Nurses and Nurse Practitioners of British Columbia

ISSUES BRIEF

Long COVID-19

February 2022*

Background

The World Health Organization (WHO) declared the COVID-19 global pandemic on March 11, 2020. Since that time, there have been more than 300,000 cases of COVID-19 illness in British Columbia, and more than 2.7 million cases to date across Canada.[i] Sadly, there have also been close to 2500 deaths from COVID-19 in BC, and over 31,000 nationwide.[ii] Fortunately initial immunization as well as booster dose rollout is underway. To date, approximately 90% of all eligible adults in BC have received two doses of a COVID-19 vaccine, and more than 30%, at the time of writing, have also received a 'booster' dose at least six months after their second dose.[iii] Additionally, children aged five and older have since become eligible to receive a COVID-19 vaccine, and the numbers of children becoming immunized continue to increase.

While many have fully recovered from COVID-19 infections, there are some people who, upon recovering from initial infection, continue to experience illness like symptoms for weeks and even months afterward. 'Post COVID-19 condition' also known as 'long COVID-19' affects only a portion of those who have been infected with the COVID-19 virus, and long-term symptoms associated with this condition appear to last for varying lengths of time. Currently, according to the World Health Organization's working definition, "post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, usually three months from the onset of COVID-19 with symptoms, and that last for at least two months and cannot be explained by an alternative diagnosis."[iv] This working definition may be amended over time as the science evolves, but for now outlines some of the complexities in working to better understand this condition.

One 2021 study monitoring long COVID-19 symptoms in Canadians found that out of more than 1000 adult participants who had previously recovered from initial COVID-19 infection, 80% still experienced symptoms more than three months post recovery, while 50% continued to experience symptoms beyond eleven months.[v] As well, the United Kingdom's Office for National Statistics (ONS) has reported that approximately 24% of females and 21% of males with COVID-19 still experience symptoms up to five weeks after they initially tested positive, and 10% still experienced symptoms up to 12 weeks after, despite negative test results.[vi] Another study on the evolution of long COVID-19 out of the United States also found that of more than 270,000 COVID-19 patients, 36% of them still experienced symptoms six months following their initial infection.[vii] Overall, many preliminary studies at this point in the pandemic estimate that between approximately 10% and 60% of a population may experience long COVID-19.[viii] However, without wide-scale multi-year data, it is difficult to determine how many people may be affected by this condition. As well, further investigation is required to determine if there are any causal links between the specific variant causing initial infection, viral load, and/or other factors. As the COVID-19 pandemic was declared in early 2020, it is still too early to know the full extent to which long COVID-19 may continue to affect individuals and at what rate.

Another challenge to diagnosing long COVID-19 is that individuals suffering from long-term effects of COVID-19, also known as 'COVID-19 long haulers', could experience any number of symptoms out of a list of approximately 200 symptoms that have been linked to long COVID-19 to date.[ix] Presently the most common symptoms reported from long COVID-19 include persistent headache, fatigue, shortness of breath, joint pain, chest pain, muscle pain, dry cough, cognitive dysfunction (including brain fog and forgetfulness), depression, rapid heartbeat, intermittent fever, diarrhea, and rash.[x] As well, additional studies out of Europe demonstrate that there may be other longer-term effects from COVID-19 that are not yet as widely recognized, including ongoing sleep disturbance or insomnia, moderate to severe hair loss, dermatological problems, loss of taste or smell, organ damage, and the development of post traumatic stress disorder (PTSD), depression and anxiety.[xi] Some studies have noted the prevalence of interstitial thickening of the lungs (scarring around the alveoli air sacs)[xii], heart disease[xiii], and even neuroinflammatory disease and increased predisposition to stroke in the weeks following COVID-19 infection.[xiv] In many instances, the symptoms of long COVID-19 do not mirror the symptoms that the individual experienced while they were initially ill with COVID-19, and current evidence shows that many may have even been asymptomatic.[xv] Overall, due to the large number and commonality of possible symptoms associated with long COVID-19, it can be very challenging to diagnose.[xvi]

It also remains unclear who is more likely to be a COVID-19 'long-hauler'. Research reported in the Harvard Health Blog suggests that such people may be those over 50 who tend to suffer from more than one chronic illness.[xvii] As well, a recent Swiss study analyzed blood samples from COVID-19 patients and identified age, initial severity and number of symptoms, history of asthma, history of chronic fatigue syndrome, and initial antibody response levels as contributors to higher risk of long COVID-19. Focusing on these factors, researchers then accurately predicted long COVID-19 in an additional group of 395 COVID-19 patients.[xviii] However, there are reports of previously healthy and fit younger adults whose lives have been dramatically compromised by long COVID-19 as well. While studies of COVID-19 effects on children are sparse, research out of Italy notes that approximately 42% of children who tested positive for the virus experienced at least one symptom 120 days later, and the symptoms were debilitating enough that they affected their daily activities.[xix] The symptoms seen in pediatric cases are similar to those found in adults, including fatigue, headaches, insomnia, joint pain, respiratory problems and heart palpitations.[xx]

Data on the long-term effects in COVID-19 patients continues to build, potentially yielding additional clues to this phenomenon as it becomes an increasing focus of interest. A COVID-19 Prospective Cohort Study (CANCOV) is the first Canadian study to look at one-year and two-year outcomes for those who have had COVID-19 in order to help provide guidelines to clinicians and policymakers around 'long-haulers'.[xxi] Currently the study is recruiting patients and family caregivers from across BC, Alberta, Ontario and Quebec.[xxii] Additionally, researchers across Canada and in post-COVID-19 interdisciplinary clinics continue to work with long-haulers to better understand the impacts of COVID-19. These COVID-19 clinics utilize teams of specialists that may include cardiologists, neurologists, rheumatologists, psychiatrists, dermatologists, physiotherapists, and nurses. Generally, treatment at the clinics is based on the symptoms that are being experienced and may evolve as the science builds. In BC, these clinics are located at St Paul's Hospital, Jim Pattison Outpatient Care and Surgery Centre in Surrey, Abbotsford Regional Hospital, and Vancouver General Hospital.[xxiii]

As the long-term implications of COVID-19 continue to be studied it is imperative that nurses continue to stay up to date with evidence-based research on the long-haul effects of COVID-19. Current research demonstrates that there is an extensive list of potential ongoing symptoms, and it is likely to be some time before we fully understand how and why these symptoms are triggered by COVID-19. Nurses will play a central role in helping people to understand the process of recovery from COVID-19 illness and manage the ongoing symptoms they may experience. Because nurses are consistently voted amongst the most trusted of health professionals, we are ideally positioned to help educate the broader public about these lasting effects, and to emphasize why prevention (e.g., vaccination and following public health guidelines) is the best approach.

NNPBC stands by the safe, ethical, and evidence-informed care that nurses continue to provide during this COVID-19 pandemic, and the role that they play every day to keep our communities as safe as possible into the future.

Key Messages

- COVID-19 recovery and long-term effects are not yet widely understood and are still being explored.
- 'Post COVID-19 condition' also known as 'long COVID-19' affects only a portion of those who have been infected with the COVID-19 virus, and outcomes vary between individuals.
- 'COVID-19 long-haulers' are defined as people who have recovered from initial illness due to COVID-19 infection but continue to experience symptoms for weeks or months post recovery.
- The list of long-term symptoms associated with COVID-19 is extensive and includes symptoms such as heart palpitations, brain fog, fatigue, breathlessness, insomnia, hair loss, dermatological problems, loss of taste and/or smell, organ damage, the development of post traumatic stress disorder (PTSD) among others.

- The COVID-19 Prospective Cohort Study (CANCOV) will be the first Canadian study to analyze the one-year outcomes of people who have had COVID-19, to provide information to clinicians and policymakers in the hopes of improving the standard of care for long-haulers.
- As community leaders, nurses are ideally positioned to educate the public about COVID-19 prevention and provide support for those affected by this complex and not yet well understood syndrome.

Further Reading/Resources

- BC Provincial Health Services Authority: Post-COVID-19 Recovery Clinics
- Public Health Agency of Canada: Post COVID-19 Condition
- COVID Long-Haulers Canada: Online COVID Community
- Long COVID Canada
- WHO: What we know about Long-term effects of COVID-19

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