



NATIONAL CENTER FOR DATA TO HEALTH

KEY PARTNERS



**OREGON CLINICAL
& TRANSLATIONAL
Research Institute**

Northwestern University

NUCATS

Clinical and Translational Sciences Institute



JOHNS HOPKINS
INSTITUTE for CLINICAL &
TRANSLATIONAL RESEARCH



Scripps Research
Translational Institute



SageBionetworks



Washington University
Institute of Clinical and
Translational Sciences



**The Jackson
Laboratory**



Institute for Clinical and
Translational Science



Institute of Translational Health Sciences
ACCELERATING RESEARCH. IMPROVING HEALTH.

OVERVIEW

With the ever-increasing volume of complex and fragmented health data that have the potential to revolutionize the efficiency and efficacy of healthcare, a challenge lies in identifying and utilizing these data to transform patient care and accelerate research discoveries. Translational research institutions across the country house a wealth of clinical data. However, these data, in addition to data generated by the healthcare system, other researchers, and personal tracking devices, are difficult to access, share, and use.

To realize the full potential of these data, the informatics community strives to build an infrastructure to unite the data ecosystem, enable innovative new analytics, and promote effective collaboration across the researcher-clinician spectrum. The National Center for Data to Health (CD2H), led by Oregon Health & Science University, was launched by NIH in the fall of 2017 to accelerate the translation of data into medical knowledge and improve patient outcomes.

GET INVOLVED WITH CD2H



@data2health

github.org/data2health

cd2h.org/onboard

NATIONAL COVID COHORT COLLABORATIVE



The N3C is a partnership amongst CTSA hubs, distributed clinical data networks (PCORnet, OHDSI, ACT/i2b2, TriNetX), and other organizations. The N3C aims to improve the efficiency and accessibility of analyses with COVID-19 clinical data, expand our ability to analyze and understand COVID, and demonstrate a novel approach for collaborative pandemic data sharing.

CD2H COMMUNITY CORES & PROJECTS



**Resource
Discovery**

- Science of translational science research platform to find resources and expertise
- New models to support attribution of translational research artifacts
- InvenioRDM research product repository
- Data inventory and API registry and tools



**Informatics Maturity
& Best Practices**

- Informatics maturity model for CTSA hubs
- Informatics best practices playbook
- Governance best practices



**Next Generation
Data Sharing**

- Harmonizing clinical data models such as FHIR, ACT/i2b2, PCORnet, and OMOP;
- Healthcare Open Terminology (HOT) ecosystem provides value set mapping, graph operations, and terminology development tools



**Tool & Cloud
Infrastructure**

- Secure cloud-based data sharing for CTSA hubs
- Infrastructure for shared apps in the cloud
- Cloud-based Sandboxes for Natural Language Processing, Data Quality, and Machine Learning tools and best practices
- DREAM challenges to bring algorithms to data
- Standard cloud-based DUA

N3C WORKSTREAMS



**Data Partnership
and Governance**

- Create a common data use agreement (DUA)
- Designate a central IRB and central protocol
- Establish a Data Access Committee



**Phenotype and
Data Acquisition**

- Identify COVID-19 patients and controls and help partners extract and contribute data



**Data Ingestion
and Harmonization**

- Harmonize EHR data provisioned via OMOP, ACT/i2b2, PCORnet, or TriNetX into a single data model to enable analytics over a nationwide large-scale dataset



**Collaborative
Analytics**

- Build a secure data enclave and collaborative portal to deploy machine learning and other analytical tools
- Clinical scenarios & Data: Define key questions
- Tools & Resources: Deploy user interfaces and machine learning methods
- Dashboards: Track progress and matchmake participants