



Indiana Health Information Exchange

Better Outcomes. Delivered.

Health Information Exchange: Can There Be ONE National Model?

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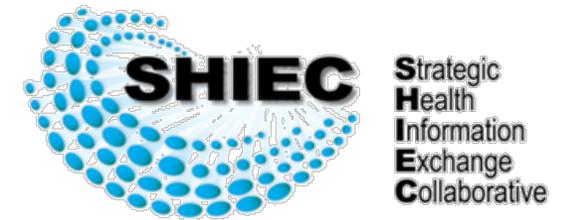
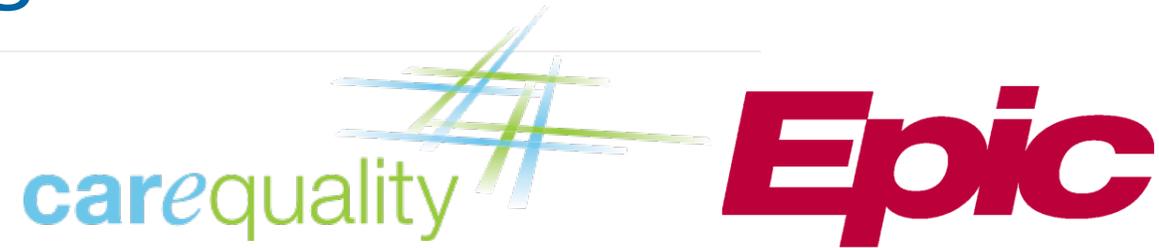
Agenda

- Part I: Define the problem.
- Part II: Discuss six interoperability approaches.
What they are, and what they do.
- Part III: What IS interoperability?
- Part IV: Now what?

Acknowledgments

Thanks to the following groups for feedback on today's topic.

NOTE: These groups provided information that was used to develop this presentation. They neither reviewed nor approved the completed content.



Relevant Board and Committee Participation

- HIMSS North America
- HIMSS HIE Committee
- The Sequoia Project
- eHealth Exchange Coordinating Committee
- Strategic Health Information Exchange Collaborative (SHIEC)
- Integrating the Healthcare Enterprise USA (IHE USA)

Part I: Introduction

Define the problem.

And the Survey Says...

95%

agree that strong interoperability capabilities are a key IT requirement for a successful transition to value-based care

85%

also agree that current interoperability solutions in the market are not meeting their needs

*Results from eHealth Initiative's 2016 interoperability survey
n=125

The Problem:

We've made little progress on interoperability from a patient outcome perspective.



AND

The HIT Industry is wasting time and resources in the process.



BECAUSE

There is no clear understanding of the various national approaches.



AND

There is an unsupported belief that one approach is the correct one.



Part II: Interoperability Approaches

What are they, and what do they do?

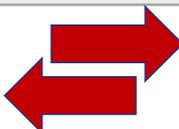
Interoperability Approaches (IA)

1. eHealth Exchange
2. Carequality
3. CommonWell
4. Epic--Care Everywhere
5. Health Information Exchange (HIE)
6. SHIEC--Patient-Centered Data Home

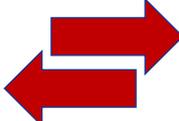
IA

Remember this acronym.
We'll use it a lot.



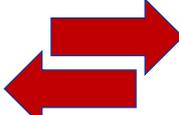
	Relevant History	Evolved out of federal government's "NwHIN" as the public-private national "network of networks"
	How this IA aims to connect the whole country?	Onboard enough participating providers and HIEs to cover the country
	Who's in Charge	The Sequoia Project is the legal entity; Rules set by a Coordinating Committee
	Legal Document	The DURSA
	Geographic Span	Nationwide (but limited by who participates)
	Most Common Transaction	Hospital or HIE → SSA or VA
	Less Common Transaction	Hospital → Hospital (for patient care)
	Other Information	Broadening portfolio of use cases

	Relevant History	Created by The Sequoia Project—in part to accommodate needs of EHR vendors ineligible for eHEX
	How this IA aims to connect the whole country?	Gain participation of EHR vendors, which gain participation of their customers to cover the country
	Who's in Charge	The Sequoia Project
	Legal Document	Carequality Connected Agreement (analogous to the DURSA)
	Geographic Span	Nationwide (but limited by who participates) ...adding CommonWell broadens the potential
	Most Common Transaction	EHR vendor on behalf of customer to another EHR vendor to get clinical data to the point of care
	Less Common Transaction	Anything but point-of-care exchange
	Other Information	Key difference from eHEX is the prohibition of charging fees or restricting which participants you exchange with

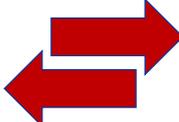
	Relevant History	Created by a group of EHR vendors led by Cerner, Athena, and other (not Epic). Partially motivated as a market response to Care Everywhere.
	How this IA aims to connect the whole country?	Gain participation of EHR vendors, which gain participation of their customers to cover the country
	Who's in Charge	Board of Directors
	Legal Document	Membership agreement
	Geographic Span	Nationwide (but limited by who participates) ...Becoming a Carequality implementer broadens the potential
	Most Common Transaction	EHR vendor on behalf of customer to another EHR vendor to get clinical data to the point of care
	Less Common Transaction	Anything but point-of-care exchange



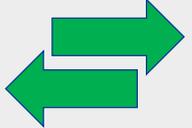
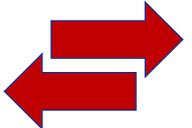
Care Everywhere

	Relevant History	Initially developed as part of the Epic EHR product a decade ago
	How this IA aims to connect the whole country?	It aims to provide Epic EHR users the ability to request/receive data from other EHRs/sources
	Who's in Charge	Epic and the governing body made up of customers
	Legal Document	Epic contract & Care Everywhere Network "Rules of the Road" (governance document)
	Geographic Span	Nationwide (Epic customers)
	Most Common Transaction	Requesting/receiving a CCD from another Epic customer
	Less Common Transaction	Requesting/receiving a CCD from a non-Epic customer
	Other Information	Embraces Carequality as a framework for interoperability

Health Information Exchange (HIE)

	Relevant History	The oldest HIEs date back to the 1990s. Many state-run exchanges emerged from ARRA HITECH funding.
	How this IA aims to connect the whole country?	It doesn't. It aims to connect the region it serves.
	Who's in Charge	Each HIE has its own management, board, and governance
	Legal Document	HIE participation agreement (all different)
	Geographic Span	From single-market to statewide
	Most Common Transaction	Making clinical data available at the point of care
	Less Common Transaction	Services like analytics based on persisted data
	Other Information	Service offerings, capabilities, and available data vary widely

Patient-Centered Data Home

	Relevant History	National association of more than 40 statewide, regional, and community HIEs
	How this IA aims to connect the whole country?	Patch together a “quilt” of HIEs to cover the whole country
	Who’s in Charge	SHIEC. SHIEC’s board is elected from among HIE members.
	Legal Document	Evolving approaches (could be DURSA)
	Geographic Span	Nationwide, but limited by who’s a member and who’s not
	Most Common Transaction	ADT notification from one HIE to another and clinical data at point of care in response
	Less Common Transaction	Clinical data back to the HIE in the patient’s home state
	Other Information	Current focus is on sharing clinical data (a) at point of care, (b) to maintain longitudinal record in patient’s home state

Stitching the Quilt

From a SHIEC presentation on Patient-Centered
Data Home:

*SHIEC's 48 member organizations comprise data homes for half of the
United States population.*

Seurat Painting



From a leading EHR vendor's FAQ on the CommonWell-Carequality announcement:

CommonWell members and Carequality participants together represent more than 90 percent of the acute EHR market and nearly 60 percent of the ambulatory market. The agreement between CommonWell and Carequality paves the way for near-universal access.

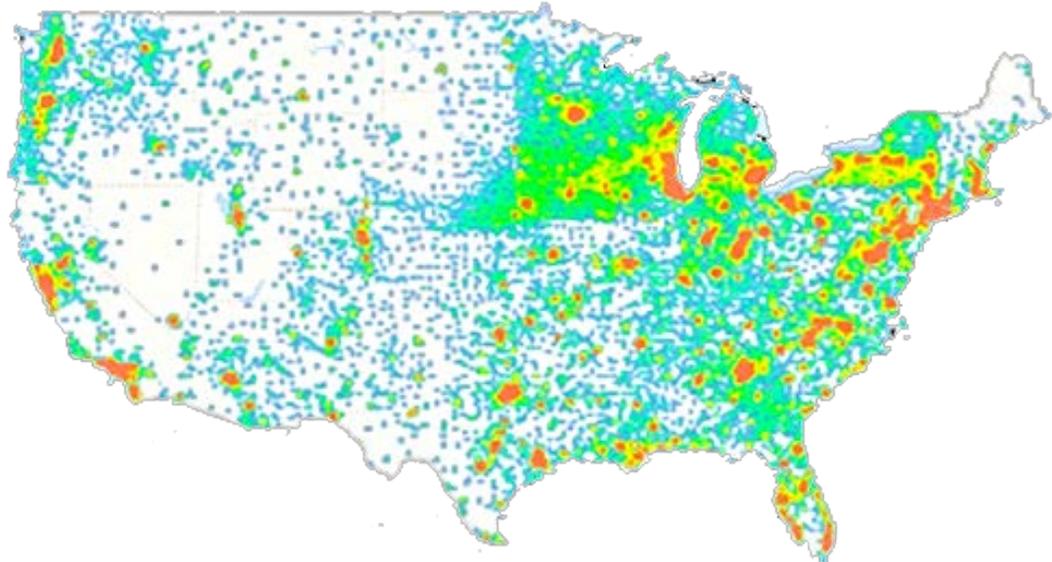


Image credits:

CommonWell Providers, <http://www.CommonWellalliance.org/providers>

Carequality Implementers, <http://sequoiaproject.org/carequality>

Georges Seurat painting, <http://www.georgesseurat.org>

A Quilt? A Seurat? Neither? Both???

eHealth Exchange	➡	Several quilt patches AND dots
Carequality	➡	A Seurat
Care Everywhere	➡	A Seurat
CommonWell	➡	A Seurat
HIE	➡	One quilt patch
SHIEC PCDH	➡	The quilt

Part III: What IS Interoperability?

It gets even more complicated.

Confused? We All Are.

- Interoperability is not ONE thing
- There are several different interoperability approaches
- No one approach will work for all interoperability use cases
- Different types of organizations have different interoperability needs
- The best approach depends on key characteristics of your organization's market
- Today, there is a general industry belief that a single interoperability approach should be capable of meeting all your needs

Interoperability is Comprised of Many Use Cases

1. Clinical results delivery (data, diagnostics, etc.)
2. Medication history, summaries, alerts, etc.
3. Notification of clinical events for patients and of the general population
4. Immunizations, syndromic surveillance and public health data
5. Electronic prescribing and refill information
6. PHRs, patient reported data
7. Claims transaction/electronic eligibility information
8. Data quality and research support
9. Connectivity to electronic health records
10. Alerts to providers
11. Enrollment/eligibility checking
12. Electronic referral processing
13. Clinical decision support
14. Disease or chronic care management
15. Quality improvement reporting for clinicians
16. Ambulatory order entry
17. Disease registries
18. CCR/CCD summary code exchange
19. Quality performance of providers/payers
20. Public health surveillance
21. Electronic prescribing and refill information
22. Alerts to providers
23. Query for documents
24. ADT notification
25. Claims processing
26. Population health management
27. Public health data
28. Research support
29. Syndromic surveillance
30. Eligibility checking
31. Ambulatory order entry
32. Patient reported data
33. Connectivity to EHRs

	Importance to Your Org	Data Movement/Exchange Need					
		eHealth Exchange	Carequality	CommonWell	Care Everywhere	HIE	SHIEC
Use Case 1	HIGH	X			X		
Use Case 2	LOW	X			X	X	X
Use Case 3	HIGH		X	X	X	X	
Use Case 4	HIGH	X	X	X		X	
Use Case 5	LOW		X	X		X	X
Use Case 6	N/A		X	X	X	X	

Healthcare organizations have always matched the need to the best available solution (or solutions).

PHYSICIAN PRACTICE	Importance to Your Org	Data Movement/Exchange Need					
		eHealth Exchange	Carequality	CommonWell	Care Everywhere	HIE	SHIEC
Use Case 1	LOW		X	X	X		
Use Case 2	HIGH	X			X		
Use Case 3	LOW	X				X	X
Use Case 4	LOW		X	X	X	X	
Use Case 5	HIGH	X	X	X		X	
Use Case 6	HIGH		X	X		X	X

INTEGRATED DELIVERY NETWORK	Importance to Your Org	Data Movement/Exchange Need					
		eHealth Exchange	Carequality	CommonWell	Care Everywhere	HIE	SHIEC
Use Case 1	HIGH	X				X	X
Use Case 2	LOW		X		X		
Use Case 3	HIGH						
Use Case 4	HIGH		X	X	X	X	
Use Case 5	LOW		X		X	X	
Use Case 6	N/A	X	X		X		

**NATIONAL
LTPAC ORG****Importance
to Your Org****Data Movement/Exchange Need**eHealth
Exchange

Carequality

CommonWell

Care
Everywhere

HIE

SHIEC

Use Case 1

HIGH**X****X**

Use Case 2

HIGH**X****X****X**

Use Case 3

LOW**X****X****X**

Use Case 4

LOW**X****X****X****X**

Use Case 5

N/A**X****X****X****X****X**

Use Case 6

HIGH**X****X****X****X**

**MARKET WITH
STRONG HIE
PRESENCE****Importance
to Your Org****Data Movement/Exchange Need**eHealth
Exchange

Carequality

CommonWell

Care
Everywhere

HIE

SHIEC

Use Case 1

HIGH

X

X

X

X

Use Case 2

LOW

X

X

X

X

X

X

Use Case 3

HIGH

X

X

Use Case 4

HIGH

X

X

X

X

Use Case 5

LOW

X

X

X

Use Case 6

N/A

X

X

X

X

X

**MARKET WITH
STRONG EPIC
PENETRATION****Importance
to Your Org****Data Movement/Exchange Need**eHealth
Exchange

Carequality

CommonWell

Care
Everywhere

HIE

SHIEC

Use Case 1

N/A

X

X

Use Case 2

HIGH

X

X

X

X

Use Case 3

HIGH

X

X

X

X

Use Case 4

LOW

X

X

Use Case 5

HIGH

X

X

Use Case 6

LOW

X

X

X

X

Can There Be ONE National Model?

The Ultimate Question



NO

The Honest Answer

Part IV: What Now?

Please stop the confusion.

Key Points to Remember

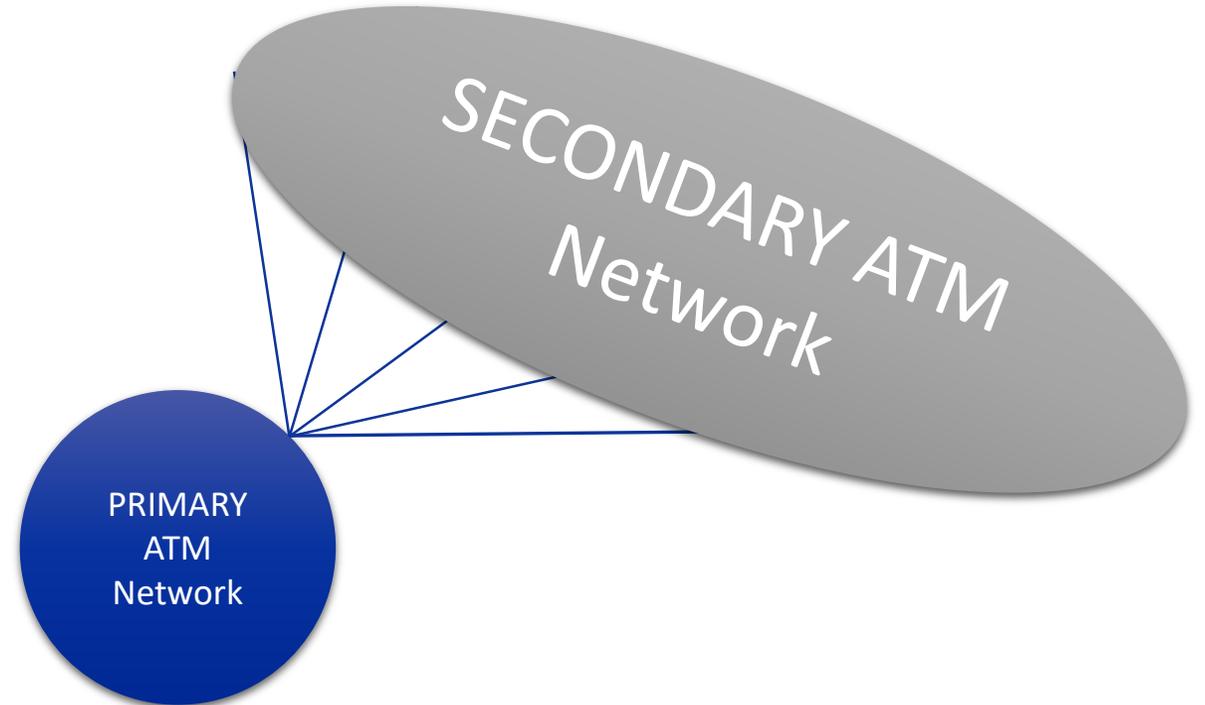
1. Interoperability is more than one thing.
2. Using multiple interoperability approaches in our current environment is hard.
3. Using multiple interoperability approaches is beneficial...if you plan well.

Interoperability is more than one thing.

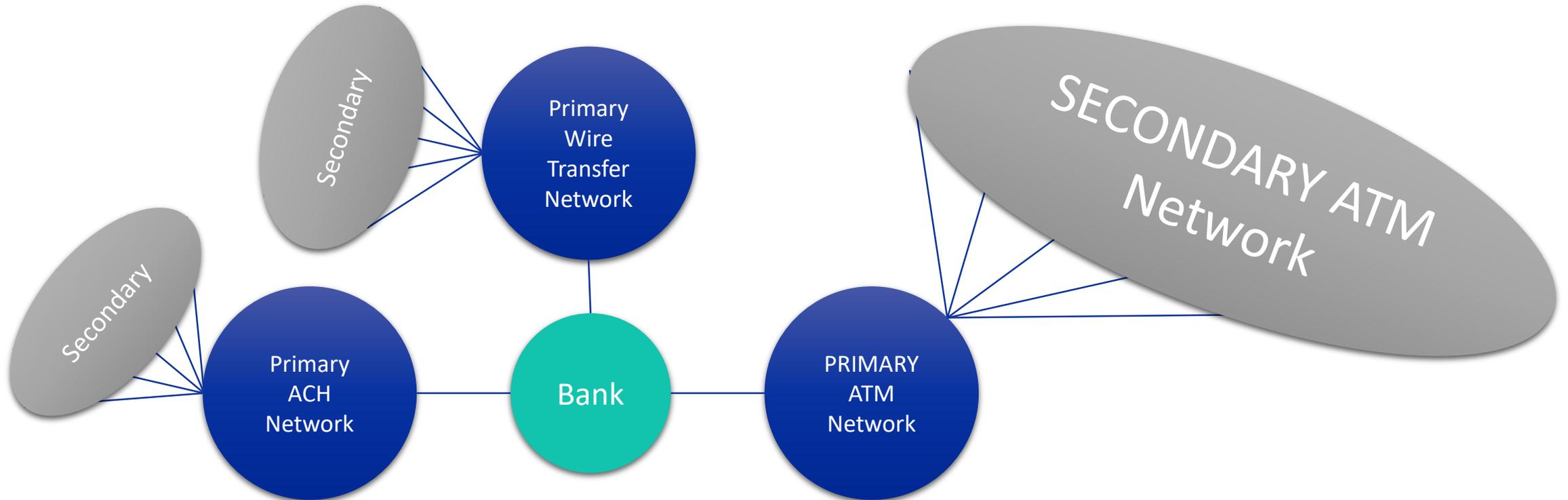
Key point #1.

The Single Network Model...

ATM Network
Comparison



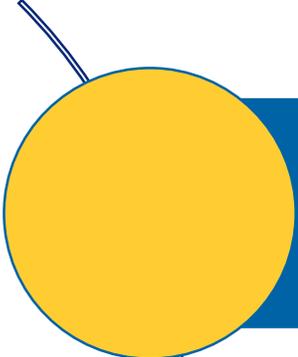
...Is Not Actually a Single Network



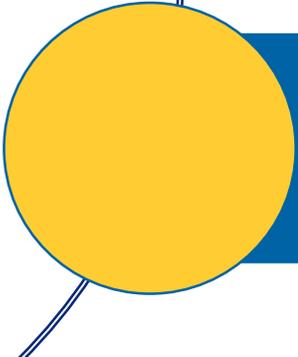
Using multiple IAs is hard (today).

Key point #2.

Challenges in Current Environment

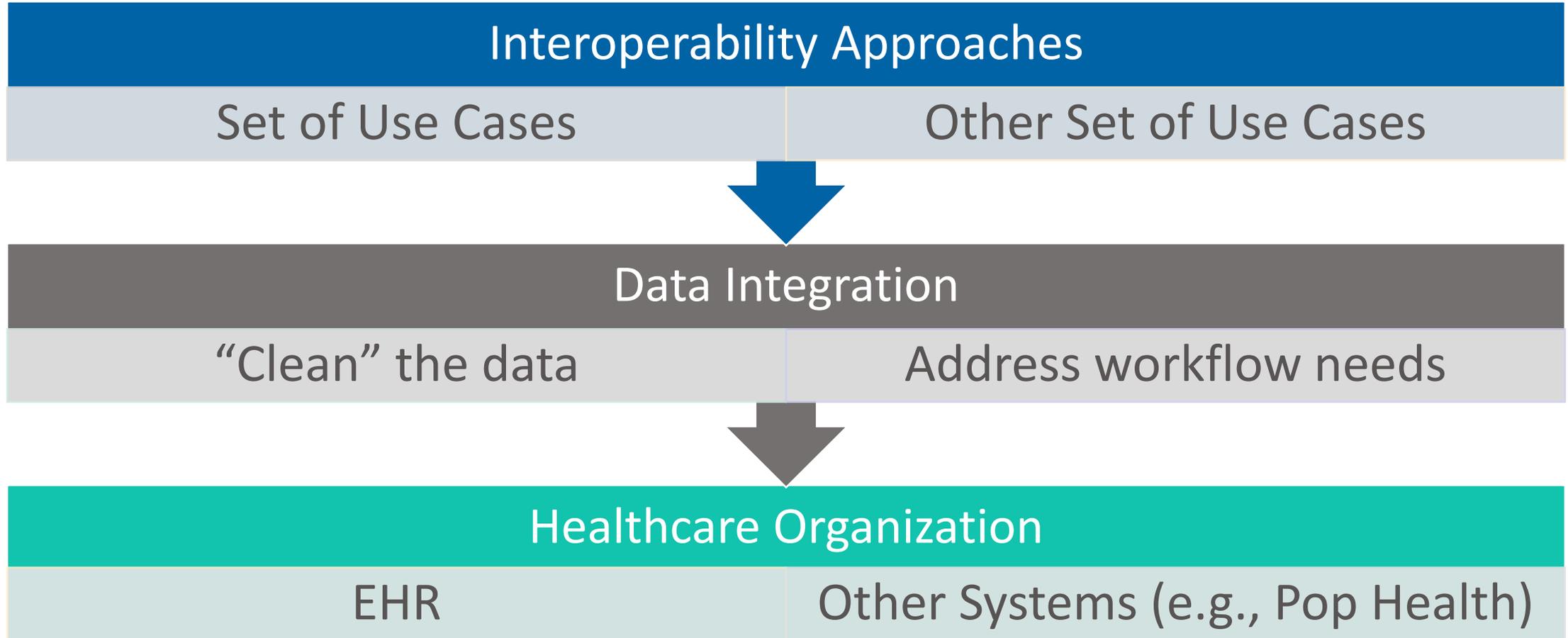


IAs make it easier to get poorly formatted data from more data sources



Data integration is complex

Data Integration Challenges



Make a plan.

Key point #3.

Create a “Living” Interoperability Plan

STEP 1: Identify internal clinical value opportunities (use cases) and prioritize.

- Address workflow and adoption!
- Be prepared for clinician apathy or resistance (think pre-EMR days)
- Look beyond point of care (CCD query) use cases

Examples:

- a. Pre-visit planning
- b. Gaps in care
- c. Care coordination

Create a “Living” Interoperability Plan

STEP 2: Identify environmental factors that currently (or soon will) affect your interoperability needs.

- Government programs (ACO, MACRA, CJR)
 - Example: How important is CJR patient activity 90 days post-procedure?
- Business relationships (CIN, Joint Ventures)

Create a “Living” Interoperability Plan

STEP 3: Assess IA capabilities for **YOUR** organization **BY USE CASE.**

How do you optimize your IA choices?

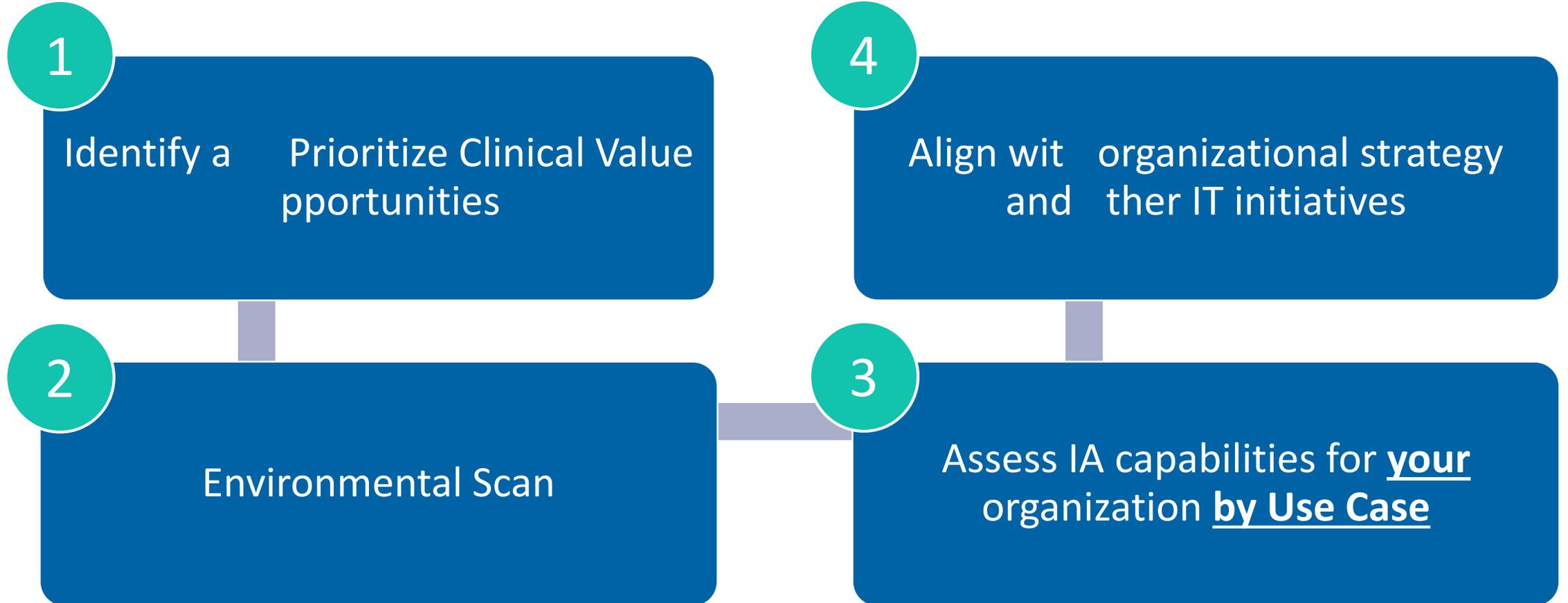
- Determine how data will integrate into your internal systems
 - How will you de-duplicate redundant data?
 - What data will you consume discretely?
- Engage the IA initiatives in your planning efforts
- Seek collaboration among IAs
(e.g. HIE and Carequality/CommonWell)

Create a “Living” Interoperability Plan

STEP 4: Align with organizational strategy and other IT initiatives

- What are the interoperability needs of my organization’s strategic initiatives?
- Given finite financial resources, how do interoperability projects stack up against internal IT initiatives?

Create a “Living” Interoperability Plan

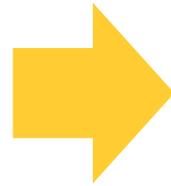


The Path Forward:

Understand the approaches.

Recognize that the best solution is a combination of several approaches.

Develop an Interoperability Strategy and Action Plan



Make better, faster decisions.

Move interoperability forward.



Questions

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