**Work-in-Progress Status-Report for**

**HL7 Investigative Study of a CIMI Compliant FHIM**

**REQUESTED ACTION:** Please send comments, issues and suggestions to facilitator

April 11, 2016 Draft-B, [Stephen.Hufnagel@apprioinc.com](mailto:Stephen.Hufnagel@apprioinc.com) CIMI-FHIM facilitator

* CIMI’s mission is to "improve the interoperability of healthcare systems through shared implementable clinical information models".
* In Jan 2016, an HL7 CIMI workgroup sponsored Investigative Study was initiated to demonstrate and document the feasibility of generating implementable CIMI compliant Detailed Clinical Model (DCM) Specifications based on HL7 clinical requirements integrated into a CIMI compliant Federal Health Information Model (FHIM); where, FHIM could be a reference model for Computer Aided Design (CAD) tool(s) to specify consistent implementable CIMI DCMs for various implementation paradigms, such as CDA, NIEM or FHIR.
* In February and March the CIMI WG discussed, analyzed and documented[[1]](#footnote-1)
  + CIMI compliance criteria (aka CIMI Principles).
    - The main challenge that the CIMI community is addressing is that of supporting iso-semantic models, and translation of data into a canonical form that can be consistently processed by applications (whether this is for decision support, user interfaces or data querying)
    - The FHIR community would also like CIMI to address this challenge.
  + Standards-based semantic interoperability based on clinical content defined in an HL7 domain analysis model (DAM), representing Information Exchange Requirements (IERs) specified in CIMI compliant Federal Health Information Model (FHIM) patterns and constrained into implementable[[2]](#footnote-2) CIMI compliant DCMs.
  + Restated, FHIM defines healthcare domains and high-level information-exchange classes (aka entities) in those domains; where, FHIM classes are the context for CIMI Clinical Modelling Patterns constrained into Detailed Clinical Models (DCMs); and, DCMs define the subtypes or leaves of the FHIM. The CIMI compliant FHIM and DCMs are collectively referred to and will be balloted as the CIMI curated “HL7 Common Logical Information Model (CLIM)[[3]](#footnote-3)”.
* In April 2016, the CIMI workgroup concurred with the value of the CLIM strategy
  + They took the action to establish a task force to draft the business case and proposed work breakdown structure and schedules, as required by an HL7 Project Scope Statement (PSS); where, the PSS would be targeted for presentation to stakeholders prior to the September 2016 HL7 Workgroup Meeting in Baltimore.
* The CIMI sponsored task force should address,:
  + Generating implementable CIMI-compliant Detailed Clinical Model (DCM) Specifications based on HL7 clinical requirements integrated into a CIMI compliant Federal Health Information Model (FHIM);
  + International participation / an International Realm.
  + Recommended tooling suite for developers and the support for MDA and MDD tools[[4]](#footnote-4) to transform requirements artifacts (DAM) into implementable CIMI DCM specifications, which represent the clinical data accurately, reproducibly, and computably. Considering
    - FHIM’s data dictionary, terminology binding data element harmonization across domains, and their data repositories.
    - FHIM Modifications to be CIMI compliant
    - UML-AML, ADL, terminology, Model Driven Architecture/Design, repositories and testing
    - Keith Campbell’s proposed SOLOR/LEGO representation
    - Gerard Freriks’ recommended changes to the core reference model
    - EHR-S FM, IHE, NIST Risk and Security Framework
    - Linkage to HL7 RIM
    - Harmonization of ADL, AML, UML and terminology-related technologies to support lossless round trip ADL 🡨🡪 UML-AML model translation.
    - Integration with HL7 processes, workgroups and artifacts.
    - HL7 Balloting schedule
    - FHIM and CIMI DCM development continuing concurrent with CLIM development and balloting.
  + Ensure the CIMI initiative can be understood by a variety of readers (clinicians, architects, developers, implementers, etc.), the task force will consider a set of viewpoints (use Case Scenarios) from The Open Group ‘Healthcare Value Chains and Reference Architecture’ to provide a full software development lifecycle perspective.
* Ideally, the CIMI sponsored Task Force **DELIVERABLE** will be a Draft HL7 Project Scope Statement (PSS) / Project Plan proposing the harmonization, validation, refinement, and transformation of CIMI compliant FHIM and CIMI Detailed Clinical Models into a Common Logical Information Model (CLIM) normative standard.

1. The HL7 CIMI WG is developing this “*CIMI Practitioners Guide to HIE Interoperability*” or more simply known as the “*CIMI Practitioners Guide*” for analysts, architects and implementers; where, it is a source of knowledge about CIMI compliant healthcare logical information and terminology models and their effective-and-efficient use in specifying and implementing interoperable Health Information Exchange (**HIE**) solutions. The CIMI Practitioners Guide is available at: <http://1drv.ms/1TuV8PD> [↑](#footnote-ref-1)
2. CIMI DCM specified Implementable Artifacts might be HL7 messages, CDA documents, FHIR services and APIs, etc. [↑](#footnote-ref-2)
3. CLIM is a set of “computable logical models” with explicit terminology bindings, which can use the Model Driven Health Tool and Model Driven Message Interface (MDHT-MDMI) to generate clear, complete, concise, correct and consistent Implementation Guides (IGs) for implementation paradigms such as CDA/CCDA, NIEM, FHIR (profiles and extensions) and XML/JSON Message/ Service APIs. [↑](#footnote-ref-3)
4. [↑](#footnote-ref-4)