Integrating the Healthcare Enterprise



IHE Patient Care Coordination Technical Framework Supplement

eNursing Summary (ENS)

Trial Implementation

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Author: IHE PCC Technical Committee

Email: pcc@ihe.net

Foreword

This is a supplement to the IHE Patient Care Coordination Technical Framework V9.0. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on November 8, 2013 for Trial Implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the Patient Care Coordination Technical Framework. Comments are invited and may be submitted at http://www.ihe.net/PCC Public Comments.

This supplement describes changes to the existing technical framework documents.

"Boxed" instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume.

35 *Amend section X.X by the following:*

Where the amendment adds text, make the added text **bold underline**. Where the amendment removes text, make the removed text **bold strikethrough**. When entire new sections are added, introduce with editor's instructions to "add new text" or similar, which for readability are not bolded or underlined.

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General information about IHE can be found at: www.ihe.net.

Information about the IHE Patient Care Coordination domain can be found at: http://www.ihe.net/IHE_Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at: http://www.ihe.net/Profiles.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at: http://www.ihe.net/IHE_Process and http://www.ihe.net/Profiles.

The current version of the IHE Patient Care Coordination Technical Framework can be found at: http://www.ihe.net/Technical Frameworks.

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Introduction

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This supplement is written for Trial Implementation. It is written as changes to the documents listed below. The reader should have already read and understood these documents:

- 1. PCC Technical Framework Volume 1, Revision 9.0
- 2. PCC Technical Framework Volume 2, Revision 9.0

This supplement also references other documents¹. The reader should have already read and understood these documents:

- 1. IT Infrastructure Technical Framework Volume 1, Revision 10.0
- 2. IT Infrastructure Technical Framework Volume 2, Revision 10.0
- 3. IT Infrastructure Technical Framework Volume 3, Revision 10.0
 - 4. The Patient Identifier Cross-Reference (PIX) and Patient Demographic Query (PDQ) HL7 v3 Supplement to the IT Infrastructure Technical Framework.
 - 5. HL7 and other standards documents referenced in Volume 1 and Volume 2

This supplement adds the eNursing Summary profile to Volume 1 of the IHE PCC Technical Framework, the Nursing Summary Document Content Module and related modules to Volume 2. This profile continues the work of Patient Plan of Care profile (PPOC) as it adds evaluation, handoff communication and discharge data communication to the PPOC.

Open Issues and Questions

- 1. Nurse give/receive report (signature) does this need to be called out specifically in the CDA Header modules?
- 2. Demographics?

Closed Issues

- 1. Nursing Subcommittee survey (HIMSS) of 593 practicing nurses provided much information regarding data elements needed
- 105 2. Identify LOINC codes

¹ The first four documents can be found on the IHE Website at http://www.ihe.net/Technical Frameworks/#IT. The remaining documents can be obtained from their respective publishers.

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Volume 1 - Profiles

Add the following to section 1.5

1.5 Copyright Permissions

No new permissions were needed. Refer to PPOC for American Nurses Association reference.

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Add the following to section 2.4

2.4 Dependencies of the PCC Integration Profiles

115 Add the following to section 2.5

2.5 History of Annual Changes

Add Section X

120 X eNursing Summary Content Profile

This profile develops data sets related to a specific clinical environment as a process to create safe, effective communication. The process ensures continuity as the patient moves through care transitions. Transitions, or "hand-offs", occur multiple times each day in a hospital and at every change of care location.

- For example: On a nursing unit of 44 patients with 10 nurses per 12 hour shift, a minimum of 88 reports are given daily. This does not include off unit reports for lunch breaks, special procedures lab, physical or occupational therapy, or general radiology reports on the patient given by the unit nurse.
- Though it is recognized that communication must be interdisciplinary in nature, the scope of this profile is based on the nursing process as adapted from the scientific method. Future work is to include multidisciplinary care provider summary information to become part of the Patient Plan of Care.

For the eNursing Summary, a data element survey was developed and implemented to support the identification of data elements required to be used for nursing reports. Responses were received from 593 nurses. The survey results are available from the IHE Nursing Subcommittee.

X.1 Purpose and Scope

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The Joint Commission, in 2005, analyzed 3000 adverse events. Communication was the contributing factor in 70% of these events. Communication breakdowns during transitions of patient care accounted for a 50% error rate. This study in conjunction with the work of Institutes for Healthcare Improvement and other research, acknowledged the serious need for improvement.

To ensure consistent information, accurate and concise communication must be present during patient care transitions or hand off. Care transitions, or "hand-offs", occur multiple times each day in a hospital and at every change of care location. This does not include off unit reports for lunch breaks, special procedures lab, physical or occupational therapy, or general radiology reports on the patient given by the unit nurse.

Standardization work has been initiated by the HL7 Clinical Document Architecture group, nursing process and ISO Reference Terminology Model. European eHealth has called for a summary which crosses borders and provides a timely transfer. IHE could solve the issue by creating an interoperable nursing eHealth summary which is possible to use nationally and internationally

The purpose of the eNursing Summary Profile is to create an interoperable summary of nursing related data that communicates the ongoing patient care needs to another care provider. The data elements were determined by an international survey of 589 nurses. Data element information for the selected Use Cases are documented in a summary table for ease of comparison.

X.2 Process Flow

X.2.1 Use Cases

X.2.1.1 Use Case #1 Nursing Home patient admitted to Acute Care

160 A 76-year-old diabetic female patient in a long-term care facility, who typically only requires the support of prepared meals and assistance with medications, has experienced an abrupt change in behavior as indicated by serial, standardized functional status assessments. Over the past 48 hours, the patient has been complaining of feeling weak and has become increasingly lethargic. Finally, she refuses to get out of bed, complaining of chills. The nurse takes her temperature and determines that she has a low-grade fever. In addition, the maximum sliding-scale insulin dose 165 indicated in the medication orders is not controlling the patient's blood sugar as determined by finger-stick glucose measurement. The primary care physician was called and a decision was made to transfer the patient to an acute care hospital for follow-up. To prepare for the transfer, the charge nurse prepares the long-term care nursing documentation with an additional functional assessment, indicating both what has been typical for this patient, and what the patient is 170 currently exhibiting. The patient is transferred to the acute care setting, where her fever and glucose level are stabilized over a period of 3 days. She is then transferred back to the long-term care facility.

X.2.1.2 Use Case #2 Perioperative Care

A 70 year old male is scheduled for a Right Total Hip Arthroplasty with a diagnosis of osteoarthritis. The patient was instructed to report to Pre-Op to begin the perioperative process with the intent of being admitted to the hospital post the perioperative procedure. The patient has no other significant health history. This patient will be seen in Pre-Op, Operating Room, and PACU, and then transferred to the nursing unit. In each phase of care, additional services from ancillary areas are needed.

X.2.2 Diagrams

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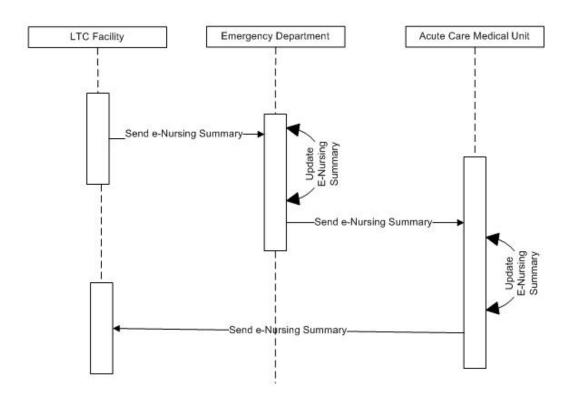


Figure X.2.2-1: Use Case #1 Basic Process Flow in eNursing Summary Profile

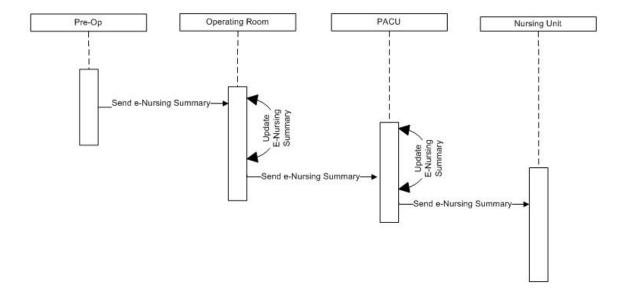


Figure X.2.2-2: Use Case #2 Basic Process Flow in eNursing Summary Profile

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X.3 Actors/Transactions

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There are two actors in this profile, the Content Creator and the Content Consumer. Content is created by a Content Creator and is to be consumed by a Content Consumer. The sharing or transmission of content from one actor to the other is addressed by the appropriate use of IHE profiles described below, and is out of scope of this profile. A Document Source or a Portable Media Creator may embody the Content Creator. A Document Consumer, a Document Recipient or a Portable Media Importer may embody the Content Consumer. The sharing or transmission of content or updates from one actor to the other is addressed by the use of appropriate IHE profiles described in the section on Content Bindings with XDS, XDM and XDR in PCC TF-2:4.1.



Figure X.3-1: Actor Diagram

205 X.3.1 Requirements of Actors

X.4 Options

Options that may be selected for this Profile are listed in the table X.4-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in notes.

210 Table X.4-1: eNursing Summary Actors and Options

Actor	Option	Section
Content Consumer	View Option (See Note 1) Document Import Option (See Note 1) Section Import Option (See Note 1) Discrete Data Import Option (See Note 1)	PCC TF-2:3.1.1 PCC TF-2:3.1.2 PCC TF-2:3.1.3 PCC TF-2:3.1.4
Content Creator	No options defined	1 00 11 2.011.

Note 1: The Actor shall support at least one of these options.

X.5 Groupings

X.6 Security Considerations

X.7 Content Modules

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Table X.7-1: eNursing Summary Content

Allergies Allergies and Other Adverse Reactions Activity Restriction Provider Orders Code Status Coded Advance Directives Level of Consciousness Assessments Cognitive abilities History of Cognitive Function Complications Active Problems Chief Complaint Chief complaint Admission Diagnosis Hospital Adm Diagnosis Discharge Diagnosis Discharge Diagnosis Date/time of report Header Modules Demographics Header Modules Devices Medical Devices Diet and Nutrition Diet restrictions Fluid Management Fluid Management Health Assessment Assessment Isolation Procedures and Interventions Lab Values Coded Results Medications Medications Mobility/fall risk Assessment Nurse rpt give/receive (signature) Header Modules Pracautions Treatment Plan Primary language spoken Header Modules Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs Wound Assessment	eNursing Summary	PCC Template		
Code Status Level of Consciousness Assessments Cognitive abilities History of Cognitive Function Complications Active Problems Chief Complaint Admission Diagnosis Discharge Diagnosis Discharge Diagnosis Date/time of report Header Modules Demographics Header Modules Devices Medical Devices Diet and Nutrition Diet restrictions Fluid Management Health Assessment Assessment Isolation Procedures and Interventions Medications Me	Allergies	Allergies and Other Adverse Reactions		
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Complications Chief Complaint	Level of Consciousness	Assessments		
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Discharge Diagnosis Date/time of report Header Modules Demographics Header Modules Devices Medical Devices Diet and Nutrition Diet restrictions Fluid Management Fluid Management Health Assessment Isolation Procedures and Interventions Lab Values Coded Results Medications Medications Mobility/fall risk Assessment Nurse rpt give/receive (signature) Pain Pain Scale Assessment Physician(s) Name Header Modules Precautions Treatment Plan Primary language spoken Procedure Procedure Procedure Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Chief Complaint	Chief complaint		
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Isolation Procedures and Interventions Lab Values Coded Results Medications Medications Mobility/fall risk Assessment Nurse rpt give/receive (signature) Header Modules Pain Pain Scale Assessment Physician(s) Name Header Modules Precautions Treatment Plan Primary language spoken Header Modules Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs	Fluid Management	Fluid Management		
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Pain Pain Scale Assessment Physician(s) Name Header Modules Precautions Treatment Plan Primary language spoken Header Modules Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Mobility/fall risk	Assessment		
Physician(s) Name Header Modules Precautions Treatment Plan Primary language spoken Header Modules Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Nurse rpt give/receive (signature)	Header Modules		
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Primary language spoken Procedure Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Physician(s) Name	Header Modules		
Procedure Procedures and Interventions Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Precautions	Treatment Plan		
Order list Provider Orders Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Primary language spoken	Header Modules		
Oxygen Treatment Plan Special needs Assessment Vital Signs Vital Signs	Procedure	Procedures and Interventions		
Special needs Assessment Vital Signs Vital Signs	Order list	Provider Orders		
Vital Signs Vital Signs	Oxygen	Treatment Plan		
	Special needs	Assessment		
Wound Assessment	Vital Signs	Vital Signs		
	Wound	Assessment		

X.8 References

American Nurses Association.(2004). *Nursing: Scope & Standards of Practice*. Silver Spring, MD: ANA.

- Athwal, P., Fields, W., Wagnell, E. (2009). Standardization of Change-of-Shift Report. J Nurs Care Qual; 24 (2) 142-147.
 - Dracup K, Morris PE. (2008). Passing the torch: the challenge of handoffs. *Am J Crit Care*;17(2):95-7.
- Goossen W. Sending Electronic Nursing Discharge Messages using the HL7 v3 Care Provision standard. Stud *Health Technol Inform.* 2009, 146:269-75.
 - Health Level Seven Inc. Clinical Document Architecture. Ann Arbor. Available at: www.hl7.org. Accessed August 24, 2009.
 - Huber, U., et.al. (2010) The Need for Standardised Documents in Continuity of Care: Results of Standardising the eNursing Summary. Presentation to be given @ MEDINFO2010 in Cape
- 230 Town, South Africa, 9/12-15/2010.

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- International Standards Organization. Integration of a Reference Terminology Model for Nursing. ISO 18104:2003. Available at: www.iso.org. Accessed 1 August 2009.
- Keenan G, et al. (2006). HANDS: A revitalized technology supported care planning method to improve nursing handoffs. *Stud Health Technol Inform*;122:580-4.
- Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. (2007). Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA*. 297:831-41.
 - Kohn, Linda T. et al, eds; To Err is Human: Building a Safer Health System. Committee on Quality of Health Care in America, Institute of Medicine. National Academy Press, Washington, DC 2000.
 - Riesenberg, L. A., Leitzsch, J., Cunningham, J.M. (2010). Nursing Handoffs, A Systematic Review of the Literature. 110 (4) 24-34.
 - Schoen, C. et.al. (2005) Taking the Pulse of Health Care System: Experiences of Patients with Health Problems in Six Countries. Health Affairs. 509-525
- Staggers, N. et.al. (2009) The Content and Context of Change of Shift Report on Medical and Surgical Units. JONA; 39 (9). 393-398.
 - The Joint Commission. National patient safety goals. Hand-off communications: standardized approach [NPSG.02.05.01]. 2008.
- http://www.jointcommission.org/AccreditationPrograms/Hospitals/Standards/09_FAQs/NPSG/C ommunication/NPSG.02.05.01/hand_off_communications.htm.
 - Wierdsma A, Mulder C, de Vries S, Sytema S. Reconstructing continuity of care in mental health services: a multilevel conceptual framework. *J Health Serv Res Policy*. 2009, 14:52-7.

Glossary

The following terms are used in various places within this technical framework, and are defined below.

Actor

An entity within a use case diagram that can perform an action within a use case diagram. Possible actions are creation or consumption of a message.

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Care Transitions

When a patient is transferred or discharged to another phase of care. The destination of the care transition can be to the patient's home or the individual's specific living arrangements (half-way house), another nursing unit within a provider's organization, hospice or home health care, a long-term care facility (nursing home), a specialty hospital, a rehabilitation hospital, or a public facility (jail).

Continuity of Care Document (CCD)

An HL7 Clinical Document Architecture (CDA) implementation alternative to ASTM
ADJE2369 for institutions or organizations committed to HL7 standards. This specification was developed as a collaborative effort between ASTM and HL7. More information is available from http://www.hl7.org.

Communication

A process for the transfer of information from one entity to another. The process can be verbal or written, but requires a sender, a message, and a recipient.

Complications

A list of current or past health problems a patient is experiencing or has overcome.

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Content Creator

The Content Creator is responsible for the creation of content and transmission to a Content Consumer.

285 Content Consumer

A Content Consumer Actor is responsible for viewing, import, or other processing of content created by a Content Creator Actor.

Clinical Document Architecture (CDA)

An HL7 standard for the exchange for clinical documents. It specifies the structure and semantics of clinical documents. More information is available from http://www.hl7.org.

Content Binding

A content binding describes how the payload used in an IHE transaction is related to and/or constrained by the data elements contained within the content sent or received in those transactions.

Fluid Management

The process of recording the patient's input and output of fluid. Fluids can be consumed via, but not limited to: oral, intravenous, or irrigation. Output of fluids include, but are not limited to: any expulsion of bodily liquid (blood, urine, feces, sputum, bile, vomitus, perspiration, pus) via oral or rectal cavities, wounds, drains, tubes, catheters, or other medical devices.

Hand-offs

A transfer of patient information during transitions of care to ensure safety and provide continuity of care for the patient. This transfer of information is provided internally, within the health care organization, or externally, outside the health care organization.

Health Assessment

The screening/examining of an individual for their overall condition or optimal well-being (mind, body, and spirit).

Health Care Proxy

The legal appointment, power of attorney, of someone else, a proxy, other than yourself, to make healthcare decision for you when you are physically or cognitively unable to. The person designates a trusted individual to make medical decisions in the event of inability to make such decisions. It is a vehicle for directing his/her own treatment in the event of serious illness and/or loss of mental ability to communicate those wishes; in an Advanced Directive, the person indicates in advance, how treatment decisions are to be made with regard to the use of artificial life support.

HIMSS

Healthcare Information and Management Systems Society.

HL7

325 Health Level Seven.

IHE

Integrating the Healthcare Enterprise.

330 Institute for Healthcare Improvement (IHI)

An independent not-for-profit organization helping to lead the improvement of health care throughout the world. IHI works to accelerate improvement by building the will for change, cultivating promising concepts for improving patient care, and helping health care systems put those ideas into action. It exists to close the gap between the health care we have and the health care we should have.

Interaction Diagram

A diagram that depicts data flow and sequencing of events.

340 Interoperable

The ability of health information systems to work together within and across organizational boundaries in order to advance the effective delivery of healthcare for individuals and communities.

345 IT

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Information Technology.

ISO Reference Terminology Model

To establish a nursing reference terminology model consistent with the goals and objectives of other specific health terminology models in order to provide a more unified reference health model. This International Standard includes the development of reference terminology models for nursing diagnoses and nursing actions and relevant terminology and definitions for its implementation.

355 Logical Observation Identifiers Names and Codes (LOINC®)

A vocabulary developed by the Regenstrief Institute aimed at standardizing laboratory and clinical codes for use in clinical care, outcomes management, and research. Additional information found at http://www.regenstrief.org/medinformatics/loinc/.

360 **Mobility/Fall Risk**

A screening, or assessment, of a patient's balance, mobility, muscle strength, cognitive status, sensory impairments, physiological parameters and sometimes home environment to identify the patient's risk for falling and implementation, if needed, fall prevention interventions.

365 **PO**

A latin term "per os", meaning by mouth.

Pre-op

A phase of care that occurs immediately prior to admitting the patient into the operating room or procedure room.

Patient Identifier Domain

A single system or a set of interconnected systems that all share a common identification scheme for patients. Such a scheme includes: (1) a single identifier-issuing authority, (2) an assignment process of an identifier to a patient, (3) a permanent record of issued patient identifiers with associated traits, and (4) a maintenance process over time. The goal of Patient Identification is to reduce errors.

PDF

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380 Portable Document Format.

Procedure

A surgery or an invasive examination of a patient that is required by quality review organizations to be preceded by a pre-procedure assessment of procedure risk and anesthesia risk. This assessment is typically referred to as a "Pre-operative" or "Pre-procedure History and Physical."

Process Flow Diagram

A graphical illustration of the flow of processes and interactions among the actors involved in a particular example.

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Provider

An individual or any category of health care providers who deliver medical or health services and any other person or organization that supplies, bills, or is paid for health care. Including but not limited to: a doctor of medicine, osteopathy, optometry, dental science, podiatry, chiropractic, pharmacist, certified midwife, a registered nurse, a nursing home, a birthing center, or a hospital.

Role

The actions of an actor in a use case.

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RSNA

Radiological Society of North America.

Scope

405 A brief description of the extent of identified profiles' transaction capacity.

SNOMED-CT®

A comprehensive clinical terminology, originally created by the College of American Pathologists (CAP) and, as of April 2007, owned, maintained, and distributed by the

International Health Terminology Standards Development Organization (IHTSDO), a non-for-profit association in Denmark. The CAP continues to support SNOMED CT operations under contract to the IHTSDO and provides SNOMED-related products and services as a licensee of the terminology. More information available from http://www.ihtsdo.org/ or the United States National Library of Medicine at

415 http://www.nlm.nih.gov/research/umls/Snomed/snomed main.html.

Standardized Functional Status Assessments

A series of specific, objective, and standardized tests, which include interview questions and/or a physical examination, of an individual, to determine their level or their strengths or weaknesses related, but not limited to fine and gross motor skills, visual perception, sensory processing, social skills, or comfort level. The assessment is used to confirm the individual's current level of functional ability for activities of daily living.

The Joint Commission

An independent, not-for-profit organization, which accredits and certifies health care organizations and programs in the United States. Their accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting specific performance standards.

Transitions

Often referred to "hand-offs". Transfer of patient and their care to another similarly licensed care provider. This occurs during a change in acuity, care site, or a different provider.

Trigger Event

An event such as the reception of a message or completion of a process, which causes another action to occur.

Use Case

A graphical depiction of the actors and operation of a system.

440 XDS

Cross Enterprise Document Sharing.

XDR

Rev. 1.2 - 2010-11-08

Cross-Enterprise Document Reliable Interchange.

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Volume 2 – Transactions and Content Modules

5.0 Namespaces and Vocabularies

codeSystem	codeSystemName	Description	

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5.1 IHE Format Codes

Profile	Format Code	Media Type	Template ID
e-Nursing Summary (ENS)	urn:ihe:pcc:ens:2010	text/xml	1.3.6.1.4.1.19376.1.5.3.1.1.20.1.3

6.0 PCC Content Modules

455 **6.3 HL7 Version 3.0 Content Modules**

Add section 6.3.1.A

6.3.1.A eNursing Summary 1.3.6.1.4.1.19376.1.5.3.1.1.20.1.3

6.3.1.A.1 Format Code

The XDSDocumentEntry format code for this content is urn:ihe:pcc:ens:2010

460 **6.3.1.A.2 LOINC Code**

The LOINC code for this document is **28651-8** Nurse Transfer note

6.3.1.A.3 Standards

CCD	ASTM/HL7 Continuity of Care Document
CDAR2	HL7 CDA Release 2.0
CDTHP	CDA for Common Document Types History and Physical Notes (DSTU)

6.3.1.A.4 Specification

This section references content modules using Template Id as the key identifier. Definitions of the modules are found in either:

- IHE Patient Care Coordination Volume 2: Final Text
- IHE PCC Content Modules Supplement

Table 6.3.1.A.4-1 eNursing Summary Specification

Data Element Name	Opt	Section Template ID / Location	Value Set Template Id
<u>Header Modules</u>	R	1.3.6.1.4.1.19376.1.5.3.1.2	
Allergies and Other Adverse Reactions	R	1.3.6.1.4.1.19376.1.5.3.1.3.13 IHE PCC 2:6.3.3.2.11	
Care Plan	R2	1.3.6.1.4.1.19376.1.5.3.1.3.36 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.6.15	
Coded Advance Directives (Coded and or Narrative Text)	R	Coded: 1.3.6.1.4.1.19376.1.5.3.1.3.35 IHE PCC 2:6.3.3.6.6 Narr text: 1.3.6.1.4.1.19376.1.5.3.1.3.34	
Active Problems	R	1.3.6.1.4.1.19376.1.5.3.1.3.6	

Data Element Name	Opt	Section Template ID / Location	Value Set Template Id
		IHE PCC 2:6.3.3.2.3	
<u>Chief complaint</u>	R2	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1 IHE PCC 2:6.3.3.1.3	
Hospital Admission Diagnosis	R2	1.3.6.1.4.1.19376.1.5.3.1.3.3 IHE PCC 2:6.3.3.1.4	
Discharge Diagnosis	R2	1.3.6.1.4.1.19376.1.5.3.1.3.7 IHE PCC 2:6.3.3.2.4	
Medical Devices (External, visible devices)	R2	1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5 IHE PCC 2:6.3.3.2.19	
Medical Devices (Visible Implantable Devices)	R2	1.3.6.1.4.1.19376.1.5.3.1.1.9.48	
Diet and Nutrition	R2	1.3.6.1.4.1.19376.1.5.3. 1.1.20.2.2 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.6.16	
Intake and Output	R2	1.3.6.1.4.1.19376.1.5.3.1.1.20.2.3 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.6.17	
Coded Results	R2	1.3.6.1.4.1.19376.1.5.3.1.3.28 IHE PCC 2:6.3.3.5.2	
Medications (list of active)	R	1.3.6.1.4.1.19376.1.5.3.1.3.19 IHE PCC 2:6.3.3.3.3	
Medications Administered This section should be present when medications have been administered.	С	1.3.6.1.4.1.19376.1.5.3.1.3.21	
Pain scale assessment section	R2	1.3.6.1.4.1.19376.1.5.3.1.1.12.2.2 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.2.23	
Procedures and Interventions This section shall include isolation, mobility/fall risk and procedures.	R2	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.8.3	
Provider Orders	R2	1.3.6.1.4.1.19376.1.5.3.1.1.20.2.1 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3/6/11	
Family History This section should be	О	1.3.6.1.4.1.19376.1.5.3.1.3.14	

Data Element Name	Opt	Section Template ID / Location	Value Set Template Id
present when there is relevant family history			
Social History This section should be present when there is relevant social history	О	1.3.6.1.4.1.19376.1.5.3.1.3.16	
Assessments This section shall include level of consciousness, health assessment, special needs and wound.	R2	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.4 PCC TF Supplement CDA Content Modules (TI) Vol 2: 6.3.3.9.7	
Vital Signs	R2	1.3.6.1.4.1.19376.1.5.3.1.3.25 IHE PCC 2:6.3.3.4.4	
Patient Instructions The patient education and consents section shall contain a description of the patient education the patient received, the results of the education, and the consents the patient signed.	R2	1.3.6.1.4.1.19376.1.5.3.1.1.9.38	

470 R = Required; R2 = Required if data present; O = Optional; C = Conditional

6.3.1.B.5 Conformance

CDA Release 2.0 documents that conform to the requirements of this content module shall indicate their conformance by the inclusion of the appropriate <templateId> elements in the header of the document. This is shown in the sample document below. A CDA Document may conform to more than one template. This content module inherits from the Medical Summary content module, and so must conform to the requirements of that template as well, thus all <templateId> elements shown in the example below shall be included.

```
<ClinicalDocument xmlns='urn:hl7-org:v3'>
480
         <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
         <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.2'/><!--Medical Summary-->
         <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.20.1.3'/><!--eNursing Summary-->
         <id root=' ' extension=' '/>
         <code code='28651-8' displayName='Nursing Transfer note'</pre>
485
           codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
         <title>eNursing Summary</title>
         <effectiveTime value='20090506012005'/>
         <confidentialityCode code='N' displayName='Normal'</pre>
           codeSystem='2.16.840.1.113883.5.25' codeSystemName='Confidentiality' />
490
         <languageCode code='en-US'/>
         <component><structuredBody>
           <component>
             <section>
495
               <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.13'/>
                <!-- Required Allergies and Other Adverse Reactions Section Section content -->
           </component>
           <component>
500
             <section>
               <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.36'/>
                <!-- Required Care Plan Section content -->
             </section>
            </component>
505
            <component>
             <section>
                <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.35'/>
                <!-- Required Coded Advance Directives Section content -->
             </section>
510
            </component>
           <component>
             <section>
                <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.6'/>
                <!-- Required Active Problems Section content -->
515
             </section>
           </component>
           <component>
             <section>
                <templateId root='1.3.6.1.4.1.19376.1.5.3 1.1.13.2.1'/>
520
                <!-- Required Chief complaint Section content -->
             </section>
            </component>
           <component>
             <section>
525
                <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.3'/>
                <!-- Required Hospital Admission Diagnosis Section content -->
             </section>
            </component>
            <component>
530
             <section>
                <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.7'/>
                <!-- Required Discharge Diagnosis Section content -->
             </section>
            </component>
535
           <component>
               <templateId root='1.3.6.1.4.1.19376.1.5.31.1.5.3.5'/>
                <!-- Required Medical Devices Section content -->
             </section>
540
           </component>
           <component>
             <section>
                <templateId root='1.3.6.1.4.1.19376.1.5.3. 1.1.20.2.2'/>
                <!-- Required Diet Restrictions Section content -->
545
             </section>
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</component> <component> <section> <templateId root='1.3.6.1.4.1.19376.1.5.31.1.20.2.3'/> 550 <!-- Required Fluid Management Section content --> </section> </component> <component> <section> 555 <templateId root='1.3.6.1.4.1.19376.1.5.3. 1.3.28'/> <!-- Required Coded Results Section content --> </section> </component> <component> 560 <section> <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.19'/> <!-- Required Medications Section content --> </section> </component> 565 <component> <section> <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.12.2.2'/> <!-- Required Pain Scale Assessment Section content --> 570 </component> <component> <section> <templateId root='1.3.6.1.4.1.19376.1.5.3. 1.3.31'/> <!-- Required Treatment Plan Section content --> 575 </section> </component> <component> <section> <templateId root='1.3.6.1.4.1.19376.1.5.3. 1.1.13.2.11'/> 580 <!-- Required Procedures and Interventions Section content --> </section> </component> <component> <section> 585 <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.20.2.1'/> <!-- Required Provider Orders Section content --> </section> </component> <component> 590 <section> <templateId root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.4'/> <!-- Required Assessment Section content --> </section> </component> 595 <component> <templateId root='1.3.6.1.4.1.19376.1.5.3.1.3.25'/> <!-- Required Vital Signs Section content --> </section> 600 </component> <component> <section> <templateId root='1.3.6.1.4.1.19376.1.5.3. 1.1.20.2.1'/> <!-- Required History of Cognitive Function Section content --> 605 </section> </component> </structuredBody></component> </ClinicalDocument>