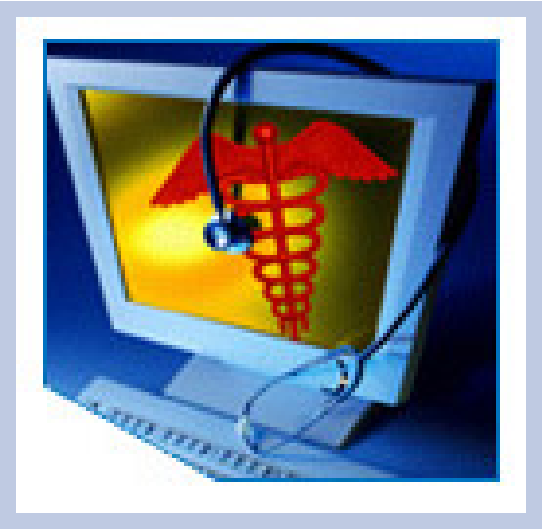
August 27, 2008
Version 2.2

HITSP Encounter Message Component

HITSP/C39



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1.0 INTRODUCTION

As an introduction to the HITSP Encounter Message Component, this section provides a high level overview of the information sharing scenario enabled by following this specification, provides a document map of the construct relationships for this specification, acknowledges the copyright protections that pertain and provides a list of key reference documents and background material. If you are already familiar with this information, proceed to Section 2.0 Component Definition.

1.1 OVERVIEW

This section describes the contents of this specification and provides a high level definition of this Component and background information about the underlying standards that the Component is based on.

This Component supports the process of sending patient encounter data (excluding laboratory results and radiology reports) from a Biosurveillance Message Sender to a Biosurveillance Message Receiver. Patient encounter data are captured as part of the normal process of care performed by healthcare providers such as hospitals, emergency departments and outpatient clinics.

1.2 COMPONENT DOCUMENT MAP

Each HITSP specification describes how to integrate and constrain existing standards and specifications that will satisfy the requirements for the HITSP construct. There are four types of HITSP constructs called Interoperability Specifications (IS), Transaction Packages (TP), Transactions (T), and Components (C). Interoperability Specifications define the context(s) in which any other HITSP construct may be used. The current Encounter Message Component specification does not depend on any other HITSP constructs, however, it is used with other constructs to meet the requirements of one or more ISs. Review Section 1.2 Interoperability Specification Document Map from the relevant IS to better understand the context, dependencies, and relationships between the constructs used to meet the IS requirements.

1.3 COPYRIGHT PERMISSIONS

1.4 REFERENCE DOCUMENTS

This section provides a list of key reference documents and background material. If you are already familiar with this information, proceed to Section 2.

A list of key reference documents and background material is provided in the table below. These documents can be retrieved from the www.hitsp.org Web Site.

Table 1.4-1 Reference Documents

Reference Document	Document Description
HITSP Interoperability Specification Overview	Provides background information about the HITSP and its role in the overall U.S. efforts to realize large scale interoperability of health information. The document also provides a description of the HITSP process for healthcare standards harmonization and explains how to use the Interoperability Specifications and other related documents to inform your health IT product development or product refinement.
HITSP Conventions List	Describes the conventions that are used to convey the full descriptions and usage of standards in the HITSP specifications
HITSP Acronyms List	Lists and defines the acronyms used in this document
HITSP Glossary	Provides definitions for relevant terms used by HITSP documents
HITSP Harmonization Framework	Describes the current framework within which the Interoperability Specifications are built
TN900 - Security and Privacy Technical Note	Developed as a reference document to provide the overall context for use of the HITSP Security and Privacy constructs. It includes the following: • The scope, reference policy background, and Security and Privacy principles used in the development of the constructs • A detailed description and schematics of the conceptual relationship between the Security and Privacy constructs • A mapping of existing standards and constructs to be used in meeting the stated requirements of the AHIC Use Cases • A list of identified gaps and the recommended approaches to resolving those gaps • A roadmap for how the Security and Privacy constructs will evolve and eventually align with other HITSP Interoperability Specifications • A conceptual framework for Security and Privacy management, including reference information on privacy policies, risk assessment, and risk management • A glossary of terms used in all the Security and Privacy construct documents • A description of the application of the Security and Privacy constructs to the HITSP Interoperability Specifications for the three initial AHIC Use Cases – Biosurveillance, Electronic Health Records - Laboratory Results Reporting, and Consumer Empowerment HITSP will periodically update this Technical Note as required by the introduction of new contexts for use.

2.0 COMPONENT DEFINITION

A Component defines atomic constructs used to support an information exchange or to meet an infrastructure requirement. This is accomplished by:

(a) Referencing one or more underlying standards
(b) Specifying constraints and other rules for using the standards

2.1 CONTEXT OVERVIEW

This section provides a general description of the Component. It includes a detailed definition of the Component and the reason for its use. It also provides all the necessary background information that further describes the context in which the Component is needed, and the base or composite standard that the Component is based on.

This Component supports the process of sending patient encounter data (excluding laboratory results and radiology reports) from a Biosurveillance Message Sender to a Biosurveillance Message Receiver.

Patient encounter data are captured as part of the normal process of care performed by healthcare providers such as hospitals, emergency departments and outpatient clinics.

2.1.1 COMPONENT CONSTRAINTS

This section describes the constraints that limit the context in which the Component may be used. A constraint describes a rule that limits the use of the actors, actions or data within the given context, or to which the interactions must conform to be used within the described context. It is a description of the limits and scope of the interactions and can describe actions or events that are not part of the initial definition for the context.

Table 2.1.1-1 Component Constraints

Constraint	Constraint Section
The patient encounter data must be anonymized, pseudonymized and translated to appropriate terminology standards before it is sent to the Biosurveillance system	N/A

2.1.2 COMPONENT DEPENDENCIES

This section describes any specific mapping criteria for the standards underlying the Component. It elaborates on the relationships between different standards used by this Component, and how they map to each other. Additional required mapping criteria not currently enforced by the underlying standards, and any specific elements that are required for this mapping to succeed, are also provided.

Table 2.1.2-1 Component Dependencies

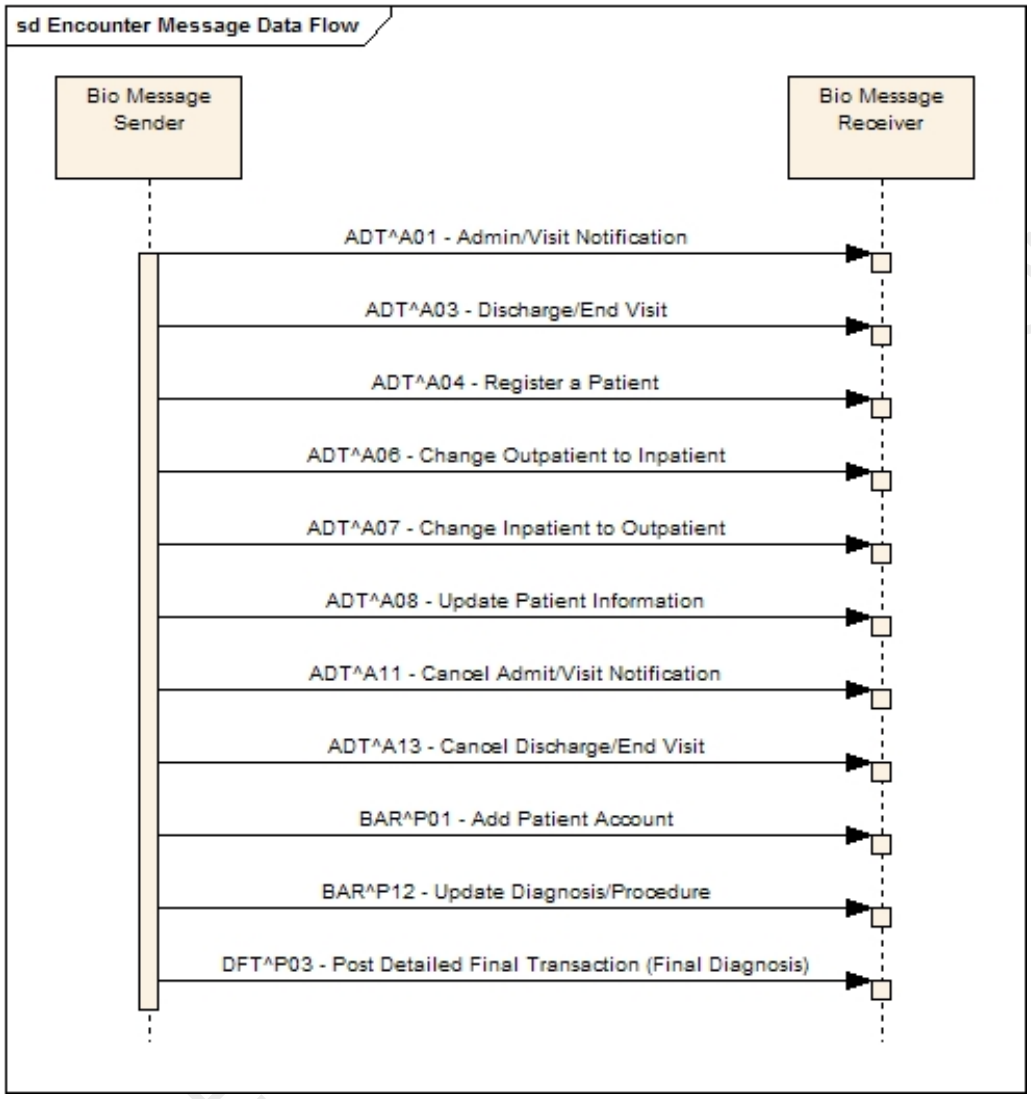
Standard/HITSP Component	Depends On (Name of standard/HITSP Component that it depends on)	Dependency Type (Pre-condition, Post-condition, General)	Purpose (Reason for this dependency)
No applicable dependencies			

2.2 RULES FOR IMPLEMENTING

The following section documents the content of the Component. It provides the basic elements and secondary standards that are supported by this Component and the constraints that are being placed on those standards. Specifically, it describes the subset or constraints that are required for this Component, and the minimum attributes of the Component as it relates to the base or composite standards on which it is based.

The trigger for sending encounter-based biosurveillance data is the updating of patient-based data at the data source. In many instances the updating of data at the data source will generate a local HL7 transaction. These local HL7 transactions can be utilized to create the HL7 V2.5 ADT Biosurveillance transactions to send Biosurveillance data to the Biosurveillance system. The Biosurveillance data source is formatted into the appropriate HL7 V2.5 ADT message (see diagram below), constrained to the AHIC defined Biosurveillance data set (see Section 2.2.1 Data Mapping) and codified with the appropriate terminology. The HL7 ADT message will also need to be anonymized and pseunonymized.

Figure 2.2-1 Encounter Message Data Flow



The encounter-based Biosurveillance data are formatted into an HL7 V2.5 ADT data structure (see Section 2.2.1 Data Mapping for the list of ADT messages). The segments that are used within the ADT messages are:

- Message Header (MSH)
- Event – (EVN)
- Patient Identification (PID)
- Patient Visit 1 (PV1)
- Patient Visit 2 (PV2)
- Observation (OBX)
- Diagnosis (DG1)

The tables below list the standard HL7 message triggers that may be supported at the site and that carry the Biosurveillance data elements. Each message structure is listed since the segment order may be defined differently for the trigger, per HL7 Standard Abstract Message Structure.

ADT Messages Needed to Capture the AHIC Data Elements

The following trigger events are necessary to capture from the source ADT traffic because they carry the information in the AHIC minimum data set.

Table 2.2-1 HL7 Messages and Trigger Events of Interest for this Use Case

Type ^ Trigger	Description
ADT^A01	Admit/Visit Notification
ADT^A03	Discharge/End Visit
ADT^A04	Register a Patient
ADT^A06	Change an Outpatient to an Inpatient
ADT^A07	Change an Inpatient to an Outpatient
ADT^A08	Update Patient Information
ADT^A11	Cancel Admit / Visit Notification
ADT^A13	Cancel Discharge / End Visit
BAR^P01*	Add Patient Account (previous HL7 versions: Add/Update Patient Account)
BAR^P12*	Update Diagnosis/Procedure
DFT^P03*	Post Detailed Financial Transaction (Final Diagnosis)

ADT Messages needed to manage patient identifiers

The management of patient identifiers in the Biosurveillance Use Case is performed by the Pseudonymization transaction. The following trigger events are listed because they may be relevant to the Pseudonymize transaction.

Table 2.2-2 HL7 Messages and Trigger Events Relevant to Pseudonymization

Type ^ Trigger	Description
ADT^A18	Merge Patient Information
ADT^A19	Patient Query
ADT^A24	Link Patient Information
ADT^A28	Add Person or Patient Information
ADT^A29	Delete Person Information
ADT^A30	Merge Person Information
ADT^A31	Update Person Information
ADT^A34	Merge Patient Information – Patient ID Only

Type ^ Trigger	Description
ADT^A35	Merge Patient Information – Account Number Only
ADT^A36	Merge Patient Information – Patient ID & Account Number
ADT^A37	Unlink Patient Information
ADT^A39	Merge Person – Patient ID
ADT^A40	Merge Patient – Patient Identifier List
ADT^A41	Merge Account – Patient Account Number
ADT^A42	Merge Visit – Visit Number
ADT^A43	Move Patient Information – Patient Identifier List
ADT^A44	Move Account Information – Patient Account Number
ADT^A45	Move Visit Information – Visit Number
ADT^A46	Change Patient ID
ADT^A47	Change Patient Identifier List
ADT^A48	Change Alternate Patient ID
ADT^A49	Change Patient Account Number
ADT^A50	Change Visit Number
ADT^A51	Change Alternate Visit ID

2.2.1 DATA MAPPING

This section describes the specific data elements used by this Component. Due to the potentially large number of data elements in a particular standard, only the fields that HITSP is constraining differently from the standard will be described here.

2.2.1.1 Encounter Message Data Set

In fulfillment of Biosurveillance data and information requirements for Encounter reporting, the following provisional data dictionary was generated by HITSP based upon interpretation of requirements provided by the American Health Information Community (AHIC). Standards selected or under consideration by HITSP to constrain the vocabularies used for interoperability are provided.

The Patient and Clinical Data listed on the tables below capture only the AHIC minimum data set. Additional data elements, as negotiated in local settings, may be included.

Table 2.2.1.1-1 Data Set Cross Reference

Column	Definition
AHIC Data Element	Data element name/identifier as listed by the American Health Information Community
Definition	Data element description as listed by American Health Information Community
Data Type	Type of data that is collected with this data element (coded, numeric, text, date/time)
Terminology	Expected data values if data element has finite values. CHI-domain recommendations were followed if available

Column	Definition
Comments	Pertinent comments and usage

Table 2.2.1.1-2 Patient and Clinical Data Set

AHIC Data Element	Description	Data Type	Terminology	Comments
Pseudonymized Patient ID/ Randomized Data Linker	A pseudonym Patient ID is created to uniquely distinguish a patient across all visits to a single institution, or across all visits to a healthcare system when a common patient identification system is used. The Biosurveillance Patient ID does not contain personally identifiable information.	Patient Management (ADT) system assigned identifier		Pseudonymized Patient ID/Randomized Data Linker
Encounter Date/Time	Date/time the encounter occurred is captured upon registration or admission in the ADT system. If an ED patient is moved to inpatient status, this field will be updated to be the admit date/time as part of the transaction.	Patient Management (ADT) system assigned identifier		Encounter Date/Time
Date of Birth	Patient's year and month of birth (day is not included for privacy purposes). NOTE: May not be passing DOB for age over 89 due to HIPAA requirements.	Date/time	HL7 Timestamp	Date of Birth
Patient Age	Patient's age as reported in an application at the source. Age may be available if DOB was not populated.	Number with units	UCUM Age Units	Patient Age
Sex	Patient sex	Code	HL7 2.5 Administrative Sex Codes	Sex
Zip code	Patient residence zip code			Zip code
State	Patient residence – state	Code	FIPS Alpha State Codes	State
Date/time of Message	Date/time of message	Date/time	HL7 V2.5 Timestamp	Date/time of Message
Diagnosis/Injury Code	Diagnosis or diagnoses assigned as a result of the encounter	Code	ICD-9 CM ICD-10 CM Or SNOMED CT	Diagnosis/Injury Code
Diagnosis Type	Type of diagnosis being sent (admitting, working, final)	Code	HL7 V2.5 Diagnosis Type Codes	Diagnosis Type
Diagnosis Date/Time	Date/time the diagnosis was made	Date/time	HL7 V2.5 Timestamp	Diagnosis Date/Time

AHIC Data Element	Description	Data Type	Terminology	Comments
Discharge Disposition	Discharge Disposition –patient's anticipated location or status following the visit (admitted, sent home, etc.).	Code	Universal Billing codes UB-92/NUBC Current UB Data Specifications Manual	Discharge Disposition
Patient Class	General type of patient, e.g., Inpatient, Outpatient, Emergency.	Code	HL7 2.5 Patient Class Codes constrained to EIO	Patient Class
Date/Time of Illness Onset	Date and time of illness onset	Date/time	LOINC for observation identifier	Date/Time of Illness Onset
Chief Complaint	Patient-reported reason for visit or admission reason. It may have been entered as text or may make use of drop-down lists to enter canned text.	Text	SNOMED CT	Chief Complaint
Heart Rate Date/Time of Heart Rate Measurement	Heart rate measurement. Assumes beats per minute. The heart rate taken on initial assessment/triage is the vital sign of interest.	Numeric	LOINC for observation identifier	Heart Rate Date/Time of Heart Rate Measurement
Temperature Date/Time of Temperature	Body temperature measurement, including the reference to Celsius or Fahrenheit. The temperature taken on initial assessment/triage is the vital sign of interest.	Numeric with units	LOINC for observation identifier UCUM Temperature units	Temperature Date/Time of Temperature
Blood Pressure BP Date/Time	Systolic/Diastolic blood pressure measurement and the date/time that it was performed. The BP done on initial assessment/triage is the vital sign of interest.	Numeric with units	LOINC for observation identifier UCUM Blood Pressure Unit Code	Blood Pressure BP Date/Time
Pulse Oximetry Pulse Ox Date/Time	Pulse oximetry reading and the date/time that it was performed. The pulse ox reading at triage assessment time is the vital sign of interest.	Numeric with units	LOINC for observation identifier	Pulse Oximetry Pulse Ox Date/Time
Nurse/Triage Notes	Provider notes documented in the process of sorting patients based on need for or likely benefit from immediate medical treatment.	Text	LOINC for observation identifier SNOMED CT	Nurse/Triage Notes

2.2.1.2 Encounter Message Mapping Table

The AHIC Biosurveillance Data Minimum and Target Data Elements used by this component are cross-referenced below to the HL7 context in which the element would be expressed in the messages being sent.

Table 2.2.1.2-1 Data Mapping Cross Reference

Data Element	Definition
AHIC Data Element	Data element name/identifier

Data Element	Definition
Definition	Data element description as listed by American Health Information Community
Source	Source of the data element – where the data was created
Limit/Range/Vocabulary	Expected data values if data element has finite values Pre-coordinated vocabulary value set name or coding system from which values may be drawn
Destination/HL7 Context	Segment and field where the data element appears in the HL7 message and other context as required.
HL7 Data Type	HL7 data type for the data element – indicates format and processing requirements.
Conditions for Use	Describe all the prevailing conditions that are assumed to be in place to be able to use the data. State the need for a particular actor if one is involved.

Table 2.2.1.2-2 Encounter Message Mapping

Data Element	Definition	Source	Limit/Range/ Vocabulary	Destination/ HL7 Message Context	HL7 Data Type	Conditions for Use
Patient Data						
Pseudonymized Patient ID/ Randomized Data Linker	A pseudonym Patient ID is created to uniquely distinguish a patient across all visits to a single institution, or across all visits to a healthcare system when a common patient identification system is used. The Biosurveillance Patient ID does not contain personally identifiable information. It is used by the healthcare facility to associate Biosurveillance patient data to the patient's medical record	PID-3 Patient ID/MRN used to create the randomized linker patient ID		PID-3 Patient Identifier List	CX	Required in every message
Encounter Date/ Time	Date / time the encounter occurred is captured upon registration or admission in the ADT system. If an ED patient is moved to inpatient status, this field will be updated to be the admit date/time as part of the transaction	PV1-44 Admit/Register Date/time	HL7 Timestamp	PV1-44 Admit/Register Date/Time	TS	
Date of Birth	Patient's year and month of birth (day is not included for privacy purposes). NOTE: May not be passing DOB for age over 89 due to HIPAA requirements	Most ADT carry the date of birth in PID-7	HL7 Timestamp	PID-7 Date of Birth in YYYYMM format	TS	

Data Element	Definition	Source	Limit/Range/ Vocabulary	Destination/ HL7 Message Context	HL7 Data Type	Conditions for Use
Patient Age	Patient's age as reported in an application at the source. Age may be available if DOB was not populated	Not an HL7 V2.5 attribute in any segment – may exist as a piece of data	UCUM Age Units	Created OBX segment OBX-5 is the number OBX-6 is the units	SN	
Sex	Patient sex	Most ADT messages carry Sex in PID-8	HL7 2.5 Administrative Sex Codes	PID-8 Administrative Sex	IS	
Zip Code	Patient residence zip code	ADT messages carry Patient Address in PID-11		PID-11 Patient Address Component 5 Zip or Postal Code	String com-ponent of XAD data type	
State	Patient residence – state	ADT messages carry Patient Address in PID-11	FIPS Alpha State Codes	PID-11 Patient Address Component 4 State or Province	String com-ponent of XAD data type	
Date/Time of Message	Date/Time of message			MSH-7 Message Creation Date/Time	TS	
Clinical Information						
Diagnosis/ Injury Code	Diagnosis or diagnoses assigned as a result of the encounter	Most ADT messages may contain them; BAR (financial) messages often carry the final diagnosis	ICD-9 CM ICD-10 CM Or SNOMED CT	DG1-3 Diagnosis Code - DG	CE	Expecting mostly ICD-9 diagnosis codes, but SNOMED CT or other vocabulary may be used
Diagnosis Type	Type of diagnosis being sent (admitting, working, final)	Diagnosis Type is specific to DG1 use and a required element for the DG1 segment	HL7 V2.5 Diagnosis Type Codes	DG1-6 Diagnosis Type		Site defined - Candidate terms: Referral (e.g. Sent to ED with "r/o appendicitis") Working (e.g. Pain consistent with appendicitis - get X-rays and observe) Presumptive overlaps all of the above Admitting/Final Discharge

Data Element	Definition	Source	Limit/Range/ Vocabulary	Destination/ HL7 Message Context	HL7 Data Type	Conditions for Use
Diagnosis Date/ Time	Date/Time the diagnosis was made	Diagnosis Date/Time is an optional attribute on the DG1 segment				
Discharge Disposition	Discharge Disposition – patient's anticipated location or status following the visit (admitted, sent home, etc.)	PV1-36 in A03 Discharge messages	Universal Billing codes UB-92/NUBC Current UB Data Specifications Manual	PV1-36 Discharge Disposition		Only pertinent for ADT A03
Patient Class	General type of patient, e.g., Inpatient, Outpatient, Emergency	Required for all PV1 usage	HL7 V2.5 Patient Class Codes constrained to EIO	PV1-2 Patient Class		
Date/Time of Illness Onset	Date and time of illness onset	No HL7 V2.5 attribute; captured as an observation at source				There is a gap because illness onset date and time is not currently captured in a consistent manner at data sources
Chief Complaint	Patient-reported reason for visit or admission reason. It may have been entered as text or may make use of drop-down lists to enter canned text	ADT^A04 for outpatient/ED ADT^A01 for inpatient	This component will use the CHI recommended SNOMED CT as a reference terminology to communicate interoperable information among and between systems, with the HITSP Interoperability Specification Pre-condition that the sending and using systems must use formal coded nursing terminologies such as the Clinical Care Classification (CCC) System and the Omaha System that are integrated in SNOMED CT	PV2-3.2 for text Admit Reason PV2-3.1 for coded Admit Reason	CE	

Data Element	Definition	Source	Limit/Range/ Vocabulary	Destination/ HL7 Message Context	HL7 Data Type	Conditions for Use
Heart Rate Date/Time of Heart Rate Measurement	Heart rate measurement. Assumes beats per minute. The heart rate taken on initial assessment/triage is the vital sign of interest	Clinical system		OBX-2 Value = SN OBX-3 Observation Identifier = 18708-8^HEART BEAT INITIAL ASSESSMENT^LN OBX-5= ^number OBX-11 = 'F' OBX-14 Date/Time of Observation		
Temperature Date/Time of Temperature	Body temperature measurement, including the reference to Celsius or Fahrenheit. The temperature taken on initial assessment/ triage is the vital sign of interest	Clinical system	UCUM Temperature units	OBX-2 Value = SN OBX-3 Observation Identifier = 8310-5^ BODY TEMPERATURE^ LN OBX-5= ^real number OBX-6 units OBX-11 = 'F' OBX-14 Date/Time of Observation		
Blood Pressure BP Date/Time	Systolic/Diastolic blood pressure measurement and the date/time that it was performed. The BP done on initial assessment/triage is the vital sign of interest	Clinical system	UCUM Blood Pressure Unit Code	OBX-2 = SN OBX-3 Value Type ='35094-2^ BLOOD PRESSURE PANEL^LN' OBX-5= |^Systolic number^/^Diastolic number| OBX-6= 'mm[Hg]6^Millimeters of Mercury ^UCUM OBX-11 = 'F' OBX-14 Date/Time of observation	SN	Note: not supporting BP Method/Position, as that would require the need for different LOINC codes to be passed
Pulse Oximetry Pulse Ox Date/ Time	Pulse oximetry reading and the date/time that it was performed. The pulse ox reading at triage assessment time is the vital sign of interest	Clinical system		OBX-2 = SN OBX-3 Value Type =19960-4^PULSE OXIMETRY^LN OBX-5= ^number OBX-11 = 'F' OBX-14 Date/Time of observation	SN	

Data Element	Definition	Source	Limit/Range/ Vocabulary	Destination/ HL7 Message Context	HL7 Data Type	Conditions for Use
Nurse / Triage Notes	Provider notes documented in the process of sorting patients based on need for or likely benefit from immediate medical treatment	Clinical system	This component will use the CHI recommended SNOMED CT as a reference terminology to communicate interoperable information among and between systems, with the HITSP Interoperability Specification Pre-condition that the sending and using systems must use formal coded nursing terminologies such as the Clinical Care Classification (CCC) System and the Omaha System that are integrated in SNOMED CT	OBX-2 Value = TX OBX-3 Observation Identifier = 34120-6^INITIAL EVALUATION NOTE^LN OBX-5= Triage Notes OBX-11 = 'F'	TX	

GUIDELINES AND EXAMPLES

This is an inpatient admit message that contains Chief Complaint and Admitting Diagnosis data elements.

```
MSH|^~\&|SendingApp^<OID>^ISO|SendingFac^<OID>^ISO|ReceivingApp^<OID>^
ISO|ReceivingFac^<OID>^ISO|2007509101832132||ADT^A01^ADT_A01|200760910
183213200723|D|2.5<CR>
EVN||2007509101832132<CR>
PID|1||P410000^^^&<OID>&ISO||””||196505|M|||^^^OR^97007<CR>
PV1|1|I||||||||||||||||||||||||||||||||||||200750816122536
PV2|||^^^^POSSIBLE MENINGITIS OR CVA<CR>
OBX|1|NM|21612-7^REPORTED PATIENT AGE^LN||40|a^Year^UCUM||||F<CR>
DG1|1||784.3^APHASIA^I9C||200750816|A<CR>
DG1|2||784.0^HEADACHE^I9C||200750816|A<CR>
DG1|3||781.6^MENINGISMUS^I9C||200750816|A<CR>
```

This is a discharge message where the patient has expired.

```
MSH|^~\&|SendingApp^<OID>^ISO|SendingFac^<OID>^ISO|ReceivingApp^<OID>^
ISO|ReceivingFac^<OID>^ISO|2007709101832133||ADT^A03^ADT_A03|200770910
18321330025|D|2.5<CR>
EVN||2007509101832133<CR>
```

```
PID|1||P410003^^^&2.16.840.1.114222.4.3.2.1&ISO||""||193707|M|||^^^OR^
97005<CR>
PV1|1|I||||||||||||||||||||||||||||||20||||||||200770908122522|20
0770910122522<CR>
PV2|||535.61^DUODENITIS W/HEMORRHAGE^I9C<CR>
DG1|1||0005.0^STAPH FOOD POISONING^I9C||200750816|F<CR>
DG1|2||535.61^DUODENITIS W/HEMORRHAGE^I9C||200750816|F<CR>
DG1|3||787.01^NAUSEA WITH VOMITING^I9C||200750816|F<CR>
```

This is an A08 Patient Information Update message used to convey additional clinical information as OBX segments.

```
MSH|^~\&|SendingApp^<OID>^ISO|SendingFac^<OID>^ISO|ReceivingApp^<OID>^
ISO|ReceivingFac^<OID>^ISO|2007509101832133||ADT^A08^ADT_A01|200750910
19450028|D|2.5<CR>
EVN||2007509101832133
PID|1||P410005^^^&2.16.840.1.114222.4.3.2.1&ISO||""||198805|F||2106-
3^White^2.16.840.1.113883.6.238^W^White^L|^^^OR^97006<CR>
PV1|1|E||||||||||||||||||||||||||||||||||200750910182522
PV2|||^^^^SOB, looks dusky and is coughing up blood.  States has just
gotten over the measles.<CR>
OBX|1|TS|11368-8^ILLNESS/INJURY ONSET
DATE/TIME^LN||2007509092230||||||F<CR>
OBX|2|NM|8310-5^BODY
TEMPERATURE^LN||101.3|[degF]^^UCUM|||||F|||200750816124045<CR>
OBX|3|SN|35094-2^BLOOD PRESSURE PANEL^LN||^140^/^84|mm[Hg]^Millimeters
of Mercury^UCUM|||||F<CR>
DG1|1||055.1^POSTMEASLES PNEUMONIA^I9C||200750816|W
DG1|2||786.09^DYSPNEA/RESP.ABNORMALITIES^I9C||200750816|W<CR>
DG1|3||786.3^HEMOPTYSIS^I9C||200750816|W<CR>
DG1|4||782.5^CYANOSIS^I9C||200750816|W<CR>
```

2.3 STANDARDS

It is important to understand that the standards selected here are within the context of the specific Use Case requirements and do not necessarily reflect selection in other contexts. The standards used by this Component specification fall into the following categories:

- Regulatory guidance is a legal or other authoritative declaration that HITSP must abide by in standards selection (see Section 2.3.1)
- Selected standards are necessary for interoperability. These are standards that are used to meet information exchange requirements of associated constructs. For example, they are used to realize direct information exchange, to provide the transport mechanism, to specify the content, or to address security (see Section 2.3.2)
- Informative reference standards provide additional background information or guidance, and are not required for interoperability. These standards are not required to implement the Component specification (see Section 2.3.3)

2.3.1 REGULATORY GUIDANCE

The following table provides a list of legal or other authoritative guidelines that HITSP must abide by, or has agreed to use as guidance in the selection of standards. Note that only the referenced sections of the regulations are relevant to this Component specification.

Table 2.3.1-1 Regulatory Guidance

Standard	Description
No applicable regulatory and guidance standards	

2.3.2 SELECTED STANDARDS

The following table provides a list of standards that are used to meet information exchange requirements of this Component specification, and a detailed description of each standard.

Table 2.3.2-2 Selected Standards

Standard	Description
Federal Information Processing Standards (FIPS) Codes for the Identification of the States, the District of Columbia and the Outlying Areas of the United States, and Associated Areas Publication # 5-2, May, 1987	A set of two-digit numeric codes and a set of two-letter alphabetic codes for representing the 50 states, the District of Columbia and the outlying areas of the United States, and associated areas. The standard covers all land areas under the sovereignty of the United States, the freely associated states of Federated States of Micronesia and Marshall Islands, and the trust territory of Palau. For more information visit www.itl.nist.gov NOTE: ASC X12 transactions and ASC X12N Implementation Guides do not allow use of this standard; instead they require use of the U.S. Postal Service's National Zip Code and Post Office Directory -- which provides similar alphabetic code values
Health Level Seven (HL7) Version 2.5	The HL7 Version 2.5 Messaging Standard is an application protocol for electronic data exchange in healthcare. It and prior versions have widespread use in the U.S. and internationally. Both message formats and value sets / code tables (e.g., diagnosis type, gender, patient class, result status, specimen collection method, abnormal flags, observation result status codes interpretation, timestamp format) are contained in the standard. Of particular focus for HITSP Interoperability Specifications are message formats described in Chapters 2, 3, 5, and 7 including patient demographic (ADT) and lab result reporting. These are also used within composite standards from IHE for Patient Identity Cross-Referencing and Feed (PIX), Patient Demographics Query (PDQ), and Acknowledgements. For more information visit www.hl7.org
International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS)	The International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS), describes the classification of inpatient procedures for statistical purposes and for the indexing of healthcare records by procedures. ICD-10-PCS is a procedural coding system managed by the Centers for Medicare and Medicaid Services (CMS). For more information visit www.cms.hhs.gov Note: While ICD-10 is not deployed in US installations, we recognize the need to move toward new releases of coded values

Standard	Description
International Classification of Diseases, 10th Revision, Related Health Problems (ICD-10-CM)	The International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM), describes the classification of morbidity information for statistical purposes and for the indexing of healthcare records by diseases. The National Center for Health Statistics (NCHS), the Federal agency responsible for use of the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) in the United States, developed a clinical modification of the classification for morbidity purposes. For more information visit www.cdc.gov/nchs Note: While ICD-10 is not deployed in US installations, we recognize the need to move toward new releases of coded values
International Classification of Diseases, 9th Revision, Clinical Modifications (ICD-9-CM)	The International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), Volumes I, II (diagnoses) and III (procedures) describes the classification of morbidity information for statistical purposes and for the indexing of healthcare records by diseases and procedures. For more information visit www.cdc.gov/nchs
International Health Terminology Standards Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®)	SNOMED CT consists of a technical design, core content architecture, and Core content. SNOMED CT Core content includes the technical specification of SNOMED CT and fully integrated multi-specialty clinical content. The Core content also includes a concepts table, description table, relationships table, history table, ICD-9-CM mapping, and Technical Reference Guide. Additionally, SNOMED CT provides a framework to manage language dialects, clinically relevant subsets, qualifiers and extensions, as well as concepts and terms unique to particular organizations or localities. For more information visit www.ihtsdo.com
Logical Observation Identifiers Names and Codes (LOINC®)	A database of universal identifiers for laboratory and other clinical observations. The laboratory portion of the LOINC database contains the usual categories of chemistry, hematology, serology, microbiology (including parasitology and virology), and toxicology; as well as categories for drugs and the cell counts typically reported on a complete blood count or a cerebrospinal fluid cell count. Antibiotic susceptibilities are a separate category. The clinical portion of the LOINC database includes entries for vital signs, hemodynamics, intake/output, EKG, obstetric ultrasound, cardiac echo, urologic imaging, gastroendoscopic procedures, pulmonary ventilator management, selected survey instruments, and other clinical observations. For more information visit www.loinc.org
National Uniform Billing Committee (NUBC) Uniform Bill Version 1992 (UB-92) Current UB Data Specification Manual Field 22, Patient Discharge Status, Codes	A code set identifying status of patient discharge on an institutional claim (e.g., inpatient, outpatient, hospice, home care). For more information visit www.nubc.org
Unified Code for Units of Measure (UCUM)	A code system intended to include all units of measures being contemporarily used in international science, engineering, and business. The purpose is to facilitate unambiguous electronic communication of quantities together with their units. The focus is on electronic communication, as opposed to communication between humans. For more information visit http://aurora.regenstrief.org

2.3.3 INFORMATIVE REFERENCE STANDARDS

The following table lists standards that provide additional background information or guidance; however, they are not required for the implementation of this Component specification.

Table 2.3.3-1 Informative Reference Standards

Standard Name	Description/Reason for Use
No applicable informative reference standards	

3.0 TECHNICAL IMPLEMENTATION

3.1 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.

3.1.1 CONFORMANCE CRITERIA

In order to claim conformance to this construct specification, an implementation must satisfy all the requirements and mandatory statements listed in this specification, the associated HITSP Interoperability Specification, its associated construct specifications, as well as conformance criteria from the selected base and composite standards. A conformant system must also be constrained as specified in Table 2.1.1-1 and implement all of the required actors, where defined within the scope, subset or implementation option that is selected from the associated Interoperability Specification.

Claims of conformance may only be made for the overall HITSP Interoperability Specification with which this construct is associated.

3.1.2 CONFORMANCE SCOPING, SUBSETTING AND OPTIONS

A HITSP Interoperability Specification must be implemented in its entirety for an implementation to claim conformance to the specification. HITSP may define the permissibility for actor scoping, subsetting or implementation options by which the specification may be implemented in a limited manner. Such scoping, subsetting and options may extend to associated constructs, such as this construct. This construct must implement all requirements within the selected scope, subset or options as defined in the associated Interoperability Specification to claim conformance.

4.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

No additional information at this time.

5.0 CHANGE HISTORY

The following sections provide the history of changes made to this document.

5.1 MAY 11, 2007

This document is now Released for Implementation.

5.2 MARCH 19, 2008

This document has been updated to include the HITSP Security and Privacy constructs and has been updated to reflect the new template.

The following change has been made to the construct:

- Removed the Clinical Care Classification (CCC) Version 2.0 standard because it is an example that satisfied the preconditions, and therefore should not be in the list of standards.

5.3 MARCH 27, 2008

Upon approval by the HITSP Panel on March 27, 2008, this document is now Released for Implementation.

The following change has been made to the construct:

- Removed IHE ITI-TF Revision 3.0 from Table 2.3-1 due to the new HITSP standards referencing approach.

5.4 AUGUST 20, 2008

This document has been modified to reflect the updated HITSP approach to categorizing standards as Regulatory Guidance, Selected Standards, and Informative References.

5.5 AUGUST 27, 2008

Upon approval by the HITSP Panel on August 27, 2008, this document is now Released for Implementation.