CT Forum on DNA Testing and Genomic Medicine Role of Health Information Exchange

Allan Hackney

Health Information Technology Officer
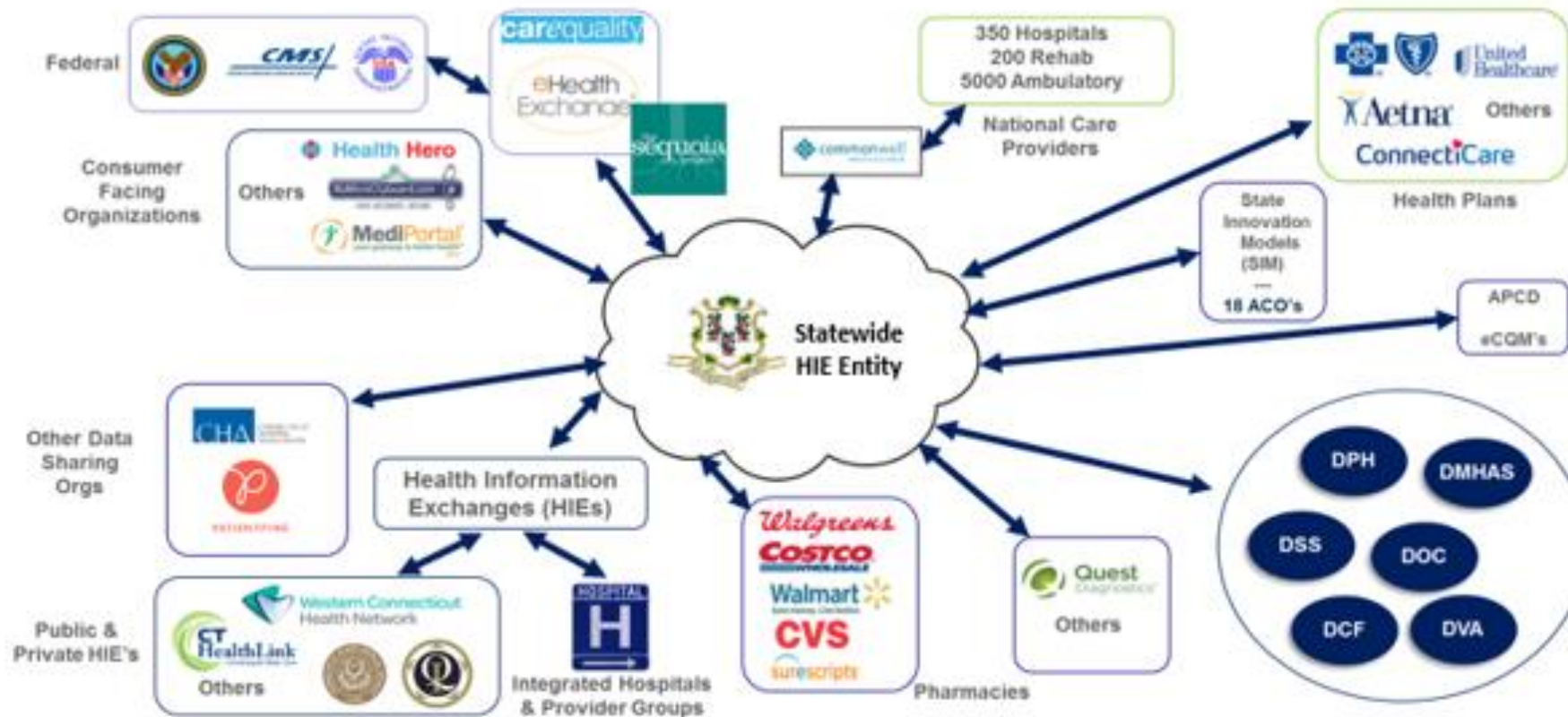
January 23, 2020

OHS

CONNECTICUT

Office of Health Strategy
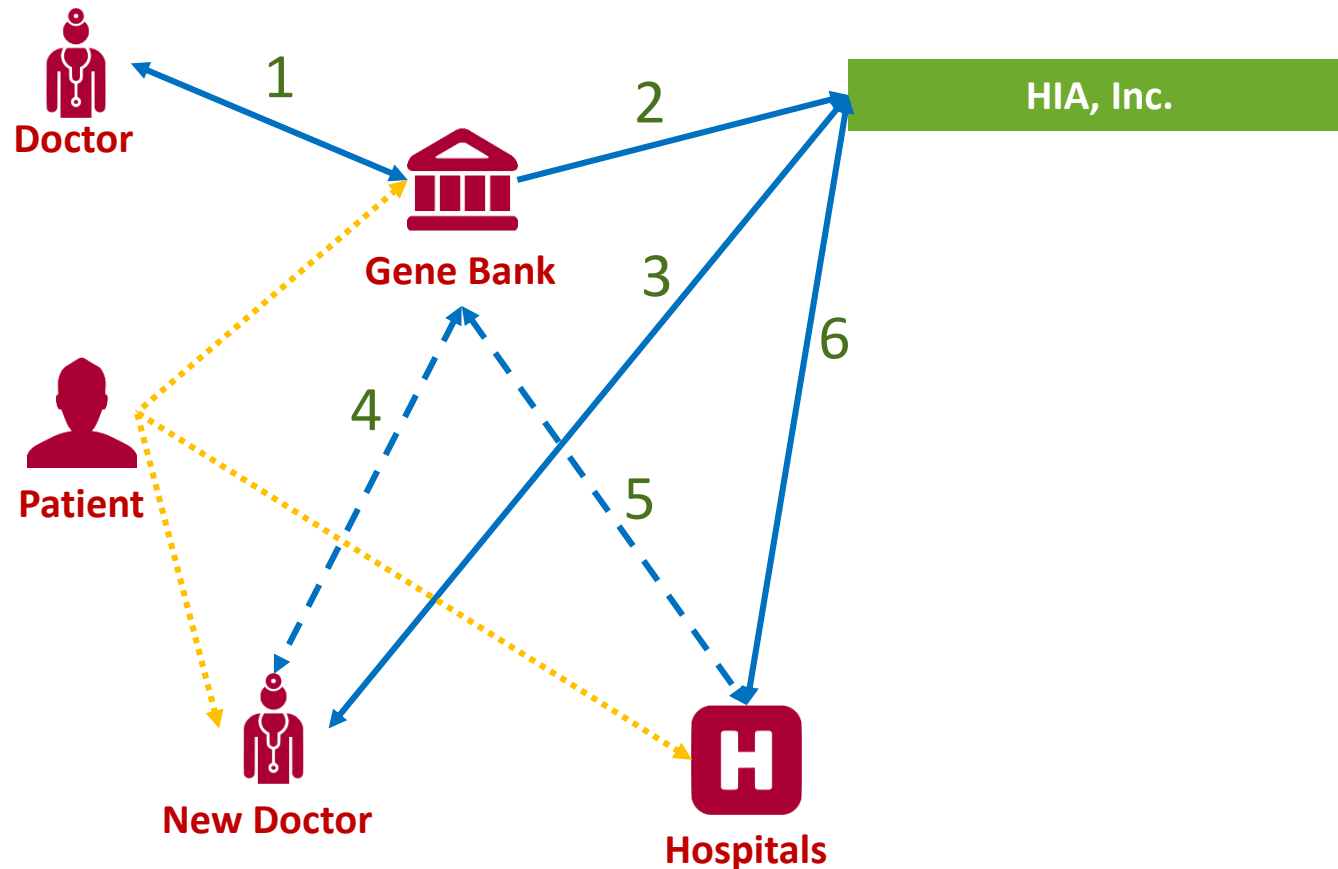
What is Health Information Exchange (HIE)?

❑ *HIE's provide the capability to electronically move clinical information among disparate healthcare information systems, and maintain the meaning of the information being exchanged.*
  - The goal of health information exchange is to facilitate access to and retrieval of clinical data to provide safe, more timely, efficient, effective, equitable, patient-centered care.
  - HIE's are also used by public health authorities to assist in the analysis of the health of populations.

❑ *Health Information Alliance, Inc. (HIA, Inc.) has been established as a nonprofit, nongovernment entity to build and deliver health data exchange services in a "neutral and trusted" manner*

OHS
CONNECTICUT
Office of Health Strategy

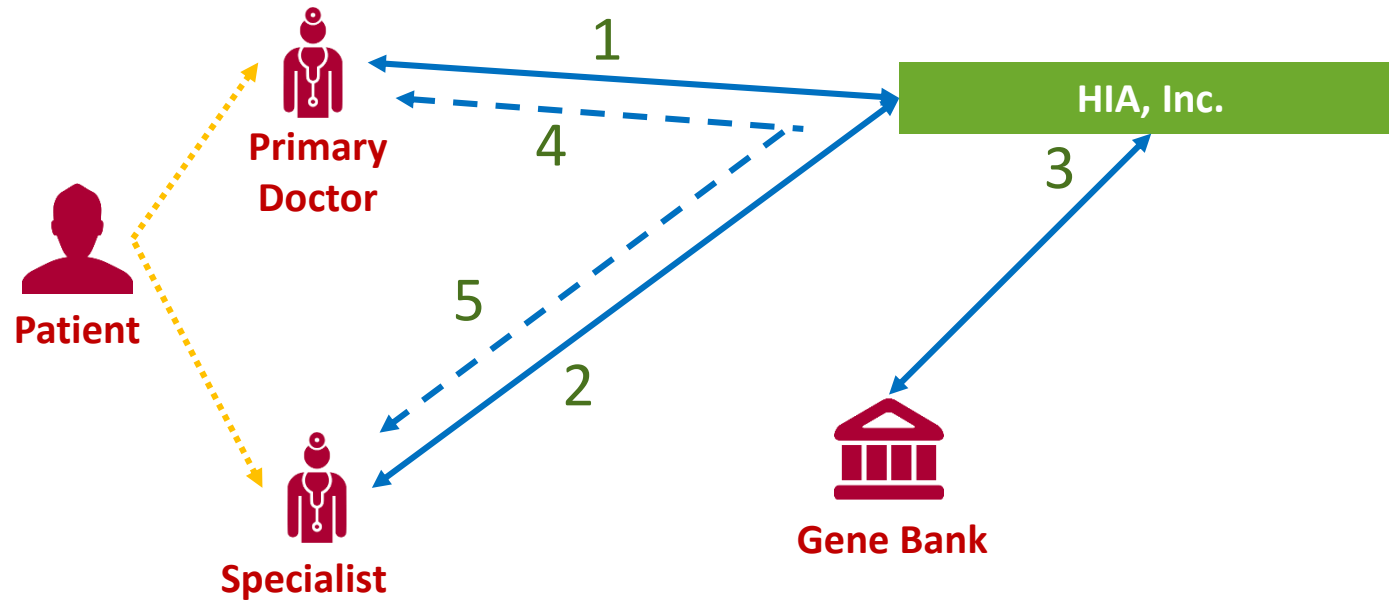# HIE Background: CT HIE Model is Federated

Key HIE objective: facilitating reliable, efficient and secure exchange
of health data among health care givers

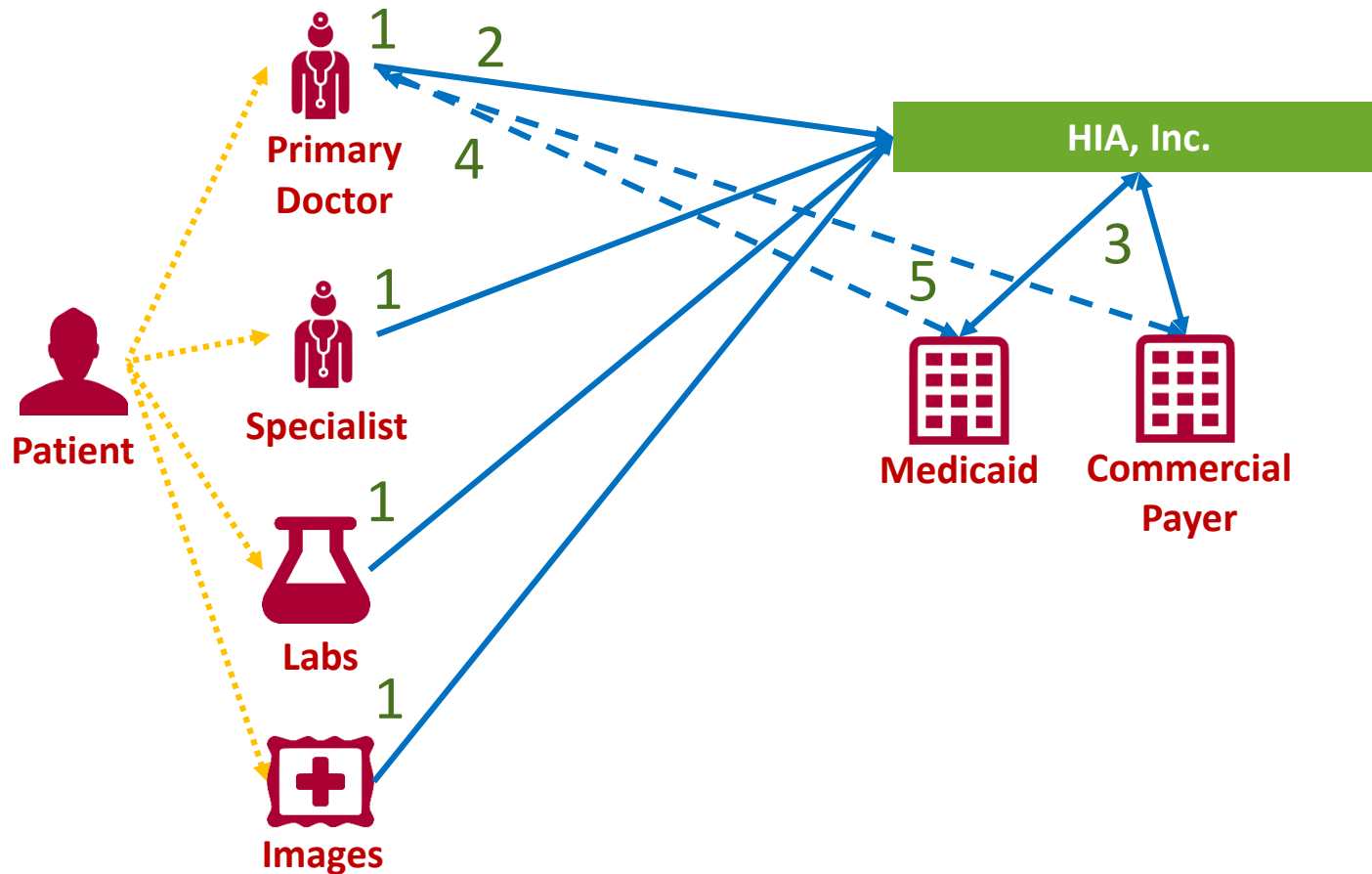# Simple HIE Use Case: Situational Awareness and Query

1. Doctor orders patient's genes mapped. Genomic data is stored where mapping occurred. Doctor receives report.
2. Gene bank notifies HIE that it has genomic data for patient
3. Patient sees a new doctor. New doctor queries HIA, learns where patient genomic data resides.
4. Doctor queries gene bank for detailed information.
5. Patient checks into a hospital.
6. Similar to new doctor, hospital is able to query gene bank if necessary

OHS
CONNECTICUT
Office of Health Strategy
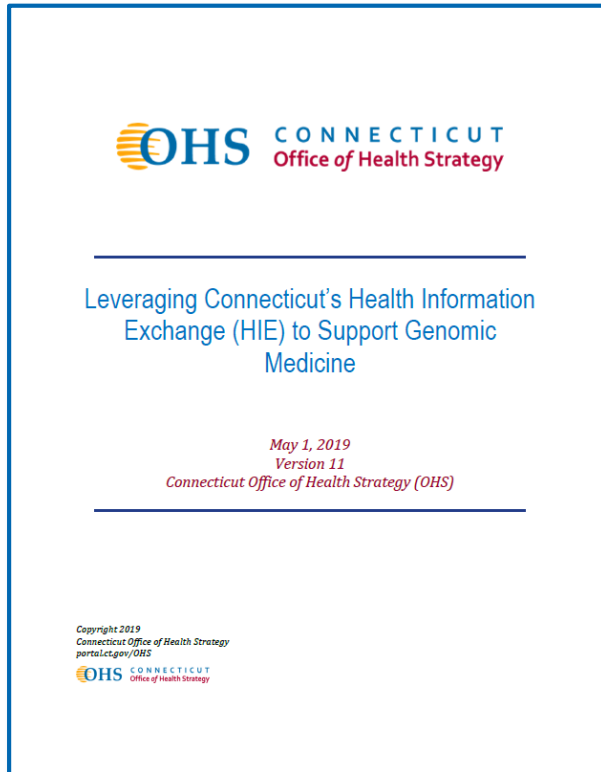
4

Another HIE Use Case: Conditional Alerting

1. Patient is referred to a specialist. An electronic clinical summary is sent to the HIE
2. Specialist diagnoses patient with a condition. Another electronic clinical summary is sent to the HIE
3. HIE detects the dual condition of a) patient has genomic data in a gene bank and b) has a diagnosis that's responsive to precision medical techniques
4. HIE sends an alert to the primary care doctor
5. HIE sends an alert to the specialist

A Payer HIE Use Case: Prior Authorization

1. Patient is seen by the primary doctor and a specialist. Labs and diagnostic images are ordered. An electronic clinical summary is sent to the HIE for each of these four events
2. Primary doctor (or specialist) make a diagnosis for a disease responsive to precision medicine
3. Primary doctor (or specialist) make a request of payer for genetic testing
4. Payer queries HIE for patient clinical summary for prior authorization
5. Payer sends decision to ordering doctor

HIE and Precision Medicine: A CT Opportunity

OHS CONNECTICUT
Office of Health Strategy

Leveraging Connecticut's Health Information Exchange (HIE) to Support Genomic Medicine

May 1, 2019
Version 11
Connecticut Office of Health Strategy (OHS)

Copyright 2019
Connecticut Office of Health Strategy
portal.ct.gov/OHS

OHS CONNECTICUT
Office of Health Strategy

❑ *OHS sponsored a genomics workshop that identified additional valuable uses of an HIE for precision medicine:*
- Clinical decision support
- Data standardization
- Social determinants of health data enrichment
- Others…

❑ *Connecticut is in a unique position to advance the interaction of precision medicine and HIE:*
- Deep genomic resources in CT:
    - Yale, Sema4, Jackson Labs, UConn and more…
- HIE architecture in CT designed to adapt to emerging standards and capabilities in genomic data sharing

An opportunity exists to harness CT stakeholder interest, the emergence of the HIE in CT, and federal funding to create value-added precision medicine use cases

OHS CONNECTICUT
Office of Health Strategy

Contacts

Health Information Technology Office:
Allan Hackney, allan.hackney@ct.gov

Health IT Office Website:
https://portal.ct.gov/OHS/Services/Health-Information-Technology