

# Draft EHR Source Journal

(Supplement to “Standards Convergence to Promote  
EHR Interoperability” Work Item)

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# Givens

- Need ready transition from 2nd to 3rd generation
  - Per “Standards Convergence” Work Item, Slides 24-26
- Need to ensure standards-based EHR interoperability between and across organizations and systems
- Need continuously assured protection of health record, with primary accountability of EHR access/use to:
  - Record Subject (patient/consumer): record of individual health and healthcare
  - Record Originator (provider): clinical and business record
- Widely divergent – and often proprietary – EHR data and software architectures

## EHR Source Journal

# Objectives

- Ensure single “source of truth” reference point for Events/Actions occurring in health and healthcare
  - Encapsulating “truth” regarding key Events/Actions: context, facts, findings and observations
  - Traceable to corresponding entries in Provider EHR
  - Accessible – with authorization
  - Exchanged via publish (push) or upon query (pull)
- Ensure Provider Control of EHR information they source
  - Origination, retention and management
  - Access control
  - Transmittal and disclosure
  - De-identification, when applicable

# Objectives, con't

- Ensure Vendor Control of proprietary data and software architectures they design and develop to
  - Support extensive and diverse application features
  - Maximize application functionality and throughput
  - Differentiate products and promote competitive market advantage

# EHR Source Journal

## Examples

Type of Journal	Journal Entries
<u>Events/Actions</u> May be indexed by Patient, Provider, Department, Service... (See Simplification Strategy, slides 21-22)	<u>Event/Action Records</u> for: <ul style="list-style-type: none"> <li>• Patient Registration</li> <li>• Lab Orders, Results</li> <li>• Medication Order and Management Cycle</li> <li>• Continuity of Care Summary (CCD)</li> <li>• Quality Reports...</li> </ul>
EHR Record Management Events	<ul style="list-style-type: none"> <li>• Record origination, amendment, attestation</li> </ul>
EHR Record Interchange Events	<ul style="list-style-type: none"> <li>• Outbound record transmittal, disclosure</li> <li>• Record de-identification, if applicable</li> <li>• Inbound record receipt from external source...</li> </ul>
User Related Events/Actions	<ul style="list-style-type: none"> <li>• Session start/end</li> <li>• Event/Action participation</li> <li>• Event/Action Record authorship...</li> </ul>

## EHR Source Journal

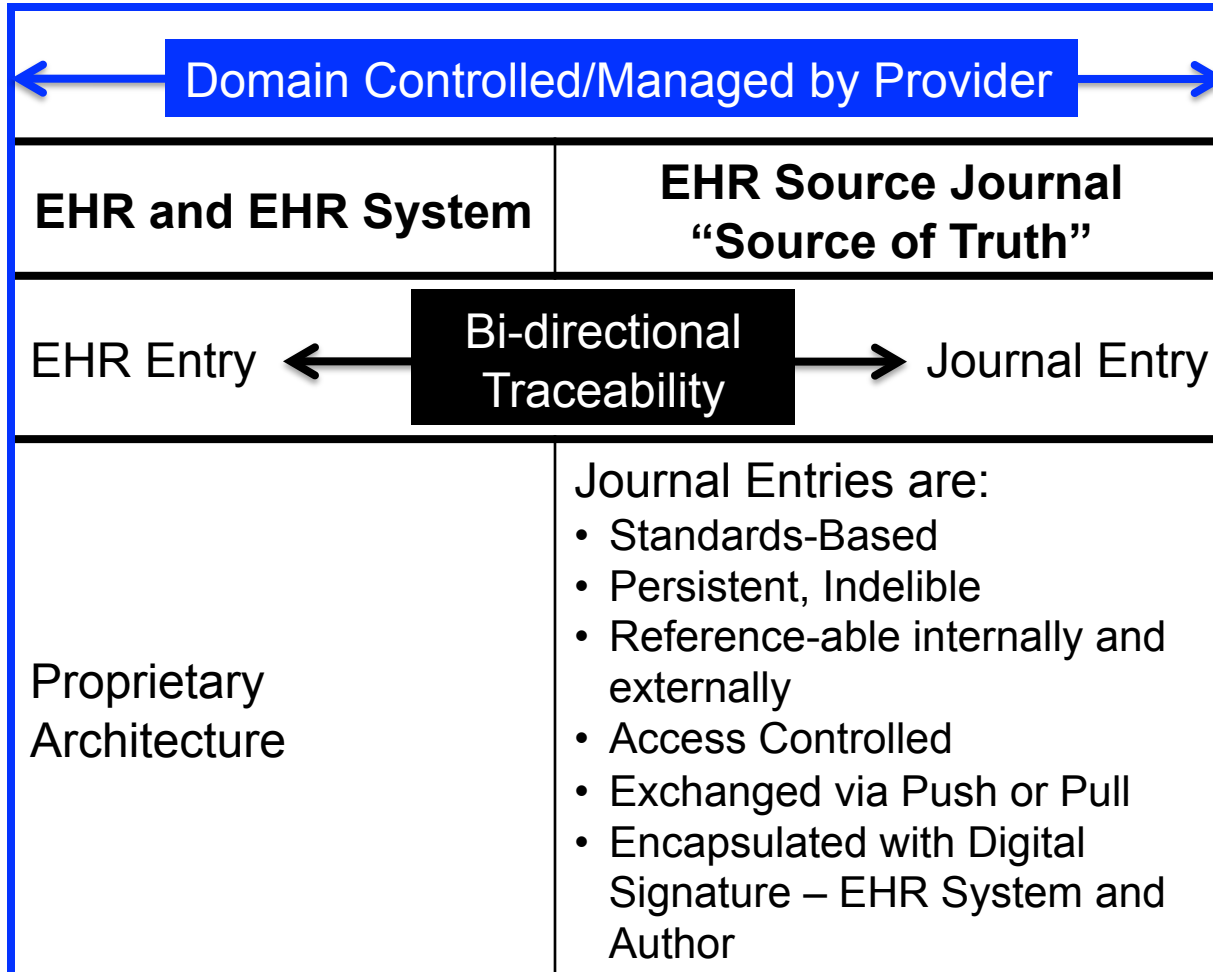
# Entries

- Are persistent, indelible evidence of real-world Events/Actions
  - Maintained for designated retention period
- Are in standards-based (external) form
  - Typically transformed from, and traceable to, proprietary (internal) EHR form
- Are reference-able and accessible, with authorization, by
  - External organizations and systems
  - Internal (provider's own) systems
- Are digitally signed by EHR System
  - Binding source, content and context (who, what, when, where)
- May also be digitally signed by Event/Action participants, including record Author(s)

# Validation, Reference, Replay

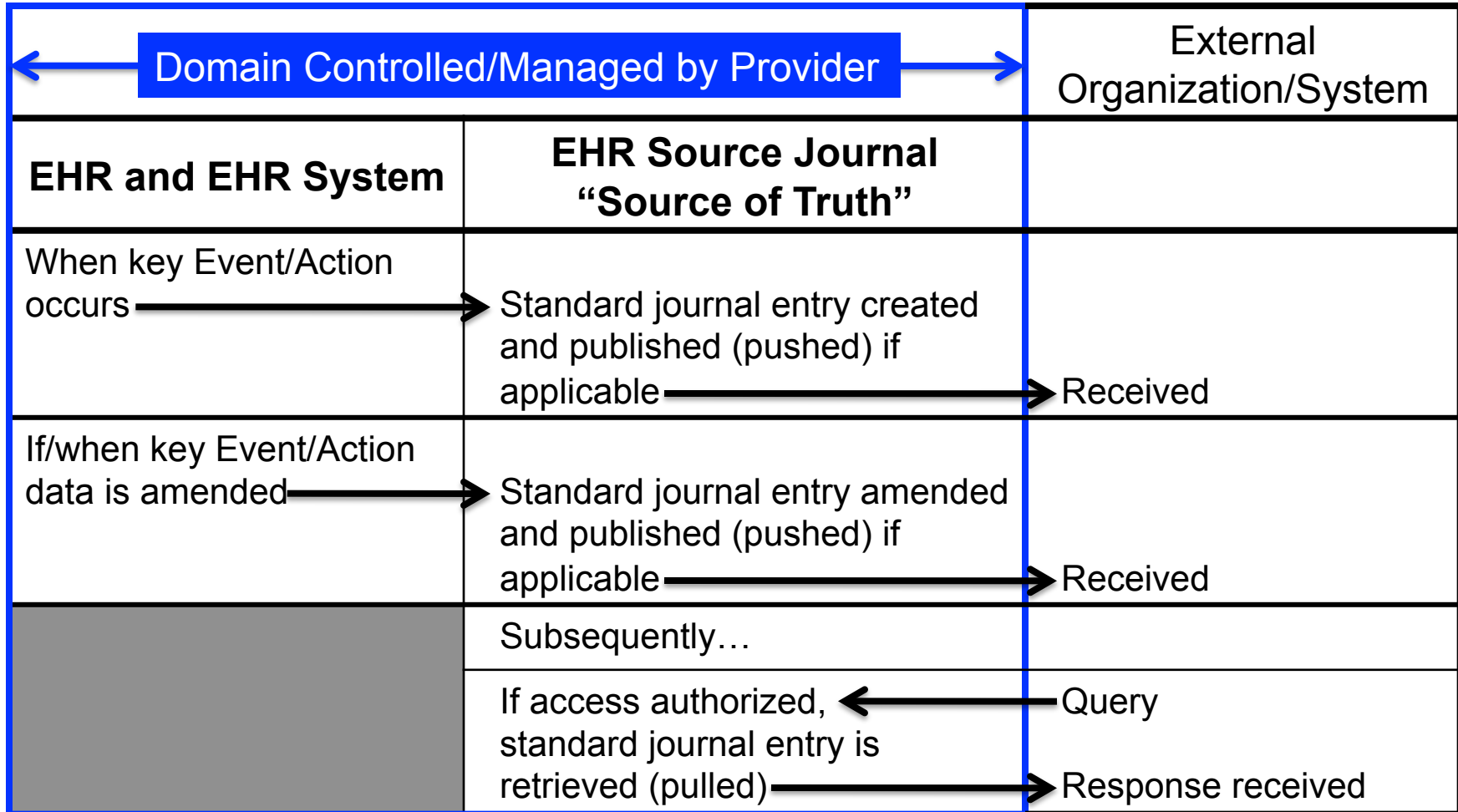
- Journal Entries provide continuous validation of:
  - Event/Action Context – who, what, when, where
  - Record persistence, indelibility since point of origination/authorship
  - Fidelity to source record
  - Authentication: source (organization, system) and authorship (person)
  - Attestation, if applicable: accuracy, completeness
  - Record amendments, lifecycle history
- Over time, Journal Entries may be:
  - Transmitted, disclosed: published (pushed) or queried (pulled)
  - Amended, corrected, then re-transmitted and re-disclosed, if applicable
  - Queried for: quality indicators, performance measures, clinical research
  - De-identified and exchanged for secondary use...

# Paired EHR System and EHR Source Journal





# Internal and External Journal Transactions



## Standards-Based

# Component Libraries

<b>Journal...</b>	<b>Standards-Based Process/ Information Component</b>	<b>As Registered in...</b>
Entry Initiator	Event/Action	Action Library
Entry	Event/Action Record, with: <ul style="list-style-type: none"> <li>• Attributes</li> <li>• Attribute Aggregations (e.g., templates, archetypes)</li> </ul>	<ul style="list-style-type: none"> <li>• Action Record Library</li> <li>• Attribute Library</li> <li>• Attribute Aggregation Library</li> </ul>

<b>Standards-Based Journal Entries</b>		
<b>Library</b>	<b>Process</b>	<b>Information</b>
Open Public	Any Event/Action	Any Event/Action Record
Harmonized	Industry Consensus or Mandated Event/Action	Industry Consensus or Mandated Event/Action Record

Reference: "Standards Convergence" Work Item, Slides 13-18

# Basics – EHR Source Journal Setup Sequence

	Sequence	Lab	ePrescribing	Summary
	<b>Create/Select from Component Libraries...</b>			
A	Process • Events/Actions	EHR/Lab Use Case Actions	Med Mgmt Use Case Actions	Related Use Case Actions
B	Information • Action Records (forming Journal Entries) • e.g., HITSP Data Req't's	Per HITSP EHR/Lab DRs	Per HITSP Medication Management DRs	Per HITSP Summary DRs
	Referencing... • e.g., HITSP Selected Data Content Standards	HL7 v2.5.1...	HL7 v2.x, NCPDP Script...	HL7 CDA R2 – Continuity of Care Document

## Basics – EHR Source Journal

# Run-Time Sequence

	Sequence	Lab	ePrescribing	Summary
1	Event/Action Occurs	<ul style="list-style-type: none"> <li>• Order...</li> <li>• Specimen...</li> <li>• Accession...</li> <li>• Test/result...</li> </ul>	<ul style="list-style-type: none"> <li>• Order...</li> <li>• Interactions...</li> <li>• Dispense...</li> <li>• Administer...</li> </ul>	<ul style="list-style-type: none"> <li>• Search, select</li> <li>• Create summary</li> </ul>
	Is documented	<ul style="list-style-type: none"> <li>• Action context: who, what, when, where</li> <li>• Action facts, findings, observations</li> </ul>		
2	Create/Commit Entry to <u>Proprietary EHR</u>	EHR	<u>Event/Action Related Entry</u> <ul style="list-style-type: none"> <li>• Proprietary data structure and format</li> </ul>	
3	Create/Commit corresponding Entry to <u>EHR Source Journal</u>	JOURNAL	<u>Event/Action Journal Entry</u> <ul style="list-style-type: none"> <li>• Standards-based data structure and format</li> <li>• Ready to be referenced, queried and transmitted</li> </ul>	
4	Publish (push) to External Organization or System			
5	Subsequently: Query/Response (pull)			