

## **Massachusetts Health Disparities Monitoring System Project Summary**

One of the most significant natural experiments in health reform in the nation is occurring in Massachusetts, which in 2006 implemented health insurance coverage for [nearly] all citizens. Thus, Massachusetts is the ideal setting in which to monitor and evaluate the cardiovascular disease (CVD) and risk factor disparities associated with these changes in health insurance as well as other changes from the current economic downturn. In this proposal, we are seeking approval to develop a limited data set to create an easily usable data repository, the Boston Massachusetts Health Disparities Repository ( "Boston-MHDR") for child and adult residents using clinical data from Boston Medical Center and its affiliated community health centers as well as claims data from the BMC HealthPlan, the largest statewide provider of the new low income insurance product. We will use i2b2, an open-source, scalable informatics platform offering a broad array of translational informatics tools including a clinical data repository and a standard ontology. I2b2's data structure, ontology, and query (analytic) tools allow the integration and analysis of massive amounts of data from disparate systems, and presents a radical advance in the ability to use clinical data for disparities monitoring. All i2b2 systems share a common architecture; data, queries, and software tools can be shared between systems to support inter-institutional disparities research. After the Boston-MHDR is developed, and under separate IRB protocols, the Boston-MHDR will be used for research by members of this study team only, and to test the feasibility of applying this novel resource for disparities monitoring. The first analyses we will propose are for common CVD risk factors and chronic conditions where there are known disparities, and which national public health goals seek to improve: hypertension, hyperlipidemia, obesity/overweight, and tobacco use, however in the future we hope to expand our focus to other clinical conditions. In this application we are requesting approval to establish the data repository of the Boston-MHDR, by requesting approval to create a Limited Data Set and a waiver of informed consent to access identifiable data within the BMC- Clinical Data Warehouse (BMC-CDW) via automated scripts which will create the limited data set in the Boston- MHDR and update it on a monthly basis. We are also requesting permission include census tract ( HIPAA covered PHI) in the Boston-MHDR. This latter information is critically important for us to be able to monitor community-level health disparities in the future, and to examine the potential differential impact of health reform by community. We are also requesting permission to include a unique identifier registry ID to be used to match subjects in the data repository back to identifiable data sets for the purposes of conducting data updates. If granted permission to retain this latter identifier, the future data manipulations will be more efficient and thus, the subjects will be exposed to less risk of breach of privacy.

In addition we will examine the impact of health reform on cardiovascular risk factors, processes of care, and health outcomes, and in disparities in each of these dimensions, both pre- and post-reform. We propose to study common Cardiovascular (CVD) risk factors and chronic conditions where there are known disparities, and which national public health goals seek to improve: hypertension, hyperlipidemia, obesity/overweight, and tobacco use.