

WEBINAR SUMMARY

July 16, 2026

Smarter Surge for Health Emergencies:

Strengthening NPHIs Through the AID Operational Model

In alignment with the domains of the WHO Global Health Emergency Corps (GHEC) framework, 12 NPHIs from across regions have co-developed the AID (Assess/Identify/Deploy) Operational Model with IANPHI. The AID Operational model supports NPHIs to plan and rapidly surge public health emergency workforce across national, subnational and community levels.

On July 16, 2026, IANPHI hosted a webinar to introduce the AID Operational Model and present the Simulation Exercise (SIMEX), applying the AID Operational Model, and tested with Kenya NPHI. In addition, a newly developed GHEC Artificial Intelligence (AI) model, which is a planning tool for workforce surge rostering, was presented by Uganda NPHI. Uganda NPHI is part of an initial pool of NPHIs testing and adopting the tool. The webinar concluded with an outline of the next steps of the project.

IANPHI's work, funded by a Gates Foundation award, aims to translate the WHO Global Health Emergency Corps into country context to strengthen the role of NPHIs in national health emergency systems.

Key topics covered during the webinar

The AID Operational Model

The IANPHI survey and interview with NPHI leaders undertaken in 2024/2025 on the role and functions of NPHIs in health emergencies highlighted several challenges including surge and scaling workforce on a national and subnational level in response to current and anticipated future needs of a health emergency. Over the past nine months, IANPHI and 12 NPHIs and ministries of health have co-developed the NPHI AID (Assess/Identify/Deploy) Operational Model to support NPHIs to plan and rapidly surge public health emergency workforce across national, subnational and community level.

The presentation illustrated how the AID Operational Model provides a systematic way to Assess & anticipate surge workforce and resource needs; Identify & coordinate the activation of surge staff and other resources, e.g. emergency rosters, mutual aid, etc;

and Deploy & support surge staff and resources, including briefing, equipping and management of staff deployment. Ultimately, the model aims to contribute towards strengthened and timely emergency response that reduces the impact on human health and lives in emergencies.

The AID Operational Model was subsequently tested by means of a tabletop simulation exercise (SIMEX) conducted with the Kenya National Public Health Institute (KNPHI). The post exercise debriefing helped identify gaps and areas of in-country strengthening and further ideas for improvement for the model. This included the need for the model being cyclical to reflect the need for periodic reassessments and redeployments as an emergency unfolds.

IANPHI's work in this area has resulted in several outputs including case studies from various countries illustrating good practice examples, implementation of ongoing country projects applying the principles of AID and GHEC, development of support tools and resources such as workforce/emergency functions guide, deployment checklists, etc., as well as the already mentioned SIMEX.

Simulation Exercise applying the AID Operational Model to mobilise a surge response

The SIMEX was developed and conducted with the Kenya National Public Health Institute (KNPHI) in Nairobi in May 2026. The objective of the simulation exercise was to use AID Operational Model to aid decision-making and document decisions as they occur; to use AID Operational Model to identify tools and resources needed to respond to the scenario; and to document coordination across sectors where applicable.

The exercise models the emergence of an emerging novel zoonotic pathogen leading to an outbreak across a country and subsequent massive spread that requires a substantial scale up and surge response. The surge response to the emerging infectious disease outbreak was made more complicated by an environmental event to add an all-hazards dimension to the exercise, as well as international spread to neighbouring countries.

Participants of the SIMEX acted in their real-world roles, representing sub-national and national level multi-stakeholders, and external organisations including non-governmental organisations, WHO and Uganda National Institute of Public Health and Uganda MoH. The debriefing session with participants provided valuable feedback on the usage of the AID Operational Model emphasising that the element of Connected leaders is key for a successful response and that AID Operational Model is a cycle, highlighting that the value in pairing AID based SIMEX with National Health Emergency Operations Plan training. It was very clear that connected leaders is imperative, cross-

cutting theme throughout the phases of emergency, coordinated leadership is key for an effective response. Trusting relationships must be built before an emergency, not at the time of an emergency to create a unified response.

The focus of the AID Operational Model is within a country, as well as cross border collaboration addressing the sub-national to national space. The AID Operational Model can be used before and during an emergency to identify gaps and prepare for an emergency.

Lessons from Kenya's National Tabletop Exercise:

Kenya NPHI provided reflections on the SIMEX exercise, the AID Operational Model and the facilitator role. In addition, the presentation gave insights into the usage and usefulness of SIMEX findings to inform country emergency workforce planning.

The exercise highlighted both areas that worked well and areas that need strengthening. One Health collaboration worked well with human health, animal health, and environmental teams moved in sync and multi-agency partners engaged effectively. The AID Operational Model assisted in identifying capacity. Initially the teams knew exactly where to find RRTs, volunteers, medical students, and community mobilizers. Communication of resource needs was also clear and actionable across all levels. However, during the exercise it became evident that early warning signals were missed at subnational levels and delays in identifying transmission pathways lead to non-targeted interventions. The information flow went from sub-national to national levels, but the reverse information flow worked less well, leaving the local teams feeling disconnected from decisions. Multi-agency and cross-border structures of engagements were somewhat unclear. Incident commanders and surge teams were overwhelmed due to the increase in pressure and the protracted emergency needing better management and welfare arrangements. Some key contingencies also needed to be planned for which included unavailability of staff directly affected by exacerbated conditions created from a complex outbreak.

The exercise participants emphasised the power of connected leadership. Strong leadership was said facilitate the availability of resources, the role and authorities of NPHIs, multi-sectoral collaboration, engagement of partners and coordinated surge mobilization with deployment from multiple institutions. Participants suggested that Connected Leaders must be more visible in the AID Operational Model.

Kenya NPHI will integrate SIMEX finding into Kenya's pilot of the GHEC AI assisted planning tool. The AI-assisted tool is designed to map surge capacity, support connected leadership and enable rapid activation of surge workforce, as well as to feed findings into the country's emergency planning.

Uganda's AI-Assisted GHEC Planning Tool

Uganda is currently in the process of transforming its National Emergency Workforce Planning through the usage of Artificial Intelligence. Uganda NPHI shared Uganda's experiences with the AI-assisted GHEC Planning Tool for workforce surge rostering.

The implementation process started with an introduction of GHEC to key stakeholders, ensuring alignment with national structures and introduction of the AI-tool to the core team. The implementation process has also involved using modelling to predict outbreak of infectious diseases; strengthening response management using event-based surveillance and identifying human resources capacity to improve the outbreak roster system.

Implementation of the GHEC AI planning tool is based on two fundamental principles, namely national control and sovereignty of data, policies and AI choices; and capability transfer to local staff meaning that the UNIPH team configure, integrates and has ownership of the AI platform and developmental needs.

Several achievements have been noted so far. The Uganda AI platform has been tested, is live and is hosted by UNIPH, used by MoH and UNIPH teams. The national workforce directory currently includes 1200 responders with roles, contact details, training records, prior deployment history and availability. The tool is operational for two of the three recent outbreaks with workforce planning, simulation scenarios and response team creation and deployment. The AI-tool is entirely configured to Uganda's context of 24 priority disease, national geography and health facilities.

Among the success factors for adoption of the tool were the following mentioned: weekly coordination meetings, a new server with ample of cloud space, and appointment of GHEC focal person with official mandate to coordinate human resources deployments for public health emergencies. The fact that the AI tool is embedded within the UNIPH, a trusted research institute handling the system into government operations, was said to facilitate implementation.

However, two recent outbreaks of Ebola, national elections in January 2026 with changes in leadership have posed challenges for implementation. Political sensitivity towards AI and information security has meant that getting buy-in from all stakeholders has proved to be a time-consuming process. Several measures have been put in place to ensure information security including making sure that Uganda's data is not shared, data is encrypted and AI models can never read personal data.

The major lessons learnt when introducing AI-assisted tools it that it is not just technical but also highly political, and therefore engagement of strategic stakeholders is necessary to mitigate red-tape. Mathematical modelling is needed to quantify human

resource needs for public health emergencies by cadre for a given outbreak. Adoption of AI into government operations may be perceived as sensitive and therefore require carefully addressing information security concerns of key decision-makers.

Nevertheless, AI-assisted public health emergency management tools offer several opportunities. Such tools can be extended to the whole national incident management machinery. They can provide real-time monitoring of incidence trends for other public health indicators, such as maternal and child health, malaria, etc. They can be extended to emergency human resource and event management in other sectors, linked to public health, and to cross-border public health emergency management.

Questions & Answers

Due to time constraint, a brief discussion evolved around using the AID Operational Model in armed conflicts, the most extreme of all emergencies. The AID Operational Model could be tested in such circumstances, as human resources are indeed needed, with special consideration for rest and recovery of deployed staff.

Next Steps and Concluding Remarks

The webinar ended with IANPHI outlining the next steps. In a near future IANPHI will:

- publish an off-the-shelf tabletop SIMEX exercise product, that is generic and can be tailored to country context;
- host a webinar to fully demonstrate the GHEC AI-assisted planning tool for workforce planning in health emergencies and its application in a few countries;
- host another webinar introducing tools and resources linked to the AID Operational Model.

Finally, the Public Health Emergency Alliance of Leaders (PHEAL), a peer-led network of health emergency directors/leads from NPHIs has been established. PHEAL serves to accelerate peer learning, harmonise readiness and response and strengthen coordination across countries. The first meeting was held on 19 June 2026. IANPHI members are welcome to contact the IANPHI secretariat or Sadaf Lynes for more information about PHEAL.

Presenters:

- Professor Andrew Lee, Technical Lead, IANPHI; Professor of public health, Sheffield University

- Dr Elizabeth Nzioka, Emergency Preparedness and Response Coordinator, Preparedness Division, Kenya National Public Health Institute
- Dr Alex Riolexus Ario, Director, Uganda National Institute of Public Health

Moderator:

- Sadaf Lynes, Director of Collaborative Surveillance, Workforce and Health Emergencies, IANPHI

//