INPLASY PROTOCOL

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Atypical presentation of COVID-19 in older adults: a scoping review

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Review question / Objective: The review questions of this scoping are: 1) What are the atypical presentations of symptoms of COVID-19 and its prevalence in older adults (60 or more years) that have been reported? 2) What are the demographic and clinical characteristics of older adults (60 or more years) with atypical presentations of symptoms of COVID-19? 3) What are the clinical outcomes for older adults with atypical presentations (60 or more years) of covid-19? The objective of this scoping review is to identify and analyse the atypical presentation of symptoms of COVID-19 in older adults.

Eligibility criteria: Participants: This scoping review will consider all studies that included persons with 60 years or over. Concept: This scoping review will include studies that focus on atypical presentations of Covid-19. Atypical presentation was defined as an absence of the typical symptoms of COVID-19 and the presence of unusual symptoms such as, but not limited to, delirium, fall, functional impairment, reduce oral intake, chest pain, etc. Context: This scoping review will consider all contexts, but not limited to, of hospital, long-term care, primary care, community services and home care.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 October 2021 and was last updated on 27 October 2021 (registration number INPLASY2021100103).

INTRODUCTION

Review question / Objective: The review questions of this scoping are: 1) What are the atypical presentations of symptoms of COVID-19 and its prevalence in older adults (60 or more years) that have been reported? 2) What are the demographic and

clinical characteristics of older adults (60 or more years) with atypical presentations of symptoms of COVID-19? 3) What are the clinical outcomes for older adults with atypical presentations (60 or more years) of covid-19? The objective of this scoping review is to identify and analyse the atypical presentation of symptoms of COVID-19 in older adults.

Background: According to the World Health Organization (WHO)(World Health Organization, 2020), on December 31, 2019, Chinese health authorities in Wuhan identified the presence of cases of an unknown "viral pneumonia". On January 30, 2020, WHO recognized this "viral pneumonia" as a Public Health Emergency of International Concern (PHEIC), having subsequently been classified as a pandemic, on March 11, 2020. Actually, exist more than 244 670 589 cases and, at least, 4 967 554 deaths worldwide. This infection was officially called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). In case of infection, people with COVID-19 showed a wide range of symptoms that appear 2-14 days after exposure to the virus. The more typical symptoms are: fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat and congestion or runny nose. However, other possible symptoms could be present, especially among older adults (Karlsson et al., 2021; Rawle et al., 2020; Vrillon et al., 2020). The disease, particularly infection, often manifests as subtle and unusual symptoms occurring outside of the normal rubric of traditional signs and symptoms and is called "atypical presentations". Likewise, other diseases, some studies highlight those older adults may not present the typical symptoms and signs of COVID-19.

Rationale: Different studies reported atypical presentations of COVID-19 (Davis et al., 2021; Karlsson et al., 2021; Rawle et al., 2020; Thiam et al., 2021). However, the results vary according to the context (e.g., hospital, community, long-term care), methodological design and definitions of

typical or atypical presentations. A study conducted with community-dwelling older adults reported that about 40% of participants (n=122) have had atypical presentation of COVID-19 (fall-36%, reduced mobility-36% and delirium-22%). At the time of hospital admission, many older adults had no respiratory syndromes (52%)(Couture et al., 2021), but they were more likely to present geriatric syndromes, such as delirium(Couture et al., 2021; Karlsson et al., 2021; Kennedy et al., 2020; Zazzara et al., 2021), functional decline(Couture et al., 2021) and falls (Couture et al., 2021; Karlsson et al., 2021). For these reasons, it is important to actualize the symptoms of COVID-19, in order to recognize the atypical presentations of the disease in older adults. A preliminary search on MEDLINE, the Cochrane Database of Systematic Reviews, the JBI Database of Systematic Reviews and Implementation Reports, the International Platform of Registered Systematic Review and Meta-analysis Protocols, and The Open Science Framework was performed and no current or in-progress systematic reviews on the topic were identified.

METHODS

Strategy of data synthesis: The proposed scoping review will be conducted following the Joanna Briggs Institute (JBI) methodology. A search strategy will be developed to identify published and unpublished studies. A three-step approach will be used in this review. First, a limited search will be carried out in MedLine (via PubMed) to identify relevant articles on the topic and extract MESH terms and other relevant words and expressions contained in the titles, abstracts, and keywords to build a full search strategy. A second search using these identified terms will then be conducted across all included databases. The third step will be the manual search of the reference lists of all included papers. The following electronic databases will be searched: MedLine (via EBSCO), Web of Science (via Web of Knowledge), Nursing & Allied Health: Comprehensive Edition (via

EBOSCO), MedicLatina (via EBSCO), Scopus, ScienceDirect, CINAHL Complete (via EBSCO), SciELO, World Health Organization International Clinical Trials Registry Platform (apps.who.int/trialsearch), WHO Global Literature on Coronavirus Disease Database and platform PUBCOVID-19 (http://pubcovid19.pt/eng/). For each chosen database, the search strategy will be adapted to fit the requirements. The reference lists of articles included in the review will be screened for additional papers. The search on grey literature will include DART-Europe and OpenGrey. Studies published in English, French, Portuguese or Spanish, from December 31, 2019, the day of the first case of COVID-19 was confirmed, will be included.

Eligibility criteria: Participants: This scoping review will consider all studies that included persons with 60 years or over. Concept: This scoping review will include studies that focus on atypical presentations of Covid-19. Atypical presentation was defined as an absence of the typical symptoms of COVID-19 and the presence of unusual symptoms such as, but not limited to, delirium, fall, functional impairment, reduce oral intake, chest pain, etc. Context: This scoping review will consider all contexts, but not limited to, of hospital, long-term care, primary care, community services and home care.

Source of evidence screening and selection: This scoping review will consider quantitative, qualitative, and mixed-method studies. Quantitative designs involve any prospective and retrospective observational cohort studies; controlled before-and-after studies; case-controlled studies; cross-sectional studies; case series. Qualitative designs include studies that focus on qualitative data, such as but not limited to, explorative and descriptive designs. Narrative literature review, letters, and correspondence reports will be excluded.

Data management: The research team will extract the data, with two or more reviewers involved in this process. A chart table will be created according to the review questions. A summary of each article will include the authors and year of publication, country of the study, purpose, study design and context. For the first question, the extract will include the characterization of the population such as, but not limited to, age, gender, ethnicity, comorbidities, gender, residence, frailty, BADL. For the second question, the extract will include: atypical presentations characterization such ass, but not limited to, COVID-19 diagnosis, signs and symptoms and prevalence. Concerning the last question, the extract will include: mortality, length of stay, number of falls, institutionalization, intense care unit care, malnutritional, among others. The draft data extraction tool will be modified as required throughout the review, depending on the data extracted from the included studies. Disagreements will be resolved by consensus between the reviewers.

Reporting results / Analysis of the evidence: The search's results will be fully reported in the final manuscript and presented in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) flow diagram.

Presentation of the results: The extracted data will be presented in tabular form in a manner that aligns with the review questions. A descriptive summary will complement the tabulated results and will explain how the results relate to the review's objective and questions.

Language: Eligible studies will be required to be published in English, Spanish, French or Portuguese language.

Country(ies) involved: Portugal.

Keywords: Coronavirus disease-2019, SARS-COV-2, COVID-19, older, aged, atypical presentation, symptoms, signs, nursing home, hospital, community.

Dissemination plans: Once the data analysis is completed, results will be published in a peer-reviewed journal and

presented in relevant scientific conferences.

Contributions of each author:

Author 1 - João Tavares - The author supported the preparation and development of the protocol and checked the search methodology. The author will participate in the selection of studies based on the inclusion criteria, as well as the critical review of the scoping review manuscript.
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