IHE Work Item Proposal (Detailed)

# Proposed Work Item: Patient Registration Content Profile

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Date: November 4, 2016

Version: 1.0

Domain: Patient Care Coordination (PCC)

**Summary**

The American Heath Information Management Association (AHIMA) Standards Task Force which is composed of over 40 clinical, vendor, and HIM professional stakeholders have identified the lack of standardization during patient registration as a significant problem to consistent patient matching, and therefore to patient data quality and patient safety.

A content profile defining the data elements that should be collected during patient registration, as well as the correct formats for each data element would go a long way to ensure that the data submitted to the affinity domain when registering each patient is of high quality.

Many standards, including the HL7v2 standard that comprises the basis for the IHE PDQ profile contain details about data elements and data type formats, however further constraints on these standards are required for consistent data collection during registration. IHE, with its history of providing additional, use case-focused constraints to broad standards such as HL7 is the most appropriate place to define this content.

The AHIMA standards task force is prepared to participate in IHE PCC committee discussions to define the content profile for Patient Registration.

# The Problem

Patient matching continues to be an issue for successful interoperability. The cost for incorrect patient matching continues to grow**.[[1]](#footnote-1)**

Patient matching relies on proper registration of the patient in the healthcare facility. Patient Registration is the process of checking-in a person to initiate the episode of care. Today, there is no standardized approach for patient registration across various healthcare facilities. There is a lack of available, consistent and complete data elements in the patient registration process.

The lack of reliable data elements compromise the efforts of information managers involved in the patient registration process. The inconsistencies in the selection and uses of data elements results in gaps and omissions in the data captured. The lack of uniform and reliable data elements creates an interoperability and patient matching roadblock in the patient registration process, which in turn directly impacts data quality across the healthcare continuum.

Patient registration must have a standardized list of data elements to be collected to enable patient identification and patient record matching in the documentation generated within the episode of care.

For interoperability to be successful, standardized patient registration content must be used by all healthcare organizations during the registration process.

# Use Cases

The AHIMA has been working on the Patient Registration Use Case standard, [[2]](#footnote-2)  where 17 patient registration scenarios have been identified across emergency department (ED), outpatient, and inpatient settings (Attachment 1).

In the IHE Patient Registration Content Profile, we propose to focus on the following two scenarios in ED setting:

1. Registration of Walk-in/Patient Presentation in ED
   1. Patient presents themselves to the ED, conscious and able to provide identification
   2. Registration staff collects identifying information necessary to register patient
   3. Registration is completed, patient registration is submitted to EHR
2. Registration Initiated/Conducted by Clinicians
   1. Patient arrives in ED unconscious or otherwise incapacitated and unable to provide identification
   2. ID number is assigned
   3. Clinical assessment and treatment is initiated by ED team
   4. Clinician collects identifying information at a later time
   5. Registration information is associated with ID number, patient registration is submitted to EHR

Regardless of the steps involved in the patient registration process, the data elements collected, the codesets used, and any potential for content or format validation must be specified in order to improve the quality of the data captured during patient registration.

Preliminary data elements proposed are listed below. Each data element must be further explored to determine need for this data element, potential format standardization for this data element, as well as potential sources for validation of this data element.

Patient Registration Information

1. Patient/guardian demographics (e.g., name, DoB, address, etc.)
2. Visit demographics (enterprise medical record number, date/time of encounter, reason for visit, list of barcodes, etc.),
3. Physician demographics (name, PID, department/service, etc.)
4. Reason for visit
5. Consent for visit
6. Consent for information sharing
7. eSignature for Registration Staff
8. Wristband (patient ID bracelet with barcodes)

Risk Management/Infection Control/Public Health/ Population Health Information

1. Have you been out of the country in the last three weeks?

Insurance information

1. Payor demographic
2. Insurance ID
3. Coverage
4. Co-pay
5. eSignature for Insurance Verifier

Payment information

1. Invoice for service
2. Payment receipt
3. Payment plan, if needed
4. Payment type (cash, check, credit card)
5. eSignature for Billing Staff

# Standards & Systems

The following standards will be used to build the content for patient registration process.

* IHE PIX/PDQ
* IHE XDW
* HL7 Version 2.3.1 Chapter 2 – Control, Chapter 3 – Patient Administration[[3]](#footnote-3)
* HL7 C-CDA
* HL7 FHIR
* Others (to be determined)

The following systems are used for patient registration:

* registration- admission, discharge, transfer (R-ADT) System
* health information system (HIS)
* financial system
* payor system
* electronic health record (EHR)
* electronic data management system (EDMS)
* health information exchange (HIE)
* personal health record (PHR)
* mobile health (mHealth) app

# Technical Approach

**New actors**

No new actors

**Existing actors**

* Content Creator/Content Consumer

Or

* Patient Demographics Supplier/PIX Manager

**New transactions (standards used)**

No new transactions

**Impact on existing integration profiles**

ITI-8 Patient Identity Feed may be impacted by constraints to data used/submitted to the ITI-8 transaction.

**New integration profiles needed**

Proposal to create new content profile that describes the data elements and associated standards and formats used for standardized patient registration.

**Breakdown of tasks that need to be accomplished**

* Review proposed list of data elements used in Patient Registration and identify core set of data elements
* Identify standardized code sets or value sets that may be available for each data element
  + Document code set to be used, if any
  + Document constraints
* Create content mapping to v2 and v3 representations (PID3 vs Person.Patient…)
* Identify standards or object checkers that may be used to validate content for a data element, such as the potential for using the US postal Service standard for US addresses.
  + Object checkers, if any, will be informative guidance only

# Risks

Political Risks

* Content standardization may need to be split between data elements that are internationally consistent and data elements and associated codesets that belong in volume 4

Technical Risks

* Definition and orchestration of data element validation may pose a challenge

# Open Issues

None Known

# Effort Estimates

<The technical committee will use this area to record details of the effort estimation.>

1. Office of the National Coordinator for Health Information Technology. Patient Identification and Matching. Final Report. February 7, 2014. URL: https://www.healthit.gov/sites/default/files/patient\_identification\_matching\_final\_report.pdf [↑](#footnote-ref-1)
2. The American Heath Information Management Association (AHIMA). Draft Specification of Checklists and Use Cases for Information Management Practices in Healthcare. 2016. URL: http://wiki.ihe.net/index.php/HIT\_Standards\_for\_HIM\_Practices-2016#Project\_Description [↑](#footnote-ref-2)
3. Health Level Seven. HL7 Messaging Standard Version 2.3.1: Section 3: Clinical and Administrative Domains. 2013. URL: <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=141> [↑](#footnote-ref-3)