CONCEPT CLEARANCE RECORD
FY 2017 RESEARCH INITIATIVE – NCATS

TITLE: CTSA Program Data to Health (CD2H) Initiative

OBJECTIVE(S): The purpose of the *CTSA Program Data to Health (CD2H)* initiative is to demonstrate and disseminate through NCATS' Clinical and Translational Science Awards (CTSA) Program the advances in informatics that can help catalyze the translation of discoveries into health benefits. The academic medical centers ("CTSA Program hubs") participating in CTSA Program are uniquely positioned to harness the transformative potential and inherently collaborative nature of informatics for translational research. They have existing strength in the collection, management and analysis of biomedical research data, and they are at the crossroads of clinical care and research. Collaborations among CTSA Program hubs have the potential of even greater impact on human health than any individual component of the CTSA Program could have. However, there is currently limited support in the CTSA Program for such collaborations. The *CD2H* initiative will leverage cutting-edge informatics and the reach of the CTSA Program to foster collaborative innovations in biomedical research informatics and data science. By using the CTSA Program as a national biomedical research informatics laboratory to discover, develop, demonstrate and disseminate innovations in informatics tools, standards, methods and processes, the *CD2H* initiative has the potential to advance translational research across the CTSA Program, and eventually the biomedical research enterprise.

DESCRIPTION: The purpose of the *CD2H* initiative is to solicit applications to promote excellence and innovation in biomedical research informatics. Biomedical research informatics is distinctly positioned as a discipline that broadly applies to translational research. It integrates advances in computer science, information technology, engineering and statistical methods for interpreting and using information from a wide variety of sources, including but not limited to biomedical research data (e.g., biological sequences and molecules, electronic health records, clinical research, behavioral science, trial data, and mobile devices).

The *CD2H* initiative will serve four key functions: 1) coordinate activities across the CTSA Program to harmonize standards in biomedical informatics that facilitate the development of interoperable data collection (e.g., standards for ontologies, natural language processing tools, software and hardware); 2) promote innovation for collaborative biomedical informatics tools, methods, processes and technologies to advance translational science; 3) set up a collaborative, sustainable information technology (IT) model that enhances existing tools, demonstrates effectiveness, conveys and adapts easily, and evaluates CTSA Program-shared tools created by the hubs; and 4) promote the use of biomedical research informatics and data science training and educational resources to CTSA Program researchers.

IMPORTANCE: In order to maximize its potential impact on human health, the CTSA Program should leverage its strength as a consortium and promote the collaborative collection and analysis of biomedical research data from diverse data sources, including CTSA Program-affiliated researchers, health care organizations, mobile devices, patients and/or caregivers.

HISTORY: A long-time CTSA Program goal has been to stimulate and support local and regional excellence in translational research training and methods. Now, NCATS is leveraging this enhanced proficiency to create a collaborative consortium of academic medical centers that can make strides in biomedical research that no one institution could make in isolation.

There is now increasing momentum among stakeholders (funders, regulators, biopharma, academia, health systems and patient groups) to develop strategies and resources for the collaborative collection and analysis of biomedical research data. Examples include, but are not limited to, the NIH Big Data to Knowledge (BD2K) and Lister Hill National Center for Biomedical Communications Initiatives, the U.S. Department of Health & Human Services/Office of the National Coordinator for Health Information Technology Health IT Dashboard, the Precision Medicine Initiative, and the Food and Drug Administration's resources for data standards and its Centers of Excellence in Regulatory Science and Innovation. Such programs create unique and timely opportunities for the CTSA Program to adopt, demonstrate and disseminate innovations in biomedical research data, training and resources.

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