

HITSP Consultations and Transfers of Care Interoperability Specification

HITSP/IS09



Healthcare Information Technology Standards Panel

Submitted to:

Healthcare Information Technology Standards Panel

Submitted by:

**Provider Perspective Technical Committee
(Formerly Care Delivery Technical Committee)**

With input from:

**Administrative and Financial Domain Technical Committee
Care Management and Health Records Domain Technical Committee
Security, Privacy and Infrastructure Domain Technical Committee (Formerly Security and Privacy Technical Committee)**



DOCUMENT CHANGE HISTORY

Version Number	Description of Change	Name of Author	Date Published
	Template V2.4	Project Team	July 31, 2008
0.0.1	Review Copy	Provider Perspective Technical Committee	September 26, 2008
0.0.2	Review Copy	Provider Perspective Technical Committee	December 10, 2008
1.0	Released for Implementation	Provider Perspective Technical Committee	December 18, 2008
1.0.1	Review Copy	Provider Perspective Technical Committee	October 19, 2009
1.0.2	Review Copy	Provider Perspective Technical Committee	January 31, 2010



TABLE OF CONTENTS

1.0	INTRODUCTION.....	5
1.1	Interoperability Specification Overview	5
1.2	Document Scope	6
1.3	Copyright Permissions	6
1.4	Reference Documents	6
1.5	Conformance	6
1.5.1	Conformance Criteria	6
1.5.2	Conformance Scoping, Subsetting and Options	7
1.5.3	Test Methods	7
2.0	REQUIREMENTS	8
2.1	Synopsis of Requirements	8
2.2	Consultations and Transfers of Care	10
2.2.1	Information Exchange Requirements for Scenario 1 and Scenario 2	10
2.3	System Description.....	14
3.0	DESIGN SPECIFICATION	17
3.1	Capabilities Used.....	17
3.2	Capability Orchestration.....	20
3.2.1	Content Subsets.....	22
3.2.2	Implementation Variants.....	22
3.2.3	Constraints on Required Capabilities.....	23
4.0	CAPABILITY GAPS.....	24
5.0	APPENDIX	26
5.1	Harmonization Request Traceability.....	26
5.2	Exchange Content	33
5.3	Regulatory Guidance	34
6.0	DOCUMENT UPDATES.....	35
6.1	December 10, 2008	35
6.1.1	Updates from Public Comment	35
6.2	December 18, 2008	36
6.3	October 19, 2009.....	36
6.4	November 9, 2009	36
6.5	January 31, 2010.....	36
6.5.1	Updates from Public Comment	36
6.5.2	Global Changes	36



FIGURES AND TABLES

Figure 3-1 Diagram Showing Capabilities Used Between Consult or Transfer of Care Systems.....	20
Table 1-1 Interoperability Reader's Guide for Specification	5
Table 1-2 Reference Documents	6
Table 2-1 Reader's Guide for Section 2.0.....	8
Table 2-2 Description of Information Exchange Requirements	8
Table 2-3 Description of Scenarios	9
Table 2-4 Consultations and Transfers of Care Information Exchange Requirements.....	10
Table 2-5 System Names and Descriptions.....	14
Table 3-1 Reader's Guide for Section 3.0.....	17
Table 3-2 Capabilities Used.....	17
Table 3-3 Orchestration of Capabilities by System	21
Table 3-4 Conditions.....	22
Table 3-5 Orchestration Constraints.....	23
Table 3-6 Additional Constraints on Required Capabilities	23
Table 4-1 Reader's Guide for Section 4.0.....	24
Table 4-2 Capability Gaps	24
Table 5-1 Reader's Guide for Section 5.0.....	26
Table 5-2 Harmonization Request Events and Actions Analysis Table	26
Table 5-3 Long Term Care Assessments Requirements Analysis Table	31
Table 5-4 Exchange Content Data Requirements for HITSP/IS09 Gaps.....	33
Table 5-5 Regulatory and Guidance.....	34



1.0 INTRODUCTION

This Healthcare Information Technology Standards Panel (HITSP) document is divided into Requirements, Design and Capabilities sections which may be used by analysts, architects and implementers. Analysts might use this document to refer to the requirements of a particular Harmonization Request. Architects and system implementers might refer to this document as the top level architectural specification for a system design while software developers will use the Interoperability Specification as a source of requirements for interoperable information exchange.

The following table details specific sections of this Interoperability Specification template and how specific sections of this document are targeted to specific readers. Each of the stakeholders listed in this table is more fully defined in a separate appendix. This table is provided as an aid to readers to assist with identifying specific areas of focus. Readers are encouraged to review all sections of this document to further their understanding of HITSP's work.

Table 1-1 Interoperability Reader's Guide for Specification

Document Section	Section Number	Intended Audience	Information Contained
Section 2.0 Requirements	2.1 Synopsis of Requirements	Policy Managers Policy Analysts Executive Leadership	Used to provide an overview (using a scenario-based approach) of the requirements applicable to this document. Readers should start here to learn more about what specific requirements this Interoperability Specification is intended to address
	2.2 Scenarios	Program Managers Policy Analysts Executive Leadership	Each of the scenarios specific to the Interoperability Specification are outlined and described using a HITSP concept known as an Information Exchange Requirement (IER). HITSP uses IER's to outline requirements for HITSP work products
	2.3 System Description	Architects Business Analysts Policy Analysts Program Managers	The systems assigned to the system roles (as defined in the HITSP Capabilities used by this Interoperability Specification) are identified and described here. Readers can learn which systems have been included as part of this HITSP Interoperability Specification
Section 3.0 Design Specification	3.1 Capabilities Used	Architects Business Analysts Development Team	For each Information Exchange Requirement (IER) identified in Section 2.0, a corresponding HITSP Capability is associated and mapped. A reader can review how specific HITSP Capabilities meet information exchange needs. A diagram is also provided to show the interchange of data among systems identified in this Interoperability Specification
	3.2 Capability Orchestration	Architects Development Team	The core of the design in the Interoperability Specification is documented here. This solution shows orchestration of Capabilities to meet the specific Information Exchange Requirements (IER) in Section 3.1. The design also identifies conditions and constraints, as well as any content subsets specific to the solution
Section 4.0 Capability Gaps	4.0 Capability Gaps	Business Analysts Development Team Architects	Gaps specific to Capabilities used as part of this Interoperability Specification are reviewed in this section to determine why specific information exchange requirements may not yet be met or defined. Readers should check this section to track the progress of gap resolution
Section 5.0 Appendix	5.1 Harmonization Request Traceability	Architects Business Analysts	A complete mapping of information exchange requirements to functional requirements is provided in this section. Readers can trace IER's to underlying Harmonization Request events and actions (in those instances where a Use Case exists) or to functional requirements defined as part of an official standards Harmonization Request

1.1 INTEROPERABILITY SPECIFICATION OVERVIEW

The Healthcare Information Technology Standards Panel (HITSP) Consultations and Transfers of Care Interoperability Specification describes the information flows and system capabilities that apply to the



sharing of required and requested health information for the purposes of Consultations and Transfers of Care amongst Healthcare Providers, Institutions, Clinicians, and Personal Health Records (PHR).

1.2 DOCUMENT SCOPE

The scope of this Interoperability Specification includes information exchanges in support of:

- Patient Care Consultations
- Transfers of Care
- Long Term Care Assessments, as part of either a Consultation or Transfer of Care

The information is exchanged between EHRs, PHRs, ancillary service and public health systems. Pharmacy systems have been included in this document because Pharmacists participate in these information exchanges. The scope of this Interoperability Specification excludes:

- Direct electronic communications between patients and providers, which is addressed in the Patient-Provider Secure Messaging Detailed Use Case
- Information exchanges relating to patient transportation

1.3 COPYRIGHT PERMISSIONS

COPYRIGHT NOTICE

© 2010 ANSI. This material may be copied without permission from ANSI only if and to the extent that the text is not altered in any fashion and ANSI's copyright is clearly noted.

1.4 REFERENCE DOCUMENTS

A list of key reference documents and background material is provided in the table below. HITSP-maintained reference documents can be retrieved from the [HITSP Web Site](#).

Table 1-2 Reference Documents

Reference Documents	Document Description
HITSP Acronyms List	Lists and defines the acronyms used in this document
HITSP Glossary	Provides definitions for relevant terms used by HITSP documents
TN900 – Security and Privacy	TN900 is a reference document that provides the overall context for use of the HITSP Security and Privacy constructs
TN901 - Clinical Documents	TN901 is a reference document that provides the overall context for use of the HITSP Care Management and Health Records constructs
TN903 – Data Architecture	TN903 is a reference document that provides the overall context for use of the HITSP Data Architecture constructs
TN904 – Harmonization Framework and Exchange Architecture	TN904 is a reference document that provides the overall context for use of the HITSP Harmonization Framework and Exchange Architecture constructs
Long Term Care Assessment 2009 AHIC Extension/GAP	This document is the extension/gap document provided by AHIC in 2009 which describes additional requirements for Long Term Care assessments

1.5 CONFORMANCE

This section describes the conformance criteria, which are objective statements of requirements that can be used to determine if a specific behavior, function, interface, or code set has been implemented correctly.

1.5.1 CONFORMANCE CRITERIA

For an implementation to claim conformance to a HITSP Interoperability Specification, it must be implemented in its entirety or within a limited scope or subset as defined within the Interoperability



Specification, its associated construct specifications, as well as conformance criteria from the selected base and composite standards. A conformant system must be constrained as specified in this Interoperability Specification, and implement all of the required interfaces within the scope, subset or implementation options as described.

1.5.2 CONFORMANCE SCOPING, SUBSETTING AND OPTIONS

HITSP may define the permissibility for system scoping, subsetting or implementation options by which the specification may be implemented in a limited manner. The selected scope, subset or options shall specifically be stated, and implementations must include all requirements within the selected scope, subset or options to claim conformance.

For this Interoperability Specification, conformance may be declared by a participating system for any Capability provided that all declared constraints, conditions and requirements imposed by the Capability and its referenced HITSP constructs are satisfied.

1.5.3 TEST METHODS

HITSP relies on the conformance test methods, test tools and other test-related material produced by, or under the auspices, of standards developers, profiling organizations and Implementation Guide producers as part of its collaborative implementation testing effort. Efforts to produce conformance test methods, tools, etc. may be internal to the organization or provided by an external organization.

An [HIT Implementation Testing and Support](#) Web Site has been developed in collaboration with HITSP, the National Institute of Standards and Testing (NIST), the Certification Commission for Healthcare Information Technology (CCHIT), and the Office of the National Coordinator for Health Information Technology (ONC) to advance conformance and interoperability testing capabilities. This Web Site provides HIT implementers with the necessary resources to support and test their implementation of standards-based health systems..



2.0 REQUIREMENTS

Section 2.0 identifies the requirements from the Harmonization Request for which information exchanges are necessary. The following table details how this section and other sections of the document are targeted to specific readers. Each of the stakeholders listed in this table are more fully defined in a separate appendix. This table is provided as an aid to readers to assist with identifying specific areas of focus. Readers are encouraged to review all sections of this document to further their understanding of HITSP's work.

Table 2-1 Reader's Guide for Section 2.0

Document Section	Section Number	Intended Audience	Information Contained
Section 2.0 Requirements	2.1 Synopsis of Requirements	Policy Managers Policy Analysts Executive Leadership	Used to provide an overview (using a scenario-based approach) of the requirements applicable to this document. Readers should start here to learn more about what specific requirements this Interoperability Specification is intended to address
	2.2 Scenarios	Program Managers Policy Analysts Executive Leadership	Each of the scenarios specific to the Interoperability Specification are outlined and described using a HITSP concept known as an Information Exchange Requirement (IER). HITSP uses IER's to outline requirements for HITSP work products
	2.3 System Description	Architects Business Analysts Policy Analysts Program Managers	The systems assigned to the system roles (as defined in the Capabilities used by this Interoperability Specification) are identified and described here. Readers can learn which systems have been included as part of this Interoperability Specification

2.1 SYNOPSIS OF REQUIREMENTS

The following table describes the information exchange requirements needed to accomplish the Harmonization Request for which information exchange is necessary.

Table 2-2 Description of Information Exchange Requirements

Information Exchange Requirement Number (IER)	Description
IS09-IER1	Query and Response Identify Provider based on patient preference
IS09-IER2	Request & Response Patient Eligibility Request/Patient Eligibility Health Result
IS09-IER3	Request & Response Health Plan Request/Health Plan Response
IS09-IER4	Request & Response Summary of Care
IS09-IER5	Request & Response Referral Summary
IS09-IER6	Request & Response Lab Result Document
IS09-IER7	Request & Response Encounter Summary Document
IS09-IER8	Request & Response Discharge Summary
IS09-IER9	Request & Response Sharing Imaging Results
IS09-IER10	Send & Receive Decision Support Data
IS09-IER11	Request & Response Additional Information (Using Unstructured Data where no structured document is available)
IS09-IER12	Send & Receive Accept Patient
IS09-IER13	Request & Response History and Physical Note
IS09-IER14	Request & Response Consultation Note
IS09-IER15	Query & Response Identify Provider Based on Health Plan
IS09-IER16	Send & Receive Clinical Referral Request Content
IS09-IER17	Send & Receive Long Term Care Assessment Clinical Content
IS09-IER18	Send & Receive Long-Term Care Assessment Instrument
IS09-IER19	Send & Receive De-Identified Long-Term Care Assessments Clinical Content



Information Exchange Requirement Number (IER)	Description
IS09-IER20	Send & Receive Authorization and Consent Content
IS09-IER21	Send & Receive Payer request for consultation for Medication Therapy Management

The Consultations and Transfers of Care Use Case focuses on the exchange of a core set of information between clinicians, care settings and patients. This Use Case also covers the exchange of information needed to verify eligibility and authorization for services. This Use Case describes two Scenarios, Consultations and Transfers of Care. Additional requirements include constructs and information transfers to accommodate standardized LTC assessment instruments.

Table 2-3 lists and describes the major subdivisions of a Harmonization Request, called Scenarios.

The Consultations and Transfers of Care Use Case focuses on the exchange of a core set of information between clinicians, care settings and patients. This Use Case also covers the exchange of information needed to verify eligibility and authorization for services. This Use Case describes two Scenarios, Consultations and Transfers of Care. Additional requirements include constructs and information transfers to accommodate standardized LTC assessment instruments.

Table 2-3 Description of Scenarios

Scenario Name	Scenario Description
Consultation	The Consultation Scenario is focused on the sharing of information to support a request for a consultation, the consultation itself, and the sharing of information back to the requesting clinician and patient upon completion of the consultation. This Scenario includes the communication of a request for consultation and a core set of clinical and administrative information between clinicians ¹ , as well as additional context specific information which may be provided to and/or requested by the consulting clinician. Requesting clinicians can transmit a core set of patient information, which can include (but is not limited to) reason for the consultation request, patient summary information, diagnostic images, procedure reports, laboratory results, etc. Consulting clinicians may also seek access to additional clinical information via an information exchange as necessary and relevant to develop a comprehensive clinical picture. Depending upon patient care needs, consultation requests may become patient referrals where the consulting clinician assumes responsibility for managing the patient and providing care

¹ A clinician is defined in the Consultations and Transfers of Care Use Case as:

“Healthcare providers with patient care responsibilities, including physicians, advanced practice nurses, physician assistants, nurses, psychologists, pharmacists, and other licensed and credentialed personnel involved in treating patients.”

Sometimes a care provider who is not a clinician or licensed provider may also create or add to documents used in Consultations or Transfers of Care scenarios. This IS document uses the term Clinician as defined in the Consultations and Transfers of Care Use Case and leaves the determination of when a Care Provider can add or modify documents to local policy and implementations. Here are some guidelines as to how to differentiate between a Clinician and a Care Provider:

- Clinician: A clinician is an individual who by virtue of BOTH Jurisdictional Regulations AND Local Business Rules is licensed to (or authorized to) and provides care to patients
- Care Provider: An individual who by virtue of Local Business Rules provides care to patients



Scenario Name	Scenario Description
Transfers of Care	The Transfers of Care Scenario is focused on the sharing of information to support the discharge and/or transfer of a patient from one care setting to another. The clinical accountability and management of the patient is transferred from one clinician and care setting to another. This Scenario includes the sharing of a set of clinical and administrative information between provider organizations, as well as additional information which may be accessed or requested by the new provider of care. The transferring setting can transmit a core set of clinical information to the receiving setting to assist in the coordination and management of patient care and may also send relevant information to the patient's personally controlled health records which may include PHRs, health record banks, etc. This core set of clinical information can include (but is not limited to) patient summary information, discharge summary, plan of care, procedure documentation, and clinical results. The receiving setting may also seek access to additional clinical information via an information exchange as necessary and relevant to develop a comprehensive clinical picture

2.2 CONSULTATIONS AND TRANSFERS OF CARE

Both the Consultations and Transfers of Care scenarios involve the same information exchanges. The distinction is that a consultation occurs between two clinician EHRs and a transfer of care occurs between two facility/organization EHRs.

2.2.1 INFORMATION EXCHANGE REQUIREMENTS FOR SCENARIO 1 AND SCENARIO 2

Table 2-4 Consultations and Transfers of Care Information Exchange Requirements summarizes the relationship between the Exchange Action, Exchange Content, and the Initiating and Responding System(s) along with Exchange Attributes.

Table 2-4 Consultations and Transfers of Care Information Exchange Requirements

Information Exchange Requirement Number	Exchange Action	Exchange Content	Initiating System	Responding System(s)	Exchange Attribute
IS09-IER1	Query & Response	Identify Provider based on patient preference	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	Provider Registry	
IS09-IER2	Request & Response	Patient Eligibility Request; Patient Eligibility Health Result	<ul style="list-style-type: none"> Provider Administrative and Financial System Personal Health Record (PHR) System Pharmacy System 	Health Plan System	
IS09-IER3	Request & Response	Health Plan Request Health Plan Response	<ul style="list-style-type: none"> Provider Administrative and Financial System Personal Health Record (PHR) System Pharmacy System 	Health Plan System	



Information Exchange Requirement Number	Exchange Action	Exchange Content	Initiating System	Responding System(s)	Exchange Attribute
IS09-IER4	Request & Response	Summary of Care	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	Transfer of Care data; or Historical Health Content for Consultation; or Encounter or full episode of care record Content Must include applicable modules from HITSP/C32 as well as Functional Status
IS09-IER5	Request & Response	Referral Summary	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	
IS09-IER6	Request & Response	Lab Result Document	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System² 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System³ 	Transfer of Care data; or Historical Health Content for Consultation; or Encounter or full episode of care record Content
IS09-IER7	Request & Response	Encounter Summary Document	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	Transfer of Care data; or Historical Health Content for Consultation; or Encounter or full episode of care record Content Must include applicable modules from HITSP/C48
IS09-IER8	Request & Response	Discharge Summary	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System 	Transfer of Care data; or Historical Health Content for Consultation; or Encounter or full episode of care record Content Must include applicable modules from HITSP/C48

² Pharmacists need access to laboratory data in order to appropriately monitor medication therapy. For example, Pharmacists need INR levels to monitor warfarin therapy.

³ Pharmacists routinely conduct screenings for osteoporosis, high blood pressure, diabetes, etc. In many cases the Pharmacist will forward the results of those tests to the individual physician. These types of activities are occurring with growing frequency. In some cases Pharmacists perform the test themselves and in other cases they work within an integrated facility and request that information specifically from the lab. This information is important to a coordinated and comprehensive health record.



Information Exchange Requirement Number	Exchange Action	Exchange Content	Initiating System	Responding System(s)	Exchange Attribute
IS09-IER9	Request & Response	Sharing Imaging Results	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	Some pharmacists in some states provide DEXA scans for osteoporosis and various nuclear medicine scans. This is governed by local regulations and policy.
IS09-IER10	Send & Receive	Decision Support Data	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	Decision support data are sent as unstructured data until a structured document is available
IS09-IER11	Request & Response	Unstructured Data	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	MAY include: Document Metadata; DR58 Unstructured Data Content Used to request and respond with additional patient data, which is an important function of the consultation and transfer of care scenarios
IS09-IER12	Send & Receive	Accept Patient	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	Accept Patient Content
IS09-IER13	Request & Response	History and Physical Note	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<p>Transfer of Care data; or Historical Health Content for Consultation; or Encounter or full episode of care record Content</p> <p>Must include applicable modules from HITSP/C84</p> <p>In Medication Therapy Management, Pharmacists use Pharmacy systems to send clinical notes to physicians and sometimes other providers as well.</p>
IS09-IER14	Request & Response	Consultation Note	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<p>Must include applicable modules from HITSP/C84</p> <p>In Medication Therapy Management, Pharmacists use Pharmacy systems to send clinical notes to physicians and sometimes other providers as well.</p>



Information Exchange Requirement Number	Exchange Action	Exchange Content	Initiating System	Responding System(s)	Exchange Attribute
IS09-IER15	Query & Response	Identify Provider Based on Health Plan	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	Provider Registry	
IS09-IER16	Send & Receive	Clinical Referral Request Content	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	
IS09-IER17	Send & Receive	Long Term Care Assessment Clinical Content ⁴	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<p>LTC Assessment clinical information is used to populate the questionnaire assessment section of CDA documents.</p> <p>Content modules are specified in HITSP/C83 - CDA Content Module Section 2.2.1.47. HITSP/C168 Long Term and Post Acute Care Assessments clarifies additional constraints and information</p>
IS09-IER18	Send & Receive	Long Term Care assessment instrument ⁵	Electronic Health Record (EHR) System	Electronic Health Record (EHR) System	<p>Specific assessment instruments must be completed to document patient status and thereby comply with regulations applicable to federally funded (whether funding is whole or in part) long-term or post-acute care program settings. These instruments include the MDS (for nursing home/SNF), OASIS (for home health), and IRF-PAI (for inpatient rehabilitation facilities.) Other assessments may be "native" to specific networks or HIE (such as VA or other local/regional/business system). These instruments can be used to exchange standardized information.</p>

⁴ Long Term Care assessments also refers to assessments used in post acute care environments.

⁵ Federally-mandated instruments are characterized by setting-specific data items, setting-specific definitions for each data item, and setting-specific instructions regarding when and how to complete the assessment.



Information Exchange Requirement Number	Exchange Action	Exchange Content	Initiating System	Responding System(s)	Exchange Attribute
IS09-IER19	Send & Receive	De-Identified Long-Term Care Assessments Clinical Content	Electronic Health Record (EHR) System	Public Health Information System	For sending de-identified LTC assessments to Public Health. SHALL use HITSP/C165 - Anonymize Long Term and Post Acute Care Assessment Data to get instructions for de-identification
IS09-IER20	Send & Receive	Authorization and Consent Content	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Personal Health Record (PHR) System Pharmacy System 	
IS09- IER21	Send & Receive	Payer request for consultation for Medication Therapy Management	Health Plan System	<ul style="list-style-type: none"> Electronic Health Record (EHR) System Pharmacy System 	Note: If payer is the initiator requesting the service, the eligibility response may be included in the consultation request, including the specific services the patient is eligible for

2.3 SYSTEM DESCRIPTION

The following table lists systems involved in the above listed scenarios, and identifies the stakeholders served by those involved systems.

Table 2-5 System Names and Descriptions

System Name	System Description	Stakeholders
Clinical Data Source ⁶	The system which responds to a request for existing clinical data on a patient	<ul style="list-style-type: none"> Care coordinators Clinical support staff Clinicians Diagnostic Imaging service provider Healthcare Entities Health Information Management (HIM) Personnel
Diagnostic Imaging Information System	A computerized system used by organizations that provide radiology and diagnostic imaging services to patients in various settings. The organizations perform and analyze the study as ordered by clinicians to assess the health status of patients, e.g. Radiology Information Systems (RIS), or Picture Archiving and Communications Systems (PACS)	<ul style="list-style-type: none"> Care coordinators Clinical support staff Clinicians Diagnostic Imaging service provider Healthcare Entities Health Information Management (HIM) Personnel Durable Medical Equipment (DME) Suppliers

⁶ The clinical data source system can be bundled with an EHR system, or implemented separately. (E.g. As a separate registry and repository)



System Name	System Description	Stakeholders
Electronic Health Record (EHR) System	An Electronic Health Record (EHR) System is a secure, real-time, point-of-care, patient-centric information resource for clinicians Note: For the purposes of satisfying the 2009 AHIC Long Term Care Assessment extension, EHR Systems are considered to include LTC systems ⁷	<ul style="list-style-type: none"> Care coordinators Clinical support staff Clinicians Diagnostic Imaging service provider Healthcare Entities Health Information Management (HIM) Personnel Durable Medical Equipment (DME) Suppliers
Health Plan Systems	Systems used by health plans that include administrative and financial functions associated with the coverage and financing of healthcare for the health plan's enrolled members. These functions include information regarding the individual's enrollment, eligibility, coverage and benefits, authorizations, claims, care coordination and other information related to the member	<ul style="list-style-type: none"> Administrative and Financial Staff Care Coordinators Health Plan Durable Medical Equipment (DME) Suppliers
Laboratory Information System	Information system supporting the testing, analysis, and information management for laboratory organizations. Medical laboratories, in either a hospital or ambulatory environment, which analyze specimens as ordered by clinicians to assess the health status of patients. Laboratories, depending on how they are affiliated with hospitals, can be part of either Individual Healthcare Facilities or Integrated Healthcare Data Suppliers. These systems are responsible for updating interface engine rules and triggers in response to Harmonization Request modifications of requested data feeds	<ul style="list-style-type: none"> Clinical support staff Clinicians Healthcare Entities Durable Medical Equipment (DME) Suppliers
Personal Health Record (PHR) System	A healthcare record system used to create, review, annotate and maintain records by the patient or the caregiver for a patient. The PHR may include any aspect(s) of the health condition, medications, medical problems, allergies, vaccination history, visit history or communications with healthcare providers	<ul style="list-style-type: none"> Care coordinators Clinicians Consumers Healthcare Entities Durable Medical Equipment (DME) Suppliers
Pharmacy System	Electronic systems that support pharmacists in their role for dispensing medications. This includes systems that may be able to provide useful information on consumers' past medication histories. These systems can exist outside of a hospital or integrated within a hospital (e.g. see HITSP/IS07 Medication Management for additional detail)	<ul style="list-style-type: none"> Pharmacists Care coordinators Clinical support staff Clinicians Diagnostic Imaging service provider (E.g.: Nuclear pharmacy diagnostic imaging) Healthcare Entities Health Information Management (HIM) Personnel Durable Medical Equipment (DME) Suppliers Consumers

⁷ For the purposes of Consultations and Transfers of Care, an EHR INCLUDES Pharmacy systems, Dietetic systems, Podiatry systems, and many other kinds of systems.



System Name	System Description	Stakeholders
Provider Administrative and Financial Systems	Systems used by healthcare provider that include administrative and financial functions associated with the delivery of healthcare. These functions support the delivery and optimization of care, but generally do not impact the direct care of an individual patient	<ul style="list-style-type: none"> • Administrative and financial staff • Care coordinators • Clinical support staff • Healthcare Entities • Health Information Management (HIM) Personnel • Durable Medical Equipment (DME) Suppliers
Provider Registry	Centralized registry of licensed providers supporting the ability for other systems to look up providers by health plan, location, specialty and other criteria to be determined.	<ul style="list-style-type: none"> • Care coordinators • Clinical support staff • Clinicians • Diagnostic Imaging service provider • Healthcare Entities • Health Information Management (HIM) Personnel
Public Health Information System	An automated and integrated system used to document and address information of interest to public health. Local, state, and federal government organizations and personnel use these systems to help protect and improve the health of their respective constituents. A critical effort under this charge is collecting health information to monitor for the existence of emerging health threats appearing in the population and manage these threats once manifested. Staff of these agencies interacts with the public health information system to verify and validate system indications of public health threats, and to assert acknowledgements that may be required by system processes	Note: Stakeholders would include state departments of health (which would include epidemiologists, biostatisticians, infectious disease personnel, etc.); Healthcare organizations (hospitals, NHs, ESRDs, etc)



3.0 DESIGN SPECIFICATION

Section 3.0 identifies the Capabilities used to meet the requirements identified in Section 2.0 Requirements and describes how to orchestrate this set of Capabilities to meet those requirements. The following table details how this section of the document is targeted to specific readers. Each of the stakeholders listed in this table are more fully defined in a separate appendix. This table is provided as an aid to readers to assist with identifying specific areas of focus. Readers are encouraged to review all sections of this document to further their understanding of HITSP's work.

Table 3-1 Reader's Guide for Section 3.0

Document Section	Section Number	Intended Audience	Information Contained
Section 3.0 Design Specification	3.1 Capabilities Used	Architects Business Analysts Development Team	For each Information Exchange Requirement (IER) identified in Section 2.0, a corresponding Capability is associated and mapped. A reader can review how specific Capabilities meet information exchange needs. A diagram is also provided to show the interchange of data among systems identified in this Interoperability Specification
	3.2 Capability Orchestration	Architects Development Team	The core of the design in the Interoperability Specification is documented here. This solution shows orchestration of Capabilities to meet the specific Information Exchange Requirements (IER) in Section 3.1. The design also identifies conditions and constraints, as well as any content subsets specific to the solution

3.1 CAPABILITIES USED

The table below lists the Capabilities used in this Interoperability Specification, and relates them to the information exchange requirements from Table 2-2 that the Capability satisfies. The information exchanges listed are the relevant information exchanges from the underlying Capability.

Table 3-2 Capabilities Used

Capability	Capability Summary	Capability IE Used	IERs Satisfied
HITSP/CAP119 – Communicate Structured Document	This Capability addresses interoperability requirements that support the communication of structured health data related to a patient in a context set by the source of the document who is attesting to its content. Several document content subsets, structured according to the HL7 CDA standard, are supported by this Capability. The following are examples of the type of structured data that may be used: <ul style="list-style-type: none"> Continuity of Care Document (CCD) Emergency Department Encounter Summary Discharge Summary (In-patient encounter and/or episodes of care) Referral Summary Ambulatory (encounter and/or episodes of care) Consultation Notes History and Physical Personal Health Device Monitoring Document Healthcare Associated Infection (HAI) Report Document Document creators shall support a number of the HITSP specified coded terminologies as defined by specific content subsets specified in this Capability Note: LTC Assessment Clinical Content will be added to this list	A - Send/Receive Clinical Document	IS09-IER4
			IS09-IER5
			IS09-IER7
			IS09-IER8
			IS09-IER9
			IS09-IER13
			IS09-IER14
			IS09-IER17
			IS09-IER18
			IS09-IER19
HITSP/CAP120 –	This Capability addresses interoperability requirements that	A - Send/Receive	IS09-IER11



Capability	Capability Summary	Capability IE Used	IEs Satisfied
Communicate Unstructured Document	support the communication of a set of unstructured health data related to a patient in a context set by the source of the document who is attesting to its content. Two types of specific unstructured content are supported, both with a structured CDA header: <ul style="list-style-type: none"> • PDF-A supporting long-term archival • UTF-8 text 	Unstructured Document	IS09-IER12
HITSP/CAP121 – Communicate Clinical Referral Request	This Capability addresses interoperability requirements that support provider-to-provider (clinical) referral request interaction. It allows the bundling of the referral request document with other relevant clinical documents of interest by referencing such documents as shared by other capabilities such as: <ul style="list-style-type: none"> • HITSP/CAP119 Communicate Structured Document • HITSP/CAP120 Communicate Unstructured Document • HITSP/CAP133 Communicate Immunization Summary 	A – Send and Receive Clinical Referral Trigger	IS09-IER16
		B – Send and Receive Clinical Referral Request	IS09-IER16
HITSP/CAP123 – Retrieve Existing Data	This Capability supports queries for clinical data (e.g., common observations, vital signs, problems, medications, allergies, immunizations, diagnostic results, professional services, procedures and visit history)	A - Request and Respond Query for Existing Data	IS09-IER11
HITSP/CAP127 – Communicate Lab Results Document	This Capability addresses interoperability requirements that support the communication of a set of structured laboratory results related to a patient in a context set by the source of the document who is attesting to its content. Non-ordering Providers of Care access historical laboratory results as documents and "copy-to" Providers of Care may receive document availability notifications to retrieve such lab report documents. Lab Report content creators shall support HITSP specified coded terminologies as defined by specific content subsets specified in this Capability for: General Laboratory Test Results; Microbiology Test Results This Capability may use content anonymization	A - Send and Receive Laboratory Report Document	IS09-IER6
HITSP/CAP128 – Communicate Imaging Information	This Capability addresses interoperability requirements that support the communication of a set of imaging results (i.e., reports, image series from imaging studies) related to a patient in a context set. This is done by an Imaging System acting as the information source attesting to its content. This Capability may use content anonymization	A – Send and Receive Medical Image Result	IS09-IER9
HITSP/CAP140 – Communicate Benefits and Eligibility	This Capability addresses interoperability requirements that support electronic inquiry and response from a patient's eligibility for health insurance benefits. The information exchanged includes the following: <ul style="list-style-type: none"> • A patient's identification (i.e.,: name, date of birth, and the health plan's member identification number) • Communication of a member's status of coverage and benefit information and financial liability • Access to information about types of services, benefits and coverage for various medical care and medications. It provides clinicians with information about each member's health insurance coverage and benefits 	A - Request for Health Plan Clinician care benefits verification	IS09-IER2
		B - Health Plan Clinician care benefits response	IS09-IER2

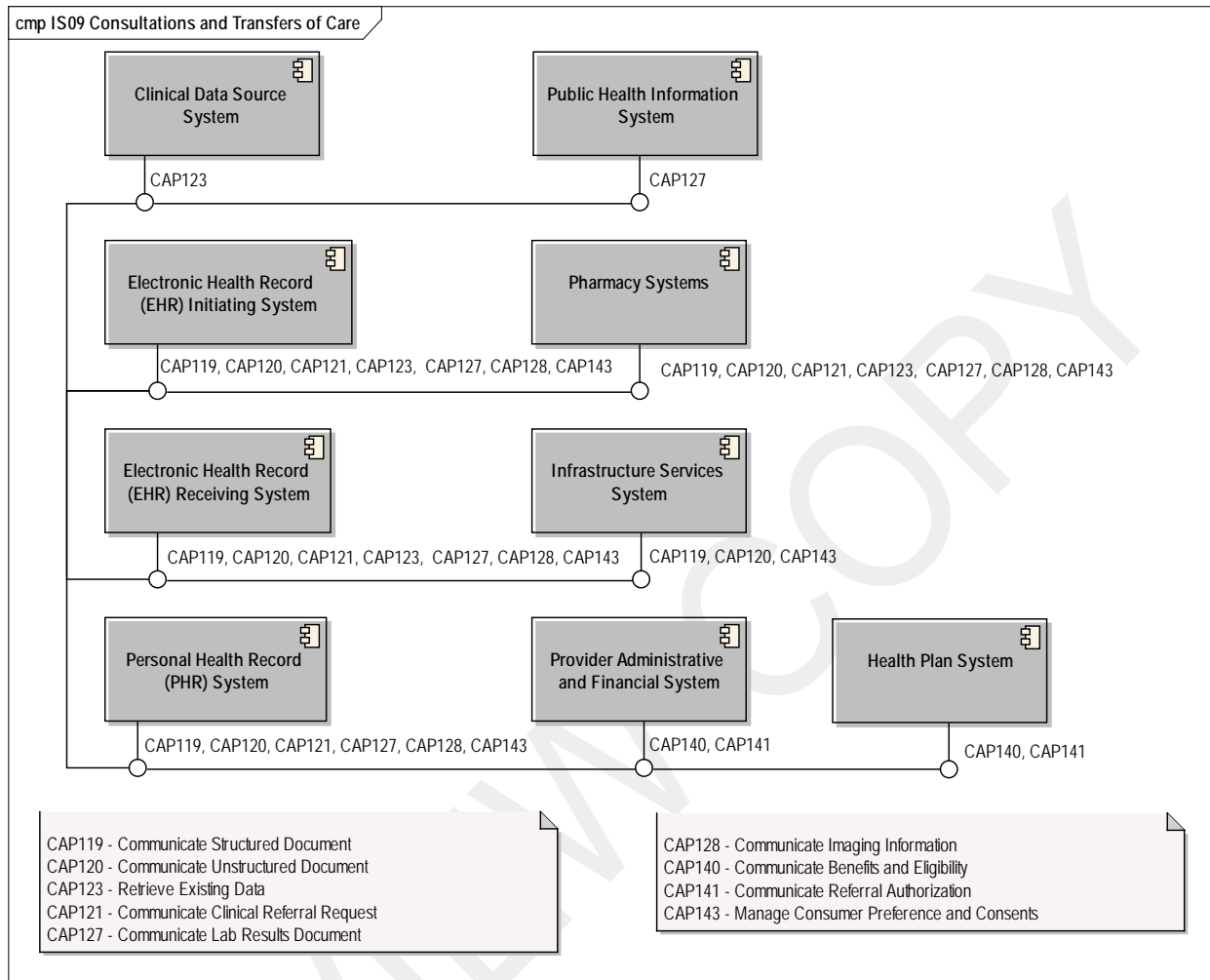


Capability	Capability Summary	Capability IE Used	IEs Satisfied
HITSP/CAP141 – Communicate Referral Authorization	<p>This Capability addresses interoperability requirements that support electronic inquiry and response to authorizing a patient (health plan member) to be referred for service by another provider or to receive a type of service or medication under the patient's health insurance benefits. The Capability supports the transmittal of a patient's name and insurance identification number with the request for the type of service. It also includes the following optional requirements:</p> <ul style="list-style-type: none"> • Identification of the type of service or medication requested for benefit coverage (does not guarantee payment by insurance provider) • Communication of a referral notification number or authorization number from the Payer System to the Provider System. It provides clinicians and pharmacists with information about each patient's medical insurance coverage and benefits. It may include information on referral or authorization permission 	A - Request for Health Plan to authorize certain healthcare services	IS09-IER3
		B - Health Plan Response for healthcare services	IS09-IER3
HITSP/CAP143 – Manage Consumer Preference and Consents	<p>This Capability addresses management of consumer preferences and consents as an acknowledgement of a privacy policy. This Capability is used to capture a patient or consumer agreement to one or more privacy policies; where examples of a privacy policy may represent a consent, dissent, authorization for data use, authorization for organizational access, or authorization for a specific clinical trial. This Capability also supports the recording of changes to prior privacy policies such as when a patient changes their level of participation or requests that data no-longer be made available because they have left the region</p>	A – Send and Receive Unstructured Document	IS09-IER20
		B – Request and Response Consent Directives	IS09-IER20

The following diagram shows how systems use Capabilities to complete the full Interoperability Specification. The diagram is purposely created to be architecturally neutral. In some settings a given system role within a Capability will be filled by more than one system in the Interoperability Specification. In many settings, one system may implement multiple Capabilities as shown in the diagram. There are many potential combinations of systems using these Capabilities in different architectures as discussed in Section 3.2.2 Implementation Variants. The diagram therefore uses one example that includes all systems.



Figure 3-1 Diagram Showing Capabilities Used Between Consult or Transfer of Care Systems



3.2 CAPABILITY ORCHESTRATION

This section describes how the Capabilities identified above are orchestrated to achieve the aims of the Harmonization Request (such as a Use Case) addressed by this Interoperability Specification. The orchestration identifies systems that fill the system roles in the Capabilities to achieve the desired data flows.

Table 3-3 lists the orchestration of Capabilities by system to meet the information exchange requirements described in Section 2.0. Subsets of these systems perform information exchanges according to one or more of the Capabilities identified in this specification. The Capabilities are annotated on the diagrams. The in-scope requirements are supported by Capabilities either previously specified by HITSP or new Capabilities introduced in this section. Optionality is expressed as Required (R), Optional (O) or Conditional (C). If the optionality is Conditional, the applicable conditions are given in Table 3-4 below.



Table 3-3 Orchestration of Capabilities by System

System	Capability	System Role	System Role Option	Condition
Electronic Health Record (EHR) System	HITSP/CAP119 – Communicate Structured Document	Document Sender	R	C[101]
		Document Consumer	R	none
	HITSP/CAP121 – Communicate Clinical Referral Request	Message Sender	R	none
		Message Receiver	R	none
		Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP123 – Retrieve Existing Data	Clinical Data Consumer	R	none
	HITSP/CAP127 – Communicate Lab Results Document	Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP128 – Communicate Imaging Information	Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP143 – Manage Consumer Preference and Consents	Document Sender	R	none
		Document Receiver	R	none
Clinical Data Source system ⁸	HITSP/CAP123 – Retrieve Existing Data	Clinical Data Source	R	none
Provider Administrative and Financial System	HITSP/CAP140 – Communicate Benefits and Eligibility	Clinician Care Eligibility Requestor	R	none
	HITSP/CAP141 – Communicate Referral Authorization	Clinician Authorization Requestor	R	none
Health Plan System	HITSP/CAP140 – Communicate Benefits and Eligibility	Clinician Care Eligibility Responder	R	none
	HITSP/CAP141 – Communicate Referral Authorization	Clinician Authorization Responder	R	none
Personal Health Record (PHR) System	HITSP/CAP119 – Communicate Structured Document	Document Sender	R	none
		Document Consumer	R	none
	HITSP/CAP120 – Communicate Unstructured Document	Document Sender	R	none
		Document Consumer	R	none
	HITSP/CAP121 – Communicate Clinical Referral Request	Message Sender	R	none
		Message Receiver	R	none
		Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP127 – Communicate Lab Results Document	Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP128 – Communicate Imaging Information	Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP140 – Communicate Benefits and Eligibility	Clinician Care Eligibility Requestor	R	none
	HITSP/CAP141 – Communicate Referral Authorization	Clinician Care Authorization Requestor	R	none
	HITSP/CAP143 – Manage	Document Sender	O	none

⁸ The clinical data source system can be bundled with an EHR system, or implemented separately. (E.g. As a separate registry and repository)



System	Capability	System Role	System Role Option	Condition
	Consumer Preference and Consents	Document Receiver	O	none
Pharmacy System	HITSP/CAP119 – Communicate Structured Document	Document Sender	R	C[101]
		Document Consumer	R	none
	HITSP/CAP120 – Communicate Unstructured Document	Document Sender	O	none
		Document Consumer	O	none
	HITSP/CAP121 – Communicate Clinical Referral Request	Message Sender	R	none
		Message Receiver	R	none
		Document Sender	R	none
		Document Receiver	R	none
	HITSP/CAP123 – Retrieve Existing Data	Clinical Data Consumer	R	none
	HITSP/CAP127 – Communicate Lab Results Document	Document Sender	C[102]	none
		Document Receiver	R	none
	HITSP/CAP128 – Communicate Imaging Information	Document Sender	O	none
		Document Receiver	O	none
	HITSP/CAP140 – Communicate Benefits and Eligibility	Clinician Care Eligibility Requestor	R	none
	HITSP/CAP141 – Communicate Referral Authorization	Clinician Care Authorization Requestor	R	none
	HITSP/CAP143 – Manage Consumer Preference and Consents	Document Sender	R	none
		Document Receiver	R	none

Optionality Legend: “R” for Required, “O” for Optional, or “C” for Conditional

Table 3-4 below lists the conditions applicable to the orchestration (see above table) of the Capabilities engaged in this Interoperability Specification.

Table 3-4 Conditions

Condition Code	Condition Description
[101]	Long Term Care assessments sent to public health MUST be anonymized using HITSP/C165 - Anonymize Long Term and Post Acute Care Assessment Data
[102]	Pharmacy systems that conduct screenings for the purposes of medication management SHALL send these results to the referring clinician.

3.2.1 CONTENT SUBSETS

Content subsets are appropriate subsets of the data content supported by the Capability that may be sent by the system and/or received in a specific information exchange. There may be no relevant subsets identified.

For the purposes of the Consultations and Transfers of Care Use Case, the entire message and associated contents or appropriate subsets can be sent, as required by local policies and workflow.

3.2.2 IMPLEMENTATION VARIANTS

This specification is intended to support all the implementations and all the architectures described in the underlying Service Collaborations.



Table 3-5 lists a number of general constraints applicable to this specification. They include assumptions, a number of pre-conditions and post-conditions as well as external trigger events that play a critical role in implementing this specification.

Table 3-5 Orchestration Constraints

Constraint ID	Constraint	Type of Constraint
None		

3.2.3 CONSTRAINTS ON REQUIRED CAPABILITIES

This section describes the constraints that further limit the Capabilities that are used by this Interoperability Specification.

Table 3-6 Additional Constraints on Required Capabilities

Constraint ID	Data Element	Capability	Constraint	Constraint Type	Purpose (Reason for this constraint)
None					



4.0 CAPABILITY GAPS

Section 4.0 identifies gaps not met by existing Capabilities but needed to achieve the aims of the Harmonization Request for which this Interoperability Specification is written. This includes overlaps in Capabilities as well. The following table details how this section of the document is targeted to specific readers. Each of the stakeholders listed in this table are more fully defined in a separate appendix. This table is provided as an aid to readers to assist with identifying specific areas of focus. Readers are encouraged to review all sections of this document to further their understanding of HITSP's work.

Table 4-1 Reader's Guide for Section 4.0

Document Section	Section Number	Intended Audience	Information Contained
Section 4.0	4.0 Capability Gaps	Business Analysts Development Team Architects	Gaps specific to Capabilities used as part of this Interoperability Specification are reviewed in this section to determine why specific information exchange requirements may not yet be met or defined. Readers should check this section to track the progress of gap resolution

The following table identifies gaps not met by or overlapping with existing Capabilities as described above.

Table 4-2 Capability Gaps

IER Gap Description	Responsible HITSP TC	Design Approach	Required Standards Now Unavailable for Constructs	SDO Working on Unavailable Standards	Expected Availability
IS09-IER1 Query & Response Identify Provider based on patient preference IS09-IER15 Query & Response Identify Provider Based on Health Plan	Administrative and Finance Domain Technical Committee and Consumer Perspective Technical Committee	A new Capability or extension is needed to describe how a patient can identify a provider based on their preference as well as based on the providers permitted by their health plan. An underlying construct may also be required. Once these are available, an update to this Interoperability Specification document	There is currently no standard available for a provider registry from which to select a provider based on patient preferences or on Health Plan Eligibility. Candidate standards in HL7 and ASC X12 are awaiting harmonization	HL7 and X12	N/A
IS09-IER10 Send & Receive Decision Support data	Care Management and Health Records Domain Technical Committee	New construct and possibly new Capability needed for decision support	Tier 2 analysis is required within HITSP in order to determine which standards, if any, are outstanding	Unknown	N/A
IS09-IER12 Send & Receive Accept Patient	Administrative and Finance Domain Technical Committee	New Capability or extension is needed in order to be able to send an application level acknowledgement	New construct needed to send an acknowledgement that the provider and/or organization can accept the patient	Candidate X12 standards may be available. HITSP Construct is pending AFDTC Tier 2 analysis.	N/A
IS09-IER21 Send and Receive	Administrative and Finance Domain	New Capability or extension is needed in order to be able to	NCPDP Medication Therapy Management (MTM) Task Group is	NCPDP MTM Task group	Draft in November/December 2010, balloted version in



Payer request for consultation for Medication Therapy Management	Technical Committee	send an application level acknowledgement	determining the best course of action		first quarter 2011
--	---------------------	---	---------------------------------------	--	--------------------



5.0 APPENDIX

The following section includes relevant materials referenced throughout this document. The following table details how this section of the document is targeted to specific readers. Each of the stakeholders listed in this table are more fully defined in a separate appendix. This table is provided as an aid to readers to assist with identifying specific areas of focus. Readers are encouraged to review all sections of this document to further their understanding of HITSP's work.

Table 5-1 Reader's Guide for Section 5.0

Document Section	Section Number	Intended Audience	Information Contained
Section 5.0	5.1 Harmonization Request Traceability	Architects Business Analysts	A complete mapping of information exchange requirements to functional requirements is provided in this section. Readers can trace IER's to underlying Harmonization Request events and actions (in those instances where a Use Case exists) or to functional requirements defined as part of an official standards Harmonization Request

5.1 HARMONIZATION REQUEST TRACEABILITY

This section describes the traceability to the Harmonization Request for which this Interoperability Specification is written. The traceability may be described in terms of events and actions, or in terms of functional requirements.

This table relates the events of a Harmonization Request to the actions taken and information exchanges required.

Table 5-2 Harmonization Request Events and Actions Analysis Table

Event	Action	Information Exchange Requirement(s) (includes security requirements)
7.1.1 Evaluate patient and determine need for consult	Action: 7.1.1.1 Evaluate patient and document patient encounter	IS09-IER4 Request & Response Summary of Care
		IS09-IER6 Request & Response Lab Result Document
		IS09-IER7 Request & Response Encounter Summary Document
		IS09-IER8 Request & Response Discharge Summary
		IS09-IER9 Request & Response Sharing Imaging Results



Event	Action	Information Exchange Requirement(s) (includes security requirements)
		IS09-IER13 Request & Response History and Physical Note Note: The clinician downloads historical health data to evaluate the patient Note: Consult request data should include dietary supplements as part of the medication list. Note: Payers send requests for services for an eligible patient to a provider. This scope is limited to Medication Therapy Management services (E.g.: Medicare part D) only. Note: Licensed providers in organizations such as long term care facilities request services by a provider secondary to regulatory mandate and/or policies/procedures and therefore should be included among the entities that can request a consultation. All consultation reports should be routed to the requesting provider and all appropriate providers as per regulations
	Action: 7.1.1.2 Determine need for consultation	None
7.1.2 Discuss with patient and select consulting clinician	Action: 7.1.2.1 Discuss with patient the recommendation for consultation with another provider	None
	Action: 7.1.2.2 Select consulting clinician	IS09-IER1 Query and Response Identify Provider based on patient preference (Gap)
		IS09-IER2 Request & Response Patient Eligibility Request/Patient Eligibility Health Result
		IS09-IER3 Request & Response Health Plan Request/Health Plan Response
		IS09-IER15 Query & Response Identify Provider Based on Health Plan
7.1.3 Initiate consult request with consulting clinician	Action: 7.1.3.1 The consulting clinician is selected	None
	Action: 7.1.3.2 The requesting clinician documents the need for a consultation and compiles the core set of consult request data for electronic transmission to the consulting clinician	Same as 7.1.1.1 as well as IS09-IER5 Request & Response Referral Summary
		IS09-IER16 Send & Receive Clinical Referral Request Content
		IS09-IER21 Send & Receive Payer request for consultation for Medication Therapy Management Note: The clinician collects and bundles relevant clinical data to send to the consulting clinician. (The IERs involved in this step are the same as in step 7.1.1.1)
7.1.4 Provide access to additional clinical information	Action: 7.1.4.1 Requesting clinician sends additional relevant patient information to the consulting clinician	Same as 7.1.1.1
	Action: 7.1.4.2 Consulting clinician sends a request for specific information	IS09-IER11 Request & Response Additional Information
		IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	Action: 7.1.4.3 Requesting clinician provides access to additional information requested by the consulting clinician	Same as 7.1.4.1 and 7.1.4.2
7.1.5 Receive and review consult report NOTE: This report can be	Action: 7.1.5.1 The requesting clinician receives a report from the consulting clinician upon the completion of the consult	IS09-IER14 Request & Response Consultation Note



Event	Action	Information Exchange Requirement(s) (includes security requirements)
forwarded to other supporting clinicians and clinical staff	Action: 7.1.5.2 The requesting clinician continues to evaluate and manage the patient	Same as 7.1.1.1 with the addition of: IS09-IER14 Request & Response Consultation Note
7.2.1 Receive and review request & determine ability to accept patient	Action: 7.2.1.1 Receive consult request letter and core set of patient data from requesting clinician	IS09-IER5 Request & Response Referral Summary
		IS09-IER16 Send & Receive Clinical Referral Request Content
	Action: 7.2.1.2 Review patient data and evaluate patient	Same as 7.1.1.1 with the addition of: IS09-IER5 Request & Response Referral Summary IS09-IER10 Send & Receive GAP-Decision Support Data
	Action: 7.2.1.3 Support needs for payer to authorize/cover consultation as appropriate NOTE: This step includes verifying eligibility done by the consulting clinician	IS09-IER2 Request & Response Patient Eligibility Request/Patient Eligibility Health Result
		IS09-IER3 Request & Response Health Plan Request/Health Plan Response IS09-IER21 Send & Receive Payer request for consultation for Medication Therapy Management
7.2.2 Request and review additional clinical information	Action: 7.2.2.1 Consulting clinician requests additional patient data	IS09-IER11 Request & Response Additional Information IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	Action: 7.2.2.2 Receive and review additional patient information	Same as above
7.2.3 Evaluate and manage patient	Action: 7.2.3.1 Evaluate and manage the patient for the requested scope of services	None
7.2.4 Complete consultation	Action: 7.2.4.1 Complete consultation and document patient encounter(s)	None
7.2.5 Complete and communicate consult report	Action: 7.2.5.1 Complete consultation report and communicate it to the requesting clinician, patient and other providers of care	IS09-IER14 Request & Response Consultation Note
7.3.1 Select and coordinate with consulting clinician	Action: 7.3.1.1 Select consulting clinician based upon requesting clinician recommendations	None
	Alternative Action: 7.3.1.1a The patient selects a clinician for a patient-initiated consultation	
	Action: 7.3.1.2 The patient coordinates an office visit with the consulting clinician	
7.3.2 Provide permissions for core set of data to be shared	Action: 7.3.2.1 The patient grants access to his/her information to the consulting clinician	IS09-IER20 Send & Receive Authorization and Consent Content
7.3.3 Complete consultation	Action: 7.3.3.1 The patient is evaluated by the consulting clinician	None
7.3.4 Receive consult report information	Action: 7.3.4.1 The patient receives a copy of the report from the consulting clinician upon the completion of the consultation	IS09-IER14 Request & Response Consultation Note
	Action: 7.3.4.2 Patient continues to receive care from the selected and/or medically appropriate care provider	None
	Alternative Action: 7.3.4.3 Following the completion of a self-initiated consultation, the patient may select a clinician to provide follow-up or continued care	None



Event	Action	Information Exchange Requirement(s) (includes security requirements)
8.1.1 Determine need to transfer patient	Action: 8.1.1.1 Care providers perform discharge planning during the course of the patient's episode of care	None
	Action: 8.1.1.2 The clinician responsible for care makes the determination that the patient is ready to be transferred to another care setting	None
8.1.2 Select next setting of care and discuss with patient/family	Action: 8.1.2.1 Discuss the next setting of care with the patient or family Note: Patient/family discussions are purely internal without interoperability requirements, however verifying eligibility and identifying covered care settings do require interoperability	IS09-IER1 Query and Response Identify Provider based on patient preference (Gap)
		IS09-IER2 Request & Response Patient Eligibility Request/Patient Eligibility Health Result
		IS09-IER15 Query & Response Identify Provider Based on Health Plan
	Action: 8.1.2.2 Support payer needs to authorize transfer of care	IS09-IER3 Request & Response Health Plan Request/Health Plan Response
	Action: 8.1.2.3 Select next setting of care and prepare for transfer coordination	None
8.1.3 Initiate plan & coordination of Discharge/Transfer	Action: 8.1.3.1 Core set of data required for coordinating the transfer process is communicated to the receiving setting	IS09-IER4 Request & Response Summary of Care
		IS09-IER5 Request & Response Referral Summary
		IS09-IER6 Request & Response Lab Result Document
		IS09-IER7 Request & Response Encounter Summary Document
		IS09-IER8 Request & Response Discharge Summary
		IS09-IER9 Request & Response Sharing Imaging Results
		IS09-IER13 Request & Response History and Physical Note
		IS09-IER14 Request & Response Consultation Note
	Action: 8.1.3.2 Receiving setting notifies the Discharging/Transferring setting that it is able to accept the patient	IS09-IER12 Send & Receive Accept Patient
	Action: 8.1.3.2a Receiving setting notifies the Discharging/Transferring setting that it is not able to accept the patient	IS09-IER12 Send & Receive Accept Patient
	Action: 8.1.3.3 Preparation for patient transfer/discharge and discharge documentation process continues	None
8.1.4 Discharge/Transfer patient and transmit available transfer data	Action: 8.1.4.1 Discharge patient from current setting	None NOTE: Discharge orders occur entirely within the discharging system's EHR
	Action: 8.1.4.2 Transfer information that is available for the patient at time of discharge is communicated to the receiving setting Note: Send the discharge summary plus appropriate sections of the current episode of care up to and including the entire EHR record	Same as 8.1.3.1



Event	Action	Information Exchange Requirement(s) (includes security requirements)
8.1.5 Transmit additional relevant patient data upon completion	Action: 8.1.5.1 Patient data becomes available or is updated after the patient has left the Discharging/Transferring setting	None
	Action: 8.1.5.2 Communicate patient data to the receiving setting upon availability	Same as 8.1.3.1
8.1.6 Provide access to additional patient data	Action: 8.1.6.1 The Discharging/Transferring setting receives a request for additional patient data that is not part of the core transfer dataset	IS09-IER11 Request & Response Additional Information IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	Action: 8.1.6.2 The Discharging/Transferring setting provides access to additional patient data in response to the request	Same as above
8.2.1 Receive and review patient data & determine ability to accept patient	Action: 8.2.1.1 The receiving setting receives a request to accept a patient	Same as 8.1.3.1 with the addition of: IS09-IER2 Request & Response Patient Eligibility Request/Patient Eligibility Health Result
		IS09-IER3 Request & Response Health Plan Request/Health Plan Response
8.2.2 Accept patient & coordinate transfer	Action: 8.2.2.1 Receiving setting notifies the Discharging/Transferring setting that it is able to accept the patient and begins the transfer coordination process	Same as 8.1.3.1 with the addition of: IS09-IER12 Send & Receive Accept Patient IS09-IER11 Request & Response Additional Information IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	Action: 8.2.2.1a Receiving setting notifies the Discharging/Transferring setting that it is not able to accept the patient	IS09-IER12 Send & Receive Accept Patient
	Action: 8.2.2.2 The receiving setting prepares for patient transfer	None
8.2.3 Receive and review patient data & evaluate and manage patient	Action: 8.2.3.1 Receive patient data and prepare for patient arrival	Same as 8.1.3.1 with the addition of: IS09-IER2 Request & Response Patient Eligibility Request/Patient Eligibility Health Result IS09-IER3 Request & Response Health Plan Request/Health Plan Response
	Action: 8.2.3.2 Review patient data and evaluate patient	Same as above except no repeat of Health Plan data
	Action: 8.2.3.3 Receive additional patient data from the Discharging/Transferring setting	IS09-IER11 Request & Response Additional Information
		IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	Action: 8.2.3.4 Continue to manage patient	None
8.2.4 Access additional patient data	Action: 8.2.4.1 Receiving setting may request additional data that was not part of the core dataset or additional information previously transmitted by the discharging setting	May resend data set from 8.1.3.1 if it has been updated, as well as: IS09-IER11 Request & Response Additional Information IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content



Event	Action	Information Exchange Requirement(s) (includes security requirements)
	Action: 8.2.4.2 Access additional patient data	Same as above
8.2.5 Continue to manage patient	Action: 8.2.5.1 Continue to manage patient	None
8.3.1 Receive Discharge/Transfer data	Action: 8.3.1.1 Receive Discharge/Transfer information	IS09-IER8 Request & Response Discharge Summary Note: Patient discharge information should include a reconciled medication list (including dietary supplements)
	Action: 8.3.1.2 Receive additional or updated information upon availability	IS09-IER11 Request & Response Additional Information IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content

Table 5-3 Long Term Care Assessments Requirements Analysis Table

Functional Requirements		Information Exchange Requirement(s) (includes security requirements)
A. The ability to communicate, incorporate, and use standardized LTC – Assessment information in EHRs in conducting patient assessments	i. Providers may benefit from the ability to receive standardized LTC – Assessment information from organizations that support electronic communication of standardized assessments	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument
	i.a. The standardized assessment information may be received from knowledge suppliers, payers, and other organizations that may supply information regarding conducting LTC – Assessments	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument
	ii. Providers may benefit from the ability to incorporate and use standardized LTC – Assessment information in EHRs that supports LTC – Assessments form structure, logic, and question/answer pairings necessary for standardizing LTC-Assessment output information	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument Note: This functionality is to be able to send the standardized question along with the possible answer list to the EHR
	ii.a. The LTC – Assessment information may include standardized assessments with generally accepted question/answer pairings used to evaluate patients within a LTC environment	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument



Functional Requirements		Information Exchange Requirement(s) (includes security requirements)
	ii.b. The details related to these pairing, sequencing, logic, and similar information may be necessary to enable a complete understanding of patient status	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument Note: This requirement refers to specific definitions of how a person must complete an assessment item E.g.: Anemia is not "anemia" it is one of these four types of anemia as per SNOMED/LOINC/ICD/etc" Note: The vendor needs to create the instrument within the EHR for the staff to complete. The idea is to trace back to the exact semantics, logic and source of the question and answer pair. E.g.: "Find the LOINC question answer pair and its specific number or code"
	iii. Once incorporated into an EHR, the standardized assessment form and accompanying information may be used to complete a patient LTC – Assessment within an EHR system	This is not an interoperability requirement. This functional requirement is a requirement on the EHR in how it allows the user to fill out the assessment instrument retrieved above
	iii.a. Assessments may be completed by providers but may include components that require patient supplied information that can be verified by providers	This is not an interoperability requirement, this data are gathered as part of interaction between patient and provider
	iii.b Assessments may be supported by information contained within EHRs. This information may be linked (e.g., by a common vocabulary) to Clinical Content contained within EHRs	This is not an interoperability requirement. This is a requirement on the EHRs to use vocabularies (E.g.: SNOMED, LOINC, etc) to encode Clinical Content
	iii.c LTC – Assessments that have been completed may be accessed via EHRs or similar systems used for monitoring patient health and trends	Out Of Scope
	iii.d. The information included in LTC – Assessments may also be used to support potential care transitions, such as between a LTC facility and an acute care hospital	IS09-IER18 Send & Receive Long-Term Care Assessment Instrument Note: PPTC interpreted this to mean that some care settings would benefit from knowing what kind of information is required on a Long Term Care Assessment instrument. I.e.: Having the list of questions will inform the discharging setting what information the transfer setting might want to know
B. The ability to communicate completed LTC – Assessments from EHRs to others (e.g., LTC clinician, inpatient clinicians, other clinicians, EHRs, payers, and others)	i. LTC Clinicians and others may benefit from the ability to access completed LTC – Assessments from EHRs and other systems and communicate this information to others. For example, this Capability could support transitions between rehabilitative care facilities and LTC facilities	IS09-IER17 Send & Receive Long Term Care Assessment Clinical Content
	ii. LTC – Assessments which have been completed may be included with other standardized clinical care documentation, including required and optional patient specific information	Note: Other standardized clinical care documentation has not been defined for the Long Term Care setting. This data would have to be specifically requested by the transfer of care setting
	iii. Clinicians and others may benefit from the ability to receive, incorporate, and use LTC – Assessments which have been completed for specific patients	Out Of Scope



Functional Requirements		Information Exchange Requirement(s) (includes security requirements)
	iii.a. This could support transitions in care including appropriate patient placement and care planning	Out Of Scope
	iii.b. As above, this completed LTC – Assessment information may be complemented by additional clinical information supporting a care transition	Out Of Scope
	iv. Clinicians and others may need the ability to incorporate and use information derived from EHR sources in a LTC – Assessment. For example, information about medications, allergies, functional abilities, or other types of information may already be included within the patient's EHR and may be a valid source of information for completing the LTC – Assessment.	Out Of Scope Note: This is specific to a vendor and/or care organization. It is not a new interoperability requirement
C. The ability to incorporate and use LTC – Assessment information and schedules in EHRs to support timely completion of LTC – Assessments	i. Providers may benefit from the ability to receive, incorporate, and use knowledge from various sources regarding LTC – Assessment information and schedules. This information may support on-going LTC quality measurements as well as potential transitions in care as described in the 2007 Quality Use Case	Out Of Scope Note: This data does not support interoperability in the context of consultations and transfers of care. It may support the Quality Use Case
D. The ability to communicate de-identified LTC – Assessment data to Population Health and others in support of activities and programs related to LTC populations	i. Population Health may benefit from the ability to receive de-identified LTC – Assessment information to support population health or research activities for medical conditions and additional assessment information available from LTC – Assessments	IS09-IER19 De-Identified Long-Term Care Assessments Clinical Content Note: Assessments contain information such as immunizations, broad demographics, etc, that can be useful to Public Health

5.2 EXCHANGE CONTENT

Table 5-4 Exchange Content Data Requirements for HITSP/IS09 Gaps

Exchange Content Number	Exchange Content Name	Exchange Content Definition	Data Requirements	Qualifier
GAP	Query & Response Identify Provider based on patient preference	<p>Provider data, stored in a registry, required to allow a patient to select a provider</p> <p>The Standards Charter Organization (SCO) is coordinating with HITSP AFDTC. Next steps are to map the data elements of X12 and HL7, identify gaps, and request an SDO work on an XML directory message</p>	<p>The high level data requirements for a provider registry include but are not limited to:</p> <ul style="list-style-type: none"> • Name • Location • Specialties/Capabilities • Facilities association • Schedule • Insurance Plan Associations • Contact Information <p>Note: This is being worked on by the Administration and Finance Domain Technical committee</p>	



Exchange Content Number	Exchange Content Name	Exchange Content Definition	Data Requirements	Qualifier
GAP	Query & Response Identify Provider Based on Health Plan	<p>Provider data, stored in a registry, required to enable:</p> <ul style="list-style-type: none"> • Consumer searches for a provider • Searching for a provider within a network • Searching for a provider within a health plan <p>The Standards Charter Organization (SCO) is coordinating with HITSP AFDTC. Next steps are to map the data elements of X12 and HL7, identify gaps, and request an SDO work on an XML directory message</p>	<p>The high level data requirements for a provider registry include but are not limited to:</p> <ul style="list-style-type: none"> • Name • Location • Specialties/Capabilities • Facilities association • Schedule • Insurance Plan Associations • Contact Information <p>Note: This is being worked on by the Administration and Finance Domain Technical committee</p>	
GAP	GAP- Accept Patient	A message that is sent to indicate that a consulting clinician or a care setting can accept a patient	<ul style="list-style-type: none"> • PID • Yes/No Patient Acceptance status message – the status may be updated based on the workflow, such as transfer/acceptance data and time, etc • Request ID • Referring clinician ID • Referring organization ID • Date/Time stamp 	
GAP	Decision Support Data	Patient-specific assessments or recommendations to clinicians or other healthcare stakeholders to assist with clinical decision making	<p>Definition taken from glossary of HSSP-DSS standard:</p> <ul style="list-style-type: none"> • http://www.hl7.org/documentcenter/ballots/2006SEP/support/AUDIT_SDO_CDS_DSS_R1_D1_2006SEP_20070129061919.pdf 	

5.3 REGULATORY GUIDANCE

Table 5-5 Regulatory and Guidance

Standard	Description
Clinical Laboratory Improvement Amendments (CLIA) of 1988	Establishes quality standards for all laboratory testing to ensure the accuracy, reliability, and timeliness of patient test results regardless of where the test is performed. The Centers for Medicare and Medicaid Services (CMS) regulates all laboratory testing (except research) performed on humans in the U.S. based on CLIA. For more information visit www.fda.gov and www.cms.hhs.gov
Health Insurance Portability and Accountability Act (HIPAA) -- Administrative Simplification	A listing of national standards plus rules adopted by federal regulation for electronically communicating specified administrative and financial healthcare transactions, and protecting the security and privacy of healthcare information, as applied to the three types of defined covered entities: health plans, healthcare clearinghouses, and healthcare providers who conduct any of the specified healthcare transactions. For more information see the Code of Federal Regulations, Title 45, Parts 160, et. seq.
Title 42 CFR 483 – Requirements for States and Long Term Care Facilities Sub-part B – Requirements for Long Term Care Facilities § 483.60 Pharmacy services	States the requirements that an institution must meet in order to qualify to participate as a Skilled Nursing Facility (SNF) in the Medicare program, and as a Nursing Facility (NF) in the Medicaid program. The requirements serve as the basis for survey activities for the purpose of determining whether a facility meets the requirements for participation in Medicare and Medicaid



6.0 DOCUMENT UPDATES

The following sections provide the details of updates made to this document.

6.1 DECEMBER 10, 2008

The changes in this construct address the following comments received during the Public Comment and Inspection Testing period (September 29 – October 24, 2008).

- 5089, 5091, 5212, 5215, 5216, 5219, 5223, 5225, 5226, 5227, 5228, 5232, 5234, 5236, 5239, 5240, 5246, 5247, 5248, 5249, 5251, 5252, 5254, 5255, 5256, 5258, 5260, 5263, 5265, 5266, 5268, 5269, 5310, 5314, 5316, 5319, 5321, 5322, 5323, 5324, 5325, 5326, 5327, 5328, 5329, 5330, 5331, 5332, 5345, 5356, 5369, 5606, 5634, 5635, 6263

The full text of the comments along with the Technical Committee's disposition can be reviewed on the [HITSP Public Web Site](#).

6.1.1 UPDATES FROM PUBLIC COMMENT

- Incorporated all of the 84 Public Comment dispositions into the document
- Added the following gaps in Section 4.2
 - Send/Receive accept patient: there is currently no way defined to send an acknowledgement to the facility that the facility can accept the patient
 - Identify patient's provider preference: there is no specification for interaction with a provider registry that could provide functionality for a patient to select a provider by preference
 - Identify/Select a consulting clinician or next setting of care based on capability and health plan association: there is a gap for identifying provider and/or facility that meets preferences
- Updated Unified Modeling Language (UML) diagrams
 - Corrected use of HITSP/TP13 Manage Sharing of Documents where it is used
 - Added HITSP/T31 Document Reliable Interchange as an option where HITSP/TP13 is used
 - Changed “referring clinician” to “requesting clinician” so that it matched other uses of the term in the document
 - Updated construct names where needed
 - Updated Component diagrams to match IER and DR harmonized numbering
 - Updated diagrams for clarity
- Added missing standards and corresponding copyrights
- Made editorial changes as suggested by public comments
 - Updated construct names and descriptions
 - Updated business actors and stakeholders as per HITSP Harmonized Data Set spreadsheet
 - Corrected use of IERs and DRs as per public comments
 - Corrected discussion language for clarity
- Added text regarding the use of HITSP/T85 Administrative Transport to Health Plan, to Section 3.2
- Moved the following tables and figures to the Appendix to allow easier access to the Design Section of the Interoperability Specification:
 - Table 2-1 – All the tables that provided the Mapping of Use Case Actions to Information Exchange Requirements



6.2 DECEMBER 18, 2008

Upon approval by the HITSP Panel on December 18, 2008, this document is now Released for Implementation.

6.3 OCTOBER 19, 2009

The following changes were applied:

- Update entire document to 2009 Interoperability Specification template
- Update HITSP/IS09 to include Long Term Care Assessment requirements as per 2009 ONC Long Term Care Assessments Extension/Gap

6.4 NOVEMBER 9, 2009

- Update IS09 to include Pharmacist consultation requirements

6.5 JANUARY 31, 2010

6.5.1 UPDATES FROM PUBLIC COMMENT

The changes in this cycle address the following comments received during the October 2009 public comment and inspection testing period:

- Update list of IERs in Table 2-2 Description of Information Exchange Requirements
- Consolidation of Figure 3-1 and 3-2 into one diagram
- Update of gap statements in Table 4-2 Capability Gaps
- Update definition of "Clinician" and "Care Provider"
- Addition of Pharmacist system as a system to which a patient can be sent on a consult or transfer of care
- Addition of multiple clarifying notes to Table 5-2 Harmonization Request Events and Actions Analysis Table to clarify Use Cases involving Pharmacist consults and transfers of care

The associated comment numbers for these updates are as follows:

- 8062, 8066 as well as comments provided directly from the Pharmacist community.

The full text of the comments along with the Technical Committee's disposition can be reviewed on the [HITSP Public Web Site](#).

6.5.2 GLOBAL CHANGES

The following changes were applied through-out the document for clarification and consistency.

- Update HITSP/IS09 to 2009 Interoperability Specification Template Version 2
- Removal of gaps from tables in Section 3.0

