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Effective Electronic Patient Record Implementations Interoperability and System Integration

September 2021

Effective EPR Implementations: Overview of the Series, Purpose, and Schedule

The Effective EPR Implementations webinar series is a set of seven one-hour virtual sessions with Healthcare providers. This series is focused on EPR implementations and driving your success through a holistic implementation approach

Purpose

- ✓ Focus on effective partnerships necessary to succeed in EPR implementations
- ✓ Highlight common pitfalls faced by clients and areas needing support
- ✓ Share key strategies necessary for healthcare practice transformation through EPR implementations

Schedule



Speaking With You Today



Fran Cousins Partner, UK



Marc Perlman Global Digital CARE Leader, US



Tony Jurek Managing Director, US



Mike Morrison Senior Manager, Canada

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Торіс	Speaker	Timing
Welcome	Fran Cousins Marc Perlman	5 mins
What is Interoperability?	Tony Jurek Mike Morrison	10 mins
Why Interoperate?	Tony Jurek Fran Cousins	15 mins
Implementing Interoperability	Mike Morrison Tony Jurek	15 mins
Q & A	All	10 mins
Close	Fran Cousins Marc Perlman	5 mins

Setting the Foundation: Governance, Guiding Principles, and Effective Decision Making

Setting a strong foundation from the beginning enhances overall outcomes and Programme success.

Governance

A well-structured governance model helps ensure decisions are made at the right level, by the right stakeholders, at the right time

Guiding Principles

Establishing appropriate Guiding Principles sets the ground rules for system design and implementation, guides decisions, and keeps teams focused on overall goals, objectives, and the desired end state

Establish 5% Executive Leadership Steering Team Support Leadership support 15% and buy-in is **Project Leadership** cultivated from the Team very beginning of 80% the Programme rage Status **Project Management Office (PMO) Operational & Technical Teams (Revenue Cycle, Finance, Clinical Operations, IT)**

Effective Decision Making

Decisions that could potentially impact the programme timeline, cost, quality, safety and/or future-state operating model should be escalated to programme and clinical governance

Guiding Principles

- Be event driven and message centric, not document centric
- Adopt a FHIR-First approach... strategically
- Put the patient care first in the interoperability solution
- Design for Adoption
- It must be trustworthy
- Policy Driven, Exception Based Design
- It's about Governance, Participant Engagement & Performance Management more than data

Importance of Governance, Guiding Principles and Effective Decision Making

Commitment from key stakeholders

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Align direction

Better decisions

Interoperability Defined

Interoperability is a critical barrier to overcome in meeting the needs of the **empowered healthcare consumer**; a capability which brings all relevant information to all points of care and connects workflows throughout the health care continuum.

- Health care data exchanges are NOT "plug and play"
- Interoperability requires a varying combination of strategies, architectures, standards, approaches, data types, security and tools to unify data/information access across 4 areas:
 - 1. Data Level
 - 2. Application Level
 - **3.** User Experience
 - 4. Workflow
- The components an organisation needs depends on service goals, regulatory requirements, current state, experience, budget, and vision
- Each component has many options and subcomponents. The options that are right for you depends on your requirements



THE ABILTY TO:

• Exchange data using the industry's most common standards: HL7 (v2/FHIR), X12, IHE/XCA

- AND -

 Share / Access data in real-time using Application Program Interfaces (APIs). The API approach is becoming more popular and will allow applications to interact with each other at the functional level (e.g., triggering a work flow, a report generation or an alert)

 Integrate Workflows to enable seamless coordination of activities among patients and providers regardless of the system(s) of record (e.g. handoffs between and EPR and CRM Systems, reconciling patient and provider identities and establish relationship context between them)

Interoperability continues to be part of an overall technology investment strategy

Investments in Interoperability, Enterprise Information Management (EDW/Reporting/Analytics) & Population Health Management/Care Coordination form the core foundation for Clinician-Led, Patient-Centric Care in a Value Driven Environment.

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However, to be Effective, Interoperability Must Evolve...

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... and address the gaps in today's healthcare interoperability platforms

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Macro Forces Shaping Interoperability

Transition to Integrated Care Systems

The transition to integrated care systems and a focus on value-based care (VBC) payment model will require all system partners to collect and share more data to improve outcomes and lower costs

Unsustainable Ecosystem Requires Collaboration

System-wide recognition that collaboration across multiple entities is required to improve the current healthcare system, lower unstainable rising costs, and enable better outcome

Expanded Insights into 'Consumer' Needs

Leveraging analytics generated from new sources of data, like Social Determinants of Health (SDoH) and Behavioural Health, are needed to gain deeper insights into 'consumer' needs to deliver more customised care

Engage Consumers

Increasingly available on-demand data seen in other industries has led to an increase in consumer demand for healthcare in terms of access and convenience, quality transparency, and alternatives

Stakeholder Evolution & New Entrants

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Ecosystem players are continuing to evolve, vertically integrate, and shift focus to meet the changing landscape, as well as the proliferation of new entrants and disruptors (e.g., Amazon, Google, Apple)

Drive for Open Data Sharing

Increased focus to address preventing information blocking, promoting APIs, deliver Payment Transparency, enable trusted exchange networks, and empower consumers to be the owners of all health information will drive extensive changes to interoperability landscape

Evolution of Technology

Cloud, Cognitive (Machine Learning, AL, etc.), blockchain, and other new technologies as well as the overall shifts to API-based integration are beginning to disrupt healthcare industry and enable enhanced/new use cases

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Engaged and Motivated Consumers Will Exert Pressure

Regardless of regulatory changes, New Entrants are driving Consumers to look for even more!

Personalised Experience

Customised solutions powered by consumer-generated data

Seamless Efficient Experience

Seamless interaction and engagement in retail transactions, integrating personal data and preferences across channels

Greater Access and Choice

Access to a wide selection of products and services at different tiers and price points across channels

♦CVSHealth amazon Walmart ><</p>

Affordability & Transparency

Ability to **compare prices and reviews** to make informed, cost-effective decisions

Quality

Expect to receive **quality and value for products and services** that is commensurate with price they are paying

Interoperability Technology Maturity Framework

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Because the start and end points, as well as service models and goals are different for every organisation, there is no "one-sizefits-all" solution. Interoperability requires a varying combination of integration, data management, security, administration and innovation to unify information access and integrate workflows effectively

Interoperability Organisational Maturity Framework

Having the technical capability to interoperate means having the organisational and procedural maturity to know what to do with it

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Consistent with Healthcare Sector Maturity Models for EPRs

The maturity model provides a general model on the layering and order of interoperable data capabilities across the development of an EPR.

Functional Solutions

Integration Intensive

What to Implement: Technology Considerations

Most health systems have adopted one of several available interoperability solutions – initially to allow their own applications to exchange data, and increasingly to participate in health information exchanges with other providers and health care stakeholders.

Notes:

- Interoperability technologies can be "distributed" and overlapping, i.e. each of the participants may have multiple HIE technologies and solutions.
- The adoption of SaaS technologies is accelerating. The adoption of HL7 FHIR tools is also accelerating and should fuel the growth of an "API" ecosystem.
- Many initiatives are exploring **Blockchain** as an additional interoperability model and testing which used are cases it would benefit the most.

Where to Implement – System and Integration Strategy for Multi-Platform Health Systems

For most health systems, the preferred approach is for a fully integrated system. The cost of transition, the long term affordability, the availability of different integration methods, make the Multi-Platform approach the only practical strategy

How to Implement – Development Process

Dealing with the Complexity of Healthcare Interoperability

Managing Variances through Exception Based Processing

Model Interoperability Policies for Healthcare Organisations

Deloitte assists clients in creating a model of how organisations should exchange health information exchange using legal and standards to guide policies.

Accommodate Group / Organisation Type Policies

It may be, in any given network, a type of organisation are subject to a different interoperability policy. (e.g. LOINC validation / mapping applying for Labs)

3 Organisation Specific Policies / Variances

Only exception to the standardised policies are managed when onboarding a specific Participant into the network. (e.g. one Lab within the group cannot supply LOINC codes, requires custom terminology mapping policy)

Interoperability Policies are modelled, group exceptions to policies managed, so only variances across individual Participants need to be managed and governed over time

Mitigating Risks

The risks to individual stakeholders must be mitigated to foster an environment favourable to interoperability.

Lessons Learned – Setting the Right Expectations

Below are some of the lessons we learned through our long and rich experience.

Lessons Learned	Our POV
Quality and consistency of data: The quantity of health care data has been growing exponentially, so has the level of variability and inconstancy	There is a very high level of variability in the data that we find in each of the health system applications. Health care data is generated through a series of workflows and activities; some are relatively consistent (e.g., ADT), other are unique for each organisation (e.g., care path, order-sets, formulary, health plan product, etc.). Therefore most transaction (or data exchange) needs to be addressed individually.
Data fluidity: Clinicians and patients expect interoperability to make all data to be available anytime through the EPR or other applications they are using.	Interoperability provides partial data fluidity, i.e., it allows for some data to be available in some systems or applications. As the data is "exchanged", as opposed to shared, fluidity is limited by the capability of each application and by the consistency and usability of data. Data exchange by definition is a partial interoperability model – and does not include the broader application collaboration at the workflow and user interaction level.
Technology solution: Can using the right technology solve the interoperability challenge.	HIE technologies are relatively mature and have been adopted by a majority of the health care system. The current technologies however have limited capability to help address the variability of the data. A "Rosetta Stone for HIE" is not available yet. The implementation of HIE technologies is therefore very iterative and relatively lengthy. In situations where separate entities need to exchange data, governance and collaboration become very challenging.
Repeatable and scalable process: Health systems expect to be able to "connect" a large number of clinics within a short timeline.	Health system leadership often have a gap in understanding the data complexities and limited to no experience with multi-organisations interoperability Data ownership is still a controversial topic and individual health care systems still have the majority of the data ownership responsibility and influence
Blaming the vendors? Industry observers have been pointing the finger at the vendors who have been "blocking" data exchange	Most EPR vendors have sophisticated data exchange capabilities, and some limitations which in many cases can be addressed using alternate methods. The vendors, as much as other industry stakeholders, have not been able to agree on detailed data standards.

Getting Started

STEP 1: Define the Vision

- In-depth review of the proposed rules and other regulatory actions, including proposed timelines and impact to specific lines of business
- Define the Interoperability vision for the organisation
- Establish initial interoperability governance structure
- Identify in-flight initiative impacted by interoperability and initial alignment

Socialize

STEP 3: Get Ready to Mobilise

- Prioritise initiatives and align with overall organisational strategy
- Explore and finalise partnerships / and potential solutions
- Finalise Interoperability architecture and roadmap

Mobilize for Implementation

STEP 2: Assess Current State

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- Building off of initial understanding of proposed rules and impacts, define (or refine) baseline interoperability strategy
- Undertake market scan to evaluate how partners, competitors and other health care stakeholders are preparing for interoperability
- Identify people, process and technology impacts to achieve the vision
- Conduct system analysis and key impact areas for change

Q&A

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- New Organisational Forms

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