Paving the Road to Interoperability with Standards

W. Ed Hammond
Davera Gabriel
Duke University and HL7 International
Healthcare Information Needs to be Exchanged

The HL7 Vision
A world in which everyone can securely access and use the right health data when and where they need it.

The HL7 Mission
To provide standards that empower global health data interoperability.

Improving Patient Care and Lowering Healthcare Cost
HL7 Standards Span the Healthcare Continuum

- Pharmacy Medication Lists
- Home Health Monitoring Devices
- Payers/Financial Systems
- Government Agencies, Public Health, Research
- Clinician Decision Support
- Hospitalization Summaries
- Doctors Orders and Clinician Notes
- Product Labeling
- Lab Test Results
- Genomics
- Mobile Health
- Emergency Care
- Medical Records
HL7 Product Families

- HL7 Version 2
- HL7 Version 3
- HL7 Clinical Document Architecture (CDA®)

® Health Level Seven, CDA, FHIR and the FHIR [FLAME DESIGN] are registered trademarks of Health Level Seven International, registered in the US Patent and Trademark Office.
HL7 Affiliates Across the Globe
HL7 Collaborates
Volunteers Work Together on Standards

In-person and virtually
HL7 is a Community Effort

Regulators  Clinical Researchers  Nurses  Payers  Physicians
Providers  IT Specialists  Hospitalists  Developers  Consultants

© Health Level Seven, CDA, FHIR and the FHIR [FLAME DESIGN] are registered trademarks of Health Level Seven International, registered in the US Patent and Trademark Office.
Why Participate in HL7?

Help make healthcare better for everyone

Jump-start innovation and speed time to launch on interoperability projects

Future-proof your business by staying ahead of standards and trends
Why Participate in HL7?

- Learn and collaborate with peers, customers, competitors, and potential partners
- Influence new standards in ways that matter to your business
- Support HL7’s vision by becoming a member today

HL7.org
Fundamentals of HL7 FHIR

- A next generation **standards framework & platform**, built on 30 years of HL7 experience, designed for implementation

- Based on REST, a pattern for using web technologies to manage information (the platform used by Facebook, Twitter…) and APIs

- Content based on Resources: essential, portable modular information components easily assembled into working systems - Like web pages directed toward computers; fast and scalable

- Flexible outputs: web, messages, documents, services
Principals of HL7 FHIR

- Data resides at the **source of truth**
- **APIs** access data: pull what you need, instead of taking what’s pushed
- Focus on **implementers**
- Include rigorous **semantics**
- Design for the common **80%**; extensions for the rest
- Off-the-shelf **security and authorization** (OAuth2, OIDC, https)
- **Speed, scalability**
- Human **readable**, ease of understanding
- Open source (Creative Commons), **freely available** for all.
New Directions

• Working with SIGGRAPH and Web3D opens new doors.
• We look forward to working with you for new opportunities to make life better for all.
Possible applications

- Virtual visits
- Surgical scheduling
- Family tree
- Drug structures
- Genomic structures
- Clinical support
  - Exercise physiology involving respiratory system, cardiovascular system, muscular system
  - Organ models
- Patient support
  - Mental health
  - Behavior modification
  - Fall prevention
  - Aging
  - Consent for research – showing what is proposed
  - Consent for surgery – showing surgery
  - Pain management
- GIS
- Others