INTEROPERABILITY BASICS COURSE AND

INTEROPERABILITY AND TRANSITIONS OF CARE

An ASSIGNMENT PAPER

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTORATE NURSING PRACTICE

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By submitting this paper for grading I am certifying that it is entirely my own work, with any words and/or ideas from other sources properly indicated (words with quotation marks), cited in text, and referenced. I have not submitted this paper to satisfy the requirements of any other course.

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INFORMATICS AND RESEARCH IN NURSING AND HEALTH CARE

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Interoperability Basics Course

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✓ Interoperability Basics Introduction
✓ Defining Interoperability
✓ Interoperability Path to Meaningful Use Stage 2
✓ Building Blocks of Interoperability
✓ The Effect of Interoperability on Categories of Care
✓ Interoperability Basics Summary

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Interoperability Basics Introduction - Lesson Summary   https://www.healthit.gov/public-course/interoperability-basics-traini...

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Lesson Summary
This introduction to the Interoperability Basics course made the following key points:

- The intention of the next phase of Interoperability (implementation requirements through Stage 2 Meaningful Use) is to enhance information sharing between providers, patients, and public health to positively impact patient outcomes.
- Interoperability Standards can be described by a framework of building blocks that describes standards required for implementation. They include:
  - Vocabulary/Code Sets
  - Content Structure
  - Transport
  - Security
  - Services
- Comprehension of interoperability standards is important to be able to assist providers and hospitals successfully attest to some of the new MU Stage 2 requirements.
- Gaining an understanding of the technical and health information technology nomenclature can help ensure a successful implementation.

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Interoperability Path to Meaningful Use Stage 2 - Lesson Summary   https://www.healthit.gov/public-course/interoperability-basics-traini...

Lesson Summary

This lesson on Stage 2 Meaningful Use made the following key points:

- Interoperability requirements of MU Stage 2 involve new standards that simplify information exchange.
- Implementing interoperability is possible with planning and knowledge of the MU Stage 2 requirements.
- New standards exist, such as Direct messaging, to assist with establishing the protocols required for information exchange.

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Defining Interoperability - Lesson Summary   https://www.healthit.gov/public-course/interoperability-basics-traini...

Lesson Summary

This lesson on interoperability, its definition, benefits and impact, made the following key points:

- The overall objectives of Meaningful Use are enabled through use of systems and technology that impact care and outcomes. Interoperability plays a key role in advancing those goals.
- Interoperability between disparate electronic systems plays an important role in breaking down information silos.
- Providers and patients are able to have the type of health information they need when and where they need it.

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Building Blocks of Interoperability - Lesson Summary

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Lesson Summary

This lesson on the Building Blocks of Interoperability made the following key points:

- Establishing standards as part of MU Stage 1 laid the foundation for the sharing of information between providers, patients, and health care stakeholders in Stage 2.
- The Common MU Data Set defines a standard set of data across certain MU Stage 2 objectives.
- Three additional data elements now require standard vocabularies: Preferred Language, Smoking Status, and Medication Allergies.
- The objectives that now have new or updated content standards in MU Stage 2 are: Lab Exchange, Lab Reporting to Public Health, Cancer Registry Reporting, and the Summary Record.
- Transport standards are an essential part of MU Stage 2.

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The Effect of Interoperability on Categories of Care - Lesson Summary   https://www.healthit.gov/public-course/interoperability-basics-traini...

Lesson Summary
This lesson on Interoperability's Effect on Categories of Care made the following key points:

- The following four Categories of Care have enhanced interoperability in MU Stage 2:
  - Lab Exchange
  - Patient and Family Engagement
  - Transitions of Care
  - Public Health
- The benefits of MU Stage 2 include the following:
  - Reduction of paper and documents (as well as the cost to produce them)
  - Tracking of health information over time which shows providers and patients health patterns
  - Secure transfer of patient information
  - Increased patient engagement (and empowerment) in managing personal health care
  - Access to the same information, at the time it is needed, by all providers and caregivers involved in a patient's care

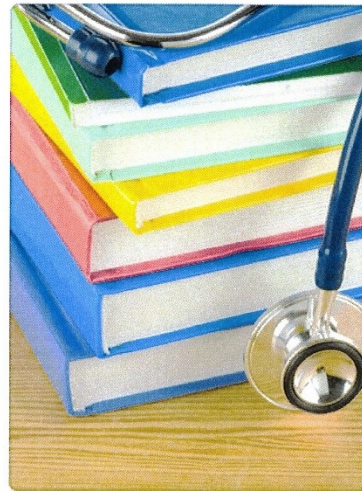HELP   RESOURCES   GO TO   PRINT   BACK   NEXT

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Congratulations!
Congratulations! You have successfully completed the Interoperability Basics course.

This is just one of several courses available to you for exploration. Other courses on the topic of Interoperability which go into depth and detail are:

- Transitions of Care
- Lab Exchange
- Patient and Family Engagement
- Public Health

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Interoperability and Transitions of Care

Interoperability and Transitions of Care training course   https://www.healthit.gov/public-course/interoperability-transitions-o...

INTEROPERABILITY

The Office of the National Coordinator for
Health Information Technology

Welcome to the Interoperability and Transitions of Care training course. This course contains three lessons. To begin the course, select the first lesson from the list below. Each lesson will open in a popup window. Each lesson contains multiple topics. Please complete all of the topics within the lesson before returning to this page to access the next lesson.

Introduction to Interoperability and Transitions of Care
Interoperability Standards for Transitions of Care
Implementing Standards-Based Exchange for Transitions of Care

Transitions of Care and Interoperability Overview - Medication Rec...   https://www.healthit.gov/public-course/interoperability-transitions-o...

Menu   **Transitions of Care and Interoperability Overview**   8 of 8   EXIT

Medication Reconciliation Knowledge Check
The MU Stage 2 objective requires providers and hospitals to perform medication reconciliation during relevant transitions of care. What other functionality is available in a provider or hospital's CEHRT to assist in reconciling important clinical information?

Select **the correct answer** and then click **Check Your Answer**.

- ⦿ **A.** Problem list and medication allergy reconciliation
- ◯ **B.** There is no additional functionality in CEHRT to support clinical information reconciliation
- ◯ **C.** All the common MU data set elements can be reconciled
- ◯ **D.** Medication allergy reconciliation

✓ Check Your Answer   Reset

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Transitions of Care Use Cases - Patient Discharged from Hospital to...   https://www.healthit.gov/public-course/interoperability-transitions-o...

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Patient Discharged from Hospital to Long Term Care Facility

Another common transition of care scenario involves a hospital that discharges a patient to an LTC or other sub-acute care facility.

Starting from the left, select the steps below to learn more about this scenario.

Patient Discharged from Hospital to Long Term Care Facility

The PCP receives the discharge summary and coordinates follow-up care with LTC staff. The LTC staff can access discharge instructions via their web portal access to the HIO's system to ensure a seamless transition of care for the patient within the first 48 hours post-discharge.

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MU Stage 2 Changes - Transitions of Care: Understanding Responsib...   https://www.healthit.gov/public-course/interoperability-transitions-o...

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Transitions of Care: Understanding Responsibilities
What does the **sending** provider or hospital need to achieve for the 50 percent transition of care threshold?

Select **the correct answer** and then click **Check Your Answer**.

- ○ **A.** The sending provider or hospital can type up a summary in a Microsoft Word document and send it with the patient.

- ◉ **B.** The sending provider or hospital must use CEHRT to create a transition of care/referral document but can transmit the document to the receiving provider using any method.

- ○ **C.** The sending provider needs to use CEHRT for every transition to both create and transmit the summary document.

- ○ **D.** The sending provider only needs to send a transition of care summary when the patient asks for it.

[✓ Check Your Answer]   [Reset]

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Lesson Summary and Conclusion

Now that you have completed the Introduction to Interoperability and Transitions of Care lesson, let us revisit the lesson objectives.

This lesson provided you with the information you need to recognize how interoperability enables transitions of care.

To help you understand this concept, this lesson discussed the following objectives:

- Recognize the important role MU Stage 2 plays in support of transitions of care
- Recognize how standards based exchange can enable care transitions
- Describe the use cases relevant to EPs and EH/CAHs

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Medication Reconciliation Stage 2 Objective and Measure

The EP or EH/CAH that receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation. This objective ensures that medication reconciliation occurs with each transition of care as appropriate.

Select the Medication Reconciliation Measure 1 button and its corresponding Measure Description, Denominator, Numerator, and Threshold buttons to learn more.

Medical Reconciliation Measure 1	Measure Description
	Denominator
	Numerator
	Threshold

The number of transitions of care in the denominator where medication reconciliation was performed.

Note:

Exclusions for EPs only: Any EP who was not the recipient of any transitions of care during the EHR reporting period. There are no exclusions for EH/CAHs.

While the electronic exchange of information is not a requirement for medication reconciliation, only patients whose records are maintained using CEHRT must be included in the denominator for transitions of care.

DON'T FORGET!   See Resources section for more details

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Security/Trust Agents or Health Information Service Providers

EHR vendors may choose to certify for the Applicability Statement for Secure Health Transport in combination with another vendor or organization that provides some of the functionality required for certification. The other partner may be a Health Information Service Provider (HISP), Health Information Organization (HIO), Health Information Exchange vendor, or third-party technology vendor.

A third-party technology vendor may provide a number of services via Security/Trust Agents (STAs) and/or HISPs that deliver health information as messages between senders and receivers over the Internet through the following methods:

- Use of domain names (i.e., www.hospital.org), Direct e-mail addresses (a.provider@direct.hospital.org), and associated certificates (Direct addresses must be linked to the associated certificate that confirms the identity of the domain name or full Direct e-mail address to assure the identities of the sender and receiver)
- Signed and encrypted Internet Message Format documents (encrypted information)
- Message Disposition Notification (notifying that messages sent and received)
- Trust Verification
- Certificate Discovery (digital certification to assure that information goes to the intended recipient) through the Domain Name Service (DNS) and Lightweight Directory Access Protocol (LDAP) (common services to locate information about the locationor addresses)

Providers and hospitals must ensure that their CEHRT allows them to meet MU requirements, especially where the EHR vendor will rely on another entity to perform a capability for which certification is required.

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Lesson Summary and Conclusion

Now that you have completed the Interoperability Standards for Transitions of Care lesson, let us revisit the lesson objectives. This lesson provided you with the information you need to apply MU Stage 2 interoperability standards for transitions of care and medication (information) reconciliation.

To help you apply these standards, this lesson discussed the following objectives:

- Identify changes between MU Stage 1 and Stage 2 objectives, measures, and requirements as they relate to transitions of care and medication (clinical information) reconciliation
- Identify the ONC 2014 CEHRT S&CC basics to provide the knowledge required to work with certified vendors and support EPs, EHs, and CAHs in implementing MU Stage 2 interoperability requirements
- Identify specific provider or facility actions that constitute achievement of MU Stage 2 transitions of care and medication reconciliation objectives and measures
- Identify provider and hospital attestation requirements and how CEHRT supports these requirements
- Identify specific provider or facility actions that constitute achievement of MU Stage 2 transitions of care and medication reconciliation objectives and measures
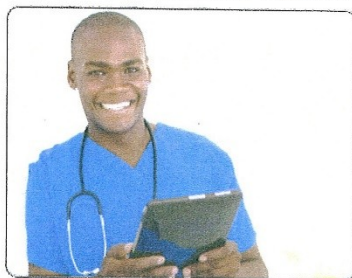
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Options for Using an eHealth Exchange Participant

Example 1

Provider A   eHealth Exchange Participant (formerly NwHIN Exchange)   Provider B

- - - - Represents Certified EHR Technology or "CEHRT"

EHR using an eHealth Exchange participant to deliver the summary record to the recipient

The EHR packages the C-CDA content and using any transport delivers it to an eHealth Exchange participant which enables the electronic transmission of the summary of care record to its intended recipient. In this scenario there needs to be verification that the message made it to the recipient.

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Setting Up a Direct Account: Other Considerations for Providers and Hospitals

Depending on how trust is established between CAs and Trust Anchors in a community, a provider may need to enter a Direct e-mail address and certificate information into their address book. Providers that share a CA or Trust Anchor minimize the need to update addresses and certificates.

At this time, the only way to know a recipient's Direct address is to ask, meaning currently, no way exists to look up Direct addresses, which are similar to e-mail addresses. HISPs will often charge for their services, so part of the evaluation process should be to determine not only the services provided and security framework, but also the cost to maintain a Direct account.

For large health systems, note that large health systems may manage Direct addresses and Digital Certificates. In these instances, it is best to work closely with the hospital's IT department to determine if they are performing these services.

Use of enterprise e-mail systems, such as Exchange, to send and receive Direct messages, is possible; however, if the enterprise e-mail functionality is not embedded into the CEHRT, the functionality may satisfy the first transition of care measure, but the functionality cannot be used to satisfy the second and third transition of care measures, which require that providers use CEHRT to transmit a transition of care/referral summary.

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Implementation Considerations - Medical Reconciliation Example   https://www.healthit.gov/public-course/interoperability-transitions-o...

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Medical Reconciliation Example

This chart is an example of a reconciled medication list.

Sample reconciled medication list		
Home Medications (the medications a patient took at home prior to a hospital stay)	**Hospital Medications (the medications the patient took during the hospital stay)**	**Discharge Medications (the medications the patient's doctor prescribed upon discharge)**
1 Dose of Medicine X orally	2 doses of Medicine X through IV	2 doses of Medicine X orally
Medicine Y		Medicine Y
Medicine G	Medicine Z	Medicine Z
Medicine H	Medicine H	Medicine H

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Lesson Summary and Conclusion

Now that you have completed the Implementing Standards-Based Exchange for Transitions of Care lesson, let us revisit the lesson objectives.

The lesson provided you with the information you need to identify how ONC grantees and implementers can support providers and hospitals to achieve MU Stage 2 transitions of care objectives and measures.

To help you understand this concept, this lesson discussed the following objectives:

- Recognize how to implement standards-based exchange to move data between different providers and care settings
- Recognize different transitions of care implementation requirements for MU Stage 2
- Recognize how to leverage regional or State HIT infrastructures, such as State or regional HIEs/HIOs or HISPs, to assist EPs and EH/CAHs achieve MU Stage 2 objectives
- Highlight workflow considerations that will facilitate smooth transitions of care

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