# INPLASY PROTOCOL

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**Review Stage at time of this submission:** The review has not yet started.

**Conflicts of interest:**
The authors declare that they have no competing interests.

# Prevalence of depression during the SARS, MERS, and COVID-19 pandemics: a protocol for overview of systematic reviews

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**Review question / Objective:** To evaluate and compare the normativity of report of systematic review, we conducted a comprehensive overview of depression on SARS, MERS, and COVID-19.

**Condition being studied:** Coronaviruses (CoVs) (order Nidovirales, family Coronaviridae, subfamily Coronavirinae) are enveloped viruses with a positive sense, single-stranded RNA genome. The outbreak of the novel coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, has emerged to be the biggest global health threat worldwide, which has now infected over 15.2 million people and claimed more than 600,000 lives around the world. A wide range of psychological outcomes have been detected during the Virus outbreak, at individual, community, national, as well as international levels. At large, the pandemic has had a harmful effect on the public mental health, especially on depression, which can even lead to psychological crises. Systemic review is one of the most important evidence to guide clinical decision-making, which has important reference value for the formulation of clinical guidelines. However, low-quality systematic reviews can also mislead decision makers. Increasing systematic reviews of coronavirus were focusing on depression. However, the methodological quality of these systematic reviews is unclear. Therefore, to evaluate and compare the normativity of report of systematic review, we conducted a comprehensive overview of depression on coronavirus.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 August 2020 and was last updated on 01 August 2020 (registration number INPLASY202080003).

## INTRODUCTION

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## METHODS

**Participant or population:** Depression among the general population, healthcare workers during the SARS, MERS, and COVID-19, and the patient has to be diagnosed with COVID-19. There were no restrictions on gender, age, or race.

**Intervention:** All interventions concerned

**Comparator:** Not applicable.

**Study designs to be included:** Systematic reviews and meta-analyses which take into account randomized controlled trials (RCTs), quasi-RCTs as well as other studies.

**Eligibility criteria:** Inclusion criteria (1) Patients: Depression among the general population, healthcare workers during the COVID-19, SARS and MERS pandemic, and the patient has to be diagnosed with COVID-19. There were no restrictions on gender, age, or race. (2) Interventions: all interventions concerned. (3) Outcome: the score of relevant scales, such as Zung Self-Rating Depression Scale (SDS), Patient Health Questionnaire-9 (PHQ-9), Hamilton Depression Scale (HAMD). (4) Published literature. (5) Studies that their full text was available. (6) Depression with organic diseases. Exclusion criteria (1) Literatures published repeatedly by the same author or with duplicate data (2) Letter, scoping review, abstract (3) No peer-reviewed articles.

**Information sources:** Two independent reviewers will conduct comprehensively searches in PubMed, EMBASE.com, Web of Science, the Cochrane Library, Chinese biomedical literature database (CBM), Chinese National Knowledge Infrastructure (CNKI), Wan fang Database, Chongqing VIP (CQVIP). Reference lists of articles, grey literature, and conference proceedings will also be searched. Languages of the publications will be limited to Chinese and English.

**Main outcome(s):** The score of relevant scales, such as Zung Self-Rating Depression Scale (SDS), Patient Health Questionnaire-9 (PHQ-9), Hamilton Depression Scale (HAMD).

**Quality assessment / Risk of bias analysis:** Two reviewers will independently assess each included review by using the Assessment of Multiple Systematic Reviews-2 (AMSTAR-2) measurement tool and the PRISMA statement, for rigorous methodological quality. Arbitration by a third reviewer is necessary for some fields. AMSTAR-2 is an update of AMSTAR, which can be used to appraise systematic reviews s of both randomized and nonrandomized controlled trials. The AMSTAR-2 tool consists of 16 items and has good face and content validity for measuring the methodological quality of systematic reviews. The methodological quality is mainly according to the

conformity of the key items, it is considered as 4 levels, namely "high", "medium", "low", "very low". The PRISMA statement for reporting quality consists of a 4-phase flow diagram and a 27-item checklist, which includes items deemed essential for transparent reporting of systemic review. The total score of each questionnaire was divided by its maximum possible score to assess study quality. Study quality related to its PRISMA score as a percentage. Percentage was rated: very poor (90%).

**Strategy of data synthesis:** General characteristics of the eligible systemic reviews will be summarized and described, including the total sample size of a meta-analysis, interventions, and their effect size and related 95% confidence interval (CI). We will provide AMSTAR-2 and PRISMA assessments in tabular form for each review, the total percentage of each item will be calculated.

**Subgroup analysis:** Not applicable.

**Sensibility analysis:** Not applicable.

**Language:** The language is limited to English and Chinese.

**Country(ies) involved:** China.

**Keywords:** COVID-19; SARS, MERS, depression; systematic reviews; overview.

**Contributions of each author:**
Author 1 - Li Du - Author 1 (1) conceived this study (2) designed the inclusion/exclusion criteria and the searching strategy (3) will be searched for the literature (4) will be collected the data and made statistical analysis (5) drafted the protocol and revised the manuscript.
Author 2 - Yamin Chen - Author 2 (1) conceived this study (2) designed the inclusion/exclusion criteria and the searching strategy (3) will be searched for the literature (4) will be collected the data and made statistical analysis.
Author 3 - Ying Li - Author 3 designed a data extraction table.

Author 4 - Wei Yuan - Author 4 will be collected the data and made statistical analysis.
Author 5 - Jianshu Wang - Author 5 (1) conceived this study (2) designed the inclusion/exclusion criteria and the searching strategy (3) drafted the protocol and revised the manuscript.