Open Health Information Exchange (OpenHIE) Architecture Specification

OpenHIE is a global mission-driven community of practice dedicated to improving the health of the underserved through open and collaborative development and support of country driven, large scale health information sharing architectures. The OpenHIE community supports interoperability by creating a **reusable architectural framework called the OpenHIE Architecture** that introduces a service-oriented approach which maximally leverages health information standards, enables flexible implementation by country partners, and supports interchangeability of individual components.

The purpose of the OpenHIE Architecture Specification is to:

- Provide an overview of the OpenHIE Architecture
- Articulate the requirements for OpenHIE components
- Articulate the workflows (data exchanges) that are currently recognized as data exchange patterns to follow
- Provide a reference for implementers to use in their architecture and/or implementations

To get started, see https://guides.ohie.org/arch-spec/get-started

General Details

PRIMARY USERS:

The primary users of the OpenHIE Architecture Specification typically include implementers, software development teams and Ministries of Health.

LANGUAGES:

English, some documentation available in French and Spanish.

TYPE:

Content

OPEN SOURCE LICENSE:

Creative Commons Attribution 4.0 International (CC BY 4.0)

Access Information

WEBSITE

https://ohie.org/

CONTACT

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WHO System Classification

PRIMARY

D2 | D2 Data interchange and interoperability

ADDITIONAL

C1 | C1 Census and population information systems

C11 | C11 Terminology and classification systems

C6 | C6 Identification registries and directories

B5 | B5 Learning and training systems

D8 | D8 Shared Health Record and Health Information Repositories

Geographic Reach & Impact

OpenHIE is a community of practice and its content is open to all. The online and bi-directional open structure makes it challenging to fully appreciate how far adoption of OpenHIE concepts have gone. However at a recent face-to-face community event in Malawi there was representation from over 30 countries from various regions all over the globe. Countries and implementers shared their different journeys in advancing health information exchange in their countries based on the OpenHIE architecture framework. The following countries have included or referenced the OpenHIE framework as part of their Digital Health strategy, eHealth strategy, HIS strategy, or related framework, or have referenced the OpenHIE architecture framework as part of pre- or in-service training programs: Côte d\'Ivoire, Haiti, Kenya, Malawi, Nepal, Ethiopia, Rwanda, Sri Lanka, Tanzania, Uganda



Standards & Interoperability

OpenHIE and its component framework (e.g. Client Registry, Health Worker Registry, Shared Health Record, Terminology Services, etc.) support several standards for sending, receiving and storing clinical and/or administrative data related to patient care. Find out more at: https://guides.ohie.org/arch-spec/architecture-specification/standards-and-profiles

OpenHIE workflows are the technical data exchange patterns for sharing health data between one or more of the OpenHIE Architecture components and/or other health information systems. OpenHIE uses community forums and Architecture Summits to incorporate community review and feedback around all of its offerings. It is made up of organizations that endorse the OpenHIE framework and collaborate on OpenHIE resources.

STANDARDS

ADX, HL7 FHIR, LOINC, SNOMED

OPENHIE COMPONENT

Interoperability Layer

Facility Registry

Finance and Insurance Service

Health Management Information Service

Shared Health Record

Terminology Service

Logistics Management Information Service

Client Registry

Healthworker Registry

Product Catalogue

Point of service

Maturity

All maturity model assessments are self-reported by the funded organization leading the content development of the global good

Maturity Matrix: 2023

Global Utility

Country Utilization	High
Country Strategy	High
Digital Health Classifications Mapping	High
Content Accessibility	High
Sustainability and Ongoing	Medium

Community Support

Organizational and Community Engagement	High
Content Governance	High
Content Roadmap	Medium
Resources to Support Use	High
Multi-Lingual Support	Low

Software Maturity

Content Productization	Medium
Content Reuse / Adaptability	High
Content Alignment to Global	High
Normative Agencies	

Resources

Support

Documentation URL

 $\underline{\text{https://guides.ohie.org/arch-spec/architecture-specification/standards-and-profiles}}$

Architectural Documentation URL https://guides.ohie.org/arch-spec/introduction

Community

OpenHIE is a community of government officials, tech developers, implementers, and others working in digital health information systems. This community supports and improves upon the OpenHIE Architecture - our conceptual approach to the exchange of health information - through open and collaborative practices. It is the members of the OpenHIE community who work in many capacities to implement the solutions and report back on their approach and experience. This information is then distilled to others who are looking to implement and the voluntary cycle continues to set-up structures that can be customized for unique environments.

This process can look like: OpenHIE members want to understand what countries are working on and how the community can support country digital health strategies to develop or build upon their health information exchange architecture. Country teams share real world needs and experiences that result in peer-learning and recommendations that influence the direction of the community itself. Software development teams bring their tools and experiences to country teams in support of the work they are doing. This cycle of sharing real world experiences and bringing knowledge back into the community has a direct impact on the workflows and standards that make up the OpenHIE framework.

This community is OPEN, so all who are interested in joining, sharing, or learning from others are welcome and can do so in our many different activities and practices.

COMMUNITY CALLS / FORUMS

There are regular and scheduled community calls available here: https://wiki.ohie.org/display/DR/Community+Event+Calendar

PLATFORMS / MAILING LISTS

There are dedicated community engagement platforms or mailing lists available here:

Community Forum - https://discourse.ohie.org

Community WhatsApp -

https://chat.whatsapp.com/LH5TZB55tnyIDuy6Eu2f8h

Women in Digital Health - https://bit.ly/WomxnDH

Mailing List - https://ohie.org/list

LinkedIn - https://www.linkedin.com/company/openhie

Twitter - https://twitter.com/OpenHIE

EVENTS & CONFERENCES

OpenHIE Community Meeting

s are annual events bringing together community members to connect and learn from each others' shared

experiences and strengthen the ability to design and build toward ecosystems that raise the level of health for all. These face-to-face events are

hosted by countries selected through a submission process and agendas are driven by the host country alongside the community.

implementing countries are invited to share their success and challenges around architecture.

Additionally, participants can expect sessions and affiliated events like:

- an OpenHIE Architecture Summit to discuss OpenHIE's framework
- sessions to bring countries together to talk share experiences
- networking time for eHealth leaders to discuss important governance and policy topics
- a Technical Marketplace for organizations or team's to showcase their global good, product, project , service or tool $\,$
- several open "unconference" sessions for which topics are proposed by attendees relevant to their experiences / OpenHIE implementation work.

The

OpenHIE Implementers Network (OHIN)

is a forum dedicated to bringing together countries and implementers who are working in some of the most challenging environments on the planet to share questions, problems, and ideas so we can work on solutions together. OHIN takes place in the form of open, virtual meetings held throughout the year, showcasing OpenHIE implementations, technical demonstrations, and other topics of interest to the community. In addition, resources and updates surrounding the community are also shared. Following these main meeting topics, space is also saved for attendees to share insights and challenges they are experiencing.

Sustainability

Regenstrief Institute is the acting secretariat for the OpenHIE Community that curates the OpenHIE Architecture Framework and is based in the United States. PEPFAR supports the OpenHIE secretariat to handle leadership when it comes to community engagement, growth, and resource support. Resources and the framework are intended to be constantly evolving as standards and implementer needs change over time. This evolution happens through the sharing and in-kind support of community members and partner organizations. Key funders/investors of the work over the past 5 years are PEPFAR, Digital Square, Global Fund.

Linked Registries & Initiatives



Policies

Tool Privacy Policy

https://wiki.ohie.org/display/DR /OpenHIE+Privacy+Policy