

AI AND DIGITAL HEALTH

THE IMPORTANCE OF DIAGNOSTICS

Diagnosis is the first step on the path to health. Obtaining a diagnosis is essential not only for individual disease management but also for protecting public health more broadly. Diagnostics save lives, enable health systems to make better use of their resources, and provide early warning of emerging health trends.

ADVANCING DIAGNOSTICS IN RESOURCE-LIMITED SETTINGS

Although diagnostics are essential, according to The Lancet, almost 1 in 2 people worldwide do not have access to the diagnostic tools they need. The diagnostics gap is particularly important in low- and middle-income countries (LMICs).

Key advances in bringing diagnostics to resource-limited setting include artificial intelligence (AI) and digital technologies. These tools are revolutionizing diagnostics and patient care, offering new ways to improve accuracy, efficiency, and access.

FIND'S APPROACH TO AI AND DIGITAL HEALTH

FIND integrates digital and AI technologies to help streamline diagnostic processes, making them more efficient while minimizing waste using digital data collection and analysis.

FIND's work in this area is centered on four priorities, each designed to address critical gaps in current practices:

➤ Pre point-of-care tools

to empower patients with knowledge about their health. This included developing and evaluating chatbots (with and without generative AI), symptom screeners, and wearable vital sign monitors.

➤ Point-of-care tools

that enable healthcare workers to provide reliable and timely screening and diagnosis, including AI-powered imaging tools like computer-aided detection for X-rays, sound analysis tools for auscultation, AI-augmented antibiograms, and clinical decision support systems.

➤ Disease surveillance and information response strategies

using AI-enabled outbreak prediction, targeted intervention design using multi-modal data, and tools to optimize vector control and supply chains.

➤ Data system strengthening

through the creation of a country-led Diagnostic Data Hub to support innovation and policy development and working on curating high-quality datasets for key diagnostic use cases in LMICs, advancing digital connectivity for surveillance and pandemic response, and building tools for data collection and annotation.



KEY PROJECTS IN DIGITAL HEALTH

EQUATe 2025

In 2024, and with the support of the Patrick J. McGovern Foundation, FIND engaged with partners in **RWANDA**, **INDIA**, and **INDONESIA** to support development of evaluation processes for integrating context-appropriate AI into national healthcare service delivery. A key insight from these engagements was the urgent need for a reusable and adaptable framework to guide the responsible deployment of AI-based tools.

The primary goal of this project is to develop and disseminate clear data management standards for AI-based diagnostic tools. FIND is working with stakeholders to co-develop a general framework specifically designed to meet the needs of LMICs. This includes defining concrete standards for at least one use-case in each country (e.g. CAD-CXR, Cough app, LLM...). This work aims to strengthen local capacity by addressing gaps in data and AI literacy.

Validation Platform

AI-based diagnostic tools in medical imaging are showing strong potential to address the shortage of trained radiologists, particularly in LMICs.

Computer-Aided Diagnosis (CAD) systems powered by AI can rapidly analyze chest X-rays to detect conditions such as tuberculosis, COVID-19, and other pulmonary diseases. These tools can significantly speed up diagnosis and support clinical decision-making across all levels of the health system, including in remote and underserved areas, by enabling faster triage and reducing reliance on limited radiology expertise.

CAD tools must undergo rigorous evaluation, including assessments of diagnostic accuracy, consistency across different populations, and operational performances. FIND has developed the Validation Platform, an independent evaluation system that uses a secure and curated library of chest X-ray images to assess the performances of CAD software in a standardized, reproducible manner.

FIND, as a certified independent evaluator, conducts these assessments without granting vendors access to the underlying data. As of early 2025, eight CAD diagnostic software packages had been evaluated for the WHO TAG evaluation.

FIND ALSO SUPPORTS CROSS-CUTTING PROJECTS, INCLUDING:

➤ **Development and deployment of an electronic platform** to support tracking laboratory specimens in **Kenya**. This will improve and optimise access to quality diagnostic services.

➤ **Technical assistance** in assessing connected diagnostics for the GenXpert laboratory network in **Pakistan**.

➤ **A reader of rapid diagnostic tests** to support the implementation of the *P. vivax* Serological Test and Treatment malaria control strategy. Target countries are **Madagascar** and **Ethiopia**.

FIND is leading innovation in digital and AI tools to support diagnostic decision-making, antimicrobial stewardship, disease surveillance and geo-mapping of diagnostic access to help countries enhance efficiency and precision in care delivery.



About FIND

Established in 2003, FIND is a global nonprofit dedicated to ensuring equitable access to diagnostics, based in Geneva, Switzerland, but also has regional offices in India, Kenya, South Africa, and Viet Nam.

We connect countries and communities, funders, decision-makers, healthcare providers and developers to spur diagnostic innovation and make testing an integral part of sustainable, resilient health systems.

For more than 20 years, FIND has been at the forefront of revolutionizing diagnostics, particularly in the realm of infectious diseases, bringing lower-cost, quality diagnosis to those who need it as an essential component of universal health care while also leading efforts in pandemic preparedness, and driving access to essential tools as a recognized thought leader.

