CADTH

CADTH COMMON DRUG REVIEW

Patient Group Input Submissions

OCRELIZUMAB (Ocrevus)

(Hoffmann-La Roche Limited)

Indication: Treatment of adult patients with relapsing-remitting multiple sclerosis (RRMS) with active disease defined by clinical and imaging features.

CADTH

Patient group input submissions were received from the following patient groups. Those with permission to post are included in this document.

Multiple Sclerosis Society of Canada — permission granted to post.

CADTH received patient group input for this review on or before June 22, 2017

CADTH posts all patient input submissions to the Common Drug Review received on or after February 1, 2014 for which permission has been given by the submitter.

The views expressed in each submission are those of the submitting organization or individual; not necessarily the views of CADTH or of other organizations. While CADTH formats the patient input submissions for posting, it does not edit the content of the submissions.

CADTH does use reasonable care to prevent disclosure of personal information in posted material; however, it is ultimately the submitter's responsibility to ensure no personal information is included in the submission. The name of the submitting patient group and all conflict of interest information are included in the posted patient group submission; however, the name of the author, including the name of an individual patient or caregiver submitting the patient input, are not posted.

CADTH

Multiple Sclerosis Society of Canada

General Information

Name of the drug CADTH is reviewing and indication(s) of interest	Ocrelizumab (Ocrevus*)
Name of the patient group	Multiple Sclerosis Society of Canada
Name of the primary contact for this submission:	[redacted]
Position or title with patient group	[redacted]
Email	[redacted]
Telephone number(s)	[redacted]
Name of author (if different)	
Patient group's contact information:	
Email	info@mssociety.ca
Telephone	416-922-6065
Address	500-250 Dundas Street West, M5T 2Z5
Website	mssociety.ca
Permission is granted to post this submission	Yes

Submitting Organization

The Multiple Sclerosis Society of Canada provides services to people with multiple sclerosis, their families and caregivers, and funds research to find the cause and cure for the disease. The mission of the MS Society is to be *a leader in finding a cure for multiple sclerosis and enabling people affected by MS to enhance their quality of life.* The mission is reflected in the organization's daily activities, which aim to support research into the cause, treatment and cure of MS, and provide programs and services that assist people with MS and their families. Since 1948 the MS Society has contributed over $140 million towards MS research. This investment has enabled the advancement of critical knowledge of MS, and the development of a pipeline of exceptional MS researchers. The MS Society has become one of the largest funders of MS research in the world, and continues to lead the search for a cure.

Conflict of Interest Declarations

We have the following declaration(s) of conflict of interest in respect of corporate members and joint working, sponsorship, or funding arrangements:

Between 2016 and 2017, the MS Society received educational grants from the following companies: Bayer, Biogen, EMD Serono, Novartis, Roche, Pfizer, Genzyme – A Sanofi Company, Allergan, and Teva Neuroscience. The contributions totalled less than two per cent of the MS Society's overall revenue and are subject to strict policies that prevent any control or influence by the donor on MS Society decision-making.

We have the following declaration(s) of conflict of interest in respect of those playing a significant role in compiling this submission:

Nothing to declare. This submission was developed and prepared solely by MS Society staff.

Condition and Current Therapy Information

Information Gathering

Information for this submission was obtained from publicly available information about the impact of MS (extracted from previous public survey reports, MS Society developed resources) and through an online survey posted between May 29 and June, 2017. The survey was offered in English and French and was shared with Canadians affected by MS through the MS Society's social media. This survey invited feedback from people living with MS who may or may not have had experience with ocrelizumab. Respondents with MS and their caregivers answered a series of questions about themselves, how MS impacts them, their experience with existing drug therapies, and their expectations of future therapies.

A total of 109 responses were received to this survey. 77% were female respondents and the remainder were men. Most respondents had MS (91%), whereas the other small percentage self-identified as caregivers. Respondents' ages ranged from 25 years to 65 and older. Most respondents were between the ages of 25 to 65. The length of diagnosis varied from less than two years to more than 20 years, with the highest number of respondents being diagnosed between five to ten years. The type of MS reported by respondents had representation from the following MS categories: relapsing-remitting (69%), secondary-progressive (14%) and primary-progressive (11%). There was a small percentage of respondents that were not certain of their MS phenotype.

Impact of Condition on Patients

Multiple sclerosis is an unpredictable, often disabling disease of the central nervous system. MS occurs because of damage to myelin, the protective covering wrapped around nerve fibres (axons). Damaged myelin causes an interruption or loss of the usual flow of nerve impulses along the axons resulting in a wide variety of symptoms. Approximately 85-90% of people are diagnosed with a relapsing-remitting course, wherein they experience 'attacks' caused by bouts of inflammation in the CNS, followed by full or near complete recovery. Within approximately 10 to 20 years, about half of these individuals are likely to transition to secondary progressive MS, a form of the disease that steadily worsens over time and is marked by fewer or no attacks and advanced disability. The remaining 10% of people are diagnosed with primary-progressive MS, characterized by a steady worsening of disease that is not preceded by a relapsing course. The most common symptoms of MS include fatigue, difficulty in walking, visual impairment, cognitive difficulties, depression, bladder problems, and pain. Other symptoms may include issues with balance, sexual dysfunction, spasticity, tremor, weakness and difficulty speaking and swallowing. MS can occur at any age, but is usually diagnosed between the ages of 15 to 40, peak years for education, career- and family-building.

Depending on the type and severity of the symptom, an individual's quality of life can be greatly impacted. The episodic nature of multiple sclerosis creates unique employment issues – many people are unable to maintain stable jobs or remain in the workplace due to relapses, symptoms, medication side-effects and disability progression. In addition to employment, MS can interfere with, or introduce a barrier to education, physical activity, family commitments, interpersonal relationships and social and recreational life.

Patients' Experiences With Current Therapy

There are thirteen Health Canada approved drugs to treat relapsing forms of MS, collectively referred to as disease-modifying therapies, or DMTs. These medications have shown to be efficacious and safe in reducing annual relapse rates (ARR) between 30 and 70 per cent, depending on the agent being used. These drugs are also effective in slowing disability progression and reducing the number of new or enhanced lesions (as seen on MRI). An individual diagnosed with relapsing MS will be treated with a first-line medication (interferon formulations, glatiramer acetate, dimethyl fumarate or teriflunomide). For many people these first line therapies are effective in managing the disease, for others they are not. Despite compliant use of first line agents, there are many people who continue to experience relapses, display new or gadolinium enhanced lesions and loss of brain volume, seen on MRI. If this occurs, neurologists will escalate the individual to a second line therapy, such as fingolimod or a monoclonal antibody.

There is no standard MS treatment algorithm therefore the options available to people are selected based on disease course activity/ severity, efficacy, tolerance, known (expected) side-effects, lifestyle choices and cost. It is very common for one treatment to work well in one individual, and fail in another. Having access to different treatment options is critical for people affected by MS to maintain their quality of life and control their MS as effectively as possible. Side-effects of DMTs are generally well-managed with over-the-

counter medications and lifestyle changes such as taking time to rest. Certain side-effects however can be more bothersome, unmanageable and in some cases fatal. Older, first generation disease modifying therapies (interferons and glatiramer acetate) carry fewer side effects but may be less effective while second generation disease modifying therapies are more effective but a carry higher risk for adverse events.

In addition to DMTs, symptom management medications, corticosteroid therapy and complementary and alternative therapies are also commonly used to treat MS. There are also many non-medicinal therapies and techniques used to manage MS, including physiotherapy, physical activity and other types of rehabilitation.

Impact on Caregivers

Caregivers play an instrumental role in the overall care management plan of people living with MS, especially those living with highly active disease or progressive disease. A caregiver's role can range from providing emotional support and assistance with medication administration, to helping with activities of daily living such as personal care, feeding and transportation to and from appointments. With the advancement of research and growing list of options, of MS treatments for relapsing forms of MS, the demand for a caregiver's role may decrease. Disability progression is being further delayed; relapses are decreasing, and symptoms are being managed more effectively. MS treatments allow those affected by MS to make family and social commitments more possible as well as remain in the work place. These factors greatly improve the quality of life for both the caregiver and their loved one with MS. Eight caregivers responded to this survey however only one provided responses indicating that they provided extensive support for their loved one.

Information about the Drug Being Reviewed

Information Gathering

Same as Information Gathering on page 4.

What Are the Expectations for the New Drug or What Experiences Have Patients Had With the New Drug?

Three respondents stated they had experience with ocrelizumab in a clinical trial. Twenty-seven respondents stated their neurologist suggested escalating to a second line therapy, and 14 were recommended specifically to start treatment with ocrelizumab. Monoclonal antibodies (mAb), such as ocrelizumab, have been highly effective in managing aggressive forms of relapsing MS where other therapies have not had clinical benefit however they also carry a higher risk for adverse events. Like most monoclonal antibodies, ocrelizumab is administered by IV infusion at a specialized infusion clinic, however unlike other mAb's, the dosing schedule is only one infusion every six months.

"My hope is to have this drug available anywhere in the world for those who need it. Especially making it affordable for those people who do not have health care."

"This new treatment has made my daily living so much better."

In clinical trials for relapsing MS, serious adverse effects were reported to be rare. More people administered with ocrelizumab had infusion-related adverse events compared to those in the placebo group at first infusion. Of note, one patient taking ocrelizumab (2000mg) died as a result of brain edema following a systemic inflammatory response with multi-organ failure. The connection between this death and ocrelizumab is unclear. One case of a rare and potentially fatal brain infection, progressive multifocal leukoencephalopathy (PML) was reported in a patient treated with ocrelizumab in Europe however the connection between this death and ocrelizumab is also unclear as this patient had been treated with natalizumab prior to treatment with ocrelizumab.

Thirty respondents stated they would be willing to take on the risk of experiencing the adverse side effects of ocrelizumab for the perceived benefits of the drug while 24 said they would not be willing to trade the risk and 31 stated they did not know if they would be willing to take the risk.

"Anything that can help bring quality of life with this disease is worth trying....it gives hope."

Additional Information

Once the first line options are no longer effective or tolerated, individuals should be provided with a choice of escalation therapy, and that decision is often based on their disease course, the treatment's dosing schedule, administration delivery, side-effect risk and individual's lifestyle. Based on the promising clinical trial data, including ocrelizumab to the list of options as a second line treatment for people with highly active MS will be very welcomed. With many treatment options now available, the majority of Canadians living with relapsing-remitting MS are able to initiate or escalate with a treatment that is most suitable to their disease course and lifestyle, ultimately enabling them to continue working and maintain active roles within their families and communities. Providing options to people living with MS can also contribute to increased adherence, which benefits the person and health system.

"When you live with MS, each day you wake up knowing you could have a new or old symptom attack you that day. You have an even higher chance of that happening when your MS is not under control. Having a new drug that works made available that increases your chance of not having another relapse that damages your body, mind and income would be life altering. It would give me longer time to prepare for my future. I would be less of a burden to everyone around me physically and financially on the system."