

Commission on Psychiatry of the International League against Epilepsy and the COVID-19

“even if we’re isolated in person we can still be united in spirit”,

Dame Vera Lynn (103 years old)

The Coronavirus disease 2019 (COVID-19) is an emerging pandemic. The numbers of those affected are rising, and countries report new cases every day. There is widespread anxiety related to this hitherto unknown illness.

Patients with epilepsy and their families will face even more pressure since their fears are not restricted solely to the pandemic, but also include their disorder and treatment. Additionally, persons with epilepsy are at higher risk for behavioral and psychiatric disorders that may emerge or be aggravated during stressful times.

We recognize that the plethora of misinformation circulating in social media adds an extra burden to the illness. For this reason, the World Health Organization (<https://www.who.int>) and the Centre for Disease Control (<https://www.cdc.gov>) provide source information with clear guidelines about COVID-19.

The International League against Epilepsy has also provided clear and concise information about epilepsy and COVID-19 for patients, clinicians, and researchers (<https://www.ilae.org/patient-care/covid-19-and-epilepsy>).

The Psychiatry Commission embraces the task of conveying reliable information about mental health for patients and their families (www.ILAEPsychiatricCommission.com)

The Psychiatry Commission offers a balanced perspective to improve knowledge, attitudes, and practices about mental health disorders in persons with epilepsy for patients, parents, and professionals.

Disclaimer: The information conveyed is accurate to the best of our knowledge. Individuals should always check with health professionals before making any decision related to treatment. Any individual who is distressed by this information should contact professionals or national help lines for support

Mental Health in persons with epilepsy during the COVID-19 Pandemic: A Call for Action

1. Is there any evidence that the SARS-Cov-2 that causes COVID-19 itself cause new psychiatric ill health in persons with epilepsy?

At present, there is no strong evidence that the virus itself, by direct action in the central nervous system (CNS), will cause psychiatric ill health, apart from confusion and disorientation associated with those who have severe acute illness.

It remains to be determined if the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, **might** infect the brain or trigger immune responses that have additional adverse effects on brain function and mental health in patients with COVID-19.

The research about possible mechanisms of CNS involvement is based on the similarity (79.5% of the RNA) between SARS-CoV-2 (COVID-19) and SARS-CoV (SARS). For this reason, it is believed, **but not proven**, that the mechanisms of SARS-CoV-2 infection may be similar to those of SARS-CoV infection.

Despite this speculation, there is preliminary in-vitro evidence that—possibly **unlike** SARS coronavirus (SARS-CoV)—SARS-CoV-2 can replicate in neuronal cells, but the translation of this finding to in-vivo settings remains unclear. Long term consequences are unknown.

Sources:

Li H, Xue Q, Xu X. Involvement of the Nervous System in SARS-COV-2 Infection. *Neurotox Res.* 2020 May 13 : 1–7. doi: 10.1007/s12640-020-00219-8

Chu H, Chan JF-W, Yuen TT-T, et al. Comparative tropism, replication kinetics, and cell damage profiling of SARS-CoV-2 and SARS-CoV with implications for clinical manifestations, transmissibility, and laboratory studies of COVID-19: an observational study. *Lancet Microbe* 2020; published online April 21. [https://doi.org/10.1016/S2666-5247\(20\)30004-5](https://doi.org/10.1016/S2666-5247(20)30004-5).

2. If it is not the virus, why does the COVID-19 pandemic have possible psychiatric consequences in persons with epilepsy?

There are several reasons in distinct phases of the pandemic that can aggravate psychiatric symptoms in persons with epilepsy.

Some of the reasons are: physical distancing measures, quarantine, and social isolation.

The infected and non-infected population might be susceptible to widespread anxiety, social isolation, and increased stress in health-care workers and other essential workers. Unemployment and financial difficulties pose an additional burden.

Other experiences might be specific to individuals who are infected with the virus, such as concern about the outcome of their illness, stigma, and amnesia or traumatic memories of severe illness.

In **persons with epilepsy**, anxiety caused by the fear of having seizures and not having proper help or treatment is an extra burden. A pragmatic plan with rescue medications and pathways of referral may be helpful. It must be done in advance during phase one of the pandemic. A written document with the physician and patient agreement is advisable.

Sources

Rogers JP, Chesney E, Oliver D, et al. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic [published online ahead of print, 2020 May 18]. *Lancet Psychiatry*. 2020;S2215-0366(20)30203-0. doi:10.1016/S2215-0366(20)30203-0

Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* 2020; **395**: 912–20.

Asmundson GJG, Taylor S. Coronaphobia: fear and the 2019-nCoV outbreak. *J Anxiety Disord* 2020; **70**: 102196.

Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020; **368**: m1211.

Chaves C, Castellanos T, Abrams M, Vazquez C. The impact of economic recessions on depression and individual and social well-being: the case of Spain (2006–2013). *Soc Psychiatry Psychiatr Epidemiol* 2018; **53**: 977–86.

Xiang Y-T, Yang Y, Li W, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry* 2020; **7**: 228–29.

Siu JY. The SARS-associated stigma of SARS victims in the post- SARS era of Hong Kong. *Qual Health Res* 2008; **18**: 729–38.

Jones C, Humphris GM, Griffiths RD. Psychological morbidity following critical illness—the rationale for care after intensive care. *Clin Intensive Care* 1998; **9**: 199–205.

3. Do persons with epilepsy and mental disorders who need hospitalization with COVID-19 infection get disorientated and confused?

Rogers et al. (2020) in a review article evidenced that infected patients who need hospitalization may present:

- delirium (confusion in 26 [65%] of 40 intensive care unit patients)
- agitation in 40 [69%] of 58 intensive care unit patients
- altered consciousness in 17 [21%] of 82 patients (in general, more severe cases with a fatal outcome)
- dysexecutive syndrome (some problems with emotional control and planning for example) after discharge [15 (33%) of 45 patients]

In some people these symptoms could be confused with non-convulsive status epilepticus, focal seizures with impaired awareness, or postictal confusion.

Status epilepticus is one of the commonest serious neurological in critically ill patients with modifiable early trajectories, potentially reducing the need for ICU admission and for this reason, it has to be identified.

When patients present with COVID-19 and confusional states or reduced consciousness, as described above. It may be appropriate to investigate patients to rule out electrographic seizures as a possible cause (for instance by EEG).

In some cases, patients may present neurological complications such as hypoxic-ischemic encephalitis, encephalitis, and stroke leading to more severe neuropsychiatric consequences. Mental disorders that are the sequelae of brain damage or disease can arise either through direct effects of infection of the CNS or indirectly via an immune response or medical therapy.

Sources

Rogers JP, Chesney E, Oliver D, et al. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic [published online ahead of print, 2020 May 18]. *Lancet Psychiatry*. 2020;S2215-0366(20)30203-0. doi:10.1016/S2215-0366(20)30203-0

4. Are there medication interactions that I should consider?

Patients with psychiatric disorders and epilepsy must maintain their treatment. Most psychotropic and antiseizure medication is safe.

If a patient with a psychiatric disorder is infected with COVID-19, a number of drugs, sometimes in the context of clinical trials, might be used in combination with psychotropic drugs and the potential for drug-drug interactions should be considered.

Most psychotropic drugs are partly metabolized by CYP2D6 and 3A4. Concomitant use of atazanavir or lopinavir/ritonavir may increase their plasma levels owing to CYP3A4 inhibition.

Psychotropics that may prolong the QT-interval should be used with caution.

The University of Liverpool provides an overview of possible interactions with COVID-19 medication, including psychotropics (www.covid19-druginteractions.org). These interactions are divided into increased and decreased exposure (measured by blood levels of medications) and QT and/or PR interval prolongation.

Sources

www.covid19-druginteractions.org

Jurjen J. Luykx JJ, van Veen SMP, Risselada A, Naarding P, Tjink JK, Vinkers Christiaan H. Safe and informed prescribing of psychotropic medication during the COVID-19 pandemic. *Br J Psychiatry*. 2020 May 4 : 1–4.

5. Non-pharmacological treatment and avoidance of triggers – How important are these in persons with epilepsy?

For persons with epilepsy and psychiatric disorder, the extra stresses of lockdown and lack of social contact, possibly with financial hardship, may lead to a worsening of symptoms seizures and symptoms of mental illness.

For all persons with epilepsy, this a difficult time and it is important to actively work on improving mental well-being and to exercise to alleviate stress.

Alcohol intake and substance abuse, more common during periods of social isolation, must be avoided. Alcohol and certain substances, including benzodiazepines, may temporarily decrease anxiety, but their long-term consequences for epilepsy and mental illness can be devastating.

Healthy sleep habits with a strict routine are mandatory. Sleep deprivation is a trigger for some epilepsy syndromes. Patients with psychiatric disorders (e.g., mood and anxiety) may find it particularly difficult—the relationship between mental disorders and poor sleep quality is well-known. In cases with moderate and severe insomnia, help from online services with a specialist in sleep hygiene may be necessary.

Persons with psychiatric disorders who need psychological support should be aware that online therapy is effective and must not be interrupted.

Sources:

www.rcpsych.ac.uk/about-us/responding-to-covid-19/guidance-for-clinicians/community-and-inpatient-services

Special Settings

The Psychiatry Commission acknowledges that there are special considerations considering persons with intellectual disability (ID) and children with epilepsy and psychiatric disorders.

Epilepsy, Intellectual Disability and Covid-19

Task Force of Intellectual Disability and Epilepsy

1. Are persons with epilepsy and ID at a higher risk of acquiring Covid-19 or of having more severe disease?

Though neither epilepsy nor ID seem to be risk factors for developing Covid-19 or for having a more severe disease course, many patients may have several

comorbidities and thus belong to a population at high risk (see below). Protective measures to minimize the infection risk are important.

In several countries there have been high rates of Covid-19 in group care settings. It is not unusual for people with ID and epilepsy to live in such settings and therefore vigilance is needed of this higher risk of becoming infected

Individuals with ID and additional disabilities may be at additional risk if they get any kind of significant infection. Some experience seizure exacerbations with febrile illnesses, others are at risk of aspiration with any kind of cough. This means that additional infection prevention measures (eg. Shielding, cocooning) may be appropriate for these individuals

2. Are there special considerations for persons with Dravet Syndrome?

Persons with Dravet Syndrome are frequently prone to seizure exacerbation during episodes of elevated body temperature. Antipyretic medication should be administered in case of fever. In addition, patients' relatives and caregivers should follow their individual schemes for the use of anti-seizure rescue medication.

3. Should everolimus be stopped in persons with Tuberous Sclerosis Complex?

Everolimus, a drug in use for the treatment of tumors and seizures in persons with Tuberous Sclerosis Complex (TSC), has immunosuppressive properties. Nevertheless, a general prophylactic withdrawal during the pandemic is not recommended. The risk of infection has to be balanced against the possible negative effects of deteriorating seizure frequency. Specialist assessment and guidance is recommended.

4. Staff in general hospitals sometimes find it difficult to interact with persons with ID. What can be done to help?

Consider bringing a document that tells health-care workers about the patients' special needs. There is a document in English language that you may find helpful: <https://healthservice.hse.ie/filelibrary/onmsd/hse-health-passport-guidance-notes.pdf>

5. What can be done to minimize the tension caused by lock-down, closure of sheltered workshops, visit bans in nursing homes etc.?

Technology (zoom/skype/social media etc.) can assist in keeping in contact with friends/family. People can keep busy with music, exercise, keeping in touch with friends etc. The following is an easy to read guide (in the public domain) that is written for people who have intellectual

disability: <http://www.inclusionireland.ie/sites/default/files/attach/article/1806/minding-mental-health-cv-final.pdf>

Children with Epilepsy and Psychiatric Disorders: Things We Have Learned about COVID-19

Task Force of Psychiatric Conditions in Children with Epilepsy – Psychiatry and Pediatric Commission

1. Are children and young people with epilepsy and psychiatric comorbidities at higher risk for COVID-19 infection and severity?

The coexistence of epilepsy and psychiatric comorbidities are not risk factors for COVID-19 infection and severity in children and adolescents with epilepsy.

For detailed information about children who are medically vulnerable to risks of infection and severity: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Sources: Centre for Disease Control <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

International League against Epilepsy website. <https://www.ilae.org/patient-care/covid-19-and-epilepsy>

Pathak EB, Salemi JL, Sobers N, Menard J, Hambleton IR. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7172976/>) Public Health Manag Pract. 2020 Apr 20 : 10.1097/PHH.0000000000001190.

2. Are children and adolescents with epilepsy at higher risk of developing or aggravating psychiatric or behavioral disorders during the COVID-19 pandemic?

We know that children and adolescents with chronic health disorders, such as epilepsy, are at higher risk for behavioral and psychiatric disorders, independently of the COVID-19 pandemic.

However, epilepsy has a very varied impact on children and their families.

Some children may enjoy the increased time at home with their parents, protected from stress in school and other social demands

Some children and adolescents may present with symptoms of depression and anxiety or even hyperactivity/increased activity levels. These may be situational and transient affecting subgroups of children and adolescents with epilepsy. These symptoms may resolve over time without intervention but in some cases supportive interventions may be needed.

Other young people may develop symptoms of depression and anxiety during the pandemic, or have an exacerbation of a current psychiatric disorder and will require support and treatment. Some specific behaviors are red flags and demand better counseling for families and prompt early diagnosis and intervention.

Source

Wagner KD. **Addressing the Experience of Children and Adolescents During the COVID-19 Pandemic.** *J Clin Psychiatry.* 2020;81(3):20ed13394

3. How can parents identify who is at higher risk for developing psychiatric disorders during the pandemic?

Some children are at higher risk than others, and these groups must be identified. Therefore, parents must pay special attention to:

1. **Children exposed to traumatic experiences.** For example, those who have experienced severe illness (a complication of their disease) in the past. For example, children and adolescents with epilepsy who have previously undergone hospitalization, ICU admission, or isolation due to their seizures may react distinctly.

2. **Children who have suffered losses** in the past. It is known that children with traumatic experiences tend to be more vulnerable to stress.

3. **Children with epilepsy and previous psychiatric disorders or documented family history of mental disorders** may have a reduced capacity for emotional regulation and adaptive coping.

4. How can we minimize severe distress caused by the infection itself, isolation or hospitalization?

It is impossible to deny the potential negative psychosocial impact of being infected with the novel coronavirus SARS-CoV- 2. However, most studies and evidence were obtained from adults, and there is scarce data on children.

Studies in adults have demonstrated that persons with suspected and confirmed COVID-19 mostly fear high contagiousness and fatality. Physical symptoms of COVID-19, such as fever, hypoxia, and cough, along with adverse effects of prescribed medications, may cause more anxiety and mental distress.

In adults, the isolation caused by the infection may lead to boredom, loneliness, anger, depression, anxiety, denial, despair or insomnia. In patients with a previous psychiatric disorder, caution must be exercised due to a risk of substance abuse, self-harm, and suicidality. According to the World Health Organization, adults who had the infection may develop depression, anxiety, and posttraumatic stress disorder (World Health Organization 2020a).

In children, it has been reported that more than 10% have experienced trauma due to severe infection, and may be diagnosed with posttraumatic stress disorder.

Guidance for children with special needs:

- 1.** Parents must remember that most information has been obtained from adults. Therefore, young children who do not understand the symptoms or the infection may not experience fear and stress. Children and adolescents may be strongly affected by their parents' level of anxiety – reassuring words and behavior are essential.
- 2.** Children and adolescents with a previous history of psychiatric disorder who show a worsening of their symptoms (e.g., panic attacks, disruptive behavior) need to access mental health support during and after the infection.
- 3.** In severe cases requiring hospitalization, parents must always inform the medical team of their child's individual needs, and emphasize the necessity for mental health support.
- 4.** Psychiatrists and psychologists can provide support for children and adolescents at home via digital means or during hospitalizations.
- 5.** A pragmatic plan for children and adolescents with a previous history of psychiatric disorder and epilepsy is suggested. A written document with diagnosis and specific recommendations for treatment (psychotropic medications) provided by the child's doctor may be of great assistance.

Source

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

Kar SK, Arafat SMY, Kabir R, Sharma P, Saxena SK. Coping with Mental Health Challenges During COVID-19. Coronavirus Disease 2019 (COVID-19) 2020 : 199–213. Published online 2020 Apr 30. doi: 10.1007/978-981-15-4814-7_16

Cui Y, Li Y, Zheng Y. Mental health services for children in China during the COVID-19 pandemic: results of an expert-based national survey among child and adolescent psychiatric hospitals. Chinese Society of Child & Adolescent Psychiatry. Eur Child Adolesc Psychiatry. 2020 May 11: 1–6. doi: 10.1007/s00787-020-01548-x

5. Are there medications that should be avoided in children and adolescents with epilepsy and psychiatry disorders?

Any information about medication must be provided by the health care professional in charge of the patient. The Royal Academy of Psychiatry (<https://www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/covid-19-and-medication-for-mental-health>) and the International League against Epilepsy (<https://www.ilae.org/patient-care/covid-19-and-epilepsy>) recommends that:

1. Patients must keep taking their medications, as prescribed. Any queries about your prescription must be discussed with your doctor.
2. Try not to make any changes to the amount of medication you take or when you take it unless you were advised to do so.
3. Monitor your child's medication. If you are worried the medication will run out or have already run out – contact your doctor or the pharmacist who usually supplies the medication as soon as possible.
4. Children and adolescents with psychiatric disorders should not administer their own medication in stressful moments.

If your child is infected by COVID-19 but does not have symptoms, carry out your treatment as usual for epilepsy and psychiatric disorders.

If your child is infected and needs treatment for COVID-19, your doctor will tell you if there is anything you need to be aware of regarding your medication. Remember that COVID-19 may affect people differently, depending on what medication they are taking, their age, and other medical conditions they have.

6. Non-pharmacological measures for children with epilepsy and psychiatric disorders

It is vital to ensure that children and adolescents with epilepsy continue to take their regular medications and avoid any potential seizure triggers (e.g., alcohol, sleep deprivation). (www.ilae.org)

1. Children and adolescents with psychiatric disorders may have more difficulties maintaining healthy habits. Sleep disorders, including insomnia, are part of the clinical picture of children and adolescents with anxiety or depressive disorder. Strategies to minimize stress and treatment of sleep disorders, when they occur, may be necessary to avoid sleep deprivation and triggering of a vicious cycle.
2. Children and adolescents with ASD or ADHD may also show difficulties in having their routine activities maintained. Lack of routine may lead to disruptive behaviors and severe sleep problems. Patients may need to give higher doses of psychoactive medication (always discuss with supporting doctor), to modify the current regime, or be taught new coping strategies (a strict routine for the family).

Strategies to mitigate these problems include a balanced routine with a clear timetable taking into account what can be done under current circumstances. ([link to tip for parents](#))

Source

Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health*. 2020;17(5):1729.

7. A child with epilepsy and severe psychiatric symptoms should not wait for help!

The concept that psychiatric disorders are less severe than others is a myth.

Regardless of the ongoing pandemic, there are some behaviors and symptoms that deserve medical attention. Psychiatric symptoms are not less important than any other medical symptoms

An adolescent with early-onset psychosis or schizophrenia cannot have his (her) diagnosis postponed, and treatment must not be delayed. Exceptional circumstances, such as self-harm, may be as urgent as having status epilepticus and must be treated accordingly.

This pandemic represents distress for children with severe psychiatric disorders. The problem is not restricted to phases 1 (preparation) and 2 (maximum peak of incidence), but also during the potential economic recession associated with phase 3.

Self-Harm

There is evidence that economic recession, such as documented after the world financial crisis of 2008, leads to self-harm among adolescents.

Suicidal Behavior

An upsurge in self-injurious and suicidal behavior in youth can be a consequence of several features of the COVID-19 pandemic, associated with previous mental illness. This issue should receive attention in children with pre-existing mental disorders.

Substance abuse

Substance abuse and ideas of death with a lack of interest in self-care must be monitored. Children and adolescents with epilepsy live in houses with access to medication.

Some abnormal or unusual behaviors deserve attention and are listed below.

Disruption of Daily Routine

- Sleep problems such as daytime sleeping or sleep refusal
- Refuses to eat or eats too much
- Stops talking with parents or familiar medical staff

Mood Swings

- Increased aggression or fear
- Depressive symptoms or anxiety

Disruptive Behaviors

- Inappropriate behavior, such as refusing treatment
- Out-of-control behavior, such as injuring medical staff
- Self-injurious behavior
- Continuous complaining

Psychosis-like symptoms

- Unable to recognize family or friends
- Has strange ideas or cannot understand other people
- visual or auditory hallucinations

Somatic symptoms

- Feeling “uncomfortable” for no reason
- Increase in headaches and stomach aches without apparent cause

Source: Cui Y, Li Y, Zheng Y; Chinese Society of Child & Adolescent Psychiatry. Mental health services for children in China during the COVID-19 pandemic: results of an expert-based national survey among child and adolescent psychiatric hospitals [published online ahead of print, 2020 May 11]. *Eur Child Adolesc Psychiatry*. 2020;1-6. doi:10.1007/s00787-020-015