Evidence check

27 May 2020

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

Reducing adverse impacts of people with a lived experience of severe mental health issues during COVID-19

Rapid review question

What guidance is available to support health systems respond to COVID-19 and reduce adverse impacts on people with a lived experience of mental health issues during the pandemic?

In brief

- Extensive evidence shows premature mortality and significant morbidity for people living with severe mental health issues, compared to the general population. They are six times more likely to die from cardiovascular disease and four times more likely to die from respiratory disease. Health issues are exacerbated by homelessness and other social determinants.
- Expert opinion is that COVID-19 will adversely and disproportionately impact people with a lived experience of mental health issues, and if infected, they will have poorer outcomes.
- Several factors are considered to increase the risk of COVID-19 infection, mortality and mental health symptom relapse, including:
    - Person-related factors such as existing poor physical health and difficulty following strict quarantine precautions.
    - Provider-level factors such as structural design of facilities, communal spaces for in-patient activities, long lengths of stay in mental health facilities and infection control practices.
    - System-level factors such as limited access to community care either virtually or in-person, risk of interrupting medications and public health interventions that raise psychological distress.
- The peak advocacy body for mental health consumers in NSW (BEING) conducted consultations at the onset of COVID-19. It recommended a clear mental health plan for NSW, with provisions for people in inpatient units to access leave and to host visitors; and activities focused on web-based communication and skill-building strategies.
- Several clustered outbreaks have been described in the US and China. One study reported COVID-19 transmission to 50 patients and 30 medical staff in a mental health facility in China. The authors suggest that closed and crowded wards and limited space in which to implement social distancing measures were contributing factors in the outbreak.

- A case-control study showed the psychological distress of people living with severe mental health issues one-month post mass quarantine during COVID-19 when compared to the general population.
- Evidence from previous pandemics supports the use of active screening programs, tailored to characteristics of the disease and causative organism.
- A recent viewpoint in JAMA Psychiatry suggests providing up-to-date information on mitigating risk and seeking treatment. It highlights the importance of consumer-focused materials addressing health literacy and the challenges of implementing distancing measures in unstable living conditions.
- The UK's Royal College of Psychiatrists released guidance that aims to prevent increases in the use of restrictive practices during COVID-19.

Limitations

- The evidence base is dynamic and information is still emerging about best responses to support people with a lived experience of mental health issues during COVID-19.
- The language has been updated wherever possible in the results table to 'people with a lived experience of mental health issues' or 'people with a lived experience of severe mental health issues'. This is to ensure the language used in this rapid evidence review is inclusive, respectful and trauma informed. Historical language has not been changed in the title of sources.
- The scope of this review is severe mental illness and specifically health system responses for inpatient mental health services. It does not include community mental health, mental health and wellbeing during COVID-19 or the mental health impacts of COVID-19 more broadly. The review does not include specific evidence or guidance for at risk groups including Aboriginal and Torres Strait Islander people, young people and lesbian, gay, bisexual, transgender and intersex (LGBTI) people, etc.
- This is a rapid evidence review that has not been developed and/or reviewed with the involvement of people with a lived experience of mental health issues.

Background

Disparities in morbidity and mortality in people with a lived experience of mental health issues compared to general populations have been unequivocally established.(1) Extensive evidence in various studies shows premature mortality of people living with mental health issues, with between 1 and 32 years of potential life lost. For people living with severe mental health issues, the life expectancy gap from the general population is 20 years. People with a lived experience of severe mental health issues are six times more likely to die from cardiovascular disease and four times more likely to die from respiratory disease.(2)

The NSW Mental Health Commission reports that the prevalence of severe mental illness in NSW is approximately 3% of the population. The Living Well: A Strategic Plan for Mental Health in NSW 2014-2024 outlines a vision and actions for a mental health system focused on community-based mental health support.(3)

People experiencing severe mental health issues may be susceptible to worse outcomes during infectious disease outbreaks such as COVID-19.(4) The poor physical health of people with a lived experience of mental health issues is a multifaceted, trans-diagnostic and a global problem. People with a lived experience of severe mental health issues have an increased risk of physical disease, as well as reduced access to adequate healthcare and in pandemic situations these risks are amplified.(1)

Public health interventions such as social distancing, which reduce the rate of new infections, can increase suicide risk.(5)

The Australian Government announced an additional $48.1 million to support the mental health and wellbeing pandemic response - with three immediate priority areas: data and modelling, outreach and connectivity.(6)

Methods (Appendix 1)

PubMed, Google and Twitter were searched on 12 May 2020 and additional studies added 19 May 2020.

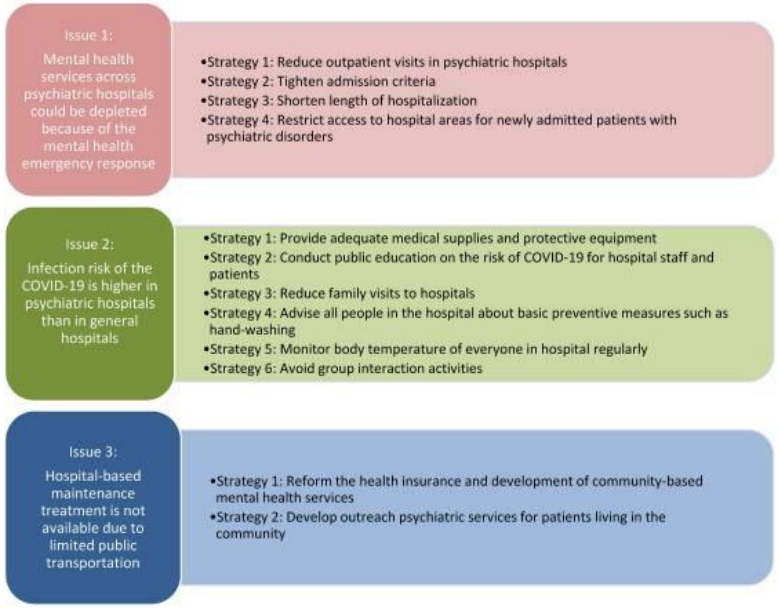
Results (Tables 1 and 2)

Table 1: Guidance to support health systems respond to COVID-19

Study	Findings	Study type
Peer reviewed studies		
Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic Rogers, et al. 2020 (7)	1,963 studies and 87 preprints were identified by the systematic search, of which 65 peer-reviewed studies and seven preprints met the inclusion criteria. The systematic review revealed that during the acute illness, common symptoms among patients admitted to hospital for SARS or MERS included confusion, depressed mood, anxiety, impaired memory and insomnia. Data for patients with COVID-19 were examined (including preprint data), there was evidence for delirium, including confusion, agitation and altered consciousness.	Systematic review and meta-analysis
Psychological distress in serious mental illness patients during the COVID-19 outbreak and one-month mass quarantine in Italy Iasevoli, et al. 2020 (8)	This paper examined the severity of COVID-19-related perceived stress, anxiety, depressive and psychotic symptoms in 205 people living with severe mental illness, 51 of their first-degree relatives, and 205 general population participants after one-month lockdown. All participants were from Naples area. All evaluations were carried out from 13-17 April 2020, corresponding to one-month quarantine and approximately 50 days from outbreak start in Italy. Rates of high perceived stress severity (PSS score >26), moderate-severe anxiety (GAD-7 score >10), and severe depressive symptoms (PHQ-9 score >15) were significantly higher in patients versus controls. Patients had higher odds of suffering from severe psychopathology compared to controls. Similar outcomes were also found after subdivision in schizophrenia spectrum and mood disorder patients.	Case-control observational study
Suicide Mortality and Coronavirus Disease 2019-A Perfect Storm? Reger, et al. 2020 (5)	This US-based review in JAMA discusses social distancing interventions that have been implemented to fundamentally reduce human contact. While these steps are expected to reduce the rate of new infections, the potential for adverse outcomes on suicide risk is high. Actions could be taken to mitigate potential unintended consequences on suicide prevention efforts, which also represent a national public health priority. Economic stress, social isolation, decreased access to community and religious support, barriers to mental health treatment, illness and medical problems, national anxiety and healthcare professionals stress are all consequences that may increase risk factors. Despite challenges, there are opportunities to improve suicide prevention efforts in this	Viewpoint

Study	Findings	Study type
	unique time. Maintenance of some existing efforts is also possible. These include focus on physical distance, not social distance, tele-mental health, increase access to mental healthcare, distance-based suicide prevention and media reporting.	
The Risk and Prevention of Novel Coronavirus Pneumonia Infections Among Inpatients in Psychiatric Hospitals. Zhu, et al. 2020 (9)	This report describes the mental health facility where 50 patients and 30 medical staff were diagnosed with COVID-19, with the facility becoming the first psychiatric hospital in China with clustered nosocomial infections. No clinical outcomes described. It includes learnings from the SARS virus for application to COVID-19, with a focus on challenges through mental health service reform. To prevent and control nosocomial infections, it is essential to take measures to support patients outside the hospital including: 1. Lengthening the duration of prescriptions for stable outpatients. 2. Ensuring remote monitoring for outpatients with acute symptoms. 3. Early warning of the risk for patients needing hospitalisation and rapid precaution planning.	Review
The potential impact of COVID-19 on psychosis: A rapid review of contemporary epidemic and pandemic research Brown, et al. 2020 (10)	This rapid review examines the impact of epidemics/pandemics on people with or at risk of psychosis. Fourteen papers met the inclusion criteria. The epidemics/pandemics under investigation were SARS (6 studies), Ebola (1), MERS (1), the 2009–2010 H1N1 (swine) influenza pandemic (2), coronaviruses (1) and COVID-19 (2). Included studies reported incident cases of psychosis in people infected with a virus of a range of 0.9% to 4%. Psychosis diagnosis was associated with viral exposure, treatments used to manage the infection and psychosocial stress. Clinical management of these patients, where infection control procedures were paramount, was challenging.	Rapid review
Schizophrenia and COVID-19: risks and recommendations Fonseca, et al. 2020 (11)	This review aimed to answer the following questions: are people living with schizophrenia at higher risk of: 1) being contaminated; 2) mortality; and 3) experiencing a psychotic relapse. They reported no study has provided details on COVID-19 prevalence or outcomes in people living with schizophrenia. The review did not yield a definite answer to the questions posed, however they use contextual data and available evidence to **infer** the following:	Review

Study	Findings	Study type
	• Contamination: people living with schizophrenia may have more difficulty following quarantine and 'respiratory etiquette' procedures and, thus, are at higher risk of contamination. • Mortality: people living with schizophrenia are at higher risk of poor COVID-19 outcomes, mainly due to higher comorbidity rates and a possible immunodeficiency associated with schizophrenia. • Relapse: people living with schizophrenia are at higher risk of relapse, considering the emotional distress added to an already high risk group during an infectious disease outbreak, their limited access to community care, and the risk of interrupting medications.	
COVID-19 paranoia in a patient suffering from schizophrenic psychosis – a case report Fischer et al. 2020 (12)	This German case study of a person living with schizophrenia presenting with COVID-19-related delusions and hallucinations, describes the potential of COVID-19 to precipitate entry into a psychotic phase and impact symptom manifestation.	Case study
Patients With Mental Health Disorders in the COVID-19 Epidemic Yao et al. 2020 (13)	In this correspondence, increases in morbidity and mortality are **inferred** from previous case-control studies looking at bacterial infections in people with lived experience of mental illness to people with no hospital records. Authors note that previous studies suggest that mental health illness comorbidities to COVID-19 will make the treatment more challenging and potentially less effective. Although this is not substantiated with any previous pandemic or COVID-19 numbers.	Correspondence
The COVID-19 outbreak and psychiatric hospitals in China: managing challenges through mental health service reform Xiang et al. 2020 (14)	This article proposes that that people experiencing severe mental illness in mental health facilities in China may be more susceptible to severe viral outbreaks, due to being confined to crowded living conditions and common spaces, with group activities scheduled for increasing social participation. Due to the acute nature of the mental health symptoms, added challenge in maintaining self-care, and limited insight, there may be barriers to practice infection control measures. Further, owing to the lifestyle associated with mental illness and side effects of psychotropic medications, the suboptimal health status of hospitalised patients with major psychiatric disorders may render them more at risk to COVID-19 and its complications. Other susceptibility in the Chinese context includes inadequate training of healthcare workers in prevention and treatment in infectious diseases and lack of community-based mental health services led to an over-	Review

Study	Findings	Study type
	reliance on psychiatric services provided by large psychiatric hospitals. These are in city areas and therefore patients are more prone to exposure. Paper strategies to improve mental health services during the outbreak of the COVID-19 in China is outlined in the figure below. 	
COVID-19 disease emergency operational instructions for Mental Health Departments issued by the Italian Society of Epidemiological Psychiatry Starace et al. 2020 (15)	This guidance paper notes that the degree of risk of COVID-19 transmission in mental health patients is still unknown but extrapolates that this risk is higher than that of the general population because of evidence of behaviours for reduced physical health, higher rates of respiratory diseases and long term utilisations of inpatient facilities, with the subsequent risk of acquiring nosocomial respiratory infections. The paper proposes stricter rules of PPE (specifically the use of fluid-resistant surgical masks), compared to World Health Organization recommendations, for healthcare workers, families and people experiencing severe mental illness, whenever supplies allow for its implementation.	Guidance paper

Study	Findings	Study type
Challenges and Priorities in Responding to COVID-19 in Inpatient Psychiatry Luming, 2020. (16)	This article focuses on specific challenges, contingency planning considerations and downstream impacts of COVID-19 on mental health facilities. Challenges for inpatient psychiatry include close contact among staff and patients, space constraints and structural barriers in care delivery. Nuanced considerations of five contingency planning strategies in response to COVID-19 are described, including COVID-19-specific precautions, visitor restrictions, physician workforce considerations, operational adjustments and group therapy changes. Organised leadership and clear communication are identified as early priorities in pandemic response to minimise misinformation and address immediate challenges. For visitor restrictions, it is important to note that interactions and family meetings are important components of inpatient treatment. Thus, although decisions may be made to limit contact, doing so may affect the treatment course and how patients reconnect with family members and may cause significant anxiety among family members who are apart from loved ones. Additionally, people experiencing severe mental illness are admitted to a hospital for safety concerns, and thus they cannot be discharged home to self-quarantine if symptoms of COVID-19 infection develop.	Opinion
Patients With Mental Health Disorders in the COVID-19 Epidemic Yao, et al. 2020 (17)	This letter outlines the limitations of mental health services in China during the COVID-19. It highlights the disparities and vulnerabilities of people with a lived experience of mental health, including low utilisation rate of mental health services, poor evidence of whether online mental health services can improve health service utilisation, especially in low to middle income countries, low socio-economic status and where digital literacy are additional barriers.	Letter to the editor
Mental health services for older adults in China during the COVID-19 outbreak Yang, et al. 2020 (18)	This article looked at the community focus of mental health services, focusing on additional barriers in older adults in China. Authors found a major barrier in accessing maintenance treatments and the lack of access to online mental health services that have been instituted.	Correspondence
Progression of Mental Health Services during the COVID-19 Outbreak in China Li et al. 2020 (19)	This article outlines the prevention of nosocomial infections and recommends the provision of timely treatment and care for patients with severe mental illness infected with COVID-19.	Article

Study	Findings	Study type
COVID-19 and Mental Health: A Review of the Existing Literature Rajkumar et al. 2020 (20)	A broad review of literature related to the mental health risks of COVID-19. Summarises key issues for susceptibility, including overcrowding, lack of general medical facilities in psychiatric hospitals, limited knowledge of infectious respiratory precautions among mental health professionals, and barriers with preventive measures, especially those people experiencing severe mental illness. Conversely, patients with lived experience of mental health may be at higher risk of relapse or new episodes of their disorder due to the stress associated with the COVID-19 outbreak. It concludes that it is crucial that psychiatrists familiarise themselves with screening and triage procedures and work closely with physicians and public health specialists to minimise the risks.	Review
Addressing the COVID-19 Pandemic in Populations with Serious Mental Illness Druss 2020 (21)	This report argues for the notion of whole community preparedness, which supports building and supporting structures at multiple levels to prepare and respond, particularly for at-risk populations. Within the public mental healthcare system, this includes engagement with mental health service users, clinicians and federal and state policies. It notes that disasters disproportionately affect poor and at-risk populations, and people experiencing severe mental illness may be among the hardest hit. High rates of smoking in this population may raise the risk of infection and confer a worse prognosis among those who develop the illness. Residential instability and homelessness can raise the risk of infection and make it harder to identify, follow up and treat those who are infected. Individuals with lived experience of mental health issues who are employed may have challenges taking time off from work and may lack sufficient insurance coverage to cover testing or treatment. Small social networks may limit opportunities to obtain support from friends and family members, should individuals with serious mental illness become ill. Taken together, these factors may lead to elevated infection rates and worse prognoses in this population. Empowering healthcare workers to deliver services via telehealth rather than in person, and when in-person visits are necessary, in individual rather than group formats.	Viewpoint

Study	Findings	Study type
COVID-19 in People with Mental Illness: Challenges and Vulnerabilities Kavoor 2020 (4)	Discusses challenges associated with provision of mental healthcare services including: • health workers with a need to self-quarantine, which may affect low priority services like routine case manager visits • focus on medication adherence, and routine psychiatrist reviews, amongst others which may precipitate relapse in severe mental illness and can translate to poor hygiene • inability to practice social distancing or other preventive strategies • absence of timely reporting or seeking medical attention • inability to comply with expected treatment. Lifestyle-related risk factors like smoking, obesity and inactivity that contribute to medical conditions leading to an increased mortality and morbidity amongst people experiencing severe mental illness.	Viewpoint
Psychiatry hospital management facing COVID-19: from medical staff to patients Shao 2020 (22)	A case study of the management of Shanghai Mental Health Center, which represents one of the largest psychiatric services in the world, with more than 2400 inpatient beds and nearly a million outpatient visits per year. By 7 April 2020, they did not have any inpatient infections. They share six interventions and strategies, including suspending face-to-face visitation and utilising video or online connections instead. For any inpatients with suspected fever, a temporary social distancing ward is employed for observation.	Organisational case study
Grey literature/news articles		
Many Voices, Many Needs BEING, 2020	BEING was able to collate valuable information of the impact that the COVID -19 pandemic is having on people who live with mental health issues in NSW. Recommendations include: - A clear mental health plan for NSW to cover both the current COVID-19 environment and post-COVID-19. - Lifting restrictions for people to move and exercise during COVID-19. - Clear messaging through a central portal. - Provisions made for people in inpatient units to access leave, visitors and activities focused on wellbeing and skill building strategies. - Provision of funding for national peer run mental health peer support and warmline and online peer support services.	Report

Study	Findings	Study type
COVID-19: Change packages Royal College of Psychiatrists, 2020	Communication with families and carers, patients and staff: - A package designed to help teams in mental health services to improve communication with families and carers, patients and staff during COVID-19. Reducing restrictive practices: - This package was designed to help teams in mental health services prevent a rise in the use of restrictive practices during COVID-19.	Guidance
COVID-19 & clinical management of mental health issues Oxford Precision Psychiatry Lab 2020 (23)	UK advice on how to minimise risk in mental health inpatient settings during the COVID-19 pandemic. Inpatient wards: - Wards should exercise the principles of social distancing across the ward community. - Take appropriate steps to distance patients with mild symptoms in the ward. - Restrict the public, limiting visiting and consider other ways of keeping in touch, such as phone calls. Visitors must be immediate family members or carers, limited to one per patient unless under specific circumstances. - Temperature should be taken on admission, patient should be engaged in information sharing, a formal capacity assessment should be completed. For infection control measures, use materials for activities that can be wiped clean and disinfected or disposed after use and in rooms large enough to adhere to social distancing. In a patient with suspected COVID-19, medication can be used with caution, consider short-acting medication, oral medication is preferred, lorazepam would be the preferred benzodiazepine and physical health monitoring. - Best management includes supportive measures, targeted treatment and organ support. General advice on gate leave: • Based on latest government advice and analysis of benefits and risks for that individual person's recovery. • Person's leave from ward, either escorted or unescorted requires additional risk assessment, depending on their exposure to symptoms. • Where possible, leave and time off the ward should be maintained. If not possible, this needs to be clearly communicated to the person and their loved ones including what the process for review was.	Guidance

Study	Findings	Study type
Mental health and psychosocial considerations during the COVID-19 outbreak	WHO and public health authorities around the world are acting to contain the COVID-19 outbreak. However, this time of crisis is generating stress throughout the population. The considerations presented in this document have been developed by the WHO's Department of Mental Health and Substance Use as a series of messages that can be used in communications to support mental and psychosocial wellbeing in different target groups during the outbreak.	Guidance
Why Psychiatric Wards Are Uniquely Vulnerable to the Coronavirus New Yorker (24)	This article describes the US experience of psychiatric care during the COVID-19 pandemic. Key aspects discussed include, the of vulnerability to coronavirus on the ward, psychiatric units being designed to facilitate communication and group activities, how a lack of testing, PPE and seclusion protocols were making a difficult task maintaining the safety of a highly vulnerable population and their care workers during a pandemic, virtually impossible. US specific healthcare limitations of insurance payments was also discussed.	News Article
Coronavirus in a psychiatric hospital: 'It's the worst of all worlds' NBC News (25)	This newspaper article reported more than 1,450 COVID-19 cases at state mental health facilities in 23 states and Washington, D.C., which equates to roughly double the total reported in the US federal prison system. The numbers, provided by state health officials, are likely an undercount since 16 states did not provide data.	News Article
Psychiatric clinic shut and patients moved to The Alfred following COVID-19 outbreak Sydney Morning Herald (26)	This news article describes an outbreak of positive COVID-19 cases in a psychiatric facility in Melbourne.	News Article

Table 2: Learning from previous epidemic and pandemics

Study	Findings	Study type
Peer reviewed studies		
Infections in Psychiatric Facilities, With an Emphasis on Outbreaks Fukuta and Muder 2013 (27)	This review describes the unique challenges facing infection prevention in mental health facilities, with an emphasis on outbreaks. It includes epidemiological features of respiratory tract infection outbreaks, where available, for six respiratory viral infections: respiratory syncytial virus, adenovirus, human metapneumovirus, influenza virus, tuberculosis and group A streptococci. Tailored strategies for each respiratory infection are recommended.	Review
Influenza outbreaks management in a French psychiatric hospital from 2004 to 2012. Gaspard et al. 2014 (28)	The goal of this study is to develop monitoring in the units of a psychiatric hospital, in order to improve knowledge and validate the alert and control measures in these kinds of units. A total of 19 units were included, with 17 hospitalisation units (4 geriatric psychiatry and 13 clinical psychiatry) and 2 residential homes (1 specialised care home and 1 medical care home). Prospective monitoring of influenza episodes was conducted for eight years. Influenza was common with a total of 20 episodes for the studied period. A maximum of 25% (5) of the units were affected in 2008-2009. Rapid influenza diagnostic tests allowed quick identification with an average time of 1.5 days. Mainly, control measures limited the spread of the influenza virus in units with patient who were not at high risk of complications. In a psychiatric hospital, influenza management must take into account the exposed patient's risks for influenza complications and adapt a strategy according to the risks identified. There was no mention of leave or visitors, or mortality/morbidity figures.	Observational/retrospective
Neglected disease in mentally ill patients: Major tuberculosis outbreak in a psychiatric hospital. Zmak et al. 2017 (29)	As tuberculosis (TB) incidence decreases, the possibility of overlooking the disease increases, especially in vulnerable populations. Authors describe here major tuberculosis outbreak among people experiencing severe mental illness in Croatia, focusing on 1 regional hospital where most patients were hospitalised. The outbreak emphasises the vulnerability of people experiencing severe mental illness to tuberculosis infection and the complexity of infection control measures in psychiatric institutions. The awareness of tuberculosis in these settings should be maintained to interrupt prolonged exposure and avoid unnecessary infection. The report points out the need for maintaining awareness of TB in at risk groups, such as patients with lived experience of mental illness. To constrain such outbreaks, there is the necessity for a more active approach in identifying TB patients. Routinely inquiring for early TB	Brief report

	symptoms in these settings could help to avoid diagnostic delay. Additional infection control measures should include single rooms for patients suspected of active TB and limited contact with other patients during periods of infectiveness. Moreover, periodically testing for latent TB infection and the administration of appropriate chemoprophylaxis would impact the number of consequent active disease cases.	
Good Practices For Infection Prevention and Control at a Psychiatric Hospital in Brazil Piai-Morais et al. 2015. (30)	This exploratory cross-sectional study aims to investigate good practice for preventing and controlling infections in a psychiatric hospital and for limiting potential exposure to biohazards for nursing professionals at a hospital in the State of Sao Paulo, Brazil conducted from November 2011 to May 2012. The researchers directly and systematically observed 830 nursing procedures, 40.6% of which presented a moderate to high risk of biohazard exposure. Results indicate very low adherence to hand hygiene (1.2% before procedures, 2.9% after procedures), inappropriate use of gloves and other instances of noncompliance to the standards of good practice for preventing and controlling infection, such as a lack of concurrent/terminal cleaning of dirty beds (132 instances) and careless manipulation of sharp devices (34 instances). Much emphasis was on hygiene protocols (or lack of adherence). There was no mention of visits leave, or mortality/morbidity data.	Cross-sectional study
Infection preventionists' challenges in psychiatric clinical settings. Li et al. 2019(31)	This analysis identified 6 themes: 1. lack of preservice training in psychiatric infection control 2. insufficient staffing in practice 3. working within environmental limits 4. patient low adherence 5. undervaluation of the importance of infection control by professionals 6. involvement of hospital administrators. There was no mention of visits, leave, or mortality/morbidity data.	Descriptive study
Factors associated with psychosis among patients with severe acute respiratory syndrome: a case-control study Lee et al. 2004 (32)	A total of 15 patients with psychotic disorders were identified among 1,744 patients with SARS, who were identified during the study period, yielding an incidence rate of 0.9%. Steroid-induced mania and psychosis were reported in 13 (0.7%) of 1,744 patients with SARS in the acute stage in one study. Although the rate of psychotic complications in the SARS population does not appear to be high, it is important to warn clinicians about the possibility of psychosis among patients during the management of this highly contagious disease. Before additional data are available, the authors believed that it would be advisable to routinely ascertain family histories of psychiatric illness and the wellbeing of other family members during the clinical assessment of patients with SARS.	Case control study

Stress and Psychological Distress Among SARS Survivors 1 Year After the Outbreak Lee et al. 2007 (33)	SARS survivors had higher stress levels during the outbreak, compared with control subjects (PSS-10 scores = 19.8 and 17.9, respectively; P<0.01), and this persisted one year later (PSS-10 scores = 19.9 and 17.3, respectively; P<0.01) without signs of decrease. In 2004, SARS survivors also showed worrying levels of depression, anxiety and posttraumatic symptoms. An alarming proportion (64%) scored above the GHQ-12 cut-off, suggesting psychiatric morbidity.	Case control study

Appendix 1: Methods

PubMed search:

1. ("2019-nCoV"[Title/Abstract] OR "ncov*"[Title/Abstract]) OR "covid-19"[Title/Abstract]) OR "covid19"[Title/Abstract]) OR "covid-19"[Title/Abstract]) OR "coronavirus"[MeSH Terms]) OR "coronavirus"[Title/Abstract]) OR "sars-cov-2"[Title/Abstract]) OR "severe acute respiratory syndrome coronavirus 2"[Supplementary Concept]) AND "mental ill*"[Title/Abstract]) OR "psychiat*"[Title/Abstract]) OR "mental health"[MeSH Terms]) AND ('patient*'[Title/Abstract]) OR ('health service*'[Title/Abstract]) Filter: Humans, English, 2020.
2. (pandemic preparedness mental[Title/Abstract])) OR (pandemic mental[Title/Abstract])) OR (mental COVID-19[Title/Abstract])) OR (mental pandemic mortality[Title/Abstract])) OR (mental pandemic death[Title/Abstract])) OR (mental infection control[Title/Abstract])) OR (infection control mental health[Title/Abstract])) OR (infection control psychiatric [Title/Abstract]) – Filters: humans, English, years included 2013-2020.
3. ((("behavio* disturbance" OR "mental illness" OR "psychotic" OR "psychosis") AND ("pandemics"[MeSH Terms] OR "pandemic*"[title/abstract] OR "disease outbreak*"[title/abstract])) AND (english[Filter])) AND (morbidity OR mortality Filter: English

Google: 'people living with mental health issues AND risk AND COVID-19'

EPPI website: 'psychiatry and COVID-19'

Key papers were used to search reference lists that matched inclusion criteria.

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