

# Health Information Exchange

JUNE 2021

## WHAT AND WHY “HEALTH INFORMATION EXCHANGE”?

One of the many lessons learned throughout the COVID-19 pandemic has been the critical need for high-quality, transparent, and accessible electronic health data to better serve consumers. **The goal of health information exchange (HIE) is to facilitate secure, efficient, effective, and equitable patient-centered care.**

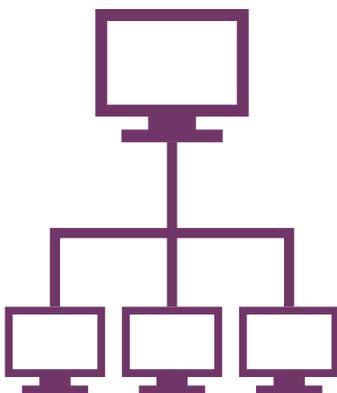
### BENEFITS OF HIE

- Enables care coordination for better patient care, health outcomes
- Allows patients and providers to access a patient’s full health history
- Promotes and facilitates population health management
- Assists in reducing racial and ethnic health disparities
- Makes health care delivery efficient and reduces medical error
- Improves public health emergency responses

### CHALLENGES OF HIE

- Patient privacy concerns
- Conflicting state and federal laws and regulations around information-sharing
- HIE governed and led predominately at the federal and local levels, not at the CA state level
- Disparate data definitions vs. use of common data elements

## POLICY CONSIDERATIONS / DECISION POINTS



**GOVERNANCE:** What government agency should oversee HIE at the state level, what model system would be implemented, and how will this coordinate with existing databases?

Relevant state agencies include: *CA Health and Human Services Agency, Office of Statewide Health Planning and Development, Department of Health Care Services, CA Department of Public Health, Department of Social Services, Department of Justice, California Department Corrections and Rehabilitation, and Department of Technology*

**PROVIDER PARTICIPATION:** Which providers should exchange information and should participation in information exchange be mandatory or optional?

**PATIENT PRIVACY AND INFORMATION SECURITY:**

How should consumers’ information be protected?

**FUNDING:** How should HIE regulation and infrastructure be financed?

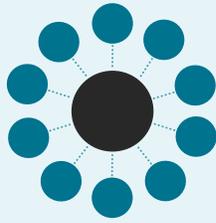
**DATA:** What types of data should be exchanged, by whom, and for what purpose? Should this change over time?

**QUALITY:** How should HIE be used to promote quality of services?

**HEALTH EQUITY:** How should HIE be used to address the social determinants of health and achieve health equity?

**3 TYPES OF HIE DATA MODELS:** <sup>1, 2, 3</sup>

In any given environment, from the community to the state level, HIE is organized along the following spectrum.



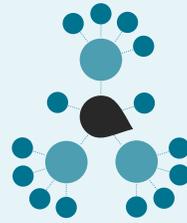
**CENTRALIZED DATA STORAGE & MANAGEMENT**

**Pros**

- One privacy consent approach
- Less expensive to maintain
- Rich set consolidated data

**Challenges**

- Difficult to standardize data
- More difficult to scale-up
- Requires greater trust of users



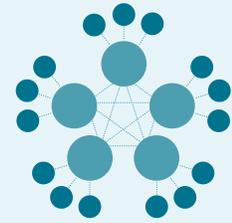
**NETWORK-OF-NETWORKS & CENTRAL HUB**

**Pros**

- Less standardization needed
- Leverage existing investments for buy in
- Central Hub can be pass-through to avoid control concerns

**Challenges**

- More costly to sustain multiple platforms



**DECENTRALIZED W/ USER AGREEMENT**

**Pros**

- Minimizes privacy issues
- Leverages existing investments

**Challenges**

- More expensive to share data
- Relies on voluntary compliance
  - Generally not statewide
- No formal accountability to state
  - Current CA regional model

This chart was adapted from a presentation given at ITUP's Health Information Exchange Policy Forum. For more detail on different data models for HIE, see the California Health Care Foundation's publication: [Designing a Statewide Health Data Network: What California Can Learn from Other States](#).

**TIMELINE**

Federal Policies = State Policies =

- 1996 [Health Information Portability and Accountability Act \(HIPAA\)](#) <sup>4, 5, 6</sup>
- 2001 [Confidentiality of Medical Information Act \(CMIA\)](#) <sup>7, 8, 9, 10</sup>
- 2009 [Health Information Technology for Economic and Clinical Health \(HITECH\) Act of the American Recovery and Reinvestment Act \(ARRA\)](#) <sup>11, 12, 13</sup>
- 2011 [Promoting Interoperability Programs](#) (formerly the Electronic Health Records Incentive Program) <sup>14, 15, 16, 17</sup>
- 2011 [Medi-Cal Electronic Health Records Incentive Program —\\$1.7B Federal Funds](#) <sup>18, 19, 20</sup>
- 2013 [Patient Access to Health Records Act \(PAHRA\)](#) <sup>21, 22, 23</sup>
- 2016 [21<sup>st</sup> Century Cures Act](#) <sup>24, 25, 26</sup>
- 2019 [California Health Information Exchange On-Boarding Program \(Cal-HOP\)—\\$50M Federal Funds](#) <sup>27, 28</sup>
- 2020 [Centers for Medicare and Medicaid Services Interoperability and Patient Access Final Rule](#) <sup>29, 30, 31, 32</sup>
- 2020 [Office of the National Coordinator \(ONC\) Cures Act Final Rule](#) <sup>33, 34</sup>

**WAYS TO SHARE HEALTH DATA** <sup>35</sup>



**Directed Exchange:**

Providers easily and securely send/receive patient health information electronically with other health care providers.



**Query-Based Exchange:**

Providers search and request patient health information from other health care providers; often used in cases of unplanned care, such as an emergency room visit.



**Consumer-Mediated Exchange:**

Patients access and manage their own health information; allows patients control over use of their health information with/among health care providers.

## Definitions of Key Terms:

**Health Information Exchange (HIE):** HIE is the act of secure, electronic transfer or sharing of a patient's health related information, and the technology and policy infrastructure that enables its action.<sup>36, 37</sup>

**Health Information Organizations (HIOs):** An HIO, also referred to as a Health Information Exchange Organization (HIE Organization), facilitates the transfer of health care information electronically among stakeholders of the HIO's designated health care network. Stakeholders include health care providers, hospitals, clinics, payers, and government agencies. Two common types of HIOs are:

- **Enterprise HIOs**—System-specific HIEs built by large hospitals and health systems that only serve partnered/contracted organizations.
- **Regional HIOs (RHIOs)**—Non-profit entities that serve defined geographical areas, are open to any health care organization, and seek to improve quality of patient care through the greater sharing of patient health information.<sup>38, 39</sup>

**Health Information Technologies (HIT):** HITs are electronic systems used by health care professionals and patients to record, share, and analyze health information. HITs include EHRs, PHRs, and electronic prescribing, privacy, and security tools.<sup>40, 41</sup>

**Electronic Health Records (EHR):** EHRs, also known as Electronic Medical Records (EMRs), are electronic versions of a patient's medical history, which include key administrative and clinical data relevant to patient care. EHRs are tools to manage, store, and, in some cases, share patient health data.<sup>42, 43</sup>

**Personal Health Record (PHR):** PHRs are electronic patient health records that patients can maintain, manage, and share themselves. PHRs can be linked to provider managed EHRs, but the patient authorizes access to their PHRs.<sup>44, 45</sup>

**Protected Health Information (PHI):** PHI includes demographic information, medical histories and conditions, and insurance information.<sup>46</sup>

**Interoperability:** Interoperability is the ability of health information systems to cooperatively use health data in a coordinated manner to optimize health care. Interoperability also allows information portability among different health information systems and the patient.<sup>47</sup>

**Population Health:** Population Health is the process of using information, or data, to improve the health outcomes of specific groups and to promote and assist with healthy living in communities.<sup>48</sup>

**Use Case:** A use case is a unique instance of sharing a specific type of patient health information to resolve a particular health care scenario. Each use case has a specific purpose and goal.<sup>49</sup>

## Endnotes

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## About ITUP

ITUP is an independent, nonprofit, health policy institute that has been a central voice in the California health care and health reform landscape for more than two decades. ITUP serves as a trusted expert, grounded in statewide and regional connections with a network of policymakers, health care leaders, and stakeholders. The mission of ITUP is to promote innovative and workable policy solutions that expand health care access and improve the health of all Californians.

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