needs of countries and communities across all levels

We pioneer innovative forms of collaboration by convening atypical actors from around the world and empowering them to take the lead

We move with speed and do not restrict ourselves to projects with guaranteed success from the start, embracing failure as part of innovation

We harness open-mindedness, humility and creativity in tackling common problems, taking each day as an opportunity to learn and grow

We take a multidisciplinary and multisectoral lens to tackle technologically and politically complex challenges

4 Driving innovation to protect the world from health threats

In today's interconnected world, health threats spread faster than ever. A new virus can cross continents in hours. An outbreak in one country can escalate into a global crisis in days. In this landscape of interconnected risks, we must constantly innovate to stay ahead.

The global COVID-19 pandemic exposed significant weaknesses in our ability to predict, detect, assess and respond to worldwide outbreaks. However, it also spurred innovation, leading to new tools, technologies and partnerships aimed at detecting and preventing future pandemic threats. The global response to the COVID-19 pandemic showed how important innovations in data and laboratory science are for detecting pandemic threats.

The Hub was created to drive the ongoing translation of public health surveillance innovations into practice, promote their global scale-up, and strengthen capabilities in an equitable way.

As an integral part of WHO's Health Emergencies Programme (WHE), the Hub is leveraging innovation and collaboration to support countries in detecting and responding to health threats and empowering them to stay one step ahead in a rapidly evolving world.

Collaborative Surveillance as an innovative way to advance the global health architecture for emergency preparedness and response

Collaborative Surveillance is a critical part of the Hub's work and is embedded as an integral part of WHO's strategic framework for strengthening the global architecture for Health Emergency Prevention, Preparedness, Response and Resilience (HEPR).

Health emergencies require answers to a complex set of questions that traditional surveillance systems alone cannot fully answer but rather require the agile triangulation of many surveillance inputs (Fig. 3).

Fig. 3. **Health emergencies demand responses to a complex set of questions which traditional surveillance systems cannot fully answer**

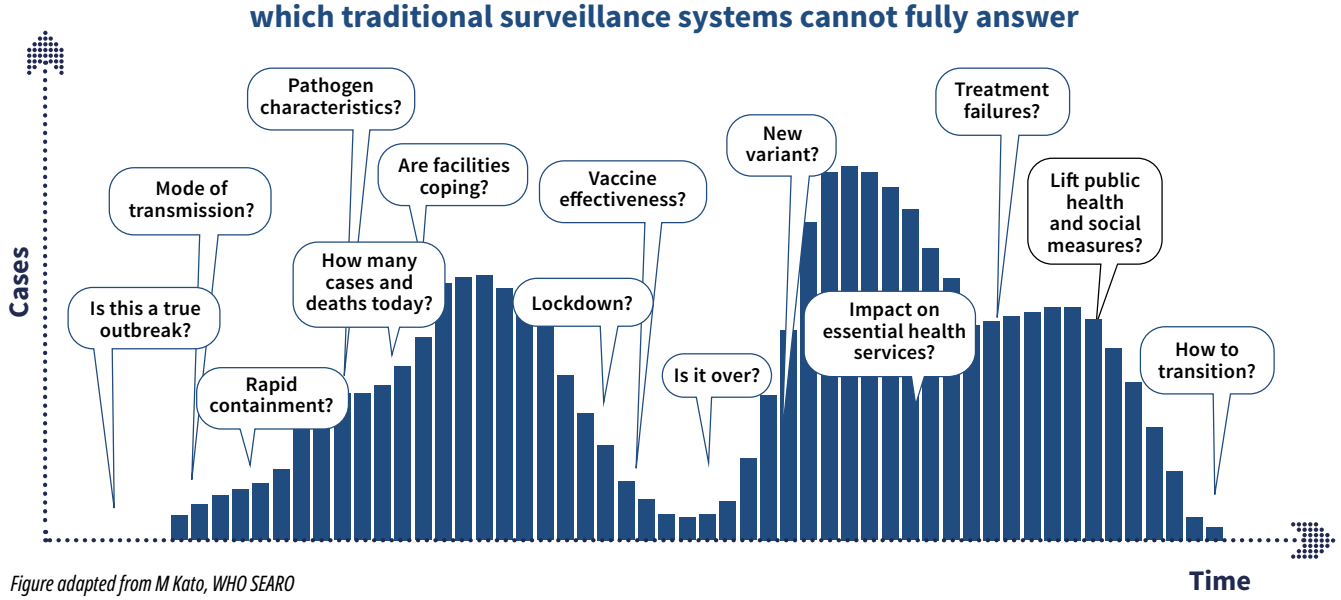


Figure adapted from M Kato, WHO SEARO

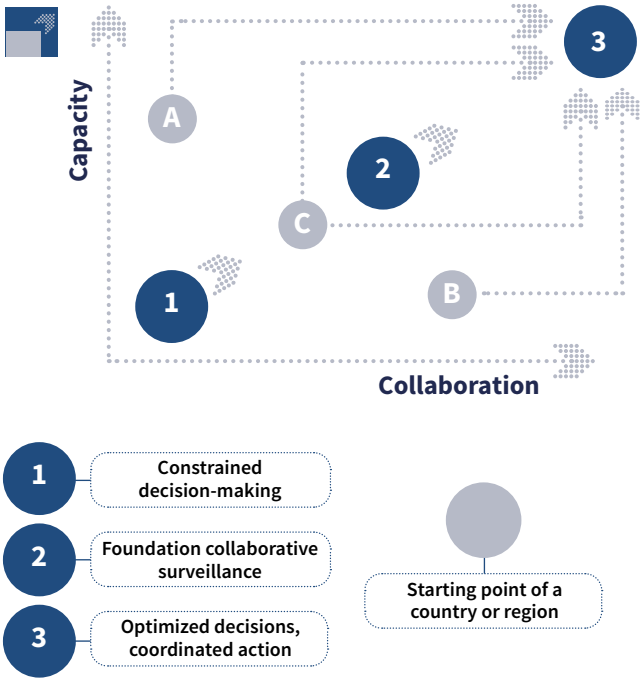
Fig. 4. **Convergence of objectives across four key dimensions of collaboration to strengthen decision-making**

Having launched the concept in 2023, based on a common consensus that strengthened surveillance is essential to deal with future health emergencies, we are now engaged in a more strategic programme of work together with WHO's regional offices and implementing partners (Fig. 4). The objective is to support Member States to apply the concept in their own national planning.

We have provided technical and financial support to regional offices, including dedicated staffing and activity funds, with selected examples included in this report. We have also convened national leaders, partners and donors for a Collaborative Surveillance Policy-Makers Forum; helped pilot the Mosaic Framework in eight countries or subregions; supported Collaborative Surveillance implementation in four African countries, along with Resolve to Save Lives; supported Pandemic Fund proposals and analysed country demands for targeted country support activities; developed a costing tool for countries to build national investment plans for emergency preparedness and response; and undertaken various analyses to better describe the international disease surveillance landscape, laying a foundation for further extension of our engagements in 2025 and beyond.

The principles of Collaborative Surveillance have now been adopted around the world by international partners and philanthropies, including the Gates Foundation, the Rockefeller Foundation, the Coalition for Epidemic Preparedness Innovations (CEPI), the Global Fund to Fight AIDS, Tuberculosis and Malaria and global networks like the International Association of National Public Health Institutes (IANPHI).

Fig. 5. **The differing starting points and paths towards increasing capacity and strengthening collaboration**



Collaborative Surveillance Policy-Makers Forum

The Collaborative Surveillance Policy-Makers Forum, which was held on 25 May 2024 on the sidelines of the Seventy-seventh World Health Assembly in Geneva, Switzerland, was an opportunity for us to make the case for this innovative approach to the world. It brought together surveillance experts, NPHA leaders, donors and policy-makers to accelerate the global implementation of Collaborative Surveillance.

The discussions emphasized the need to collaborate and invest in stronger surveillance systems at regional, national and community levels. While the detection, verification and response to health emergencies are local, they need to be enabled by a strong global architecture. We reiterated WHO's commitment to supporting national surveillance systems and decision-making by building capacities, empowering NPHAs and promoting sustainable financing to create an enabling environment for Collaborative Surveillance.

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Panel discussion at the Collaborative Surveillance Policy-Makers Forum

Watch the Policy-Makers Forum here

Regional Impact – European Region

In 2024, the WHO Regional Office for Europe developed a workplan and appointed its first focal point for Collaborative Surveillance. The workplan will support the priority surveillance objectives identified in the Preparedness 2.0 strategy and action plan for health emergency preparedness, response and resilience, which was unanimously adopted during the 74th Session of the WHO Regional Committee for Europe 2024.

Collaborative Surveillance is also a priority initiative of the Pan-European Network for Disease Control (NDC), with mainly experts from NPHAs working together to document institutional experiences and to develop a flexible business case for increased investment in Collaborative Surveillance at national level. A staff member from the NDC secretariat is currently working in the Hub, and NDC also supports the Regional WHO Collaborative Surveillance workplan and outputs for 2024–2025, demonstrating the value of partnerships in tackling global health challenges.

© WHO / Halldorsson

Launch of the Pan-European Network for Disease Control, in London, United Kingdom, on 22 April 2024

Regional Impact – South-East Asia Region

In the South-East Asia Region, countries endorsed the Asia Pacific Health Security Action Framework (APHSAF), which prioritizes a multi-source collaborative surveillance (MSCS) approach in which data and insights are gathered and synthesized from diverse sources across human, animal and environmental health. These include vaccine coverage, people movement, border crossings, transportation, economic data and social listening. Multi-source surveillance takes a whole-of-society approach, leveraging the strengths of multiple sectors, surveillance sources and methods, to inform comprehensive decision-making and response. It is aligned with the multidisciplinary, multisectoral and coordinating approach of Collaborative Surveillance.

The WHO Regional Office for South-East Asia has developed a manual that is fully aligned with the global Collaborative Surveillance initiative, and that each country can use to transform its surveillance system to share information and bring stakeholders together.

Countries determine their own focus for the implementation of MSCS. Indonesia chose dengue, and Nepal chose water- and food-borne diseases. Early results show that stakeholders are willing to share information when they understand the objectives and roles of other stakeholders and how each contributes to the system. The next step is to establish these structures and ensure that they are institutionalized for a seamless flow of information and more effective decision-making during public health emergencies.

Regional Impact – Region of the Americas

In October 2024, the PAHO Strategy on Epidemic Intelligence for Strengthening Early Warning of Health Emergencies 2024–2029 was approved by the Pan-American Health Organization (PAHO) Executive Committee. PAHO is the first WHO Region to establish a formal regional framework to support Member States in advancing epidemic intelligence in alignment with both regional and global mandates. The strategy outlines four areas of action for epidemic intelligence: enhancing coordination and leadership; building technical capacity; improving integration and interoperability of systems and tools; and fostering collaboration for strengthened information sharing and rapid verification.

Together with the World Bank, PAHO launched the Pandemic Response Optimization Through Engaged Communities and Territories (PROTECT) project, which is supported by the Pandemic Fund, for seven countries in South America. Aimed at improving early detection, characterization and response to emerging zoonotic diseases that can trigger a pandemic, PROTECT is a crucial step towards preparedness for health threats in the Amazon Basin. More than 2.4 million people, including indigenous, non-indigenous and riverine communities, as well as migrants and displaced persons, will benefit from strengthening early warning surveillance, modernizing laboratories and promoting regional coordination for a more effective pandemic response.

Community-based surveillance in the Americas achieved a milestone in 2024, with core functionalities drafted that are aligned with strategic priorities for epidemic intelligence at local, national, regional and global levels. PAHO developed a proposed regional guide for the application of community-based surveillance, focusing on connecting such efforts with early warning systems and adopting an all-hazards approach. Further, enhanced knowledge management has been promoted and strengthened through exchange missions, with Member States that are newly adopting community-based surveillance learning from others with greater expertise in this area. These exchanges will further enable the adoption of community-based surveillance in the region.

5 Fostering collaborations

> Nearly 3 years on, the WHO Hub has significantly enhanced international cooperation and effective monitoring of epidemic and pandemic threats.
>
> **Lawrence Gostin**
> Faculty Director of the O'Neill Institute for National and Global Health Law, Georgetown Law

©WHO / Christopher Black

Source: Samarasekera U. Understanding pandemic risks: the WHO Pandemic Hub. Lancet. 2024; 404:420–1

Leveraging WHO's convening power, the WHO Hub brings partners together to foster collaboration, encourage the sharing of data and analysis and support the collective adoption of innovative approaches. In 2024, the Hub worked closely with over 150 Member States and 210 partner organizations and networks, solidifying its role as a global hub for collective action.

A core principle of the Hub's mission has been to create a physical space dedicated to collaboration and exchange. In just three years, we have established a fully operational campus for global health activities in Berlin. The Hub has also become an attractive location for conferences, debate and exchanges: in 2024 alone, we hosted approximately 2500 partners, Member States and other guests at around 60 onsite workshops and meetings.

As of July 2024, we have grown our workforce to more than 100 people, with a composition that reflects our collaborative ethos: over 40 WHO staff are joined by secondments and exchange posts from partner organizations from different sectors and Member States – an innovative approach within the United Nations (UN) system that fosters cooperation and the exchange of expertise.

World Health Summit

At the World Health Summit in Berlin in October 2024, the WHO Hub hosted two important sessions, emphasizing the critical role of trust in emergency preparedness and response.

A plenary discussion emphasized the role of regional health organizations in strengthening collaboration during crises, with Professor Dr Karl Lauterbach, Federal Minister of Health, highlighting Germany's dedication to trust-building for future health emergencies. An interactive session addressed rebuilding trust post-COVID-19, showcasing examples such as the impact of community organizations in Sierra Leone in bridging gaps with vulnerable populations. These discussions reinforced the importance of trust as the foundation of resilient health systems and effective emergency response.

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The Hub's plenary discussion at the World Health Summit

© WHO / Marcio Schimming

German Federal Minister of Health Karl Lauterbach speaks during the plenary session

© WHO / Marcio Schimming

The Health Lab session explored strategies for rebuilding trust after COVID-19

Watch the panel discussion here

Watch the Global Health Lab session here

© WHO / Guerchom Ndebo

A health worker talks to a patient in front of the Nyiragongo General Referral Hospital in Goma, Democratic Republic of the Congo, where mpox patients are being treated

The WHO Hub's contribution to the mpox response

In August 2024, WHO Director-General Tedros Adhanom Ghebreyesus declared the outbreak of mpox in the Democratic Republic of the Congo and a growing number of countries in Africa as a public health emergency of international concern (PHEIC).

For the first time, we used collaborative approaches for modelling the spread of mpox clade 1b, that were presented to the International Health Regulations (IHR) Emergency Committee of independent experts to inform their decision on whether the outbreak was to be considered a PHEIC.

The Hub also brought together for the first time the community of pathogen genomics experts to rapidly establish technical guidance on wastewater and environmental surveillance, allowing these data to be interpreted in conjunction with clinical data.

Innovation Forum

In 2022, the Hub established the Pandemic and Epidemic Intelligence Innovation Forum, which hosts regular meetings with international experts and thought leaders in the field of public health intelligence for outbreaks.

The 2024 meetings explored varied topics. The first session was co-hosted with data.org and explored intersections between efforts to build data ecosystems in climate and health, and discussed the need for greater integration between these two fields that leads to better decision-making.

The second session of the year focused on digital twins and explored potential applications of the technology underlying them to public health surveillance activities and pandemic and epidemic intelligence.

Towards the end of the year, and together with the Global Partnership for Sustainable Development Data, the Hub hosted a session focused on the integration of citizen data in infectious disease prevention and response. Participants were consulted on the opportunities, challenges and capacity-building needs around this topic.

In total, more than 205 participants from over 44 organizations attended the Innovation Forum in 2024.

Sign up for the Innovation Forum here

Regional Impact – African Region

The Government of Senegal and WHO, in collaboration with the WHO Regional Office for Africa, the Hub and the Africa Centres for Disease Control and Prevention, has inaugurated a regional health emergency hub in Dakar to strengthen the African region's capacity to respond swiftly to health crises and save lives.

The Dakar hub specializes in supply chain management, data analysis and information management. It is part of a plan to establish decentralized emergency response systems, with a specialized focus for each one, and pre-positioning of emergency health supplies. WHO is setting up two additional emergency hubs in the region – a Kenya hub was launched in Nairobi in 2022, and one is planned for Pretoria, South Africa.

Africa faces the highest number of health emergencies globally, and is home to millions of people who need urgent humanitarian aid.

© WHO

Inauguration of the regional health emergency Hub in Dakar, Senegal

The hubs aim to cut response times from 45 days to three, enabling faster and more effective emergency responses to crises. They also serve as centres of excellence, training more than 3000 African experts in key technical skills.

6 The Hub within Germany's global health ecosystem

© BMG / Jan Pauls

I am gratified that the WHO Hub for Pandemic and Epidemic Intelligence, supported by Germany and based in Berlin, is at the heart of our efforts to support the best science upon which to base sound, equitable and effective policies that will protect people around the globe.

Professor Dr Karl Lauterbach
Federal Minister of Health, Germany, at the World Health Summit 2024

© BMG / Schinkel

Since its inauguration in September 2021, the WHO Hub has seen remarkable growth, and I am proud of the strong cooperation we have built between the Hub, the Robert Koch Institute and the Charité, as well as many other partners beyond Berlin and Germany. This is not just a Hub for Germany, it's an international Hub, a WHO Hub for the world, and that's what truly matters.

Dr Thomas Steffen
State Secretary at the Federal Ministry of Health, Germany

Germany is a leader in global health. It has been the driving force behind many innovative initiatives: during Germany's 2017 presidency of the G20, a global health working group was created, the first-ever meeting of health ministers was hosted, and mechanisms of interaction were established between heads of state and WHO's Director-General. These actions had the effect of moving health high on the global political agenda. Global Health Hub Germany, a multistakeholder forum, was launched in early 2019 and a Global Health Strategy was adopted in 2020. Germany's engagement in global health has contributed to the decisions by Wellcome Trust and the Gates Foundation to set up offices in Berlin.

Berlin is a natural base for the Hub, with a vibrant innovation landscape and existing strong global health actors in research and public health. Since its inception, the Hub has benefited from a close collaboration with its two foundational partners, the Center for Global Health at the Charité – Universitätsmedizin Berlin and the Robert Koch Institute (RKI). As highlighted above, the Hub also closely works with the World Health Summit, where international experts in global health are brought together every year.

Germany's involvement in the Hub has created a multiplier effect that mobilizes financial resources and establishes a reputation for thought leadership. The Hub's work, in turn, contributes to the policy priorities of the country, with the Hub supporting Germany to influence the policies and practices of global public health.

Finally, Berlin's growing reputation as an important nexus for leaders in global health security is being driven by the Hub's projects and our extensive partnerships with academic institutions, national public health agencies and other stakeholders.

Collaboration with our foundational partners

© Sabine Gudath

We at the Charité Center for Global Health are proud to have been a foundational partner of the WHO Hub for Pandemic and Epidemic Intelligence from the very beginning. Over the past years, our partnership has deepened and broadened, advancing our shared goal of strengthening global health surveillance and global pandemic preparedness. By combining Charité's expertise in global health research and practice with the Hub's collaborative and innovation-led approach, we are supporting countries to identify critical health threats faster, inform public health more effectively, and drive innovation in epidemic and pandemic prevention and detection.

Professor Dr Beate Kampmannn
Scientific Director,
Charité Center for Global Health

WHO Hub for Pandemic and Epidemic Intelligence Speaker Series

Co-hosted by the Hub and the Charité Center for Global Health, our Speaker Series is a regular event, held in-person and online through WHO's YouTube Channel, that convenes and fosters global health communities in Berlin, across Germany and around the world. The theme of the 2024 season was "Protecting the world: moving rapidly together", which showcased faster and more effective collaborative responses to public health emergencies.

Featured topics included leveraging diversity for better decision-making, harnessing contextual insights for better public health intelligence, and the role of research in pandemic and epidemic Intelligence.

© WHO / Marius Bauer / Marcio Schimming

Joint projects with the Charité Center for Global Health

Subscribe to the WHO Hub newsletter to get updated about the next Speaker Series

With Berlin becoming more and more of a centre in global health, it's wonderful to have this whole Hub and source of expertise of WHO here – with open doors for partners from all around the world. The pandemic has shown very clearly the important role that national public health agencies play in terms of preparing and responding to health emergencies. Our partnership with the Hub aims to strengthen these structures. Everything that has happened over the last three years has exceeded my expectations. It really has been quite a beautiful friendship.

Professor Dr Johanna Hanefeld
Vice-President (acting), Robert Koch Institute, Berlin, Germany

© Robert Koch Institute

Joint projects with the Robert Koch Institute (RKI), Germany's national public health institute

Innovating for public health intelligence	**Together with RKI and WHO's Regional Office for the Eastern Mediterranean, we have strengthened public health intelligence (PHI) capacity through innovative approaches and targeted training, including through piloting programmes in Egypt and Jordan. Professionals in these countries are now better equipped to detect health threats earlier, respond swiftly and minimize negative impact on their populations.**
Collaboration on antimicrobial resistance and health care-associated infections	**Antimicrobial resistance (AMR) and health care-associated infections (HAIs) are some of the biggest global public health challenges of our time. Our joint project aims to improve surveillance standards and tools for AMR and HAIs, particularly in low-resource settings, addressing the gaps that exist in data sharing and laboratory capacities.**
A partnership to strengthen integrated genomic surveillance through greater capacities in national public health institutes	**This project aims to improve public health decision-making by enhancing genomic surveillance capacity in five African countries. It addresses gaps, needs and priorities in genomic sequencing, and ensures that genetic data on pathogens are accessible to public health professionals to evaluate their possible impact on public health.**
GOARN Berlin Fellowship Programme	**The GOARN Berlin Fellowship Programme, a collaboration between the WHO Hub, the Global Outbreak Alert and Response Network (GOARN) and the Robert Koch Institute, is designed to strengthen the institutional commitment, engagement and capacity of GOARN partners to improve decision-making and interventions for containing epidemics and pandemics. During the six-month fellowship in Berlin, fellows work on their proposed projects, benefiting from the mentorship and broad expertise of all three partner organizations.**

Voices from our GOARN fellows

My fellowship project aims to enhance epidemic intelligence activities in Lebanon for timely detection of public health threats and rapid response. It focuses on building the capacities of surveillance teams and enhancing sources of event-based surveillance.
My time at the Hub has been an enriching and exceptional experience that has demonstrated how, in a world of numerous emerging health threats, collaboration and innovation are key pillars of better preparedness and response.

Lina Chaito
Epidemiologist, Ministry of Public Health, Lebanon

© Lina Chaito

During my time at the Hub and the Robert Koch Institute, I had the opportunity to contribute to the Cholera Epidemic Intelligence project. One of the key learnings from this experience was the importance of Collaborative Surveillance in strengthening our ability to detect and respond to cholera outbreaks in real time. By integrating event-based surveillance systems, we are able to monitor non-traditional data sources, such as news reports and social media, alongside official health data, to identify potential outbreaks more rapidly.

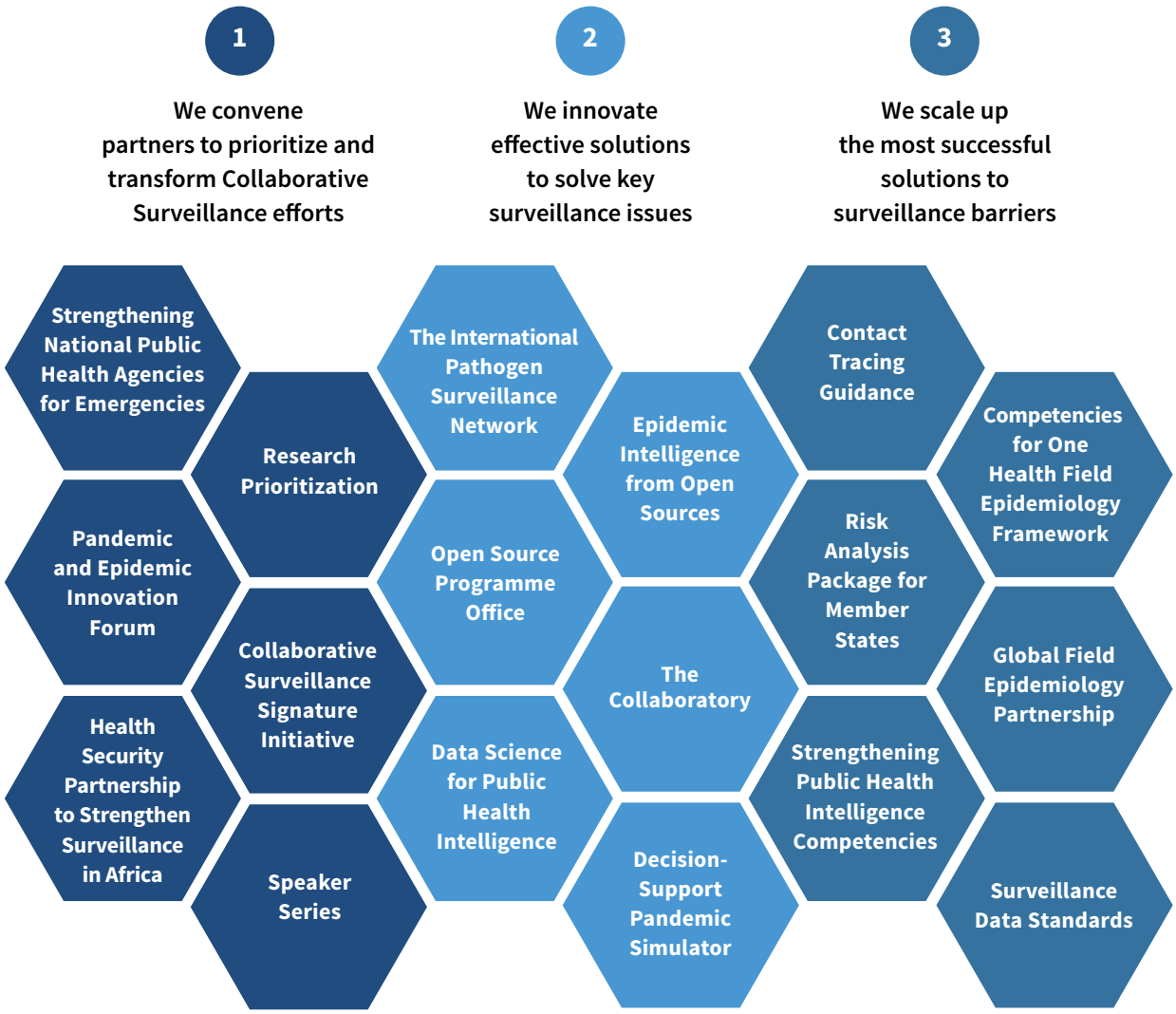
Wellington Maruma
Epidemiologist, National Institute of Communicable Diseases, South Africa

© WHO / Marius Bauer

7 Delivering against the Hub's strategy

In 2024, the WHO Hub made remarkable progress towards our vision of Collaborative Surveillance and a world where people are safer from health crises. The following section provides an overview of our main achievements against our strategic plan.

Fig. 6. **Snapshot of portfolio by strategic objectives**



Strategic objective 1:

We convene partners to prioritize and transform Collaborative Surveillance efforts

Health Security Partnership to Strengthen Disease Surveillance in Africa

HSPA
Health Security Partnership In Africa

A safer future for Africa and the world, free from all forms of biological threats, is the ultimate goal of the Health Security Partnership to Strengthen Disease Surveillance in Africa (HSPA). This project aims to reduce biological threats – whether natural, accidental or deliberate – by strengthening disease surveillance and epidemic intelligence.

The first phase, which ended in September 2024, was led by six countries: Gambia, Mali, Morocco, Namibia, South Africa and Tunisia. The project used a unique delivery model involving the WHO Hub, WHO Regional Offices for the African and Eastern Mediterranean Regions, Africa CDC and RKI to integrate biosecurity and public health programmes. The project is funded by the Government of Canada, building on the investments in the Signature Initiative to Mitigate Biological Threats in Africa (SIMBA). During the first phase, the project achieved several milestones. Comprehensive biosecurity assessments were conducted in all six countries. A high-consequence agents and toxins framework was developed and piloted in Namibia. The Integrated Disease Surveillance and Response (IDSR) strategy was expanded. Event-based surveillance call centres were established. Country-specific genomic surveillance capacity assessments and roadmaps were completed. Comprehensive epidemic intelligence assessments were carried out in Morocco, Namibia, South Africa and Tunisia.

© Medicines Patent Pool / Rodger Bosch

Laboratory technicians at work in Cape Town, South Africa

Building on the successful partnerships established in the initial phase, a second phase will be delivered from 2025 with financial support from the Government of Canada and other donors.

> The Health Security Partnership to Strengthen Disease Surveillance in Africa is an initiative that we are exceptionally proud of. Here we have a true community where the Global Partnership and African health colleagues have come together and have built a very successful model for collaboration.
>
> **Trevor Smith**
> Senior Program Manager for Biological and Chemical Security Weapons Threat Reduction Program at Global Affairs Canada

© Trevor Smith

Strengthening National Public Health Agencies for Emergencies

NPHA Strengthening National Public Health Agencies for Emergencies

National public health agencies play a key role in preparing for and responding to public health emergencies. NPHAs also play a crucial role in international collaboration, to address global health threats. Their comprehensive approach helps to protect public health and ensure a structured response to emergencies.

In the wake of the COVID-19 pandemic, strengthening the capacity of NPHAs to better manage health emergencies has become a key priority of WHE. The Hub plays a central role in supporting these WHE efforts, working closely with regional offices and other partners.

In 2024, the NPHA initiative worked with over 105 Member States to help them build stronger and more effective national health agencies (Fig. 7).

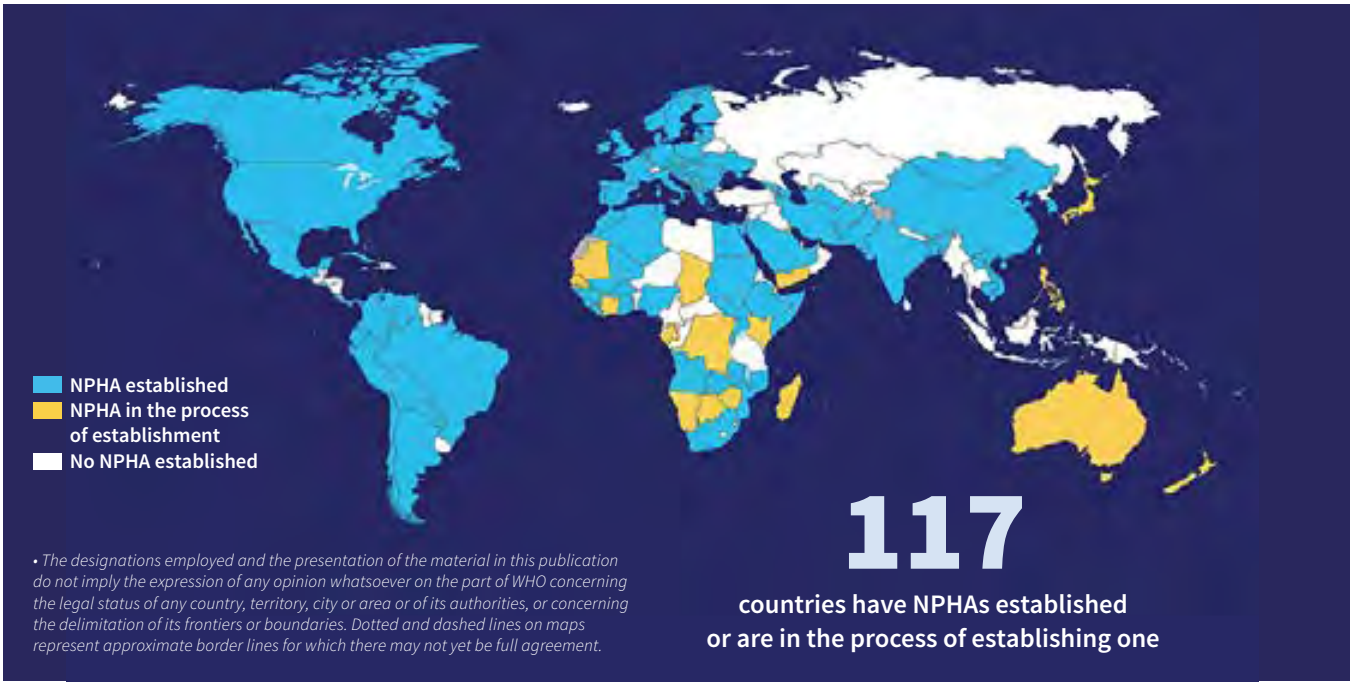
While building technical capacity is critical, it is equally important to strengthen the systems that support the work of these agencies – such as laws, regulations, funding, governance and workforce development.

In 2024, we supported regions and Member States in establishing new NPHAs and restructuring their existing institutions. We developed a framework that outlines the recommended capabilities that NPHAs worldwide should implement to improve preparedness and response to public health emergencies. We also initiated a project to document NPHA governance structures to support emergency preparedness and response.

In addition, we scaled up a peer learning exchange between NPHAs to discuss topical issues such as partnerships, different mandates and roles beyond health emergencies.

With this initiative, the WHO Hub aims to create a safer future by fostering interconnected NPHAs that enhance local, regional and global health security.

Fig. 7. **Evolution of Global National Public Health Agencies: Year 2024**



Regional Impact – Eastern Mediterranean Region

In 2024, the WHO Hub worked closely with the WHO Regional Office for the Eastern Mediterranean to support NPHAs in the Region in strengthening their capacities for health emergencies.

Two countries, Kuwait and Yemen, hosted workshops to plan or explore the establishment of their NPHAs. Groups of experts, including from the Hub, helped identify the needs, gaps and best practices to guide the establishment of the Kuwait Center for Disease Control. In Yemen, an action plan and discussion paper were developed for the proposed Yemen National Public Health Agency.

In June 2024, a workshop for the Eastern Mediterranean Region in Cairo, Egypt, brought together NPHAs to discuss strategies for improving emergency preparedness and response. Participants emphasized the need to clarify roles and responsibilities, particularly in relation to ministries of health, to ensure better coordination. They also highlighted the importance of building strong partnerships, creating effective organizational structures, and developing politically sensitive and context-specific guidelines. This workshop also helped finalize the draft regional Engagement Framework for NPHAs in emergency preparedness and response.

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Workshop on engaging NPHAs in emergency preparedness and response in WHO Eastern Mediterranean Region, Cairo, Egypt

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NPHA governance model consultation, Singapore, May 2024

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Consultation with NPHAs on the sidelines of the IANPHI 2024 Annual Meeting, Kigali, Rwanda

Research prioritization for pandemic and epidemic intelligence

In 2024, the Hub led a consultation process to identify the key research areas that generate high-quality evidence and methods to improve day-to-day surveillance practices and inform decision-making in health emergencies.

Together with the Charité Center for Global Health, the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R), and WHO's Science Division, with financial support from Wellcome Trust, this process engaged researchers and public health practitioners worldwide to identify key knowledge gaps and research problem statements. The result was a consensus on 23 research priorities grouped under the three aims of better data, better analytics and better decisions.

Download the technical brief on the Research prioritization for pandemic and epidemic intelligence

Strategic objective 2:

We innovate effective solutions to solve key surveillance challenges

The International Pathogen Surveillance Network

The International Pathogen Surveillance Network (IPSN) is a global network of pathogen genomic actors, coordinated by the WHO Hub, that accelerates pathogen genomic surveillance and improves public health decision-making.

Pathogen genomic surveillance is the monitoring and analysis of the genetic material of pathogens, including viruses, bacteria, fungi and parasites. It involves the collection, sequencing and analysis of the genomic information from pathogens to understand their genetic makeup, evolution and how they spread.

Pathogen genomic surveillance was used widely during the COVID-19 pandemic to track and predict the evolution of the virus itself, and can be used across diseases to inform public health outcomes and prepare for future pandemics and epidemics.

In 2024, the IPSN has partnered with 235 organizations across 85 countries (Fig. 8). The initiative is building relationships and delivering critical tools to accelerate pathogen genomic data sharing, build country-level capacity in identifying multi-pathogen genomics applications and define investment priorities. The IPSN hosts a Community of Practice (CoP) on Genomics Data and a CoP on Emergency Response, focusing on use of genomics and wastewater data in the mpox response. It hosts a Country Scale-Up Accelerator to work particularly with low- and middle-income countries to jointly deliver on pathogen genomics priorities, and is establishing a new CoP on environmental and wastewater surveillance.

Fig. 8. **IPSN engagement with partner organizations**

The IPSN Global Partners Forum

The second IPSN Global Partners Forum took place on 21 and 22 November 2024 in Bangkok, Thailand, and was co-hosted by the WHO Regional Office for South-East Asia, the WHO Regional Office for the Western Pacific and the Centre for Pathogen Genomics at the Doherty Institute, University of Melbourne, Australia.

A total of 158 participants across 80 organizations attended the forum, of which 50% were representatives coming from low- and middle-income countries. The event provided a platform for public health practitioners, academics, policy-makers and financial institutions to discuss the biggest issues in pathogen genomics, build partnerships, introduce innovations and socialize new ideas.

Participants at the second IPSN Global Partners Forum

The IPSN Catalytic Grant Fund

The IPSN introduced a catalytic grant fund to help low- and middle-income countries enhance genomic surveillance of pathogens, pilot innovative approaches and produce global goods. This US$ 4 million fund – created by the Gates Foundation, the Rockefeller Foundation and the Wellcome Trust – is managed by the UN Foundation. In the first round, nearly 200 applications were received, with 10 selected for funding. The second round will occur in 2025, alongside a new fund for wastewater and environmental surveillance.

Full list of the first IPSN catalytic grantees:

- National Institute for Health Research (Angola) – "Metagenomic surveillance for epidemic prevention in the Democratic Republic of the Congo–Angola cross-border (FEEVIR Project)"
- Federal University of Rio de Janeiro (Brazil) - "Development of an offline-capable computational framework for decentralized real-time untargeted pathogen genomic surveillance"
- National Public Health Laboratory (Cameroon) – "Integrating surveillance of malaria parasites into the National Public Health Laboratory genomics platform in Cameroon"
- Evangelical University of Africa (Democratic Republic of the Congo) – "Generating genomic surveillance data of pathogens in the Democratic Republic of the Congo by extending the Mini-Lab with a Nanopore MinION sequencer"
- Noguchi Memorial Institute for Medical Research, University of Ghana (Ghana) – "Air Sampling Surveillance for Antimicrobial Resistance Monitoring and Pathogens of Public Health Interest"
- Ashoka University, International Foundation for Research and Education, Council of Scientific and Industrial Research (India) – "Quantitative mapping of environmental to clinical AMR via DNA barcoding"
- Pasteur Institute of Laos (Lao People's Democratic Republic) – "Environmental genomic surveillance of avian Influenza A viruses in high-risk live-bird markets in Laos: an innovative sequencing approach"
- American University of Beirut (Lebanon) – "Wastewater Genomic Surveillance of Underestimated Viral Diarrhoeal Diseases among Vulnerable and Refugee Populations in Lebanon"
- Rwanda Biomedical Centre (Rwanda) – "Establishing a Rwandan One Health genomic surveillance network for endemic and emerging viral haemorrhagic fevers"
- Medical Research Institute Colombo (Sri Lanka) – "Piloting the application of pathogen genomics for public health and surveillance of foodborne disease"

© Dhamari Naidoo

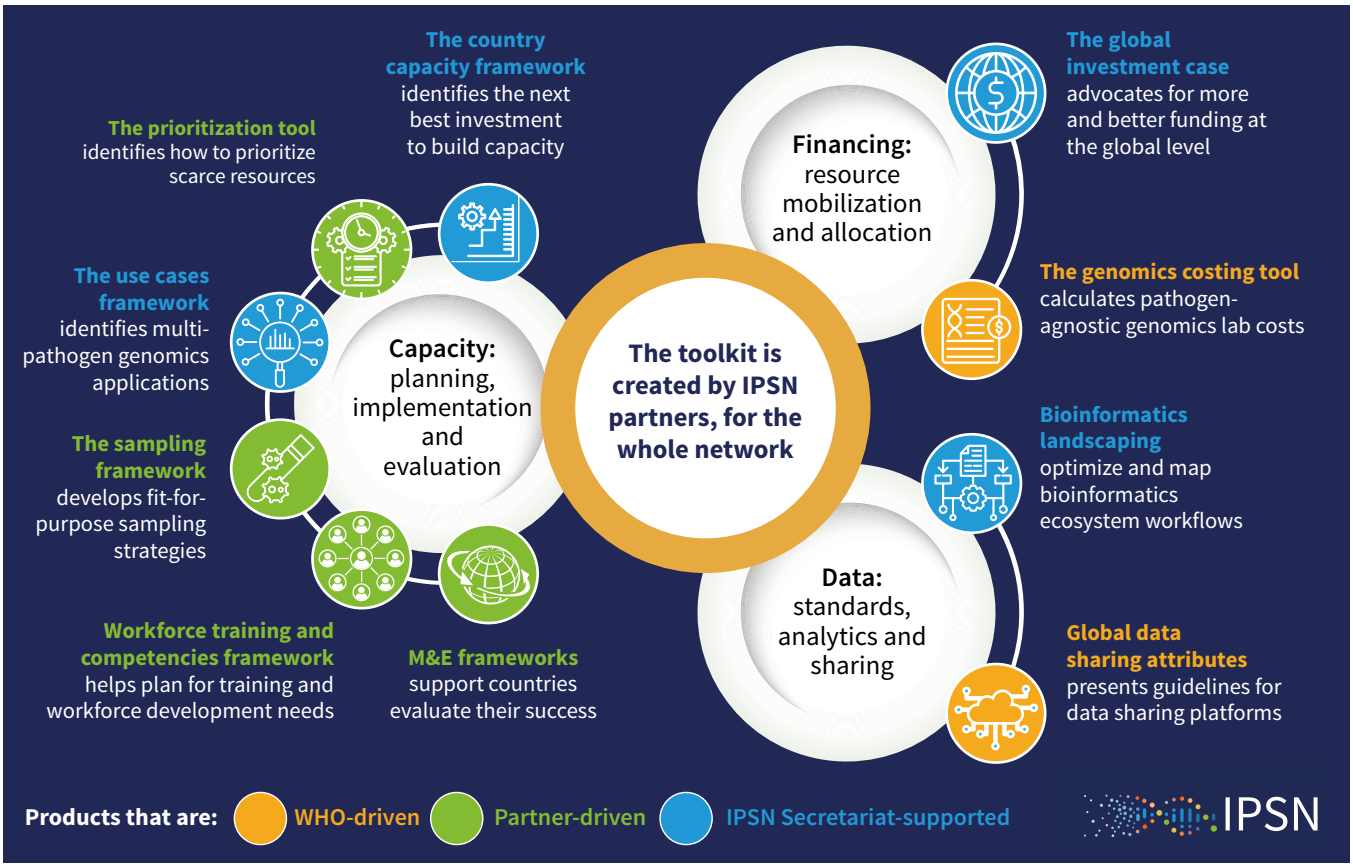
I am most excited about the IPSN communities of practice, this is what I will be looking at implementing to help countries improve genomics surveillance.

Dhamari Naidoo
WHO Regional Office for South-East Asia

The IPSN Toolkit

In 2024, the IPSN developed a toolkit (Fig. 9) – a comprehensive set of resources to support countries and organizations to strengthen or build their capacities in genomic surveillance of pathogens. It includes capacity-building tools to help countries enhance their surveillance capabilities, data standards and protocols to ensure efficient and effective data sharing, as well as prioritization and costing tools.

Fig. 9. **IPSN toolkit**



Scan the QR code to visit the IPSN webpage

The Epidemic Intelligence from Open Sources Initiative

The Epidemic Intelligence from Open Sources (EIOS) initiative has evolved into the world's leading force in open-source intelligence for public health decision-making. Spearheaded by WHO and hosted at the WHO Hub in Berlin, EIOS is transforming how the world uses open-source intelligence to detect and assess health threats in near real-time.

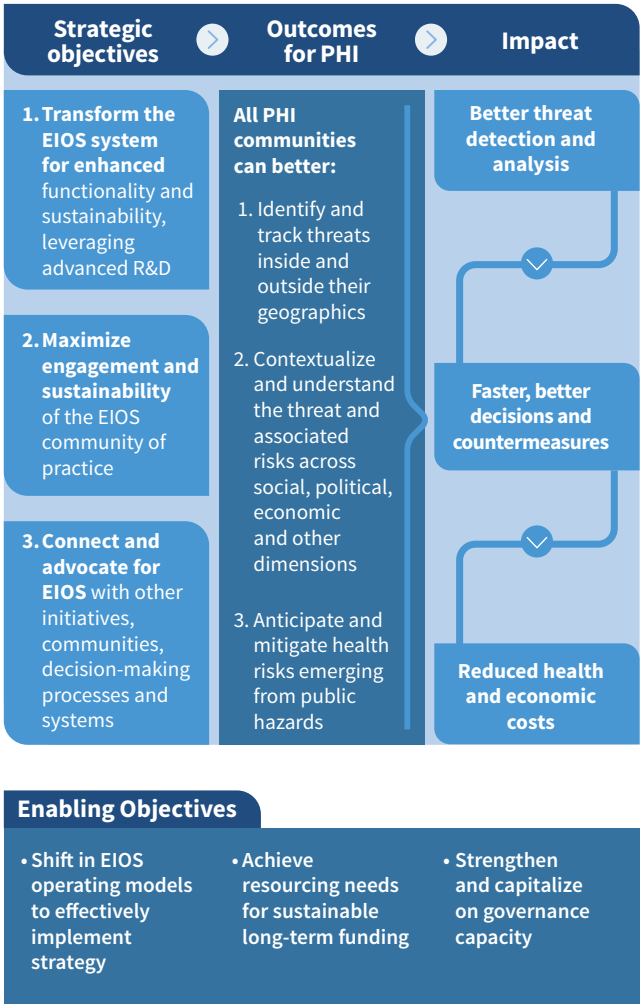
In 2024, EIOS achieved remarkable milestones, expanding its network to over 100 Member States and more than 25 regional and international organizations. Close to 900 experts were trained through over 40 workshops, equipping them with the latest tools to enhance global health intelligence from open sources. The initiative also reached a major technological breakthrough, with new partnerships put in place for the development and maintenance of a new version of the EIOS system, EIOS V2.0, set for release in 2025.

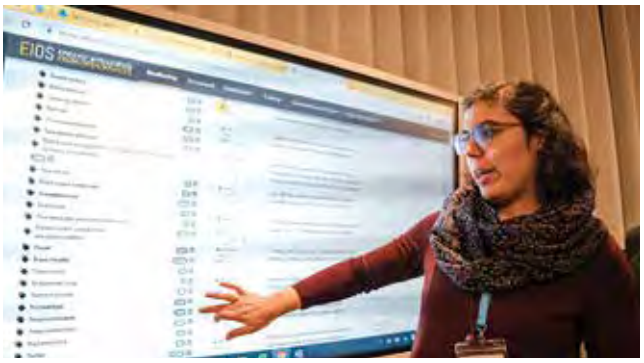
Also in 2024, the EIOS core team launched and began implementing its new three-year strategy, designed to ensure the initiative's sustainability, adaptability and long-term impact in an evolving global landscape (Fig.10). Rooted in stakeholder-driven insights, this strategy sets ambitious goals to:

- Enhance EIOS system architecture and AI integration for smarter, faster and more effective public health intelligence.
- Strengthen global community engagement, catalysing collaboration across Member States, organizations and experts.
- Streamline user onboarding and training to accelerate adoption of the EIOS system and empower a growing community of practice.
- Drive sustained adoption and implementation, embedding EIOS within national and regional health systems where appropriate.
- Ensure long-term resilience and impact through strategic resource mobilization and continuous evaluation.

The expansion of the EIOS community, ongoing cutting-edge system enhancements and global capacity-building efforts have significantly reinforced public health intelligence capabilities worldwide. As part of a broader ecosystem of collaborative surveillance and intelligence initiatives, EIOS serves as a key complementary tool, enhancing global efforts to detect, assess and respond to health threats. Moving into 2025 and beyond, EIOS remains committed to innovation and collaboration, working alongside national, regional and global partners to strengthen the collective intelligence needed to protect populations from emerging health threats. By aligning with the needs of public health intelligence experts worldwide, the new EIOS Strategy is laying the foundation for a stronger, more connected and future-ready intelligence ecosystem – ensuring that EIOS remains a key enabler of global health security for years to come. EIOS is not just an initiative – it's a global movement driving the future of public health intelligence.

Fig. 10. **EIOS Strategic Framework 2024 – 2026**





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A demonstration of the EIOS interface

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A Training of Trainers workshop on the EIOS system at the WHO Hub in Berlin

Unifying Global Efforts – EIOS Global Technical Meeting 2024: The Future of Public Health Intelligence

© WHO/Geraldine Hutt

Participants at the 2024 EIOS Global Technical Meeting

A key highlight of 2024 was the fifth EIOS Global Technical Meeting in Senegal, where nearly 200 participants from 70 countries came together to shape the future of public health intelligence. Co-hosted with the WHO Regional Office for Africa and the WHO Regional Emergency Hub in Dakar and supported by the European Commission's Health Emergency Preparedness and Response Authority (HERA), this pivotal gathering united a diverse global community of public health experts, collaborators and innovators to explore "The Future of Public Health Intelligence." Participants engaged in dynamic discussions on transforming the EIOS system, maximizing community engagement, fostering sustainable practices to enhance global health security, leveraging information beyond the human health domain and nurturing a competent public health intelligence workforce. The meeting underscored the critical importance of collaborative surveillance and the integration of advanced technologies, particularly artificial intelligence, to significantly augment activities for detecting and responding to health threats promptly. Existing networks were strengthened, and new alliances were forged, reinforcing our collective commitment to safeguarding global health. As Dr Philip Ngere of Kenya's Ministry of Health emphasized, "The meeting underscored the power of global collaboration – broadening perspectives, strengthening implementation and shaping best practices for the future."

Scan the QR code
to visit the EIOS webpage

The Collaboratory

The Collaboratory is a global, digital collaborative space where the communities of practice (CoPs), including epidemiologists, mathematical modellers, coders and academics can collectively solve complex problems, share knowledge and resources, and jointly evaluate and improve analytic resources.

The Collaboratory has three main objectives:

- To connect pandemic and epidemic intelligence communities and cultivate an environment and culture of collaboration.
- To support the co-creation, development and improvement of tools for transparent, reusable and comparable advanced analysis to increase quality and decrease the time needed between analysis and decision-making.
- To test, monitor and evaluate approaches and tools, and share best practices and lessons learned.

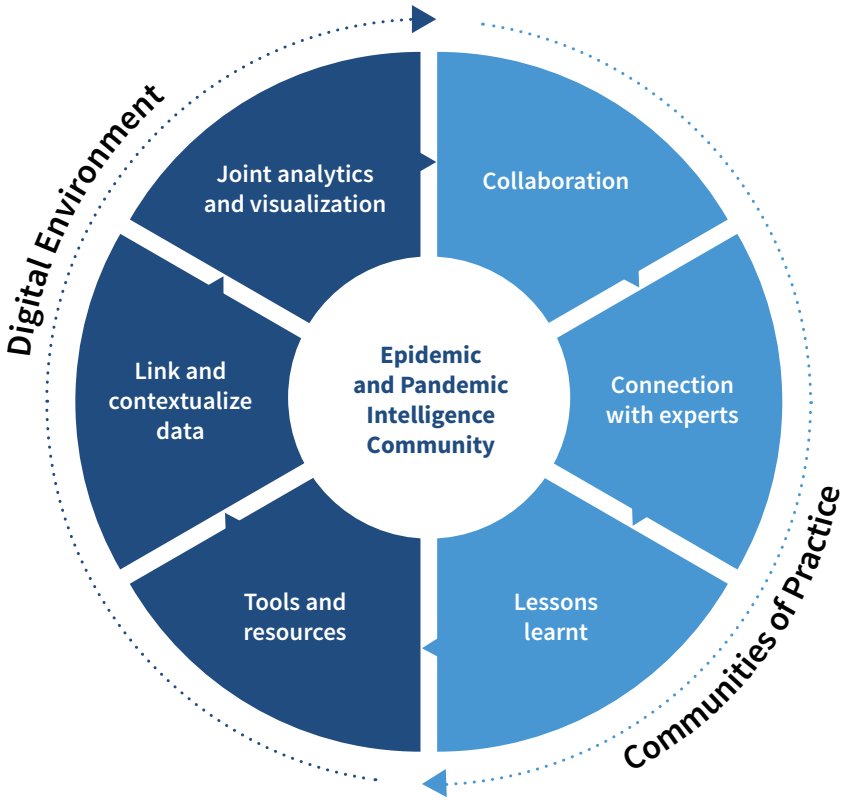
The Collaboratory, which is supported by the European Commission's Health Emergency Preparedness and Response Authority (HERA), was launched in March 2024.

The digital platform is now being used by more than 600 experts from more than 100 institutes, 50 countries and dozens of technical disciplines. By the end of 2024, there were already 17 CoPs sharing information and communicating results and co-developing models to support Member States, as well as creating new tools, collaborations and partnerships to help colleagues model faster and better (Fig. 11).

In addition to urgent needs, such as supporting the mpox response, these CoPs work on building tools and capacities for future responses, such as the work of the Epi-parameters Group on developing a global repository of parameters.

The Collaboratory convened its technical advisory group at the first annual Collaboratory Summit, and launched CoPs and areas of collaboration with more than 100 participants across five in-person workshops and dozens of webinars.

Fig. 11. **The Collaboratory**



Dengue Analytics Workshop

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A health worker checking on patients in a dengue ward at the Mugda Hospital in Dhaka, Bangladesh

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During a workshop at the WHO Hub in Berlin, modellers explored innovative solutions to support combatting dengue

The Dengue virus poses a significant public health threat in many parts of the world, particularly in tropical and subtropical regions. The increasing incidence and geographic spread of dengue necessitate robust predictive models to inform public health preparedness and response.

In November 2024, a Dengue Analytics workshop was held at the WHO Hub. Dengue modellers face several significant challenges, including the variability of data availability and quality, which can skew model outputs and reduce their reliability. Data sources often differ in resolution, timeliness and accuracy, particularly between countries where dengue burden is often highest. Moreover, the dynamic nature of dengue virus transmission, driven by environmental, ecological and social factors, adds complexity to modelling efforts. These challenges are compounded by the diversity in modelling approaches, and a lack of standardized methodologies and validation protocols. These limit their utility in real-world applications and interpretation for policy and response decision-making.

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Participants at the workshop created a Community of Practice to foster collaboration and drive innovation in advanced analytics

Regional Impact – Western Pacific Region

Staff from the WHO Regional Office for the Western Pacific joined the Collaboratory Summit held in Berlin in March 2024, with discussions focused on building a sustainable pandemic and epidemic intelligence community through such incentives as networking and co-authorship. Since the summit, the Western Pacific Regional Office has been identifying experts and modellers for various hazards in the Region and plans to engage these experts in global or regional CoPs.

Scan the QR code to visit the Collaboratory webpage

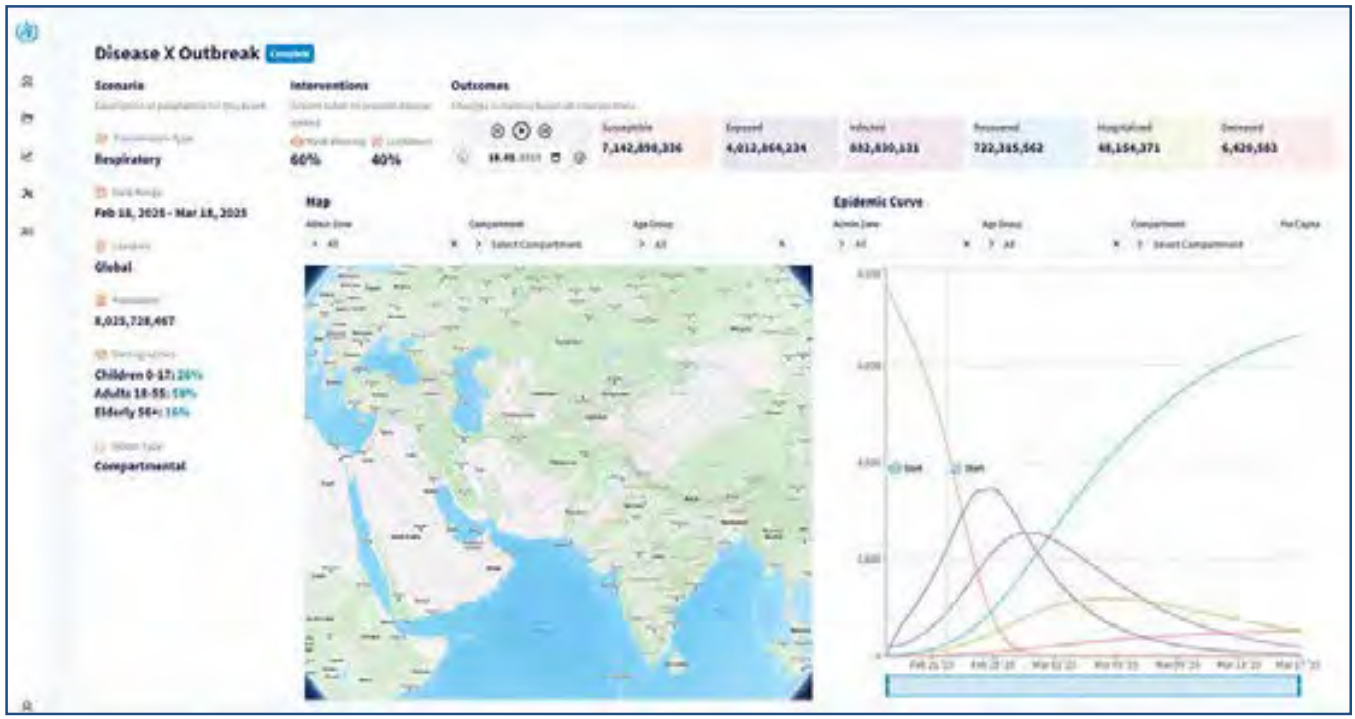
The Decision Support Simulator for Epidemics and Pandemics

When faced with a potential public health emergency, policy-makers need answers to questions such as: Should we consider a lockdown? Close schools? Introduce a mask mandate?

To address the lack of dynamic tools for informed decision-making in public health emergencies, the WHO Hub initiated the development of the Decision Support Pandemic Simulator at the end of 2023 (Fig. 12). This tool will provide decision-makers with information upon which to base their decisions. It will allow them to understand the current state of a public health emergency in the location of interest, and explore trade-offs between intervention and mitigation strategies for robust decision support. The ultimate aim is to bring together evidence and real-world data for informed policy-making.

With a prototype being finalized, this cutting-edge platform will model disease transmission, simulate the impact of interventions and facilitate the use of country-specific data to provide actionable insights to policy-makers.

Fig. 12. **A preview of the Decision Support Simulator interface**



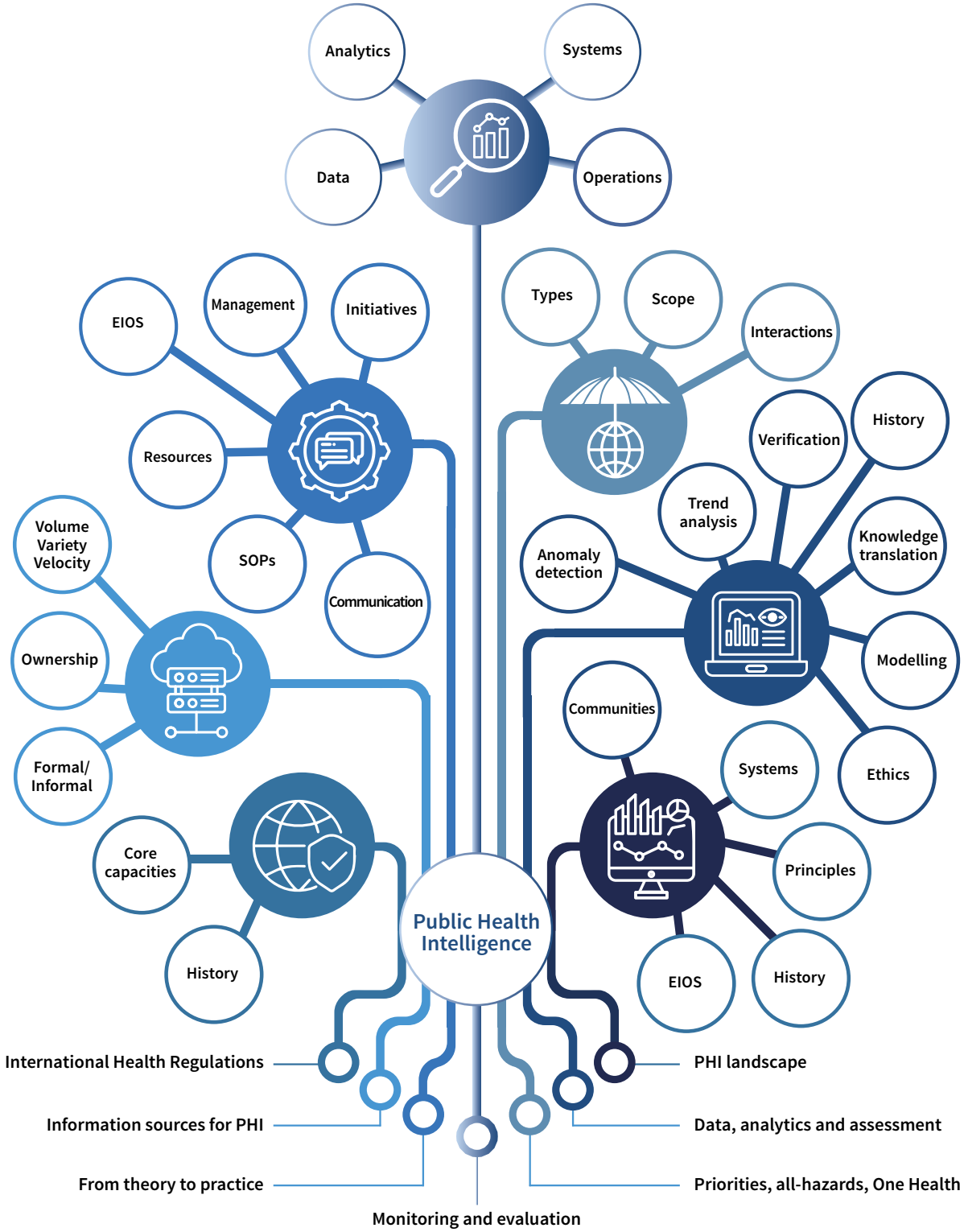
Scan the QR code to learn more about the Decision Support Simulator for Epidemics and Pandemics

Strategic objective 3:

We scale up the most successful solutions to surveillance barriers

Strengthening public health intelligence competencies

Fig. 13. **A selection of relevant PHI areas**



Emergencies such as mpox or the COVID-19 pandemic have highlighted the critical function of public health personnel who can identify, assess and communicate important new information to support prompt response. In order to fulfil this vital role, they must have the necessary skills to transform an abundance of raw data from a variety of sources into insights, information and knowledge to drive effective and reliable public health decisions and actions.

The WHO Hub launched this initiative to strengthen public health intelligence (PHI) capacity in Member States. It does this by reviewing existing training programmes and materials, defining learner groups and developing a competency framework. Based on these findings, a curriculum has been developed, consisting of a series of training courses that allow learners to develop the competencies required to undertake PHI functions. Course 1 of the curriculum (Foundations of PHI) was piloted in Jordan and Egypt, and during a Training of Trainers in Cairo, 13 experts from six different organizations or teams have been trained in teaching this course.

Our efforts were bolstered by active engagement with key stakeholders such as US CDC, RKI, TEPHINET, Africa CDC, ECDC, FAO, and Data.org, among others. These collaborations were pivotal to the creation of a robust support network for PHI capacity-building. Additionally, we have been working closely with the WHO Academy to ensure that our training modules are aligned with global standards and have started jointly developing four learning courses.

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"At the Hub, my work focuses on enhancing public health intelligence (PHI) through coordinated surveillance systems for respiratory pathogens, such as influenza and other emerging threats. This involves integrating data from sentinel, non-sentinel and open-source surveillance systems, including the EIOS system, to improve early detection, monitoring and response. My experience here will support the advancement of PHI frameworks, foster multisectoral collaboration, and enhance early detection and response to public health threats in my home country, the Republic of Korea."

Dr Yeon Kyeng Lee

Secondee from the Korea Disease Control and Prevention Agency

Surveillance Data Standards

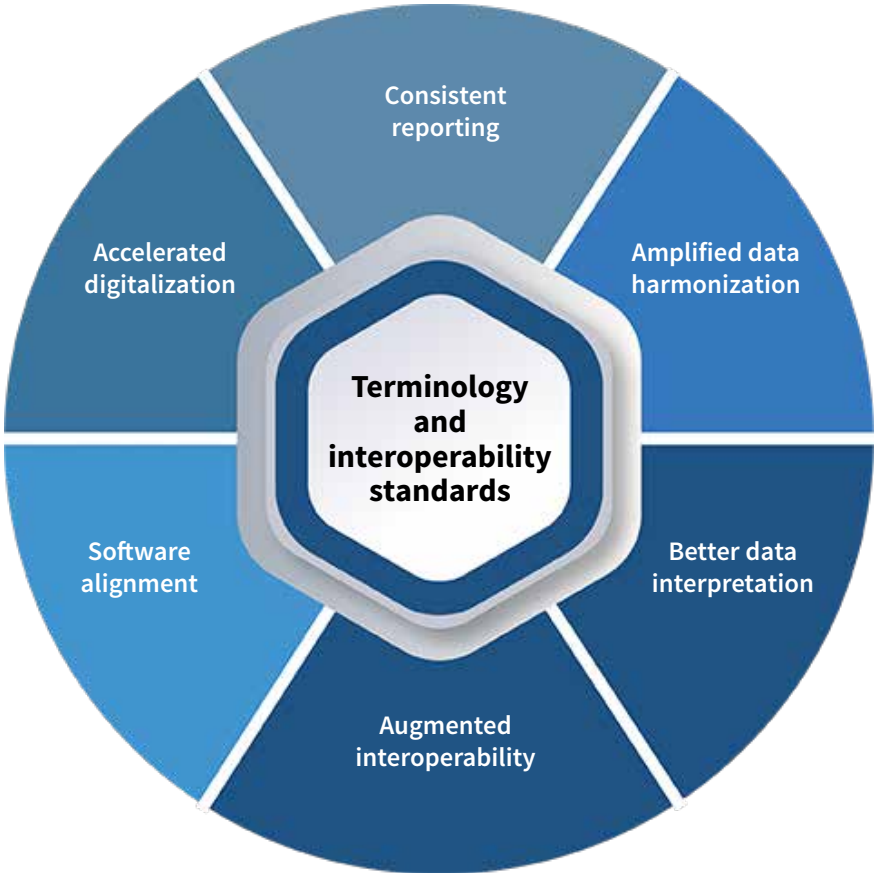
Part of WHO's Collaborative Surveillance strategy is the development of strong integrated national disease surveillance systems.

These systems face several challenges, including fragmented data collection that limits effective use, duplication of efforts and inconsistent adoption of WHO guidelines. To address these issues, WHO is developing terminology and interoperability standards to harmonize and integrate data from multiple sources – ensuring a more comprehensive and reliable understanding of health threats.

The initiative strengthens national surveillance systems by applying the SMART (Specific, Measurable, Achievable, Realistic and Timely) Guidelines approach, and creating Digital Adaptation Kits (DAKs) that support robust, integrated and interoperable systems for effective infectious disease surveillance.

In 2024, we developed draft definitions of the core components of these standards (Fig. 14), including disease-agnostic and disease-specific data elements, indicators, workflows and essential system requirements; these are now being reviewed and validated across WHO regions. Prioritized disease-specific modules have been developed for meningitis, cholera and measles. In addition, the Collaboratory platform now hosts a CoP for surveillance data standards, and a Technical Working Group for the development of surveillance data standards has been established.

Fig. 14. **Standards-based approach**



Contact tracing guidance

In today's interconnected world, infectious diseases can spread rapidly, threatening lives and livelihoods. Contact tracing has long been considered a fundamental strategy to contain and control disease outbreaks, used effectively for diseases such as tuberculosis and Ebola virus disease. While it is a complex intervention that must be sensitive to subtleties and nuances, contact tracing may minimize the outbreak size and reduce the loss of human life and economic impact. In addition to responding to the characteristics of different diseases, contact tracing must be designed and developed to meet contextual, local and cultural needs, conditions and sensitivities, as well as the capacities and limitations of the local workforce.

The absence of a comprehensive global contact tracing strategy, guidelines and standard operating procedures hampered the COVID-19 response. Although many resources exist for vertical programme disease management, outbreak containment and response, none address the overall rationale of contact tracing and optimal strategies, nor give proper attention to the truly multisectoral nature of this public health intervention.

To address this need, WHO has developed an evidence-based disease-agnostic contact tracing guideline.

Scan the QR code to download the publication

Supporting field epidemiology

Field Epidemiology Training Programmes (FETPs) have been one of the most successful interventions to strengthen the global public health workforce, equipping field epidemiologists with the skills and knowledge to detect and respond to health threats rapidly.

To support field epidemiology, WHO established the Global Field Epidemiology Partnership (GFEP) in 2023 and now co-chairs the Steering Committee. GFEP unites a diverse network of partners to expand and integrate field epidemiology capacities within national health systems.

To strengthen the collaboration between the public health, animal health and environment sectors to tackle health threats at the human-animal-environment interface, WHO together with the Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (WOAH) published the Competencies for One Health Field Epidemiology (COHFE) framework. The framework defines the knowledge, skills and competencies needed for field epidemiologists to implement the One Health approach.

Scan the QR code to download the publication

8 Looking to the future

It has been my privilege to lead the WHO Hub for Pandemic and Epidemic Intelligence for these first few years of its life, and I have often pondered how the next pandemic can – and must – be different on account of our efforts. If I summon all my powers of foresight, what do I see?

First, the very earliest signals will be captured. We know now that we must be listening for the first warnings of potential outbreaks everywhere and from every possible source – and we have an enormous amount of epidemic intelligence that we are mining from open sources. Information is an ever-increasing tsunami; the amount of material, news, events, data and platforms for the delivery of all of these is multiplying at nearly unfathomable rates. Social media is able to tell us far more than ever before about what is actually happening on the ground at every level across the world; and it is also able to beguile us with wild rumours, baseless conclusions and entirely fictitious claims. So just being bombarded with signals is meaningless: we must have the tools to capture these indicators, interpret and make judgments about them.

Second, we will benefit from vastly improved surveillance that includes a broad range of pathogens. Effective Collaborative Surveillance, from community-based to national and regional level and ultimately, global surveillance, is at the heart of our efforts and a concept that the WHO Hub has pioneered. But we should not kid ourselves: the collaboration upon which this system is built is not easy. It requires constant attention and new ways of understanding each other and figuring out how to work together.

The third part of my future pandemic scenario sees us applying the best science to analyse these early signals. We will employ cutting-edge technologies, including artificial intelligence, pathogen genomics and other tools that have recently been added to our arsenal, to feed into our advanced analytic capabilities. We will collaborate quickly and easily with colleagues across many disciplines, including the social sciences, so we can incorporate into our evidence base a wide range of issues that affect health and livelihoods. Data will be shared seamlessly between government sectors, laboratories and academia.

All the information we have will be linked more tightly and more rapidly so that decision-making will be easier and not as chaotic as in previous outbreaks. That is not merely a technical exercise; it is also a political one. We have to get better at convincing leaders to use the data we provide and not just their political instincts or whatever else their decisions are based on. And that is a challenge.

Finally, the cumulative effect of all of this will be the rapid development of countermeasures, effective and widely accepted public health and social measures, with the impact of the outbreak diminished. In short, outbreaks that could become pandemics will not.

This scenario represents what we are aiming for at the WHO Hub. As a key part of WHE , the WHO Hub will continue the excellent work it has started in the last three years, to make this vision a reality.

Dr Chikwe Ihekweazu

Deputy Executive Director, WHO Health Emergencies Programme and Assistant Director-General, World Health Organization


EIOS Training of Trainers


the world s

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In 2024, the WHO Hub collaborated with over 150 Member States and more than 210 partner organizations and networks, many of which visited the Hub's premises in Berlin

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