



Health Informatics Module

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OVERARCHING MODULE GOALS

- Standardize – standardize data models, data elements, and processes across the CTSC to lower barriers for using electronic health record data
- Enable – enable clinical and translational research through broader implementation of self-service and assisted informatics tools. Enhance education, training, and support, with a focus on recruiting underrepresented minorities, social determinants of health, and health disparities
- Share – develop tools and processes that embrace a culture of Open Science and Data Sharing that promotes the F.A.I.R. principles
- Innovate – continue innovation including
 - Use of F.H.I.R.
 - Big data tool development and use
 - Integration with external datasets
 - Recruiting underrepresented minorities
 - Social determinants of health
 - health disparities

PLANS TO ACHIEVE GOALS

- Standardize
 - One open-source common data model across all institutions
 - Use Common Data Elements wherever possible
 - Processes to ease access to EHR data across all institutions
- Enable
 - Implement and use standard health informatics tools (open and proprietary)
 - Implement standard training materials and support models to educate and train the workforce
 - Increase enrollment in formal Informatics educational programs and integrate informatics into other educational programs
 - Conduct regular needs assessment
- Share
 - Develop and implement tools and processes for researchers to embrace Open Science and Data Sharing that promotes F.A.I.R. principles
- Innovate
 - Identify and expand uses of F.H.I.R.
 - Implement and expand use of and innovation with “big data” resources and tools (Explorys, TriNetX, Epic Cosmos, OMOP/OHDSI).
 - Focus efforts toward research involving underrepresented minorities, social determinants of health, and health disparities

OUTCOMES AND METRICS

- Standardize
 - Implementation of a common, open source data model across all CTSC institutions (Y/N)
 - Implementation of standard processes to access EHR data across all CTSC institutions (Y/N)
 - Increased use of Common Data Elements across all CTSC institutions
- Enable
 - Increase the # of uses of informatics tool and resources
 - Increase the # of end users utilizing training and support resources
 - Increase the # of trainees “touched” by educational programs (similar to current informatics metrics)
 - Increase user satisfaction through a regularly administered needs assessment survey
- Share
 - Increase the # of data sets and other “intermediaries” of scholarly activity shared
 - Increase the # of Informatics related and enabled publications
- Innovate
 - Increase the # of users of “big data” tools
 - Increase the # of research initiatives using F.H.I.R
 - Implementation of EHR geocoding across all CTSC institutions (Y/N)
 - Implementation of standardized social determinants of health tools across all CTSC institutions (Y/N)
 - Implementation of tools to assist with research involving underrepresented minorities, and health disparities (Y/N)

Need to adapt to SMART goals!



YEAR FIVE PLANS TO FILL GAPS

- Standardize
 - Agree upon and develop plan for open source common data model across all CTSC institutions
 - Develop governance team and process to achieve standard processes to access EHR data across all CTSC institutions
 - Review Common Data Elements to identify gaps and implementation plan/process for next grant period
- Enable
 - Create Informatics Advisory Board (research “customers” to advise Health Informatics team on activities)
 - Agree upon standardized informatics tools and resources for new grant
 - Identify team to collate existing and develop new standardized training and support resources
 - Expand clinical informatics fellowship and elective to at least another site
 - Administer baseline “needs assessment survey”
- Share
 - Develop plan for tools and processes to embrace Open Science and Data Sharing that promotes F.A.I.R. principles
- Innovate
 - Develop plan to implement geocoding across EHRs across all CTSC institutions
 - Develop plan to standardized social determinants of health tools across all CTSC institutions
 - Identify at least one research project that utilizes F.H.I.R. in innovative ways
 - Identify at least one research project that uses informatics tools to assist with research involving underrepresented minorities, social determinants of health, and health disparities



Addressing CTSC Overall Goals

- **To understand the underlying barriers to the suboptimal recruitment of underrepresented minorities.**
 - Provide tools to enhance access of EHR data for research and recruitment of URMs
- **To facilitate and expedite innovation in multicenter clinical research, across the partners and collaborators, including fully integrated community partners**
 - Provide standardized common data models and tools across all partner institutions
 - Provide tools that enhance research and translation using SDOH
- **To disseminate and implementation of innovative research programs across partners and collaborative institutions, including digital health technologies.**
 - Provide standardized tools that enhance research and translation using EHR and other data sources
- **To create and disseminate broad and high impact educational and training programs for clinical research professionals of all disciplines, both in hospital and community settings.**
 - Provide workforce training sessions and materials to enhance the use of electronic data and tools
 - Provide formal training programs (certificate, MS, Ph.D.) to grow the workforce



Questions for the EAC

- Support vs innovation – What is the best balance of health informatics supporting “other” research vs health informatics innovative research?
- F.A.I.R. – What is expected/realistic to propose regarding “embrace Open Science and Data Sharing that promotes F.A.I.R. principles”?
- Open source vs proprietary tools – What is the right “balance” of open source vs proprietary tools to discuss/propose
- CTSC projects – What type of project(s) should we propose in the overall grant to “highlight” health informatics opportunities?
- Advice/Feedback – What other advice/feedback do you have?