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Dr. Caroline Quach-Thanh
Chair, National Advisory Committee on Immunization
c/o Dr. Matthew Tunis, PhD, Executive Secretary
Public Health Agency of Canada

RE: COVID-19 Vaccination Prioritization for People Living with Multiple Sclerosis

Submitted via matthew.tunis@canada.ca

Dear Dr. Quach-Thanh,

The Multiple Sclerosis Society of Canada (MS Society) would like to formally request that National Advisory Committee on Immunization (NACI) include people with multiple sclerosis (MS) and their essential family caregivers and care providers in the key population of people with 'Other high-risk conditions' that increase their risk for severe COVID-19 illness as part of their *Recommendations for public health program level decision-making* related to their guidance on key populations for early COVID-19 immunizationⁱ.

MS is an unpredictable, often disabling neurologic condition of the central nervous system that disrupts the flow of information within the brain, and between the brain and body. Symptoms vary from person to person and range from numbness and tingling, to walking difficulties, fatigue, dizziness, pain, depression, visual impairment, and paralysis. Canada has one of the highest rates of MS in the world, with an estimated 90,000 Canadians living with the disease. Most people are diagnosed with MS between the ages of 20 and 49 and the unpredictable effects of the disease will last for the rest of their lives. The progress, severity, and specific symptoms of MS in any one person cannot yet be predicted but advances in research and treatment are leading to better understanding and moving us closer to a world free of MS.

A growing body of evidence indicates that early and ongoing treatment with a Health Canada approved disease-modifying therapy (DMT) is the best way to manage the MS disease course, to reduce the risk of disability worsening and improve long-term outcomesⁱⁱ. The full range of MS DMTs represent various mechanisms of action and routes of administration with varying efficacy, side effects and safety profiles. However, many of these DMTs, have the effect of altering or weakening the immune system, which includes them in the NACI category of '**other high-risk conditions**' that place an individual at increased risk of severe illness from COVID-19.

At the beginning of the COVID-19 outbreak in 2020, the MS Society joined with the Consortium of MS Centers and the National MS Society (USA) to create COViMS, a North American database to capture data on COVID-19 infections in people with MS and related central nervous system demyelinating diseases. The goal of the COViMS registry is to rapidly define the impact of COVID-19 on people with MS and related diseases and how factors such as age, comorbidities, and use of MS disease-modifying therapy impacts COVID-19 outcomes.

Summary data available on the COViMS website indicate that MS itself does not generally constitute a significant morbidity for severe COVID-19 illness. However, it is well documented that there is a high prevalence of comorbidities in people living with MS that include hypertension, hyperlipidemia, and chronic

lung diseaseⁱⁱⁱ, factors that have been shown to increase the risk of more severe COVID-19 disease. Additionally, certain treatments for MS have a greater impact on the immune system such as anti-CD20 agents (b cell depletion therapies). Evidence has shown that people with MS on these treatments have increased hospitalisations, ICU admissions and the need for ventilators, suggesting that individuals with MS treated with anti-CD20 agents are at risk of a more severe COVID-19 disease course.^{iv}

It is important to note that preliminary data from the COViMS registry demonstrate that impaired mobility was consistently associated with poorer outcomes (increased hospitalization, mortality, or ICU admission) from COVID-19, so much so that individuals who were non-ambulatory were associated with a **25-fold increased risk of death** after adjustment for other risk factors.^v

Family caregivers and care providers play an essential role in the overall care plan of Canadians living with MS, especially those living with highly active disease or progressive disease. This caregiving role is fundamental in providing activities of daily living such as personal care, feeding, medication assistance, and transportation to and from appointments as well as emotional support which is key to supporting mental health. We believe that these essential caregivers need to be added to the key populations for early COVID-19 immunization list.

In closing, based on the above data and NACI language, we recommend that people with MS and their essential family caregivers and care providers be explicitly included in the Recommendations for public health program level decision-making related to their guidance on key populations for early COVID-19 immunization. We appreciate your attention and actions to date in response to the COVID-19.

Warm regards,

Dr. Pamela Valentine

President and Chief Executive Officer

MS Society of Canada

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ⁱ National Advisory Committee on Immunization. Preliminary guidance on key populations for early COVID-19 immunization. Canada, November 2020.

<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/guidance-key-populations-early-covid-19-immunization.html#a7>

ⁱⁱ Freedman, M., Devonshire, V., Duquette, P., Giacomini, P., Giuliani, F., Levin, M., . . . Yeh, E. (2020). Treatment Optimization in Multiple Sclerosis: Canadian MS Working Group Recommendations. *Canadian Journal of Neurological Sciences / Journal Canadien Des Sciences Neurologiques*, 47(4), 437-455. doi:10.1017/cjn.2020.66

ⁱⁱⁱ Marrie RA. Comorbidity in Multiple Sclerosis: Some Answers, More Questions. *Int J MS Care*. 2016;18(6):271-272. doi:10.7224/1537-2073.2016-086

^{iv} MSVirtual 2020 – Late Breaking News. *Multiple Sclerosis Journal*. 2020;26(3_suppl):43-117. doi:10.1177/1352458520974938 [SS02.04 First results of the covid-19 in ms global data sharing initiative suggest anti-cd20 dmts are associated with worse covid-19 outcomes]

^v “Covims registry: clinical characterization of SARS-CoV-2 infected multiple sclerosis patients in north America (LB1242)”. MSVirtual 2020 – Late Breaking News. (2020). *Multiple Sclerosis Journal*, 26(3_suppl), 43–117. <https://doi.org/10.1177/1352458520974938>. and related manuscript submitted.