

Disability and the COVID-19 Pandemic

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Summary of 6 Key Points

1. The COVID-19 pandemic 'marathon' is not over. Fresh waves of new COVID-19 variants of concern may be expected; some of those may evade the protection that immunization offers.
2. 20% of COVID-19 survivors will go on to experience persistent symptoms or organ dysfunction, some of which may be disabling. Those at risk of persistent symptoms include persons with asymptomatic infections, and children. The COVID-19 pandemic may well become the greatest mass disabling event in human history.
3. The COVID-19 crisis has exacerbated existing inequalities in society, further marginalizing and isolating persons with disabilities. Many have lost support services, experienced social isolation, faced mental health challenges, and had finances negatively impacted.
4. Internet and smart device access for persons with disabilities has become crucial. Freely available digital devices and Internet access have removed physical and communication barriers, enabling the increased participation of persons with disabilities in society.
5. Post-pandemic: to 'build back better' for persons with disabilities, a National COVID-19 Disability Action Plan is needed, to:
 - 5.1 Chart and monitor the implementation and sustainability of inclusion efforts.
 - 5.2 Collect & analyze disaggregated data.
 - 5.3 Map marginalized communities struggling to survive.
 - 5.4 Ensure services reach all and are sustainable.
6. Recommendation to the ESCAP secretariat, in cooperation with other members of the United Nations system, to draw Government attention to the urgency of:
 - Formally recognizing the enormity of Long COVID impact on a potential disability pandemic that is silently evolving.
 - Communicating to the general public the need to continue personal risk reduction measures.
 - Offer screening to all individuals who have had a COVID-19 infection, to look for secondary conditions (e.g., cardiac, neurological, endocrine).

1st Pandemic: COVID-19

2nd Pandemic: Widespread Mental Health Issues

3rd Pandemic: Potential Mass Disability Event

COVID-19 Future and how the Pandemic is Changing

Important Caveat: COVID-19 information changes rapidly and is highly fluid, especially regarding outbreak size and impact, and vaccination. Hence, what is said today may need to be revised tomorrow. In addition, there is much disinformation and false news circulating that damage ability to respond well.

The COVID-19 pandemic 'marathon' is not over. No one can predict with certainty what will happen in the next few years. Even with effective vaccines, we may expect fresh waves of new COVID-19 variants of concern for another year or two; some of these may evade the protection that immunization offers. Studies¹ show that natural infection by recent variants (Omicron) do not confer additional immunity.

The numbers reported daily are no longer reliable where testing is done by individuals (rather than health authorities), with minimal reporting and contact tracing is poor. The spectre of Long COVID continues to become more apparent, even in those who have been vaccinated (see below).

*"Without testing, without sequencing, without public health measures in place, we are really playing with fire with this virus. I understand that the world wants to be done with the COVID-19 pandemic, but such intense circulation will lead to more variants. Even with current variants, deaths are far too high and totally unacceptable when we have tools to prevent them."*²

Dr Maria Van Kerkhove
Infectious Disease Epidemiologist,
Technical Lead, World Health Organization

Importantly, there will be a prolonged post-pandemic recovery for many years. Lives have been lost and families are in grief. Jobs and businesses have to be built back. Children are facing an enormous education crisis – this is a serious risk factor for dementia decades later. There is a mental health pandemic, with increased anxiety disorders, post-traumatic stress disorders and suicides to deal with. Children are becoming a 'fearful generation.' The full impact of this prolonged pandemic on children will become evident with time. For many generations to come, Asian and Pacific societies may continue to experience psychological morbidity, demographic change, limited educational outcomes and a human resource crisis.

¹ Nicola Davis (2022). People who caught COVID in first wave get 'no immune boost' from Omicron. Guardian. <https://www.theguardian.com/world/2022/jun/14/people-who-caught-COVID-in-first-wave-get-no-immune-boost-from-omicron?CMP=Share_iOSApp%E2%80%A6>.

² Maria Van Kerkhove (June 15th, 2022). <<https://twitter.com/mvankerkhove/status/1536818252164255745?t=0mT6qNHESKxzzneqmw-Tg&s=03>>.

THE IMPACT OF COVID-19 ON PERSONS WITH DISABILITIES AND Disability Services

The COVID-19 crisis has exacerbated existing inequalities in society. It has further excluded and marginalised persons with disabilities.

Impact of COVID-19 on Persons with Disabilities, Key Points:

1. The COVID-19 crisis has exacerbated existing inequalities in society and further marginalized persons with disabilities.
2. Many persons with disabilities have lost support services, rehabilitation progress, with diagnosis delayed. In Malaysia 25% of pre-school services (early intervention services) have closed.
3. Many persons with disabilities have experienced social isolation and increased abuse. There is a growing, unaddressed, mental health pandemic.
4. Communication about COVID-19 has been inadequate for persons with disabilities and some have had difficulties complying with SOPs.
5. Persons with disabilities lost means of livelihood or had finances negatively impacted. Food insecurity was a real issue for many during lockdowns. Internet and digital device access for persons with disabilities has become crucial.
6. When digital devices and Internet access was freely available, persons with disabilities had increased participation in society via the removal of physical and communication barriers and because many activities had moved online.

The COVID-19 pandemic has significantly impacted all of society, especially those in poverty or the economically challenged. It has stretched all support systems and unmasked systemic weakness.

There is an under-appreciation of the impact of COVID-19 on persons with disabilities. The COVID-19 pandemic has had the effect of further disabling those already disabled. COVID-19 has disrupted routines and lives. In addition, COVID-19 is a risk to the health of persons with disabilities (some have a greater risk of severe COVID-19 illness and death). The failure of the health authorities to collect or show disaggregation data on disability has not allowed for adequate impact assessment.

Impact, a summary:^{3,4,5,6,7,8:}

1. Support Service and Rehabilitation Progress Lost, Diagnosis Delayed

³ Amar-Singh HSS (Nov 2020). COVID-19 and its Impact to Future Generations. Speaking for the Unspoken 2020: The Vulnerable Population and COVID-19. Medico-Legal Society of Malaysia, Updated September 2021.

⁴ Shakespeare, Ndagire, Seketi (2021). Triple jeopardy: disabled people and the COVID-19 pandemic. Lancet Vol 397, Issue 10282, P1331-1333. <[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00625-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00625-5/fulltext)>

⁵ Amar-Singh HSS, Lai-Thin Ng, Moses Choo, Yoon Loong Wong, and Yuenwah San (2022). Situation of persons with disabilities in the COVID-19 pandemic and their access to ICT, United Nations ESCAP.

⁶ Pettinicchio, David, Maroto, Michelle, Chai, Lei & Lukk, Martin. (2021). Findings from an online survey on the mental health effects of COVID-19 on Canadians with disabilities and chronic health conditions. Disability and Health Journal, Vol 14 <<https://www.sciencedirect.com/science/article/pii/S1936657421000315>>

⁷ Amar-Singh HSS, Lai-Thin Ng (2021). Future of Early Intervention Services in Malaysia. National Early Childhood Intervention Council. Malaysia.

⁸ Amar-Singh HSS, Ong Puay-Hoon, Gill Raja, Srividhya Ganapathy, Ng Lai-Thin, Yuenwah San (2022). A National Emergency - Our Children's Learning Loss: Keys to Post-COVID-19 School Recovery in Malaysia. Situation Report and Recommendations. Malaysia. 27th April 2022.

- Persons with disabilities, especially children, have been hard hit by a loss of support services and rehabilitation progress. Most persons with disabilities and their carers worry about the infection risk of hospital-based therapy services, as PWD, particularly those with underlying health conditions, are at higher risk of complications and death as a result of COVID-19 infection. Many have deferred appointments due to COVID-19 concerns. Only the few, with financial resources, have arranged for therapists to make home visits. In one Malaysian study, access to all types services during the pandemic were lost to varying degrees; on average 36% reduction in services.
 - Persons with disabilities (especially children) newly-identified as having impairments, now have a later diagnosis, later therapy and hence poorer outcomes. Due to the limited access to education and health facilities, many children with less obvious disabilities (dyslexia and other learning disorders) will not be identified and offered support.
 - Many children with disabilities who are in special education classes have not been able to physically return to school for much of 2020/2021. This is a serious loss of education and progress for this generation. It is also a loss of respite from the home environment for the children, and a loss of breathing space for parents/caregivers who are supporting them in remote learning.
 - Many community-based rehabilitation centres, often the only source of early intervention in rural communities, and urban early intervention centres run by civil society organizations (CSOs) for poorer communities, have remained closed for much of the past two years. Many of these centres that offer early interventions are now struggling due to loss of community funding, as well as a loss of fees from parents (no longer able to pay due to loss of earnings). There are staff members who have taken pay cuts, others no longer have a salary. In Malaysia, 25% of pre-school services have closed down. The loss of such vital lifelines to children with disabilities, in the face of limited existing services, will have major impact for many years to come.
 - There will be enormous challenges to restart or renew community disability services when there is recovery, with an anticipated surge in demand for services.
2. Social Isolation, Increased Abuse, a Growing Mental Health Pandemic
- Many persons with disabilities have become isolated at home. Some are not able to cope with the change in routine, while parents/carers struggle with behaviours that challenge their understanding (especially children with autism).
 - Prolonged home confinement has increased domestic violence, physical and sexual violence and abuse, which persons with disabilities are more vulnerable to.⁹
 - The COVID-19 pandemic was associated with increased anxiety, stress, and despair in persons with disabilities and chronic health conditions. They had an increased sense of loneliness and a decreased sense of belonging.^{10,11, 12}

⁹ Kubenz and Kiwan (2021). The impact of the COVID-19 pandemic on disabled people in Low-and Middle-Income Countries: A literature review. GCRF Network and 'Disability Under Siege' project. <<https://research.birmingham.ac.uk/en/publications/the-impact-of-the-covid-19-pandemic-on-disabled-people-in-low-and>>

¹⁰ Mehrotra and Soldaticb (2021). COVID-19 in South Asia: State practices, responses and the experiences of persons with disability within the region. Disability and the Global South, 2021 Vol.8, No. 1. <https://www.researchgate.net/profile/Nilika-Mehrotra/publication/352159615_COVID-19_in_South_Asia_State_practices_responses_and_the_experiences_of_persons_with_disability_within_the_re/links/60bbc09d458515218f94b6cd/COVID-19-in-South-Asia-State-practices-responses-and-the-experiences-of-persons-with-disability-within-the-region.pdf>

¹¹ Maulana, G., Khalilullah, K., Qanita, I., & Yufika, A. (2021). The Impact of COVID-19 Pandemic on People with Intellectual Disabilities: A Literature Review. Journal of Asian Social Science Research, 3(2), 141-154. <<https://doi.org/10.15575/jassr.v3i2.42>>

¹² Amar-Singh HSS, Lai-Thin Ng, Moses Choo, Yoon Loong Wong, and Yuenwah San (2022). Situation of persons with disabilities in the COVID-19 pandemic and their access to ICT, United Nations ESCAP.

- This is just beginning: the impact of COVID-19 on adults and children with disabilities, their families and service providers. Signs are emerging: some are impacted severely and the COVID-19 pandemic is becoming a mental health pandemic. The full impact of this pandemic is yet to fully emerge: already people are presenting with phobias, fears, post-traumatic stress disorders (PTSD) and suicides; these may increase long-term.
3. Inadequate Communication and SOP Compliance Issues
 - Persons with disabilities have problems receiving on time COVID-19 information in formats and languages that they can access. This especially affects persons who are blind or otherwise print-disabled, deaf, hard-of-hearing, and persons with cognitive impairments.
 - COVID-19 SOPs are challenging for persons with diverse disabilities to follow. Not everyone with a disability can use a mask (especially children with autism, persons with dementia and those with breathing difficulties). For Blind persons who depend on touching surfaces to navigate the environment, surface contact entails high infection risk. Avoiding the risk curtails independence. Persons with hearing loss, who need to lip read, cannot do so with mask use as a public health measure. The disruption of familiar routines has been traumatic for many persons with autism and their families. Persons requiring the support of non-live-in personal assistants/domestic helpers were badly hit when lockdowns were suddenly imposed and consideration had not been given to the issuance of passes or to alerting enforcement personnel to facilitate the movement of such personnel who provided essential services in the home and in institutions.
 4. Increased Reliance on Online/Internet Connectivity¹³
 - The prolonged lockdowns have meant that Internet and digital device access for persons with disabilities has become crucial. Work has only just begun to explore the lack of connectivity and its impact. In general, lockdowns have made persons with disabilities more excluded from society.
 - However, in communities in parts of Asia (e.g., Malaysia and Republic of Korea) where pre-pandemic Internet penetration and use by persons with disabilities was already extensive, usage remained unchanged or increased.
 5. Loss of Income and Jobs
 - Persons with disabilities who survived on street vending, busking or tourism-related means of income are among those who have had loss of vital income (daily wage) and have limited or depleted financial reserves. For them, food insecurity and loss of funds for paying rent and utilities have become real issues.
 6. Impact of Delaying Marriage and Childbirth
 - Due to COVID-19 many couples are delaying getting married and delaying having a child. In Malaysia, there was a 10.8% reduction in births in 2021. The reduction in yearly birth volume will last much longer after COVID-19 due to increased poverty and the need to rebuild lives. When the community returns to having more children, there may be a significant rise in older age pregnancies, with the risk of more congenital abnormalities and disabilities.
 7. Impact on women with disabilities
 - A recent UN Women-Sight Savers report¹⁴ that looked at the experiences of women with disabilities in 10 Asia-Pacific countries during COVID-19 emphasized the significant

¹³ Cho, Kim (2021). Effect of digital divide on people with disabilities during the COVID-19 pandemic. Disability and Health Journal. Vol 15. <<https://www.sciencedirect.com/science/article/pii/S1936657421001874>>

¹⁴ United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) (2021). Experiences of women with disabilities in the Asia-Pacific region during COVID-19. <<https://www.unwomen.org/en/digital->

difference in experiences for women with disabilities compared to men with disabilities. However, the report did highlight that this was not universal. In Malaysia, the lack of accessible communication was a bigger challenge than gender differences.

Has the COVID-19 Pandemic brought any Benefit or Helped to Galvanize PERSONS WITH DISABILITIES and their ALLIES to Push for Change?

1. The pandemic has exposed long-standing systemic inequalities that exist in society. COVID-19 has worsened the situation of persons with disabilities with erosion of some progress in rights and services. This has galvanized some in the community into fresh action on their rights.
2. The general landscape for resource mobilization by disability-related CSO deteriorated during the pandemic. In that critical situation, with persons with disabilities unable to meet basic needs, especially for food, medicines and money, there emerged individuals in the community who organized themselves and made home delivery of essential supplies to persons with disabilities.
3. The triaging of limited intensive care (ICU) highlighted a view that the life of a disabled person is of less value than that of a non-disabled person. This has stimulated discussion on the ethics of medical care and highlighted ableism as the root of discrimination.
4. The limitation on meeting physically has enabled an unprecedented mushrooming of online connections and dialogues. Linkages have been forged that will transcend the pandemic and facilitate networking among diverse groups and individuals.
5. Some organizations have initiated tele-therapy for rural or hard-to-reach communities, improving the shift to family-centred care. Some hospitals have initiated online medical consultations. The world's largest doctor-patient teleconsultation system, eSanjeevani OPD – Stay Home OPD,¹⁵ a Government of India/Ministry of Health and Family Welfare initiative launched in April 2020, has 10,000 hubs, with 10,000 doctors serving 330,000 patients daily, and an average waiting time of several minutes (just over seven).
6. Some positive developments for persons with disabilities (based on a review¹⁶) and where digital devices and Internet access are freely available or easily affordable:
 - 6.1 Persons with disabilities are able to have increased participation in income-earning and capability building options, and webinars on a wide range of subjects/issues. Physical and communication barriers are removed, with education, work, shopping/leisure, and town hall activities increasingly moved online.¹⁷ The caveats to this “increased participation” are: availability of a stable and fast Internet connection; financial means to access data plans; access to the use of smart devices (shared with others in the same household or personal use only).

[library/publications/2022/01/brief-experiences-of-women-with-disabilities-in-the-asia-pacific-region-during-COVID-19](https://www.library/publications/2022/01/brief-experiences-of-women-with-disabilities-in-the-asia-pacific-region-during-COVID-19)>.

¹⁵ Comments by Dr Sanjay Sood, Project Director-eSanjeevani, National Telemedicine Service, Government of India, and Centre for Development of Advanced Computing, India, at the “Official Launch of the WHO-ITU Global Standard for Accessibility of Telehealth Services,” 16 June 2022, World Health Organization and International Telecommunication Union Side Event, 15th session of the Conference of States Parties to the Convention on the Rights of Persons with Disabilities. <<https://esanjeevaniopd.in/About>>; Nirupam Bajpai and Manisha Wadhwa (2021). “National Teleconsultation Service in India. eSanjeevani OPD.” ICT India Working Paper #53, July 2021, Centre for Sustainable Development, Earth Institute, Columbia University, USA.

¹⁶ Gerard Goggin & Katie Ellis (2020) Disability, communication, and life itself in the COVID-19 pandemic. *Health Sociology Review*, 29:2, 168-176. <<https://www.tandfonline.com/doi/full/10.1080/14461242.2020.1784020>>

¹⁷ Shakespeare, Ndagire, Seketi (2021). Triple jeopardy: disabled people and the COVID-19 pandemic. *Lancet*. Vol 397. <[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00625-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00625-5/fulltext)>

- 6.2 Employees with disabilities are able to benefit from work-from-home (WFH) arrangements introduced by companies during lockdown, validating requests for the same prior to the pandemic which had been ignored or dismissed. WFH obviated prohibitive transport costs otherwise incurred. However, in a Malaysian study,¹⁸ 23% of the respondents (persons with diverse disabilities) had Internet access that worsened or was lost during the pandemic - effectively cutting them off from participation and society.

¹⁸ Amar-Singh HSS, Lai-Thin Ng, Moses Choo, Yoon Loong Wong, and Yuenwah San (2022). Situation of persons with disabilities in the COVID-19 pandemic and their access to ICT, United Nations ESCAP.

The Concerns of Long COVID

*The COVID-19 pandemic may well become the greatest mass disabling event in human history*¹⁹

Long COVID, Key Points:

1. Between 20% - 40% of those infected with COVID-19 will experience Long COVID.
2. Those with asymptomatic infections and children are not spared.
3. 1 in 5 COVID-19 survivors will go on to experience persistent symptoms or organ dysfunction; some of which may be disabling.
4. Vaccines offer less than 20% protection from Long COVID.
5. Re-infections are common (even with prior infections or vaccination) and pose a risk for Long COVID.
6. There may be a higher risk of developmental delay in babies born to mother infected during pregnancy.

The impact of Long COVID is serious.²⁰ The growing body of evidence on Long COVID demands attention.

Common symptoms of Long COVID include: fatigue, brain fog (cannot think clearly or have trouble processing information), depression, anxiety, insomnia, joint or muscle aches, shortness of breath, chest tightness, diarrhoea and stomach pain, changes in menstrual cycle. The cause of Long COVID is still uncertain. Evidence, to date, suggests a number of possible mechanisms,²¹ and perhaps a combination of them: persistence of the virus in the body, micro-blood clots being released intermittently and chronic inflammation (damage to the immune system). Long Covid is incapacitating: once healthy, young persons are now no longer able to function, as before. They are not able to exercise or work as they used to.

A meta-analysis and systematic review that combined data from 50 international studies²² suggests that the worldwide prevalence of Long COVID is 43% (95% CI 39-46%). The rate in hospitalized patients was 54% and in non-hospitalised 34%. In this review, rates of Long COVID were highest in the Asian studies.

COVID-19 is often considered mild in children, but this is no longer true with the newer variants of concern. A meta-analysis and systematic review on the Long COVID risk in children from 21 studies was 25%.²³

Current estimates on the Long COVID risk after an asymptomatic infection is estimated at 20% - 30%.²⁴ While those admitted with serious illness have the highest rates of Long COVID, increasing numbers of individuals with asymptomatic infections are presenting at Long COVID clinics.

¹⁹ Francesca Stead Sellers (2022). "How long COVID could change the way we think about disability," Washington Post, 6 June 2022, 6:01 AM EDT <<https://www.washingtonpost.com/health/2022/06/06/long-covid-disability-advocacy/>>; How many COVID infections will you have in your lifetime? There's probably a limit. <<https://medium.com/@socialcreature/the-covid-event-horizon-37dc504bf503>>.

²⁰ Long COVID is also termed Post-Acute Sequelae of SARS-CoV-2 Infection or Post-COVID Conditions or Post-Acute COVID syndrome (PACS).

²¹ Couzin-Frankel (2022). Clues to Long COVID. Science. American Association for the Advancement of Science. <<https://www.science.org/content/article/what-causes-long-COVID-three-leading-theories>>

²² Chen Chen *et al* (2022). "Global Prevalence of Post COVID-19 Condition or Long COVID: A Meta-Analysis and Systematic Review," *Journal of Infectious Diseases*, published 16 April 2022. <<https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jiac136/6569364>>.

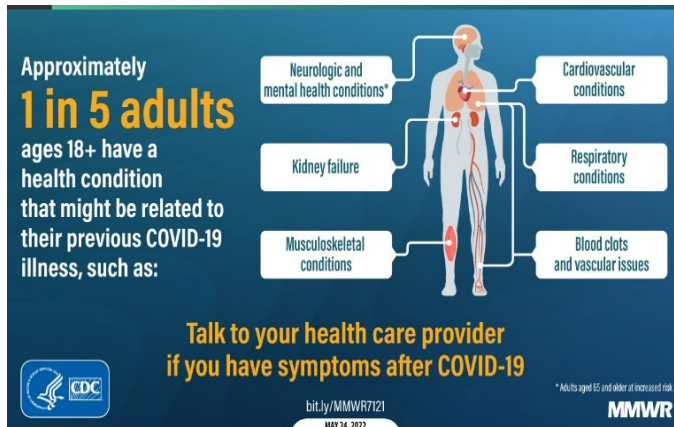
²³ Long COVID in Children and Adolescents: A Systematic Review and Meta-analysis 2022. <<https://www.medrxiv.org/content/10.1101/2022.03.10.22272237v1.full.pdf>>

²⁴ Pam Belluck (June 2021). Many 'Long COVID' Patients Had No Symptoms From Their Initial Infection. The New York Times. <<https://www.nytimes.com/2021/03/08/health/long-COVID-asymptomatic.html>>

Of concern is a May 2022 report on Long COVID posted on the US CDC MMWR website²⁵ showing data that:

“one in five COVID-19 survivors aged 18–64 years and one in four survivors aged ≥65 years experienced at least one incident condition (persistent symptoms or organ dysfunction) that might be attributable to previous COVID-19).

The CDC graphic shows:



Approximately 1 in 5 adults ages 18+ have a health condition that might be related to their previous COVID-19 illness, such as:

Neurologic and mental health conditions;
Cardiovascular conditions;
Respiratory conditions;
Kidney failure;
Musculoskeletal conditions;
Blood clots and vascular issues.

“Talk to your healthcare provider if you have symptoms after COVID-19”

Previous studies showed that vaccination reduces the risk of Long COVID by approximately 50%. However, a new, large study published in *Nature Medicine*,²⁶ suggests vaccination could decrease the risk of Long COVID by only 15%. The authors conclude that reliance on vaccination “as a sole mitigation strategy may not optimally reduce long-term health consequences of SARS-CoV-2 infection.”

Impact of Long COVID on the Brain, Heart and Other Organs

A detailed UK study²⁷ looking at individuals who received critical care for COVID-19, compared with matched controls, showed persistent cognitive impairment (average loss in IQ of 10 points) six to 10 months after admission, with only gradual recovery.

A large, longitudinal one-year cohort study (over 1,400 participants aged 60 years and older, with a control group), conducted in Wuhan, China²⁸ showed that 12% of survivors had

²⁵ Bull-Otterson L, Baca S, Saydah S, et al. Post-COVID Conditions Among Adult COVID-19 Survivors Aged 18–64 and ≥65 Years — United States, March 2020–November 2021. *MMWR Morb Mortal Wkly Rep* 2022;71:713–717. <<http://dx.doi.org/10.15585/mmwr.mm7121e1>>

²⁶ Ziyad Al-Aly, Benjamin Bowe and Yan Xie (2022). Long COVID after breakthrough SARS-CoV-2 infection. *Nature Medicine*, published 25 May 2022. <<https://www.nature.com/articles/s41591-022-01840-0>>

²⁷ Hampshire, et al (2022). Multivariate profile and acute-phase correlates of cognitive deficits in a COVID-19 hospitalised cohort. *Lancet*, Volume 47, May 2022. <[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(22\)00147-X/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00147-X/fulltext)>.

²⁸ Yu-Hui Liu, et al (2022). One-Year Trajectory of Cognitive Changes in Older Survivors of COVID-19 in Wuhan, China: A Longitudinal Cohort Study. *JAMA Neurol.* 2022;79(5):509-517.

cognitive impairment 12 months after discharge. The risk was higher for individuals with severe cases; those with non-severe COVID-19 had a risk of early-onset cognitive decline.

A meta-analysis and systematic review²⁹ looking at changes in cognitive functioning after COVID-19, summarized data from 27 studies involving more than 2,000 persons. Impairment in executive functions, attention and memory were found in post-COVID-19 patients compared to healthy controls. One study³⁰ showed 0.5 - 2% brain shrinkage after infection, compared with before the pandemic, even in mild infections. A recent study³¹ suggested that the Long COVID impact on the brain is the deterioration expected with 10 years of ageing.

A large study from the US³² looked at more than 150,000 individuals with COVID-19 and compared their cardiac risks with controls one year later. They conclude “*Our results provide evidence that the risk and 1-year burden of cardiovascular disease in survivors of acute COVID-19 are substantial.*” “*These risks and burdens were evident even among individuals who were not hospitalized...*” The risk was two to three times higher for those infected to get, one year after the infection, strokes, arrhythmias, ischaemic heart disease, pericarditis, heart failure and clots (thromboembolic disease).

There is increasing evidence³³ suggesting there is a higher risk of diabetes after a COVID-19 infection, both in non-hospitalized and hospitalized patients (higher in those with severe COVID).

All the above have serious implications for dementia risk.

Recent data, looking at mothers who tested COVID-19 positive during pregnancy,³⁴ showed a higher rate of developmental delay within the first year of life. Other studies³⁵ have suggested that more births during the COVID-19 pandemic are associated with neurodevelopmental delay at age 6 months compared with historical cohorts of infants born before the onset of the pandemic.

There are more data and studies. Long COVID is not mild and may have long-term health and disabling consequences. This affects not just those hospitalized, but includes **asymptomatic** infections. Children are not spared. Many scientists now speak of the burden of disability that will come with this pandemic: a second pandemic - not just a mental health pandemic, but a disability pandemic.

The figure below attempts to summarise the possible outcomes of a COVID-19 infections and highlights the long-term burden impact.

<https://jamanetwork.com/journals/jamaneurology/fullarticle/2789919#:~:text=Findings%20in%20this%20cohort%20study.a%201%2Dyear%20follow%2Dup>

²⁹ Crivelli, Palmer, et al (2022). Changes in cognitive functioning after COVID-19: A systematic review and meta-analysis. *Journal of the Alzheimer's Association*. Vol18, Issue 5, pages 1047-10. <<https://alz-journals.onlinelibrary.wiley.com/doi/10.1002/alz.12644>>

³⁰ Douaud, G., Lee, S., Alfaro-Almagro, F. et al (2022). SARS-CoV-2 is associated with changes in brain structure in UK Biobank. *Nature* 604, 697–707. <<https://www.nature.com/articles/s41586-022-04569-5>>

³¹ Holdsworth, Chamley, Barker-Davies, et al (2022). Comprehensive clinical assessment identifies specific neurocognitive deficits in working-age patients with long-COVID. *Plos One*. <<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0267392>>

³² Yan Xie, et al (2022). Long-term cardiovascular outcomes of COVID-19. *Nature Medicine*. Vol 28, 583–590. <<https://www.nature.com/articles/s41591-022-01689-3.pdf>>

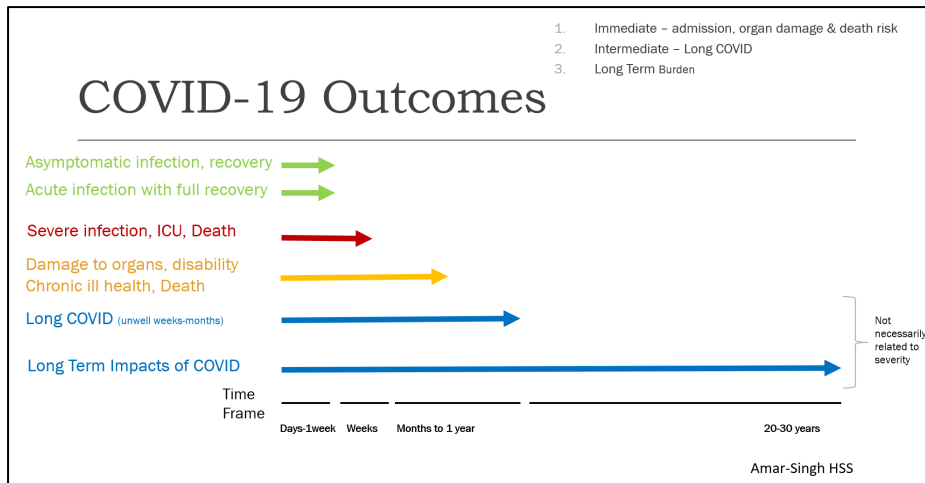
³³ Yan Xie, Ziyad Al-Aly (2022). Risks and burdens of incident diabetes in long COVID: a cohort study. *Lancet*. <[https://www.thelancet.com/journals/landia/article/PIIS2213-8587\(22\)00044-4/fulltext](https://www.thelancet.com/journals/landia/article/PIIS2213-8587(22)00044-4/fulltext)>

³⁴ Edlow, Castro, Shook, et al (2022). Neurodevelopmental Outcomes at 1 Year in Infants of Mothers Who Tested Positive for SARS-CoV-2 During Pregnancy. *JAMA Netw Open*, 2022;5(6):e2215787 (published June 9, 2022):

<<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793178#:~:text=Findings%20in%20this%20cohort%20study.delivery%2C%20even%20after%20accounting%20for>>

³⁵ Shuffrey, Firestein, Kyle, et al. (2022). Association of Birth During the COVID-19 Pandemic With Neurodevelopmental Status at 6 Months in Infants With and Without In Utero Exposure to Maternal SARS-CoV-2 Infection. *JAMA Pediatr*. 2022;176(6):e215563.

<<https://jamanetwork.com/journals/jamapediatrics/fullarticle/2787479>>



The graphic shows:

Outcome timelines after a COVID-19 infection.

The possibilities are:

1. An asymptomatic or acute infection with full recovery in one week.
2. Severe infection that could lead to ICU admission and death in weeks.
3. A severe infection that could lead to organ damage and chronic ill health for months.
4. Long COVID lasting months to more than a year.
5. Long term impacts of COVID on health that may appear years or decades later.

The last two may not be related to the severity of infection and can happen in asymptomatic individuals.

**DISABILITY INCLUSION IN THE POST-PANDEMIC PERIOD:
SUGGESTIONS ON SOME KEY AREAS AND INITIATIVES TO WORK ON^{36,37}**

COVID-19 is a wake-up call to live as 'humanity.' We all have a choice to work towards a more equitable society where everyone can be given dignity and respect as a human being, and end the great disparity between persons with disabilities and the rest of society.

Suggestions for consideration: ESCAP secretariat action

1. The pandemic has exposed gaps and inequalities in services for persons with disabilities. Highlight evidence to Governments of the ESCAP membership, to:
 - 1.1 Use lessons from the pandemic to improve support for persons with disabilities.
 - 1.1 Have mechanisms to map persons with disabilities and their communities that have been excluded and ensure adequate resources to 'close the gap,' particularly gaps faced by rural, indigenous and poor urban communities/families that have members with disabling conditions.
 - 1.2 Introduce changes that are sustainable in the long run, to end inequalities permanently.
2. An important lesson from the pandemic is the enabling and empowerment of persons with disabilities when digital devices and Internet access are freely available.
 - How can ESCAP, with other members of the United Nations system, leverage on this momentum and build on the rapid digitalization of societies as a tool to remove major barriers to the meaningful participation of persons with disabilities?
3. This is a vital responsibility -- the ESCAP secretariat could use means available to it, including in cooperation with other members of the United Nations system, to bring to the urgent attention of members and associate members the need to:
 - 3.1 Formally recognize the enormous impact of Long COVID and the potential disability pandemic that is evolving.
 - 3.2 Communicate widely to all Government officials and the general public the science and data on Long COVID, to enable personal risk reduction, while Governments make concerted efforts to limit the spread of the virus and minimize Long COVID.

Attention for Governments (ESCAP members and associate members)

1. One concern is that once the pandemic settles, government and society may revert to old ways to repair the economy. The pandemic has yielded important lessons for Governments to draw from (on meeting the needs of persons with disabilities during the pandemic) and put in place a post-pandemic national disability action plan that includes, *inter alia*, the following:
 - 1.2 Mechanisms to map persons with disabilities and their communities (disaggregated data) that have been excluded and ensure adequate resources to 'close the gap,' in particular rural, indigenous and poor urban communities/families that have members with disabling conditions.
 - 1.3 Mechanisms to ensure financial security for persons with disabilities and families who have dependants with disabilities.
 - 1.4 Chart and monitor the implementation and sustainability of inclusion efforts for persons with disabilities.

³⁶ Das, Espinoza, Ijjasz-Vasquez, Choi, and Sultan (2020). The Human Face of COVID-19: Six Things to Consider for an Inclusive Recovery. World Bank. <<https://www.worldbank.org/en/news/immersive-story/2020/10/22/the-human-face-of-COVID-19-six-things-to-consider-for-an-inclusive-recovery>>

³⁷ 14th Session of the Conference of States Parties to the United Nations Convention on the Rights of Persons with Disabilities (17th June 2021). Nothing Without Us: Disability Inclusion and the Pandemic Recovery <<https://teamup.com/ksmv4e1gd1ruzbzoso/events/932446025>>

2. It is important that Governments in the ESCAP region:
 - 2.1 Hasten support for individuals affected by the mental health pandemic that is emerging in the wake of COVID-19.
 - 2.2 Strengthen significantly existing mental health services in the national health systems and those offered by CSOs.
3. Governments in the ESCAP region must be enabled to recognize the following:
 - 3.1 The enormous, growing burden of disability from Long COVID, with its potential to overwhelm health-care systems and damage economies.
 - 3.2 Urgency of action, to:
 - (a) Stop the complacent 'living with COVID' outlook and work across sectors to reduce the spread of COVID-19;
 - (b) Reduce reinfection risk via promoting:
 - (i) Routine use of quality masks;
 - (ii) Significantly improved ventilation systems in all indoor spaces, including schools, factories and places where the poor live and work.
 - (c) Offer screening to all individuals who have had a COVID-19 infection, to look for secondary conditions (e.g., cardiac, neurological, endocrine).
 - (d) Accelerate work on therapeutic options to support people with Long COVID.

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