ABSTRACT: The Irving Institute for Clinical and Translational Research (Irving Institute) is home to Columbia University’s Clinical Translational Science Award (CTSA) Program Hub in New York City (NYC). By April of 2020, NYC had become the United States’ COVID-19 epicenter. In response to the pandemic, the Irving Institute was confronted by several significant issues, including 1) developing a comprehensive biobanking protocol for genetic, molecular, and translational studies of COVID-19, 2) triaging ongoing clinical research to maximize participant safety and project sustainability, and 3) expanding opportunities for COVID-related clinical research to identify novel diagnostic, therapeutic, and preventive interventions. We will highlight innovative responses from the Irving Institute Precision Medicine Resource (PMR) and Clinical Research Resource (CRR).

Early on in the COVID-19 pandemic, the PMR and CRR applied algorithmic approaches to 1) create a comprehensive biobanking protocol and database in the Columbia University Biobank (CUB), 2) triage ongoing clinical research into projects that should be suspended based on risk: benefit ratio analyses; could be continued after relocation into identified lower COVID-risk environments, or the cessation of which would be seriously detrimental to participants, 3) identify areas and streamline opportunities to implement priorities COVID-related research.

The Columbia CTSA Program hub’s approaches to biobanking, ongoing clinical research, new COVID-related research, and new COVID-related biobanking successfully adapted to a fluctuating environment including caseloads, demand for hospital beds, and new diagnostic, preventative and treatment-related protocols. These algorithms could potentially be applied in other emergent situations.