

EHR.Network

Open | Scalable | Private | Secure

Introduction

by



Agenda

- List of available learning resources
- Introduction to the concepts & overview of the platform
 - Complexities & challenges in Digital health
 - Introduction to EHR.Network architecture - the DataFirst digital health infrastructure
 - References

List of learning resources

Open access

1. EHR.Network architecture - included in this
2. Services
3. Resources & APIs
4. Multi-service APIs
5. Basic howtos

Limited access

6. openEHR clinical modelling
7. Code walkthrough
8. Build, test & deploy

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Complex regulatory & governing standards

Digital Information Security in Healthcare, Act

NATIONAL DIGITAL HEALTH BLUEPRINT

NATIONAL HEALTH STACK

ELECTRONIC HEALTH RECORD (EHR) STANDARDS FOR INDIA

2016

Standards Set Recommendations v2.0

Ministry of Health & Family Welfare Government of India

भारत का राजपत्र
The Gazette of India

EXTRAORDINARY
PART II—Section 1
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NEW DELHI, FRIDAY, APRIL 7, 2017/CHAITRA 17, 1939 (SAKA)

MINISTRY OF LAW AND JUSTICE
(Legislative Department)

The following Act of Parliament received the assent of the President on the 7th April, 2017, and is hereby published for general information:—

THE MENTAL HEALTHCARE ACT, 2017
No. 10 of 2017 [7th April, 2017.]

- Indian EHR standards, NDHM, PDP, TPG & Consent
- Multiple-fragmented regulatory & governance standards
- Multiple EHR data standards
- Complexity and Sensitivity of healthcare data

India EHR Standards' challenge - key points



- Ownership of Clinical data with patient
- Clinical Data ready for semantic interoperability through Common data models/resources
- Data coding (SNOMED CT / ICD / LOINC)
- Minimum Data Sets for Clinical and Demographic information
- Data sharing through openEHR and HL7 FHIR

ABDM challenge - key points



Health ID



Digi Doctor



Health Facility Registry (HFR)



NDHM Health Records



Electronic Medical Records (EMR)

- Unique HealthID for Patient
- Registries - DigiDoctor for Practitioners, Facility Registry for Healthcare Providers
- Patient Consent Management for data sharing
- Secure data exchange
- Health Data Management Policy

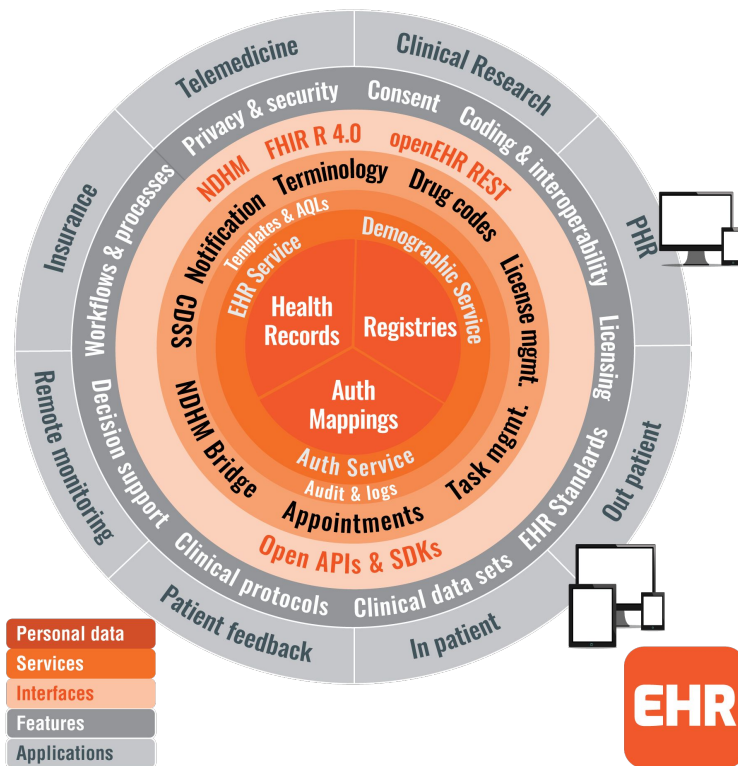
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Data-first digital health infrastructure

...powered by **openEHR** approach

- Standards compliant API-based digital health data platform
- Independently managed data & application layers
- Deploy Compliance, Standards, Security, Privacy & Consent as services
- Build dynamic application ecosystem



Standards compliance

- Designed to comply with the Indian EHR standards
- openEHR specifications in implementing Clinical Data Repository(CDR)
- Security guidelines are based on the OWASP Top 10 Most Critical Web Application Security Risks
- Computable clinical data - coding with SNOMED-CT, LOINC, ICD 10
- HL7 FHIR standards for interoperability of data
- ABDM compliance for Consent based data sharing

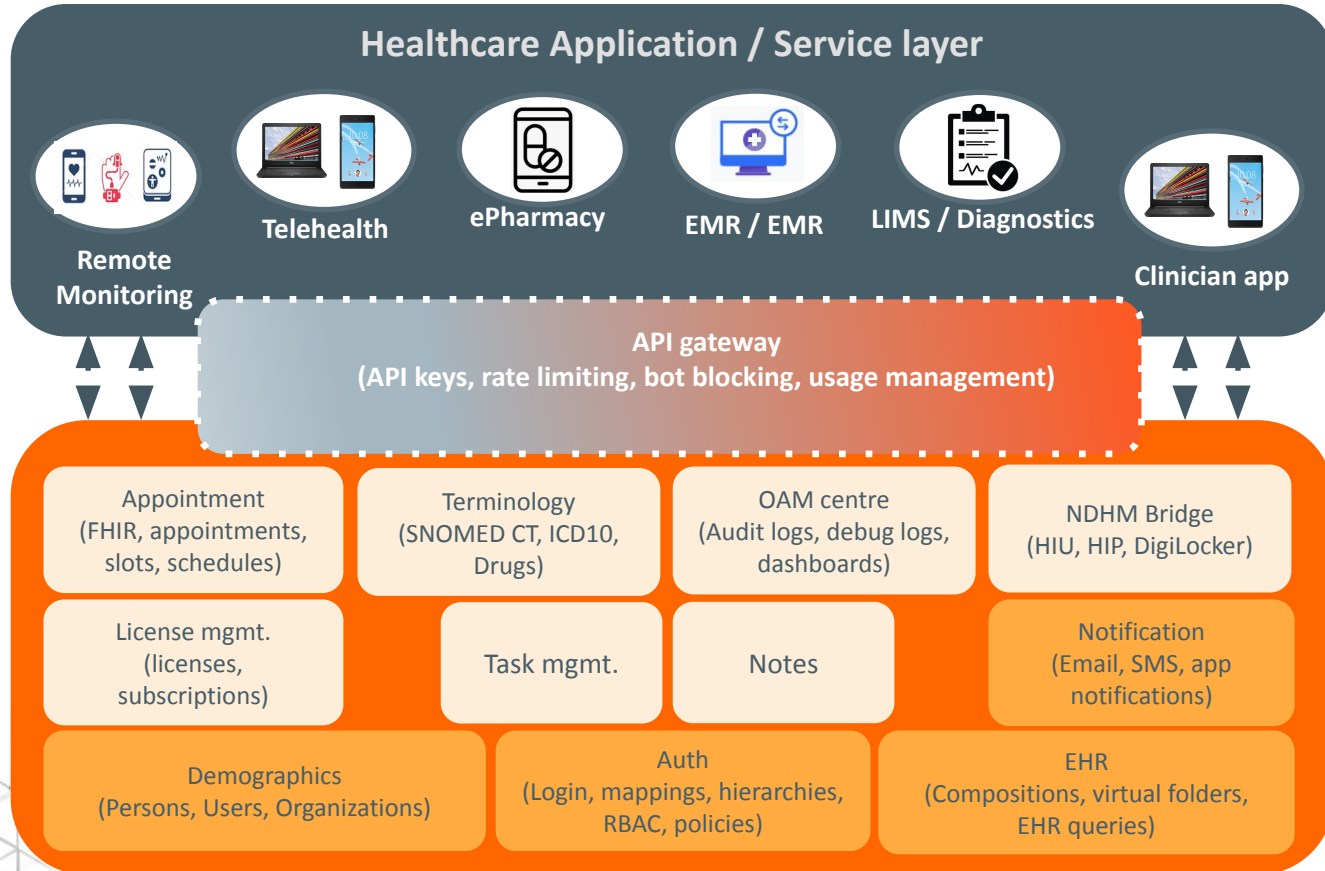
Open platform* principles

- EHR.Network is an open DataFirst digital health platform
- **Open standards** - Built using open & freely available standards
- **Shared information models** - Community curated models from openEHR CKM, Shared custom models
- **Vendor neutral** - supports interoperable applications by independent teams
- **Open data** - Vendor neutral, interoperable & accessible across the life of a person
- **Portability beyond just data** - Schema, queries, workflow artefacts

Ease of application development

- Achieves segregation of data & applications so that both can evolve independently
- Ready to use APIs for quick development & deployment
- Loosely coupled services that give flexibility for developers to pick only the required services
- Flexible data schema - openEHR CDR allows developers to implement their clinical models
- Regulations, standards and compliance as managed services

EHR.Network for Digital Healthcare solutions



EHR.Network
Optional services

EHR.Network
Core services

References

- EHR.Network website - <https://ehr.network>
- EHR.Network documentation - <https://docs.ehr.network/site/>
- openEHR - <https://www.openehr.org/>
- FHIR - <https://nrces.in/ndhm/fhir/r4/all-examples.html>
- LOINC - <http://loinc.org/>
- SNOMED CT - <https://www.snomed.org/>
- Owasp - <https://owasp.org/www-project-top-ten/>
- Open platform - https://apperta.org/assets/Apperta_Defining_an_Open_Platform.pdf

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HealthLife