Protocol Brief

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Effectiveness and safety of antiviral or antibody treatments for coronavirus

Rationale

Based on our preparatory work, there is a need for an overall synthesis of potential therapies and medical countermeasures for COVID-19 or coronavirus in general as none currently exist.

Implications

The results of this rapid review will be shared with the Infectious Disease Prevention and Control Branch of the Public Health Agency of Canada (PHAC) to address their query on the effectiveness and safety of antiviral, antibody, or other medical countermeasures for the treatment of novel coronavirus (COVID-19).

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Objective

- To identify safe and effective medical countermeasures to address the current outbreak of a novel coronavirus (COVID-19) through the following research questions (RQs):
    1. RQ1: What is the effectiveness and safety of any antiviral and/or monoclonal antibody treatment currently available to treat (COVID-19)?
    2. RQ2: What is the effectiveness and safety of currently available antiviral therapies used to treat other coronavirus infections?

Methodology

- Due to a rapid timeline, streamlined approaches will be used
- Eligibility criteria using the PICOS framework:
    Population: Anyone treated for a coronavirus infection; subgroups will be older adults >65 years, pediatric, pregnant, or immunocompromised patients
    Interventions: Antiviral medications used alone or in combination for COVID-19 or other coronavirus infections and monoclonal antibodies approved or in pre-clinical trials for use in COVID-19
    Comparators: 1 intervention listed above, no intervention, or placebo
    Outcomes: Hospitalization, ICU admission, mortality, lab-confirmed coronavirus infection, and adverse events
    Study designs: Randomized controlled trials (RCTs), non-RCTs, observational studies, case studies, case reports, and case series, pre-clinical (animal) studies (for RQ1 only)
    Other: Limited to studies written in English
- **Literature Search:** Literature searches will be developed by an experienced librarian for MEDLINE, EMBASE, the Cochrane Library, biorxiv.org/medrxiv.org, and GIDEON. Grey literature will be searched via clinicaltrials.gov
- **Study Selection/Data Abstraction:** Calibration exercises will be conducted prior to citation and full-text screening, and data abstraction. Screening will be completed by single reviewers using Synthesi.SR, the Knowledge Translation Program's proprietary online software, and included studies will be abstracted by single reviewers
- **Synthesis:** The synthesis will involve a descriptive summary of included studies with summary tables and detailed tables of study results

Knowledge Translation Strategy

- Summary of results will be sent to PHAC and other relevant policy-makers as a brief summary report and 1-page policy brief. This work will also be submitted to an open-access, peer-reviewed journal for publication

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