

Rapid Review: Mental Health Outcomes of Adults Hospitalized for COVID-19

July 2021

Key Findings

Mental health outcomes of patients who have been hospitalized for COVID-19		Certainty
Prevalence of symptoms during and 3 months after hospitalization	Anxiety symptoms: 30-39% Insomnia symptoms: 24-40% Obsessive-compulsive symptoms: 20-26% PTSD symptoms: 10-15% Depression symptoms: 9-66%	Low
Incidence of new diagnoses 6 months after hospitalization	Anxiety disorder diagnosis: 7% Mood disorder diagnosis: 5% Insomnia diagnosis: 3% Substance use disorder diagnosis: 2% Psychotic disorder diagnosis: 1%	Moderate
Inpatients vs outpatients	Patients hospitalized with COVID-19 have a 55% increased risk of being diagnosed with a new mood, anxiety, or psychotic disorder within 6 months compared to outpatients with COVID-19.	Moderate
Differences by patient and disease characteristics	Female sex and COVID-19 severity are the two patient and disease characteristics most consistently associated with worse MH outcomes.	Low

Background

One in 7 people diagnosed with COVID-19 will be hospitalized, some of whom will develop life-threatening complications. These patients may undergo invasive procedures requiring sedation or paralytic agents which can affect their ability to understand and interact with their providers. Additionally, patients may be stressed by ICU settings, experience isolation from friends and family, or experience financial hardship due to disruption from work. Experts warn severe symptoms of COVID-19 and related stressors may put patients at higher risk of new or worsened mental health disorders.

Goal

The goal of this rapid review was to summarize research evidence on the prevalence of mental health disorders (eg, depression, anxiety, PTSD, psychotic disorders, and substance use disorders) among adults who have been hospitalized for COVID-19 compared with those hospitalized for non-COVID-19 reasons and outpatients with COVID-19. Evidence on variation in the prevalence of mental health disorders by patient and disease characteristics and on mental health care utilization and resource needs for patients hospitalized for COVID-19 was also synthesized.

Methods

A research librarian searched MEDLINE, the WHO COVID-19 database, PsycINFO, and CINAHL for articles published through March 2021. Published cohort and cross-sectional studies that assessed the prevalence of mental health disorders, mental healthcare utilization, and mental healthcare resource needs among patients who had been hospitalized for COVID-19 were included. Studies that enrolled ≥ 200 participants were prioritized as they provided the best available evidence. One reviewer assessed articles for inclusion, evaluated study quality, extracted data, and assessed strength of evidence using predefined criteria with verification by a second reviewer. See the full ESP report for complete details on methods.

Results

Characteristics of Studies that Provided the Best Available Evidence

4,866 potentially relevant articles were published up to March 2021.

19 of these articles provided the best available evidence



Study characteristics	2 prospective cohort, 2 retrospective cohort, and 13 cross-sectional studies
Population	Patients who have been hospitalized for COVID-19
Comparators	No comparison group; outpatients with COVID-19; subgroups vs each other
Outcomes	<ul style="list-style-type: none"> Prevalence of anxiety, depression, PTSD, obsessive-compulsive and insomnia symptoms Incidence of new diagnoses of mood, anxiety, insomnia, substance use, and psychotic disorder Mental health care utilization and resource needs
Settings	China, United States, Italy, UK, Turkey, Iran, Bangladesh, Norway
Timing	During or ≤ 6 months after hospitalization

Conclusion

As of March 2021, evidence from primarily fair-quality studies suggests that many patients experience mental health symptoms such as depression, anxiety, and insomnia during and in the 3 months following hospitalization for COVID-19. However, patients infrequently receive a new mental health disorder diagnosis in the 6 months following hospitalization. Some patients – such as women and those with more severe COVID-19 – may be at higher risk of poor mental health outcomes.

Future Research Needs



Studies should compare patients hospitalized for COVID-19 to patients hospitalized for other reasons as well as outpatients with COVID-19.



Researchers should report and adjust for potential confounders like preexisting mental health disorders, medications, and medical comorbidities.



Using longitudinal studies, researchers should assess mental health care utilization and resource needs of patients after COVID-19 hospitalization.