UNLOCKING THE **POWER** OF HEALTH INFORMATION

HL7 INTERNATIONAL

THE OFFICIAL PUBLICATION
OF HEALTH LEVEL SEVEN®
INTERNATIONAL

SEPTEMBER 2018

NEWS

The Changing World of Provider Reimbursement

Plus...

HL7 Genomics Conference Session

IHIC 2018: Mastering the Interoperability Challenge

CDA Examples Task Force

ONC Grant Project and Tooling Updates

In this Issue

HL7 News
is the official publication of
Health Level Seven International
3300 Washtenaw Avenue, Suite 227
Ann Arbor, MI 48104-4261 USA
Phone: +1 (734) 677-7777
Fax: +1 (734) 6777-6622
www.HL7.org

Mark McDougall, *Publisher*
Andrea Ribick, *Managing Editor*
Karen Van Hentenryck, *Technical Editor*
Kai Heitmann, *Photographer*

Update from Headquarters

By Mark McDougall, HL7 Executive Director

DevDays in Boston

After being produced by Firely the last four years in Amsterdam, the HL7® FHIR® DevDays came to the United States for the first time on June 19-21, 2018. The event was organized by HL7, the HL7 FHIR Foundation and Firely. HL7 FHIR DevDays was so popular that it sold out with the maximum number of 380 attendees with 70 individuals on the wait list. Clearly, there is an interest in the structure of the program, which features a combination of hackathons, tutorials, keynotes and networking opportunities. FHIR experts from around the world were present to instruct, guide and discuss the further improvement of the HL7 FHIR standard. The event also provided a chance to work with the specification surrounded by others doing the same thing, side by side with experts available to answer any questions. The three pillars for DevDays are as follows: education, idea sharing and networking. Plans are underway to find a larger venue for the 2019 HL7 FHIR DevDays event produced in the U.S.

Ewout Kramer addresses the crowd at DevDays.

I am happy to recognize the special contributions from so many individuals and organizations that helped make this event such a success, including:

- Rien Wertheim, Ewout Kramer and their entire team at Firely
- Marita Mantle-Kloosterboer
- Each of the 70 speakers and subject matter experts
- InterSystems for their significant sponsorship as the Host Sponsor, the sponsor of the networking event at Lucky Strike and the presentation recordings
- Allscripts for Silver sponsorship
- Efferent for Silver sponsorship
- Cerner for Bronze sponsorship
- PCH Alliance for Bronze Sponsorship

HL7 FHIR DevDays attendees participate in hands-on sessions at the State Room in Boston.

HL7 FHIR DevDays in Boston

Kai Heitmann, MD was a critically important contributor to the planning preparations.

Attendees at the May Working Group Meeting enjoy the view of Cologne, Germany during a break.

WGM in Cologne, Germany

The May International Conference and Working Group Meeting (WGM) held on May 12-18, 2018 in Cologne, Germany attracted 310 attendees. Over 50 HL7 work groups, committees and steering divisions convened meetings in Cologne. At the event, 19 work groups conducted co-chair elections for 25 leadership positions. Attendees also took advantage of 16 tutorials and a two-day FHIR connectathon.

The WGM featured a Monday morning plenary meeting with five keynotes sessions covering eHealth in Europe. The keynote sessions included the following:

- ***eHealth Network of Member State Representatives: Past, Present and Future*** by Clemens Martin Auer, MD, Director General, Federal Ministry of Health, Austria and Chair, eHealth Network
- ***Patient at the Center of Digital Health Developments*** by Margo Brands, Msc, Senior Policy Advisory Digital Health, Dutch Patients Federation and Stakholder Manager, MedMij
- ***Healthcare in the Age of Digitization: Focus on Portugal*** by Henrique Martins, MD, PhD, CEO, Shared Service, Ministry of Health (SPMS), Portugal
- ***Using Law and Standards to Make the Most of the European Reference Networks for Rare Diseases*** by Petra Wilson, PhD, Managing Partner, Health Connect Partners, Brussels, Belgium
- ***European Strategy for eHealth: The Role of Interoperability Standards*** by Tapani Piha, MD, Head of Unit, Cross-Border Healthcare & eHealth, DG Health and Food Safety, European Commission, Brussels, Belgium

Several volunteers held key roles in the planning of the Cologne WGM. Kai Heitmann, MD, was a critically important contributor to the planning preparations. His ongoing support and guidance has been sincerely appreciated for almost 20 years. I would also like to recognize and extend a special thank you to the following volunteers who were instrumental in developing the program, planning and producing the WGM in Cologne:

- Kai Heitmann, MD
- Christof Gessner, PhD
- Catherine Chronaki
- Frank Oemig, PhD
- Stefan Sabutsch
- Robert Stegwee, PhD
- Julian Sass
- Dominik Ludmann

I am pleased to recognize the following organizations that helped sponsor our May Working Group meeting in Cologne:

- iNTERFACEWARE
- InterSystems

Attendees also enjoyed plenty of food, Kölsch and the breathtaking views of Cologne from the top floor of the KolnSKY during the HL7 WGM networking reception.

FHIR Applications Roundtable in Washington DC

We hope you will join us September 27-28 for our 4th FHIR Applications Roundtable (FAR) program. The two-day event is designed to educate the healthcare industry about the power and maturity of HL7 FHIR. The format features short presentations/demos from providers, vendors, academic institutions, start-ups and individuals showcasing FHIR-based solutions that are in development or already being deployed. Attendees will be invited to judge the FHIR presentations by voting on best of show and other awards to be announced.

Anyone interested in understanding, implementing or developing FHIR applications will find value in this event. One very important note I'd like to make is that the FAR event is NOT a technical meeting, and no code-a-thons or work group business will take place. For more info, please visit the site at: http://HL7.me/FHIRAppRT.

32nd Annual Plenary Meeting in Baltimore

We are pleased to report that the theme for our upcoming plenary meeting will be: Collaborating Together Toward Global Interoperability. I am pleased to announce that the National Coordinator for Health IT, Dr. Donald Rucker, will keynote the event. More program details can be found on the meeting website at: http://hl7.me/eting.

Please join us for the 32nd Plenary meeting that will occur at the Hyatt Regency Baltimore Inner Harbor in Baltimore, Maryland. The week of meeting activities will also include:

- HL7 FHIR Connectathon on Saturday-Sunday, September 29-30
- Plenary program on Monday, October 1
- Work group meetings Monday-Friday, October 1-5
- Two-day hands-on FHIR workshop titled the HL7 FHIR Experience, Wednesday-Thursday, October 3-4
- Over 20 tutorials Monday-Thursday, October 1-4

Benefactors and Gold Members

We are pleased to recognize HL7's 2018 benefactors and gold members who are listed on page 24. Their support of HL7 is very much needed and sincerely appreciated. We are pleased to recognize our benefactors in all of our HL7 newsletters, on the HL7 website, in all of our HL7 press releases, and at all of our HL7 Working Group Meetings.

Organizational Member Firms

As listed on pages 24-27, HL7 is very proud to recognize the organizations who are HL7 organizational member companies. We sincerely appreciate their ongoing support of HL7 via their organizational membership dues.

Best wishes to you and your loved ones for good health and plenty of laughter!

Newly Certified HL7 Specialists

Congratulations to the following people who recently passed the HL7 Certification Exam

Certified HL7 Version 2.x Chapter 2 Control Specialist

APRIL 2018

Kazushige Okanishi
Shamil Nizamov

MAY 2018

Nirav Rana
Deepak Kamboj

JUNE 2018

Deepak Kamboj
Shravan Kumar Lakumarapu
María del Rocío Rodríguez Morín
Daniel Nebot
Abhay Deshpande
Prasanna Rajeev Rajanala
Prashant Chothwe
Prashant Kadam
David Leon Fernandez
Kristi Wood
David Abril Escolano

Certified RIM Version 3 Specialist

JULY 2018

Shamil Nizamov

HL7 FHIR STU Proficient Certified

APRIL 2018

Jari Vuonos
Matthew Conkol

Tooling Update

Stops Along the Road

By Wayne Kubick, CTO, HL7 International

Many of us recall family summer vacations consisting of long drives, perhaps stopping along the way at a series of national parks, scenic villages or beaches. Some of these stops were so incredible that they became permanently etched in our memories; others were hit or miss.

The kids might remember playing in the motel pool or a rich slice of diner whipped cream pie more than gushing at the mountains, waterfalls or geysers. And many of us parents may remember the journey more than the destination, since arriving at that destination was merely a precursor to the next journey. Other times, the destination is the whole point – like a free pass to Disney World (but hopefully not Walley World).

Within the world of standards development at HL7, we're in the midst of a series of long journeys. Our entire experience developing standards is one journey after another, as is our quest to provide improved tooling.

During the past year we've taken steps to build up a more modern tooling infrastructure, based on Confluence, JIRA, GitHub and Zulip. In some cases—as with Zulip—we've already arrived at the destination, though many haven't yet gotten out of their cars to enter the park. In other cases, the best—or at least the most—is yet to come. Here's a brief update on some key stops along our ongoing tooling journey.

Confluence

While Confluence can eventually replace what we currently do in MediaWiki, it's really much more of a broad collaboration platform than a mere Wiki.

Last January, we began to migrate certain work groups to the Confluence platform as well introduce some new standard features, beginning with an online attendance log.

While early adopters may have experienced a few teething pains, we now feel we're over the hump and ready to make it available for the rest of the working group, together with a suite of standard templates for meeting agendas, minutes and attendance logs. Thanks especially to our JIRACon team – Patrick Loyd, Lorraine Constable, Tony Julian as well as our exceptional webmaster, David Johnson – for leading the way along with the Electronic Services and Tools Work Group.

In the coming months we'll be posting new tip sheets and brief training videos to help you hit the ground running in Confluence. Stay tuned for some new online forms like the Project Scope Statement, and tips on how to use e-voting and collaborative document editing as we continue our journey toward improved collaboration. Remember to hit the feedback tab and let us know your ideas for helping to use this powerful new tool to further enhance our collaborative experience at HL7. We will definitely be anxious to announce "Confluence has arrived" in Baltimore.

JIRA

Like GForge Tracker, JIRA is an issue-tracking system, albeit one on steroids with advanced workflow, reporting and tight integration with Confluence. Some work groups and the JIRACon team have already successfully transitioned to JIRA for tracking issues related to our tooling projects.

Most importantly, Lloyd McKenzie has been leading a major project to re-engineer our ballot processes using JIRA instead of spreadsheets. Testing of this new JIRA-based ballot system commenced in July, with a goal of piloting it for at least one major ballot in the August ballot cycle. I'll be reporting back on this at the October Working Group Meeting (WGM), but, if things go according to plan, you can all be expecting to reach the new JIRA ballot destination early in 2019.

The other major new application based on JIRA is Ted Klein's Unified Terminology Governance (UTG) project. We now have a single repository for all terminologies used in HL7 standards, and Ted will be demonstrating the prototype system for requesting and governing new terminologies at the October WGM. We're on track to rollout UTG in the first half of 2019, with the expectation that it will replace the current harmonization process during that year.

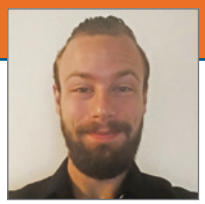
A Tour Guide to Smooth the Journey

Of course, changing to any new system usually involves some discomfort and effort. And bringing in new systems doesn't alleviate the burden of supporting old systems until we're able to put the old, legacy systems to rest. To really realize the benefits, we need to simplify the entire tooling infrastructure to focus on a smaller set of technology platforms, and that's another, longer journey. But the HL7 Board has recognized the importance of providing additional support to the community to help them adjust to the new tools, as well as to help us support, enhance or retire the older ones. Therefore, I'm pleased to welcome Josh Procious as our new applications manager to help guide us along the journey (See bio below).

The Bucket List

We've got a lot more sights to visit in the collaboration tooling world. But we're also working to improve our publication tools with a major effort to port Version 2 to a web-based format, simplify the representation of C-CDA templates, and further improve the FHIR publishing environment to ensure it's sustainable in the long term with minimal risks. I'll be providing updates on these and other initiatives in the coming months. Until then, happy trails.

HL7 Welcomes New Staff Member



Joshua Procious, Applications Manager

HL7 welcomes Joshua (Josh) Procious as our newest staff member. As the HL7 applications manager, Josh is responsible for providing client-facing training and support as well as assisting with set up and management of software applications used by HL7 members such as JIRA, Confluence, Zulip and others.

During high school, animation was the gateway for Josh into the IT world. From there, he dabbled in industrial programming, design and administration. Josh joined the United States Marine Corps after graduating from high school. There, he served as a system administrator and communicator. While playing the role of a national security agency monitor and local system administrator, Josh supported Operations Enduring Freedom and Inherent Resolve both from the United States and abroad. During his time in the military, he fell in love with philosophy and art. To date, these are his favorite pastimes. As a new member of the HL7 staff, Josh is excited to use his experience to better our society. *"Keep art free, use your mind, and keep those servers running."*

News from the HL7 Project Management Office

ONC Grant Project Updates

By Dave Hamill,
Director, HL7 Project
Management Office

Work continues on the projects funded by the ONC's $875,000 grant for Maturing Consolidated Clinical Document Architecture (C-CDA®) and Fast Healthcare Interoperability Resources (FHIR®) standards.

The following new projects got underway this past trimester:

1. FHIR R4 Ballot Process Support
2. C-CDA To FHIR Mapping Proof of Concept
3. Add Clinical Notes to FHIR

Work continued on the projects listed below:

4. Creating a Unified Terminology Governance (UTG) process and demonstrable proof-of-concept prototype
5. Migrating FHIR issue/project tracking and ballot reconciliation to JIRA
6. Providing Support for FHIR R4 STU balloting via vallot facilitators and a coordinator
7. Supporting FHIR connectathons by providing an administrator
8. Upgrading existing FHIR reference server implementations to more effectively support "Bulk Access and Push" applications
9. Continuing C-CDA Implementation-A-Thons (IAT)

Details regarding each project are as follows:

FHIR R4 Ballot Process Support Project

During the May 2018 ballot cycle, the FHIR R4 Ballot Process Support project oversaw importing the pre-processing ballot comment spreadsheet data into GForge and then processed FHIR ballot responses stemming from the May cycle. In addition to supporting FHIR R4, the main deliverables coming out from the project was a tip sheet to assist ballot submitters in the future and a report identifying issues encountered as well as future recommendations.

C-CDA To FHIR Mapping Proof of Concept Project

The main goal of the C-CDA to FHIR Mapping Proof of Concept project is to prepare draft bidirectional CDA/FHIR mappings for CCD and Discharge Summary templates. At the time of authoring this article, a document containing draft mappings of CCD and Discharge Summary templates had been completed. Work to finalize and test the mappings as well as document issues continued through the summer months.

Add Clinical Notes to FHIR Project

Work to upgrade U.S. FHIR Core from standard for trial use (STU) to STU 4 by adding clinical notes to the U.S. Core dataset was to begin mid-Q3 and completed by mid-September.

Unified Terminology Governance Project

The Unified Terminology Governance (UTG) project will develop a UTG proof-of-concept prototype that will be demonstrated at the October WGM in Baltimore with the following capabilities:

- Creation of sample complete harmonization proposals
- Editing existing draft harmonization proposals
- Submitting harmonization proposals for consensus approval or abandonment
- Auto and manual validate proposals
- Integration with confluence for consensus discussions
- Ability to gather votes for approval/rejection
- Ability to triage submitted proposal as per consensus decision
- Ability to process approved proposal into the terminology store
- Enabling on-demand extract of any value set
- Output of terms in V3, C-CDA, and V2 vocabulary in publishable form
- Management of active proposals
- Management of permissions for submitters and consensus pool

Migrating FHIR Issue Tracking/Ballot Reconciliation to JIRA

The September ballot cycle provided the opportunity for a team to test the process and technical infrastructure created by the Migrating FHIR Issue Tracking/Ballot Reconciliation to JIRA project. The team created test plans, engaged volunteer testers, conducted system tests simulating ballot functions and scenarios and documented test results and issues. Expect to see a final report containing a rollout plan of the new system in the coming weeks.

Ballot Facilitators and Coordinator to Support Support for FHIR R4 STU Balloting

Ballot facilitators and a ballot coordinator continued to support the STU balloting and reconciliation of FHIR R4 by facilitating the reconciliation of high priority product ballots, including clarification of content before work group discussions, proposing block votes, documenting discussions, decisions and actions related to ballot reconciliation, management of change proposals and removing bottlenecks and obstacles to publishing FHIR R4 in order to release it to the FHIR community as soon as reasonably possible.

FHIR Connectathon Administrator

Sandy Vance will fulfill the FHIR Connectathon Administrator role again for the late September event in Baltimore. The administrator role was created to support the growing needs of HL7's FHIR Connectathons. The primary objective of the administrator is to maximize the participant's experiences and outcomes at the event.

FHIR Bulk Data Access & Push Project

The FHIR Bulk Data Access & Push project has added new capabilities to the FHIR specification to increase support for API-based access and push of data for large number of patients in support of provider-based exchange, analytics and other value-based services. The project has also upgraded existing FHIR reference server implementations to more effectively support "Bulk Access and Push" applications.

The FHIR Bulk Data Access & Push project supported the May 2018 FHIR Connectathon in Cologne by supplying attendees reference implementation code. The code has a number of features like the ability to produce files with millions of FHIR, simulate server errors such as an expired token when testing clients, and configure parameters like the time it takes to return a response so client apps can ensure they respond correctly to slow servers.

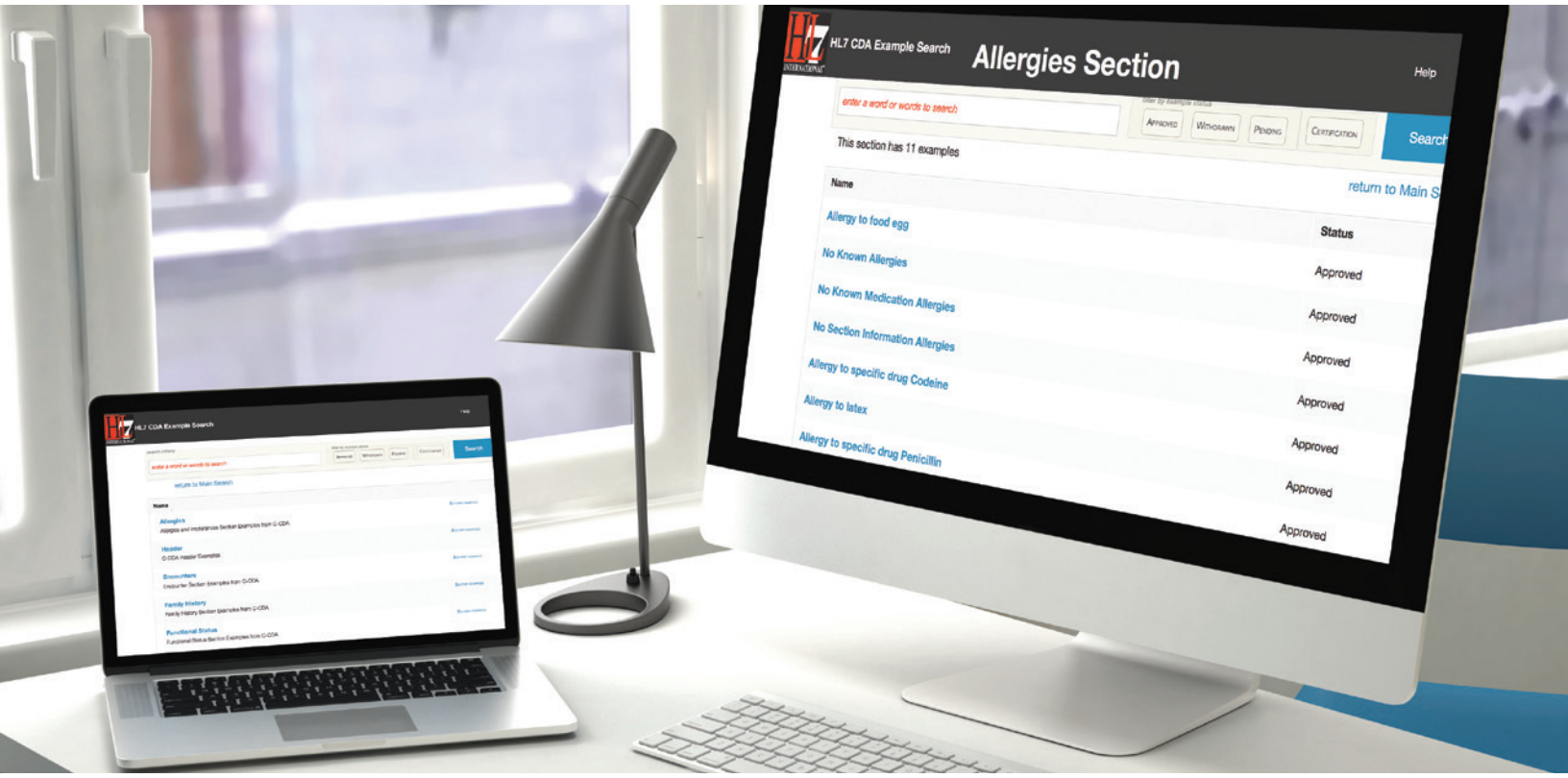
C-CDA Implementation-A-Thons

Two C-CDA Implementation-A-Thons (IAT) were held over the past few months. A virtual IAT was conducted in June and a face-to-face IAT was held in Washington DC in August. Discussion topics focused on document versioning, clinical notes, CCD/progress notes, value set release package update, care plan and the ever popular 'Ask the ONC'.

In Conclusion

HL7 appreciates ONC's continued support of C-CDA and FHIR for 2018 and beyond. ■

For the most up-to-date information on all of the ONC funded projects visit: http://HL7.me/ONCgrantproject



Empowering the CDA Implementer Community

CDA Examples Task Force

By Brett Marquard

Lisa Nelson, Co-Chairs, HL7 CDA Management Group

Healthcare information is complex.

Clinical Document Architecture (CDA®) design is hard.

The combination often results in abstract models and implementation guides that are difficult to understand. This can be problematic because developers and implementers love concrete examples!

There are several questions that need to be addressed, such as the following:

- How do I send lab results when I only have free text units?
- What is the proper way to express 'take this medication every four hours'?
- How do I represent that I don't have any coded information when a section requires coded information (entries)?

The HL7 Structured Documents Work Group launched the CDA Examples Task Force to empower the community of CDA implementers to discuss, vet, and establish consensus around how to represent various types of information supporting different use cases using Consolidated CDA (C-CDA) templates. These examples help drive consistent implementation which is key for interoperability.

The Examples Task Force is a group of developers, implementers as well as a few standards folks who are committed to producing high quality C-CDA examples that address challenges identified 'in the field'. Examples vetted through the group

are reviewed and approved by the Structured Documents Work Group. Over the past several years, the group developed over 100 C-CDA R2.1 examples that have been approved.

The process is straightforward and is highlighted below:

- **Step 1:** An implementer has a question about how to represent information that needs to be exchanged in the field.
- **Step 2:** The implementer brings the challenge to the Examples Task Force along with a proposed solution. The group works collaboratively to review the proposed solution and develop a common answer.
- **Step 3:** The Example Task Force brings the proposed solution to the Structured Documents Work Group for approval.
- **Step 4:** The example is published as part of the collection of C-CDA examples. These examples are publicly available online.

During each call, the group aims to get through at least one example. If you are a new implementer, your example goes to the top of the list for review. A rolling plan is maintained showing who will present on the next call. The work done by the Examples Task Force is challenging and detailed. A lot needs to be right for one of the examples to be approved.

You are invited to join a future call to share an example or become a part of the community that contributes to the example review. The Example Task Force meets on Thursdays from 12:00 noon - 1 PM U.S. Eastern. (Please see the Structured Documents section on the Directory of Conference Calls page of the HL7 website at: http://www.HL7.org/concalls/CallDirectory.aspx.

A few comments from implementers who participate

"The Example Task Force fills the gap between theory and practice, providing concrete real-world guidance. Example Task Force is practical and hands-on, responding to real-time requests for clarification examples. Practical and fun – can't beat that!"

"Example Task Force is very explanatory and has greatly improved requirements gathering for C-CDA templates implementation. I think everyone who create and use C-CDA templates should participate and contribute."

"If you are just getting started with C-CDA, reviewing the examples is a great way to learn. The task force adds many instructive comments that are tutorial in nature. Participating in the task force provides exposure to an engaged and helpful group of CDA experts. It's a collaborative way to get your trickiest questions answered."

"People talk about semantic interoperability as an abstract concept, but it's hard work in reality. Having clear examples and conventions for how to deal with the complexity of medical data are critical to any standard. As a programmer, I often find examples of a data standard to be as essential as a schema or model. The CDA Example Task Force plays an essential role in achieving true interoperability for clinical documents."

You can view the range of available C-CDA examples online at:

http://cdasearch.HL7.org

Role of Standards

The Changing World of Provider Reimbursement (Volume to Value)

The U.S. healthcare system is going through a seismic change[1] that began with HITECH Act under the ARRA-American Recovery and Reinvestment Act of 2009 and the Meaningful Use (MU) mandate, which required certified Electronic Health Record (EHR) adoption by providers and hospitals. Subsequent U.S. legislations (MACRA[2] in 2015, 21st Century Cures Act[3] in 2016) and rule-makings have continued to guide this transformation.

The driver for change is the critical need to bring improved healthcare outcomes while bringing down costs. The high-level strategy through which this is being achieved is the introduction of value-based (performance) payment models and moving away from the existing volume-based fee-for-service reimbursement models[4].

By Gora Datta, HL7 Ambassador; Group Chairman and CEO, CAL2CAL Corporation

and Martin Entwistle, MD, HL7 Ambassador; President Ares Health Systems

1 http://www.rand.org/topics/health-care-pay-for-performance.html
2 http://www.aafp.org/practice-management/payment/medicare-payment/faq.html
3 https://www.healthit.gov/sites/default/files/curesactlearningsession_1_v6_10818.pdf
4 https://www.healthaffairs.org/do/10.1377/hpb20121011.90233/full/

The Triple Aim framework[5] developed by the Institute for Healthcare Improvement (IHI) has been very influential in the process and describes an approach to optimizing health system performance that includes:

- Improving the patient experience of care (including quality and satisfaction);
- Improving the health of populations; and
- Reducing the per capita cost of healthcare

While the writing has been on the wall for some time that the delivery of care is to move from payments based on volume to payments based on value[6], there have been significant advances in the last few years driven by the introduction of incentive-based programs for the delivery of value-based care.

The driver for change is the critical need to bring improved healthcare outcomes while bringing down costs.

In particular, the U.S. government has given teeth to this shift through the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). Through this act, the Centers for Medicare & Medicaid Services (CMS) which is part of the U.S. Department of Health and Human Services, is replacing traditional fee-for-service payments with a financial incentive framework that rewards for improved quality, outcomes and cost management.

MACRA changes the way Medicare incorporates quality measurement into payments and develops new policies to address and incentivize participation in Alternative Payment Models (APMs), with the objective of transitioning care delivery from volume based FFS (fee for service) payments to value based pay-for-performance payment model. These unified policies are referred to as the Quality Payment Program (QPP). [https://qpp.cms.gov]

This shift to value-based reimbursement models creates a new paradigm in which care is delivered by an entirely coordinated care community sharing in the risk and responsibility of outcomes and costs. Today MACRA only impacts payments by Medicare to physicians. It lays the groundwork and provides strong incentives for other payers to move in the same direction, thus potentially disrupting the healthcare system at all levels. In fact, private payers[7] are not just waiting for CMS to define and set the pathway for value-based care. Some have already started moving from claims-based payment models into pay-for-performance models by providing bonuses to providers who are meeting certain clinical performance targets[8].

Those involved in the delivery of care now have good reason to actively embrace these changes and put in place systems to address the process and reporting requirements driven by MACRA and the new value-based payment models. Much of these center on the collection and use of a wide range of data that goes beyond the traditional collection of clinical outcome measures and includes patient generated data (PGHD)[9], patient reported outcomes (PROs)[10] and engagement metrics.

This shift toward value-based care is of major importance and presents both opportunities and challenges. MACRA (and subsequent U.S. government rule-makings) mandates the use of 2015 Certified EHRs by eligible clinicians[11].

Many HL7 standards are identified[12] in these legislations, including: HL7 Version 2.x, the Consolidated Clinical Document Architecture (C-CDA), the Quality Reporting Document Architecture (QRDA), the Health Quality Measure Format (HQMF), and others. HL7's API (Application Program Interfaces) based standard, HL7 Fast Healthcare Interoperability Resources (FHIR®), can facilitate the interfacing of data from multiple sources directly with existing clinical systems.

HL7 has much to offer in supporting this process and this article outlines where these opportunities lie.

Continued on page 14

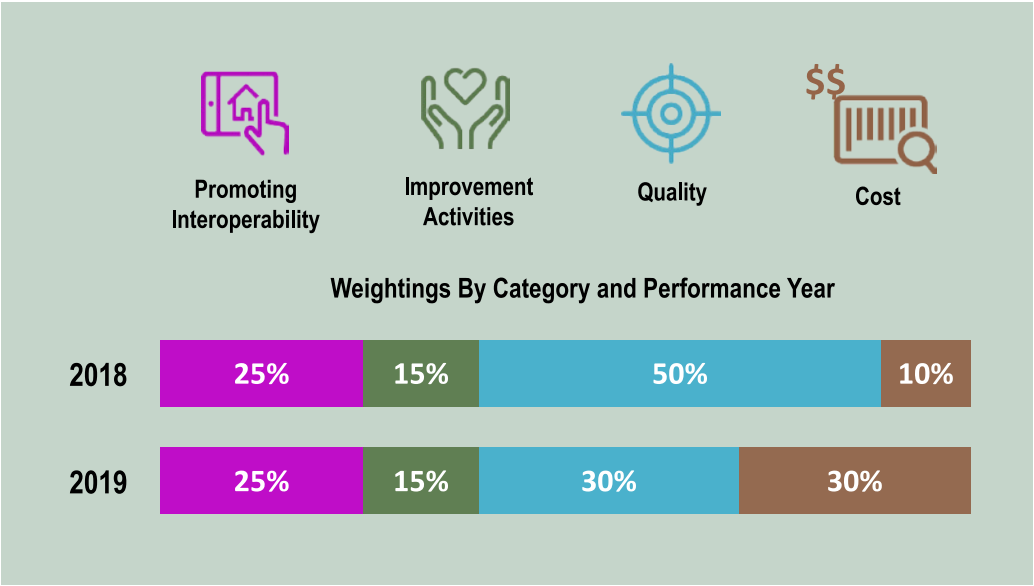
5 http://www.ihi.org/Engage/Initiatives/TripleAim/Pages/default.aspx
6 http://www.ncsl.org/portals/1/documents/health/PERFORMANCE-BASED_PAY-2010.pdf
7 https://www.healthaffairs.org/do/10.1377/hpb20121011.90233/full/
8 http://www.ncsl.org/portals/1/documents/health/PERFORMANCE-BASED_PAY-2010.pdf
9 https://www.healthit.gov/topic/scientific-initiatives/patient-generated-health-data
10 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4089835/
11 https://www.healthit.gov/topic/certification-ehrs/2015-edition
12 http://www.hl7.org/implement/standards/hhsifr.cfm?ref=nav

Continued from page 13

The Changing World of Provider Reimbursement (Volume to Value)

MACRA and QPP

Under MACRA, CMS is required to implement a quality payment incentive program, referred to as the Quality Payment Program (QPP)[13], which ties financial incentive payments to rewards value and outcomes, while at the same time reducing payments to those clinicians who aren't meeting performance standards.



To manage this process, eligible practitioners must participate in one of two programs. The options available are based on practice size, specialty, location and patient population:

- Merit-based Incentive Payment System (MIPS)[14]
- Advanced Alternative Payment Models (APMs)[15]

APMs support the goals of transitioning from fee-for-service (FFS) payments to payments for quality and value-based care. APMs cover a range of models that tie quality or value performance to payments, and include Accountable Care Organizations (ACOs) and bundled payment arrangements.

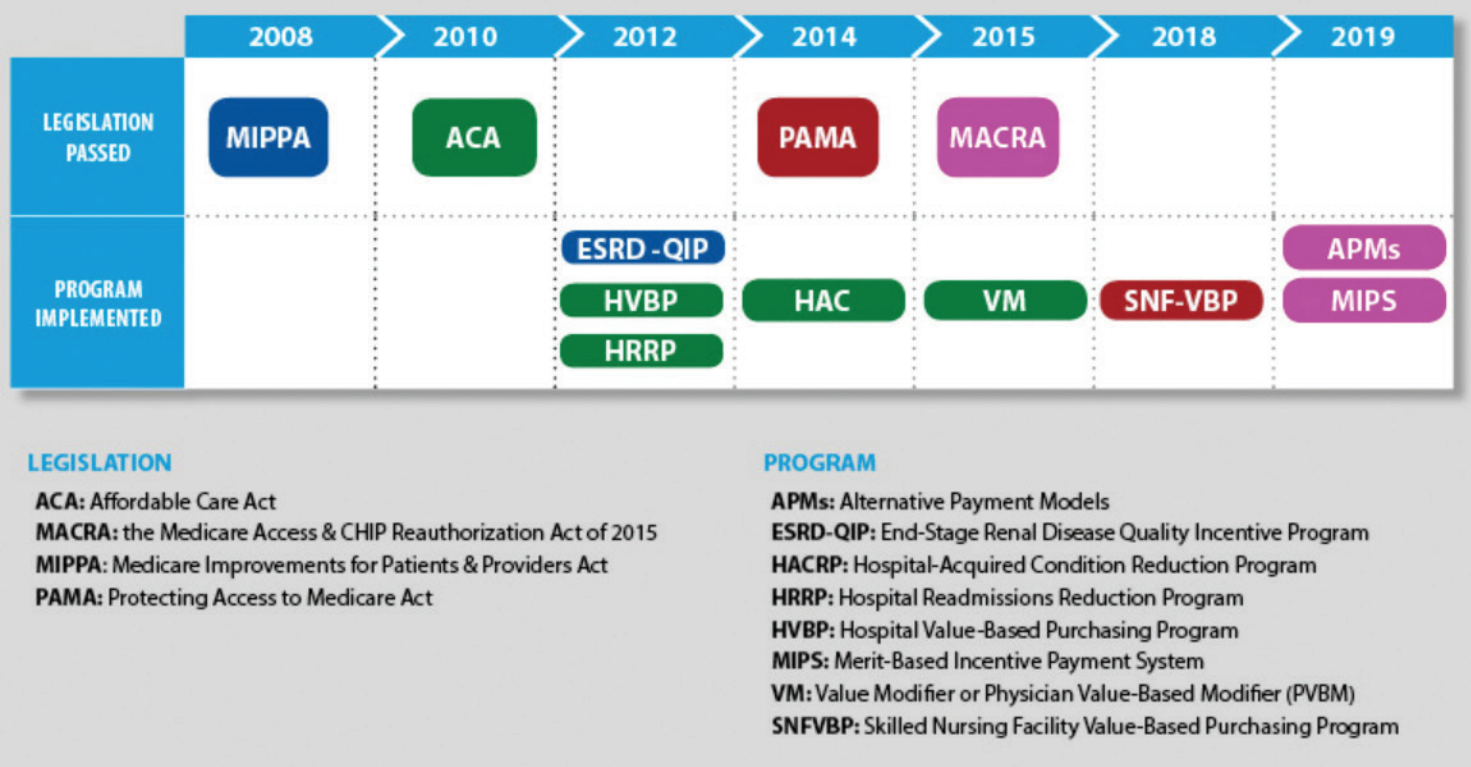
MACRA Migrates Previous Quality Programs to MIPS or APMs

MIPS automatically applies to eligible clinicians, who are defined as a physician, including a doctor of medicine or osteopathy; a doctor of dental surgery or of dental medicine; a doctor of podiatric medicine; a doctor of optometry; a chiropractor; a physician assistant; a nurse practitioner; a clinical nurse specialist; a certified registered nurse anaesthetist; or a group that includes at least one of the clinicians in this list.

Performance is measured through the data clinicians report in four areas. Performance in each of these four areas is scored, the sum of which makes up a final score. The final score determines what the payment adjustment for an individual physician will be. These are the four reporting categories:

- **Quality** – practitioners select six measures of performance that best fit their practice, based on performance measures created by CMS, professional bodies and stakeholder groups.
- **Improvement Activities** – a new performance category reporting activities that improve care processes, enhance patient engagement to care, or increase access to care.
- **Promoting Interoperability** (formerly Advancing Care Information) – here the focus is on patient engagement and the electronic exchange of health information using certified electronic health record technology (CEHRT). This category replaced the Medicare EHR Incentive Program for EPs, commonly known as Meaningful Use.

13 https://qpp.cms.gov/
14 https://qpp.cms.gov/mips/overview
15 https://qpp.cms.gov/apms/overview



- **Cost** – this category replaces Value-based Measures. The total cost of care during the year or during a hospital stay provided by an individual practitioner will be calculated based on Medicare claims, and beginning in 2018, this performance category will count toward the MIPS final score.

MIPS makes payment adjustments based on performance on quality, cost and other measures. Advanced APMs support the goals of transitioning from fee-for-service (FFS) payments to payments for quality and value-based payment.

Impact of MACRA and Meaningful Use for Hospitals and Physicians

There is a general misunderstanding that MACRA signals the end of Meaningful Use, but that is not strictly correct. Since its inception, Meaningful Use has been applied to both hospitals and eligible physicians.

The Meaningful Use program continues for hospitals. In fact, Stage 3, which is also a component of moving toward value-based care, is to be implemented by hospitals in general in 2018. On the other hand, for physicians, CMS regards MIPS as the migration of Meaningful Use into more streamlined quality reporting process where MIPS is replacing three previous incentive programs Meaningful Use (MU), Physician Quality Reporting System (PQRS) & Value Based Measures (VBM).

A number of the requirements for Meaningful Use Stage 3 live on under MACRA. For example, it will still be required that that EHR technology meet the 2015 Edition Health IT Certification which emphasizes the use of APIs to exchange clinical health data.

Value-based Care

CMS value-based programs reward healthcare providers with incentive payments for the quality of care they give to Medicare patients, and are part of the larger quality strategy to reform how healthcare is delivered and paid for.

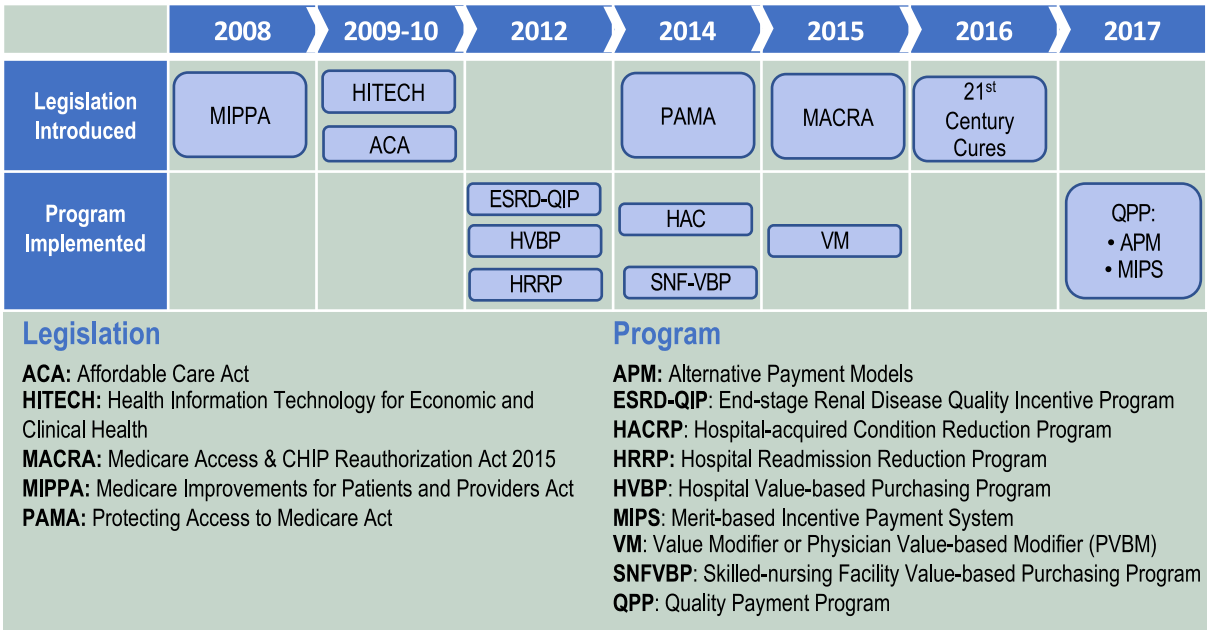
There are five original value-based programs:

- End-Stage Renal Disease Quality Incentive Program (ESRD QIP)
- Hospital Value-Based Purchasing (HVBP) Program
- Hospital Readmission Reduction (HRR) Program
- Value Modifier (VM) Program (also called the Physician Value-Based Modifier or PVBM)
- Hospital Acquired Conditions (HAC) Program

Continued on page 16

Continued from page 15

The Changing World of Provider Reimbursement (Volume to Value)



There are also other, more recent, value-based programs including:

- Skilled Nursing Facility Value-Based Program (SNFVBP)
- Home Health Value Based Program (HHVBP)
- Comprehensive Primary Care Plus (CPC+)

The concept of value-based care has been extended to include a wider range of programs based on the principles of value-based purchasing (VBP). These refer to a broad set of performance-based payment strategies that link financial incentives to healthcare providers' performance on a set of defined measures to achieve better value. Three types of VBP programs seen in the U.S.:

- Pay-for-performance programs
- Accountable care organizations
- Bundled payment programs

The Role of HL7 in MACRA

The drive to implement value-based care programs where coordinated action between different parts of the healthcare funding and delivery system is required puts further emphasis on the wide-range of interoperable data required for program management and reporting. In that regard, HL7 has many resources that can be of significant assistance.

These include tried and tested Version 2.x, messaging identifying trigger events supporting care coordination as well as the sharing of clinical data between providers and payers using documents in Consolidated Clinical Document Architecture (CDA®) which is part of Meaningful Use 2016/2017 and the Merit Incentive-based Payer System (MIPS) for 2018/2019. HL7's solutions also include the more advanced capabilities for clinical care management using HL7's API (Application Program Interfaces) based standard, HL7 Fast Healthcare Interoperability Resources (FHIR®), which can facilitate the interfacing of data from multiple sources directly with existing clinical systems.

In addition, HL7 has standards that support quality reporting. The Health Quality Measure Format (HQMF) is a standard for representing a health quality measure as an electronic document, while the Quality Reporting Document Architecture (QRDA) is a standard for communicating health care quality measurement information. It conforms to the requirements of HL7 CDA Release 2.0 and reuses the templates developed for HL7 CCD.

SUMMARY

The health challenges of today's society and the need of healthcare solutions are being met by solutions that were, until recently, in the cradle of research. Think ATM for money, Wi-Fi for your laptops, smartphones working anywhere and local cell phones working in a foreign land. Standards are foundational to the global successes these industries have seen, and this is the direction that the health IT industry is taking.

Healthcare access and delivery is undergoing a seismic change. In the U.S., recent legislations such as Meaningful Use and MACRA have been a major driver for this change that is now being further spurred by the shift to value-based care. Compliance is no longer optional and failure to perform to defined metrics has significant financial impact, so it is timely that health information technology (health IT) is now making it possible for health care providers to better manage patient care through secure use and sharing of health information.

Our world has been radically transformed by digital technology—smartphones, tablets and web-enabled devices have transformed our daily lives and the way we communicate. A greater and more seamless flow of information within a digital health care infrastructure, created by electronic health records (EHRs), encompasses and leverages digital progress and can transform the way care is delivered and compensated.[16]

Traditional methods of doing research, developing solutions and subsequent adoption and utilization by end-users in this information and digital age at a breakneck speed is also seeing a change that is rapidly adapting/adopting to this wave. Regulators are scrambling to stay ahead of the curve by defining policies and regulations that will help leverage its benefits but at the same time, hopefully, not throttle or choke innovation.

HL7 and its international health IT standards are playing a foundational role in this transformation. ■

16 https://www.healthit.gov/topic/health-it-basics/benefits-ehrs

The Evolution and Future of HL7 FHIR Genomics

HL7 Genomics Conference Session Gathers Stakeholder Input

Background

Standardized communication of genomics is enabling new applications in the clinical and research spaces. The HL7 Clinical Genomics Work Group and its members have played a major role in this emerging area, including modeling genomics in HL7 Fast Healthcare Interoperability Resources (FHIR®), the Domain Analysis Model (DAM) for Clinical Sequencing, the DAM for Clinical Genomics and other efforts that support precision medicine. At the same time, external efforts have arisen, such as the DIGITizE Action Collaborative (originally housed at the National Academies, but now at the FHIR Foundation), which are exploring piloting in this space.

By Gil Alterovitz, PhD, Co-Chair, HL7 Clinical Genomics Work Group and Assistant Professor, Harvard Medical School/ Boston Children's Hospital

Grant Wood, Member, HL7 Clinical Genomics Work Group and Senior IT Strategist, Intermountain Healthcare

Wei-Lun Hsu, PhD, Member, HL7 Clinical Genomics Work Group

Agile Approaches

During the interactive work session of the HL7 Genomics Conference in February 2018 entitled "Use of FHIR Genomics Standards," participants from industry, academia, government agencies and nonprofit organizations brainstormed on use cases and stakeholders for deployment of FHIR genomics-based platforms in production for increasing levels of genomics adoption.

The goal for the session was to identify critical areas to solve existing and future genomic data and standard deployment needs. Participants contributed their ideas by putting post-it notes on the wall. After the session, a facilitator grouped similar notes together and attendees voted on the ideas they thought were more important than others. The two areas looked at included use cases and stakeholders.

Figure 1: Participants casting their votes at HL7 Genomics Conference session

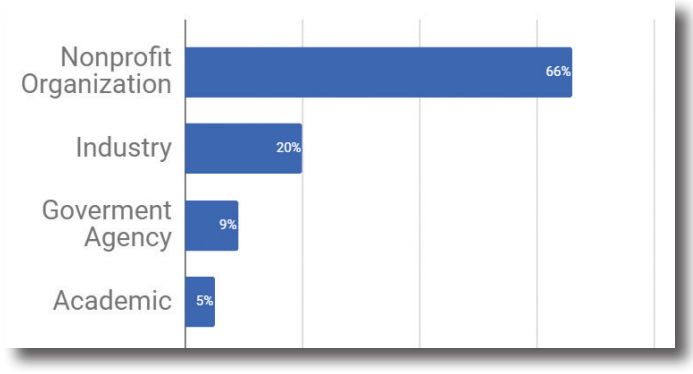


Figure 2: Types of organizational stakeholders receiving votes

Results

Participants suggested several use cases, including the following: prediction of genetic test results based on other variables; Cl4CC and M2Gen; the common pharmacogenomics panel testing; and germline testing (BCRA genes, family health history, etc.). The recently balloted HL7 DAM Clinical Sequencing and Clinical Genomics use cases will also empower users to examine various workflows in related areas.

Attendees also voted on critical stakeholders in this area. Participants suggested stakeholder engagement with players such as the American Medical Information Association (AMIA), Healthcare Information and Management System Society (HIMSS), EHR vendors, Global Alliance for Genomics and Health (GA4GH), American Health Information Management Association (AHIMA) and the American Medical Association (AMA). An overview of the types of stakeholders recommended is shown in figure 2 on page 18, with nonprofits like HL7 a clear leader.

Challenges

While FHIR genomics connectathons and FHIR genomics pilots have been used to obtain feedback on FHIR genomics standards, there are different needs for organizations seeking to deploy for production uses in working toward a larger ecosystem, beyond research and test settings. There is a need to make the implementation steps simple and easy to adopt. There is also a need to capture the type of genomics information and eventually validate it so other organizations know which types of genomics support is available.

Implementer Engagement

Additionally, there is a need to bring FHIR genomics to production systems and declare different levels of genomics adoption. This could be accomplished through engaging various stakeholders to use HL7 FHIR genomics platforms in production by providing project support, genomic level identification and tools to help foster a genomics ecosystem.

We should be clear that, as current processes are focusing on completing FHIR genomics profiles for the anticipated first normative version of HL7 FHIR, the following implementation ideas are out of scope for the Clinical Genomics Work Group. However, this is an example of looking towards implementer engagement for FHIR genomics which can be informative to many other HL7 work groups when developing standards.

Genomic Data Levels

To make adoption of FHIR genomics (and other standards, as applicable) quantifiable and discoverable within an ecosystem, different qualitative genomics levels will be introduced. As an example presented at the HL7 Genomics Conference, these levels may be bronze, silver, gold, platinum and diamond. The different levels specify the level of genomic data used in an implementation. For example, bronze may involve the ability to receive basic genetic results. In FHIR genomics, that could correspond to support of certain observation genetics profiles dealing with interpretations. A more advanced level may enable detailed reference sequence information via the sequence resource, for quality metrics and linking to raw information.

Although lower levels would typically be implemented earlier than higher levels by necessity, there is no requirement for an organization to adopt all levels. A participating organization can choose one or multiple levels to start and then reach other levels over time. The genomics levels can also serve as a measurable index to match other organizations with the same level to work together. The purpose of genomic levels is to divide industrial adoption into workable sprints so that an organization can continue deploying standards through agile feedback loops.

Next Steps

Finally, by leveraging input and requirements from various stakeholders who seek to implement FHIR genomics in production toward a larger ecosystem, work with the community can leverage latest standards using agile sprints. Below are some the steps of potential interest going forward:

1. Engage organizations interested in integrating genomics into their workflows.
2. Leverage use cases to help foster an ecosystem for FHIR implementation in precision medicine/genomics with guiding principles and implementation codes.
3. Help empower organizations to implement production genomics systems with FHIR Genomics as opposed to proprietary standards.
4. Build a process by which an organization's level of genomics adoption is identified.

Please feel free to contact the authors on the previous page for more information. ■

Report on the International HL7 Interoperability Conference 2018

“Mastering the Interoperability Challenge” (IHIC 2018)

Bernd Blobel, PhD,
Co-Chair, IHIC 2018

Philip Scott, PhD,
Co-Chair, IHIC 2018

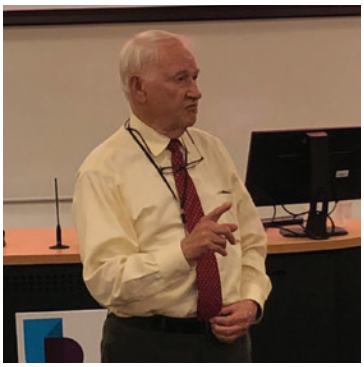
IHIC 2018 was the 18th event in the history of the International HL7 Interoperability Conferences. It focused on managing advanced interoperability in an increasingly complex, interdisciplinary, technologically supported healthcare ecosystem.

IHIC 2018 marks the second time the event was held in the United Kingdom. IHIC was held in Reading in 2001 and last month at the University of Portsmouth at the School of Computing on July 11-12, 2018. The conference was organized by the HL7 UK affiliate in collaboration with HL7 Germany.

The event attracted 39 attendees from six countries. It was chaired by Dr. Bernd Blobel, Medical Faculty at the University of Regensburg and member of HL7 Germany, and Dr. Philip Scott, University of Portsmouth and member of HL7 UK. Dr. Kai Heitmann, Heitmann Consulting, HL7 Germany also provided support for the event.

IHIC 2018 was sponsored by HL7 International, HL7 UK and HL7 Germany, supported by the University of Portsmouth, InterSystems and the British Computer Society. The IHIC event kicked off July 11 with two tutorials. In the first tutorial “America is on FHIR,” Dr. Russell Leftwich, Dr. Charles Jaffe, and W. Ed Hammond reported about HL7 Fast Healthcare Interoperability Resources (FHIR®) as a transformational force in healthcare information interoperability, thereby also highlighting related projects. In the second tutorial “Security and Privacy Challenges of Interoperability,” Dr. Bernd Blobel presented basic and advanced concepts of security, privacy and trust in the context of advanced interoperability and addressed the EU General Data Protections Regulation.

The IHIC 2018 conference on July 12, 2018 included two keynotes. In the opening keynote “Solving the Modeling Dilemma as a Foundation for Interoperability,” Dr. Bernd Blobel addressed all interoperability levels including: technical, structural, syntactic, semantic, organization/service, domain-to-domain and skills-based individual interoperability. He emphasized the weaknesses of current modeling approaches and how they ignore the business domain specific non-ICT aspects and their correct representation using the ISO Interoperability Reference Architecture Model.



Dr. W. Ed Hammond addresses the IHIC 2018 attendees with his keynote presentation titled "How do you know when you have interoperability?"

In his closing keynote presentation, Dr. W. Ed Hammond focused on ICT-specific interoperability specifications and implementations and highlighted HL7 standards and artifacts. His presentation covered the entire interoperability ecosystem and highlighted multiple aspects of, and perspectives on, interoperability.

Eleven submissions to IHIC 2018 were carefully reviewed by at least two independent international reviewers. This process resulted in four papers and one abstract being published along with the keynotes to the European Journal for Biomedical Informatics (EJBI). The EJBI IHIC 2018 Special Issue is available at https://www.ejbi.org/. These papers were also presented during the IHCI 2018 conference along with additional presentations, a panel discussion and poster sessions.

IHIC 2018 was organized in four sessions: Quality Improvement; Testing and Implementation; Overcoming Local and Global Barriers; and Consent and Trust for Care and Research.

In the first session, Jerome S. de Bruin from the University of Applied Sciences Johanneum in Austria, presented the paper "A comparison of business rule management systems and standards for the implementation of clinical decision support systems using data from structured CDA documents." Frank Oemig from Deutsche Telekom, Healthcare and Security Solutions in Germany, discussed in his paper "Standardizing medical quality assurance and control in Germany based on HL7 FHIR."

In the second session, Charlie McCay of Ramsey Systems tackled the problem "Supporting implementation with synthetic patient data." He was followed by Philip Graham of Lancashire and South Cumbria Integrated Care System, who discussed "Healthcare event management: Using FHIR standards to create interoperability – an early use case from the NHS Digital Child Health Program." The session was concluded by Sebastian Bojanowski of HL7 Poland, who presented his abstract "Interoperability specifications and conformance testing services made available on the Tukan platform."

The third session opened with a panel discussion on "Resolving practical implementation issues in health and social care," which provided insights from industry, research, administration and care providers on the interoperability challenge. The panelists included Dunmail Hodkinson of Blackpear Software, Robert Warden of Open Mapping Software, Rahmatullah Mohammed of Portsmouth Hospitals NHS Trust, and Mark Frayne of NHS Wales Informatics Service. Thereafter, Dunmail Hodkinson addressed the project "INTEROPen: A UK collaboration between SDOs, industry and care providers for promotion of interoperability." The session concluded with a presentation from Dr. Kai Heitmann of HL7 Germany, who reported on "Global information sharing: Update on the International Patient Summary."

J.W. Dudeck Award Recipient Anna Lackerbauer

Anna Lackerbauer of the University of Applied Sciences Upper Austria opened the final session with a presentation on her paper "A model for implementing an interoperable electronic consent form for medical treatment using HL7 FHIR." Ed Conley from AIMES concluded the session by presenting his paper "GDPR compliance challenges for interoperable Health Information Exchanges (HIEs) and Trustworthy Research Environments (TREs)."

IHIC 2018 concluded with the J.W. Dudeck Award Ceremony and the closing ceremony. Since 2010, the Joachim W. Dudeck Award (co-sponsored by HL7 International and by HL7 Germany) has been bestowed on researchers less than 35 years old who present a scientific paper at an IHIC conference. This year's recipient is Anna M. Lackerbauer who presented "A Model for Implementing an Interoperable Electronic Consent Form for Medical Treatment Using HL7 FHIR". ■

Member Spotlight on Carmela Couderc

Career Background and HL7

Carmela Couderc started her healthcare IT career as a programmer working on a pharmacy cart fill list at Shared Medical Systems.

Carmela and family at Lake Champlain

She caught the HL7 bug at a conference early on and was fortunate to work with smart people who recognized the positive impact interoperability standards could have on healthcare.

Carmela worked on Version 2 pharmacy and laboratory interfaces supporting a clinical repository that was implemented at hundreds of customers. She began focusing on terminology, terminology models and terminology tools, and integrating terminology into EHRs.

Around the same time that Version 3 piqued her interest, she had the good luck to be working with Mead Walker. He created a custom curriculum so she could hit the ground running.

She started attending the HL7 Vocabulary Work Group meetings in the late 1990s and is currently working on expanding her knowledge about HL7's Fast Healthcare Interoperability Resources (FHIR®) terminology services.

Three years ago, Carmela started working at Intelligent Medical Objects (IMO) where she focuses her efforts on the use of groups/value sets to facilitate decision support, analytics and quality measures.

Personal Life

Carmela has lived in West Chester, Pennsylvania for over 20 years, but grew up in Massachusetts. She is married and has two daughters, one in college and one who recently graduated. Like John Hatem, Carmela still cheers for teams from her home state – that last Super Bowl was a tough one! In her spare time, Carmela enjoys anything she does with her family, spending time with friends, hiking, biking, tennis, gardening and reading.

Benefactors

accenture
Allscripts
CDC Centers for Disease Control and Prevention
Cerner
Duke Clinical & Translational Science Institute
edifecs
Epic
FDA
GE
Intermountain Healthcare
InterSystems Health | Business | Government
Kaiser Permanente
NICTIZ
HealthIT.gov
OPTUM
Partners HealthCare
Department of Defense - Department of Veterans Affairs - Interagency Program Office
PHILIPS
Quest Diagnostics
SCOPE Infotech, Inc.
UnitedHealthcare
health.mil MHS Military Health System | U.S. Department of Defense
Department of Veterans Affairs

HL7 FHIR Fundamentals Course

Next edition begins November 1, 2018!

http://HL7.me/FHIRfun

November 1 - 29, 2018

- An introductory online course on HL7 FHIR - no experience necessary!
- Four week course includes new module each week
- Guided real-world exercises with instructor assistance and feedback
- Interactive online community with students and instructors

Organizational Members

BENEFACTORS

Accenture
Allscripts
Centers for Disease Control and Prevention/CDC
Cerner Corporation
Duke Clinical & Translational Science Institute
Edifecs, Inc.
Epic
Food and Drug Administration
GE Healthcare
Intermountain Healthcare
InterSystems
Kaiser Permanente
NICTIZ Nat.ICT.Inst.Healthc.Netherlands
Office of the National Coordinator for Health IT
Optum
Partners HealthCare System, Inc.
PEO DHMS - DoD/VA Interagency Program Office
Philips Healthcare
Quest Diagnostics, Incorporated
Scope Infotech, Inc.
U.S. Department of Defense, Military Health System
U.S. Department of Veterans Affairs
UnitedHealthcare

GOLD

Academy of Nutrition & Dietetics
ActioNet, Inc
ACUTA LLC
Advocate Healthcare Laboratories
Altarum
American College of Physicians
American Health Information Management Association
American Medical Association
Apprio, Inc.
Asymmetrik Ltd.
Aurora Health Care
Availity, LLC
Blue Cross and Blue Shield of Alabama
Blue Cross Blue Shield Association
Botswana Institute for Technology Research and Innovation
CAL2CAL Corporation
Computrition, Inc.
Connecticut Department of Public Health
Consolo Services Group, Inc.
Corepoint Health
EBSCO Health
eHealth Initiative
ESAC Inc
EyeMD EMR Healthcare Systems, Inc.
Health Care Service Corporation
Hospital privado centro medico de Cordoba S.A.
Info World
Inofile
iNTERFACEWARE, Inc.
Klein Consulting Informatics LLC
MaxMD
Microsoft Corporation
National Association of Dental Plans
National Cancer Institute
NHS Digital
NIH/Department of Clinical Research Informatics
Northrop Grumman Technology Services
NYC Department of Health and Mental Hygiene
PenRad
Public Health Informatics Institute
Ready Computing Inc.
Rochester RHIO
SMART Health IT
Sparx Systems
St. Joseph Health
Starwest Tech
Tabula Rasa HealthCare, Inc.
Tennessee Department of Health
Therap Services LLC
Transcend Insights
UCSF Center for Digital Health Innovation
UHIN (Utah Health Information Network)
University of Arkansas Medical Sciences
UW Medicine Information Technology Services

CONSULTANTS

Accenture
ActioNet, Inc
AEGIS.net, Inc.
Altarum
Apprio, Inc.
CAL2CAL Corporation
Carradora Health, Inc.
CentriHealth
CITRIOM LLC
Cognosante, LLC
Curandi
D288 IT Solutions, LLC
Dapasoft Inc.
doc.ai Inc.
Elimu Informatics Inc.
EnableCare LLC
ESAC Inc
Haas Consulting
Haines I.T.
Health Intersections Pty Ltd
Hi3 Solutions
HLN Consulting, LLC
iNTERFACEWARE, Inc.
Interfix, LLC
J Michael Consulting, LLC
Klein Consulting Informatics LLC
Lantana Consulting Group
M*Modal, Inc.
Mathematica Policy Research
Motive Medical Intellligence
OTech, Inc.
Point-of-Care Partners
Professional Laboratory Management, Inc.
Ready Computing Inc.
Rochester RHIO
Scope Infotech, Inc.
Shafarman Consulting
SLI Compliance
Smallboard
Systex, Inc.
Vermonster LLC
Vernetzt, LLC
WaveOne Associates Inc.
Whipple Consulting, LLC

GENERAL INTEREST

Academy of Nutrition & Dietetics
Agence eSante Luxembourg
Alabama Department of Public Health
American Alliance of Orthopaedic Executives
American Assoc. of Veterinary Lab Diagnosticians
American Clinical Laboratory Association
American College of Cardiology
American College of Obstetricians and Gynecologists
American College of Physicians
American College of Surgeons, NTDB
American Dental Association
American Health Information Management Association
American Immunization Registry Association (AIRA)
American Medical Association

Organizational Members (continued)

American Psychiatric Association
Arkansas Department of Health
ASIP SANTE
Association of Public Health Laboratories
Australian Digital Health Agency
Baylor College of Medicine
Bipartisan Policy Center
Blue Cross Blue Shield Association
Botswana Institute for Technology Research and Innovation
CA Department of Public Health
California Department of Health Care Services
CAQH
CENS
Center for Medical Interoperability
Centers for Disease Control and Prevention/CDC
Centers for Medicare & Medicaid Services
Centre for Development of Advanced Computing
College of American Pathologists
College of Healthcare Information Mgmt. Executives
Colorado Regional Health Information Organization
CommonWell Health Alliance
Connecticut Department of Public Health
Contra Costa County Health Services
Council of Cooperative Health Insurance
Council of State and Territorial Epidemiologists
DGS, Commonwealth of Virginia
DirectTrust
Duke Clinical & Translational Science Institute
eHealth Initiative
European Medicines Agency
Florida Department of Health
Food and Drug Administration
Great Lakes Health Connect
GS1 US
Health and Welfare Information Systems Centre
Health Sciences South Carolina
HealtHIE Nevada
HIMSS
HSE - Health Service Executive
I3L @ GaTech
ICCBBA, Inc.
ICH
Idaho Health Data Exchange
Illinois Department of Public Health
Indian Health Service
International Society for Disease Surveillance
Iowa Department of Public Health
IT Division at Ministry of Health
Japan Pharmaceutical Manufacturers Association
Mercer University
Michigan State University HIT
Michigan Technological University
Minnesota Department of Health
Missouri Department of Health & Senior Services
NAACCR
National Association of Dental Plans
National Cancer Institute
National Center for Health Statistics/CDC
National Centre for Healthcare Information Systems
National Comprehensive Cancer Network
National Council for Prescription Drug Programs
National Institute of Standards and Technology
National Library of Medicine
National Marrow Donor Program
NC Division of Public Health
NCQA
Nebraska Dept of Health and Human Services
Nebraska Health Information Initiative (NeHII)
New Mexico Department of Health
New York State Department of Health
New York State Office of Mental Health
NHS Digital
NICTIZ Nat.ICT.Inst.Healthc.Netherlands
NIH/Department of Clinical Research Informatics
NJ Division of Developmental Disabilities
NJDOH
NYC Department of Health and Mental Hygiene
NYS DOH, Office of Quality and Patient Safety
Object Management Group (OMG)
Office of the National Coordinator for Health IT
Oklahoma State Department of Health
Oregon Public Health Division
OSEHRA
PA Dept of Health
PCPI
PEO DHMS - DoD/VA Interagency Program Office
Pharmaceuticals & Medical Devices Agency
Public Health Informatics Institute
Radiological Society of North America
Ramsey County Public Health
Republican Center for Medical Technologies
Rhode Island Quality Institute
RTI International
SAMHSA
SC Dept. of Health & Environmental Control HS
SMART Health IT
Social Security Administration
Tennessee Department of Health
The Joint Commission
The Sequoia Project
U.S. Department of Defense, Military Health System
U.S. Department of Veterans Affairs
UC Davis School of Medicine
UCSF Center for Digital Health Innovation
UHIN (Utah Health Information Network)
United Network for Organ Sharing
United Physicians
University of AL at Birmingham
University of Arkansas Medical Sciences
University of Miami
University of Minnesota
University of Texas Medical Branch at Galveston
Utah Department of Health
UW Medicine Information Technology Services
Virginia Department of Health
Washington State Department of Health
Westat
Wisconsin Department of Health Services
WNY HEALTHeLINK

PAYERS

Anthem, Inc.
Arkansas Blue Cross Blue Shield
Blue Cross and Blue Shield of Alabama
Blue Cross Blue Shield of Kansas City
Blue Cross Blue Shield of Louisiana
Blue Cross Blue Shield of Michigan
Blue Cross Blue Shield of South Carolina
Cambia Health Solutions
Delta Dental Plans Association
Health Care Service Corporation
Healthfirst Management Services LLC

Organizational Members (continued)

HealthNow New York Inc.
Healthspring
Highmark Health
Humana
Lumeris, Inc.
Meridian Health Plan
Noridian Healthcare Solutions
Premera Blue Cross
UnitedHealthcare

PHARMACY

GlaxoSmithKline
Merck & Co. Inc.
UCB

PROVIDERS

Acuity Healthcare
Advocate Healthcare Laboratories
AHIS - St. John Providence Health
Alaska Native Tribal Health Consortium
Albany Medical Center
Albany Medical Center Hospital
almerys
ARUP Laboratories, Inc.
Aurora Health Care
BJC HealthCare
Blessing Hospital
Boston Medical Center
CAH Children's Rehabilitation Center
Cedars-Sinai Medical Center
Central Illinois Radiological Associates
Children's Mercy Hospitals and Clinics
Children's of Alabama
CHRISTUS Health
Cleveland Clinic Health System
Dayton Children's Hospital
Diagnostic Laboratory Services
Dignity Health
EGHealthcare
Emory Healthcare
HCA IT&S
Hendricks Regional Health
Hospital privado centro medico de Cordoba S.A.
Intermountain Healthcare
Johns Hopkins Hospital
Kaiser Permanente
Laboratory Corporation of America
Loyola University Health System
Mary Greeley Medical Center
Mayo Clinic
Mediclinic Southern Africa
Mednax Services, Inc.
Memorial Health System
Milton S. Hershey Medical Center
MultiCare Health System
New York-Presbyterian Hospital
North Carolina Baptist Hospitals, Inc.
Palmetto Health Tuomey
Partners HealthCare System, Inc.
Patient First
Perry Community Hospital
Quest Diagnostics, Incorporated
Rady Children's Hospital
Regenstrief Institute, Inc.
RTZ Associates, Inc
Sharp HealthCare Information Systems
South Bend Medical Foundation, Inc.
Sparrow Health System
Spectrum Health
St. Joseph Health
St. Joseph's Healthcare System
Standing Stone, LLC
Stanford Children's Health
Sutter Health
The Children's Hospital of Philadelphia
UK HealthCare
UNC Health Care System
University of Louisville Physicians
University of Nebraska Medical Center
University of Utah Health Care
University of Utah Pediatric Critical Care/ IICRC
University Physicians, Inc.
UT M.D. Anderson Cancer Center
West Virginia University Hospitals

VENDORS

A2C Medical
ACUTA LLC
Allscripts
Amtelco
Apelon, Inc.
Applied PilotFish Healthcare Integration
Asymmetrik Ltd.
athenahealth
Availity, LLC
Azuba Corporation
BayHealth Development
Beckman Coulter, Inc.
Becton Dickinson
Bizmatics, Inc.
By Light Professional IT Services LLC
Care Everywhere, LLC
Carium
Cedaron Medical, Inc.
Cerner Corporation
Change Healthcare
Ciitizen
Clinical Architecture LLC
Clinical Software Solutions
Clinicomp, Intl
CMG Technologies Sdn Bhd
Community Computer Service, Inc.
Comparion Medical Analytics
Complia Health
Computrition, Inc.
Conceptual MindWorks, Inc.
Consolo Services Group, Inc.
Corepoint Health
Counseling Management Services
Data Innovations, LLC
Datica
Deer Creek Pharmacy Services
Diameter Health
Document Storage Systems, Inc.
DocuTrac, Inc.
Dolbey & Company
Due North Innovations, LLC
Dynamic Health IT, Inc.
EBSCO Health
Eccovia Solutions
eClinicalWorks
Edifecs, Inc.
ELEKTA
EMR Direct
Epic
Evident
EXTEDO
EyeMD EMR Healthcare Systems, Inc.
ezEMRx
FEI.com
Foothold Technology
Forte Research Systems, Inc.
GE Healthcare
Genesis Systems, Inc.
Geriatric Practice Management
Goldblatt Systems, LLC
Greenway Health
Health Care Software, Inc.
Health Catalyst
Health Companion, Inc.
Healthland
HealthLX
heartbase, inc.
Hewlett-Packard Enterprise Services
Honeycomb Networks, Inc.
IBM

Organizational Members (continued)

InDxLogic
Info World
Infor
Information Builders
Information Management Associates
Innovaccer Inc.
Inofile
Intelligent Medical Objects (IMO)
Interbit Data, Inc.
InterSystems
iPatientCare, Inc.
Isoprime Corporation
Jopari Solutions
KaMMCO
Kolkin Corp
Lab Warehouse, Inc.
Labware, Inc.
Leidos, Inc.
LexisNexis Vitalchek Network Inc.
LINK Medical Computing, Inc.
Logibec
MaxMD
MCIS
McKesson Corporation
MD Land International
MDT Technical Services, Inc.
MEDarchiver srl
MedConnect, Inc.
Medecision
Medical Equipment & Engineering Co., Ltd.
MedicaSoft
Medicity, Inc.
Medicomp Systems, Inc.
MediSked, LLC
Medisolv Inc
MEDITECH, Inc
Mediture
Medtronic
MGRID
Microsoft Corporation
ModuleMD LLC
MPN Software Systems, Inc.
NaviHealth
NetDirector
NeuralFrame
NextGen Healthcare Information Systems, Inc.
NoMoreClipboard.com
Northrop Grumman Technology Services
Office Practicum
OneHealthPort
Optum
Orchard Software
Patient Resource LLC
PenRad
PHI Medical Office Solutions
Philips Healthcare
Physician Compass
PNT Data Corp. (formally Post-N-Track Corporation)
Practice Fusion
Premier Healthcare Alliance
Prometheus Computing LLC
Prometheus Research, LLC
QS/1 Data Systems, Inc.
Qvera
Real Seven, LLC
Redox
Reed Technology and Information Services Inc.
RefleXion Medical
Roche Diagnostics International Ltd.
Roji Health Intelligence LLC
Rosch Visionary Systems
Sabiamed Corporation
Salesforce
San Diego Health Connect
Scope Infotech, Inc.
Sisoft Healthcare Information Systems
SIVSA SOLUCIONES INFORMATICAS, S.A.U.
Smiths Medical
Softek Solutions, Inc.
Southwestern Provider Services, Inc
Sparx Systems
SRSsoft, Inc.
Starwest Tech
StreamlineMD, LLC.
Summit Healthcare Services, Inc.
Summit Imaging, Inc.
Sunquest Information Systems
Surescripts
SurgiVision Consultants, Inc.
Synopsys Finland Oy
TGX Medical Systems
Tabula Rasa HealthCare, Inc.
The CBORD Group Inc.
The MITRE Corporation
Therap Services LLC
Thrasys, Inc.
TIBCO Software Inc.
Transcend Insights
Uniform Data System for Medical Rehabilitation
Verscend Technologies, Inc.
VigiLanz Corporation
WebMD Health Services
Wellsoft Corporation
Wolters Kluwer Health
XchangeWorx
XIFIN, Inc.
Zoho Corp.

Watch the HL7 Website for
Upcoming HL7 Online Classes!
See more details at:
www.hl7.org/events/webinars.cfm

2018 TECHNICAL STEERING COMMITTEE MEMBERS

CHAIR
Austin Kreisler, FHL7
Leidos, Inc.
Phone: 706-525-1181
Email: austin.j.kresler@leidos.com

CHIEF TECHNOLOGY OFFICER
Wayne Kubick
Health Level Seven International
Phone: 847-842-1846
Email: wkubick@HL7.org

ARB CHAIR
Anthony Julian, FHL7
Mayo Clinic
Phone: 507-266-0958
Email: ajulian@mayo.edu

ARB VICE CHAIR
Lorraine Constable
HL7 Canada
Phone: 780-951-4853
Email: lorraine@constable.ca

INTERNATIONAL REPRESENTATIVES
Giorgio Cangioli
HL7 Italy
Email: giorgio.cangioli@gmail.com

Jean Duteau
Duteau Design Inc.
Phone: 780-328-6395
Email: jean@duteaudesign.com

CLINICAL CO-CHAIRS
Floyd Eisenberg, MD
iParsimony LLC
Phone: +1 202-643-6350
Email: feisenberg@iparsimony.com

Melva Peters
HL7 Canada
Phone: +1 604-512-5124
Email: melva@jenakerconsulting.com

INFRASTRUCTURE CO-CHAIRS
Russell Hamm
Intelligent Medical Objects (IMO)
Phone: 847-613-6645
Email: russellhamm@gmail.com

Paul Knapp
Knapp Consulting Inc.
Phone: 604-987-3313
Email: pknapp@pknapp.com

ADMINISTRATIVE CO-CHAIRS
Austin Kreisler, FHL7
Leidos, Inc.
Phone: 706-525-1181
Email: austin.j.kresler@leidos.com

Mary Kay McDaniel
Cognosante, LLC
Email: marykay.mcdaniel@cognosante.com

ORGANIZATIONAL SUPPORT CO-CHAIRS
Andy Stechishin
HL7 Canada
Phone: 780-903-0885
Email: andy.stechishin@gmail.com

Sandra Stuart
Kaiser Permanente
Phone: 925-519-5735
Email: sandra.stuart@kp.org

AD-HOC MEMBERS
Ken McCaslin MAR
Accenture
Phone: 703-457-4729
Email: H.Kenneth.McCaslin@accenture.com

John Roberts
Tennessee Department of Health
Phone: +1 615-741-3702
Email: john.a.roberts@tn.gov

Steering Divisions

ADMINISTRATIVE
Attachments
Electronic Health Record
Financial Management
Imaging Integration
Orders & Observations
Patient Administration

CLINICAL
Anesthesia
Biomedical Research & Regulation
Community-Based Care and Privacy
Clinical Decision Support
Clinical Genomics
Clinical Interoperability Council
Clinical Quality Information
Emergency Care
Health Care Devices
Learning Health Systems
Patient Care
Pharmacy
Public Health

INFRASTRUCTURE
Arden Syntax
Clinical Information Modeling Initiative
Conformance
FHIR Infrastructure
Implementatble Technology Specifications
Infrastructure & Messaging
Mobile Health
Modeling & Methodology
Security
SOA
Structured Documents
Templates
Vocabulary

ORGANIZATIONAL SUPPORT
Electronic Services & Tools
Healthcare Standards Integration
International Mentoring
Process Improvement Committee
Project Services
Publishing

HL7 Work Group Co-Chairs

ANESTHESIA

Martin Hurrell, PhD
Phone: +44 7711-669-522
Email: martinhurrell@outlook.com

Ellen Torres
Email: etworks@outlook.com

John Walsh, MD
Partners HealthCare System, Inc.
Phone: +1 857-282-3953
Email: jwalsh@partners.org

ARCHITECTURAL REVIEW BOARD

Lorraine Constable
HL7 Canada
Phone: +1 780-951-4853
Email: lorraine@constable.ca

Anthony Julian, FHL7
Mayo Clinic
Phone: +1 507-266-0958
Email: ajulian@mayo.edu

ARDEN SYNTAX

Peter Haug, MD
Intermountain Healthcare
Phone: +1 801-507-9253
Email: peter.haug@imail.org

Robert Jenders, MD, MS
Charles Drew University/UCLA
Phone: +1 323-249-5734
Email: jenders@ucla.edu

ATTACHMENTS

Durwin Day
Health Care Service Corporation
Phone: +1 312-653-5948
Email: dayd@bcbsil.com

Craig Gabron
Email: cgabron@sc.rr.com

Christol Green
Anthem, Inc.
Phone: +1 303-435-6195
Email: christol.green@anthem.com

BIOMEDICAL RESEARCH AND REGULATION

Boris Brodsky
Food and Drug Administration
Phone: +1 301-796-5179
Email: boris.brodsky@fda.hhs.gov

Myron Finseth, BS, MSc
Medtronic
Phone: +1 763-526-3071
Email: myron.finseth@medtronic.com

Hugh Glover, FHL7
Blue Wave Informatics
Email: hugh_glover@bluewaveinformatics.co.uk

Edward Helton PhD
National Cancer Institute
Phone: +1 301-480-4290
Email: heltone2@mail.nih.gov

CLINICAL DECISION SUPPORT

Guilherme Del Fiol, MD, PhD
University of Utah Health Care
Phone: +1 801-213-4129
Email: guilherme.delfiol@utah.edu

Robert Jenders, MD, MS
Charles Drew University/UCLA
Phone: +1 323-249-5734
Email: jenders@ucla.edu

Kensaku Kawamoto, MD, PhD
University of Utah Health Care
Phone: +1 801-587-8001
Email: kensaku.kawamoto@utah.edu

Howard Strasberg, MD, MS
Wolters Kluwer Health
Phone: +1 858-481-4249
Email: howard.strasberg@wolterskluwer.com

CLINICAL GENOMICS

Gil Alterovitz, PhD
SMART Health IT
Email: gil@chip.org

Robert Freimuth, PhD
Mayo Clinic
Phone: +1 507-266-4078
Email: freimuth.robert@mayo.edu

Bob Milius, PhD
National Marrow Donor Program
Phone: +1 612-627-5844
Email: bmilius@nmdp.org

Kevin Power
Cerner Corporation
Phone: +1 816-201-3026
Email: kpower@cerner.com

Amnon Shabo, PhD, FHL7
Philips Healthcare
Email: amnon.shvo@gmail.com

CLINICAL INFORMATION MODELING INITIATIVE

Richard Esmond
PenRad
Phone: +1 763-475-3388
Email: richard.esmond@gmail.com

Stanley Huff, MD, FHL7
Intermountain Healthcare
Phone: +1 801-507-9111
Email: stan.huff@imail.org

Galen Mulrooney, MBA
U.S. Department of Veterans Affairs
Phone: +1 703-815-0900
Email: galen.mulrooney@jpsys.com

Claude Nanjo
University of Utah Health Care
Phone: +1 810-587-6092
Email: cnanjo@gmail.com

CLINICAL INTEROPERABILITY COUNCIL

Laura Heermann Langford RN, PhD
Intermountain Healthcare
Phone: +1 801-507-9254
Email: laura.heermann@imail.org

Russell Leftwich, MD
InterSystems
Phone: +1 617-551-2111
Email: russell.leftwich@intersystems.com

Amy Nordo, MMCi, RN
Duke Clinical & Translational Science Institute
Phone: +1 267-577-6832
Email: amy.nordo@duke.edu

Mitra Rocca
Food and Drug Administration
Phone: +1 301-796-2175
Email : mitra.rocca@fda.hhs.gov

CLINICAL QUALITY INFORMATION

Patricia Craig, MS, MIS
The Joint Commission
Phone: +1 630-792-5546
Email: pcraig@jointcommission.org

Floyd Eisenberg, MD
iParsimony LLC
Phone: +1 202-643-6350
Email: feisenberg@iparsimony.com

Yan Heras
Optimum eHealth
Phone: +1 949-566-3361
Email: yanheras@gmail.com

Juliet Rubini, MS, MSIS
Mathematica Policy Research
Phone: +1 609-750-3181
Email: julietkrubini@gmail.com

Kanwarpreet Sethi
Lantana Consulting Group
Phone: 802-785-2623
Email: kp.sethi@lantanagroup.com

COMMUNITY-BASED CARE AND PRIVACY

Johnathan Coleman
Security Risk Solutions, Inc.
Phone: +1 843-442-9104
Email: jc@securityrs.com

Suzanne Gonzales-Webb
Department of Veteran Affairs
Phone: +1 727-605-5081
Email: suzanne.webb@bookzurman.com

James Kretz
SAMHSA
Phone: +1 240-276-1755
Email: jim.kretz@samhsa.hhs.gov

David Pyke
Ready Computing Inc.
Phone: +1 212-877-3307 x101
Email: david.pyke@readycomputing.com

HL7 Work Group Co-Chairs (continued)

CONFORMANCE

Nathan Bunker
American Immunization Registry Association
Phone: +1 435-635-1532
Email: nbunker@immregistries.org

Frank Oemig, PhD, FHL7
HL7 Germany
Phone: +49 208-781194
Email: hl7@oemig.de

Ioana Singureanu, MSCs, FHL7
U.S. Department of Veterans Affairs
Phone: +1 603-548-5640
Email: ioana.singureanu@bookzurman.com

Robert Snelick
National Institute of Standards & Technology
Phone: +1 301-975-5924
Email: robert.snelick@nist.gov

ELECTRONIC HEALTH RECORDS

Michael Brody, DPM
Email: mbrody@cmeonline.com

Gary Dickinson, FHL7
CentriHealth
Phone: +1 951-536-7010
Email: gary.dickinson@ehr-standards.com

Stephen Hufnagel, PhD
Apprio, Inc.
Phone: +1 703-575-7912
Email: shufnagel@apprioinc.com

Mark Janczewski, MD, MPH
Medical Networks, LLC
Phone: +1 703-994-7637
Email: mark.janczewski@gmail.com

John Ritter, FHL7
Phone: +1 412-372-5783
Email: johnritter1@verizon.net

Feliciano Yu, MD, MS
University of Arkansas Medical Sciences
Email: pele.yu@archildrens.org

ELECTRONIC SERVICES AND TOOLS

David Burgess
Laboratory Corporation of America
Phone: +1 615-221-1901
Email: burgesd@labcorp.com

Elizabeth Newton
Kaiser Permanente
Phone: 925-926-3011
Email: elizabeth.h.newton@kp.org

Brian Pech, MD, MBA
Kaiser Permanente
Phone: +1 678-245-1762
Email: brian.pech@kp.org

Andrew Statler
Cerner Corporation
Phone: +1 816-201-3336
Email: astatler@cerner.com

Michael Van der Zel, BSc
HL7 Netherlands
Phone: +31 503619876
Email: m.van.der.zel@umcg.nl

EMERGENCY CARE

Dominik Brammen
HL7 Germany
Phone: +49 700-7777-6767
Email: dominik.brammen@aktin.org

Laura Heermann Langford, RN, PhD
Intermountain Healthcare
Phone: +1 801-507-9254
Email: laura.heermann@imail.org

James McClay, MD
University of Nebraska Medical Center
Phone: +1 402-559-3587
Email: jmcclay@unmc.edu

FHIR INFRASTRUCTURE

Grahame Grieve, FHL7
HL7 International; Health Intersections Pty Ltd
Phone: +61 3-98445796
Email: grahame@hl7.org; grahame@healthintersections.com.au

Ewout Kramer
HL7 Netherlands/Firely
Phone: +31 3467171
Email: ewout@fire.ly

Joshua Mandel, MD
SMART Health IT
Phone: +1 617-500-3253
Email: jmandel@gmail.com

Lloyd McKenzie, FHL7
HL7 Canada / Gevity
Email: lloyd@lmckenzie.com

FINANCIAL MANAGEMENT

Kathleen Connor, FHL7
U.S. Department of Veterans Affairs
Phone: +1 727-519-4607
Email: kathleen_connor@comcast.net

Beat Heggli
HL7 Switzerland
Phone: +41 44-297-5737
Email: beat.heggli@netcetera.com

Paul Knapp
Knapp Consulting
Phone: +1 604-987-3313
Email: pknapp@pknapp.com

Mary Kay McDaniel
Cognosante, LLC
Email: marykay.mcdaniel@cognosante.com

HEALTH CARE DEVICES

Todd Cooper
Intermountain Healthcare
Phone: +1 801-290-6887
Email: toddcooperafc@gmail.org

Chris Courville
Epic
Phone: +1 608-271-9000
Email: ccourvil@epic.com

John Garguilo
National Institute of Standards
Email: john.garguilo@nist.gov

John Rhoads, PhD
Philips Healthcare
Phone: +1 978-659-3024
Email: john.rhoads@philips.com

IMAGING INTEGRATION

Brad Genereaux
HL7 Germany/AGFA
Phone: +49 700-7777-6767
Email: brad.genereaux@agfa.com

Elliot Silver, MSc
Change Healthcare
Phone: +1 604-279-5422 x2686
Email: elliot.silver@mckesson.com

IMPLEMENTABLE TECHNOLOGY SPECIFICATIONS

Paul Knapp
Knapp Consulting Inc.
Phone: +1 604-987-3313
Email: pknapp@pknapp.com

BRIAN PECH, MD, MBA

Kaiser Permanente
Phone: +1 678-245-1762
Email: brian.pech@kp.org

Andy Stechishin
HL7 Canada
Phone: +1 780-903-0885
Email: andy.stechishin@gmail.com

INFRASTRUCTURE & MESSAGING

Anthony Julian, FHL7
Mayo Clinic
Phone: +1 507-266-0958
Email: ajulian@mayo.edu

Nick Radov
UnitedHealthcare
Phone: +1 800-328-5979
Email: nradov@uhc.com

Sandra Stuart, FHL7
Kaiser Permanente
Phone: +1 925-519-5735
Email: sandra.stuart@kp.org

HL7 Work Group Co-Chairs (continued)

INTERNATIONAL COUNCIL

Diego Kaminker, FHL7
HL7 Argentina
Phone: +54 11-4781-2898
Email: diego.kaminker@kern-it.com.ar

Melva Peters
HL7 Canada
Phone: +1 604-512-5124
Email: melva@jenakerconsulting.com

Line Saele
HL7 Norway
Phone: +47 9592-5357
Email: line.sele@nasjonalikt.no

LEARNING HEALTH SYSTEMS

Russell Leftwich, MD
InterSystems
Phone: +1 617-551-2111
Email: russell.leftwich@intersystems.com

John Roberts
Tennessee Department of Health
Phone: +1 615-741-3702
Email: john.a.roberts@tn.gov

MOBILE HEALTH

Nathan Botts, PhD, MSIS
Westat
Phone: +1 760-845-8356
Email: nathanbotts@westat.com

Gora Datta
CAL2CAL Corporation
Phone: +1 949-955-3443
Email: gora@cal2cal.com

Matthew Graham
Mayo Clinic
Phone: +1 507-284-3028
Email: mgraham@mayo.edu

Frank Ploeg
HL7 Netherlands
Email: r.f.ploeg@umcg.nl

MODELING AND METHODOLOGY

Jean Duteau
Duteau Design Inc.
Phone: +1 780-328-6395
Email: jean@duteaudesign.com

Grahame Grieve, FHL7
HL7 International; Health Intersections Pty Ltd
Phone: +61 3-98445796
Email: grahame@hl7.org; grahame@healthintersections.com.au

Lloyd McKenzie, FHL7
HL7 Canada/Gevity
Email: lloyd@lmckenzie.com

AbdulMalik Shakir, FHL7
Hi3 Solutions
Phone: +1 626-644-4491
Email: abdulmalik.shakir@hi3solutions.com

Ron Shapiro
Qvera
Phone: +1 801-335-51-1 x7011
Email: ron@qvera.com

Upcoming International Events

October 18-19, 2018	SNOMED CT Expo 2018	http://www.snomedexpo.org Vancouver, Canada
October 25-27, 2018	HIMSS 18 Eurasia	http://himsseurasia.com Istanbul, Turkey
November 3-7, 2018	AMIA Annual Symposium	http://www.amia.org/amia2018 San Francisco, California
November 13-14, 2018	EHiN 2018	http://www.ehin.no/en Oslo, Norway
November 28-29, 2018	Digital Health World Congress 2018	http://digitalhealthcareworld-congress.com London, UK
November 29-30, 2018	ONC 2018 Annual Meeting	www.healthit.gov/news/events/onc-2018-annual-meeting Washtington, DC
January 8-11, 2019	Digital Health Summit	http://digitalhealthsummit.com Las Vegas, Nevada
February 18-22, 2019	GS1 Global Forum 2019	https://www.gs1.org/events/488/gs1-global-forum-2019 Brussels, Belgium
February 22-24, 2019	HEALTHINF 2019	http://www.healthinf.biostec.org Prague, Czech Republic
March 5-7, 2019	World Healthcare Congress Europe	http://europehealthcare.org Manchester Central, UK
May 26-29, 2019	e-Health 2019 Conference	http://www.e-healthconference.com Toronto, Canada
August 26-30, 2019	MedInfo 2019	http://www.medinfo-lyon.org/en Lyon, France

HL7 Work Group Co-Chairs (continued)

ORDERS/OBSERVATIONS

Hans Buitendijk, MSc, FHL7
Cerner Corporation
Phone: +1 610-219-2087
Email: hans.buitendijk@cerner.com

David Burgess
Laboratory Corporation of America
Phone: +1 615-221-1901
Email: burgesd@lapcorp.com

Lorraine Constable
HL7 Canada
Phone: +1 780-951-4853
Email: lorraine@constable.ca

Robert Hausam, MD, FHL7
Hausam Consulting, LLC
Phone: +1 801-949-1556
Email: rob@hausamconsulting.com

Patrick Loyd
Email: patrick.e.loyd@gmail.com

Ken McCaslin, MAR, FHL7
Accenture
Phone: +1 703-457-4729
Email: h.kenneth.mccaslin@accenture.com

Ulrike Merrick
Vernetzt, LLC
Phone: +1 415-634-4131
Email: rikimerrick@gmail.com

John David Nolen, MD, PhD
Children's Mercy Hospitals and Clinics
Phone : +1 816-701-4882
Email: jlnolen@cmh.edu

ORGANIZATIONAL RELATIONS COMMITTEE

Scott Robertson, PharmD, FHL7
Kaiser Permanente
Phone: +1 310-200-0231
Email: scott.m.robertson@kp.org

OUTREACH COMMITTEE FOR CLINICAL RESEARCH

Ed Helton, PhD
National Cancer Institute
Phone: +1 301-480-4290
Email: heltone2@mail.nih.gov

PATIENT ADMINSTRATION

Alexander de Leon
Kaiser Permanente
Phone: +1 626-381-4141
Email: alexander.j.deleon@kp.org

Irma Jongeneel-de Haas, FHL7
HL7 Netherlands
Phone: +31 681153857
Email: jongeneel@vzvz.nl

Brian Postlethwaite, BaSc
Telstra Health
Email: brian_pos@hotmail.com

Line Saele
HL7 Norway
Phone: +47 9592-5357
Email: line.sele@nasjonalikt.no

PATIENT CARE

Stephen Chu, MD
HL7 Australia
Email: chuscmi88@gmail.com

Laura Heermann Langford, RN, PhD
Intermountain Healthcare
Phone: +1 801-507-9254
Email: laura.heermann@imail.org

Emma Jones
Allscripts
Phone: +1 919-859-8441
Email: emma.jones@allscripts.com

Jay Lyle
Email: jay@lyle.net

Michelle Miller
Cerner Corporation
Phone: +1 816-201-2010
Email: mmoseman@cerner.com

Michael Padula, MD, MBI
The Children's Hospital of Philadelphia
Phone: +1 215-590-1653
Email: padula@email.chop.edu

Michael Tan
NICTIZ
Phone: +31 7031-73450
Email: tan@nictiz.nl

PHARMACY

Jean Duteau
Duteau Design Inc
Phone: +1 780-328-6395
Email: jean@duteaudesign.com

HL7 Standards Approved by ANSI, Since May 2018

Name	Designation	Date
1. HL7 Version 3 Standard: Care Provision; Care Transfer Topic, Release 1	ANSI/HL7 V3 PC CARETRANS, R1-2013 (R2018)	5/8/18
2. HL7 Templates Standard: Specification and Use of Reusable Information Constraint Templates, Release 1	ANSI/HL7 TEMPLATES, R1-2018	5/8/18
3. HL7 Version 3 Standard: Care Provision; Assessment Scales, Release 1	ANSI/HL7 V3 PCAS, R1-2018	5/24/18
4. HL7 Version 3 Standard: Medication Statement and Administration Event, Release 1	ANSI/HL7 V3 RXMSSEVNT, R1-2013 (R2018)	5/24/18
5. HL7 Version 3 Standard: Abstract Transport Specification, Release 1	ANSI/HL7 V3 TR AB, R1-2013 (R2018)	5/31/18
6. HL7 Version 3 Standard: Care Provision; Queries Care Record Topic, Release 1	ANSI/HL7 V3 PC CAREREC, R1-2013 (R2018)	6/15/18
7. HL7 Version 3 Standard: Decision Support Services, Release 2	ANSI/HL7 V3 DSS, R2-2018	9/6/18
8. HL7 Virtual Medical Record for Clinical Decision Support (vMR-CDS) Logical Models, Release 2	ANSI/HL7 vMR CDSLM, R2-2018	9/6/18

HL7 Work Group Co-Chairs (continued)

John Hatem, FHL7
Email: jnhatem@hotmail.com

Melva Peters
HL7 Canada
Phone: +1 604-512-5124
Email: melva@jenakerconsulting.com

Scott Robertson, PharmD, FHL7
Kaiser Permanente
Phone: +1 310-200-0231
Email: scott.m.robertson@kp.org

PROCESS IMPROVEMENT COMMITTEE

Ioana Singureanu, MSCs, FHL7
U. S. Department of Veterans Affairs
Phone: +1 603-548-5640
Email: Ioana.singureanu@bookzurman.com

Sandra Stuart, FHL7
Kaiser Permanente
Phone: +1 925-519-5735
Email: sandra.stuart@kp.org

PROJECT SERVICES

Rick Haddorff
Mayo Clinic
Email: haddorff.richard@mayo.edu

Freida Hall, FHL7
Quest Diagnostics, Inc.
Phone: +1 610-650-6794
Email: freida.x.hall@questdiagnostics.com

PUBLIC HEALTH AND EMERGENCY RESPONSE

Erin Holt, MPH
Tennessee Department of Health
Phone: +1 615-741-3570
Email: erin.holt@tn.gov

Nell Lapres
Epic
Phone: +1 608-271-9000
Email: nell@epic.com

Joginder Madra
Madra Consulting Inc.
Phone: +1 780-717-4295
Email: hl7@madraconsulting.com

Craig Newman
Northrop Grumman
Phone: +1 608-345-3606
Email: csnewman88@gmail.com

Laura Rappleye
Altarum
Email: laura.rappleye@altarum.org

PUBLISHING COMMITTEE

Peter Gilbert
Meridian Health Plan
Phone: +1 313-324-3700 x21174
Email: peter.gilbert@mhplan.com

Brian Pech, MD, MBA
Kaiser Permanente
Phone: +1 678-245-1762
Email: brian.pech@kp.org

SECURITY

Kathleen Connor, FHL7
U.S. Department of Veterans Affairs
Phone: +1 727-519-4607
Email: kathleen_connor@comcast.net

Alexander Mense
HL7 Austria
Phone: +43 01-1-333-40-77-232
Email: alexander.mense@hl7.at

John Moehrke
By Light Professional IT Services LLC
Phone: +1 703-224-1000
Email: john.moehrke@bylight.com

Chris Shawn
U.S. Department of Veterans Affairs
Phone: +1 518-681-1858
Email: christopher.shawn2@va.gov

Patricia Williams, PhD, MSc
Flinders University, Adelaide, Australia
Phone: +61 882012023
Email: patricia.williams@flinders.edu.au

SERVICES ORIENTED ARCHITECTURE

Jerry Goodnough (CHECK ON THIS BEFORE PUBLICATION)
Cognitive Medical Systems
Phone: +1 541-338-4911
Email: jgoodnough@cognitivemedicine.com

Stefano Lotti
HL7 Italy
Phone: +39 06-42160685
Email: slotti@invitalia.it

Vince McCauley, MBBS, PhD
Telstra Health (Australia)
Phone: +61 298186493
Email: vincem@bigpond.com.au

Diana Proud-Madruga
U.S. Department of Veterans Affairs
Phone: +1 619-467-5568
Email: diana.proud-madruga@va.gov

STANDARDS GOVERNANCE BOARD

Lorraine Constable
HL7 Canada
Phone : +1 780-951-4853
Email: lorraine@constable.ca

Paul Knapp
Knapp Consulting Inc.
Phone: +1 604-987-3313
Email: pknapp@pknapp.com

STRUCTURED DOCUMENTS

Calvin Beebe, FHL7
Mayo Clinic
Email: cbeebe@mayo.edu

Gay Dolin, MSN RN
Intelligent Medical Objects (IMO)
Phone: +1 847-613-6645
Email: gdolin@imo-online.com

Benjamin Flessner
Redox
Email: benjamin@redoxengine.com

Austin Kreisler, FHL7
Leidos, Inc.
Phone: +1 706-525-1181
Email: austin.j.kreisler@leidos.com

Sean McIlvenna
Lantana Consulting Group
Phone: +1 802-785-2623
Email: sean.mcilvenna@lantanagroup.com

Andrew Statler
Cerner Corporation
Phone: +1 816-201-3336
Email: astatler@cerner.com

TEMPLATES

Kai Heitmann, MD, FHL7
HL7 Germany
Phone: +49 172-2660814
Email: hl7@kheitmann.de

John Roberts
Tennessee Department of Health
Phone: +1 615-741-3702
Email: john.a.roberts@tn.gov

Mark Shafarman, FHL7
Shafarman Consulting
Phone: +1 510-593-3483
Email: mark.shafarman@earthlink.net

VOCABULARY

James Case, MS, DVM, PhD, FHL7
SNOMED International
Email: james.case@mail.nih.gov

Heather Grain
eHealth Education
Phone: +61 3-956-99443
Email: heather@lginformatics.com

Russell Hamm
Intelligent Medical Objects (IMO)
Phone: +1 847-613-6645
Email: russellhamm@gmail.com

Robert Hausam, MD, FHL7
Hausam Consulting, LLC
Phone: +1 801-949-1556
Email: rob@hausamconsulting.com

William Ted Klein, FHL7
Klein Consulting Informatics LLC
Phone: +1 307-883-9739
Email: kci@tklein.com

Caroline Macumber
Apelon, Inc.
Phone: +1 203-431-2530
Email: cmacumber@apelon.com

Robert McClure, MD
MD Partners, Inc.
Phone: +1 303-926-6771
Email: mcclure@mdpartners.com

HL7 Work Group Facilitators

BIOMEDICAL RESEARCH AND REGULATION

D. Mead Walker, FHL7
Modeling and Methodology
Mead Walker Consulting
Phone: +1 610-518-6259
Email: dmead@comcast.net

Myron Finseth, BS, MSc
Publishing
Medtronic
Phone: +1 763-526-3071
Email: myron.finseth@medctronic.com

Julie James
Vocabulary
Blue Wave Informatics
Email: Julie_james@bluewaveinformatics.co.uk

CLINICAL DECISION SUPPORT

Craig Parker, MD, MS, FHL7
Modeling and Methodology; Publishing
Email: craigparkermd@gmail.com

Robert McClure, MD
Vocabulary
MD Partners, Inc.
Phone: +1 303-926-6771
Email: mcclure@mdpartners.com

CLINICAL GENOMICS

Amnon Shabo, PhD, FHL7
Modeling and Methodology
Philips Healthcare
Email: amnon.shvo@gmail.com

Grant Wood
Publishing
Intermountain Healthcare
Phone: +1 801-408-8153
Email: grant.wood@imail.org

CLINICAL INFORMATION MODELING INITIATIVE

Susan Matney, PhD, RN
Vocabulary
Intermountain Healthcare
Email: susan.matney@imail.org

CLINICAL INTEROPERABILITY COUNCIL

AbdulMalik Shakir, FHL7
Modeling and Methodology
Hi3 Solutions
Phone: +1 626-644-4491
Email: abdulmalik.shakir@hi3solutions.com

Amy Nordo, MMCi, RN
Publishing
Duke Clinical & Translational Science Institute
Phone: +1 267-577-6832
Email: amy.nordo@duke.edu

Sarah Ryan
Vocabulary
Email: ryansaraha1@earthlink.net

COMMUNITY-BASED CARE AND PRIVACY

Ioana Singureanu, MSCs, FHL7
Modeling and Methodology; Publishing
U.S. Department of Veterans Affairs
Phone: +1 603-548-5640
Email: ioana.singureanu@bookzurman.com

Kathleen Connor, FHL7
Vocabulary
U.S. Department of Veterans Affairs
Phone: +1 727-519-4607
Email: kathleen_connor@comcast.net

EDUCATION ADVISORY COUNCIL

Heather Grain
Vocabulary
eHealth Education
Phone: +61 3-956-99443
Email: heather@lginformatics.com

ELECTRONIC HEALTH RECORDS

Corey Spears
Modeling and Methodology
Infor
Phone: +1 917-426-7397
Email: corey.spears@infor.com

John Ritter, FHL7
Publishing
Phone: +1 412-372-5783
Email: johnritter1@verizon.net

EMERGENCY CARE

Kevin Coonan, MD
Modeling and Methodology
Email: kevin.coonan@gmail.com

FINANCIAL MANAGEMENT

Kathleen Connor, FHL7
Modeling and Methodology; Vocabulary
U.S. Department of Veterans Affairs
Phone: +1 727-519-4607
Email: kathleen_connor@comcast.net

Beat Heggli
Modeling and Methodology; Publishing
HL7 Switzerland
Phone: +41 44-297-5737
Email: beat.heggli@netcetera.com

Mary Kay McDaniel
Publishing; Vocabulary
Cognosante, LLC
Email: marykay.mcdaniel@cognosante.com

HEALTH CARE DEVICES

Ioana Singureanu, MSCs, FHL7
Modeling and Methodology
U.S. Department of Veterans Affairs
Phone: +1 603-548-5640
Email: Ioana.singureau@bookzurman.com

Todd Cooper
Vocabulary
Intermountain Healthcare
Phone: +1 801-290-6887
Email: toddcooperafc@gmail.com

Christof Gessner
Vocabulary
HL7 Germany
Phone: +49 172-3994033
Email: christof.gessner@gematik.de

IMAGING INTEGRATION

Elliot Silver, MSc
Vocabulary
Change Healthcare
Phone: +1 604-279-5422 x 2686
Email: elliot.silver@mckesson.com

INFRASTRUCTURE AND MESSAGING

Grahame Grieve, FHL7
Modeling and Methodology
Health Intersections Pty Ltd./Health Level Seven International
Phone: +61 3-98445796
Email: grahame@healthintersections.com.au / grahame@HL7.org

Anthony Julian, FHL7
Publishing
Mayo Clinic
Phone: +1 507-266-0958
Email: ajulian@mayo.edu

Sandra Stuart, FHL7
Vocabulary
Kaiser Permanente
Phone: +1 925-519-5735
Email: sandra.stuart@kp.org

HL7 Work Group Facilitators

MODELING AND METHODOLOGY

AbdulMalik Shakir, FHL7
Modeling and Methodology
Hi3 Solutions
Phone: +1 626-644-4491
Email: abdulmalik.shakir@hi3solutions.com

William Ted Klein, FHL7
Vocabulary
Klein Consulting Informatics LLC
Phone: +1 307-883-9739
Email: kci@tklein.com

ORDERS AND OBSERVATIONS

Patrick Loyd
Modeling and Methodology
Email: patrick.e.loyd@gmail.com

Lorraine Constable
Publishing
HL7 Canada
Phone: +1 780-951-4853
Email: lorraine@constable.ca

Robert Hausam, MD, FHL7
Vocabulary
Hausam Consulting LLC
Phone: +1 801-949-1556
Email: rob@hausamconsulting.com

PATIENT ADMINISTRATION

Alexander Henket
Modeling and Methodology; Publishing
NICTIZ Nat.ICT.Inst.Healthc.Netherlands
Phone: +31 7031-73450
Email: henket@nictiz.nl

Wendy Huang
Vocabulary
Email: wendyyjhuang@gmail.com

PATIENT CARE

Jean Duteau
Modeling and Methodology
Duteau Design Inc.
Phone: +1 780-328-6395
Email: jean@duteaudesign.com

Susan Matney, PhD, RN
Vocabulary
Intermountain Healthcare
Email: susan.matney@imail.org

PHARMACY

Jean Duteau
Modeling and Methodology
Duteau Design Inc.
Phone: +1 780-328-6395
Email: jean@duteaudesign.com

Scott Robertson, PharmD, FHL7
Publishing
Kaiser Permanente
Phone: +1 310-200-0231
Email: scott.m.robertson@kp.org

Julie James
Vocabulary
Blue Wave Informatics
Email: julie_james@bluewaveinformatics.co.uk

PUBLIC HEALTH

Joginder Madra
Modeling and Methodology
Madra Consulting Inc.
Phone: +1 780-717-4295
Email: hl7@madraconsulting.com

Jean Duteau
Publishing
Duteau Design Inc.
Phone: +1 780-328-6395
Email: jean@duteaudesign.com

Susan Barber
Vocabulary
Tennessee Department of Health
Phone: +1 615-770-1155
Email: susan.barber@tn.gov

SECURITY

Mike Davis
Publishing
U.S. Department of Veterans Affairs
Phone: +1 760-632-0294
Email: mike.davis@va.gov

Kathleen Connor, FHL7
Vocabulary
U.S. Department of Veterans Affairs
Phone: +1 727-519-4607
Email: kathleen_connor@comcast.net

SERVICES ORIENTED ARCHITECTURE

Diana Proud-Madruga
Vocabulary
U.S. Department of Veterans Affairs
Phone: +1 619-467-5568
Email: diana.proud-madruga@va.gov

STRUCTURED DOCUMENTS

Austin Kreisler, FHL7
Modeling and Methodology
Leidos, Inc.
Phone: +1 706-525-1181
Email: austin.j.kreisler@leidos.com

Peter Gilbert
Publishing
Meridian Health Plan
Phone: +1 313-324-3700 x21174
Email: peter.gilbert@mhplan.com

Robert Hausam, MD, FHL7
Vocabulary
Hausam Consulting LLC
Phone: +1 801-949-1556
Email: rob@hausamconsulting.com

TEMPLATES

Douglas Baird
Publishing
Boston Scientific Corporation
Phone: +1 651-582-3241
Email: douglas.baird@guidant.com

Mark Shafarman, FHL7
Vocabulary
Shafarman Consulting
Phone: +1 510-593-3483
Email: mark.shafarman@earthlink.net

VOCABULARY

William Ted Klein, FHL7
Vocabulary
Klein Consulting Informatics LLC
Phone: +1 307-883-9739
Email: kci@tklein.com

Find HL7 on Social!

@HL7
http://twitter.com/HL7

http://www.facebook.com/HealthLevel7

https://www.linkedin.com/company/health-level-seven

Affiliate Contacts

HL7 ARGENTINA
Fernando Campos, FHL7
Phone: +54 11-4781-2898
Email: fernando.campos@hospitalitaliano.org.ar

HL7 AUSTRALIA
Jason Steen
Phone: +61 488881882
Email: chair@HL7.org.au

HL7 AUSTRIA
Stefan Sabutsch
Phone: +43 664-3132505
Email: stefan.sabutsch@hl7.at

HL7 BOSNIA & HERZEGOVINA
Samir Dedovic
Phone: +387 0-33-721-911
Email: samir.dedovic@medit.ba

HL7 BRAZIL
Marivan Abrahao, MD
Phone: +55 11-5573-9580
Email: marivan@mac.com

HL7 CANADA
Ron Parker
Phone: +1 416-595-3448
Email: rgparker57@eastlink.ca

HL7 CHINA
Professor Baoluo Li
Phone: +86 010-65815977
Email: liblpumch@qq.com

HL7 CROATIA
Miroslav Koncar
Phone: +385 99-321-2253
Email: chair@HL7.hr

HL7 CZECH REPUBLIC
Libor Seidl
Phone: +420 605740492
Email: seidl@HL7cr.eu

HL7 DENMARK
Sofia Stokholm
Phone: +45 39966222
Email: svs@ds.dk

HL7 FINLAND
Juha Mykkanen, PhD
Phone: +358 29-524-8038
Email: juha.mykkanen@thl.fi

HL7 FRANCE
Francois Macary
Phone: +33 786-160-591
Email: francois.macary@phast.fr

HL7 GERMANY
Christof Gessner
Phone: +49 172-3994033
Email: christof.gessner@gematik.de

HL7 GREECE
Alexander Berler
Phone: +30 2111001691
Email: a.berler@gnomon.com.gr

HL7 HONG KONG
Chun-Por Wong
Phone: +852 3488-3762
Email: chair@HL7.org.hk

HL7 INDIA
Naresh Yallapragada BDS, MSc
Email: chairman@HL7india.org

HL7 ITALY
Giorgio Cangioli
Phone: +39 06-42160685
Email: giorgio.cangioli@gmail.com

HL7 JAPAN
Michio Kimura, MD, PhD
Phone: +81 53-435-2770
Email: kimura@mi.hama-med.ac.jp

HL7 KOREA
Byoung-Kee Yi, PhD
Phone: +82 234101944
Email: byoungkeeyi@gmail.com

HL7 NETHERLANDS
Rob Mulders
Email: r.mulders@furore.com

HL7 NEW ZEALAND
Peter Jordan, MSc, LLB
Phone: +64 21-758834
Email: pkjordan@xtra.co.nz

HL7 NORWAY
Line Saele
Phone: +47 9592-5357
Email: line.sele@nasjonalikt.no

HL7 PAKISTAN
Kahlid Latif
Email: khalid.latif@hl7.org.pk

HL7 POLAND
Roman Radomski, MD, MBA
Phone: +48 605-404-363
Email: radomski@iehr.eu

HL7 PORTUGAL
Paulo Alves
Email: paulo.alves@proside.pt

HL7 ROMANIA
Florica Moldoveanu
Phone: +40 21-4115781
Email: florica.moldoveanu@cs.pub.ro

HL7 RUSSIA
Sergey Shvyrev, MD, PhD
Phone: +7 495-434-55-82
Email: Sergey.Shvyrev@gmail.com

HL7 SINGAPORE
Adam Chee
Email: HL7@binaryhealthcare.com

HL7 SPAIN
Francisco Perez
Phone: +34 637208657
Email: fperezfernan@gmail.com

HL7 SWEDEN
Mikael Wintell
Phone: +46 736-254831
Email: mikael.wintell@vgregion.se

HL7 SWITZERLAND
Roeland Luykx, PhD
Phone: +41 71-279-11-89
Email: roeland.luykx@arpage.ch

HL7 TAIWAN
Yu-Ting Yeh
Phone: +886 2-2552-6990
Email: yuting@tmu.edu.tw

HL7 UAE
Mohamed AlRedha, MD
Phone: ARE +971 42194084
Email: maalredha@dha.gov.ae

HL7 UK
Dunmail Hodkinson
Phone: +44 8700-112-866
Email: chair@HL7.org.uk

HL7 UKRAINE
Leonid Stoyanov
Phone: +380 443336829
Email: leo@hl7.org.ua

2018 HL7 Staff

Chief Executive Officer

Charles Jaffe, MD PhD
+1 858-720-8200
cjaffe@HL7.org

Chief Technology Officer

Wayne Kubick
+1 847-842-1846
wkubick@HL7.org

Executive Director

Mark McDougall
+1 734-677-7777 x103
markmcd@HL7.org

Associate Executive Director

Karen Van Hentenryck
+1 734-677-7777 x104
karenvan@HL7.org

Director of Education

Sadhana Alangar, PhD
+1 734-677-7777 x116
sadhana@HL7.org

Director of Meetings

Mary Ann Boyle
+1 734-677-7777 x141
maryann@HL7.org

FHIR Product Director

Grahame Grieve
+1 734-677-7777
grahame@HL7.org

Director of Marketing

Patricia Guerra
+1-773-516-0943
patricia@HL7.org

Director, Project Management Office

Dave Hamill
+1 734-677-7777 x142
dhamill@HL7.org

Director of Membership and Administrative Services

Linda Jenkins
+1 734-677-7777 x170
linda@HL7.org

Director of Technical Services & Webmaster

David Johnson
+1 734-677-7777 x125
davidj@HL7.org

Director of Technical Publications

Lynn Laakso, MPA
+1 906-361-5966
lynn@HL7.org

Web Developer

Laura Mitter
+1 740-963-9839
laura@HL7.org

Accounting Manager

Renee Previch
+1 734-677-7777 x106
renee@HL7.org

Applications Manager

Joshua Procious
+1 734-677-777
joshua@HL7.org

Director of Communications

Andrea Ribick
+1 734-677-7777 x165
andrea@HL7.org

Education Marketing Manager

Melinda Stewart
+1 734-677-7777 x101
melinda@HL7.org

HL7 Project Manager

Anne Wizauer
+1 734-677-7777 x112
anne@HL7.org

2018 HL7 Board of Directors

BOARD CHAIR

Calvin Beebe, FHL7
Mayo Clinic
cbeebe@mayo.edu

VICE-CHAIR

Patricia Van Dyke
patricia.vandyke@gmail.com

BOARD SECRETARY

Hans Buitendijk, MSc, FHL7
Cerner Corporation
+1 610-219-2087
hans.buitendijk@cerner.com

BOARD TREASURER

Russell Leftwich, MD
InterSystems
+1 617-551-2111
russell.leftwich@intersystems.com

CHAIR EMERITUS

W. Edward Hammond, PhD, FHL7
Duke Clinical & Translational Science Institute
+1 919-668-2408
william.hammond@duke.edu

APPOINTED DIRECTORS

Dave Shaver, FHL7
Corepoint Health
+1 214-618-7000
Dave.Shaver@corepointhealth.com

Mary Ann Slack
Food and Drug Administration
+1 301-796-0603
maryann.slack@fda.hhs.gov

Andrew Truscot
Accenture
+1 713-855-8402
andrew.j.truscott@accenture.com

AFFILIATE DIRECTOR

Frank Oemig, PhD, FHL7
HL7 Germany
+49 208-781194
hl7@oemig.de

Line Saele
HL7 Norway
+47 9592-5357
line.sele@nasjonalikt.no

TSC CHAIR

Austin Kreisler, FHL7
Leidos, Inc.
+1 706-525-1181
austin.j.kreisler@leidos.com

DIRECTORS-AT-LARGE

Jennifer Covich Bordenick
eHealth Initiative
+1 202-624-3288
jennifer.covich@ehidc.org

Nancy Orvis, MHA
U.S. Department of Defense, Military Health System
+1 703-681-6350
nancy.j.orvis.civ@mail.mil

Melva Peters
HL7 Canada
+1 604-512-5124
melva@jenakerconsulting.com

Walter Suarez, MD, MPH
Kaiser Permanente
+1 301-801-3207
walter.g.suarez@kp.org

NON-VOTING MEMBERS

Charles Jaffe, MD, PhD
HL7 CEO
+1 858-720-8200
cjaffe@HL7.org

Wayne Kubick
HL7 CTO
+1 847-842-1846
wkubick@HL7.org

Mark McDougall
HL7 Executive Director
+1 734-677-7777 x103
markmcd@HL7.org

SAVE THE DATE FOR HIMSS19

February 11 - 15, 2019
Orlando, Florida

Join us in the HL7 Booth (#4849)
at the HIMSS18 Exhibit!
http://www.himssconference.org/

HL7 will offer a variety of education sessions covering HL7 standards such as FHIR, C-CDA and current industry topics like precision medicine and the Argonaut and Da Vinci Projects. Visit our booth to learn more about how HL7 is advancing healthcare IT interoperability across the globe.

HL7 Welcomes New Members

Benefactor

- Scope Infotech, Inc.

Gold

- NeuralFrame
- Tabula Rasa HealthCare, Inc.

Organizational

- Apple Inc.
- Baylor College of Medicine
- Bipartisan Policy Center
- Carium
- Carradora Health, Inc.
- Dayton Children's Hospital
- doc.ai.Inc.
- HealtHIE Nevada
- Humana
- Innovaccer Inc.
- IT Division at Ministry of Health
- J Michael Consulting, LLC
- New York State Department of Health
- NYS DOH, Office of Quality and Patient Safety
- Sisoft Healthcare Information Systems
- Smallboard
- StreamlineMD, LLC
- United Network for Organ Sharing
- Vermonster

Upcoming Working Group Meetings

January 12-18, 2019
Working Group Meeting

Hyatt Regency San Antonio on The Riverwalk

San Antonio, TX

May 4-10, 2019
Working Group Meeting

Sheraton Le Centre

Montreal, Quebec, Canada

September 14-20, 2019
33rd Annual Plenary & Working Group Meeting

Atlanta Marriott Marquis

Atlanta, GA

February 1-7, 2020
International Conference & Working Group Meeting

To be announced

Sydney, Australia

May 16-22, 2020
Working Group Meeting

Hyatt Regency San Antonio on The Riverwalk

San Antonio, TX

September 18-25, 2020
Working Group Meeting

Baltimore Renaissance Harborplace

Baltimore, Maryland