HL7 IIM&T, ACS Cancer Interoperability Launch and HSPC
Aug 1-4, 2017 Meetings Summary Report

Meetings hosted by American College of Surgeons (ACS), Washington, DC
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Aug 10, 2017 16:00 Final Draft

The 1 Aug 2017 meetings included

- 8-10 AM: HL7 Integration of Information Models and Tools (**IIM&T**) Part 1: *Pilot/Project Status*
- 10-3: American College of Surgeons (**ACS**): *Cancer Interoperability Launch*
- 3-5 PM: *HL7 IIM&T* Part 2: *Next Steps*.

The 2-4 Aug 2017 HSPC meeting included

- HSPC Roadmap, infrastructure, development sandbox, tooling, business/clinical workflow processes, associated outreach, governance and communications
- HL7 Sep 2017 ballot (BMM, style and architectural guide, Skin Assessment DCMs, FHIR)
- CIMI information modeling (pilots, vital signs, lab)
- SOLOR efforts
- Pilots (Cognitive NICU, ACOG FPAR, Skin Assessment).

Enclosures

- Enclosure 1: Links, Background and Acronym list
- Enclosure 2: Agendas:
  - Jul 13 Clinical Information Interoperability Council (CIIC) (included for reference based on connection)
  - Aug 1, IIM&T, ACS Cancer Interoperability Launch and
  - Aug 2-4 HSPC

Bottom Line Up Front (BLUF)

The recent Clinical Information Interoperability Council (**CIIC**): *Data and Modelling Meeting*, American College of Surgeons (**ACS**) *Cancer Interoperability Launch*, 15th General Healthcare Services Platform Consortium (**HSPC**) Meeting, and the HL7 *Integration of Information Models & Tools (**IIM&T**)* Working Meeting showed synergies across HL7, HSPC, and CIIC that can be advantageous to DHA and VA EHR transition. These synergies are coalescing on seamless tools for standards-based data, models, information exchanges, legacy Application Program Interfaces (**API**), Model-Driven Development (**MDD**) and Extraction, Transformation and Load (**ETL**) and mapping, component libraries, registries and the uses of the HSPC DT&E environment for an efficient and effective software development lifecycle.

- **Opportunity**: Cerner, IPO, VA, DHA jointly leverage HL7 standards and HSPC resources inclusive of DT&E environment to manage Plug-and-Play information exchanges, components and knowledge-based systems.
  - regression DT&E conformance-performance certifications ensuring requirements integrity
  - requirements-data-portfolio functional configuration audits (FCAs) ensuring traceable and consistent
  - architectural verification-and-validation
  - ROI from HSPC cloud-based regression DT&E risk-mitigation to minimize operational problems.
  - Patient value (safety and care quality) at lowest cost within agile DT&E agile scrums.
- **Information modeling:** Everyone agrees that having standardized (or at least transparent) information models is the best way to achieve universal (semantic) interoperability. As pointed out during the Jul 13, 2017 CIIC event professionals are finding the lack of standardized data for patient care, registries and research. A number of groups have focused on this challenge; however, many have been working independently. This has resulted in duplication of efforts and variations in

data definitions. Interoperability depends on implementing the same data model across systems. The purpose of the CIIC is to engage the clinical stakeholder community and in collaboration with these other forums, work together to develop and use common data models for clinical data elements, HL7-ISO standard architectural framework, common logical information model - **CLIM** (SOLOR, FHIM, CIMI, CQF), FHIR and C-CDA for HSPC to lend the Model Driven Design (**MDD**) following the IIM&T methodology.

- **Patient value (safety and care quality):** Dr Huff started with a personal example of a community hospital's failure to properly and quickly diagnose a treatable life-critical issue in someone many of us knew. Sepsis, as an example, is quickly diagnosed and treated in a modern medical center having information sharing and knowledge-based systems (**KBS**). We need to move medical-center data-sharing and KBS to the point-of-care, regardless of location. *We can quickly think of DHA's procedures, allergies, medications, problems, immunizations (**PAMPI**) readiness data and DHA-VA clinical-care impacting data, that if efficiently and effectively shared, will improve Servicemembers' and Veterans' safety, care and value.*
- **Traceable Requirements**: HL7's standard EHR System Functional Model requirements are consistently traceable to HL7's standard common logical information model - CLIM (SOLOR, FHIM, CIMI, CQF), used for Model-Driven Development (MDD) whose methodology is specifically cited via the HL7 IIM&T Project Scope Statement (PSS) submitted during the Sep 2017 HL7 Working Meeting and formally approved Jun 2017
- **Tooling**: Enabled as part of HSPC and extended by the evolving partnerships, OMG MDD tools provide consistent C-CDA, FHIR, and component specific APIs, services, and test fixtures. HSPC supports emerging software development lifecycle requirements, risk mitigations, validation, and future certification. Also, fully traceable component via the HL7 IIM&T PSS
- **Agile Implementation**: HSPC Development and Test sandbox creates individual user instances of development and test environments. Each user's environment can contain standards-based healthcare MDD tools (e.g., SOLOR, MDHT, MDMI, etc.), "SMART on FHIR", Cerner Millennium EHR HealthePlatform SOA portal, and HSPC's "SMART on FHIR" component library. These customizable environments serve to accelerate ad-hoc, agile-scrum, collaborative demonstration and formal Operation T&E efforts. HSPC's contribution is to make standards better, bring about collaboration by focusing on specific use cases to build-up and demonstrate capabilities via 'feet on the ground' agile sprints involving stakeholders in an easily accessible and secure "cloud" environment.
- **Medical Specialties**: The Clinical Information Interoperability Council (CIIC) by providing the means to engage the clinical communities facilitates necessary collaboration among the medical societies and standards organizations. This will evolve the needed governance/focus to identify work priorities and in turn the development of detailed clinical models with clinical data elements supporting MDD, test and evaluation, resulting in "plug-and-play" interoperable healthcare systems.
- **Communication and Governance**: The HL7's IIM&T construct not only identifies the methodology meant to be delivered via incremental implementations to produce incremental improvements, but also identifies the necessity for efficient and effective communications, mediation, coordination, and governance. HSPC makes available the means to execute the full intent of the HL7 IIM&T. Key to success however, is to propel even more collaboration via partnerships/membership.
- **Process interoperability and workflow standardization**: Inroads made via (skin – wound assessment and FPAR pilots) inclusive of decomposed processes shared. The IPO's focus on metrics for transitions of care relates directly to the efforts of DoD and VA to standardize workflows across the enterprise. The Boston HealthNet project provides a model for how our goals might be achieved using the OMG family of languages and tools, primarily BPMN.

Current interests are highly aligned and increased collaboration can create a win-win for DHA, VA, commercial Healthcare Partners, and most importantly, patients. The IPO and ONC have a role to play in this discussion, and potentially a large one as vendors are far less unified (or interested) than the federal government regarding universal interoperability. *Specifically, DHA's PAMPI "readiness" use case can leverage the HL7 standards and IIM&T methodology, MDD tools, HSPC Developers' Sandbox, plus professional community's peer-review*. Any operational, infrastructure, standards, process efficiencies and/or insights gained can support incremental implementations, improvements, deployments of critical DHA-VA EHR modernization initiatives. HSPC legitimacy once demonstrated is also intended to streamline HL7 (model and standards) review and approval processes via HL7 to HSPC MOU.

Meeting Highlights

Meeting	Topics	Corresponding Steps
CIIC, Jul 13, 2017	• Interoperability depends on implementing the same data model across systems	• Governance, Prioritization of work & funding plan • Focus on harmonization among Registries
HL7 IIM&T Part 1: *Pilot Status* *Aug 1, 2017 8-10 AM*	• Pilots Status though abbreviated exchanged • Interest to capture, in reasonable fashion, pilots' intent and status sustained. • Gaining increased clarity via pilots' experiences	• Immediate project status conveyed expected inroads and issue identification. • Enhanced representation via survey collection will be pursued; open to any approach streamlining intake to support communicating among pilot participants, to stakeholders and as input to IIM&T Newsletter
HL7 IIM&T Part 2: *Next Steps* *Aug 1, 2017 3-5 PM*	• Simplification considerations • Increase Focus. Members supported increased attention to Skin Wound Assessment pilot to validate methodology and ensure product delivery via near term (Sep 2017, Jan 2018) ballot cycles • Delivery of value to FHIR community • Tooling interests remain noteworthy given varied types exercised	• SOLOR activities via HSPC will continue to 'refine' simplification interests • Skin Wound Assessment will receive prominent attention to any underlying IIM&T effort (CIMI, FHIM, CQF refactoring) • Added interest to advance FPAR - Family Health Reporting provided, if latitude exists. • Tooling Requirements evaluation endorsed
ACS Cancer Interoperability Launch, Aug 1, 2017 10-3	• Need for common data elements and clinical models • Registry data sharing and quality focus • Laying the foundation in support of Learning Health System demands	• Engagement with stakeholders across cancer continuum of care • Improving data quality / fidelity and capture • Leveraging HL7 IIM&T CLIM (SOLOR, FHIM, CIMI, CQF), FHIR • Apply via HSPC "SMART on FHIR" components • Breast & Lung cancer staging to be initial focus
HSPC 15th General Meeting 2-4 Aug	• Sampling of specific points discussed during HSPC included whether to focus on process or data interoperability, how to express the value proposition, and what is the best approach to achieve something tangible in the short term. As one example, special interest • Query launched to appreciate latitude with Cerner / their license to support SOLORizing data • Support to acquire the needed extract (is there latitude in license to gain a Cerner Millennium core data model content extract?) • SOLOR activities would occur to improve (unify) the content; build extensions • Interest is to arrange the ability to make that contribution back and what that requires • Engaging HSPC & HL7 IIM&T components with pertinent use cases	• HSPC agile cloud-based regression DT&E environment for FCAs to ensure patient safety and quality care from process test-scripts ensuring traceable-consistent plug-and-play information exchanges, components and knowledge-based systems. • Special Interest: Mark Overhage, Cerner POC, as an HSPC attendee, to investigate (Dr. Kator, Keith Campbell initiated); to be assessed for next steps • Testing and conformance options to be investigated, e.g., if HSPC should do certification directly or contract to outside firm • Use Case examples more pertinent to DoD, VA, IPO: DHA's Procedures, Allergies, Medications, Problems, Immunizations (PAMPI) data-sharing initiative, Cancer care case management and/or allergen interoperability.

Discussion Highlights

- **Stan Huff / Nona Hall:** One message that was prominent across HL7 IIM&T and HSPC was the importance to 'stay the course' related to the approach currently used within CIMI to ensure delivery of Sep 2017 HL7 ballot artifacts and perhaps updated in Jan 2018. With that in mind, requirements identification was supported aimed to ensure tooling / modeling approaches are scalable.
- **Keith Campbell:** We are not doing standards; but, we are making standards better. We must simplify them to improve ROI, e.g., Distinguishing *Analysis Normal Form (ANF)* from iso-semantic *Clinical Entry Form (CEF), single SOLOR ontology to facilitate reasoning*.
    - SOLOR (SNOMED, LOINC) is scheduled to be operational October 2017 with harmonized Skin Assessment terminology (immediate use case focus).
- **HL7 IIM&T Core SMEs**: Discussion highlighted anticipated differences in areas such as tooling approaches what is (or isn't) intended in the FHIM – CIMI integration / harmonization. Follow on discussion intended.
- **Ken Rubin**: OMG BPMN adding Case Management Model and Notation (**CMMN**) and the Decision Model Notation (**DMN**), which is being used by the HSPC Process Interoperability WG. Ken also presented a draft HSPC and VA Interoperability Transition Roadmap, for refinement.
- **Susan Matney:** FPAR project's people, processes & products Visio flowchart can be leveraged to augment HL7 IIM&T methodology. Vital signs and 1k lab CIMI DCMs will follow.
- **Julia Skapik/Stan Huff:** Need dynamic crowd sourcing and governance for scale-ability and sustainability of > 100k DCMs.
- **Rob McClure:** Beyond its core services, VSAC also supports FHIR terminology services.
- **Preston Lee:** HSPC Sandbox is a personal instance of a SMART on FHIR platform in the cloud with tools and data for organizations' pilots, developments and tests.
- **Steve Kator/Nona Hall:** Increased attention to federal (DoD and VA), etc. via a UC that appeals to both HSPC, DoD, VA, IPO, e.g., PAMPI, Cancer care case management and allergen interoperability
- **Mark Overhage**: FHIR is the key way for Cerner to expose Millennium's core-data; where, our HealthePlatform (see figure in background) is for users to access Cerner Millennium core-data for their own environments. *HSPC is forming a workgroup to pilot this work; where, DHA is welcome to participate and offer a pilot-study use case, such as PAMPI*. As an example, Cerner's HealthePlatform is used with Cerner HealtheIntent cloud-based, programmable population health management platform that is vendor-agnostic, which means it can receive data from any EHR, existing HIT system and other data sources, such as pharmacy benefits managers or insurance claims. The near real-time platform enables health care systems to aggregate, transform and reconcile data across the continuum of care, creating a longitudinal health record for individual members of the population that the organization is held accountable for. It enables organizations to identify, score and predict the risks of individual patients, allowing them to match care programs to individuals, which helps to improve outcomes and lower costs.

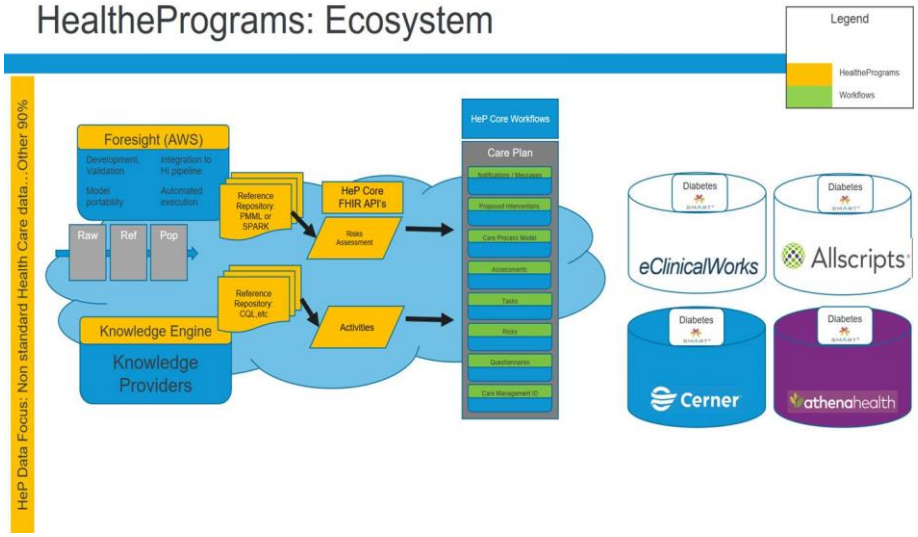
Upcoming Events

- Sep 9-15 HL7 Workgroup meeting, San Diego
- Oct 17-18 Implementers SMART on FHIR Forum. Univ. of UT School of Medicine
- Nov 1-2 HL7 Partners in Operability "*Digital Quality Summit*", Washington DC
- Nov 13-15, HSPC, hosted by Regenstrief, Indianapolis, IN
- Nov TBD, via track within proposed IPO Consolidation Meeting, Roslyn, VA
- Dec 5-7, Partners in Interoperability and CIIC Mtg., New Orleans
- Jan 27 to Feb 2, HL7 Workgroup meeting, New Orleans
- Mar 5-9, HIMSS, Las Vegas

ENCLOSURE 1: Background

Links (contact stephen.hufnagel@asrcfederal.com if you cannot access from DoD or VA networks)

- **1 Aug ACS & IIM&T agenda and slides are viewable and downloadable at:**
  - https://1drv.ms/f/s!AlkpZJej6nh_IZ143eOPm8dFLv-CTg
- **2-4 Aug HSPC agenda and slides are viewable and downloadable at**:
  - https://healthservices.atlassian.net/wiki/spaces/Meetings/pages/105190619/15th+General+Meeting+of+HSPC?mc_cid=0b6c6138ec&mc_eid=dda50449ea
- **Legacy HL7 IIM&T slides, reports and newsletters are viewable and downloadable at**:
  - https://1drv.ms/f/s!AlkpZJej6nh_IZ143eOPm8dFLv-CTg
- **Detailed notes, status, issues and actions:**
  see https://1drv.ms/f/s!AlkpZJej6nh_IZ143eOPm8dFLv-CTg
  contact Nona.G.Hall.civ@mail.mil, Stephen.Hufnagel@ApprioInc.com



FHIR is the key way for Cerner to expose Millennium's core-data; where, our HealthePlatform is for users to access Cerner Millennium core-data for their own environments. [Mark Overhage] As shown in the figure, Cerner's HealthePlatform is used with Cerner HealtheIntent cloud-based, programmable population health management platform that is vendor-agnostic, which means it can receive data from any EHR, existing HIT system and other data sources, such as pharmacy benefits managers or insurance claims. The near real-time platform enables health care systems to aggregate, transform and reconcile data across the continuum of care, creating a longitudinal health record for individual members of the population that the organization is held accountable for. It enables organizations to identify, score and predict the risks of individual patients, allowing them to match care programs to individuals, which helps to improve outcomes and lower costs.

While the HL7 IIM&T Project Scope Statement (**PSS**) # 1316 was approved Jun 13, 2017 and formally details the need and approach; where, the HL7, as an SDO, provides a venue to promote and publish resulting standards-based artifacts, the advantage the HSPC brings is to collaboratively refine, work up, and incrementally implement and improve intent. The advantage this synergy produces is also observed as it attracts special interests with the most recent demonstrated via the

request by ACS to launch Cancer Interoperability specifically to modernize their registries (starting with cancer--breast and lung). HSPC has an MOU with HL7 specifically to not only bring together these organizations together, but to also formally leverage the formal results (such as testing and conformance); where, HSPC stands up to accelerate and improve the HL7 standards approval process.

The Jul7 2016 HL7 IIM&T PSS, with its inherent methodology, originally identified the following pilots, which were further accented as specific focus opportunities to build upon the lessons learned: 1) Skin – Wound Assessment, 2) FPAR - Family Health Reporting and 3) Neonatal pilot projects. The HSPC by its approach is evolving HL7 IIM&T project's methodology, emerging CIMI architectural framework, the HL7 Common Logical Information Model (**CLIM**) intended and doing so by offering the collaboration and ready access to HSPC's tools, development-and-test environment and emerging components for service platforms and applications

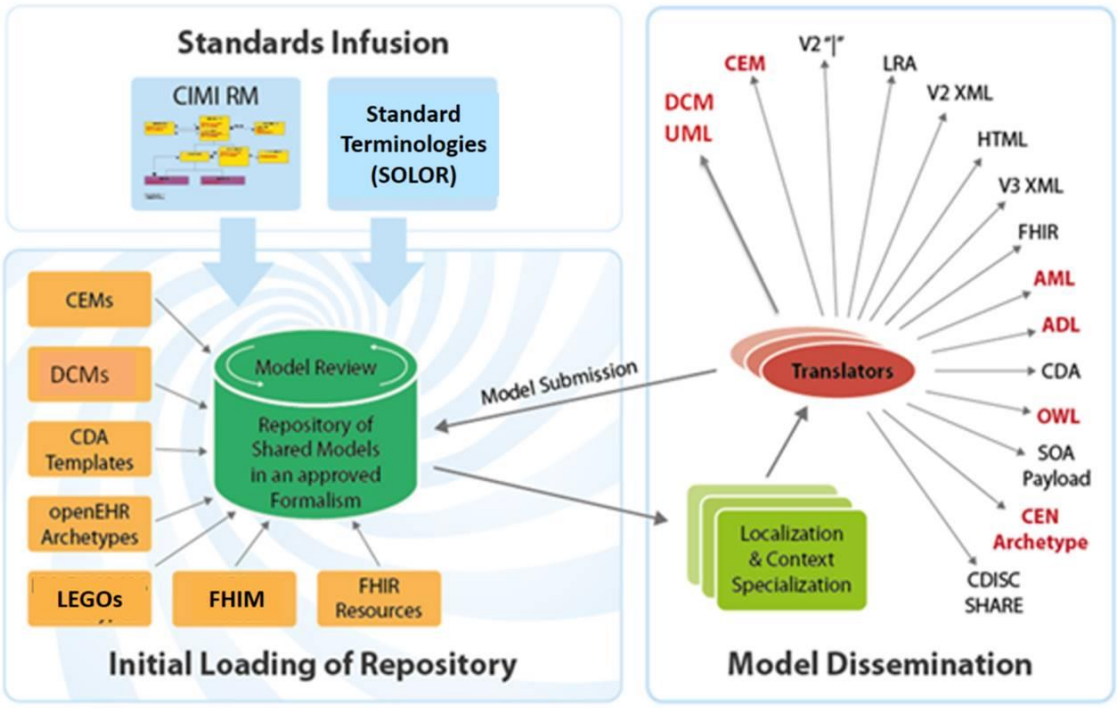
Another forum with HL7 and HSPC ties and referenced is the re-emergence of the Clinical Information Interoperability Council (**CIIC**) which met 13 Jul 2017 at the National Institute of Health (NIH). With all interests sustained, the main value CIIC offers is the access to the clinical communities. Specifically, the stand out element was the invitation and inclusion of the medical societies. With details to be worked, the attendees to the 13 Jul 2017 endorsed the CIIC.

- HL7 is a standards development organization including subject matter experts from the Services, Federal Agencies, professional medical societies, academia, and healthcare-related groups, such as HSPC. HL7 workgroups produce, peer-review and curate standard semantic data packages and constructs. This work empowers machine-computable and clinician-usable information for clinical practice, information-sharing, clinical decision support, population-based reasoning and analytics.
- HSPC is a provider-led consortium producing an open ecosystem of interoperable applications, knowledge, content, and services within a reusable model library and component marketplace for developers, implementers and integrators to construct service platforms-and-applications. This forum and the collaboration it affords is regarded as an ideal resource to 'incrementally implement, incrementally improve computable interoperability;' ensuring via the collaboration that, the fullest of considerations are represented as outputs are delivered.
- HL7's IIM&T project will facilitate alignment among a federated set of CIMI-compliant models: SOLOR, FHIM, DCMs, CQI CQF, US CORE, QI Core, etc.; where, alignment is dependent on common CIMI principles and constructs (e.g., Reference Archetypes and semantic anchor Patterns) shared among those models. HL7 IIM&T/CIMI encourages 4-6 month pilot-project sprints; where, results can be presented at HL7 workgroup meetings; so that; the CIMI workgroup (as lead HL7 workgroup) can consider incorporating project lessons-learned and artifacts into the CIMI's curated principles, Reference Archetypes, Semantic-Anchor Patterns, DCMs, architecture, processes, style, architecture and Practitioners' guides and related exemplars, tutorials and videos. This project intends to demonstrate how computable interoperability can be achieved through the coordination of the CIMI Logical Model with physical message models such as but not limited to FHIR. Refer to the PSS for complete scope.
- IIM&T project goal is to Improve patient-value (safety and quality of care at reduced cost) from "learning Health Systems (**LHS**); where, patient-value serves to unite the diverse interests of participants within the healthcare system. Semantic-interoperability is foundational to achieving LHS. As patient value improves, so does economic-sustainability.
- IIM&T's methodology executed via HSPC maintains a clean separation of structural model and clinical model semantics, using a **SOLOR** (SNOMED with LOINC and RxNorm extension) to create a terminology foundation. SOLOR follows the SNOMED CT observation model, which separates finding, context and provenance. SOLOR encourages post-coordination within SNOMED descriptive-logic expressions to eliminate semantic-overlap inconsistencies, e.g. UML structural-model and terminology-model both specifying anatomical location. Model-

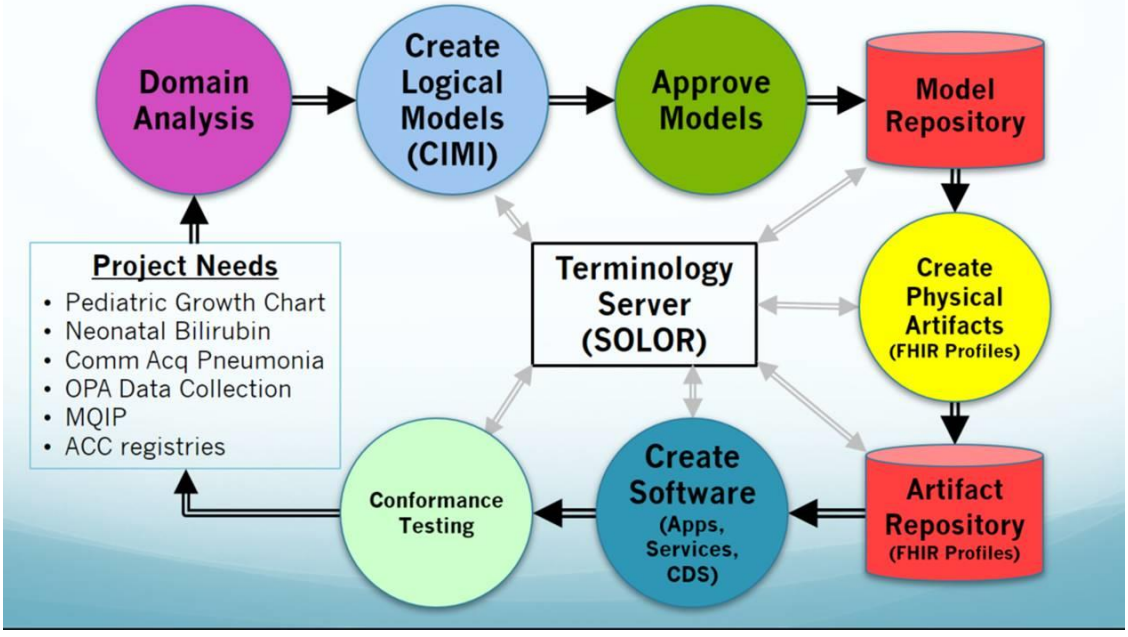
driven developments (**MDD**) can result in clear, complete, concise, correct, consistent and requirements-traceable C-CDA and FHIR profiles to enable efficient-and-effective clinical decision support (**CDS**), knowledge-based-systems (**KBS**), population-based analytics. Thereby, CLIM and MDD increase patient-value.

- IIM&T's products are an HL7-ISO Healthcare Architectural Framework, Common Logical Information Model (**CLIM**) of harmonized SOLOR, FHIM, CIMI, CQF, FHIR and C-CDA standards, implementation guides and reference implements. These are consistent-and-traceable to a rich collection of re-usable use-cases used-to specify computable healthcare data-sets, which are compose-able into actionable patient information, FHIR and C-CDA APIs, services, components, mobile-apps and systems, such as EMRs, Registries, Lab, Rad, Rx. CLIM hierarchically harmonizes
  - **VA SOLOR** (SNOMED CT extension for LOINC and RxNorm),
  - **FHA FHIM** (Federal Health Information Model) clinical domains, classes and data elements.
  - **HL7-ISO AF** (Architectural Framework) of Basic Meta-Model (**BMM**), principles and methodology,
  - **CIMI DCMs** (Detailed Clinical Models) constraining FHIM's clinical reference architypes,
  - **ONC CQF** (Clinical Quality Framework) for
    - **CQI** (Clinical Quality Indicators) and
    - **CDS** (Clinical Decision Support).
  - **MDD** (Model-Driven Development) tools to specify FHIR Structure Definitions for
    - HL7-ISO standard US FHIR core, QI Core, C-CDA and FHIR profiles plus
    - implementation guides, reference implementation code, APIs and test fixtures.
- Healthcare Services Platform Consortium (**HSPC**) "SMART on FHIR" and SOLOR project is producing tools, a development environment and reusable-components to accelerate the delivery of a services-platform empowering the "faster-better-cheaper" construction-of innovative healthcare applications and mobile-apps for the improvement of health, healthcare delivery and patient-value enables and or supports:.
  - Return on investment (ROI) from improved patient-value (safety, care-quality, lower cost) from efficient and effective with economic-sustainability for healthcare-system stakeholders.
  - CLIM (SOLOR, FHIM, CIMI, CQF) empowering consistent and traceable MDD via release of associated implementation artifacts (guides, models, etc.)
  - HSPC design-time tooling, development environment and run-time components,
  - CDA and FHIR HL7-ISO standards to enable high-quality healthcare systems

Model Development Lifecycle



The Interoperable App Development Process



Acronyms and Links

BMM	CIMI Basic Meta Model components	ISAAC	VA tool for SOLOR
CEM	Intermountain Clinical Element Models	ISO	International Standards Organization
CIMI	HL7 Clinical Information Model Initiative	JIF	VA/DOD Joint Incentive Fund
CLIM	HL7 Common (Clinical) Logical Information Model	KNART	CDS Knowledge Artifact
CQI	HL7 Clinical Quality Information	LOINC	Logical Observation Identifiers Names and Codes
CQF	HL7 Clinical Quality Framework	MDHT	Model Driven Health Tools
DAF	ONC Data Access Framework	MDMI	Model Driven Message Interoperability
DCM	Detailed Clinical Model	ONC/OST	US Office of the Natl. Coordinator / Office of Science and Tech.
eCQM	CQI Electronic Clinical Quality Measure	PAMPI	Procedures, Allergies, Medications, Problems, Immunizations
STU	HL7 Standard for Trial Use	PMP	Program Management Plan
EDW	Electronic Data Warehouse	PSS	Project Scope Statement
FDA	US Federal Drug Agency	QUICK	CQI Quality Information and Clinical Knowledge logical model.
FHA	US Federal Health Architecture	RXNorm	US National Library of Medicine naming system for drugs
FHIM	US Federal Health Information Model	SIGG	Standards Interoperability Guide Generator
FHIR	HL7 Fast Health Information Resource	SOLOR	SNOMED extension for LOINC & RXNorm
HIEA	DoD VA IPO Health Interoperability Exchange Alliance	TLC	ONC/OST Technical Learning Center
HcDir	ONC-FHA Provider Healthcare Directory.	VA	US Veterans Administration
IPO	US DoD and VA Interagency Program Office	VCS	Version Control System for collaboration
		VSAC	NLM Value Set Authority

- **BMM** is CIMI Reference Model (Information Architecture) Basic Meta Model components.
  - See http://wiki.hl7.org/index.php?title=CIMI_Practitioners%27_Guide
- **CDA** is HL7 Clinical Data Architecture.
  - See http://www.hl7.org/implement/standards/product_brief.cfm?product_id=258
- **C-CDA** is HL7 Consolidated CDA.
  - See http://www.hl7.org/implement/standards/product_brief.cfm?product_id=379
- **CEM** is Intermountain Clinical Element Models. See http://www.opencem.org/#/
- **CDS** is HL7 Clinical Decision Support workgroup.
  - See http://wiki.hl7.org/index.php?title=Clinical_Decision_Support
- **CIMI** is HL7 Clinical Information Model Initiative.
  - See http://wiki.hl7.org/index.php?title=Clinical_Information_Modeling_Initiative_Work_Group
- **CIMI Principles** See http://wiki.hl7.org/index.php?title=CIMI_Practitioners%27_Guide

- **CIMI Reference Models (aka Information Architecture)**
  - See http://wiki.hl7.org/index.php?title=CIMI_Practitioners%27_Guide
- **CLIM** is HL7 Clinical Logical Information Model Package of CIMI-Harmonized SOLOR, FHIM, CQF, CIMI DCMs and CQI KNARTs; where, independent organizations maintain the component models and HL7 periodically configuration manages, ballots and standardizes them.
- **CQF** is ONC Clinical Quality Framework.
  - See http://wiki.hl7.org/index.php?title=Clinical_Decision_Support
- **CQI** is HL7 Clinical Quality Initiative workgroup.
  - See http://wiki.hl7.org/index.php?title=Clinical_Quality_Information
- **DAF** is ONC Data Access Framework (currently known as US Core FHIR).
  - See http://wiki.siframework.org/Data+Access+Framework+Homepage
- **DCM** is CIMI Detailed Clinical Models. See http://www.opencimi.org/model-browser
- **FHIM** is Federal Health Information Model. FHIM specifies 30+ healthcare domains.
  - See http://FHIMS.org
- **FHIR** is HL7 Fast Healthcare Information Resource standard and workgroup.
  - See http://wiki.hl7.org/index.php?title=FHIR
- **HcDir** is ONC-FHA Provider Healthcare Directory. See http://wiki.siframework.org/Provider+Directories
- **IIM&T** Is CIMI-sponsored HL7 Integration of Information Models & Tools Project #1316.
  - Wiki: http://wiki.hl7.org/index.php?title=Clinical_Information_Modeling_Initiative_Work_Group
  - Newsletters: http://wiki.hl7.org/index.php?title=CIMI_Newsletters
  - PSS: https://1drv.ms/f/s!AlkpZJej6nh_IlQOuPJcL2rf5BVoXQ
- **JET** is DoD-VA Joint Exploratory Team.
- **KNART** is CDS Knowledge Artifact.
  - See http://www.hl7.org/implement/standards/product_brief.cfm?product_id=337
- **MDHT** is SIGG Model Driven Health Tool.
  - See https://projects.eclipse.org/proposals/model-driven-health-tools
- **MDMI** is SIGG Model Driven Message Interoperability.
  - The present MDMI Referent Index (RI) scope is the US Core; where, FHIM is used for data-element value-sets.
  - FHA's MDMI RI supports all MU2 data elements and >90% of the C-CDA model.
  - See http://www.omg.org/mdmi/ and http://www.omg.org/spec/MDMI/
  - See at https://github.com/MDMI/ReferentIndexContent
- **NIEM** is National Information Exchange Package. See https://www.niem.gov/
- **QI Core** is FHIR Quality Improvement Core Implementation Guide.
  - See https://www.hl7.org/fhir/qicore/qicore.html
- **PAMPI** is DHA's procedures, allergies, medications, problems, immunizations readiness data
- **QUICK** is CQI Quality Information and Clinical Knowledge logical model, used to specify eCQMs and FHIR QI Core.
  - See https://www.hl7.org/documentcenter/public_temp_315E0F18-1C23-BA17-0C73398BA144AB5D/wg/cqi/Defining_eCQMs_Using_CQL.pdf
- **RI** is SIGG-MDMI Referent Index. See https://github.com/MDMI/ReferentIndexContent
- **SIGG (MDHT, MDMI)** is FHA Standards Implementation Guide Generator
- **SOLOR (**SnOmed LOinc, RxNorm) is VA's terminology harmonization initiative.
  - HSPC hosts the SOLOR terminology editing environment.
- **VSAC** is NLM Value Set Authority Center. https://vsac.nlm.nih.gov/

ENCLOSURE 2: Agendas

08:00 - 10:00 IIM&T Pilot Projects Status Tue 1 Aug Agenda

- Stan Huff <Stan.Huff@imail.org>; 'switconsulting@comcast.net'; Campbell, Keith E (Portland) <Keith.Campbell@va.gov>; 'Keith E. Campbell' <campbell@informatics.com>; Skapik, Julia (HHS/ONC) <Julia.Skapik@hhs.gov>; nona.g.hall.civ@mail.mil; susan.matney@imail.org; 'Richard Esmond' (richard.esmond@gmail.com); 'galen.mulrooney@jpsys.com' (galen.mulrooney@jpsys.com); Claude Nanjo' (cnanjo@cognitivemedicine.com); Robert McClure MD <rmcclure@mdpartners.com>; sean.muir@jkmsoftware.com; dcarlson@xmlmodeling.com; SHufnagel@AppriоInc.com; 'Kramer, Mark A.' <MKRAMER@mitre.org>; Frazier, Pavla (pavla.frazier@leidos.com) (pavla.frazier@leidos.com); Terrie.Reed@fda.hhs.gov; HILLS, CHRISTOPHER J CIV USN SPAWARSYSCEN LANT SC (US) <christopher.j.hills.civ@mail.mil>; Hasley, Stephen K <hasleysk@upmc.edu>; Reginald Humphries, Reginald Humphries, Dan Morford, Gregory Pappas, Martha.Velezis

Core Work

- FHIM integration of CIMI Clinical BMM & Archetypes (Patterns) (Galen Mulrooney)
- US Core / QI Core integration of CIMI BMM & Archetypes (Patterns) (Claude Nanjo)
- Refine PROCEDURE and CONTEXT based on Pilots (Galen Mulrooney & Claude Nanjo)
- SOLOR
- HL7 Ballot (BMM, Style & Architecture Guide, Skin Assessment Exemplar) (Sep 2017)

Project Centric

- Patient Care Project #1253 "CIMI Clinical Model Proof of Concept" (Skin Assessment)* (Susan Matney)
- Pediatric Bilirubin Management CDS, needs code generation library (Ken Kawamoto)
- Zika measure (Ken Kawamoto and Claude Nanjo)
- Immunization Management EHR Functional Model Profile (Steve Hufnagel & Gary Dickerson)
- Family Planning Annual Report (FPAR) – HSPC pilot with ACOG* (Stan Huff, Susan Matney, Dr Hasley)
- Device interfaces MDEpiNet (Julia Skapik, ONC and Terri Reed, FDA)
- FHIR JET (Joint Exploratory Team)* (Dave Carlson, Mark Kramer)
- Just Announced: NICU, Emery Fry
- Just in from FHIR Group: Vital Signs Challenges (Susan Matney)
- *Proposed for DHA, VA, IPO: PAMPI (Keith Campbell, Steve Kator, Steve Hufnagel)*

10:00-15:00 Cancer Interoperability Launch 1 Aug Agenda

10:00 am Call to order

10:05 - 10:15 am - Welcome and Overview of Meeting - Frank Opelka MD

This pre-HSPC kickoff meeting is in response to ACS's request to HL7 and HSPC for help modernize ACS registries to better enable modern clinical decision support and analytics, using FHIR APIs.

10:15 - 11:00 am - Interoperability depends on implementing the same data model across systems

- **Stan Huff**, MD; Chief Medical Informatics Officer, Intermountain Healthcare
- **Charles (Chuck) Jaffe**, MD, PhD ; CEO, Health Level Seven International

11:00 - 11:15 am - Clinical Importance of Care Models

- Frank Opelka, MD, ACS cancer lead

11:15 - 11:45 am VA Initiatives in Interoperability

- Michael Kelley of VA
- Doug Rosendale

11:45 - 12:30 pm Introduction to Clinical Modeling

- Richard Esmond; HL7 CIMI Co-Chair, CTO PenRad Inc.
- Mark Kramer; MITRE

12:30 - 1:15 pm Lunch

1:15 - 2:00 pm Demonstrations, Explanation and Q&A

- Richard Esmond; HL7 CIMI Co-Chair, CTO PenRad Inc.
- Mark Kramer; MITRE
- Steve Hasley, MD
- Susan Matney

2:00 - 3:00 pm Action plan for developing the roadmap for Solid-Mass Cancers (Lung and Breast) Open-Discussion Facilitated by:

- Stan Huff, MD; Chief Medical Informatics Officer, Intermountain Healthcare
- Frank Opelka, MD
- Richard Esmond; HL7 CIMI Co-Chair, CTO PenRad Inc.

03:00 - 05:00 pm HL7 IIM&T Plans Tue 1 Aug Agenda

- Terminology foundation: SOLOR (via SNOMED, LOINC & RxNORM) combined with the
- Integration/harmonization of information models CLIM (SOLOR, FHIM, CIMI, CQF), FHIR, C-CDA
- Tooling to deliver value to implementers
- Implementations, including but not limited to FHIR and C-CDA
- Agile-scrum Pilots/Projects in order to deliver results and incrementally apply lessons learned.
- Governance / Communications

HSPC Day 1, Wed Aug 2, 2017 Agenda

	Topic		**Speaker / Facilitator**		
0800-0830	Breakfast				
0830-0845	Welcome and Introductions		Oscar Diaz		
0845-0915	Keynote		Viet Nguyen HSPC_Keynote_20170802.pptx		
	Updates from Recent Consortium Activity				
0915-0940	Cancer DTR Update		Frank Opelka		
0940-1005	CIIC		Stan Huff Clinical Information Interoperability Council Plans for Moving Forward 2017 07 18 for HSPC in DC.pptx		
1005-1030	Break				
1030-1050	Activity and Plan Management Project update		Marc Overhage/ Oscar Diaz HSPC slides Draft.pptx		
1050-1105	Conformance & Certification Update		Craig Parker HSPC Conformance Update DC2017.pptx		
1105-1120	Marketplace update		Preston Lee		
1120-1150	Community brief on HSPC projects Roadmap - Ken SOA Platform - Preston Developers Environment - Rick SOLOR - Susan Matney/Keith Campbell		Facilitator: Ken Rubin 2017-08 HSPC Lightning Round Project Updates.pptx		
1150-1210	HSPC Liaison activity OMG/BPMN- Ken, 5 min MOU updates- Virginia, 5 min Outreach activities - Oscar, 5 min		Facilitator: Oscar Diaz MOU Updates 2017 08.pptx		

	HL7/Argonauts - Stan, 5 min				
1210-1300	Lunch				
	Track 1-	Facilitator	**Track 2** L		**Facilitator**
1300-1445	HSPC Roadmap Breakout 2017-08 HSPC Roadmap TMAP Presentation Version.pptx 2017-07 HSPC Interoperability Roadmap ALPHA RC1a.docx	Ken Rubin	1300-1445	Activity and Plan Management Project Breakout	Marc Overhage Oscar Diaz
1445-1515	Break				
1515-1630	Conformance & Certification Breakout	Craig Parker	1515-1630	Activity and Plan Management Project Breakout - continued	Marc Overhage Oscar Diaz
1630-1700	Report from Breakouts		Stan Huff		
1700-1715	Wrap up and Adjourn		Stan Huff		
1800-1930	Reception - The Liaison: Art and Soul Restaurant - Private Room. Enter through the restaurant entrance, go to the large gray door on the right. The hostess can also help show the way. 415 New Jersey Ave. NW Washington, DC 20001				

HSPC Day 2, Thu Aug 3, 2017 Agenda

	Topic		**Speaker / Facilitator**		
0800-0830	Breakfast				
0830-0845	Welcome and Introductions		Oscar Diaz		
0845-0910	Terminology and Modeling update		Susan Matney HSPCTerminologyInitiativesUpdate08022017.pptx		
0910-0935	Development Environment and Resources update		Rick Freeman 2017-07 HSPC General Meeting-HSPC Sandbox-Freeman.pptx		
0935-1000	SOA Platform update		Preston Lee		
1000-1030	Break				
1030-1100	Knowledge, Content and Clinical Process Sharing		Peter Haug, Emory Fry, Ken Rubin Knowledge Authoring Reference Model 8-2017-		

	update		distrib.pptx		
1100-1135	NICU Pilot update		Emory Fry HSPC-NICU PIlot.pptx		
1135-1200	HSPC Governance		Stan Huff/Ken Rubin/Oscar Diaz		
1200-1300	Lunch				
	Track 1	**Facilitator**	**Track 2**		**Facilitator**
1300-1445	SOA Platform Breakout	Preston Lee	1300-1445	Terminology and Modeling Breakout	Keith Campbell
1445-1515	Break				
1515-1630	SOA Platform Breakout	Preston Lee	1515-1630	Terminology and Modeling Breakout	Susan Matney
1630-1700	Report from Breakouts		Stan Huff		
1700-1715	Wrap up and Adjourn		Stan Huff		

HSPC Day 3, Fri Aug 4, 2017 Agenda

	Topic		**Speaker / Facilitator**	
0800-0830	Breakfast			
0830-0845	Welcome and Introductions		Oscar Diaz	
	Track 1	**Facilitator**	**Track 2**	**Facilitator**
0845-1000	Tooling Breakout BOARD ROOM CONFERENCE ROOM CLOSEST to DOOR	Craig Parker	Opportunities for provider Collaboration MAIN ROOM	Stan Huff and Viet Nguyen
1000-1030	Break			
1030-1050	Reports from Breakouts		Oscar Diaz	
1050-1130	Roadmap Discussion: Community Input, Validation, and Voting 2017-08 HSPC Roadmap TMAP Presentation Version.pptx		Ken Rubin	
1130-1200	HIMSS Planning		Laura Heermann/Rick Freeman	
1200-1230	Lunch			
1230-1330	Next Steps Conference call planning Wrap up and Adjourn		Stan Huff	

From <*https://healthservices.atlassian.net/wiki/spaces/Meetings/pages/105190619/15th+General+Meeting+of+HSPC?mc_cid=0b6c6138ec&mc_eid=dda50449ea*>

Clinical Information Interoperability Council, Thurs Jul 13, 2017 Agenda

8:00 – 8:30am Welcome & Overview of Meeting
Interoperability depends on implementing the same data model across systems (Dr Stan Huff, Intermountain HC, Chuck Jaffe, MD HL7

8:30 – 9:15am Opening Keynote
Dr Rucker National Coordinator, ONC

9:15 – 10:30am Work to Build On
Moderator, Virginia Riehl
Panel: Seth Blumenthal, MBA; Director, Data and Innovation, PCPI; Judy Murphy RN, FAAN, FACMI, CNO, IBM Frank Opelka, MD Medical Director, American College of Surgeons; Terri Reed, Sr Advisor for UDI Adoption, FDA; Steve Hasley, MD, CMIO, ACOG

10:30 – 11:00am Break

11:00 – 12:00am Presentation on Options Approaching Governance, Prioritization of Work, Collaboration and Funding Stan Huff, MD

12:00 – 1:00pm Lunch

1:00 – 2:00pm Breakout Groups (3)
Attendees will participate in breakout groups to develop feedback on the plan for moving forward

2:00 – 2:30pm Breakout Reports (3)
Attendees will reconvene to hear report outs and comment

2:30 – 3:00pm Break

3:00 – 4:00pm Plan for Moving Forward
Next Steps will be determined based on Attendee Discussion, Stan Huff, MD