



**Mental  
Health  
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OF TASMANIA

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# Population mental health and wellbeing in pandemics

Understanding the potential impacts of  
COVID-19 in Tasmania

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AUTHORISED BY:

**Connie Digolis**

Chief Executive Officer

[cdigolis@mhct.org](mailto:cdigolis@mhct.org)

03 6224 9222

0418 431 995

Level 1, 131A Collins Street  
Hobart TAS 7000

## Summary

It has been acknowledged that the COVID-19 pandemic, and subsequent measures taken to safeguard the Tasmanian community from the risk of COVID-19 infection, is likely to have implications for the mental health and wellbeing of Tasmanians living with mental illness, and also for community mental health and wellbeing.

This paper examines and clarifies key underlying issues including the difference between mental illness and psychological distress, and uses a global evidence base to predict as far as possible the prevalence and relative severity of both conditions during the phases of a pandemic event.

### Mental illness versus psychological distress in pandemics

There is some confusion about how the terms ‘mental illness’ and ‘psychological distress’ may relate to each other. It is important to clarify the differences between them for two reasons:

- To reassure people with no pre-existing mental illness, who are experiencing pandemic-related psychological distress (perhaps for the first time), that *this does not mean they have a mental illness*; and
- To make sure that *people with existing mental illness exacerbated by pandemic-related psychological distress receive appropriate support*. When many people are articulating feelings of ‘distress’, it may be more difficult to identify individuals who have an existing mental illness that is worsening. A failure to identify and offer support to these individuals creates significant risks of harm, whereas psychological distress that is unrelated to mental illness does not carry the same risks of harm.

‘Mental illness’ and ‘psychological distress’ overlap to some degree, in that people with mental illness often experience psychological distress that is intrinsic either to the illness, or to its impact upon the person’s life. However, psychological distress is also frequently experienced by people who do not have mental illness.

### Psychological distress

Being in ‘psychological distress’ (feeling unhappy, anxious, worried, angry, sad, scared or grief-stricken) is a normal human reaction during events that threaten us and our community. Pandemics are particularly likely to cause people to feel anxious, worried and scared because they create widespread risks across the community, are unpredictable, and are often experienced as being ‘outside of a person’s control’, leading people to feel powerless in the face of threat.

In evolutionary terms, psychological distress during pandemics is protective. It prompts people to be more cautious and vigilant, which assists the community to stay safe. If we didn't feel any anxiety about infectious risk, we would not be so motivated to listen to public health warnings and commit to infection control measures.

In pandemics, psychological distress builds in proportion to the perceived 'closeness' of the threat. Tasmanians likely felt less distressed when there were no COVID-19 cases in the state and felt increased levels of distress corresponding to the rise in Tasmanian COVID-19 cases; psychological distress is likely to be higher in hot zones (geographic areas with relatively greater numbers of cases) and lower in less affected areas.

Very high levels of psychological distress may lead to acute episodes (panic or anxiety attacks). Although unpleasant, anxiety attacks are self-limiting and do not present a health risk to most people. Psychological distress is rarely sustained at a high level. As people live with and become accustomed to pandemic risk, their distress gradually lessens as they adapt to changes in daily life.

### Psychological distress in the context of mental illness

In contrast, psychological distress in the context of mental illness is often prolonged, with the level of distress rising and falling episodically. People with mental illness often struggle to regulate emotions and self-soothe, which renders them vulnerable to severe distress in their daily lives. A pandemic event may introduce numerous additional stressors to an already-significant burden of psychological distress. This may exacerbate a person's mental illness, cause a deterioration in their ability to cope with daily life, and result in a significantly increased risk of harm.

It is critical to provide continued access to appropriate mental health care for people with pre-existing mental illnesses during a pandemic. International guidelines recommend that mental health care services at all levels from basic services to inpatient care should be immediately available for specific, urgent mental health problems.<sup>1</sup>

### Mental illness during pandemics

Analysis of historic global pandemics indicates that people rarely become incapacitated by mental illness at the height of a disease epidemic. For instance, in an analysis of the Spanish Influenza pandemic in 1918-19 which killed 50 million people with an estimated fatality rate of 10%, it is notable that during the pandemic the focus on survival (maintaining food, shelter and taking care of family members) was so immediate and overwhelming that it appeared to be protective against acute mental illness. This was frequently referenced in later years by

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<sup>1</sup> World Health Organisation, p. 1

pandemic survivors as having ‘no time’ to feel grief or anxiety, even in the face of intensely distressing events (the death of a child or spouse).<sup>2</sup>

While risks to life at the height of a pandemic appear to provide some protection against acute mental illness episodes, this appears time limited. Once the need to focus on immediate physical survival and the care of dependents eases, there will likely be delayed presentations of acute mental illness:

- People whose mental illness *gradually worsened* over a period of time but who did not present when they normally would, due to fear of infection or service inaccessibility
- People with mental illness *who became acutely unwell* during the height of the pandemic but did not present due to fear of infection or service inaccessibility
- People with new or emerging mental illness.

### Risk of trauma during disease outbreaks

An infectious disease outbreak carries some intrinsic risks of trauma and therefore may result in higher population prevalence of mental illness after the outbreak than was measured prior to the outbreak. Following the 2014 Ebola outbreak in Sierra Leone, for instance, mental illness population prevalence was measured at an astounding 48%. It should be noted, however, that the outbreak occurred following years of war and political instability in the region; additionally, the high fatality rate of Ebola (60% in the Sierra Leone outbreak compared to current estimates of between 2 – 6% for COVID-19) poses greater intrinsic traumatic risk.<sup>3</sup>

Given the variables it is difficult to generalise the results of the 2014 Sierra Leone outbreak to the current Australian context. Nevertheless, it appears likely that the COVID-19 pandemic will result in new presentations of mental illness that are directly or indirectly related to the impacts of the pandemic.

### Trauma in surviving patients

A recent study considered the need for integration of mental health into epidemic responses, based on events during the 2018 Ebola outbreak in the Democratic Republic of Congo.<sup>4</sup> It noted that the public health response focused on infection control, the strengthening of health systems and disease containment strategies; this caused responders to overlook the presence of trauma and psychosocial damage to affected individuals and communities. Some infection control measures were particularly distressing to surviving patients. Use of personal protective equipment such as biohazard suits by medical staff, together with isolation

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<sup>2</sup> Influenza Pandemic, p. 8.

<sup>3</sup> AMA Journal of Ethics, p. 1

<sup>4</sup> AMA Journal of Ethics, pp. 1-5

and quarantine protocols, were profoundly distressing. Surviving patients frequently described ongoing PTSD-like symptoms including hallucinations, nightmares and extreme fear of men in white PPE treatment suits.<sup>5</sup> An unintended consequence of infectious disease protocols used to protect clinicians was that patients felt stigmatised and shunned. This resulted in patients experiencing increased fear and mistrust of clinical staff, notably exacerbated when clinicians had a different cultural background to that of their patients.

### Higher trauma risk in people with trauma histories

In relation to the care of COVID-19 patients in Tasmania, it should be noted that patients from CALD backgrounds may be particularly at risk of trauma in this regard; moreover, patients who are refugees from war zones and areas of conflict may be especially vulnerable to trauma resulting from infection control measures, as this experience will likely be additional to, and compound the effects of, existing conflict-related PTSD and C-PTSD.

In relation to mitigating risks of trauma in unwell patients who are experiencing psychological distress or signs of mental illness, the Ebola study's authors noted it was critical that such patients receive culturally appropriate support and care. This acts to mitigate that patient's potential distrust of health care workers and limits the potential for long-lasting traumatic damage.<sup>6</sup>

In relation to assessing mental health care needs of unwell patients during an infectious disease epidemic, the study notes that rapid mental health diagnostic tests could be integrated into clinical care to immediately assess a patient's psychological state, supported by mental health care referral pathways and assertive follow-up.<sup>7</sup>

### Psychological distress: prevalence and relative severity in pandemics

Research studies indicate that most people will experience some level of psychological distress during a pandemic.<sup>8</sup> For most people this will ease over time and does not lead to mental illness.

To estimate likely population prevalence of psychological distress during the COVID-19 pandemic, reference can be made to a Australian study that measured psychological distress in farmers affected by the Australian equine influenza outbreak in 2007.<sup>9</sup> This used the Kessler 10 ratings of 'low', 'moderate', 'high', and 'very high' to assess the degree of non-specific psychological distress presenting in affected farmers. A rating of 'high' or 'very high'

<sup>5</sup> AMA Journal of Ethics, p.2, Section on Ebola and psychosocial context.

<sup>6</sup> AMA Journal of Ethics, p. 2.

<sup>7</sup> AMA Journal of Ethics, p. 3.

<sup>8</sup> World Health Organisation, p. 1

<sup>9</sup> BMC Public Health, pp. 1-25.

psychological distress indicates that there may be a need for some form of external intervention<sup>10</sup> but does not indicate that the person is mentally ill (see discussion below). The study provides basic indicative modelling of how an infectious disease outbreak might affect psychological distress levels in the Australian population, assuming that a pandemic would cause the entire population to be directly or indirectly affected.<sup>11</sup>

The study showed that during the outbreak, 34% of affected farmers recorded high to very high levels of psychological distress. Australian statistics show that in 2007 between 12.1 – 13.8% of the Australian population reported high to very high psychological distress (rates were slightly higher in rural communities).<sup>12</sup> The prevalence of high to very high psychological distress in farmers affected by the outbreak was therefore 20% higher than general population prevalence.<sup>13</sup>

**Table 1: Rates of high and very high psychological distress in affected farmers during the 2007 Australian equine influenza outbreak compared to rates of high and very high psychological distress in the general Australian population during 2007<sup>14</sup>**

Population group	Proportion of population reporting <b>high</b> psychological distress	Proportion of population reporting <b>very high</b> psychological distress	Combined proportion of population - <b>high and very high</b> psychological distress
General	4-5%	8-9%	12-14%
Affected by outbreak	20%	14%	34%
<b>Percentage rise during outbreak</b>	<b>15-16%</b>	<b>5-6%</b>	<b>18-20%</b>

In Table 1 above, the last row shows the increase in high and very high levels of psychological distress in people affected by the outbreak as compared to the population baseline.

The study also noted that for the 40% of the cohort that reported very high psychological distress (14% of the entire cohort), their distress reached levels that could be diagnostic for mental illness according to DSM-4 criteria.<sup>15</sup> It should be noted, however, that the study did not measure existing prevalence of mental illness in the cohort. People with pre-existing mental illness would likely make up part, or all, of the 14% of those whose distress was severe enough to be diagnostic of mental illness. Therefore, this data should not be considered predictive of new-onset mental illness in disease outbreaks.

<sup>10</sup> BMC Public Health, p. 19

<sup>11</sup> Although see notes on extent of generalisability on p. 3 of BMC Public Health.

<sup>12</sup> BMC Public Health, p 7

<sup>13</sup> BMC Public Health, pp.1-25.

<sup>14</sup> BMC Public Health, data drawn from pp.2-6.

<sup>15</sup> BMC Public Health, p. 19.

## Multiple causality and compounding effect of psychological distress

While the primary risk in a pandemic is health related, other risks (i.e., economic risks) can be significant and may cause high levels of distress. Significant changes in one's daily life (for instance, working from home, looking after children who normally attend childcare or school, self-isolating at home, or going into quarantine) are often experienced as stressful.

Psychological distress compounds as stressors increase. For instance, a person who is financially secure and does not have to make major changes in routine may be anxious about the health risks of a pandemic; a person who is financially *insecure* and is faced with major changes to daily life may be anxious about health risks and may, in addition, be anxious about money and life changes. Each additional stressor adds to (compounds) the load. The second person in this example would likely experience a high level of psychological distress than the first.

### *Cohorts at higher risk of psychological distress*

People with the greatest perceived risk to life are most likely to feel higher levels of psychological distress about their infectious disease risk.

There is little evidence available on whether some people are intrinsically more likely than others to contract COVID-19.<sup>16</sup> However, members of a specific population cohort are considered to have a high risk of *more severe illness* if they contract COVID19:<sup>17</sup>

- Age over 65 years (or)
- Chronic lung disease (or)
- Serious heart condition (or)
- Autoimmune disease (or)
- Organ transplant history (or)
- Severe obesity, diabetes, renal failure, liver disease (or)
- On immune-suppressant medication including cancer treatments

Members of this cohort appear to be at higher risk of experiencing a high level of psychological distress in relation to infectious disease risk.

A 2007 Australian study demonstrated that stressors other than infectious risk were significant during an outbreak (as noted above), noting that specific cohorts were especially likely to experience high to very high psychological distress from other causes ('indirect' impacts):<sup>18</sup>

<sup>16</sup> Although it has been shown that workplace exposure to people who have COVID-19 dramatically increases a person's infectious risk, as evidenced by infection rates in Italian and British health care professionals looking after patients with COVID-19.

<sup>17</sup> Centers for Disease Control and Prevention (CDC), [People who are at higher risk for severe illness](#), 22 March 2020

<sup>18</sup> These were (a) people whose main source of income was impacted by the outbreak or disease control interventions (more than twice as likely to experience high rates of distress compared to those whose main source of income was not impacted); (b) People with no formal educational qualifications, who were 63% more likely to experience high rates of distress compared to those with tertiary qualifications; and (c) People under 24 years, although the specific circumstances of the equine influenza outbreak (in which many horses were euthanized) caused traumatic disruption of animal-human bonds that may have affected younger people disproportionately as compared to other types of epidemic. See discussion and tables in BMC Public Health, pp. 8-20.

- People whose main source of income is impacted by COVID-19 or infection control measures
- People with no formal educational qualifications
- People under the age of 24 (who may be more affected by social and interpersonal disruptions).

This indicates that equivalent Tasmanian cohorts may be at higher risk of experiencing high to very high levels of psychological distress during the COVID-19 pandemic. It is possible that these population cohorts may require greater psychosocial support, even early interventions, to maintain their mental health and wellbeing during and after the first phase of the pandemic.

There is no evidence that people who experience high levels of psychological distress during a pandemic will go on to develop a mental illness *as a consequence of experiencing psychological distress*. The 2007 Australian study does not support a theory of increased mental illness in people impacted by an infectious disease outbreak (only 14% of those impacted had a level of psychological distress high enough to be diagnostic for mental illness<sup>19</sup> whereas the Australian population prevalence of mental illness that year was 20%).<sup>20</sup> It is possible, however, that the experience of becoming sick with COVID-19 may increase a person's risk of new onset of mental illness or (for a person with a history of mental illness) a lapse in recovery.

It is possible that novel changes in social connectedness, caused by self-isolation and social distancing measures relating to the control of COVID-19, may result in higher population incidence of mental illness. It is difficult to predict the long-term impacts of such changes; they are unprecedented in scale and therefore have never been studied. It should be noted, however, that human beings are innately social, a quality that requires physical proximity to others; consequently prolonged social and physical distancing may be profoundly disturbing, as it does not allow 'normal' human interactions to proceed.

### Stages of psychological distress and mental illness leading up to, during, and after an infectious disease pandemic: a theoretical model

Given the evidence base, it seems reasonable to propose that population mental health support and care should be viewed in three consecutive stages, where population needs are distinct and different at each stage:



<sup>19</sup> According to DSM-IV criteria at the time. DSM-4 has subsequently been replaced with DSM-5

<sup>20</sup> Mental Health of Australians 2



## Phase 1: Preceding full pandemic impact

Support for population mental health and wellbeing:

- Widespread, strategic messaging that normalises the experience of psychological distress
- Widespread, strategic messaging that emphasises community cohesion, commonality of experience, and hope
- Expand telephone support and counselling services to accommodate increased levels of psychological distress. Consider creation or expansion of volunteer 'chat lines' to address loneliness caused by self-isolation or quarantine

Maintain open and honest communication:

- Maintain open and honest communication with community, even if the news is 'bad' – maintenance of trust in government is protective for mental health and wellbeing

Maintain mental health service delivery:

- Continue all levels of mental health service delivery at existing levels – it is critical for people with pre-existing mental illness to have continuation of their 'normal' services and supports for as long as possible

## Phase 2: Full pandemic impact

Plan for reduced MH service delivery:

- Bombproof a proportion of core MH services and anticipate failure of all other services
- Potential slackening of demand for acute mental health services (physical survival focus) and/or reluctance to present acutely (fear of infection in acute care settings); preoccupation with physical impacts of infectious disease (people are unwell, have unwell family members and friends, or both)

Assess and mitigate traumatic risk in severely unwell patients:

- Incorporate psychological assessment into clinical management of hospitalised patients, recognising high traumatic risk in severely unwell [hospitalised] patients (fear of fatal outcome, experiences of treatment by clinicians wearing PPE, experiences of quarantine and forced isolation)
- Provide bombproof MH referral pathways reserved for treatment of hospitalised patients
- Provide assertive MH follow up for hospitalised patients post-recovery

## Phase 3: Rebuilding services to meet increased need

Restore previous MH service capacity as quickly as possible

Anticipate significant increase in demand for MH services:

- Delayed presentations of people with pre-existing mental illness

- New presentations from recovered patients who were severely ill/traumatized by experiences
- New presentations from patients who were severely ill and have not achieved/will not achieve full physical recovery;
- Other new presentations related to exhaustion, grief, long term changes in life circumstances

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*Dr Astrid Wootton*

*Policy Officer, MHCT*

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