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## **COVID-19 CMAJ headlines:**

- **Four Canadian COVID-19 randomized controlled trials**
- **Triage system for extracorporeal life support during COVID-19**

## **Four Canadian COVID-19 randomized controlled trials**

OTTAWA – Canadian researchers, in close collaboration with their international counterparts, are starting to conduct high-quality research on therapies to treat and prevent coronavirus disease 2019 (COVID-19), to help Canadians and people around the world. They describe in *CMAJ (Canadian Medical Association Journal)* 4 randomized controlled trials (RCTs), in collaboration with global colleagues, that will investigate potential COVID-19 treatments.

“As the number of severely ill patients with [COVID-19] continues to increase, we must learn as much as possible about this disease, as quickly as possible, to inform patient care,” writes Dr. Srinivas Murthy, an infectious disease specialist and investigator at BC Children’s Hospital and the University of British Columbia, Vancouver, BC, with coauthors.

In pandemics such as COVID-19, unapproved, experimental medications are already being used outside of clinical trials. However, as unproven treatments can be harmful or at the very least ineffective, evidence-based therapies from RCTs are vital.

“[T]here is a strong ethical and clinical argument for replacing such “random” care with randomized care, in which patients are routinely randomly assigned to the most promising available option(s) or to control arm(s), so that evidence regarding the safest, most effective therapies may be generated in the shortest possible time,” write the authors.

The speedy scale-up of Canada’s research infrastructure, the federal governments’ rapid funding of COVID-19 research and swift action from regulatory bodies have enabled researchers to spring into action.

Four COVID-19 studies mentioned in the article:

- Canada’s COVID-19 trial, **CATCO (Canadian Treatments for COVID-19)**, is the largest treatment trial in the country and will be part of the World Health Organization’s Solidarity Protocol to evaluate treatments for patients in hospital. The Canadian research team will evaluate the antiretroviral drugs lopinavir–ritonavir, and are adding in hydroxychloroquine and remdesivir for evaluation, in conjunction with countries around the world.
- **REMAP-CAP (A Randomised, Embedded, Multi-factorial, Adaptive Platform Trial for Community-Acquired Pneumonia)** now includes patients with COVID-19.

- The **CORIPREV LR (COVID-19 Ring-based Prevention Trial with Lopinavir/Ritonavir)** will evaluate the efficacy of these drugs in preventing transmission in exposed contacts using “rings” of contacts.
- The **COVID19 Postexposure Prophylaxis RCT** will randomly assign patients to hydroxychloroquine or placebo postexposure and in early treatment of disease, through an Internet system and home delivery of study medications.

Other Canadian trials are also getting underway.

Challenges to conducting RCTs in the middle of a pandemic include maintaining funding, rapid scale-up and minimizing the risk of infection for researchers. Novel strategies will be required to expedite patient enrolment and consent, such as video and other technologies, and simplifying data entry.

“As the pandemic evolves, the temptation to use unproven medications will be tremendous, but Canadian clinicians must maintain a commitment to the rigorous gathering of scientific evidence, in collaboration with global colleagues, so that we may quickly improve outcomes for all patients with COVID-19 worldwide,” the authors conclude.

For a list of community-sourced known Canadian trials, visit [canada-covid.idtrials.com](https://canada-covid.idtrials.com).

Read [CMAJ](#) and [CMAJ Blogs](#) for COVID-related content and first-person accounts.

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## **Triage system for extracorporeal life support during COVID-19**

Alberta has developed a 4-level system to triage extracorporeal life support (ECLS) to help manage this scarce resource during the COVID-19 pandemic, described in *CMAJ (Canadian Medical Association Journal)*. Other provinces, territories and programs could find the tool useful for their own pandemic responses.

ECLS is a precious and limited life-saving rescue therapy in which blood is externally oxygenated to help patients who are not stabilized with other therapies. During a pandemic, capacity strain may require limiting ECLS availability. Multidisciplinary medical and operational coordination of human resources, supply management, and clear provision and triaging guidelines will help an emergency command centre respond to dynamic critical care resource demands.

“An accurate and easily understood strategy to communicate ECLS capacity is essential,” writes Dr. Ken Parhar, a critical care physician at the University of Calgary and Alberta Health Services, with coauthors.

The authors suggest clearly outlining referral criteria in advance for ECLS, ensuring an ECLS consultant is on staff 24/7 to assess each case and to consider each case individually.

“Patients with advanced age, high burden of medical comorbidities and poor likelihood of recovering sufficient lung function to promote independent recovery may be deemed unsuitable ECLS candidates,” write the authors.

They caution it may not be feasible to provide ECLS at all, if the numbers of patients requiring critical care become very large.

“In the case of overwhelming demand for critical care resources, ECLS services would need to be suspended in order to redirect all available critical care resources according to need,” state the authors.

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