PSYCHIATRISTS' ASSOCIATION OF NEPAL

Guidelines for Prevention and Management of Psychiatric Illness during Isolation and Quarantine

Dr. Ranjan Thapa
Prof. Sudarshan Narsingh Pradhan

This guideline has been developed to facilitate Psychiatrists, other health care workers and policy makers to address the psychosocial aspects of Isolation and Quarantine. This document may be freely reproduced in part or whole for non-profit uses with proper citation.

Correspondence

Psychiatrists' Association of Nepal
NMA building, Exhibition Road, Kathmandu.
E-mail: panemail2013@gmail.com
Website: psychiatrynepal.org.np

PAN No: 602730763 **Reg. No:** 116/047/048

PSYCHIATRISTS' ASSOCIATION NEPAL (PAN)

KATHMANDU, NEPAL

Secretariat:
NMA Building, Sidhhi Sadan
Room No. 6, 5th Floor
Exhibition Road, Kathmandu

e-mail: panemail2013@gmail.com
Website: www.psychiatrynepal.org

Ref. No. *Date:*

Date: 14 June 2021

MESSAGE

As we look back and reflect on the events of that have occurred during the past year, COVID-19 has brought up a great Global Impact and immense crisis. Affecting 224 countries around the world with almost 176 million cases and above 3.8 million deaths. Almost 607 thousand cases and above 8 thousand deaths have been reported so far in Nepal.

Mental Health Impacts of The Pandemic is massive. Added to the fear of contracting the virus in a pandemic and the significant changes to our daily lives, as our movements are restricted in support of efforts to contain and slow down the spread of the virus. We have faced with new realities as the lockdown has been imposed starting from working from home, temporary unemployment, home- schooling of children, and lack of physical contact with other family members, friends and colleagues. Along with this, isolation, quarantine and the treatment related part like lengthy hospitalization, ICU, prolonged mechanical ventilation, considerable reduction in quality of life and stigma-related psychosocial stressors are some of the factors owing to the Mental Health Burden. Adding to this situation was the closure and disruption of mental health services and deployment of Mental Health Care staff to COVID-19 response team, this brought about an enormous mental health challenge.

Mental disorders like anxiety, depression and stress-associated conditions as well as relapse of previously ill or pre-existing psychiatric disorders are commonly seen in the population. Moreover, the rapidly increasing rate of suicide has caused distress.

In order to tackle the current situation of psychological turmoil, I am extremely happy that Psychiatrists' Association of Nepal (PAN) took the initiative in forming Guidelines for Prevention and Management of Psychiatric illness during Isolation and Quarantine. I hope that this guideline would be of immense use and help for policy makers, Psychiatrists, General Practitioners, Doctors, Interns and Health care workers.

Prof. S.N. Pradhan
President, PAN

Introduction

The Covid-19 pandemic which was first reported from Wuhan, China was declared a pandemic on 11 March 2020. It is still ongoing and has led to massive morbidity and mortality throughout the world. [1] Various measures have been applied to control this pandemic. Isolation and quarantine are two public health measures, among many others which have been used to control this pandemic. Isolation is a method that separates ill persons who have a communicable disease from those who are healthy. Isolation restricts the movement of ill persons to help stop the spread of certain diseases [2].] During this pandemic isolation has been implemented in healthcare facilities as well as home. Quarantine, on the other hand, separates those who are still healthy, but possibly exposed to an infective agent, from those who are healthy and have not been exposed. It is a restraint upon the activities of persons designed to prevent the spread of disease [2]. During this pandemic Nepal has ordered all traveller from abroad to quarantine themselves at a quarantine centre, hotel or home depending upon the stage of the pandemic.

Although from the public health aspect quarantine and isolation are effective to prevent the spread of the novel corona virus, they exact a toll on the mental health of the people subjected to isolation and quarantine. Patients who are placed in isolation and quarantine due to the covid-19 pandemic are vulnerable to neuropsychiatric complications due to multiple reasons. From a psychological perspective, the consequences of social distancing are summed up in two words – isolation and uncertainty. It results in various degrees of isolation. Isolation in settings of quarantine and isolation can be quite palpable, physical (contact barriers, protective equipment, physical separation by glass or locked doors) and symbolic (separation from loved ones, inability to read facial expressions from masked faces, feel a human touch on one's skin, inability to make out a human shape underneath protective equipment). The other crucial psychological aspect of isolation is uncertainty – those who are ill in isolation are uncertain about their survival and recovery, those who are healthy in quarantine are uncertain about whether they are going to get sick [2]. Changes in daily lives, feeling of loneliness, job losses, financial difficulty, and grief over the death of loved ones have the potential to affect the mental health of many. Other stressors during quarantine and isolation are frustration, boredom, inadequate supplies, inadequate information, financial loss and stigma [3,4]. For such individuals, isolation is evident and physical – they are confined to limited space, their movement is limited, there are contact precautions, and everyone is rushing to complete their task at hand and get out of the isolation room. Their isolation is deepened by the illness itself and complications arising from the infection. Those complications can include delirium, anxiety, depression, a sense of hopelessness and despair, psychological trauma (acute stress disorder or post traumatic stress disorder [PTSD]), and cognitive impairment.

Delirium

Delirium has been found to be common among patients with severe corona virus infections [5]. Delirium is a neurobehavioral syndrome caused by the transient disruption of normal neuronal activity secondary to systemic disturbances, including ones caused by an infection. Delirium is a state of acute, organically caused mental dysfunction. It often fluctuates in severity over a short period of time. It includes attentional deficits and disorganization of behavior (hyperactive, hypoactive, or mixed). It may involve other cognitive deficits, changes in arousal, perceptual deficits, altered sleep-wake cycle, hallucinations and delusions. Delirium has been associated with increased morbidity, mortality, cost, complications, a slower rate of recovery, and prolonged hospital stays. Longer term delirium has been associated with poor functional and cognitive recovery and decreased quality of life [6]. Prevention, management, and treatment of delirium, therefore, remain an important part of treatment of patients in isolation due to severe corona virus infection [7].

There are factors that can lead to delirium; the primary culprits will be virus itself and the systemic inflammatory responses they cause [8]. Inflammatory processes are well documented in the pathophysiology of delirium, and delirium is a considerable complication among patients in isolation [9]. Antiviral and antibiotic drugs itself can result in delirium. Other agents like steroids, antibodies and interferon which are often used to treat infection and inflammation can also contribute to delirium in patients in isolation.

The treatment of delirium in patients quarantined and isolated for corona virus infection does not differ from approaches to delirium in general – treating the underlying cause, removing or reducing the use of agents that can cause delirium, restoration of sleep-wake cycle, early ambulation, hydration, reduction of sensory deprivation or overload, frequent reorientation, placing familiar objects/photographs in patient's surrounding [10]. Patients in isolation are particularly susceptible to sensory deprivation and isolation from social contacts that can provide reorientation, support, and reassurance. If family members and friends are unable to visit patients in isolation, then it is incumbent upon healthcare personnel to provide the much-needed social contact, reorientation, and support. Providing contact with family members via telecommunication should be used as having such communication may have a beneficial effect on the patient and patient's loved ones on the other side. Psycho-education about delirium, its course, treatment, and prospects for recovery can be helpful for family members who may not understand why the patient acts, reacts, or behaves in a particular way and who may be disturbed by seeing the patient in such a state.

Melatonin is a drug which may be used in the prevention and early treatment of delirium. Despite the evidence for its effectiveness not being very strong, it remains the most frequently used agent in delirium because of almost no known adverse effects. It is often prescribed in doses of 1–5 mg at bedtime [11, 12]. Once delirium is diagnosed and pharmacotherapy for delirium is considered, low-dose anti-psychotics, are usually the first-line agents. Although almost any antipsychotic drug may be used for treatment of delirium Haloperidol is commonly used because of low cost, easy availability and availability in tablet, liquid, intramuscular and intravenous forms. When antipsychotics are used, they are used in doses lower than the doses used for the treatment of psychosis. Antipsychotic induced extra pyramidal symptoms (EPS) are unlikely to occur at doses

used in delirium. As delirium is an organic illness psychiatrists need to work in liaison with physicians to identify the factors contributing to delirium. Benzodiazepines are not recommended for the treatment of delirium and delirium-associated agitation as they may contribute to confusion and worsen delirium [13]. Benzodiazepines are, however, considered a preferred treatment for alcohol withdrawal and delirium associated with alcohol withdrawal (delirium tremens) [14].

Anxiety

When people are faced with sudden isolation and quarantine, they can react with anxiety which can give way to depression and despair or anger and acting out. This event may act like a traumatic event for the individuals involved. Symptoms of depression and anxiety are, to a large extent, a normal reaction to a stressful situation and tend to respond to support, reassurance, and accurate and timely information about the isolation status and changes in the environment. Loss of control in such situations is a reflection of reality and may be accompanied by a more or less pronounced sense of helplessness. Empowering individuals in quarantine and isolation by including them in the decision-making process for at least certain decisions helps restore dignity and sense of self-worth in difficult situations [15].

Anxiety is an appropriate signal to a number of processes that occur within the context of quarantine and isolation. A person is faced with a sudden realization that their plans for their immediate future have suddenly and dramatically changed. They may be taken to an unfamiliar setting and separated from their social context. At the very least, they would reasonably be anxious about their own health, concerned that they could fall ill at any given time. Their anxiety will likely be worsened by the inability to conduct their affairs or to provide for their dependents. If anxiety develops in this context, it likely meets the criteria of adjustment disorder with anxiety. Similarly, from the other side of quarantine or isolation barrier, families and loved ones of those who are in quarantine and isolation may be very concerned about their wellbeing, but also about their own, both in terms of health and in terms of capability to provide for themselves or dependents in the absence of the isolated person. Adjustment disorder symptoms, both with anxiety and depression, can reasonably occur among those populations as well. When the situation of isolation and quarantine involves more dramatic events, including seeing loved ones stricken by disease and suffering, seeing patients dying from the illness, or witnessing violence and the use of force (including forceful separation), those experiences, coupled with fear for own safety and the safety of loved ones, may give rise to symptoms of traumatic stress (resulting in acute stress disorder and post-traumatic stress disorder). Several studies examined the impact of isolation on patient mental well-being and behavior and a majority showed a negative impact, including higher scores for depression, anxiety, and anger among isolated patients. A few studies also found that healthcare workers spent less time with patients in isolation and patient satisfaction was adversely affected by isolation if patients felt that they were kept uninformed of their health care by the providers [15]. The duration of isolation is directly reflected in the severity of symptoms. Short-term isolation likely does not have a significant impact on patients' well-being [16]. As the duration of isolation extends and as the severity of symptoms increases, the psychological toll seems to increase. Respiratory compromise during hospitalization and isolation seems to give significant rise to symptoms of post-

traumatic stress [17]. Basic logistics sometimes can present as an insurmountable challenge to those who are mandated into isolation or quarantine. Ensuring necessary support for persons who are asked to refrain from entering public venues can impact their willingness to comply with quarantine orders. Anticipating the simple, nonclinical needs of persons under public health surveillance includes addressing potential concerns about housing, transportation, education, employment, food, and other household issues.

Handling anxiety during isolation and quarantine requires a multi-pronged approach that rests on support, reassurance, providing useful information, and solving practical issues for patients and that utilizes medications when necessary.

In cases of patients with no significant pre-existing issues, anxiety spells can be treated with short-term courses of benzodiazepines. Unlike the SSRI drugs which need several days to exert their anxiolytic effects the benzodiazepines start working immediately. While any benzodiazepines may be helpful, selection may depend on availability, half-life, and the duration of action. Short half-life medications such as Alprazolam may be helpful in panic attacks or panic-like anxiety spells, while longer-acting medications, such as Diazepam or Clonazepam, may be better suited for persistent anxiety. Benzodiazepines can be used for the treatment of both anxiety and insomnia during isolation and quarantine. They may be prescribed to be taken in as per need basis only. We should be careful in prescribing benzodiazepines for severely ill patients in isolation because they may contribute to delirium. The use of benzodiazepines may also be problematic in patients with compromised respiratory function [18].

For patients with impaired respiratory function and those who are at risk for or exhibiting signs of delirium, the use of agents with 5-HT2A antagonistic properties such as Mirtazapine and Trazodone may be useful [19]. These medications also have sedating properties and can be used for insomnia. They have advantages like being non- addictive and safe for those at risk of delirium and those with respiratory distress. Most second-generation antipsychotics also have 5-HT2A antagonism and can be used in low doses for anxiety and insomnia, even with patients with delirium or at risk for delirium. These drugs are safe in patients with respiratory distress too.

Depression

Depression, just like anxiety, is a part of a natural response to a sudden change in living circumstances involving separation and uncertainty, accentuated by helplessness. Depression is manifested by depressed or sad mood, loss of pleasure or interest in otherwise pleasurable activities, and other symptoms like problems with appetite, sleep, energy, problems concentrating, worthlessness, guilt, hopelessness, death wishes and outright suicidality. ICD-10 and DSM-5 requires depressed mood with accompanying symptoms to last for at least 2 weeks in order to establish a diagnosis of major depressive episode that needs psychiatric attention. In isolation and quarantine, at least in the short term, the severity of depression is unlikely to rise to this level. Depression in those circumstances would likely be a part of adjustment disorder (adjustment disorder with depressed mood or adjustment disorder with mixed anxiety and depression). Under such circumstances, depression may not require pharmacological treatment, at least not in the initial period. Such a manifestation of depression is best addressed with supportive therapy, with reassurance, and by overcoming helplessness and isolation by way of providing accurate information and by correcting cognitive distortions and misconceptions that may accompany depressive outlook [20]. Empowering individuals to make decisions and by helping them restore or establish routines during the isolation, as well as directing them to utilize healthy defence, including humor, helps to maintain mental health equilibrium [21]. As isolation or quarantine drag on, however, individuals become more susceptible to the development of more serious depressive symptoms. When stigma becomes associated with an infectious disease, isolation tends to become far more symbolic and substantial, and such individuals are susceptible to depression [22]. When social support is unavailable due to isolation, it should be patched with available technological means, including phones, tablets, and social media. When pre-existing social support cannot be reassembled due to stigma, then it is up to healthcare providers and other volunteers to step up and fill this void.

Pharmacological treatment of depression should be weighed against the severity and duration of depression symptoms, side effects of medications, their interactions, and the length of time needed to see the antidepressant effect. Treatment with medications should be initiated when expected benefits exceed the risks and the probability of recovery without medications with supportive therapy and by removing isolation and quarantine in the near future. In cases where depressive symptoms may be accompanied by anxiety and insomnia, the use of agents with 5-HT2A serotonin receptor antagonism such as Mirtazapine or Trazodone, may be useful even if the treatment may be aborted before the robust onset of antidepressant effects due to change in circumstances. The use of Mirtazapine may particularly be appropriate for patients who, in addition to insomnia and depressive symptoms, may be having a poor appetite and with or without nausea, due to its H1 antagonism and 5-HT3 antagonism [23]. If patients are at high risk for delirium, the use of antidepressants should be weighed very critically. Traditional antidepressants such as tricyclics (TCAs) are generally avoided due to their anticholinergic properties [22]. Another option for patients with depressive symptoms, anxiety, and insomnia, but who are at high risk for delirium could be agomelatine, an antidepressant that also has properties melatonin receptor MT1/MT2 agonism [25]. This medication is not currently available in Nepal.

Grief

People who are in isolation and quarantine frequently get news of the death of their family members, friends or colleagues. Isolation interrupts their normal grieving process. These people will benefit from psychosocial support to help them grieve properly. These people need to be explained that it is natural to feel grief over what one is losing and when we do that, it allows us to let grief do its job, so that we can move on. Organizing a virtual memorial service with friends and family members will help. Some counselling about the nature of grief will definitely help. People need to be told that during grief they may experience a range of emotions like sadness, anxiety, loneliness, regret, anger and guilt. They need to be told that grief is transient, and it will all slowly pass off. We need to help them accept that we are in a different time where many of the ways of our societal functioning has changed, and they can adapt rituals as part of new normal. They can make a "to do list" of tasks which they can carry out after the pandemic wanes [26].

Pre-existing Psychiatric Disorders

Emerging data indicate that people with schizophrenia and other serious mental illnesses have been hard hit by the pandemic. Individuals with schizophrenia and Depression, for instance, are nearly 7 times more likely to contract COVID-19 and are nearly two to three times more likely to die from it if they do fall ill, compared with individuals who do not have a mental illness [27]. Multiple factors have been described that could increase the risk of persons with mental disorders to get COVID infection or make the outcomes of the infection worse. These include challenges in appraising health information and complying with preventive behaviour, limitations in access to health care, homelessness or living in settings where the risk for contagion is higher, and the higher prevalence of comorbid medical conditions that are associated with increased risk for COVID-19 severe illness (such as cardiovascular diseases, substance use disorders, and chronic obstructive pulmonary disease) [28].

Patients who enter quarantine or isolation with pre-existing psychiatric disorders need to be monitored closely as the stress related to isolation may lead to exacerbation of their symptoms. They should generally continue with their medications. It will not be advisable to change the dose or change the medication at this time unless it is indicated very strongly.

Patients who are on antipsychotics need to continue their antipsychotics. It should not be difficult to get CBC for patients taking Clozapine in the setting of isolation or quarantine. If patients who are taking first generation antipsychotics that lead to prolongation of QT interval regular ECG is advisable. The setting of isolation and quarantine, with closed doors and people wearing masks and other protective gears may be overwhelming for patients with psychosis. So, it is important to monitor these patients to watch for exacerbation of their symptoms.

One drug that needs special attention while prescribing to patients in isolation is Lithium. Care should be exercised while prescribing lithium to febrile patients because fever can lead to lithium toxicity by causing dehydration. Getting a Lithium level may not always be possible in the setting of isolation or quarantine, so we must extra careful while using Lithium. Lithium should not be used in cases of acute renal failure or deranged renal functioning [29, 30]. Depending on the

circumstances, patients in such cases should be switched to other mood stabilizers or second-generation antipsychotics.

Patients on antidepressants will most likely be on SSRIs or SNRIs. SSRIs and SNRIs have generally safe pharmacological profile, but those medications can cause hyponatremia, particularly in medically compromised, elderly patients, which can further complicate the management of electrolyte imbalances [31]. Due to their platelet inhibitory actions, SSRIs have also been associated with increased incidences of postoperative bleeding. Reviews generally consider this risk to be negligible, but it may merit attention in cases of recurrent surgeries or where multiple anticoagulants are used [32].

Patients with Obsessive Compulsive Disorder (OCD) have reported worsening of symptoms during this pandemic. A study from Germany reported that about 70 percent of OCD patients have reported worsening of their symptoms during this period. This increase in symptom severity was particularly true for washers in comparison to non-washers. Specifically, washers reported a larger increase than non-washers in compulsions and avoidance behavior but not in obsessions [33]. The WHO has issued hand washing guidelines but patients with OCD may feel an intense urge or drive to take it much further, feeling that more must be better. They may focus solely on one part of the hygiene guidelines and ignore the rest. We need to guide these patients to find a healthy balance between physical and mental health. They should be advised to follow established practices while resisting urges to take hygienic behaviors to damaging extremes. Another problem for people with OCD can stem from the constant stream of news and information about the pandemic. These patients may take one point of information and causes it to explode. Hence, we need to advise patients to avoid overexposure to information and focus on few but trusted sources of information [34].

In seriously ill patients in isolation, dose adjustments may be required for a number of medications, particularly if hepatic function and renal clearance are affected [35]. A reduction of dose in renal failure is individual for each medication, but in the absence of precise references, a dose reduction by 1/3 when renal clearance of the drug is not involved and by ½ where renal clearance of the drug is involved appears prudent [36].

Challenges may arise when patients in isolation require medication treatment or intensive care that may interact with their existing psychotropic medications. It is important to remember that psychotropic medications tend to interact with a number of medications, including antimicrobials, at several different levels. It is not possible to discuss about the specific drug interactions in this guideline, so references on drug interactions should be consulted when particular and specific interactions are concerned.

Substance Use Disorders

Patients with active substance use disorders who enter isolation or quarantine may require detoxification. Detoxification is indicated for patients with alcohol or sedatives use disorder, as well as for patients with opioid use disorders. Withdrawal from most other classes of substances can be unpleasant but may not require pharmacological interventions.

Cognitive Disorders

Patients with cognitive disorders like dementia and intellectual disability require special attention during quarantine and isolation because they (1) have limited ability to provide for themselves, (2) have limited ability to understand and comply with critically important instructions, and (3) are often congregated together in institutions and can find themselves in isolation in large groups. This is of particular importance when we understand that individuals in residential care facilities are very susceptible to corona virus outbreaks due to the nature of their facilities. Cognitively impaired patients who reside individually may be unable to be quarantined by themselves and to follow directions, and they may depend on the care of other individuals to stay with them and care for them during the isolation period. They may require frequent and simple reminders and reorientation regarding the isolation circumstances and may benefit from repetitive instructions in verbal or visual (written) form. They are also more susceptible to delirium in the context of isolation [37]. Donepezil, which is the commonest medication used in dementia is not thought to be contributing to delirium, rather it is being investigated as possible delirium treatment, but with little evidence of efficacy [38]. However, another medication used to treat advanced dementia, Memantine, may contribute to the progression of delirium, and its continued use in isolation setting should be re-evaluated [39].

Special Populations

Children, adolescents and pregnant women are other groups that require special attention during isolation and quarantine. Young children should not be kept in isolation or quarantine without caregivers for any extended period of time. Adolescents may have difficulties adhering to quarantine and isolation rules and they are, with healthcare professionals, a subpopulation most likely to break quarantine [40]. Children of all ages and adolescents benefit from structured time activities and routine. Routine may be designed to resemble the pre-isolation routine, or it may be an entirely new routine. If isolated or quarantined children are missing school, they should be allowed to attend classes virtually. Other than assigning children homework and other tasks, the use of books, media, board, or electronic games can make the isolation less daunting. The use of the internet should be allowed and tolerated, but the use of social media should be monitored for the dissemination of inaccurate, yet dramatic, attention-grabbing messages and postings.

Pregnant women also require special attention in cases of isolation or quarantine. Expectant mothers may be particularly concerned about the well-being of their babies and the effect the infection may have on the fetus. Pregnancy itself may come with some emotional lability and mood symptoms, and the introduction of infection can further complicate matters. The postpartum period makes mothers more susceptible to postpartum depression or postpartum exacerbation of already existing mood disorders. Performing screening and providing support and education, as one would in a regular setting, can have a significantly positive effect on mothers who deliver while in isolation.

Promotion of Mental Health during Quarantine and Isolation.

As psychological problems are common during isolation and quarantine, there must be plan in place to address these issues while implementing quarantine and isolation. Addressing the psychological aspects pays dividends not only in the long term, by a lower incidence of PTSD, anxiety, depression, or substance abuse, but may pay off handsomely from the very outset, by motivating participation and enhancing adherence [2]. In order to minimize the risk to mental health during isolation and quarantine, the following steps are recommended.

1. **Keep it as short as possible:**

   Longer quarantine is associated with poorer psychological outcomes. Restricting the length of quarantine and isolation to what is scientifically reasonable and not adopting an overly precautionary approach to this, would minimize the effect on people. For patients suffering from mild Covid-19 there is no need to wait for a negative PCR report after two weeks to end the isolation [41]. Waiting for a negative report may unnecessary prolongation of isolation. Evidence also emphasizes the importance of authorities adhering to their own recommended length of quarantine, and not extending it. For people already in quarantine, an extension, no matter how small, is likely to exacerbate any sense of frustration or demoralization [42].

2. **Provide as much information as possible**

   People who are quarantined often feared being infected or infecting others. They also often have catastrophic appraisals of any physical symptoms experienced during the quarantine period. This fear is a common occurrence for people exposed to a worrying infectious disease [43], and might be exacerbated by the often inadequate information participants reported receiving from public health officials leaving them unclear of the nature of the risks they faced and why they were being quarantined at all. Ensuring that those under quarantine have a good understanding of the disease in question, and the reasons for quarantine, should be a priority.

3. **Provide adequate supplies**

   Officials also need to ensure that quarantined and isolated households have enough supplies for their basic needs and, importantly, these must be provided as rapidly as possible. Coordination for provision of supplies should ideally occur in advance, with conservation and reallocation plans established to ensure resources do not run out [3].

4. **Have a plan to reduce the boredom and provide communication**

   Boredom and isolation will cause distress; people who are quarantined should be advised about what they can do to stave off boredom and provided with practical advice on coping and stress management techniques. Having a working mobile phone should be taken as a necessity, not a luxury. Activating one's social network, albeit remotely, is not just a key priority, but an inability to do so is associated not just with immediate anxiety, but longer- term distress. One study suggested that having a telephone support line, staffed by psychiatric nurses, set up specifically for those in quarantine could be effective in terms of providing them with a social network.[44] The ability to communicate with one's family and friends is also essential. Particularly, social media could play an important part in communication with those

far away, allowing people who are quarantined to update their loved ones about their situation and reassure them that they are well. Therefore, providing those quarantined with mobile phones, cords and outlets for charging devices, and robust WIFI networks with internet access to allow them to communicate directly with loved ones could reduce feelings of isolation, stress, and panic. It is also important that public health officials maintain clear lines of communication with people quarantined about what to do if they experience any symptoms. A phone line or online service specifically set up for those in quarantine and staffed by health-care workers who can provide instructions about what to do in the event of developing illness symptoms, would help reassure people that they will be cared for if they become ill. This service would show those who are quarantined that they have not been forgotten and that their health needs are just as important as those of the wider public. The benefits of such a resource have not been studied, but it is likely that reassurance could subsequently decrease feelings such as fear, worry, and anger.

5. **Provide special attention to Health-care workers**

Health-care workers themselves are often quarantined and a review by Brooks SK et al suggests they, like the general public, are negatively affected by stigmatizing attitudes from others [3]. It is also possible that health-care workers who are quarantined might be concerned about causing their workplaces to be understaffed and causing extra work for their colleagues[45] and that their colleagues' perceptions could be particularly important. Being separated from a team they are used to working in close contact with might add to feelings of isolation for health-care workers who are quarantined. Therefore, it is essential that they feel supported by their immediate colleagues. During infectious disease outbreaks, organizational support has been found to be protective of mental health for health-care staff in general [45] and managers should take steps to ensure their staff members are supportive of their colleagues who are quarantined.

6. **Appeal for altruism**

No research was found which tested whether mandatory versus voluntary quarantine has a differential effect on wellbeing. In other contexts, however, feeling that others will benefit from one's situation can make stressful situations easier to bear and it seems likely that this is also true for home-based quarantine and isolation. Reinforcing that quarantine/isolation is helping to keep others safe, including those particularly vulnerable (such as those who are very young, old, or with pre-existing serious medical conditions), and that health authorities are genuinely grateful to them, can only help to reduce the mental health effect and adherence in those quarantined [3].

References

1. World Health Organization. https://www.who.int/emergencies/diseases/novel-coronavirus-2019
2. Huremovic D. (2019) Psychiatry of Pandemics: A Mental Health Response to Infection Outbreak. Cham: Springer International Publishing.
3. Brooks S. K., Webster R. K., Smith L. E., Woodland L., Wessely S., Greenberg N. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* 395, 912–920. 10.1016/S0140-6736(20)30460-8, PMID: [PMC free article] [PubMed] [CrossRef] [Google Scholar]
4. Pietrabissa, G., & Simpson, S. G. (2020). Psychological consequences of social isolation during covid-19 outbreak. *Frontiers in Psychology, 11*. 10.3389/fpsyg.2020.02201. [PMC free article] [PubMed]
5. Rogers J.P., Chesney E., Oliver D., Pollak T.A., McGuire P., Fusar-Poli P., Zandi M.S., Lewis G., David A.S. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. *Lancet Psychiatry.* 2020;7(7):611–627. [PMC free article] [PubMed] [Google Scholar]
6. Maldonado JR. Acute brain failure: pathophysiology, diagnosis, management, and sequelae of delirium. Crit Care Clin. 2017;33(3):461–519. https://doi.org/10.1016/j.ccc.2017.03.013. Review. PubMed PMID: 28601132.
7. Chertow DS, et al. Ebola virus disease in West Africa—Clinical manifestations and management. N Engl J Med. 2014;371(22,Massachusetts Medical Society):2054–7. https://doi.org/10.1056/ NEJMp1413084.
8. Fong TG, Tulebaev SR, Inouye SK. Delirium in elderly adults: diagnosis, prevention and treatment. Nat Rev Neurol. 2009;5(4):210–20. https://doi.org/10.1038/nrneurol.2009.24.
9. van Gool WA, van de Beek D, Eikelenboom P. Systemic infection and delirium: when cytokines and acetylcholine collide. Lancet. 2010; https://doi.org/10.1016/S0140-6736(09)61158-2.
9. Teale EA, Siddiqi N, Clegg A, Todd OM, Young J. Non-pharmacological interventions for managing delirium in hospitalized patients (Protocol). Cochrane Database Syst Rev. 2017;(4):CD005995. https://doi.org/10.1002/14651858.CD005995. pub2.
11. Choy SW, Yeoh AC, Lee ZZ, Srikanth V, Moran C. Melatonin and the prevention and management of delirium: a scoping study. Front Med. 2017;4:242. https://doi.org/10.3389/fmed.2017.00242.
12. Joseph SG. Melatonin supplementation for the prevention of hospital-associated delirium. Ment Health Clin. 2017;7(4):143–6. https://doi.org/10.9740/mhc.2017.07.143.
13. Kikuchi N, Hazama K, Imai T, Suzuki S, Yoshida Y, Hidaka S. Assessment of the relationship between hypnotics and delirium using the Japanese Adverse Drug Event Report (JADER) database. Yakugaku Zasshi. 2018;138(7):985–90. https://doi.org/10.1248/yakushi.17-00221. Japanese.
14. Sachdeva A, Choudhary M, Chandra M. Alcohol withdrawal syndrome: benzodiazepines and beyond. J Clin Diagn Res. 2015; 9(9):VE01–7. https://doi.org/10.7860/JCDR/2015/13407.6538. Epub 2015 Sep 1. Review. PubMed PMID: 26500991; PubMed Central PMCID: PMC4606320.
15. Abad C, Fearday A, Safdar N. Adverse effects of isolation in hospitalized patients: a systematic review. J Hosp Infect. 2010;76(2):97–102. https://doi.org/10.1016/j.jhin.2010.04.027.
16. Day HR, Perencevich EN, Harris AD, Gruber-Baldini AL, Himelhoch SS, Brown CH, Morgan DJ. Depression, anxiety, and moods of hospitalized patients under contact precautions. Infect Control Hosp Epidemiol. 2013;34(3):251–8. https://doi.org/10.1086/669526. Epub 2013 Jan 23.
17. Jiang YN, Zhou W, Zhao XH, Hong X, Wei J. Post-traumatic stress disorder in convalescent patients of severe acute respiratory syndrome: (1)H-MRS study. Zhonghua Yi Xue Za Zhi. 2013;93(5):366–9.

18. Vozoris NT. Do benzodiazepines contribute to respiratory problems? Expert Rev Respir Med. 2014;8(6):661–3. https://doi.org/10.1586/17476348.2014.957186.
19. Nic Dhonnchadha BA, Hascoët M, Jolliet P, Bourin M. Evidence for a 5-HT2A receptor mode of action in the anxiolytic-like properties of DOI in mice. Behav Brain Res. 2003;147(1–2):175–84.
20. Beck AT. Thinking and depression I. idiosyncratic content and cognitive distortions. Arch Gen Psychiatry. 63;9(4):324–33. https://doi.org/10.1001/archpsyc.1963.01720160014002.
21. Rnic K, Dozois DJA, Martin RA. Cognitive distortions, humor styles, and depression. Eur J Psychol. 2016;12(3):348–62. https://doi.org/10.5964/ejop.v12i3.1118.
22. Nita Bhalla, Isolation, depression hounds tuberculosis patients as virulently as the disease Thomson Reuters Foundation, Catholic Online (https://www.catholic.org). 2015 Mar 25 https://www.catholic.org/news/international/asia/story.php?id=59279
23. Anttila SA, Leinonen EV. A review of the pharmacological and clinical profile of mirtazapine. CNS Drug Rev. 2001;7(3):249–64.Review. PubMed PMID: 11607047.
24. Livingston RL, Zucker DK, Isenberg K, Wetzel RD. Tricyclic antidepressants and delirium. J Clin Psychiatry. 1983;44(5):173–6.
25. Fornaro M, Prestia D, Colicchio S, Perugi G. A systematic, updated review on the antidepressant agomelatine focusing on its melatonergic modulation. Curr Neuropharmacol. 2010;8(3):287–304. https://doi.org/10.2174/157015910792246227
26. https://www.brighamandwomens.org/covid-19/grieving-during-a-pandemic
27. Wang, Q., Xu, R., & Volkow, N. D. (2021). Increased risk of COVID-19 infection and mortality in people with mental disorders: Analysis from electronic health records in the United States. *World Psychiatry*. https://doi.org/10.1002/wps.20806
28. Shinn AK, Viron M. Perspectives on the COVID-19 pandemic and individuals with serious mental illness. *J Clin Psychiatry* 2020;81:20com13412. Crossref PubMed Google Scholar
29. Lerma EV. Renal toxicity of lithium, UpToDate. 2018 June. https://www.uptodate.com/contents/renal-toxicity-of-lithium
30. Fenves AZ, Emmett M, White MG. Lithium intoxication associated with acute renal failure. South Med J. 1984;77(11):1472–4.
31. Revol R, Rault C, Polard E, Bellet F, Guy C. Hyponatremia associated with SSRI/NRSI: Descriptive and comparative epidemiological study of the incidence rates of the notified cases from the data of the French National Pharmacovigilance Database and the French National Health Insurance. Encéphale. 2018;44(3):291–6. https://doi.org/10.1016/j.encep.2017.09.003. Epub 2017 Dec 14. French.
32. Sepehripour AH, Eckersley M, Jiskani A, Casula R, Athanasiou T. Selective serotonin reuptake inhibitor use and outcomes following cardiac surgery-a systematic review. J Thorac Dis. 2018;10(2):1112–20. https://doi.org/10.21037/jtd.2018.01.69. Review. PubMed PMID: 29607188; PubMed Central PMCID: PMC5864618.
33. Jelinek L, Moritz S, Miegel F, Voderholzer U. Obsessive-compulsive disorder during COVID-19: Turning a problem into an opportunity? *Journal of Anxiety Disorders.* 2021 doi: 10.1016/j.janxdis.2020.102329. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
34. https://www.mcleanhospital.org/essential/living-ocd-during-coronavirus-crisis

35. Moreira JM, da Matta SM, Kummer AM e, Barbosa IG, Teixeira AL, Silva ACS e. Neuropsychiatric disorders and renal diseases: an update. Braz J Nephrol. 2014;36(3):396–400. https://doi.org/10.5935/0101-2800.20140056.
36. Wyszynski A, Wyszynski B. Manual of psychiatric care for the medically Ill. Washington, DC: American Psychiatric Press; 2005. Appendix 12: Guidelines for Adult Psychotropic Dosing in Renal Failure.
37. Fick DM, Agostini JV, Inouye SK. Delirium superimposed on dementia: a systematic review. J Am Geriatr Soc. 2002;50:1723–32. https://doi.org/10.1046/j.1532-5415.2002.50468.x.
38. Liptzin B, Laki A, Garb JL, Fingeroth R, Krushell R. Donepezil in the prevention and treatment of post-surgical delirium. Am J Geriatr Psychiatry. 2005;13(12):1100–6, ISSN 1064-7481. https://doi.org/10.1097/00019442-200512000-00010.
39. Witter D, McCord M, Suryadevara U. Delirium associated with memantine use in a patient with vascular dementia. J Clin Psychopharmacol. 2015;35(6):736–7. https://doi.org/10.1097/JCP.0000000000000420.
40. DiGiovanni C, Conley J, Chiu D, Zaborski J. Factors influencing compliance with quarantine in Toronto during the 2003 SARS outbreak. Biosecur Bioterror. 2004;2(4):265–72.
41. WHO.https://www.who.int/news-room/commentaries/detail/criteria-for-releasing-covid-19-patients-from-isolation
42. Rona RJ, Fear NT, Hull L, et al. Mental health consequences of overstretch in the UK armed forces: first phase of a cohort study. BMJ 2007; 335: 603.
43. Rubin GJ, Harper S, Williams PD, et al. How to support staff deploying on overseas humanitarian work: a qualitative analysis of responder views about the 2014/15 West African Ebola outbreak. Eur J Psychotraumatol 2016; 7: 30933. 4
44. Maunder R, Hunter J, Vincent L, et al. The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. CMAJ 2003; 168: 1245–51. 2
45. Brooks SK, Dunn R, Amlôt R, Rubin GJ, Greenberg N. A systematic, thematic review of social and occupational factors associated with psychological outcomes in healthcare employees during an infectious disease outbreak. J Occup Environ Med 2018; 60: 248–57