05-HIA-0266

HEALTH SERVICES APPEAL AND REVIEW BOARD

PRESENT:

Soraya Farha, Vice-Chair, Presiding
Dawn Roper, Member
Jay Yedvab, Member

On the 2nd and 3rd day of March 2009 at Toronto, Ontario

IN THE MATTER OF AN APPEAL UNDER SECTION 20(1) of the *Health Insurance Act*, Revised Statutes of Ontario, 1990, Chapter H.6 –as amended

B E T W E E N:

B.R.

Appellant

-and-

THE GENERAL MANAGER,
THE ONTARIO HEALTH INSURANCE PLAN

Respondent

Appearances

For the Appellant: Adrian Nurse, Counsel

For the Respondent
General Manager, OHIP: John Johnston, Counsel

FINAL DECISION AND REASONS

I. DECISION

1. In the fall of 2004 the Appellant was diagnosed with multiple brain cavernomas. In August, 2005 he underwent a left retrosigmoid suboccipital craniotomy for resection of

a complex symptomatic brainstem cavernoma, by Dr. Robert Spetzler of Barrow Neurological Institute in Phoenix, Arizona. The Respondent, General Manager of the Ontario Health Insurance Plan (OHIP) has declined to reimburse the Appellant for the costs of that treatment on the basis that identical or equivalent treatment was available in Ontario, without delay, at the material time.

2. The Appellant seeks reimbursement in the within appeal. For the reasons set forth herein, the appeal is granted.

II. OVERVIEW

3. The events chronicled in this section are derived from the parties' written evidence, together with the oral evidence of the Appellant, and of the following physicians: Dr. Hugh Langley who testified on behalf of the Respondent; Dr. Robert Spetzler, operating neurosurgeon and Appellant's expert witness; and Dr. Charles Tator, Professor of Neurosurgery and expert witness for the Respondent.

4. In September, 2004 the Appellant, at that time a 19-year old student in the Police Foundations course at Mohawk College, suddenly started to experience double vision and an inability to move his left eye to the left.

5. After undergoing a series of medical tests through October, 2004, he was diagnosed by Dr. Michael Kronby, a neurologist based in Hamilton, with a left pontine cavernoma, which is an abnormal blood vessel malformation which can bleed, located in the left

middle brainstem. (The pontine is also referred to herein from time to time as the "pons").The Appellant has been diagnosed as having other cavernomas, however at issue in this appeal is the treatment of the left pontine cavernoma, surgically removed by Dr. Spetzler, which we will refer to hereinafter as the "brainstem cavernoma".

6. The Appellant's double vision and left eye immobility (caused by a "partial 6th nerve palsy") resulted from a bleed of the brainstem cavernoma. This bleed will be further discussed herein and will be referred to as the "first bleed", which is said to have occurred on or about September 23, 2004, the day the Appellant began to experience the symptoms described above.

7. Dr. Kronby referred the Appellant to a neuro-opthalmologist, Dr. Paul Ranalli, who referred the Appellant on to the Arteriovenous Vascular Malformation Clinic (the "AVM Clinic") at Toronto Western Hospital.

8. Dr. Tator testified that with relatively rare conditions such as brain vascular formations, not every neurological surgical unit in the province has the specialty skills to deal with such conditions, and so the care in Ontario for such conditions has been regionalized. In the case of brain vascular formations, care has been regionalized at Toronto Western Hospital, a Division of the University Health Network and a teaching hospital of the University of Toronto. Dr. Tator stated that regionalization allows better care to be offered because the clinicians would have more experience with that condition, and a

medical team with sufficient skill required to manage such a condition could be fully staffed.

9. On December 16, 2004 the Appellant consulted with Dr. Michael Tymianski, a neurosurgeon with the AVM Clinic, who advised the Appellant that he did not recommend intervention by neurosurgery at that time.

10. More particularly, Dr. Tymianski noted on the patient's chart that he discussed the nature of the diagnosis, the natural history of cavernous malformations and the fact that there is an approximate 10% per year neurological event rate associated with the condition. He noted that one-third of patients recover completely, one-third does not recover at all, and one-third partially recovers from any neurological deficit. With regard to surgery, Dr. Tymianski stated as follows on the chart:

> Based on these statistics, we have often offered surgical resection for these lesions, but only if they present to a pial surface. If a lesion is deep in the brain stem, we generally believe it to be too hazardous to remove as the likelihood of a neurological deficit related to surgery is extremely high. We have thus elected to watch this cavernoma rather that to offer him any treatment. I have booked an MRI for him in September 2005 and we will see him again in the clinic thereafter. His case will also be discussed at the Vascular Malformation Clinic conference.
>
> Notably, I have mentioned to the patient and to his parent that should he have multiple hemorrhages the surgical option is still available, however it is always a matter of balancing risks and benefits.

11. Between January and the beginning of June, 2005 the Appellant experienced improvement in his vision and improved muscle movement in his eyes. He testified that he felt he was 90% recovered although he still could not see far to the left.

12. On approximately June 18, 2005 the Appellant experienced a second bleed (the "second bleed"). As a result, his double vision (or "diplopia") returned and he suffered complete 6th nerve palsy such that he had no muscle movement in his left eye. On July 7, 2005 he was again evaluated by Dr. Tymianski at the AVM Clinic. Dr. Tymianski continued to be of the view that the risks outweighed the benefits of surgery. In his report to Dr. Kronby dated July 7, 2005 he states as follows:

> The MRI to me looks virtually unchanged. There may be a very subtle increase in the size of the malformation but there is no clear hemorrhage. I discussed this in detail with the family and I explained that given the delicacy of the location of this cavernoma, any subtle increase in size may produce symptoms, especially when it comes to the sixth nerve, whose nucleus is an extremely small structure located right near the cavernoma.
>
> This cavernous malformation does not reach the pial surface anywhere in the brainstem. It is about 2 cm deep to the floor of the fourth ventricle and a lateral approach would require surgery through the middle cerebellar peduncle, which considering B.'s lack of other neurological symptoms, would possibly make him worse. Consequently, we have continued advising him that surgically we would not recommend resection of this cavernous malformation for the time being. This could change should he have any kind of neurological events that are worse than what he has experienced.

13. At the July 7 appointment with Dr. Tymianski, the Appellant's parents asked if there was a possibility of getting a second opinion. Dr. Tymianski reports to Dr. Kronby that he advised them that they could obtain a second opinion from Dr. Spetzler:

> …I have told [the Appellant's parents] that in my view the best second opinion would be that of Robert Spetzler in Phoenix, Arizona. Dr. Spetzler has surgical experience with over 200 brainstem cavernous malformations. The family will get a photocopy of his notes and copies of the MRI scan. They will arrange for this second opinion on their own.

14. The Appellant proceeded to obtain a second opinion from Dr. Spetzler. His parents sent the information as noted in Dr. Tymianski's letter. On or about July 15, 2005, the

Appellant's mother discussed the matter with one of Dr. Spetzler's colleagues, Dr. Little. Dr. Little advised that Dr. Spetzler's advice was that the cavernoma had to be removed surgically and recommended that a surgery date be booked at his clinic. Surgery was booked for the next available date of September 2, 2005 (with a pre-surgical consultation booked for the preceding day).

15. After June 18, the Appellant had complete and constant double vision. On approximately July 24, 2005 the Appellant awoke with new symptoms, including extreme headache, tingling on his right side affecting his right hand and foot, ear-ringing, hyperacusis (hearing things more loudly than normal), together with the on-going double vision.

16. On July 24, the Appellant attended at St. Joseph's Hospital in Hamilton. A CAT scan revealed a third bleed in the brainstem cavernoma. On July 25, he was assessed by Dr. Reddy, a neurosurgeon who is not part of the Toronto Western team. The Appellant testified that Dr. Reddy offered to do the surgery on the brainstem cavernoma and advised him and his parents that he had operated on 2 brainstem cavernomas in the past. Dr. Reddy stated the following in his Consultation Report dated July 25, 2005 with regard to the discussions he had with the Appellant and his parents:

> Clearly he has had another bleed from his cavernoma. I was planning to admit him to the Hamilton General Hospital, observe him for a couple of days to make sure that he does not develop hydrocephalus or have another bleed but the patient preferred to go home instead. Apparently his mother has got the week off and she will watch him closely.
>
> A somewhat uncomfortable long discussion ensued subsequent to this where I asked them clearly where they prefer their care to be. It appears that the patient's

> mother has found the name of Dr. Robert Spetzler, a very well known neurosurgeon in Phoenix, Arizona, and he is waiting to get an opinion from him. My understanding is that she would like his surgery performed elsewhere. I have informed the patient and his mother very clearly that I am not willing to participate in fragmented care. If the patient and his family choose to go elsewhere for their care that is perfectly their choice but unless there is a life threatening emergency I personally would not like to be involved in his care any further.

17. The Appellant returned later the same day to St. Joseph's hospital as he began to experience a new symptom of hearing impairment. He was seen by the emergency doctor, Dr. Eby, who contacted the AVM Clinic and arranged for a consultation for the following day.

18. Also on July 25, the Appellant's parents contacted an assistant in Dr. Spetzler's office to advise of the third bleed. The assistant advised that Dr. Spetzler was on holidays but that one of the other neurosurgeons at the Clinic would contact Dr. Spetzler to update him.

19. On July 26, the Appellant attended at the AVM Clinic. The Appellant was advised that Dr. Tymianski was on holidays, that Dr. Wallace, the head of neurosurgery was not available, and that he would be seen by Dr. Gunnarson. Dr. Gunnarson made the following notations in the Appellant's chart:

> …
>
> I had a long conversation with the parents and the patient about his condition. The patient was also discussed with Dr. Wallace and it is our impression that with three events in one year, there may now be indication for surgical removal of this cavernoma. In order to define the location and the anatomy better, we have arranged for an MRI scan today. We will see the patient in our clinic in two days for further discussion. The patient and his parents have been advised to seek the nearest emergency department if he should deteriorate.

20. On July 27, Dr. Spetzler's colleague at the Barrow Institute, Dr. Nakaji, called the Appellant's family. They discussed whether or not the proposed September 2 surgery date was still appropriate given the latest bleeding episode. The Appellant stated that Dr. Nakaji advised that he would contact Dr. Spetzler who was still on vacation and report back.

21. The Appellant returned to the AVM Clinic on July 28, 2005 and met with Dr. Wallace. He was advised at that meeting that Dr. Tymianski was still on vacation.

22. In a letter dated July 28, 2005 to "Michael" (both Dr. Kronby and Dr. Tymianski are called "Michael"), Dr. Wallace discussed the Appellant's condition and indicated that he had recommended surgery:

> This gentleman has had another event….
>
> …
>
> He was examined 2 days ago and an urgent MR was done. The patient is seen today in clinic.
>
> Clinical exam today shows a complete left 6th nerve palsy with no movement. The rest of the extraocular movement is normal. Vision in the eye is normal. He has no cerebellar dysmetria. He has had subjective tingling throughout the right upper and lower extremity, worse in the right upper extremity. Subjective decreased hearing in the left ear. Audiograms have not been done. We looked carefully and there may be a small lag of his facial movement but there is no obvious facial paresis.
>
> CT scan and MR scan show a re-bleed….
>
> I think this gentleman with repeated bleeds is ahead of his rate of 8.0% per year and this lesion should be removed. We have recommended that he have a craniotomy and a partial labryinthectomy through the petrous bone to arrive at this lesion and make an incision guided by CT guidance to remove this cavernous malformation. This can be scheduled any time in the next couple of weeks. Today we have discussed the risks of doing nothing and certainly the 3 events have both the patient and particularly his parents interested in pursuing this.

> On their own they have consulted and they asked me today (sic) other centers in North America who do a lot of these and clearly I have indicated to them that the greatest number would have been done at the Mayfield Clinic at the Barrow Neurological Institute. On their own they have already contacted Dr. Robert Spetzler and are making arrangements to see him within the next month for a surgical procedure there. The recommendation that they have received with review of the x-rays has been to remove the lesion similar to here.
>
> We will continue to monitor him and we have reviewed some of the symptoms that would prompt a quick return to hospital. Thanks for allowing us to continue to help with his care and we will still be happy to follow him if he elects to go ahead with surgical procedure this fall in Phoenix.

23. The Appellant testified that at the July 28, 2005 consultation, he and his parents asked Dr. Wallace about his previous experience with the proposed procedure. The Appellant testified that Dr. Wallace told him that he had done 3 previous brainstem cavernoma surgeries, with poor results.

24. During the course of the consultation, according to the Appellant, Dr. Wallace completed the Application for Prior Approval, also dated July 28, seeking approval for funding for a craniotomy for pontine cavernous malformation to be performed by Dr. Spetzler at the Barrow Neurological Institute. On the form, Dr. Wallace ticked off the boxes to indicate that the procedure was generally accepted as appropriate for a person in the Appellant's medical circumstances, that it is performed in Ontario at the Toronto Western Hospital and that is could be performed within 2 weeks, without a delay that would result in death or medically significant irreversible tissue damage. Dr. Wallace added the following notation in Part 4B of the form:

> Pt. & family advised to do procedure. It can be done here within weeks. Pt & family wish to go to a centre with the most surgical experience. Their research and my answer to their inquiry was Dr. Spetzler at the Barrow Neurological Institute.

25. Dr. Wallace added further that the Appellant could receive follow-up care at the University of Toronto Vascular Malformation Study Group.

26. The Application was denied by the Respondent the next day, by letter to Dr. Wallace dated July 29, 2005. In that letter Dr. Robert Thomson on behalf of the Respondent stated that the service was available in Ontario and no evidence had been provided of a delay that would result in death or medically significant irreversible tissue damage. Dr. Thomson also indicated in the letter that the Ministry would be prepared to re-assess the application if there was additional medical information that Dr. Wallace wished to submit.

27. On August 2, the Appellant's family was contacted by Dr. Spetzler's assistant who advised that Dr. Spetzler would return from his vacation early to operate on the Appellant as the surgery could not wait until early September given the latest bleed. A preoperative consultation was scheduled for August 9 with the surgery to follow the next day.

28. The Appellant proceeded to Phoenix for the consultation and surgery. He testified that he had no contact with the AVM Clinic or Toronto Western Hospital between the date of the consultation with Dr. Wallace, July 28, and his departure for Phoenix on August 8.

29. On August 10, 2005 Dr. Spetzler performed the left retrosigmoid suboccipital craniotomy for resection of brainstem cavernoma. In a letter dated September 28, 2005, Dr. Spetzler described the procedure and the Appellant's recovery as "uneventful". He described the Appellant's surgical outcome as successful.

30. The Appellant testified that post-surgery, he had no new symptoms, and that all of his symptoms had gone, with the exception of his vision. He stated that he underwent two operative procedures at Sunnybrook Hospital which have improved, but not corrected, his vision issues. He continues to have little movement in his left eye, and experiences double vision when he looks to the left.

III. LAW

31. Health insurance in Ontario is governed by the provisions of the *Health Insurance Act* (the "Act") and any regulations made pursuant to the Act. Section 12 of the Act provides that every insured person is entitled to payment for insured services. The term "insured services" is defined in sections 1 and 11.2 of the Act to include only those services that are prescribed by regulation.

32. For the most part, "insured services" are provided in Ontario. However, under certain limited circumstances, treatments provided out of the country are also prescribed as "insured services". There are two categories of out of country treatment for which funding may be available.

33. The first category of insured out of country treatment is when an insured person is out of the country when he or she requires medical services in connection with an illness, disease, condition or injury that is acute and unexpected, arose outside of Canada and requires immediate treatment. It is not in dispute that this first category does not apply to the Appellant's circumstances.

34. The second category of insured out of country treatment is when funding is approved by the General Manager of OHIP, in specified circumstances, because the treatment is not performed in Ontario, or there is a delay in Ontario. This category of insured out of country treatment is set out in section 28.4 of Regulation 552. The Appellant relies on this provision in support of his appeal.

35. Services rendered outside Canada are prescribed as insured services under section 28.4 of Regulation 552 only if specified criteria set out in section 28.4(2) are met.

> 28.4 (2) Services that are part of a treatment and that are rendered outside Canada at a hospital or health facility are prescribed as insured services if,
>
> (a) the treatment is generally accepted in Ontario as appropriate for a person in the same medical circumstances as the insured person; and
>
> (b) either,
>
> (i) that kind of treatment is not performed in Ontario by an identical or equivalent procedure, or
>
> (ii) that kind of treatment is performed in Ontario but it is necessary that the insured person travel out of Canada to avoid a delay that would result in death or medically significant irreversible tissue damage.

IV. PARTIES' POSITIONS AND ISSUES

36. The Respondent does not take issue with the appropriateness of the craniotomy for resection of brainstem cavernoma for a person in the Appellant's circumstances. The parties are in agreement on that issue. The Respondent maintains that that procedure was performed in Ontario at the material time, at the AVM Clinic at Toronto Western Hospital and that it was made available to the Appellant who declined to receive treatment at that facility because he wanted to go to the most experienced surgeon in the world, Dr. Spetzler.

37. The Appellant contends that it was necessary for him to travel to the Barrow Institute to have the surgery done by Dr. Spetzler because, first, identical or equivalent treatment was not available to him in the circumstances and at the time that the decision was being made that he required that treatment.

38. Second, the Appellant submits that if identical or equivalent treatment was performed in Ontario, it was necessary for him to travel out of country to obtain treatment in order to avoid a delay in Ontario that would result in medically significant, irreversible tissue damage.

39. With regard to the submission on the performance of equivalent treatment, the Appellant makes essentially two arguments. First, he submits that the procedure was not really available to him. The Appellant contends that while Dr. Wallace indicated on the Prior Approval Form that the surgery was available in 2 weeks, a view maintained

by the Respondent throughout this appeal, it really was not available, and certainly not without delay, because the identity of the surgeon had not been disclosed and no firm surgical date had been booked. For reasons that are discussed herein, the Appeal Board is not persuaded that the procedure was not really offered at the AVM Clinic; the panel is persuaded that it would it have been scheduled if the Appellant had not left for the United States.

40. It is the second argument regarding performance in Ontario which lies at the heart of the appeal and which presents a much more difficult issue to be resolved: namely, whether or not, in the Appellant's particular medical circumstances, a procedure that is technically the same, but performed by surgeons with different levels of experience, is treatment that is "equivalent or identical".

41. More specifically, in this appeal the Appeal Board is asked to consider if the craniotomy to resect the brainstem cavernoma that could be performed on the Appellant at the AVM Clinic in Toronto (which is acknowledged by the Respondent to be the only real alternative in Ontario given regionalization and the expertise of the surgeons there) is identical or equivalent to the craniotomy that was performed by Dr. Spetzler at the Barrow Institute.

42. The burden of proof lies with the Appellant to establish that on a balance of probabilities, the proposed surgery at the AVM Clinic would not have been identical or equivalent to the surgery undergone at the Barrow Institute.

43. In weighing the evidence of the parties, the Appeal Board finds that the Appellant has met this burden, and that the treatment at the AVM Clinic would not have been identical or equivalent to the treatment the Appellant received from Dr. Spetzler.

44. Given this finding, it is unnecessary to consider the issue of delay and the Appeal Board has not done so. We do note, however, that having found that surgery was offered in Ontario within 2 weeks of July 28, 2005, there would not have been a delay as the Appellant underwent surgery approximately 2 weeks later at the Barrow Institute on August 10, 2005.

V. ANALYSIS

A) Expert Evidence

45. Before considering the issues raised on this appeal, we will review the evidence of the experts tendered by the parties.

(i) Introduction

46. Drs Spetzler and Tator testified at the oral hearing of this appeal, for the Appellant and Respondent respectively. Counsel for both parties agreed that these physicians are experts in the field of neurosurgery and can offer opinions on neurosurgery. Their curriculum vitae (CVs) were filed as exhibits to the hearing.

47. None of the physicians including Drs Tymianski, Wallace and Kronby, who attended the Appellant in Ontario, testified at the hearing, nor were their CVs filed.

48. The Appellant filed medical records from the Barrow Institute, Toronto Western Hospital and St Joseph's Hospital in Hamilton, together with opinion letters from Drs Kronby and Spetzler. The Respondent filed a written opinion from Dr. Tator.

49. The Appeal Board will review the oral and written evidence of Drs Spetzler, Kronby and Tator.

ii) Dr. Spetzler

50. Since 1986, Dr. Spetzler has been the Director of the Barrow Neurological Institute, St. Joseph's Medical Hospital and Medical Center, in Phoenix, Arizona. He is the J.N. Harber Chair of Neurological Surgery and the Robert F. Spetzler Chair of Neurological Research. Dr. Spetzler has been a Professor of Neurosurgery at the University of Arizona School of Medicine in Tucson, Arizona since 1991. Prior to that he held teaching positions at the University of California, San Francisco and Case Western Reserve University School of Medicine in Cleveland, Ohio.

51. Among Dr. Spetzler's contributions to the field of neurosurgery are the development of theories on normal perfusion pressure breakthrough and how the size of arteriovenous vascular malformations ("AVM"s) are related to their rupture, and the development of innovative surgical approaches for skull base surgery.

52. Dr. Spetzler testified that he has operated on approximately 250- 270 brainstem cavernous malformations. At the time of the Appellant's surgery, he had operated on approximately 200 brainstem cavernomas. He testified further that he has operated in

the brain stem for lesions that are not specifically cavernous malformations but that present the same problems, approximately 500 times.

53. The totality of the evidence at the hearing establishes that Dr. Spetzler is a world-leading expert in the field of surgery on brainstem cavernomas. He trains surgeons from around the world in the procedure, trained Drs Tymianski and Wallace, and was the only surgeon in any country that both of those Ontario neurosurgeons recommended to the Appellant for a second opinion.

54. Dr. Spetzler described the brainstem as functioning like a cable between a computer and a screen. He stated that even if the computer (the brain) and the screen (limbs, eyes, ears) work, if the cable (brainstem) does not work, a person is "disconnected". For that reason, he described the brainstem as an "incredibly eloquent area of the brain".

55. Dr. Spetzler stated that once a cavernoma in the brainstem bleeds more than once, the risk of further hemorrhages goes up, and if a patient bleeds more than twice, the patient is "in a zone where [he or she] will have almost a repitity of bleeds…and with each bleed, you have further damage to the brainstem". He stated that with each bleed, the patient will lose something in terms of function. Dr. Spetzler submitted that "the worse you are before the cavernous malformation is removed, the worse you're going to be after it is removed. So there is some concern in trying to avoid deterioration." He

concluded that if there is a reasonable surgical option for a patient, surgery must be considered. [1]

56. In a letter dated September 28, 2005, Dr. Spetzler described the risk of not operating on a brainstem cavernoma as follows:

> …the risk of doing nothing carries a 10% risk per year for occurrence of a neurological event, with only one-third of these patients making a complete recovery, one-third making a partial recovery, and one-third not recovering at all.

57. Dr. Spetzler was not contacted by the Appellant until after the first bleed. He was questioned by counsel for the Appellant as to what his clinical recommendations would have been after the first bleed, and what his actual recommendations were after the second and third bleeds.

58. Dr. Tymianski advised against surgery after the first bleed. Dr. Spetzler stated that he was aware of this advice but that in his opinion surgery "could have been considered" after the first bleed. Dr. Spetzler clarified that he was not saying that surgery is

[1] To further describe the brainstem cavernoma, the Appellant filed a paper on the topic by Jack Hoch, entitled "Brainstem Cavernous Angiomas", found on the website of Angioma Alliance. It forms part of Exhibit XII to the hearing. The contents of the paper were not contested by the Respondent and most of the following description was presented to and agreed upon by Dr. Tator on cross-examination. Hoch states as follows:
"Cavernous angiomas of the brainstem present particular problems to both the affected individual as well as the neurosurgeon. Tightly packed nuclei inhabit the narrow conduit of the brainstem. Any additional mass or introduction of fluid, such as blood products from a bleed, can compress or crush important nerve fibers. In other words, the smallest of intrusions can result in significant, and potentially life-threatening symptoms. The nerves that transverse the brainstem control basic, involuntary functions such as respiration, gag reflex, heartbeat regulation, body temperature, pain and heat sensation, and hiccupping as well as other voluntary functions including eye movement, swallowing, facial muscle control, walking, and speech….The neurosurgeon must worry about how to manage the case and whether the inherent risks of brainstem surgery are worth the potential beneficial rewards."

necessary in every case after one bleed. Rather, the decision to operate after a first bleed depends on the accessibility of the lesion, the state of the patient, the size of the bleed, and the surgical risk at that point in time.

59. Dr. Spetzler testified that in his view, the advice not to operate after the first bleed was not incorrect *per se* but was based, in a nutshell, on the level of experience, and relative lack of experience, of the surgeons, Drs Tymianski and Wallace.

60. Below we will consider further Dr. Spetzler's testimony on the issue of relative experience and the impact of experience on clinical opinion and recommendation, and on surgical outcome.

61. After being consulted by the Appellant following the second bleed, Dr. Spetzler recommended surgery, which was booked for September 2, 2005. Dr. Tymianski had advised against surgery after the second bleed. Dr. Spetzler disagreed with Dr. Tymianski's assessment to not operate after the second bleed, but opined that Dr. Tymianski's assessment of the relative risks and benefits of surgery after the second bleed was likely a reflection of his level of experience with the procedure. In other words, with Dr. Tymianski's degree of experience with brainstem cavernoma surgeries in very complicated cases, the risks may well have outweighed the benefits of surgery after a second bleed. Yet in Dr. Spetzler's view, surgery was required after the second bleed to avoid further deterioration.

62. After the third bleed, Dr. Spetzler returned from holiday and advanced the date of the surgery to August 10, 2005 because of the urgency of the case. He testified that at that point "there was every reason to fear that [the Appellant] was going to have a fourth, and a fifth, and sixth bleed, and with this neurological progression, there was certainly some urgency in getting the cavernous malformation out."

63. He summarizes as follows: "…in my opinion, this cavernous malformation could have been considered for treatment after the first bleed, and then after the first bleed when there was a second or third, then it became more of a mandatory surgical indication."

64. Dr. Spetzler's opinion is that the Barrow Neurological Institute was, at the material time, the only medical center anywhere that could provide the requisite surgical experience to treat the Appellant given the circumstances of his condition, which he describes as "complex and unique". Dr. Spetzler's view is summarized in his September 28, 2005 letter filed as an Exhibit to the hearing and is excerpted as follows:

> Because of the complex and unique nature of B.'s cavernoma, exceptional expertise was required. This level of expertise is *currently only available* at the Barrow Neurological Institute where I have been a leader in this particular field of neurosurgery. *I have published extensively on this subject and have operated on more of these lesions than any other neurosurgeon in the world with an unsurpassed success rate.* In addition to the expertise of the neurosurgeon, it is also critical to perform these complex procedures at institutions that have extensive experience in dealing with these patients – from the technology to the dedicated neuroanesthesia and nursing teams. *Our team at the Barrow Neurological Institute is world renown (sic) and receives patient referrals from around the globe, as well as provides training to neurosurgeons from around the world.*
>
> It was this level of expertise that was *necessary to ensure a successful outcome* for B. who is now making an uneventful recovery from his surgery.
> (emphasis added)

65. Dr. Spetzler elaborated upon his opinion in his oral testimony. In response to questioning from the panel, Dr. Spetzler described the Appellant's case as "very difficult". He testified that a difference in levels of experience has an impact on surgical outcome and morbidity and mortality rates, so that the analysis as to whether or not to recommend surgery by a particular surgeon at a particular time will hinge on the cost/benefit analysis of doing the surgery, given that surgeon's level of experience. Dr. Spetzler described the relationship between morbidity, mortality, experience and clinical recommendation as follows:

> …if in your hands the morbidity and mortality of operating in the brainstem is significantly higher than the natural history of the disease, then it would be very improper to recommend that option to a patient and family. If, however, based on your experience you think the morbidity and mortality is significantly less than the natural history of the disease, then you would recommend surgery. So, it has a lot to do with experience and with the surgical capabilities that are available, as well as the technology to give support for the lower morbidity and mortality.

66. Dr. Spetzler stated that when a surgeon does a procedure more frequently, the complication rate goes down. He stated that his success rate is "better than 80%". Dr. Spetzler testified that "[f]or something like cavernous malformation, there are very rare centers across the world where they have any degree of experience that goes maybe more than 20 or 25 of the brain stem. And so, what you learn when you have done several hundred is obviously not repeating the mistakes that you learned as you are developing the indications and the surgical approaches."

67. While Dr. Tator thought that the Ontario physicians might have done 25 brainstem cavernoma surgeries in total between them, he did not provide any figures to dispute the Appellant's figure (provided by Dr. Kronby in his letter dated February 6, 2007,

Exhibit IV #2, and as reported by the Appellant regarding Dr. Wallace following inquiries with him at the July 28, 2005 consultation**)** that Dr. Tymianski had performed six surgeries on brain stem cavernomas and Dr. Wallace three, at that point in their careers. Dr. Spetzler described this level of experience as "very limited".

68. With regard to the decisions made at the AVM Clinic after the first, second and third bleeds, Dr. Spetzler stated as follows:

> I know both of them [Drs Tymianski and Wallace] personally. I think they are both excellent neurosurgeons. But, it's like anything else when you're dealing with something very complex. Unless you feel comfortable and have had enough under your belt, your recommendation depends on your experience.

69. In response to questioning at the hearing, Dr. Spetzler compared his decision process with that of Drs Tymianski and Wallace:

> "I think you can read between the lines that they were hesitant to do anything in the beginning because of the risk of doing something. And, their experience in that area was obviously very limited. In my particular case, being quite a bit older, having been very much involved in defining what the limits are of operating in that region, I had a totally different perspective of what was possible and what sort of risks the patient would have to undergo in order to treat the lesion, and I think that's basically the difference."

70. Although Drs Wallace and Tymianski did not testify at the hearing, it is undisputed that they both trained with Dr. Spetzler. In response to questions from the Appeal Board regarding what a surgeon trained at his center would be able to do following that training, Dr. Spetzler testified that such a surgeon would be qualified to do cases that are complex, but not the most complex or the most difficult.

iii) Dr. Kronby

71. Dr. Kronby was the Appellant's Hamilton-based treating neurologist. He did not testify at the hearing of the appeal. The Appellant filed a letter from Dr. Kronby, referred to above, dated February 6, 2007, in which he states as follows:.

> This same procedure, while offered by national experts at The Toronto Western Hospital, had only been performed six times by Dr. Tymianski and three times by Dr. Wallace, in that institution and such procedure was deferred not once but three times there.
>
> …
>
> The family was rightly and justifiably concerned that further delay risked further brain damage or death and no emergency procedure was being offered in Canada by the national experts. When Dr. Spetzler's office was contacted and informed of these developments, this world expert cut his holiday short to make sure that B. was operated on as soon as possible to prevent death or further disability.
>
> Therefore I believe that the operation performed on B.R. was done in a more timely manner than offered in Canada and by someone with greater expertise. (emphasis in original)

iv) Dr. Tator

72. Dr. Tator has had a long and distinguished career in neurosurgery. Since 1980 he has been a Professor in the Division of Neurosurgery, Department of Surgery, University of Toronto. He has been a Staff Member of the Division of Neurosurgery at the Toronto Western Hospital since 1985, and for many years was Head of that division. For decades Dr. Tator has been a Staff Member, Institute for Medical Science, University of Toronto and since 2000 has been a Consultant in Neurosurgery, Toronto Rehabilitation Institute. He is the recipient of many honours and awards, including an Appointment as a Member of the Order of Canada, and Induction into the Canadian Medical Hall of Fame.

73. In 2005, Dr. Tator was Chief of the AVM Clinic. He had no contact with the Appellant at that time. In approximately 2007, Dr. Tator discontinued performing surgery, but he continues to see patients who have neurosurgical problems.

74. Dr. Tator testified that his special areas of practice were operations on tumours in the cerebellopontine angle and in surgeries relating to spinal problems, spinal cord injuries and lesions of that nature. He stated that while he has performed hundreds of retrosigmoid suboccipital craniotomies, has removed cavernomas in locations other than the pons, and infrequently removed tumours other than cavernomas from the pons, he has never removed a cavernoma in the pons.

75. Dr. Tator's opinion on this appeal is summarized in his letter of July 25, 2007, excerpts of which read as follows:

> Cavernomas are a type of vascular malformation, and they have a clinical course that is difficult to predict in the individual case. On average, a cavernoma of the brainstem that has bled has approximately a 10% chance each year of bleeding again. *When the cavernomas are located deep within the brainstem, the operation to remove them is a high-risk operation, and one that is not commonly performed in the vast majority of neurosurgical units.*
>
> …
>
> In my view, this patient's request for funding from OHIP does not meet the requirements of the Ministry of Health Guidelines for Reimbursement for Medical Treatments Out of Province. *This surgery is available in Ontario, and there is some experience with this procedure, and there are excellent neurosurgeons in Ontario who have special expertise and experience in managing these conditions. Although the experience of these surgeons is less than some of the larger centres in other countries, it still represents a highly skilled team in an excellent neuroscience centre with experience in management of major vascular malformations of the brain.*
>
> Furthermore, the operation was offered to the patient by this experienced team and within a reasonable period of time with respect to his clinical condition and degree of urgency. This team is trained to perform the procedure, and has

> performed the procedure on this rare condition in a reasonable number of cases, although admittedly in a lower number of patients than in some of the larger centres in other countries, and certainly less often than Dr. Spetzler. However, our system does not provide paid access to the world's most proficient practitioner when there are proficient practitioners in Ontario who can provide the service within a reasonable time. (emphasis added)

76. Before considering Dr. Tator's opinion on the equivalency of the treatment that was offered at the AVM Clinic, we will review his comments on the level of risk of the procedure, and the relationship between experience and mortality rates.

77. Dr. Tator testified that any procedure such as this one with a mortality rate of a 3 to 4 % is high risk. Following questioning by Appellant's counsel on the contents of an article in the Journal of Neurosurgery authored by the University of Toronto Brain Vascular Malformation Study Group which included Dr. Wallace, Dr. Tator agreed that the report indicated that there was a 30-fold increase in event rates (hemorrhage) for "infratentorial" lesions, which are deep lesions such as those in the brain stem, as compared with "supratentorial lesions" located in non-deep areas of the brain.[2]

78. Dr. Tator agreed that mortality rate has a correlation to the experience of the surgeon, together with the experience of the surgical team. He stated that the mortality rate of a procedure would be lower with an experienced surgeon and pointed out that that is a rationale for the kind of regionalization of care put into place at the Toronto Western Hospital, which offers the patient access to an experienced surgeon.

[2] Porter, et al, The University of Toronto Brain Vascular Malformation Study Group, *Cerebral cavernous malformations: natural history and prognosis after clinical deterioration with or without hemorrhage,* J Neurosurg 87:190-197, 1997

79. Further, Dr. Tator opined that the more experience a surgeon has, the lower the mortality rate, but only up to a point. He explained that with a certain number of completed procedures, a surgeon will gain an acceptable mortality rate that will be equivalent to that of a surgeon with more experience.

80. With regard to the Appellant's case, Dr. Tator testified that once a surgeon has performed three procedures to remove brainstem cavernomas, a good surgeon would be capable of providing just as good an outcome as Dr. Spetzler. He elaborated, stating that in his opinion, a surgeon who had performed one such procedure would not be able to provide an outcome equal to Dr. Spetzler, but that with three completed procedures, a surgeon "is qualified to provide the patient with as safe an environment as is required." Dr. Tator did not cite any independent sources to substantiate these figures. He disagreed with Dr. Spetzler's view that the amount of experience a surgeon ought to have may vary depending on the complexity of the patient's case.

81. Dr. Tator was not sure if the figures of three procedures for Dr. Wallace and six for Dr. Tymianski were correct, but he had no information to refute those figures. He testified that he believed that the AVM Clinic had operated on 500 cavernomas. However, the Appellant filed an email exchange between Dr. Wallace and the Appellant's father in which Dr. Wallace stated that the Clinic had "operated on close to 35 brain stem and other region cavernous malformations … over 10 years". Dr. Tator had no figures to support or dispute that information, nor did he have any figures to identify which of the 35 procedures were in the brain stem.

82. Dr. Tator testified that assuming that Dr. Wallace had operated on three, and Dr. Tymianski on six brainstem cavernous malformations, "if that is the case, then I would feel that that is sufficient, because all of their experience in having done this type of lesion in other locations would also be brought to bear. And, in addition, all of their experience of doing other types of lesions in this location would also be relevant."

83. With regard to the treatment the Appellant received at the AVM Clinic prior to his departure for the Barrow Institute, Dr. Tator testified that he agreed with the decisions made by Drs Tymianski and Wallace after the first, second and third bleeds. He disagreed with Dr. Spetzler's view that the decision not to offer surgery after the second bleed was a function of the relative inexperience of Drs Tymianski and Wallace.

84. When questioned by Appellant's counsel regarding a proposed surgery at the AVM Clinic, Dr. Tator stated that he had no indication of which surgeon would have performed the surgery and that while he concludes from Dr. Wallace's July 28, 2005 letter referred to above that the Clinic was preparing to schedule the operation, there is nothing in his records to indicate that the surgery had actually been booked.

85. Dr. Tator was questioned regarding the Appellant's statement that Dr. Wallace told him he had achieved "poor results" in the 3 brain stem procedures he had completed. Dr. Tator testified that he had not reviewed the statistics on the outcomes of the cases that Dr. Wallace or Dr. Tymianski had done.

86. Finally, when asked to respond to Dr. Spetzler's opinion that the Appellant's case was complicated enough that he felt it was appropriate to be done by a surgeon who had done 200 cases rather than a surgeon who had done 3 or 6 of the procedure, Dr. Tator stated that Dr. Spetzler's comments are "self-serving, because he, in fact, did agree to treat this patient, and you don't expect him to say that he would have thought the other surgeons would do just as good a job."

B) Was treatment identical or equivalent to that received at the Barrow Institute Performed in Ontario?

(i) Was treatment performed at all in Ontario?

87. The Appellant has argued that surgery was not really offered to him because although Dr. Wallace indicated that he could undergo surgery at the AVM Clinic within 2 weeks of the date of the Prior Approval Application (the "Application"), no actual date was given and the identity of the proposed surgeons was not disclosed.

88. The Appeal Board is not persuaded by this argument. Dr. Wallace filled out the Application for out of country services at the request of the Appellant and his family, at the July 28 consultation. According to Dr. Wallace's July 28, 2005 consultation note, the Appellant's family indicated that they had consulted with Dr. Spetzler and had made arrangements to see him for a surgical procedure. We find that it was reasonable for Dr. Wallace to infer that the Appellant intended to pursue treatment at Dr. Spetzler's clinic. It was suggested that that was an irresponsible assumption to make as Dr. Wallace reportedly advised the Appellant that the Application was unlikely to succeed given the information that he had filled out on it regarding the availability of

treatment in Ontario without delay. This in fact was the outcome as the Respondent denied the Application the day after it was received.

89. Nonetheless, in reviewing the evidence on this issue, the Appeal Board finds that it was reasonable for the AVM Clinic to not schedule the surgery when there was a strong indication that the Appellant intended to obtain treatment at the Barrow Institute, and there is no reason to believe that surgery would not have been available to the Appellant within the time frame stated by Dr. Wallace if the Appellant clearly indicated that he intended to remain at Toronto Western for treatment.

(ii) Was the treatment that could have been performed at Toronto Western's AVM Clinic Identical or Equivalent to the Treatment the Appellant Received at Barrow?

90. In a clinical setting, decisions must be made about a patient's treatment having regard to the particular medical circumstances of that patient. Similarly, in order to illuminate the analysis as to whether or not a treatment in Ontario is identical or equivalent to a treatment offered or obtained out of country, the patient's particular medical circumstances must be considered because the treatment required may vary from patient to patient depending on the medical condition of the patient.

91. Furthermore, in order to determine whether or not a particular procedure offered in Ontario is identical or equivalent to a procedure offered out of country, those treatments must be closely considered and compared. The relative expertise of the medical teams and the implications for the risk of morbidity and mortality, and for successful outcome, are factors that must be considered.

92. The evidence of both Drs Spetzler and Tator substantiate this approach. Dr. Spetzler made it clear that the complexity of cases varies and that the Appellant's case was "complex and unique". He stated that less experienced surgeons might be suited to a less complex case, but will not have the experience for a most complex or very difficult case, such as the Appellant's, because the risks inherent in the procedure are greater for those surgeons with less experience and are minimized in the hands of more experienced surgeons.

93. Dr. Tator agreed that a cavernoma like the Appellant's, approaching the fourth ventricle in the pons, is a very high-risk location. He also agreed with the principle that there is a correlation between mortality rate and experience of the surgeon.

94. However the assessments by these two neurosurgeons in applying the experience and risk factor analysis led to very different conclusions on the central issue raised on this appeal.[3]

95. The thrust of Dr. Spetzler's evidence was as follows:

- The Appellant's brainstem cavernoma was "complex and unique"
- The Appellant required "exceptional expertise" which was only available at the Barrow Clinic
- The experience of Drs Tymianski and Wallace "was very limited" in this type of complex case

[3] We do not consider the report of Dr. Kronby in this analysis. While he was familiar with the Appellant's medical circumstances and was copied on correspondence and reports prepared by the AVM Clinic, Dr. Kronby is a neurologist, not a neurosurgeon. Further, he does not provide detail to substantiate his opinion. As such, his report is not helpful in analyzing whether or not the treatments were equivalent.

- Dr. Tymianski and Dr. Wallace are excellent neurosurgeons but they had insufficient experience to treat the Appellant's brainstem cavernoma given its complexity

- The lack of experience of Drs Tymianski and Wallace was reflected in their advice to the Appellant after the first and particularly after the second bleed

- Dr. Spetzler was able to offer a significantly higher probability of successful outcome given his experience, with a lower risk of morbidity and mortality

96. The Appellant submitted that even though Drs Tymianski and Wallace came to the conclusion after the third bleed that it was riskier to do nothing than to operate at that time and thus recommended surgery, that would not make the craniotomy surgery performed in the same time frame at the AVM Clinic as at the Barrow Clinic "equivalent treatment" – because of the relative inexperience of the Ontario surgeons.

97. Dr. Tator's evidence may be summarized as follows:

- The surgeons at the AVM Clinic, having performed at least 3 brainstem cavernomas each at the material time (and Dr. Tymianski had done 6) were qualified to handle the Appellant's most complex and difficult case, particularly in light of their overall surgical experience.

- Three was the minimum number of procedures a surgeon ought to have performed before he can take on the most complex cases, especially in light of the fact that Drs Tymianski and Wallace operate routinely in the pons, albeit not routinely on brainstem cavernomas.

98. The Respondent argued that based on Dr. Tator's opinion that 3 is the minimum number, together with his views on the AVM being the regional center of excellence for the province, and the Ontario surgeons' expertise generally in surgery in the pons, they were in a position to provide the Appellant with surgery identical or equivalent to

what Dr. Spetzler performed on the Appellant. Dr. Tator stated that Dr. Spetzler's opinion that the Appellant could only be treated at Barrow was "self-serving".

99. Dr. Tator detailed the rationale for the regionalization of care at the AVM Clinic and submitted that the Clinic is a centre of excellence in the province. Dr. Langley provided a similar explanation. (Dr. Langley submitted that the procedure was offered to the Appellant at two centres in Ontario, by Dr. Reddy at St. Joseph's Hospital in Hamilton, and by the AVM Clinic. It is not clear how Dr. Reddy's offer to do the surgery fits in with the regionalization model described by the Respondent as Dr. Reddy does not appear to be associated with the AVM Clinic or Toronto Western Hospital. The panel will not address further a possible surgery by Dr. Reddy as no evidence was submitted to substantiate the equivalence of the treatment offered by Dr. Reddy to that received by the Appellant at the Barrow Institute.)

100. While the Appeal Board appreciates the need to rationalize care for complex and rare conditions, and accepts that regionalization represents a concentration of excellence in the province, the fact that such regionalization has taken place in a particular area of medicine does not address the issue of whether or not a particular treatment offered by that medical centre to a particular patient in a particular clinical context is equivalent to that received by a patient out of country. In order to address that issue, the treatment, medical team and patient's condition must be considered.

101. Dr. Tator agreed that outcome and morbidity and mortality risks were related to experience. However, he maintained that a surgeon who operated routinely in the pons and who had performed a minimum of three surgeries dealing specifically with brainstem cavernomas would be able to provide equivalent treatment to a surgeon such as Dr. Spetzler who had done in the range of 200 such procedures. He denied that the decision to not operate after the second bleed was based on a lack of experience. Dr. Tator submitted that given the complexity of procedures handled by the AVM Clinic, the medical team that would have been assembled to do the surgery would have been equivalent to that of the Barrow Institute.

102. Dr. Tator's evidence conflicts with Dr. Spetzler's, most importantly on the issue of the amount of experience that was required to operate on the Appellant in light of his medical condition. Dr. Spetzler opined that the AVM Clinic surgeons did not have sufficient experience to address the complexity and unusual nature of the Appellant's condition. His view was that they could not offer an equivalent chance of a successful outcome and low morbidity and mortality risk. Dr. Tator submitted that in light of their experience "in the pons", a total of three surgeries on brainstem cavernomas would bring them to a sufficient level of expertise.

103. The Appeal Board notes that the Respondent did not call upon either Dr. Tymianski or Dr. Wallace to testify or submit a report on this appeal. While Dr. Wallace ticked off the box on the Prior Approval Application indicating that identical or equivalent treatment was performed at the Toronto Western Hospital, he has not elaborated upon

that assertion, or responded to Dr. Spetzler's opinion, by way of written opinion, report or oral testimony. Neither Dr. Wallace's CV, nor that of Dr. Tymianski, was filed. Although Dr. Langley stated that Dr. Wallace did not tender an expert's opinion in this appeal because he had attended the patient, that would not have precluded him from testifying, for example, with respect to the treatment including surgery the Appellant could have expected to receive at the AVM Clinic, or his own experience with the procedure at issue.

104. In weighing the evidence of Drs Tator and Spetzler, we prefer the evidence of the latter. Dr. Tator is a very highly-regarded and accomplished neurosurgeon as is evidenced by his CV and oral testimony. However he acknowledged that brainstem cavernoma is not his area of specialty and that he has never operated on a brainstem cavernoma. Dr. Spetzler on the other hand is an acknowledged world leader in the very type of surgery at issue in this case. He trained Drs Tymianski and Wallace and stated that while they are excellent neurosurgeons for whom he has tremendous respect, their experience was too limited given the Appellant's circumstances.

105. Neither Dr. Spetzler nor Dr. Tator cited any independent sources for their views as to the minimum number of surgeries a neurosurgeon would have to have completed in order to attain the requisite level of expertise to operate on the most complex cases. However given the expertise of Dr. Spetzler in this particular procedure, and the fact that he has trained surgeons from all over the world including Drs Wallace and Tymianski, we prefer his evidence over that of Dr. Tator.

106. Dr. Tator characterized Dr. Spetzler's opinion on the requisite level of experience as being self-serving. We do not agree with that characterization. Dr Spetzler had much praise for the skills of the Ontario surgeons and confined his remarks to an observation about their expertise to handle a case of this complexity. Again we note that Dr. Spetzler trained both Dr. Tymianski and Dr. Wallace. Further, Dr. Spetzler was the only surgeon they both recommended to the Appellant.

107. The Respondent, and Dr. Tator, argued that Ontario insured persons are not entitled to receive medical services from the world leader in any given medical discipline, at their option. However the statutory and regulatory scheme provides that in the circumstances where an identical or equivalent treatment is **not** available in Ontario, insured persons may receive out of country medical services. The Appeal Board is mandated to consider that very issue based upon the evidence before it. In this case, having carefully considered and weighed the evidence, the Appeal Board finds that the Appellant has met the onus of establishing on a balance of probabilities that the treatment offered at the AVM Clinic was not identical or equivalent to that received at the Barrow Institute.

VI. DECISION

108. The treatment offered at the AVM Clinic at Toronto Western Hospital was not identical or equivalent to the treatment the Appellant received at the Barrow Institute in Phoenix, Arizona. As such, identical or equivalent treatment was not performed in Ontario. The treatment received at Barrow is thus an insured service pursuant to the provisions of s. 28.4 (2) of Regulation 552. The General Manager is directed to pay the costs of the

surgery at the Barrow Institute in accordance with the provisions of the Act and its regulations.

109. The appeal is granted.

DATED at Toronto this 5th day of November 2009.

Soraya Farha,Vice-Chair

Dawn Roper, Member

Jay Yedvab, Member