



Standards



Innovation



Technology



Commitment



Reliability



Quality



Efficiency

**SOLUTIONS  
DELIVERED.**

# EMDI Workgroup: Hurdles of Interoperability

Name of Project: EMDI

Presented by: EMDI team

Contract Number: GS-35F-0212X

Date: 09/19/2019

- ⚙ Collected Hurdles Review
- ⚙ Interoperability Hurdle: Education
  - ⚙ Measuring Interoperability Implementation
- ⚙ Round Table

# Acronyms

Acronym	Definition
<b>EMDI</b>	Electronic Medical Documentation interoperability
<b>FHIR</b>	Fast Healthcare Interoperability Resource
<b>ISA</b>	Interoperability Standards Advisory
<b>ONC</b>	The Office of the National Coordinator for Health Information Technology
<b>Q&amp;A</b>	Questions and Answers
<b>ROI</b>	Return on Investment

# Workgroup Collaboration



Group-Based  
Discussion



Topic by Topic



Q&A Recorded  
and Reviewed in  
Future Meetings

# Workgroup Collaboration: Activity

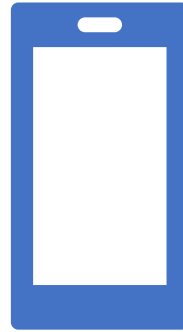
- ⚙️ Participation from all workgroup members can potentially lead to groundbreaking INTEROPERABILITY SOLUTIONS!
- ⚙️ We ask that each organization in the workgroup:
  - ⚙️ Provide an insight/potential solution to at least one noted point in their category as well as at least one noted point in the “General” category or...
  - ⚙️ Generate two points of your own with respective insights/solutions



# Workgroup Collaboration: Answering



**Conference Call**



**Cell Phone**



**Computer**

- ⚙ Select the Q&A hyperlink located in the:
  - ⚙ Workgroup meeting invite
  - ⚙ GoTo Meeting chat box
  - ⚙ EMDI Workgroup Collaboration page
  - ⚙ Visit link:  
<https://www.research.net/r/EMDIWGSEPT2019>

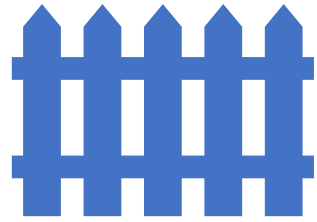
# Collected Hurdles

# Collected Hurdles



Participants

16



Hurdle Responses



Email



EMDI  
Q&A Tool



Workgroup Call

## Response Categories

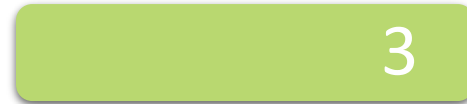
Interoperability Education



Interoperability Adoption



Interoperability with Providers



Interoperability with EHR



Interoperability with Payers





# Collected Hurdles: Hot Topics

Category	Comment
<b>Interoperability Education</b>	“There is so much going on in interoperability—there are approximately 50 workgroups for FHIR alone—and there is little crossover between groups (Meaning that there is so much going on all over the place that there isn’t one central location)”
<b>Interoperability with Providers</b>	“Limited adoption can be due to lack of defined ROI, Organization goals prevent interoperability goals; Providers running Cerner CAN technically respond to requests for Operations and Payment, but hospital POLICY blocks responses.”
<b>Interoperability Education</b>	“Business interoperability must overlay technology infrastructure interoperability. Technology follow[s] business, not the reverse. By "Business" I mean money (\$) based workflows that are both internal to the organization(s) involved AND workflow of the dynamics of the larger macro market dynamics in both clinical excellence and revenue overlap.”

# Collected Hurdles: Education

# Interoperability Hurdles: Education

- ⚙️ Education is at the heart of interoperability success
  - ⚙️ Without proper education and resources, organizations will
    - ⚙️ Have minimal adoption
    - ⚙️ Have decreased interest due to lack of specified direction
    - ⚙️ Continue their current workflow
  - ⚙️ Creating educational resources that assist with interoperability adoption includes
    - ⚙️ Linking existing resources together like ONC ISA and the EMDI Pilot Program
    - ⚙️ Identifying successful measures that drive ROI
    - ⚙️ Promoting the use of interoperability through blog posts and news articles



# Interoperability Hurdles: Starting Point



- ⚙️ Let's create a starting point with measures
  - ⚙️ Lack of interoperability measurements has increased uncertainty levels of early adopters
  - ⚙️ We want to know
    - ⚙️ How interoperability can be measured
      - ⚙️ In a meaningful way
      - ⚙️ To show scalability and growth
      - ⚙️ Without increasing burden on providers
    - ⚙️ What should be measured
      - ⚙️ Potential?
      - ⚙️ Compatibility?
      - ⚙️ Performance?

# What Should be Measured: Identification



The Office of the National Coordinator for  
Health Information Technology

- ⚙️ ONC has identified a few areas of measurement (April 2017)
  - ⚙️ Standard's lifecycle
  - ⚙️ Standard's effect on workflow
  - ⚙️ Instances where interoperability is lacking



# What Should be Measured: Method



- ⚙️ ONC plans to measure implementation of standards in a health IT product by:
  - ⚙️ Standards in development plans
  - ⚙️ Standard implemented in a health IT product or service
  - ⚙️ Product version with standard implemented deployed to end users
    - ⚙️ Note: All measures are intended to be captured nationally and annually

# What Should be Measured: Method

- ⚙️ ONC plans to measure the use of standards, including customization of the standards by end users to meet specific interoperability needs.
  - ⚙️ Standard used by end user
  - ⚙️ Volume of transactions by standard
  - ⚙️ Level of conformance/ customization of interoperability standards
    - ⚙️ Note: Consideration must be given to the type of standard being tracked (transport, content, vocabulary), the particular standard being used, its versioning, and the interoperability need it is addressing.



# Has Anyone Measured Interoperability?

## *Provider*

- Amedisys
- Apria Healthcare
- Lincare
- MedSide Healthcare

## *EHR/EMR*

- Brightree
- Change Healthcare
- Epic
- HealthSplash
- Homecare Homebase
- Hyland OnBase
- Netsmart
- Suncoast RHIO

## *Health IT*

- BRYJ
- careMESH
- DirectTrust
- eHealth Exchange
- Kno2
- MedAllies
- NewWave
- Somnoware

## *General*

- All



# Interoperability Measurement Hurdles

# Measurement Hurdles



- ⚙ Standards used and versioning
- ⚙ Defined measurement categories
- ⚙ Timing and location of measurement
- ⚙ Sample size and standardized measurements

# Have You Experienced These Hurdles While Measuring?

## *Provider*

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- Amedisys
- Apria Healthcare
- Lincare
- MedSide Healthcare

## *EHR/EMR*

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- Brightree
- Change Healthcare
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## *Health IT*

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- BRYJ
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## *General*

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- All

# Measurement Hurdle Solutions



Potential  
Measurements



Compatibility  
Measurements



Performance  
Measurements



## Potential Measurements

### ⚙️ Maturity Measurement

#### ⚙️ Barrier categories

- ⚙️ Business Process
- ⚙️ Services
- ⚙️ Data

#### ⚙️ Characterized as

- ⚙️ Isolated
- ⚙️ Initial
- ⚙️ Executable
- ⚙️ Connectable
- ⚙️ Interoperable



## Compatibility Measurements

- ⚙️ Performed during the engineering stage or when the interoperability goal is known
- ⚙️ Questions:
  - ⚙️ Conceptual compatibility:
    - ⚙️ *Syntactic*: is the information to be exchanged expressed with the same syntax?
    - ⚙️ *Semantic*: does the information to be exchanged have the same meaning?
  - ⚙️ Organizational compatibility:
    - ⚙️ *Persons*: are authorities/responsibilities clearly defined at both sides?
    - ⚙️ *Organization*: are the organization structures compatible?
  - ⚙️ Technological compatibility:
    - ⚙️ *Platform*: are the IT platform technologies compatible?
    - ⚙️ *Communications*: do the partners use the same protocols of exchange?



## Compatibility Measurements

Example

<b>Barriers</b>  <b>Concerns</b>	<b>Conceptual</b>		<b>Organizational</b>		<b>Technology</b>	
	<i>syntactic</i>	<i>semantic</i>	<i>authorities responsibilities</i>	<i>organization</i>	<i>platform</i>	<i>communication</i>
<b>Business</b>	1	1	0	1	0	0
<b>Processes</b>	1	1	1	1	1	1
<b>Services</b>	1	0	0	0	1	0
<b>Data</b>	0	0	0	1	1	1



## Performance Measurements

- ⚙️ Performed during the operational phase
  - ⚙️ Quality of exchange
  - ⚙️ Quality of use
  - ⚙️ Quality of conformity
  - ⚙️ Cost of implementation



# Round Table

## EMDI Workgroup October 2019 October 17<sup>th</sup>, 2019 at 3:00 PM ET

- ⚙ Continue hurdle discussion
- ⚙ Capture pilot updates

Please contact the EMDI team at [EMDI\\_team@Scopeinfotechinc.com](mailto:EMDI_team@Scopeinfotechinc.com) to add any agenda items to the next workgroup discussion.