

COVID-19 existing resource response #7

(Last updated 8 April 2021)

Question

What is the best-available evidence about the impact of COVID-19 on developing coagulopathies?

What we found

We searched the COVID-END global and domestic inventories of best evidence syntheses to identify evidence documents that focused on the impact of COVID-19 on developing coagulopathies. The search terms used were: “COVID-19 related coagulopathies” OR “coagulopathy” AND COVID-19. We did not include evidence about conditions generated by a blood clot (e.g., thromboembolism, deep venous thrombosis and stroke). The existing evidence we identified is provided in Table 1.

The documents identified, include:

- seven full systematic reviews;
- one rapid review;
- four single studies (of which one is a recently posted pre-print);
- two protocols for systematic reviews; and
- two other types of documents (a science brief from the Ontario Science Table and a report from the Human Medicines Committee at the European Medicines Agency)

Box 1: Our approach

COVID-END in Canada responds to requests for evidence syntheses about topics related to COVID-19 that are likely to be explicitly considered by high-level decision-makers in multiple Canadian jurisdictions. This includes conducting rapid evidence profiles, living evidence profiles, rapid syntheses, and living evidence syntheses. Examples of these evidence products can be viewed [here](#).

Sometimes requests are submitted about questions that have already been addressed by one or more recently updated, high-quality evidence syntheses or will be addressed soon by work underway (e.g., through a rapid synthesis underway with or being planned by a Canadian team, registered synthesis protocol or CIHR funding to conduct a synthesis). In these situations, we prepare a response that profiles these existing resources. These responses are typically prepared by a combination of: 1) searching both the COVID-END domestic inventory and the COVID-END global inventory; and 2) contacting 40+ Canada evidence-synthesis teams to identify any additional resources or work underway that is relevant to the question posed in a request. Such an existing resource response is equivalent to a rapid evidence profile prepared with the same turn-around time.

We followed this approach to prepare this existing resource response, which was prepared in a half of a business day (and hence the equivalent to a half-day rapid evidence profile) to inform next steps in evidence synthesis, guideline development and/or decision-making related to the question that was posed.

Table 1: Hyperlinked titles to evidence documents about the impact of COVID-19 related coagulopathies

Evidence type	Evidence documents identified
Guidelines	None identified
Living reviews	None identified
Full systematic reviews	<ul style="list-style-type: none"> • Thromboembolism risk of COVID-19 is high and associated with a higher risk of mortality: A systematic review and meta-analysis • COVID-19 and coagulation dysfunction in adults: A systematic review and meta-analysis • Changes in blood coagulation in patients with severe coronavirus disease 2019 (COVID-19): A meta-analysis • Anticoagulation in COVID-19: A systematic review, meta-analysis, and rapid guidance from Mayo Clinic • Meta-analysis of coagulation parameters associated with disease severity and poor prognosis of COVID-19 • Coronavirus-19 and coagulopathy: A systematic review [COVID-COAG] (pre-print) • Systemic coagulopathy in hospitalized patients with coronavirus disease 2019: A systematic review and meta-analysis
Rapid reviews	<ul style="list-style-type: none"> • COVID-19 coagulopathy in pregnancy: Critical review, preliminary recommendations, and ISTH registry-Communication from the ISTH SSC for women's health
Single studies	<ul style="list-style-type: none"> • A prothrombotic thrombocytopenic disorder resembling heparin-induced thrombocytopenia following coronavirus-19 vaccination (pre-print) • Autoimmune heparin-induced thrombocytopenia
Protocols	<ul style="list-style-type: none"> • Coronavirus disease 2019 (COVID-19) associated coagulation disorders and its impact on outcomes: A meta-analysis study • Characteristics, outcomes and incidence of heparin-induced thrombocytopenia (HIT) in patients with COVID-19
Other types of documents	<ul style="list-style-type: none"> • Vaccine-induced prothrombotic immune thrombocytopenia (VIPIT) following AstraZeneca COVID-19 vaccination (science brief from the Ontario Science Table) • COVID-19 vaccine AstraZeneca: Benefits still outweigh the risks despite possible link to rare blood clots with low blood platelets (report from the Human Medicines Committee at the European Medicines Agency) • Heparin-induced thrombocytopenia: Pathogenesis and management (non-systematic summary) • A review of pathophysiology, clinical features, and management options of COVID-19 associated coagulopathy (non-systematic summary)

Wilson MG, Bhuiya A, Mansilla C, Lavis JN. COVID-END in Canada existing resource response #7: What is the best-available evidence about the impact of COVID-19 on developing coagulopathies?. Hamilton: McMaster Health Forum, COVID-END in Canada, 8 April 2021.

To help health- and social-system leaders as they respond to unprecedented challenges related to the COVID-19 pandemic, the McMaster Health Forum is preparing responses like this one. This response is funded by the Public Health Agency of Canada. The opinions, results, and conclusions are those of the McMaster Health Forum and are independent of the funder. No endorsement by the Public Health Agency of Canada is intended or should be inferred.



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