Office of Research & Development

Program Announcement for

Research on Post-COVID-19 Conditions and Other Long-Term Outcomes of COVID-19 Infection

October 15, 2021

Introduction

Understanding the long-term outcomes for Veterans who have survived COVID-19 infection is of critical interest to the VA Office of Research and Development (ORD) and necessary to develop effective interventions to improve those outcomes and to allow VA to plan for care of affected patients. This Program Announcement is intended to summarize the funding mechanisms available to eligible VA scientists for research related to post COVID-19 conditions as defined by the World Health Organization[1]. The term "post COVID-19 conditions" encompasses a range of clinical conditions, symptoms and complications that have been variably referred to as Post-Acute Sequelae of SARS CoV-2 infection (PASC), long-term complications of COVID and the colloquial term "long-COVID". Published Requests for Applications (RFAs) issued by ORD research services for Merit, Small Project in Rehabilitation Research (SPiRE), Career Development Awards (CDAs), and Minority Serving Institutions Career Development Awards (MSI-CDAs) may be used to propose research into post COVID-19 conditions. This Program Announcement describes the specific priorities for each ORD research service. In developing post COVID research applications, investigators are encouraged to be familiar with ORD's ongoing studies in the area, as well as the potential research infrastructure resources which have been developed to support COVID-19 research, e.g. VA Science and Health Initiative to Combat Infectious and Emerging Life-Threatening Diseases (VA SHIELD) biorepository. Please visit https://www.research.va.gov/covid-19.cfm for more information.

In addition to ORD's parent RFAs, we are currently planning a collaborative funding opportunity based on the Collaborative Merit program of the Biomedical Laboratory and Clinical Science Research and Development Services. This opportunity will allow investigators to submit individual applications as part of a group of 3 projects that address a common clinical or scientific issue relevant to post-COVID-19 conditions. These collaborations may be across research services or within one research service and will be supported by additional funds for core infrastructure. Applicants can propose up to three core infrastructure components (one being an administrative core) to advance data or methods, explore mediating or moderating risk-factors, develop new biomarkers for post-

[1]World Health Organization. *A clinical case definition of post COVID-19 condition by a Delphi consensus.* Geneva, Switzerland; 2021.

COVID-19 conditions, or improve engagement of clinical partners or patients, among others. We anticipate release of the RFA by **November 7th.** We are releasing this information now so individual investigators can consider and develop collaborations with other teams in order to move needed scientific evidence and knowledge forward. The initial stage of the application process will require a letter of intent (LOI) describing the clinical or research problem of interest, the aims and methods for each of the three studies, and the role of infrastructure cores. Investigators with approved LOIs will then develop full applications which will be reviewed by a single, cross-disciplinary panel. ORD will conduct a webinar in advance of the LOI deadline to answer questions. The anticipated deadline for LOIs is January. Please note: applications submitted to HSRD or RRD for the December 2021 deadlines may be included in a LOI for the collaborative funding opportunity.

Between the current funding mechanisms and the new opportunity to be presented in a Collaborative Merit RFA, ORD hopes to engender wide-ranging team science to address the highly relevant questions related to post-COVID-19 conditions, and thus improve Veterans' healthcare.

Research Priorities by Service

Biomedical Laboratory R&D Service (BLRD)

The goal of BLRD is to support laboratory, animal and -omic studies that will discover biomarkers that predict post COVID-19 conditions and biomarkers for active post COVID-19 conditions, that will explain the pathophysiology of post COVID-19 conditions, and that will help to identify potential treatments for post COVID-19 conditions. Areas of interest include:

- Studies of validated animal models designed to identify potential biomarkers of risk of developing post COVID-19 conditions
- Studies of validated animal models designed to identify potential biomarkers of active post COVID-19 conditions.
- Studies of validated animal models designed to determine the pathophysiology of post COVID-19 conditions.
- Studies of validated animal models designed to identify potential treatments for post COVID-19 conditions for future testing.
- Studies designed to identify biomarkers of post COVID-19 conditions risk or active post COVID-19 conditions and to identify pathways involved in post COVID-19 conditions pathogenesis and potential targets for treatments.

Note that studies involving prospective collection of data on human subjects or which involve more than minimally invasive procedures are not in BLRD purview.

Clinical Science Research and Development (CSRD) Service

CSRD is focused on supporting research that answers important clinically related or clinically translatable questions. For example, in post COVID-19 conditions, we are interested in assessing factors that impact patient centered outcomes including "how long will I be impacted?" and "how we will know what symptom intervention is effective?" Applications should include a description of what specific clinical questions are being addressed in the application. We are interested in interventional and effectiveness studies, clinical, and epidemiological studies. Areas of interest include, but are not limited to:

- Changes and trajectories specific to post COVID-19 conditions in suicide risk, mental health conditions, substance use and abuse, as well as factors that may impact such trajectories
- Effective treatment and management of mental health exacerbation due to post COVID-19 conditions
- Physical and cognitive functioning in post COVID-19 conditions, and comparison to baseline health and function
- Understanding the fluctuation of symptoms (persistent or new) in post COVID-19 condition and the potential impact on health outcomes or treatments
- Identification of biomarkers (including viral variants, genetic susceptibility, inflammatory markers, diagnostic markers, etc.) associated with specific symptoms of post COVID-19 conditions
- Identification of patient and disease risk factors that influence the development and duration of post COVID-19 conditions?
- Predictors of development and duration of post COVID-19 conditions
- Impacts of COVID treatments and vaccination on post COVID-19 conditions
- Long-term cardiac, neurological, mental health and pulmonary complications versus exacerbation of other chronic disease states versus combination of both conditions
- Impacts of conditions or exposures prevalent in Veterans that influence post COVID-19 conditions onset and duration

Health Services R&D (HSRD)

The goal of HSR&D is to identify and evaluate innovative strategies that lead to accessible, high quality, and equitable care for patients. For this announcement, HSR&D is particularly interested in applications that will add to our understanding of the following impacts of post COVID-19 conditions:

- Health system utilization and costs of patients with specific post COVID-19 conditions (note: the COVID Outcome Research Collaboratory two-year outcomes study will characterize impact of COVID infection on outcomes and costs at a population level).
- Impacts need for long-term services and support

- Issues related to health equity in the receipt of services of post COVID-19 conditions
- Different models of care for post COVID-19 conditions ("long COVID" clinics)
- Patient & Provider beliefs, attitudes, and experience concerning post COVID-19 conditions
- Impacts of post-COVID symptoms on quality of life and well-being
- Patient self-care practices, care-seeking behavior , and use of complementary and integrative therapies in response to post COVID-19 symptoms
- Differential effects of post COVID-19 conditions in special populations (e.g., the homeless, patients in long-term care, patients with serious mental illness, etc.)

Rehabilitation Research & Development (RRD)

The goal of RRD is to maximize Veterans' functional independence, quality of life and participation in their lives and community. The RR&D purview includes clinical, preclinical or applied rehabilitation research to enable translation into clinical practice to maximize Veterans' functional independence, quality of life and participation in their lives and community. To meet the RR&D mission, rehabilitation research may

- restore the structure and function of body tissues impaired by injury or disease;
- replace damaged body tissues and functions with innovative approaches;
- return Veterans with disabling conditions to full and productive lives.

For this Announcement, in addition to the general information provided, RR&D is interested in the impact of post COVID-19 conditions on Veterans' physical, sensory, cognitive and psychosocial function by:

- Revealing late or delayed effects of post COVID-19 conditions on impairment and disability;
- Considering the influence of comorbidities (e.g., pre-existing pulmonary, cardiometabolic, oncologic, mental health, immunological or other disorders, etc.) and other risk factors (e.g., age, race, ethnicity, living conditions, environmental exposures, etc.) on the impacts of post COVID-19 conditions on impairment and disability;
- Examining new or established rehabilitation interventions and responses to treatment for Veterans experiencing post COVID-19 conditions.

Please contact the mailbox below if you require further information:

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