HIE Policy Board Sustainability Subcommittee Meeting

September 9, 2016

AGENDA

- Introduction of new Subcommittee members *[10:30 AM – 10:35 AM]*

- *Discussion #1* - Initial data mapping initiative with Clinovations *[10:35 AM – 11:20 AM]*

- *Discussion #2* - Business and financial drivers of DC HIE participation *[11:20 AM – 11:55 AM]*

- Wrap-up and next steps *[11:55 AM – 12:00 PM]*

NEW SUBCOMMITTEE MEMBERS**

- **Allison Viola**
  - Kaiser Permanente / Director, Health IT Policy

- **Sam Hanna**
  - George Washington University / Program Director, Masters of Healthcare Informatics & Analytics
  - PricewaterhouseCoopers / Senior Director, Health Services Advisory Practice

**Appendix A* of Subcommittee Charter Updated

DC HIE Data Summary

For Authorized Use Only – Confidential

June 23, 2016

Goals and Objectives

Goal: Gain foundational understanding of available data, where it's stored and barriers to data exchange within the District

Objectives

Collaborate with key stakeholders to gain pertinent information	**Document health data flow within the District at both a high level and technical view**	**Highlight key opportunities for enhanced data flow**

Improved Data Access   **Increased Collaboration**

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Data Sources and Data Stores Reviewed

Point-of-Care Data *Sources*

- Hospitals
- Ambulatory Clinics
- Ancillary Services
  - Laboratories
  - Radiology Centers
  - Pharmacies
- iCAMS

District Data *Stores*

- Medicaid Claims and Administrative Data
- Case Management
- Public Health Registries
- Annual Hospital Discharge Database
- Surveillance Database
- iCAMS

HIE Data *Stores*

- Capital Partners in Care (CPC)
- Children's IQ Network
- CRISP HIE

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Current State of Information Exchange

PROBLEM STATEMENT:

Data availability depends on where care is sought

Data access and connectivity among data users is inconsistent throughout the District

-Lack of EHRs or access to Health IT; EHRs not connected to HIE; HIEs not connected to each other

PROVIDER IMPACT:

- Prevents effective participation in value-based payment models
- Impacts care coordination and delivery of quality, safe, effective care
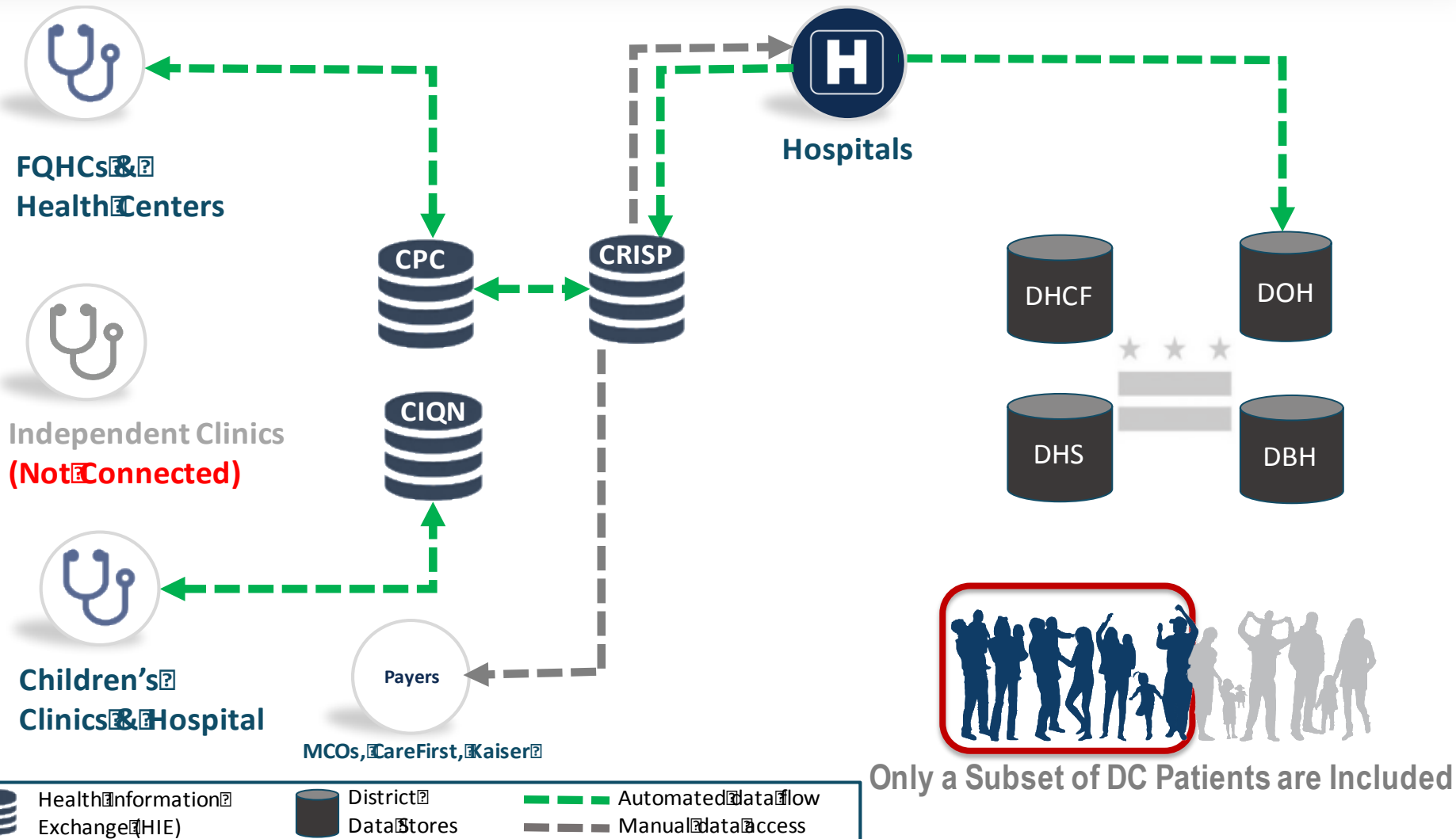
DC GOVERNMENT IMPACT:

- Inability to develop population health services
- Limited ability to develop effective care and payment programs (e.g. health homes)
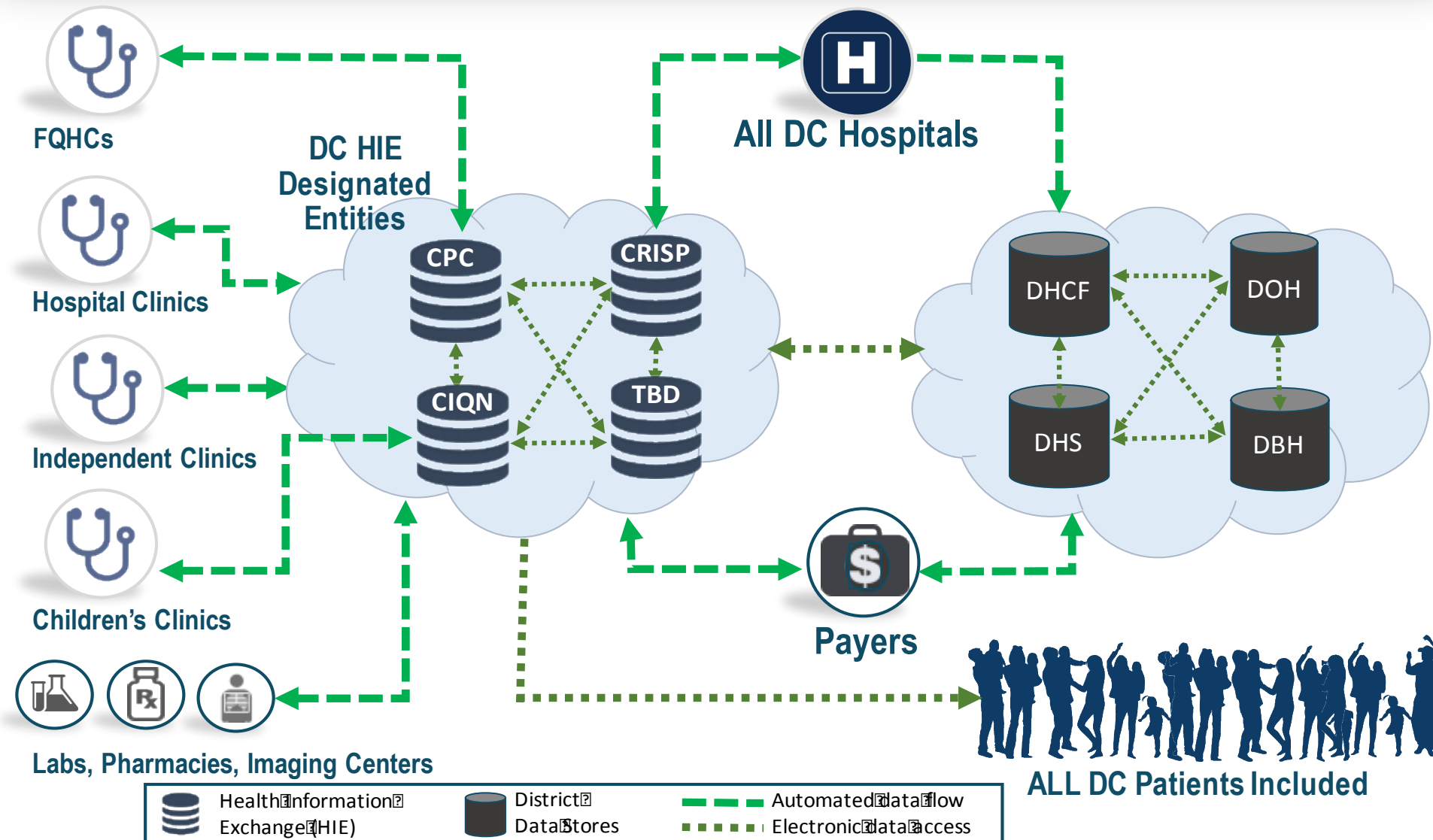- Needs of most underserved population are not identified nor met

PATIENT IMPACT:

- Increased potential for duplicate or inappropriate treatment or testing
- Limits self-advocacy

Current State

FQHCs &
Health Centers

Independent Clinics
(Not Connected)

Children's
Clinics & Hospital

CPC

CRISP

CIQN

Payers

MCOs, CareFirst, Kaiser

Hospitals

DHCF

DOH

DHS

DBH

Only a Subset of DC Patients are Included

Health Information Exchange (HIE)	District Data Stores	— — Automated data flow	— — Manual data access

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Potential Future State (For Illustrative Purposes Only)

FQHCs

Hospital Clinics

Independent Clinics

Children's Clinics

Labs, Pharmacies, Imaging Centers

DC HIE Designated Entities

CPC
CRISP
CIQN
TBD

All DC Hospitals

DHCF
DOH
DHS
DBH

Payers

ALL DC Patients Included

| | Health Information Exchange (HIE) | | District Data Stores | | Automated data flow |
| | Electronic data access |

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VISION:

By 2021, a foundation for DC HIE Ecosystem serves ALL District residents.

- *ALL* patients
- *ALL* clinics
- *ALL* hospitals
- *ALL* payers

PROVIDER IMPACT:

- Enables participation in quality and value-based care programs
- Facilitates safe and effective care delivery at the point of care
- Data integration for effective practice-based and hospital-based population health

DC GOVERNMENT IMPACT:

- DC has the ability to _access_ and _use_ all health data for patients
- DC can determine unmet needs and develop effective programs

PATIENT IMPACT:

- Care is coordinated amongst all providers who care for a patient
- Patients have access to their health information to engage in care
- Improved health outcomes

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1. Participate in federal and other programs to support DC hospitals, clinics, and other care delivery organizations to adopt certified EHR technology

2. Support technical assistance delivery to organizations/providers that are low adopters

3. Support connectivity of EHRs and provider-based health IT systems to DC Designated HIEs

# Targeted Outcomes of DC HIE Designation

1. Provide *integrated* (electronic and automated) data access to DC Designated HIEs and providers served by them <u>and</u> DC Government

2. Provide data via query/retrieve, direct interface, batch, or other electronic request/receipt mechanism to other DC Designated HIEs <u>and</u> DC Government

3. Execute data-sharing agreements to support integration and data access by providers, DC government, and patients
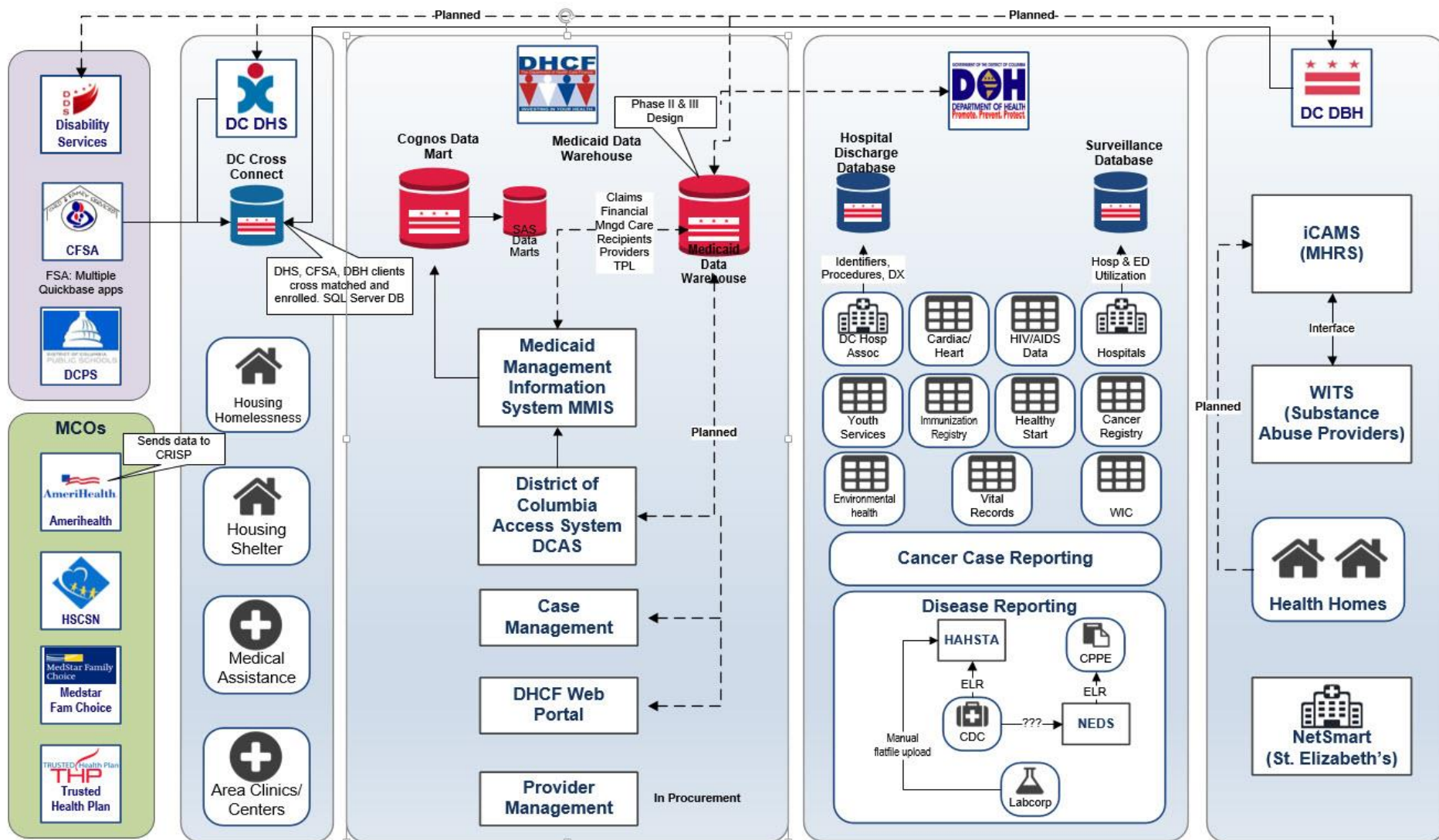
HIE Designation Process Creates the HIE Ecosystem Foundation for the District

District Data Flows

DC Clinical Data Map

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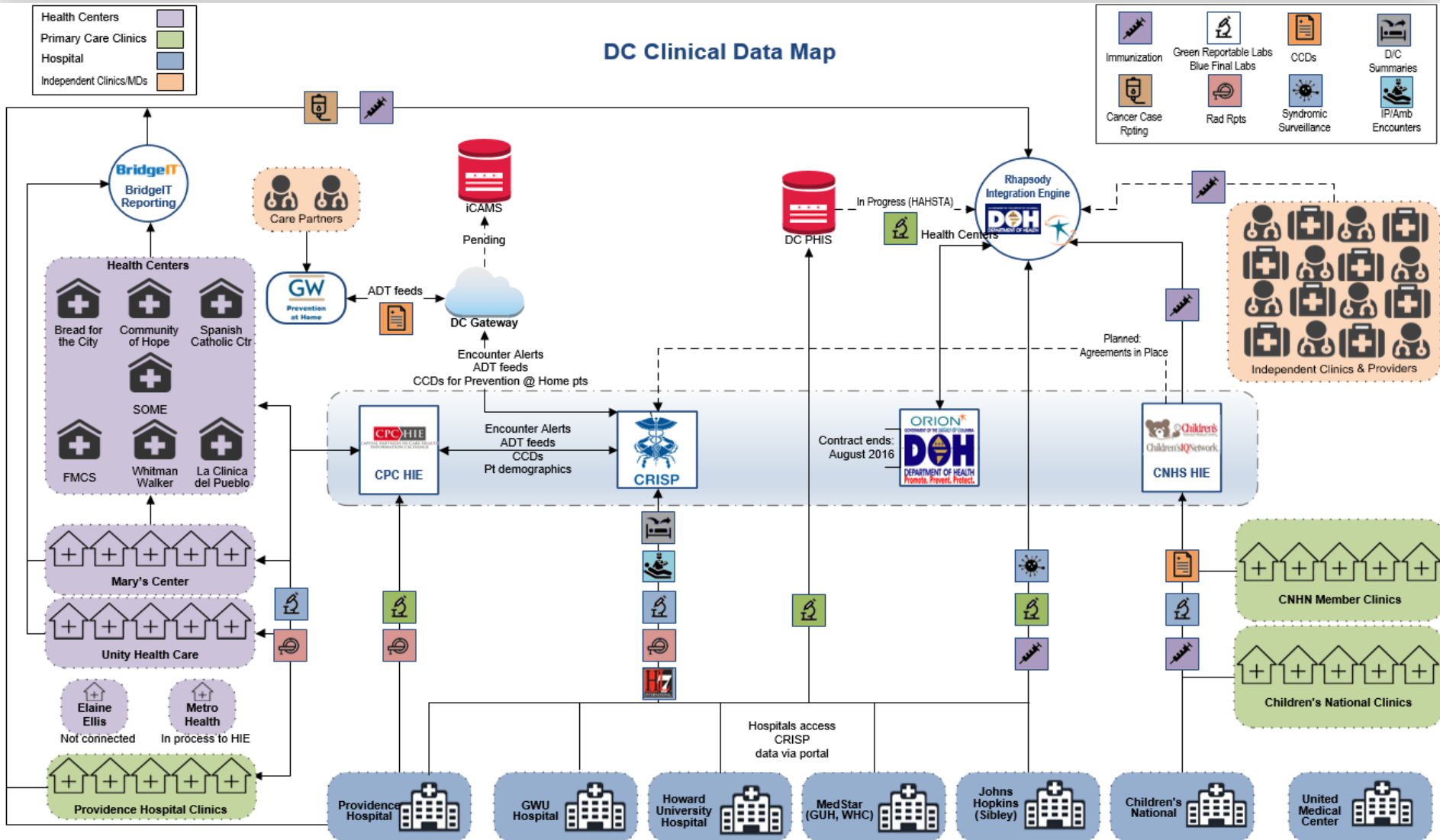
DC Data Exchange Heat Map

Org/Group	Inpt/Amb	EHR/Health IT	CCDs	Lab	Rad	Cancer Cas	CPC	CRISP	CIQN
Clinical Facility			**Data Exchanged**				**HIE or Repository With Data**		
Bread for the City	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Community of Hope	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Elaine Ellis	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Family & Medical CS	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
La Clinica del Pueblo	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Mary's Center	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Metro Health	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
SOME	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Whitman Walker	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Planned Parenthood	Ambulatory	NextGen	NO	NO	NO	NO	NO	NO	NO
Unity Health Care	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Providence Clinics	Ambulatory	eCW	YES	YES	YES	YES	YES	ENS Panel	NO
Children's Clinics	Ambulatory	eCW	YES	YES	YES	YES	NO	NO	YES
Peds Clinics - CNHN	Ambulatory	eCW	YES	YES	YES	YES	NO	NO	YES
MedStar Clinics	Ambulatory	GE Centricity -> Cerner	NO	NO	NO	UNK	NO	NO	NO
Howard Clinics	Ambulatory	Allscripts Enterprise	NO	NO	NO	UNK	NO	ENS (IN PROG)	NO
GWU Clinics (MFA)	Ambulatory	Allscripts Enterprise	UNK	UNK	UNK	UNK	NO	ENS Panel	NO
UMC Clinics	Ambulatory	eCW (Implementing)	NO	NO	NO	UNK	NO	NO	NO
Johns Hopkins Clinics	Inpatient	Epic	NO	NO	NO	UNK	NO	ADT, Lab, Rad	NO
MedStar Georgetown Hosp	Inpatient	Cerner	NO	NO	NO	UNK	NO	ADT, Lab, Rad	NO
MedStar Wash Hosp Ctr	Inpatient	Cerner	NO	NO	NO	UNK	NO	ADT, Lab, Rad	NO
GWU Hospital	Inpatient	Cerner	NO	YES	UNK	UNK	NO	ADT, Lab, Rad	NO
Johns Hopkins - Sibley Hosp	Inpatient	Epic	NO	NO	NO	UNK	NO	ADT, Lab, Rad	NO
Howard Univ Hospital	Inpatient	Siemens	NO	NO	NO	UNK	NO	ADT, Lab, Rad	NO
Providence Hospital	Inpatient	MEDITECH	NO	YES	YES	UNK	YES	ADT, CCD, Lab, Rad	NO
Children's National	Inpatient	Cerner	YES	YES	UNK	UNK	NO	NO	NO
UMC Hospital	Inpatient	MEDITECH	NO	NO	NO	NO	NO	NO	NO
Ind Practices Achieving MU	Ambulatory	Various	NO	NO	NO	UNK	NO	Varies	NO
Ind Practices Not Achieving MU	Ambulatory	Various	NO	NO	NO	NO	Varies	Varies	Varies
Ind Practices Without EHRs	Ambulatory	None	NO	NO	NO	NO	NO	NO	NO
GCM Radiology	Imaging Ctr	Unknown	N/A	N/A	YES	N/A	N/A	N/A	N/A
Foxhall MRI (Progressive Rad)	Imaging Ctr	Unknown	N/A	N/A	YES	N/A	N/A	N/A	N/A
Washington Radiology Assoc	Imaging Ctr	Unknown	N/A	N/A	YES	N/A	N/A	N/A	N/A
Other / Ind Radiology Centers	Imaging Ctr	Unknown	N/A	N/A	NO	N/A	N/A	N/A	N/A

- **Data Exchanged:** Data types and formats available for exchange from Organization's EHR
- **HIE or Repository With Data:** Indicates where HIE or Data Store electronically receives data from Organization.
- **Values:** Yes; No; UNK = Unknown at this time; IN PROG = In Progress; Varies = Varies by individual Organization
- Data availability collected from interviews and review of available HIE documentation April/May 2016
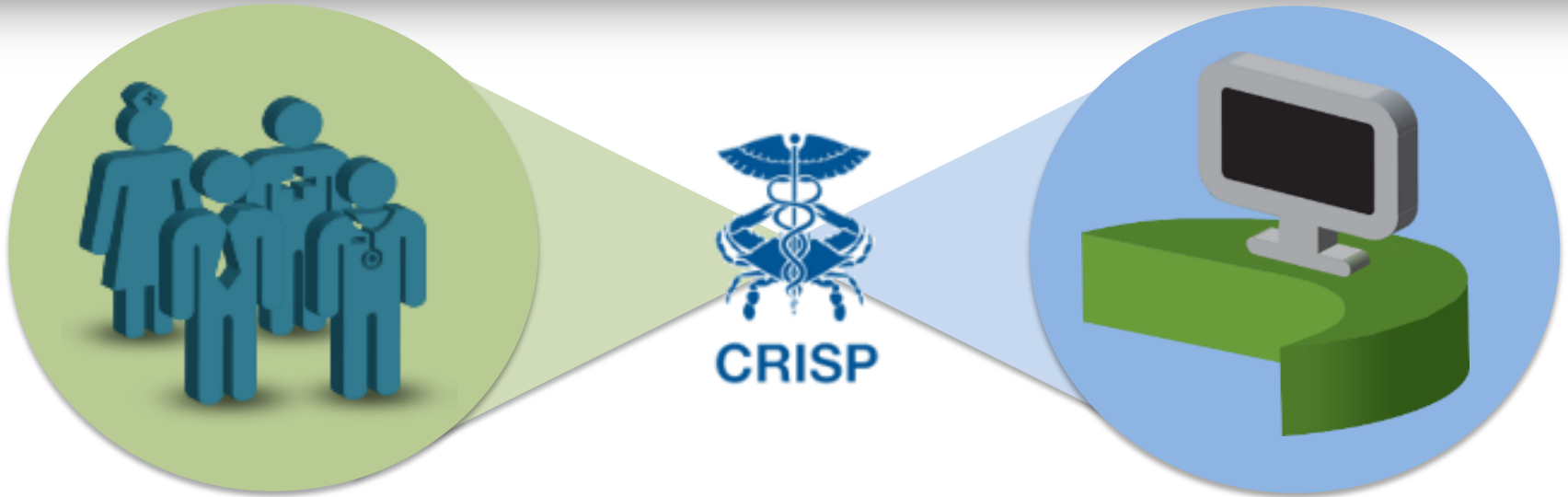
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Heat Map Quick Reference

Ref	Ambulatory Connectivity: C-CDA	Operated By	Platform	Exchange Format/Data	Details
1	Capital Partners in Care (CPC)	DCPCA	eCW eHX	C-CDA Encounter Summary	CHCs, FQHCs, Providence-owned clinics
2	Children's IQ Network	CNMC	eCW eHX	C-CDA Encounter Summary	CNMC-owned, IQ network participants (peds)

Ref	Ambulatory Connectivity: HL7 messages	Operated By	Platform	Exchange Format/Data	Details
1	Capital Partners in Care (CPC)	DCPCA	eCW eHX	HL7 v2: Laboratory Results	Upon final: All labs w/in connected clinics; Providence labs
2	Capital Partners in Care (CPC)	DCPCA	eCW eHX	HL7 v2: Radiology Results	Upon final: All rad rpts w/in connected clinics; Providence rad rpts
3	Children's IQ Network	CNMC	eCW eHX		verify lab, rad connectivity (follow-up)

Ref	Inpatient Connectivity: HL7 messages	Operated By	Platform	Exchange Format/Data	Sites Connected
1	CRISP	CRISP		HL7 v2 ADT	All hospitals except UMC
2	DC DOH (Syndromic Surveillance)	DC DOH		HL7 v2 ADT	All hospitals? (verify UMC)
3				HL7 Cancer Case Reporting	MU hospitals? MU clinics (discuss with DOH)

Ref	Data Repositories/Warehouses	Operated By	Platform	When	Who
1	CRISP	CRISP	Mirth, Initiate	Locked progress note, Final Results	All inpatient/ED encounters (except UMC), FQHCs, Providence clinics
2	Prevention @ Home	GWU	(Verify)	Query-based	Enrolled patients
3	DC Immunization Registry	DC DOH			Get list/% of connected DC ambulatory sites (small practice)
4	DC PHIS				Different from IR? ELR intf being built. What reportable conditions?

Ref	Integration Engines				
1	eCW eHX				?UMC plans for eHX/eCW?
2	DC Gateway				
3	Bridge-IT (for eCW connected clinics)				
4	Hospital-specific IE				
5	DOH Orion Rhapsody				

Ref	Outstanding Items/Questions
1	LabCorp/Quest Laboratory Data -- outside of connected clinics (Lab results, Reportable Labs (ELR))
2	Medication Data - Surescripts query? (CRISP, clinic specific - is this data available/stored anywhere) - NO (Available functionality w/in EHRs but not part of Med List)
3	Data stored vs. Data "available" -- w/in repositories vs. available via query -- determine representation methods (e.g. CRISP encounter query, Surescripts med history query)
4	Any clinical access to claims registry/summary in DC?
5	Direct connectivity evaluation -- Reality is that individual ambulatory clinics in DC are not connected to a HISP that enables provider-to-provider exchange, even amongst Meaningful Users
6	How to show/depict CPC/CIQN/CRISP patient look-up/query?
7	What is in Orion HIE -- and plans to migrate to options post August 2016

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HIE Data Access

✓
- **Hospitals:** Providence, GWU, Howard, MedStar, Johns Hopkins
- **Payers:** MCOs, CareFirst, Kaiser
- **Health Centers**
- **DC Gateway**
- **Ambulatory:** 19 organizations

✗
- **Hospitals:** Children's (Pending), United Medical Center

Available Data:	Radiology Reports	Discharge Summary
	Lab Reports	HL7 Visit Data
	Encounter Data	C-CDAs (Inpatient)

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- **Health Centers**
- **FQHCs**
- **Providence Hospital**
- **Providence Clinics**
- **CRISP**

- **All other ambulatory providers**

Available Data:

Ambulatory Encounter Data

Final Laboratory Results

Final Radiology Reports

HIE Data Access: Children's IQ Network

✅
- **Children's Clinics**
- **Children's Affiliated/ Participating Clinics**
- **Children's Hospital**
- **DOH (Immunization reporting only)**

❌
- **All other ambulatory providers**
- **All other hospitals**

Available Data: Final Laboratory Results Ambulatory Encounter Data
Final Radiology Reports Ambulatory Progress Notes

How does patient data flow within the District?

Clinical Example #1:

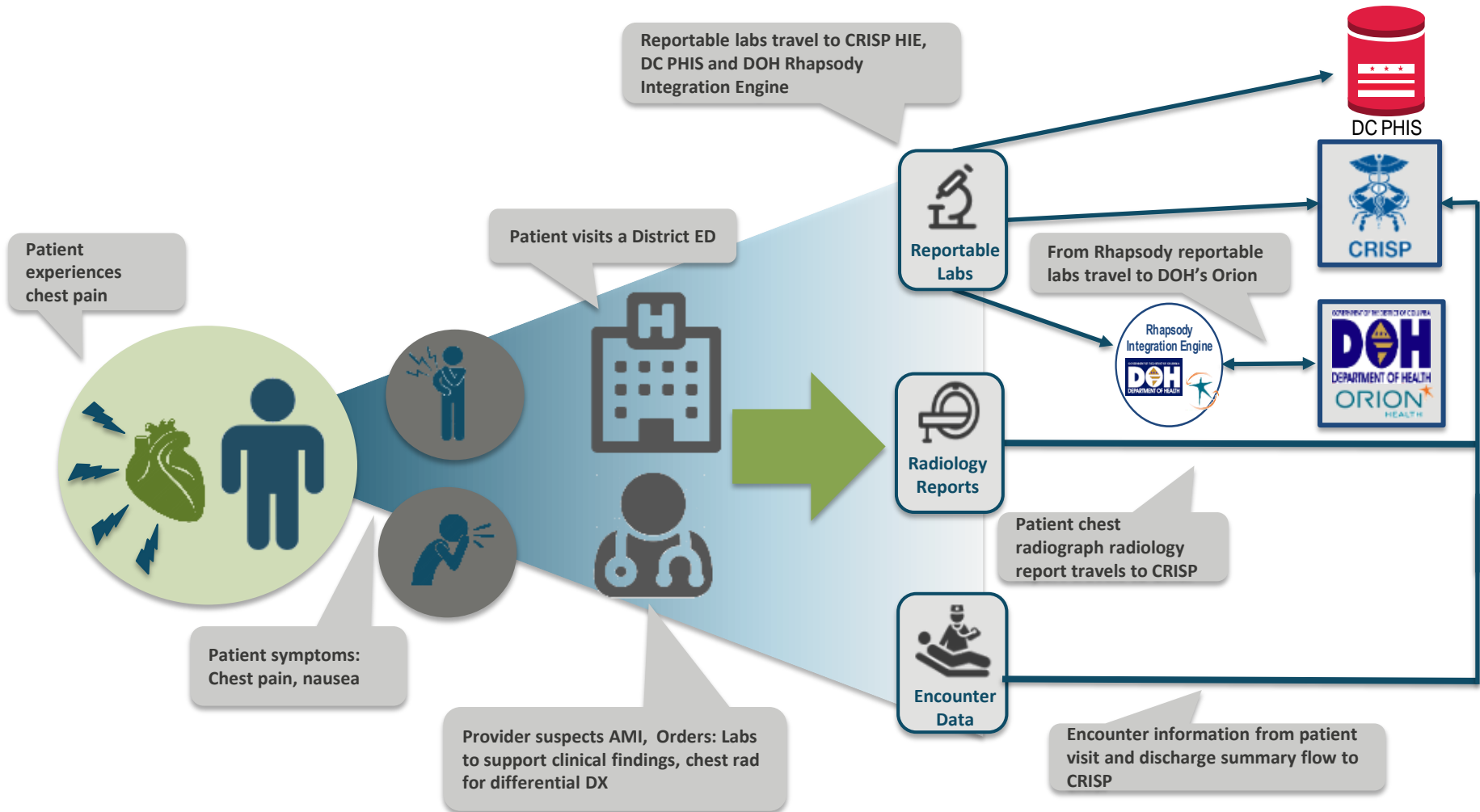# Hospital/ED Encounter and Clinic Follow-up Visit

Cardiac Event

Reportable labs travel to CRISP HIE, DC PHIS and DOH Rhapsody Integration Engine

DC PHIS

CRISP

Patient visits a District ED

Reportable Labs

From Rhapsody reportable labs travel to DOH's Orion

Rhapsody Integration Engine
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DOH DEPARTMENT OF HEALTH ORION HEALTH

Patient experiences chest pain

Radiology Reports

Patient chest radiograph radiology report travels to CRISP

Patient symptoms: Chest pain, nausea

Encounter Data

Provider suspects AMI, Orders: Labs to support clinical findings, chest rad for differential DX

Encounter information from patient visit and discharge summary flow to CRISP

23

Potential for Data Exchanged Within the District

Providence

Howard

Johns Hopkins

GWU

MedStar

United Medical Center
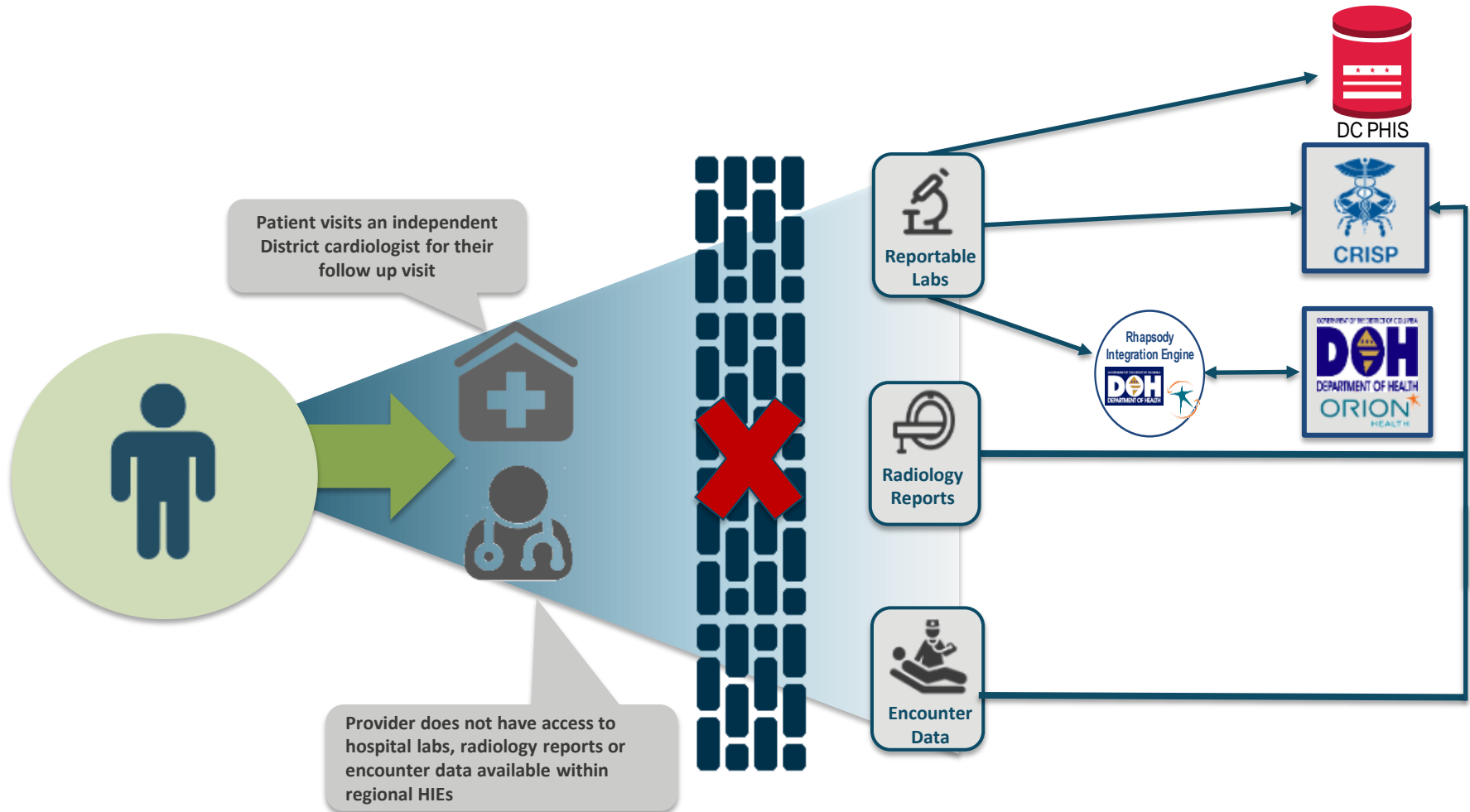- CRISP - pending

Children's National
- CRISP - pending

Cardiac Event

Patient visits an independent District cardiologist for their follow up visit

Provider does not have access to hospital labs, radiology reports or encounter data available within regional HIEs

DC PHIS

CRISP

Reportable Labs

Rhapsody Integration Engine

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ORION HEALTH

Radiology Reports

Encounter Data

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Potential for Data Exchanged Within the District

- Independent Specialty Providers have limited or no connectivity to District HIEs
- Independent Specialty Providers who are connected share limited data sets
- Data is not accessible or available in an easily consumable form to Independent Providers from HIEs

How does patient data flow within the District?

Clinical Example #2:
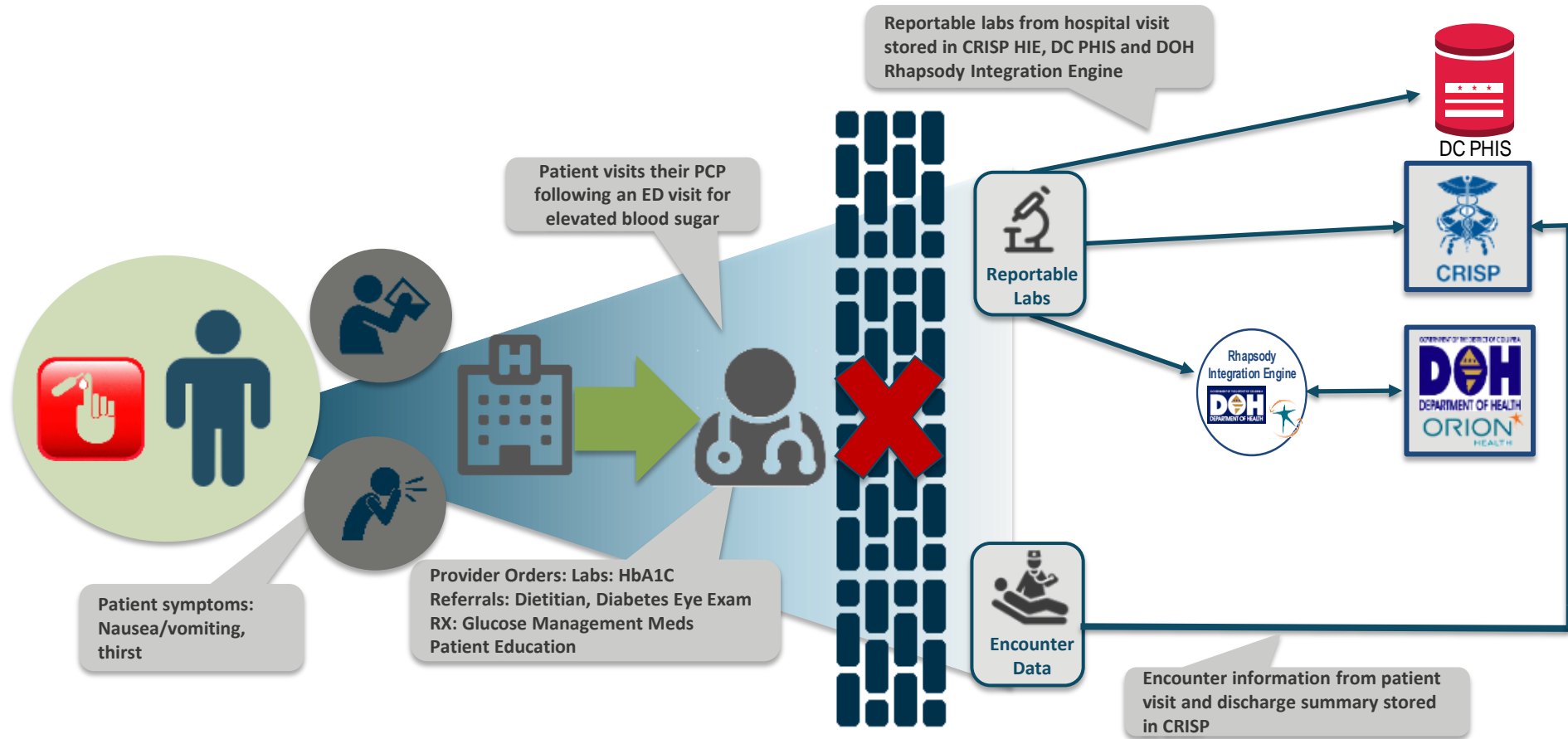
Initial PCP Encounter

clinovations
GOVERNMENT + HEALTH

Diabetes Management

Reportable labs from hospital visit stored in CRISP HIE, DC PHIS and DOH Rhapsody Integration Engine

Patient visits their PCP following an ED visit for elevated blood sugar

Patient symptoms: Nausea/vomiting, thirst

Provider Orders: Labs: HbA1C
Referrals: Dietitian, Diabetes Eye Exam
RX: Glucose Management Meds
Patient Education

Reportable Labs

Encounter Data

DC PHIS

CRISP

Rhapsody Integration Engine

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Encounter information from patient visit and discharge summary stored in CRISP

Potential for Data Exchanged Within the District

- Independent Primary Care Providers have limited or no connectivity to District HIEs
- Independent Primary Care Providers who are connected share limited data sets
- Data is not accessible or available in an easily consumable form to Independent Providers from HIEs

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Summary

Patients Served

- **Current HIEs serve distinct patient populations**

- **Only a subset of patients served**

CPC HIE
- FQHCs
- Providence Hospital

CNHS HIE
- Children's Hospital
- Children's Clinics
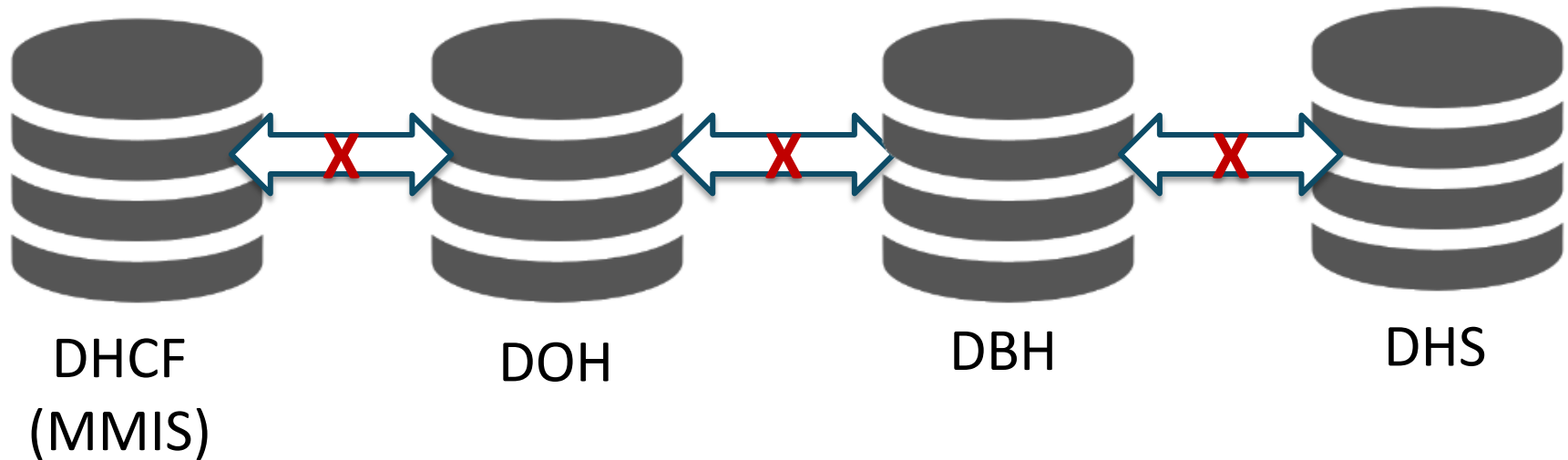- Children's affiliated clinics

CRISP
- 6 Out of 8 Hospitals

0% of HIEs Serve These Patients

Examples
- United Medical Center
- Independent Benning Rd, Anacostia Providers/Clinics

DHCF (MMIS)

- **Medicaid Claims**

DOH

- **Case Management**
- **Hospital Discharge Database**
- **Surveillance Database**

DBH

- **iCAMS**

DHS

- **Housing**

Illustrative Purposes Only – Data Store Listings Are Not Comprehensive (Examples)

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Pending systems can integrate the data of consumers receiving services from DHS, DHCF, DBH, CSOSA & DCPS

Housing Homeless services

Behavioral Health

DHS, DHCF, DBH Clients

Legal Issues Parole/Probation

School Based Counselors

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Inpatient Encounters

Patient Data
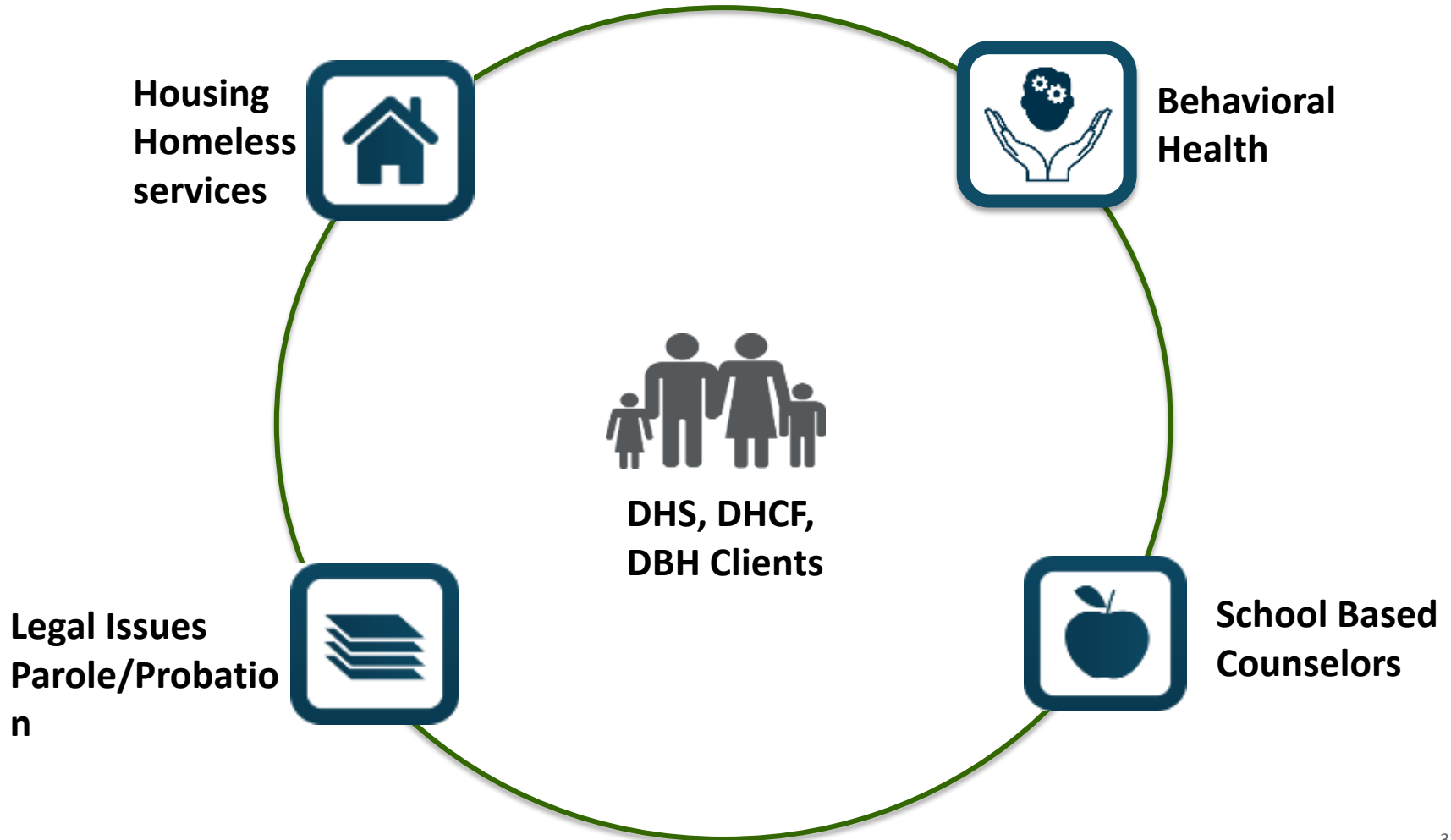
Ambulatory Encounters
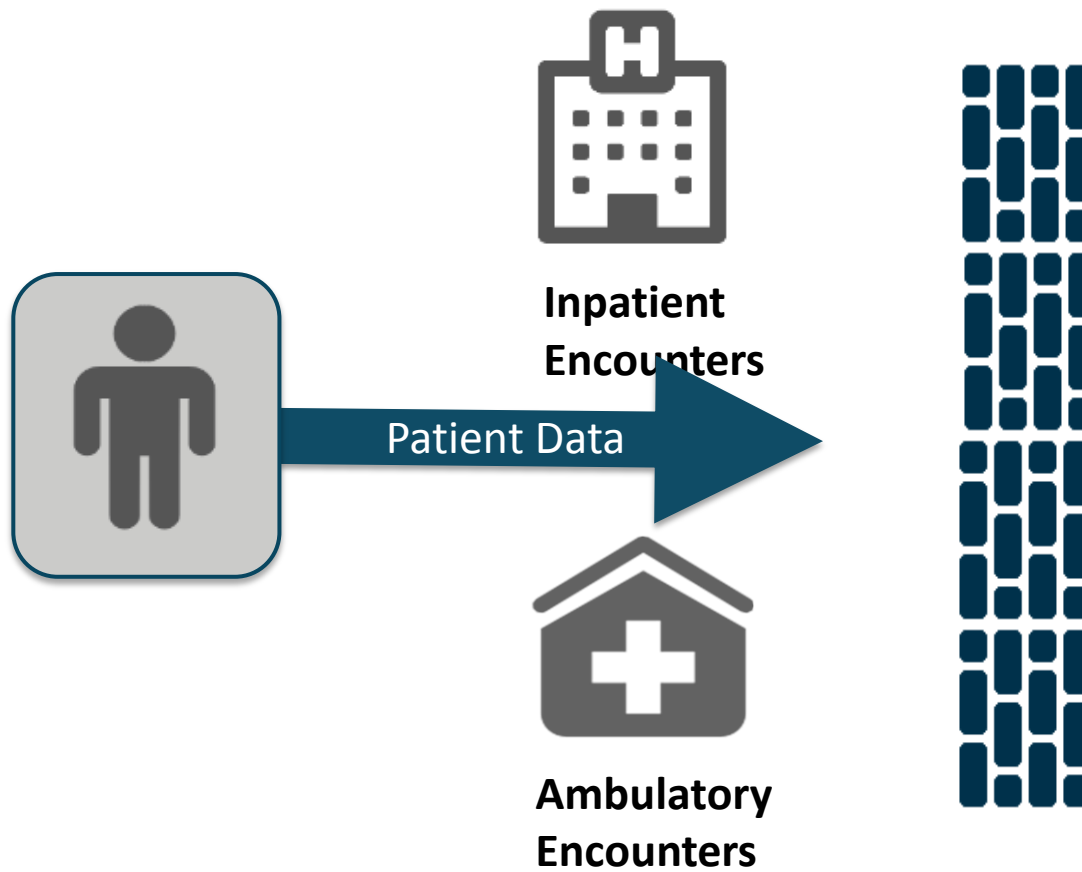
Lack a Longitudinal View of Patient Encounters

ED/Hospital encounters: Until Children's National and UMC are connected via CRISP

Ambulatory encounters: Outside of FQHCs + Providence Clinics Children's National has their own

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Appendix

SUMMARY – DC HIE APPROACH

ROOT CAUSE/ISSUE	CARE COORDINATION, DELIVERY REFORM, PROVIDER IMPACT	DC GOV – PUBLIC HEALTH, POULATION HEALTH IMPACT	PATIENT IMPACT	FUTURE VISION (BY 2021): DC HIE ECOSYSTEM
Where you present for care either: • Has an HIE-connected Health IT/EHR • Has Health IT/EHR, but is not connected to an HIE • Does not have any Health IT	Can participate (CHCs, Children's only)/Have data Cannot participate/do not have access to data	• DC organizations not participating from EHR incentive programs • DC has visibility into a small subset of patients for non-claims health information	• **Care is not coordinated** • **Patients must login to multiple portals for information – within an HIE or across HIE** • **Patients do not have electronic access to their health information**	• ALL Ambulatory Clinics have EHRs connected to DC Designated HIE(s) • ALL Hospitals have EHRs connected to DC Designated HIE(s)

If hospital/clinic is connected to an HIE, it is siloed:
• Only connected to the single HIE and the clinic(s)/hospital(s) connected to that HIE
• HIEs are not connected to each other or have mechanisms for data sharing: no data access or integrated data flow
	Providers do not have a complete view of the patient
	
	Providers and HIE-connected organizations cannot effectively participate in value-based care delivery reform
		• DC has no agreements, MOUs, etc. in place to gain access to data within a silo
		• DC has no comprehensive view of health of residents as data is limited
		• Inability to develop effective population health services and payment programs (e.g., health homes)
				• Connection to any DC Designated HIE supports integrated data access by any provider
				• DC Govt. has access to all DC HIE Ecosystem data for:
				  • Public Health
				  • Population Health
				  • Development of District-specific initiatives

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DC BUSINESS AND FINANCIAL DRIVERS

The success of DC HIEs is dependent upon widespread stakeholder participation across (and outside of) the health-related ecosystem. HIE participation must be financially viable for stakeholders and must add value to their practice.

We should ask ourselves:

1. How can we create an HIE environment that adds more value for hospitals, physician practices, and other stakeholders?

2. How can we best incentivize stakeholder participation in DC HIEs?
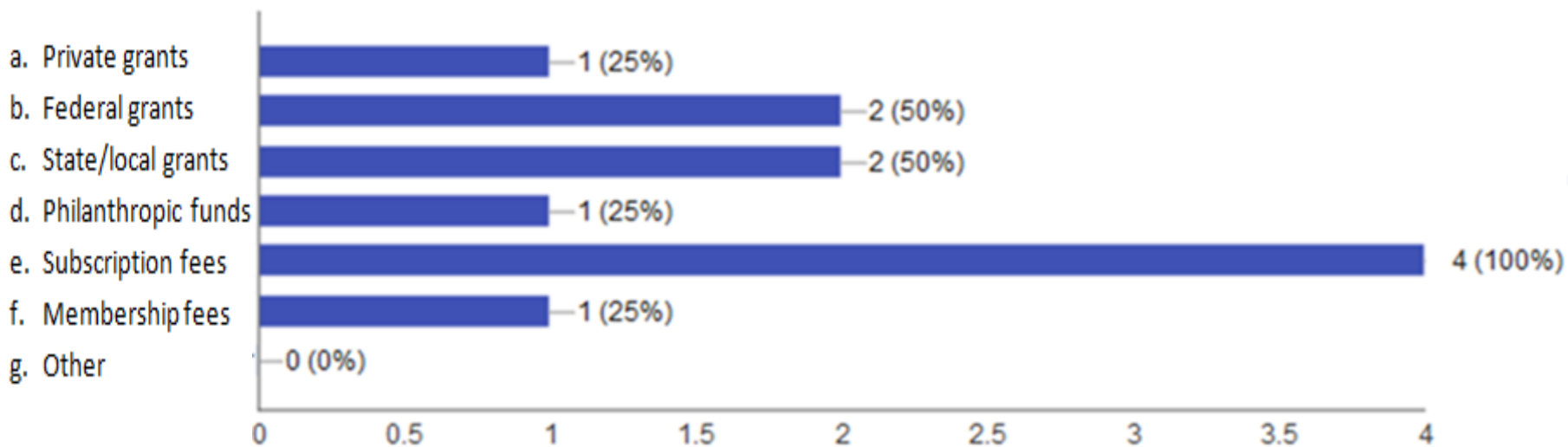
To learn more about HIEs operating in DC we created an HIE survey:

- 4 respondents
- Survey Highlights:
  - Financial Solvency
  - Participation

HIE FINANCIAL SOLVENCY

- Subscriptions and government funds account for most of the funding of current DC HIEs
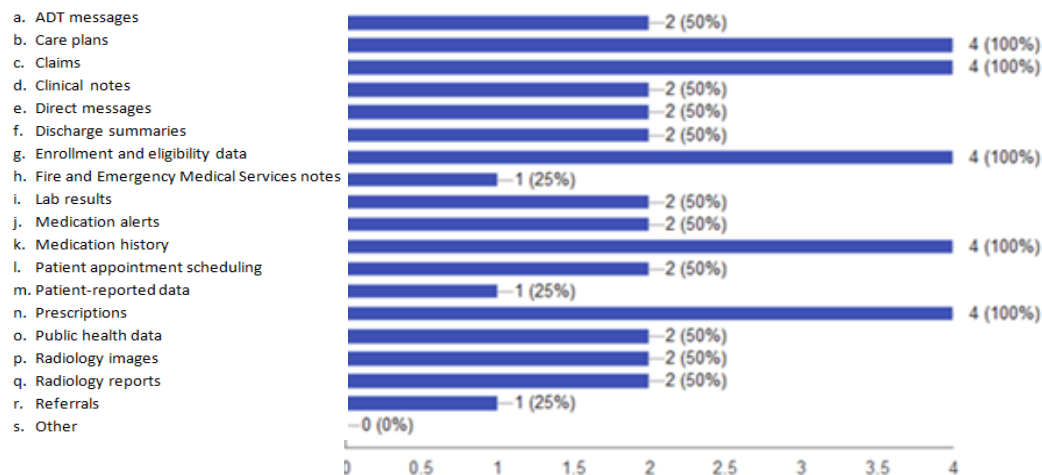
  – *Funding mix:*
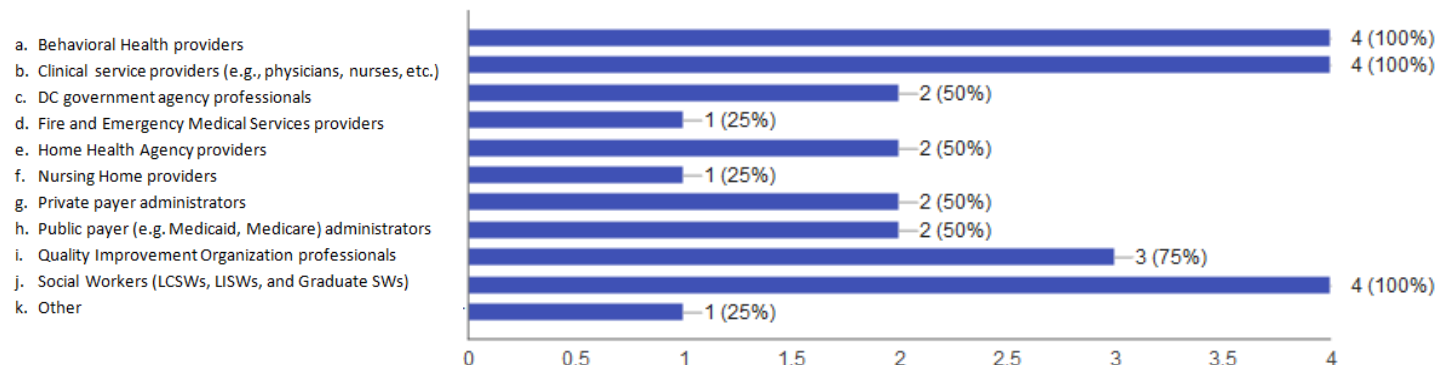
HIE DATA & PARTICIPATION

- Types of data exchanged and associated participants varies between HIEs

  – *HIE facilitates the exchange of:*

a. ADT messages	2 (50%)
b. Care plans	4 (100%)
c. Claims	4 (100%)
d. Clinical notes	2 (50%)
e. Direct messages	2 (50%)
f. Discharge summaries	2 (50%)
g. Enrollment and eligibility data	4 (100%)
h. Fire and Emergency Medical Services notes	1 (25%)
i. Lab results	2 (50%)
j. Medication alerts	2 (50%)
k. Medication history	4 (100%)
l. Patient appointment scheduling	2 (50%)
m. Patient-reported data	1 (25%)
n. Prescriptions	4 (100%)
o. Public health data	2 (50%)
p. Radiology images	2 (50%)
q. Radiology reports	2 (50%)
r. Referrals	1 (25%)
s. Other	0 (0%)

  – *Authorized Users:*

a. Behavioral Health providers	4 (100%)
b. Clinical service providers (e.g., physicians, nurses, etc.)	4 (100%)
c. DC government agency professionals	2 (50%)
d. Fire and Emergency Medical Services providers	1 (25%)
e. Home Health Agency providers	2 (50%)
f. Nursing Home providers	1 (25%)
g. Private payer administrators	2 (50%)
h. Public payer (e.g. Medicaid, Medicare) administrators	2 (50%)
i. Quality Improvement Organization professionals	3 (75%)
j. Social Workers (LCSWs, LISWs, and Graduate SWs)	4 (100%)
k. Other	1 (25%)

OBJECTIVES AND DISCUSSION

Objectives:

1. Identify current incentives and obstacles for District stakeholder HIE participation

2. Develop financial framework that facilitates sustainable HIE participation in DC

Discussion:

– How can we leverage current initiatives to accomplish our objectives?

WRAP-UP AND NEXT STEPS

- Homework assignments…
- Next meeting will be on…