



Issue 26 | April 2025

The EMPHNET Emergency Bulletin

National Public Health Institutes at the Forefront of Managing Public Health Emergencies: Role, Strategies, and Lessons Learned

From pandemics to natural disasters, public health emergencies continue to test the strength and agility of national health systems. At the heart of these responses are National Public Health Institutes (NPHIs), serving at the frontlines and guiding evidence-based actions. This issue delves into how NPHIs are taking on a greater role, aligning efforts across institutions, shaping effective response strategies, and enhancing readiness for future emergencies.

A Glimpse at the National Public Health Institutes and their Role in Public Health Emergency Management

Definition and Functions

A National Public Health Institute (NPHI) is a science-driven organization or a network of organizations that provides national leadership and expert guidance to support long-term improvements in population health. These institutes are multidisciplinary, comprising professionals with diverse skills and expertise in areas such as disease surveillance, research, epidemiology, and policy development. NPHIs serve as trusted advisors to policymakers and government leaders. In most countries, NPHIs are part of or affiliated with the Ministry of Health, while maintaining connections with other government bodies involved in public health.

Emergence and Evolution

NPHIs vary significantly across countries, often emerging in response to specific health crises, particularly infectious disease outbreaks, and are shaped by political dynamics, leadership priorities, and institutional reforms. For example, the COVID-19 pandemic created strong momentum for establishing NPHIs and Centers for Disease Control (CDC) in many countries. Organizations such as the International Association of National Public Health Institutes (IANPHI), the World Health Organization (WHO), regional networks like EMPHNET, as well as various foundations and financial institutions, play a key role in supporting the development and strengthening of National Public Health Institutes (NPHIs). Also, NPHIs differ in how they are structured, funded, and function due to factors like population needs, history, politics, and existing health systems. Key functions, such as national public health laboratories, may be housed within the NPHI or operate as separate entities.

Collaboration and Coordination

NPHI is an integral part of a broader public health ecosystem. To function effectively, NPHIs must collaborate and coordinate with a wide range of stakeholders at national, subnational, regional, and global levels, as illustrated in **Figure 1**. While such collaboration is a significant strength, it also presents challenges, as NPHI operations often require navigating multiple layers of governance, authority, and accountability.

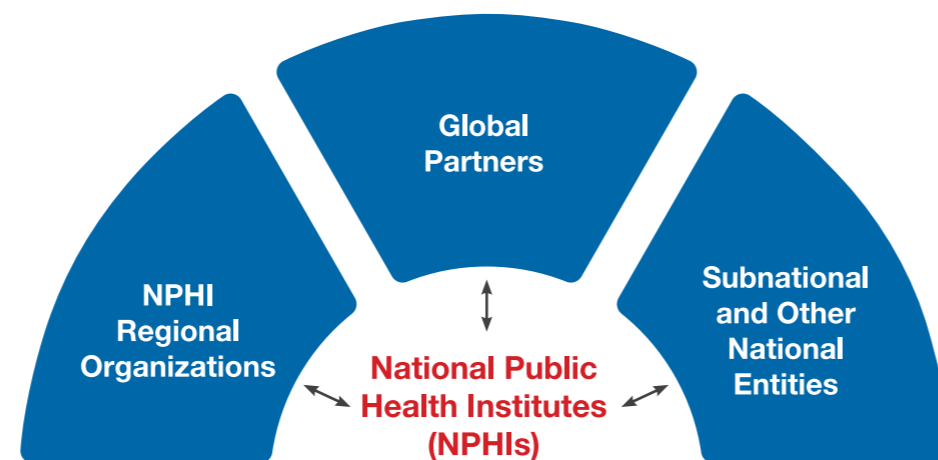


Figure 1: National Public Health Institute (NPHI) embedment within the global public health ecosystem - *Adapted from the following reference: The International Association of National Public Health Institutes (IANPHI). (2007). Framework for the Creation and Development of National Public Health Institutes.*

NPHIs Attributes, Functions, and Role in Managing Public Health Emergencies

NPHIs key functions include disease surveillance and detection, outbreak investigation and control, research, workforce development, health promotion and health education, and laboratory science. Many of these functions are particularly critical in low-resource nations.

Core Attributes of an NPHI
National scope of influence
National recognition
Limitations on political influence
Scientific basis for programs and policies
Focus on the major public health problems affecting the country
Adequate human and financial resources
Adequate infrastructure support
Linkages and networks
Accountability

The Core NPHI Functions
Evaluation and analysis of health status
Public health surveillance, problem investigation, and control of risks
Prevention programs and health promotion
Social participation in health
Planning and management
Regulation and enforcement
Evaluation and promotion of coverage and access to health services
Human resource development and training
Quality assurance in personal and population-based health services
Reduction of the impact of emergencies and disasters on health

Key Function of NPHIs in Managing Public Health Emergencies Emergency
Disease surveillance, detection, and monitoring
Outbreak investigation and control
Laboratory science
Workforce development
Health promotion and health education
Public health research

Major Challenges and Learning from Experiences

The COVID-19 pandemic significantly elevated the importance of NPHIs worldwide. However, their effectiveness has been challenged by several persistent issues, including long-term development needs, funding constraints, fragmented health systems, and unclear roles in emergency preparedness and response. It is also important to consider the context of each country, as each has its unique health ecosystem and corresponding implications for the role and performance of NPHIs.

– By. **Dr. Sara Abu Khudair, Technical Officer, EMPHNET**



Source: RKI

Reflections from the 2025 Annual Meeting of the International Association of National Public Health Institutions (IANPHI)

In a world facing multiple crises—driven by conflict, climate change, extreme weather events, and infectious disease outbreaks—the need for strong national capacity to manage public health emergencies has never been more critical.

The annual meeting of IANPHI, held from April 9-10 April in Maputo, Mozambique, focused on the role of NPHIs in addressing current and emerging health threats. As a global network, IANPHI brings together the Chief Executives and leaders of 126 National Public Health Institutions across 107 countries, with a notable presence throughout the Eastern Mediterranean Region (EMR). In his opening address, Dr. Jean Kaseya, Director General of the Africa Centers for Disease Control and Prevention (Africa CDC), emphasized Africa's goal of establishing a strong NPHI in all 55 countries. He highlighted the critical role of NPHIs in managing Public Health Emergency Operating Centers (PHEOCs) and coordinating laboratory networks and data management systems for effective emergency response.

Dr. Chikwe Ihekweazu, Acting WHO Regional Director for Africa, emphasized the vital role of NPHIs in emergency coordination and the strong collaboration between WHO in Africa and the Eastern Mediterranean, with Africa CDC in developing PHEOC capacity. This commitment is outlined in the [2023 Strategic Plan for Strengthening Public Health Emergency Operating Centers in Member States of the African and EMR](#).

IANPHI's mandate is to build a global network of NPHIs that support one another in both stable times and during crises. In the pressure of emergency decision-making, this peer network offers vital guidance, shared experience, and solidarity for public health leaders. With the recent major reductions in global health funding, the need to develop strong national capability, largely funded by each country's own resources, is now more important than ever. Yet focusing solely on emergency response overlooks the broader determinants of health. Morbidity and mortality are influenced by a wide range of factors, and the growing burden of non-communicable diseases has increased vulnerability to health threats—as evidenced by the high COVID-19 mortality rates among the elderly and those with co-morbidities or obesity.

NPHIs must be equipped to support the delivery of all [essential public health functions](#). This includes working closely with a broad range of public health partners, such as academic and training institutions, to ensure access to a workforce with the skills needed to address both emergencies and ongoing public health challenges. The EMR has played a leading role in advancing this work, with EMPHNET serving as a key voice in shaping the global strategy for public health workforce development outlined in the WHO [Roadmap](#) on the Public Health and Emergency Workforce.

In conclusion, effective management of public health emergencies relies on strong NPHIs that can lead EOCs and draw on a skilled workforce to deliver both preparedness and essential public health functions. The EMR has shown strong commitment to this agenda, with IANPHI partnering closely with EMPHNET, WHO EMRO, and WHO AFRO. Health security cannot be achieved in isolation—it's a shared journey. The IANPHI meeting closed with the African proverb, "If you want to go fast, go alone; if you want to go far, go together," a journey IANPHI is committed to walking alongside NPHIs in the EMR and beyond. – **By Prof. Neil Squires, Secretary General, IANPHI**



Source: IANPHI Annual Meeting 2025

NPHIs in Action: The Robert Koch Institute (RKI) as an Example

The Robert Koch Institute (RKI) supports public health emergency management across national, regional, and global levels, actively collaborating with other NPHIs and bilateral partners, as well as with supranational organizations and international networks.

At the global level, RKI contributes to international outbreak response through its involvement in the WHO's Global Outbreak Alert and Response Network (GOARN), deploying experts to assist with investigations and emergency operations. The first WHO Collaborating Centre for GOARN is hosted by RKI as well. The Institute also supports global capacity building, particularly through Germany's Global Health Protection Program (GHPP), helping to strengthen epidemiological and laboratory capabilities in low- and middle-income countries. Additionally, RKI shares knowledge through global research collaborations, contributing to the development of international standards and surveillance tools.

At the regional level, particularly within Europe, RKI works closely with the European Center for Disease Prevention and Control (ECDC) and WHO EURO to share data and expertise, conduct joint assessments, and respond to cross-border health threats. The institute also participates in EU-funded projects aimed at improving regional preparedness and response capacities, and it regularly engages in joint simulation exercises and training initiatives with other European NPHIs.

Nationally, within Germany, RKI serves as the central authority for disease surveillance, outbreak detection, and national risk assessment. It played a leading role in managing Germany's COVID-19 response, guiding strategies for testing, vaccination, contact tracing, and public health messaging. RKI also develops national preparedness and pandemic plans, coordinates response protocols, and supports health authorities across the country.

In collaboration with other NPHIs, RKI actively contributes to international public health networks, especially through the IANPHI. It supports peer institutions by offering training, technical support, and collaborative research opportunities. RKI also participates in joint responses to international emergencies and helps build a solid global network of public health institutions capable of managing health crises effectively.

RKI is committed to a strong, multilateral response to pandemics and epidemics, built on solid international cooperation and robust public health networks. Evidence from recent global health crises, particularly COVID-19 and Ebola, shows that NPHIs with active ties to global networks respond faster, more efficiently, and with better coordination. Organizations like the WHO and international networks such as GOARN, EMT, IANPHI, and EMPHNET have proven their value by enabling real-time data sharing, expert deployment, joint surveillance, and harmonized response strategies. To enhance pandemic preparedness, NPHIs must continue investing in global partnerships and trust-based cooperation as vital infrastructure for national and global health security.

– By. Dr. Andreas Jansen, Head of the Information Centre for International Health Protection (INIG), the Robert Koch Institute in Berlin



Source: From Somalia NIH Facebook Page

The National Institute of Health in Somalia: Leading Public Health Emergency Management and Coordination Efforts

The National Institute of Health (NIH) in Somalia leads the country's efforts in public health emergency preparedness, detection, and response. Since the establishment of the Somalia Frontline Field Epidemiology Training Program (FETP) in 2021, NIH has significantly strengthened national and sub-national health systems. Over 150 public health professionals have graduated across the first six cohorts as of February 2025, with additional training underway. These skilled graduates contribute to disease surveillance, rapid outbreak investigations, and independent monitoring of polio campaigns, ensuring timely, evidence-based public health interventions.

In 2023, NIH launched fully equipped Public Health Emergency Operations centres (PHEOCs) in five states in Somalia, enhancing national capabilities to coordinate preparation, response, and recovery efforts. These centres are vital for the implementation of the International Health Regulations (IHR), allowing Somalia to better detect, report, and manage public health threats.

Somalia recently established the Department of Port Health under NIH, which will drive cross-border collaboration efforts. Through engagement with neighbouring countries via platforms such as the East African Community (EAC) and Africa CDC, Somalia is working to strengthen information sharing, conduct joint outbreak investigations, and harmonize emergency preparedness plans with regional partners.

Key Message:

The NIH is Somalia's leading centre for emergency preparedness and research, ensuring a healthier future through rapid response, evidence-based research, and continuous innovation. Through this leadership, NIH is advancing new ways to improve public health and the healthcare system across the country.

To NPHIs and Public Health Professionals: Effective public health emergency management demands strong collaboration, real-time data-driven decision-making, and sustained investment in preparedness capacities. Let's prioritize building resilient, proactive health systems to safeguard communities against current and emerging health threats with efficiency, solidarity, and innovation.

– By. Dr. Hussein Muhiadin, NIH Executive Director, Somalia.

In Numbers

This section highlights key figures illustrating the global reach and impact of NPHIs:

128
member institutes in IANPHI across 107 countries, as of 2025

60+
countries had NPHIs leading or coordinating COVID-19 response actions.

6+ billion
people, around 75% of the global population, are served by NPHIs

90%
of IANPHI member institutes contributed to risk communication, contact tracing, and testing during the pandemic.

12
out of 22 countries in the EMR have established NPHIs, as member institutes in IANPHI.

In our turbulent world, crises have become a constant reality for communities across the EMR and beyond. These crises, ranging from natural disasters to man-made emergencies driven by war and conflict, take a significant toll on healthcare systems and the health of populations. More critically, they contribute to the collapse of health infrastructure, with climate change exacerbating the situation further. This section provides an overview of alarming statistics.

Gaza

52,400+
people have been killed as of April 30, 2025

63%
of hospitals are partially functional, as of April 30, 2025 (22 out of 36)

118,014
people have been injured as of April 30, 2025

48%
of primary health care centers are functional, including 10 that are fully operational and 64 that are partially functional, as of April 30, 2025

423,000
people have been displaced between March 18 and April 30, 2025

13
routine immunization health service delivery points have had their services interrupted, as of April 30, 2025.

>1,400
health workers were killed, as of April 15, 2025

91%
the analyzed population (1.95 million people) is projected to face high levels of acute food insecurity, classified as IPC Phase 3 (crisis) or higher, as of April 30, 2025

12
EMTs are currently operating

Sudan

30.4 million
people are in need of assistance in 2025

755,000
people are facing catastrophic levels of hunger (IPC 5) in North Darfur.

11.4 million
people have been internally displaced including 8.6 million newly displaced since 15 April 2023

20%
of health facilities remain operational, struggling to meet the needs of the population and due to a lack of qualified personnel and resources.

At IAPH, we connect knowledge with real-world action through 150+ courses, 37 programs, and 16 fields of study, all designed to empower future public health leaders. Start your journey today with IAPH!

Check out our current programs and courses:

[Click Here](#)



References

- Abou-Taleb, H., van Gilst, S., Mohamed, N., & Mataria, A. (2024). National public health institutes in the Eastern Mediterranean Region: Insights from experts in the field. *BMJ Global Health*, 9(4), e012601. <https://doi.org/10.1136/bmjgh-2023-012601>
- Howard, S. (2025, May). Sudan in health crisis as civil war passes two-year mark. *BMJ*, 389, r887. <https://doi.org/10.1136/bmj.r887>
- International Association of National Public Health Institutes (IANPHI). (2007). Framework for the creation and development of national public health institutes. <https://ianphi.org/tools-resources/nphi-framework.html>
- International Association of National Public Health Institutes (IANPHI). (2021). Lessons learned from national public health institutes' response to the COVID-19 outbreak in 2020. <https://ianphi.org/news/2022/covid-19-lessons-learned-report.html>
- International Association of National Public Health Institutes (IANPHI). Member countries. <https://ianphi.org/about/member-countries.html>
- ReliefWeb. (2025, March). UNFPA Sudan emergency situation report No. 19 – March 2025. <https://reliefweb.int/report/sudan/unfpa-sudan-emergency-situation-report-no-19-march-2025>
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA). (2025). Humanitarian situation update #284 – Gaza Strip. <https://www.ochaopt.org/content/humanitarian-situation-update-284-gaza-strip>
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA). (2025, April 30). Reported impact snapshot – Gaza Strip (30 April 2025). <https://www.ochaopt.org/content/reported-impact-snapshot-gaza-strip-30-april-2025>