How can we achieve a high level of interoperability in genomic data and use it to improve patient outcomes? By standardizing the data collected and shared across many systems - laboratories, clinicians, researchers, and other stakeholders: enabling a learning health system.

FHIR Accelerators and Genomics

HL7 FHIR has gained rapid acceptance on a global scale as an innovative standard for enabling health data interoperability. HL7 created the FHIR Accelerator program to develop and assist communities across the global care spectrum to rapidly create and foster adoption of high-quality FHIR Implementation Guides that improve health care and research.

The HL7 Clinical Genomics Workgroup has been developing a FHIR Genomics Implementation Guide, including an information model, definition of diverse genomic resources and guidance for the use and implementation of these FHIR resources for a variety of clinical genomic use cases.

Now, it is time to accelerate the adoption of FHIR Genomics as a common, computable, data standard. Such adoption is essential to enabling the incorporation of Genomics into clinical care and the tremendous benefits which this provides.

Join us in the formation of GenomeX. Housed under the CodeX FHIR Accelerator, GenomeX is focused on strengthening and enhancing FHIR Genomics which is foundational to a large number of clinical domains. GenomeX will leverage the FHIR Clinical Genomics Implementation Guide to execute scalable pilots that improve and demonstrate the value of FHIR Genomics within multiple use cases.

Why GenomeX?

Currently, the majority of genomic tests are sent from the laboratory to health care organizations in the form of a PDF, isolating this non-computable information within the EHR, and inhibiting it’s use for clinical care and research. A common thread
in all GenomeX use cases is the collection of data in a standardized, machine-readable format, allowing this data to be used for many uses. Use of the FHIR Genomics standard enables appropriate data to be stored in EHRs for clinical care, as well as increasing the interoperability of genomic and EHR data, allowing stakeholders to analyze real-world data from large cohorts of patients. Access to data on patients with diverse demographics, allows informed treatment decisions between clinicians and patients, new research, as well as development of clinical decision support tools.

GenomeX Goals

- Create a multi-stakeholder community, working together as subject matter experts, to enable high-quality, computable data for the genomics ecosystem.
- Ensure that the FHIR Genomics Resources and Implementation Guide meet the needs of stakeholders through real-world pilots across a variety of use cases.
- Gain expert feedback from stakeholders on FHIR Genomics Resources: potential areas for improvement and development.
- Drive adoption for FHIR Genomics through Accelerator participation and implementation, and the publicity these generate, to create greater awareness of the HL7/FHIR Genomics standard.

Join Us and **Lead the Quest for Smarter Genomic Data towards Improved Clinical Care and Outcomes**

GenomeX Members reflect the diverse perspectives required to drive community-led, impactful use of FHIR Genomics standards. We are actively seeking leading organizations across all stakeholder groups who wish to **lead in the use of FHIR Genomi**
cs, gain a deeper understanding of how to use FHIR Genomics and influence the future of FHIR Genomics – all with the objective of improving clinical care and patient outcomes. Paid membership and participation in GenomeX have many advantages: seats on the Operating Committee, Use Case Leadership Teams, and the ability to sponsor another organization into GenomeX. Detailed information about GenomeX membership can be found here: CodeX Membership Options.

We are currently establishing our membership in order to identify our first use cases. GenomeX use cases are based on the interest of the Membership as well as their impact on high-quality, computable data, enabling the genomics ecosystem. GenomeX use cases current being discussed include:

- **Using FHIR Genomics to share genomic data between laboratories, healthcare organizations and EHR vendors.**
- **Developing and utilizing FHIR Genomics operations.** Based on the premise that genomic data is stored in a repository (by a healthcare group, academic institution or vendor), FHIR Genomics operations ‘wrap’ the repository, hiding its complexity, then presenting a clear and uniform interface to developers, regardless of internal repository’s complexity or data structures.
- **Create open industry Implementation Guides for use cases of importance to patients, providers, vendors, or the industry as a whole.**
- **Implement select components of FHIR Genomics into commercial systems or reference implementations.**
- **Pilots demonstrating feasibility and value of early adoption and scale of FHIR Genomics.**

**How to Get Involved?**

- Contact Arthur Hermann (arthur.hermann@kp.org) or May Terry (mayt@mitre.org) - to get involved in shaping and to participate in GenomeX use cases.
- Contact the CodeX team at CodeX@HL7.org to discuss Membership options that will enable you and your organization to drive real impact within GenomeX and any other CodeX Use Cases of interest.

Archive of discussions from early 2021