

**RESEARCH LETTER****The “Vascular Surgery COVID-19 Collaborative” (VASCC)**

The COVID-19 pandemic has drastically altered the medical landscape, and various strategies have been employed to preserve hospital capability and equipment.<sup>1</sup> Not in our lifetime have we seen such a rapid and widespread cancellation of scheduled surgical operations. Nearly all hospitals in regions affected by the pandemic temporarily halted the performance of elective surgery at some point, and, for many of them, only emergency operations were being performed during the peak of the pandemic surge.

Although necessary for the preservation of public health, increasing concerns have mounted in the vascular community about the disruption of clinical routine and the need to establish new protocols for the delivery of regular care.<sup>2</sup> Vascular patients are a vulnerable population during a pandemic; at the same time, the time critical nature of many vascular operations endangers patients when elective procedures cannot be carried out within expected timeframes. Furthermore, reports of thrombotic complications in patients with COVID-19 have raised awareness of possible relationships between the virus and endothelial damage, with increased thrombotic risk.<sup>3</sup>

The importance of research, and of the unique research opportunities this situation presents, should not be overlooked, but considered an opportunity.<sup>4</sup> The great number of patients who may have had their procedures postponed due to COVID-19 mandates an analysis of the consequences of such a delay. Also, vascular surgeons are often at the frontline of the treatment of thrombotic diseases, putting them in a privileged position to explore the topic.

We would like to bring the “Vascular Surgery COVID-19 Collaborative” (VASCC) to the attention of our colleagues. VASCC was established to provide vascular surgeons from around the world with the opportunity to study the fundamental issues facing our specialty through two distinct research projects.<sup>5</sup>

**Project 1: “Impact of COVID-19 on scheduled vascular operations”.** This project provides a mechanism to formally assess the impact of surgical delay on patients with vascular disease and will investigate the natural history of those whose operations were postponed as a result of the pandemic. This project will also evaluate alterations in surgical care provided in response to the global pandemic, including identification of the stakeholder responsible for surgery cancellation or postponement, and changes in type and location of surgery performed, all of which affect the healthcare system. The project will cover five major areas of vascular practice and conditions (carotid, aortic, peripheral, venous, and haemodialysis).

**Project 2: “Thrombotic complications of COVID-19”.** This project seeks to investigate the possible thrombotic

manifestations of the disease and to underline management practices under such circumstances. The project will have four specific modules encompassing a wide range of thrombotic conditions of the arterial and venous systems (acute limb ischaemia, acute mesenteric ischaemia, symptomatic venous thrombo-embolism, and stroke).

VASCC, launched in the wake of the COVID-19 pandemic to leverage key research data related to the impact on the provision of vascular care and outcomes of vascular diseases, will publish under a collaborative authorship module and seeks to promote broad engagement of surgeons and physicians from diverse backgrounds. We are allowing two participants per institution, and trainee or medical student participation is encouraged.

As of 9 June 2020, VASCC has already received commitment from more than 200 collaborators encompassing 171 sites and 34 countries (Fig. 1). Relevant experts from the global vascular community have been involved in the development of the study modules, with the goal of providing a data collection tool that is comprehensive, yet not overwhelming. Each module was first drafted by a dedicated working group and subsequently beta tested to ensure consistency and transparency. Lastly, a WhatsApp message group is available by invitation to VASCC members who are interested, to promote conversation and facilitate the sharing of ideas.

Worldwide coordinated efforts are needed to obtain high quality data of sufficient power to overcome the limitations imposed by scattered gathering of information. We are on different places along the curve, and are affected to varying degrees, but all this information is to be captured in order to paint a complete picture of the global impact of the pandemic on the delivery of vascular care. Broad participation is required to be able to achieve a robust dataset that will yield relevant clinical information. We acknowledge that some areas might have been able to continue elective surgery so far during the pandemic, which is a potential limitation of our study. However, these regions may be affected in the future and understanding the impact of the pandemic on the provision of vascular treatment could be useful to tailor better pathways of care.

There is an obvious and urgent appetite for research around the COVID-19 pandemic among physicians, institutions, and policymakers. At the time of writing, the COVID-19 Vascular sERvice (COVER) trial is also capturing global data on vascular practice amidst the current pandemic; we view these projects as complementary and encourage participation in both. The data from these projects will help us understand the impact of the current COVID-19 global pandemic on vascular patients and provide the international vascular community with usable data to improve care pathways for our patients in the face of predictable resurgences of COVID-19, or in the case of an inevitable future pandemic or natural disaster.

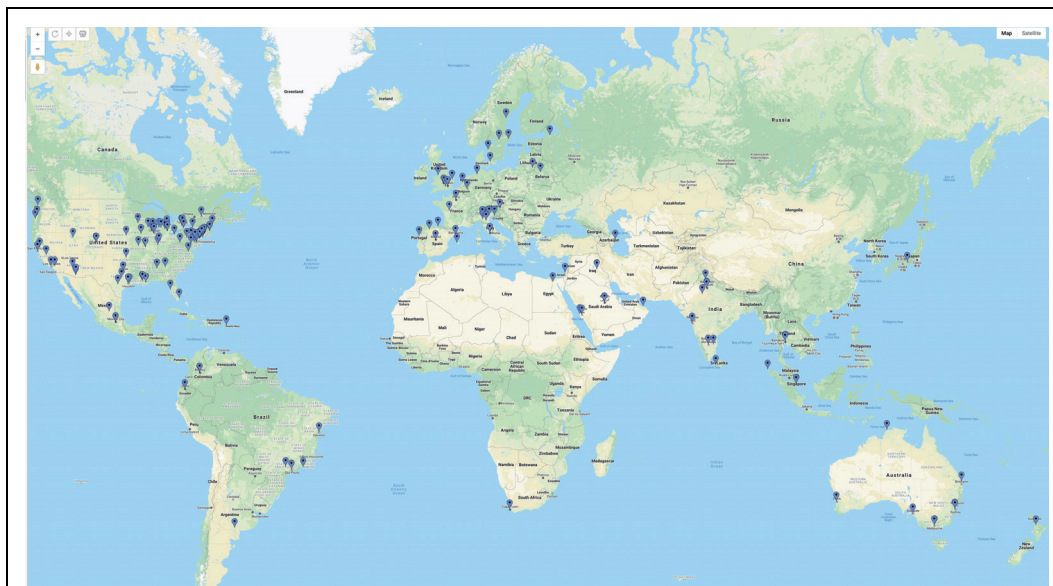


Figure 1. Geographic distribution of Vascular Surgery COVID-19 Collaborative participating sites as of 9 June 2020.

More information and details on how to join are available on the website: <https://medschool.cuanschutz.edu/surgery/specialties/vascular/research/vascular-surgery-covid-19-collaborative>

#### CONFLICTS OF INTEREST

None.

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