Health Data Exchange

An API Enabled Roadmap for India

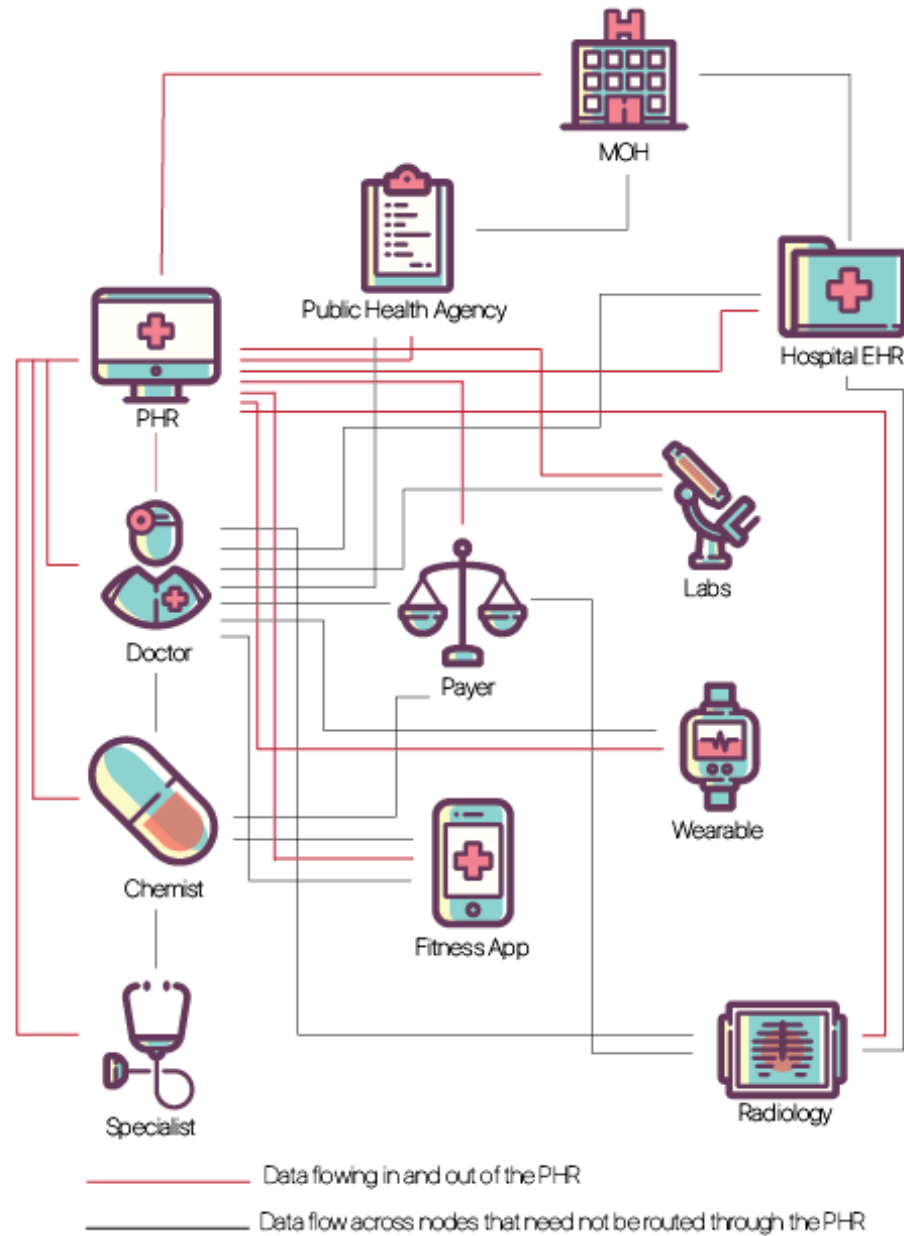# Why Create a Health Data Exchange

KEY REASONS

- *Restricting access to health data results in redundancy, duplication wastage and delays*
- *Significant benefits accrue from combining health data with non-health data*
- *Authorised access could help accelerate medical research*

CHALLENGES

- *The cost of implementation operates as an impediment to adoption*
- *We will need to resist the urge to create nothing more than a nation-wide billing platform*

The Proposed Model

Federated, Patient Centric API Enabled System

TRILEGAL

MOH

Public Health Agency

Hospital EHR

PHR

Doctor

Labs

Payer

Chemist

Wearable

Fitness App

Specialist

Radiology

Data flowing in and out of the PHR

Data flow across nodes that need not be routed through the PHR

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Proposed Model

FEDERATED ARCHITECTURE

- *Collating all health data of 1.3 billion Indians in a national repository is wasteful, expensive and unsafe*

- *A federated system allows data to reside at source and be called on demand*

- *Applications can be developed to synchronise and back-up a patient's EHR on a personal device*

- *The system must be able to record transactions in a verifiable non-repudiable format – possibly using an open distributed ledger*

- *It should be able to query multiple nodes to receive periodic updates*

Proposed Model

UNIVERSAL IDENTIFIER

- *A federated architecture requires a universal identifier so that all data tagged with that identifier can be attributed to the patient*

- *The system should allow patients the discretion to apply the identifier only to that data that they want to*

- *Aadhaar is ideal though its use will need to be designed to comply with the SC restriction on private sector use*

Proposed Model

API ENABLED MODEL

- *Create a standardized taxonomy that applies to all entities in the ecosystem*

- *Build standard protocols that allow applications to exchange information*

- *Build in principles of data minimization and substitutability*

Proposed Model

AUTHORISATION AND CONSENT

- *Access to a patient's personal health data is authorized through a consent framework.*

- *All data exchange will require either a pre-authorization, real-time authentication, or waiver (in case of emergencies)*
  - Third Party applications that provide medical reminders need pre-authorization to access personal health records
  - Diagnostic laboratories would need a patient authentication to send reports to a doctor for a second opinion
  - Public Health Agencies may need waivers to respond to epidemic outbreaks

- *Consent should be capable of being separated in time from the data flow*

- *Efforts must be made to ensure purpose limitation and accountability for use*

Thank You