

CADTH COMMON DRUG REVIEW

Patient Input

abobotulinumtoxinA (Dysport Therapeutic)

(Ipsen Biopharmaceuticals Canada Inc.)

Indication: Lower limb spasticity

CADTH received patient input from:
Cerebral Palsy Association in Alberta
Multiple Sclerosis Society of Canada

February 22, 2018

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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.

1. About Your Patient Group

Cerebral Palsy Association in Alberta website: www.cpalberta.com

The Cerebral Palsy Association in Alberta (CPAA) is a registered charity that enriches and supports the lives of children and adults with cerebral palsy through our programs and services and collaborates with other organizations to promote awareness, acceptance and understanding for persons with disabilities to live, learn and work in the community.

The CPAA is the leading organization in the CP Canada Network, a collaborative of CP Organizations, Researchers, Physicians and community stakeholders with a goal to work together to ensure best practices in programs and services, patient engagement in research and act as a resource hub for patients and families across Canada

The CPAA is also an international affiliate of United Cerebral Palsy and Cerebral Palsy Alliance, and is actively involved in global initiatives, to promote awareness and acceptance of cerebral palsy, such as World CP Day.

2. Information Gathering

There are estimated to be 17 million people worldwide and specifically 80,000 people in Canada diagnosed with cerebral palsy. It is the most common childhood disability.

The CPAA has extensive experience in working with individuals with cerebral palsy and their families. While we estimate there to be over 10,000 Albertans affected by cerebral palsy, we have active case files on 1300 clients. Approximately 25% of our clients (300) would fit within the age guidelines for the review of this drug. (under 18)

A survey was created with the questions of the review in mind, and distributed to our own client group, and distributed on social media channels including those of the CP Canada Network and Facebook Special Needs groups.

24 responses were collected and collated with anecdotal experiences of families including my own.

3. Disease Experience

“Cerebral Palsy is a neurodevelopmental disorder that affect movement and posture. Cerebral Palsy can affect different parts of the body. The most common form of CP is spastic, where muscle appear stiff and tight. 1 in 3 cannot walk 3 in 4 experience pain, 1 in 4 is unable to talk and 1 in 2 has an intellectual impairment.” *Worldcpday.org*

The respondents in our survey indicate the following:

- 67% have delays in reaching motor skill, milestone, such as pushing up on arms, sitting up alone
- 63% are unable to walk
- 60% experience pain
- 58% report variation in muscle tone

71% reported that cerebral palsy affected their family's day to day life by limiting them in participating in leisure activities and socializing, and working. It affects them emotionally. Some comments “ So many physically demands, lots of lifting, can't leave him alone like other children.

Families and caregivers face many challenges in caring for someone with cerebral palsy. 78% reported access to appropriate therapies and medications, which was either costly, not accessible, or too far to travel. 87% reported the demands on personal time, managing work and caregiving were high and 78% found it difficult to manage the stress of caring for someone with cerebral palsy.

4. Experiences With Currently Available Treatments

There are many treatments and therapies that are utilized by families to treat their child's contracted, overactive or stiff muscles. 91% use physiotherapy, 87% occupational therapy and 35% other therapies such as Hippotherapy, Conductive Education, ABM (Anat Baniel Method). Medications include Botox (59%) Bacofen (36%) and some report using Artane, Sinemet, and essential oils.

30% report treatments are not effective, and only 25% report treatments as Very Good. 25% report Good and 25% Just OK. Comments include "lots of side effects, had surgery, most effective is Botox, needs regular stretching and exercise." One poignant comment "I feel like nobody cares, all I get is consults for equipment and so frustrating when he is so close to walking"

For the purpose of this review, we asked specific questions on neurotoxin treatments to control tone in lower limbs. 63% had used Botox, most had not heard of Dysport until recently. The average age when they first received treatment was 3-4 years old and most receive 2-3 treatments per year and the years of treatment are from 2 to 13 to ongoing.

65% report a reduction of spasticity and greater ease in stretching. 59% report improvement in positioning and range of motion. 41% report significantly improved gait pattern and 35% report decreased pain in stiff muscles and improved tolerance of braces. Other comments include: "greater independence" and improved ability to do personal care"

Adverse effects were minimal with 40% reporting muscle weakness, bruising and pain near injection area. 60% had no adverse effects. The difficulties in receiving treatments included financial challenges (38%) travel difficulties getting to administration sites (23%) and 8% unable to access the drug.

5. Improved Outcomes

There are a number of needs that are not being met by current therapies and treatments that families feel they need. Most noted "the amount of physiotherapy and occupational therapy required to keep their children mobile and functional. " Neuro toxin treatments require intensive physiotherapy post injection and families are required to do multiple visits or become therapists themselves.

Improvements that patients and their families would like to see include:

- Longer lasting treatments with longer lasting effects
- Ease of accessing specialists and local therapists
- More intensive and frequent interventions
- Reduced spasticity and tone
- Financial accommodations for travel and specialists
- Access for First Nations

Families felt that with these improvements, their quality of life would be different by:

- Being able to participate in more social and recreational activities
- Requiring less hospital trips, treatments
- Reduced costs would help the financial situation of families
- Their child would be able to walk better and be more independent
- Life would be less stressful

" we could be more active as a family, participate in activities such as swimming, biking, even simple outings could last longer rather than being cut short due to fatigues. Normal socializing would be much easier."

6. Experience With Drug Under Review

As Dysport Therapeutic was only recently awarded Health Canada Funding, there are no Canadian patients that have had access to this drug. The current neurotoxin treatment recommended to families is Botox. This is usually made by a hospital clinician to the family. Most often there is not an alternative to consider. While there are numerous studies of the benefits of this treatment, families are still unsure of having to consider this. Added to the fact, that families must be willing to commit to 12+ weeks of intensive therapy post injection, it does add much stress onto families that are often already overwhelmed.

That being said, and witnessing myself first hand the benefits of the treatment, the majority of families are very happy with the outcomes of this treatment, which far exceeds any other therapies/medications currently available.

7. Companion Diagnostic Test

Patients and caregivers really don't understand or care about the above. Families want to have a drug that positively impacts their child's function ability in a positive way.

8. Anything Else?

Having a child with cerebral palsy has a huge impact on a family's quality of life. While families move through a process of dealing with their child's disability and participation in the community, there are some things they can control and others they cannot. While they can advocate for inclusion, access to schools, and community facilities, having in home supports, etc., one thing families feel they have little say in, is the therapies and treatments that are provided. Without having a say in these, sometimes they look to new and unproven treatments abroad, looking for the "magic cure". A past example is hyperbaric oxygen therapy. We saw families spending over \$12000 in experimental treatments that have been disproved today. Families don't want to wait for treatments to be proven, they are desperate to try anything today. Some things they can afford, most things they cannot.

While Dysport, may or may not add extra benefits to treatments currently on the market today, what it does is give families a choice. Families first and foremost need to be part of the process in determining their child's medical treatment plan. By including them in this process, we can hopefully have an engaged treatment team.

Appendix: Patient Group Conflict of Interest Declaration

To maintain the objectivity and credibility of the CADTH CDR and pCODR programs, all participants in the drug review processes must disclose any real, potential, or perceived conflicts of interest. This Patient Group Conflict of Interest Declaration is required for participation. Declarations made do not negate or preclude the use of the patient group input. CADTH may contact your group with further questions, as needed.

1. Did you receive help from outside your patient group to complete this submission? If yes, please detail the help and who provided it.

No

2. Did you receive help from outside your patient group to collect or analyze data used in this submission? If yes, please detail the help and who provided it.

No

3. List any companies or organizations that have provided your group with financial payment over the past two years AND who may have direct or indirect interest in the drug under review.

Company	Check Appropriate Dollar Range			
	\$0 to 5,000	\$5,001 to 10,000	\$10,001 to 50,000	In Excess of \$50,000
Allergan International Foundation (Allergan Botox)		X		
Ipsen Pharmaceutical		X		

I hereby certify that I have the authority to disclose all relevant information with respect to any matter involving this patient group with a company, organization, or entity that may place this patient group in a real, potential, or perceived conflict of interest situation.

Name: Janice Bushfield

Position: Executive Director

Patient Group: Cerebral Palsy Association in Alberta

Date: February 21, 2018

1. About Your Patient Group

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.

2. Information Gathering

The MS Society of Canada launched an online survey posted to its national website www.mssociety.ca main page and Facebook page in both English and French. A survey related to Dysport Therapeutic for treatment of lower limb spasticity in pediatric patients 2 years of age and older was posted January 22, 2018 and closed February 19, 2018. As this call for patient input was for a pediatric MS population, we geared the survey to parents/guardians and caregivers of children ages two years and older living with multiple sclerosis. Based on the survey comments, respondents appear to be from Canada however country of origin was not a survey question. In total we received eight surveys; unfortunately, none of the surveys were completed. Of those who initiated the survey, all respondents self-identified as parents. Age ranges provided for the children were 6-12 (1) and 13-19 (4). Children were reported as living with MS for less five years (3).

3. Disease Experience

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, but can be diagnosed in children as young as two years old. Pediatric MS makes up approximately [2-5% of the MS population in Canada and about 10% of patients diagnosed with MS may have had their first symptoms before 18 years of age](#). As with the adult MS population, the episodic nature of multiple sclerosis creates unique issues for youth living with MS. Depending on the type and severity of the symptom, an individual's quality of life can be greatly impacted due to relapses, symptoms, medication side-effects and disability progression.

Three parents reported that lower limb spasticity impacted their child's ability to: attend school, participate in extracurricular activities (sports or clubs), sleep, socialize (for example: attending activities with friends, birthday parties, going to the mall, going to movies etc.), mobility, perform age-appropriate activities independently, drive a car, self-care (toileting, dressing, eating), provide care for younger siblings, maintain family relationships (for example: changes in roles and routines within the family such as chores), participate in recreational and/or physical activities (such as bike riding, going to the park, active play independently or with friends).

4. Experiences With Currently Available Treatments

None of the children were treated for lower limb spasticity. In Canada, there are 15 Health Canada approved medications used to manage relapsing forms of MS in adults. None of these medications are approved for use in pediatric MS however some are used off-label. There are currently several clinical trials underway to assess the safety and efficacy of MS medications in pediatric MS. Symptom management medications, such as Dysport Therapeutic are therefore critical in the overall management of MS.

5. Improved Outcomes

Treatment with Dysport Therapeutic has the potential to remove the barriers that lower limb spasticity presents to education, social and recreational activities, activities of daily living, family life and quality of life of children who experience lower limb spasticity.

6. Experience With Drug Under Review

The MS Society did not receive feedback from patients who have current or previous experience with the drug Dysport Therapeutic. None of all respondents had not heard about Dysport Therapeutic as a treatment for lower limb spasticity in pediatric MS by their child's neurologist.

7. Companion Diagnostic Test

We did not gather information in this survey on pre-treatment laboratory tests or post-treatment monitoring.

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Bayer	X			
Biogen				X
EMD Serono				X
Novartis				X
Roche				X
Pfizer			X	
Genzyme – A Sanofi Company			X	
Allergan	X			
Teva Neuroscience		X		

I hereby certify that I have the authority to disclose all relevant information with respect to any matter involving this patient group with a company, organization, or entity that may place this patient group in a real, potential, or perceived conflict of interest situation.

Name: Jennifer McDonell

Position: Senior Specialist, Programs and Pharma Relations

Patient Group: Multiple Sclerosis Society of Canada

Date: December 18, 2017