

State of the art digital health projects build on existing evidence, and normative guidelines, frameworks, and tools in various areas, ranging from software development to financing and equitable programming. In the context of the GIZ Digital Innovation in Pandemic Control (DIPC) Initiative, the Robert Koch Institute, Germany, has conducted a comprehensive analysis on key digital public health definitions and concepts, and on 75 normative resources for digital health programming across 11 digital health topics, published between 2012 and early 2024 [\[link\]](#). Findings from the report have been summarized in form of 20 easy to use Factsheets. The current factsheet (12/20) summarizes the findings on the identified **Guidelines, Frameworks, and Tools for Integration & Interoperability** and discusses the need for integrating digital health systems to ensure seamless data flow and interoperability.

Factsheet 12

Guidelines, Frameworks and Tools for Integration & Interoperability



Target Audience

Primary Users: Developers, Donors, Ministries of Health

Secondary Users: Healthcare Providers, Government Bodies

Relevance

The accelerating rate of digitization in the digital health ecosystem presents challenges, as numerous standalone solutions compete without full integration into the system, impacting data quality and medical practice. Seamless interoperability is essential for enhancing patient care coordination, reducing errors, and supporting public health surveillance. It facilitates patient data exchange across healthcare providers, enhances Electronic Health Records (EHR) utilization, and aids in population health management and community health services. Thus, an integrated approach is key for optimizing disease tracking, resource allocation, and decision-making in healthcare systems.

Findings

Number of resources identified: 3

Findings show that, in low- and middle-income countries (LMICs), vertical and partner-driven health investments often lead to fragmented systems lacking end-user involvement. To address inefficiencies in Africa's digital health systems, WHO AFRO recommends adopting the ITU-WHO Digital Health Platform Handbook to implement a unified Digital Health Platform (DHP). This approach aims to integrate disparate solutions, enhance interoperability, and align with digital health architectures. Tools like the Health Information Systems Interoperability Maturity Toolkit and PATH/Digital Square's assessment tools are crucial for measuring system interoperability and assessing national digital landscapes. Additionally, global efforts, such as adopting HL7 FHIR standards, are enhancing healthcare data exchange capabilities globally, supporting interoperable Electronic Health Records (EHRs) and digital health implementations.

Guidelines

Digital Health Platform Handbook: Building a Digital Information Infrastructure (Infostructure) for Health

Intended for health sector planners and enterprise architects in early-stage digital maturity countries; focuses on building national health platforms to support the SDGs.

Published by: WHO

Year: 2020

Language: English

Digital implementation investment guide (DIIG): integrating digital interventions into health programmes

Serves as a roadmap for integrating DHIs into health programs. DIIG complements the WHO guideline on digital interventions.

Published by: WHO

Year: 2020

Language: English, French, Spanish

Toolkits

HIS Interoperability Toolkit Users Guide

Aids Ministries of Health in evaluating Health Information System (HIS) landscapes for interoperability.

Published by: MEASURE Evaluation **Year:** 2017

Language: English & French



This is based on [“Navigating the Digital Health Ecosystem: A Review of Key Guidelines, Frameworks, and Tools”](#)

Read the full report [here](#) or scan the QR code

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