WORKERS COMPENSATION COMMISSION

CERTIFICATE OF DETERMINATION

Issued in accordance with section 294 of the *Workplace Injury Management and Workers Compensation Act 1998*

Matter Number: **4479/19**
Applicant: **Maria Barbosa**
Respondent: **Rio Formwork Pty Ltd**
Date of Determination: **10 January 2020**
Citation: **[2020] NSWWCC 17**

The Commission determines:

1. Amend the Application herein to substitute Maria Barbosa as the applicant in lieu of the Estate of the late Adao Barbosa.

2. Amend Part 5.1 of the Application to insert the sum of $481,950 in lieu of what there appears.

3. Adao Barbosa (the deceased) died on 3 May 2012 as a result of injuries arising out of and in the course of his employment on 8 October 2001 and 24 March 2003.

4. At the time of his death his wife Maria and his daughter Elizabeth were dependent upon him for support.

5. On the evidence before the Commission, there was no other person dependent upon the deceased for support.

6. At the date of the deceased death the amount payable in respect of the death of a worker pursuant to section 25 (1) (a) of the 1987 Act was the sum of $481,950.

7. Order the respondent to pay Elizabeth Barbosa the weekly payment prescribed by section 25 (1) (b) of the 1987 Act from 3 May 2012 to date and continuing in accordance with section 25 (2) (b) of the 1987 Act.

8. List the matter for telephone conference at 12 noon on 24 January 2020, or at such other time as is convenient to the parties to consider apportionment of the amount prescribed by section 25 (1) (a) and to make orders for payment of the compensation.

A brief statement is attached setting out the Commission's reasons for the determination.

Paul Sweeney
Arbitrator

I CERTIFY THAT THIS PAGE AND THE FOLLOWING PAGES IS A TRUE AND ACCURATE RECORD OF THE CERTIFICATE OF DETERMINATION AND REASONS FOR DECISION OF PAUL SWEENEY, ARBITRATOR, WORKERS COMPENSATION COMMISSION.

Sarojini Naiker
Senior Dispute Services Officer
As delegate of the Registrar

STATEMENT OF REASONS

INTRODUCTION

1. Adao Barbosa (the deceased) died of a basilar artery occlusion, probably secondary to cerebrovascular disease, on 3 May 2012. There is no real dispute that the deceased's wife, Maria Barbosa (the applicant) and their daughter, Elizabeth Barbosa, were dependent on him for support at that time. It is the applicant's case that the death of the deceased results from injuries sustained to his low back in the course of his employment with Rio Formwork Pty Ltd (the respondent) on 8 October 2001 and 24 March 2003. The agency by which the back injuries allegedly contributed to the deceased's death was diminished physical activity causing weight gain.

2. The respondent disputes that the death of the deceased results from the employment injuries.

PROCEDURE BEFORE THE COMMISSION

3. By these proceedings the applicant claims the compensation payable in respect of the death of a worker pursuant to section 25 of the *Workers Compensation Act 1987* (the 1987 Act). It was agreed by the parties that the sum payable in accordance with section 25(1)(a) is $481,950 and I amend the Application accordingly.

4. When the matter came on for arbitration on 13 November 2019, Mr McManamey of counsel appeared for the applicant and Mr Stockley of counsel appeared for the respondent. I was informed by counsel that the parties were unable to reach any mutually satisfactory resolution of the issue of whether the applicant's death resulted from injury.

5. I am satisfied that the parties, who were represented by experienced counsel, had ample opportunity to resolve the matter. Unfortunately, the structure of section 25 of the 1987 Act negates the possibility of compromise in death claims. That is unfortunate and inconsistent with the general policy of the legislation and the objective of the Commission that it is preferable that claims for compensation be resolved between the parties.

6. If an employer denies liability in respect of a claim for the death benefit, it is necessary for the widow or other dependent to institute proceedings and challenge the denial of liability at a contested hearing with an unpredictable outcome. Patently, this can cause emotional distress in many cases. It would be preferable from the perspective of both parties if the legislation permitted the parties to resolve the dispute on a compromise basis reflecting the prospects of success or failure at the arbitration hearing. That would facilitate the objectives of the Commission to permit the early resolution of cases and obviate the necessity for a widow or child to revisit the unpleasant circumstances surrounding the death of the deceased at a hearing. It would also permit the employer's insurer to administer and dispose of the claim in accordance with the risk assessed rather that contemplating an all or nothing outcome.

7. It was agreed at the arbitration that should the applicant succeed on the issue of causal nexus between the deceased's injuries and his death that the issue of apportionment between the applicant and Elizabeth would be stood over to a telephone conference to permit an agreement to be put before the Commission for approval or, alternatively, further evidence to be lodged on the issue of apportionment. I note that Elizabeth is 17 years of age and is still a student.

8. After I commenced to write these reasons, I realised that the letters by which the applicant's solicitors sought an expert opinion from Dr Brooder were not in evidence. The absence had not been raised at the arbitration hearing. It is evident, however, the doctor's opinion on critical issues in the case is partly conveyed by answers to questions posed in these letters.

I was not entirely comfortable in reaching conclusions in respect of the nature or cogency of his opinion without the correspondence. Accordingly, on 24 December 2019, I issued a direction requiring the applicant's solicitors to lodge those letters with the Commission. I received copies of the letters on 8 January 2020.

9. I remain unconvinced that the estate of the deceased is an appropriate applicant in the matter. If the death of the deceased results from the work injuries, orders should be made in favour of his widow and child and not in favour of the estate. I propose to make this amendment to the Application to give the parties the opportunity to apply in respect of it if they disagree.

DOCUMENTS BEFORE THE COMMISSION

10. The following documents are before the Commission;

    (a) The Application to Resolve a Dispute(the Application) **and** the documents attached;
    (b) Reply and the documents attached, and
    (c) An Application to Admit Late Documents bearing date 3 October 2019 and the documents attached.

11. There was no objection to any of the material referred to above. Neither party sought to adduce further evidence at the arbitration hearing.

12. Although the respondent had issued several dispute notices in the matter, Mr Stockley succinctly stated that the only issue for determination was whether the death of the deceased resulted from or was consequential to the accepted injuries to his back in 2001 and 2003.

SUBMISSIONS

13. The submissions of counsel are recorded, and I do not propose to reiterate each of the submissions in these short reasons. Mr Stockley submitted that the only medical opinion evidence on causal nexus between injury and death in the applicant's case was inadequate. The opinion of Dr Ron Brooder, a neurologist, only established "a tenuous connection" between injury and death. It only posited an increased risk of death resulting from his inactivity. He submitted that:

    > "That is a very tenuous link to start with and the legal test that you would consider is whether or not the injury made a material contribution to the death."

    He referred to *Holden Pty Ltd v Walsh* (2000) 19 NSWCCR 629 and *Accident Compensation Commission v CE Heath Underwriting Insurance (Aust) Pty Ltd* (1994) 121 ALR 417.

14. Mr Stockley submitted that Dr Brooder's conclusion that the orthopaedic injuries contributed to the risk factor of diabetes required an examination of "when the diabetes was diagnosed in the chronology". He submitted that the evidence in respect of weight gain was equivocal although he conceded that at the date of death the deceased was heavier than he had been in "2005, by ten or more kilos". Equally, it was recorded that the deceased lost some 12 kilograms prior to his surgery in August 2005 at which time he was 98 kilograms. He argued, however, that Dr Brooder did not engage with the question of what is an appropriate weight for a man of the applicant's height. Accordingly, Dr Brooder was only advancing propositions that related to the risk factors concerned and did not address the deceased as an individual. In those circumstances, the Commission might prefer the evidence of Dr O'Sullivan.

15. Mr Stockley conceded, however, that Dr O'Sullivan's history that the deceased smoked 10 years before his consultation with Dr Giblin in April 2011 was inconsistent with the evidence of the applicant.

16. In order to understand the submissions of the parties and the way in which the Commission has resolved the dispute it is necessary to briefly consider the written evidence of the deceased, the contemporaneous medical evidence arising from the treatment of his accepted low back injuries and the evidence of the applicant. The evidence of the deceased is to be found in his signed statement and in the histories which he provided to medical practitioners in his lifetime.

17. What follows is not intended to be a comprehensive survey of the evidence. Rather, I set out the salient points of the evidence so that the submissions of the parties and the way in which the Commission has resolved the dispute can be understood.

The statement of the deceased

18. By a signed statement the deceased described the occurrence of injuries during his employment with the respondent on 8 October 2001 and 24 March 2003. On each occasion, he experienced severe pain in his lower back. The deceased did not return to work after the second injury.

19. Following the first injury, he was referred to an orthopaedic surgeon, Dr Rosenberg, who performed an annuloplasty of his lumbosacral disc in December 2003.

20. Subsequently, Dr Rosenberg recommended further, more radical, surgery. His request for funding of the surgery was declined by the respondent's workers compensation insurer.

21. The deceased states he was then treated by Dr Ditton, a pain management specialist at RPAH and, subsequently, by Dr Pope a neurosurgeon. Both doctors treated him with injections. The deceased recounts that he obtained "a little improvement for about two or three months" from the periradicular blocks prescribed by Dr Pope.

22. In respect of his condition in September 2011, the deceased stated:

> "My back pain is severe and it affects me every day.
>
> Some days are better than others. Generally, I can walk between 15 to 30 minutes before I feel pain.
>
> I can sit down for about 15 but with back pain. However, the longer I sit, the pain slowly subsides."

23. The deceased states that his back and leg pain has caused problems in his personal life "as I constantly feel agitated, irritable and aggressive".

The applicant's statement of 21 September 2017

24. By her statement Maria Barbosa states that following the second injury the deceased was "unable to go back to work". She continues:

> "I would see Adao at home, unable to get up from the bed because of severe back pain. Adao's back pain radiated into his legs and he had difficulty with walking and prolonged sitting. I would help him get up, put on his clothes, socks and shoes, etc.
>
> Adao became largely inactive as physiotherapy and hydrotherapy did not help. He stopped these after about one year."

25. The applicant says that the deceased did very little around the house. He was always in pain and “started putting on weight”.

26. Following his treatment by Dr Ditton, the applicant says the deceased “started to gain more and more weight” and she observed him to be constantly tired, not sleeping well and eating large quantities of food. He was also irritable and aggressive.

27. The applicant asserts that the deceased “never smoked during our relationship”. He told her that he smoked when he was younger but had quit.

Treating medical evidence

28. Following the injury of 8 October 2001, the deceased came under the care of Dr Braga, a general practitioner. He was referred to Dr Rosenberg, the orthopaedic surgeon who treated him conservatively. Dr Rosenberg thought that the applicant’s “story suggests disc pathology”. On reviewing the radiological evidence on 1 February 2002, he expressed the opinion that there was “no obvious surgical lesion”.

29. When Dr Rosenberg reviewed the deceased on 29 May 2002, he was working on lighter duties six hours a day with “ongoing back pain”. On review of his most recent MRI scan, the doctor noted widespread degeneration in the lumbosacral spine and doubted that surgery had a role to play.

30. Following the injury of 24 March 2003, the deceased returned to the care of Dr Rosenberg who noted that he had been unable to return to work after that injury. He suggested a discogram to assist in ascertaining which disc was responsible for the pain.

31. On 1 December 2003, Dr Rosenberg performed a discogram which was “strongly positive” at the lumbosacral level. He, therefore, suggested that the deceased undergo an intervertebral disc annuloplasty, a minimally invasive procedure, at that level. The deceased underwent that surgery at the St George Private Hospital on 12 December 2003.

32. On review on 30 January 2004, Dr Rosenberg reported that the deceased had not achieved a significant benefit from the operation. Once again, he expressed the view that there was no surgical remedy for his complaints. He thought that the deceased was not fit for his “previous heavy physical work”.

33. In 2004, the deceased came under the care of Dr Mohr-Bell, another general practitioner. He was referred back to Dr Rosenberg, who thought that the deceased was unfit to work “in any physical capacity”. He suggested that he undergo disc replacement at the lumbosacral level. The respondent’s insurer, however, denied that such a procedure was reasonably necessary on the basis of medical opinion that aspects of the deceased’s presentation were caused by psychological factors.

34. On 14 February 2008, Dr Rosenberg reported that there was little point in continuing to manage the deceased, as it was unlikely that he would come to surgery. The doctor stated that he thought much of the applicant’s pain emanated from the lumbosacral disc and that “surgery by way of a fusion could upgrade the situation.” The deceased, however, was no longer keen on surgical intervention.

35. On 5 June 2007, Ms Susan Pervan, a psychologist, saw the deceased at the RPAH pain management centre, where he was under the care of Dr John Ditton. She expressed the opinion that the deceased had “chronic pain” which “impacted on his psychosocial, psychological and vocational functioning.” She continued:

> "Mr Barbosa presents with pain related anxiety, low pain self efficacy, catastrophises about chronic pain, has limited chronic pain acceptance and self reports high levels of disability."

She also stated that the deceased said that his restrictions would preclude him from taking part in a pain management program.

36. In September 2010, the deceased was referred to Dr Pope, a neurosurgeon, by Dr Mohr-Bell. He diagnosed chronic lower back pain and "chronic pain syndrome and behaviour". He recommended that the deceased see Dr Ng, an occupational physician, to discuss pain management. He also referred him for physiotherapy. It was agreed that a surgical procedure was not appropriate but that pain relief medication and possible referral to a "chronic pain specialist" may be appropriate.

37. On 4 August 2008, Dr Mohr-Bell referred the deceased to Mr Alfredo Goldbach, a Portuguese speaking psychologist "for an opinion and management of depression following compensable injury to back". Mr Goldbach appears to have treated the deceased up until the time of his death. Dr Mohr-Bell wrote to him on 28 July 2011 and again on 30 March 2012. The doctor observed that the deceased had "poor compliance with the antidepressant". She contemplated a change of the antidepressant if the situation continued.

38. In a letter to the applicant's solicitors, Mr Goldbach advised that the deceased suffered an "extremely severe level of depression" throughout his treatment. He referred to the physical and psychological consequences of the injury and the complications which the deceased experienced in dealing with insurers, lawyers and doctors, as well as a reduced income and having to depend on his wife as a bread winner were all factors which caused the deceased's "low emotional mood and feeling extremely hopeless".

39. On 16 November 2010, Dr Mardini, a cardiologist, saw the deceased with a history of recent chest pain. It was noted that he had significant cardiovascular risk factors of diabetes, increased weight and hypertension. He expressed the following opinion:

> "He currently does not have typical symptoms but still needs to be closely observed. If there are any typical exertional symptoms then he needs to present for cardiac assessment. He needs to understand that further cardiac investigation may be required depending on his symptoms but certainly other causes can also be considered at this stage."

40. On 4 April 2012, some one month before his death, Dr Mohr-Bell recorded that the deceased's mood was better. He was seeing the psychologist regularly.

DISCUSSION AND FINDING

Cause of death

41. The only medical opinion evidence, which directly addresses the issue of whether the death of the deceased results from the accepted employment injuries, are the reports of Dr Brooder and Dr O'Sullivan. Both are specialist neurologists. Dr Brooder, who was retained by the applicant's solicitors, expressed the opinion that the deceased lack of exercise and increased eating contributed to the development of cerebrovascular disease and diabetes mellitus. The latter condition, in turn, "further increased his cerebrovascular risk factors that had contributed to his death on 3 May 2012."

42. Dr O'Sullivan, on the other hand, expressed the opinion that the applicant's death was not a direct consequence of his back injury. He stated:

> "Although central obesity, that is weight gain predisposes people to vascular disease the other risk factors in my opinion were more important, namely the presence of type 2 diabetes mellitus, hypertension and his past history of heavy smoking up until 2001."

43. There was some discussion as to the precise cause of the deceased's death at the arbitration hearing. It is common ground that the deceased died of irreversible brain damage which was caused by a thrombus or blood clot which caused occluding the basilar artery. It also appears common ground that the thrombus was dislodged from a site within the deceased's cardiovascular or cerebrovascular systems, although the precise origin of the thrombus has not been conclusively established.

44. Dr O'Sullivan raises "the possibility" that "an embolic event from his heart" could have caused the basilar stroke. It is unclear what flows from this statement. On my analysis of the brief evidence on this point, I infer that the origin of the thrombus is immaterial. It does not matter, for the outcome of this case, whether the thrombus originated in the cardiovascular system or the cerebrovascular system, as the risk factors for the development of disease in both systems is the same. I do not reach that conclusion with great conviction, but I doubt whether the contrary view is open.

45. First, the respondent did not submit at the arbitration hearing that an acceptance of Dr O'Sullivan's view that any causal connection between the work injuries and the death of the deceased would be unequivocally repudiated if the embolism which caused his death originated from his heart. More importantly, Dr O'Sullivan postulates that this is only a possibility. That may involve an acceptance that the probabilities favour the view expressed by Dr Brooder that the thrombus was a complication of cerebrovascular disease. Thirdly, as I have outlined above, it can be inferred that the risk factors for cardiovascular disease and cerebrovascular disease are the same.

46. On the basis of the evidence, however, the Commission can find as a probability that the site at which the thrombus dislodged was probably within the deceased's cerebrovascular system

Does the evidence establish weight gain?

47. In his report, Dr Brooder expressed the opinion that the notes of Dr Braga, the deceased's general practitioner at the time of the subject injuries, would assist with this inquiry. He also expressed the opinion that it would be "important to objectively quantify the amount of weight gained over this period of time". Unfortunately, the notes of Dr Braga do not form a part of the evidence and Dr Brooder has not commented on it. There was no explanation as to the absence of the clinical record of Dr Braga. It was not suggested that I draw any inference adverse to the applicant by reason of its absence. Presumably, if the documents are extant, they could have been obtained and tendered in evidence by either party.

48. While it is not possible to precisely calculate the deceased's weight gain from the time of his injury until the date of his death, there can be little doubt that he gained weight. The applicant's evidence records her observations that the deceased was "eating more and doing very little". She observed him to "gain more and more weight."

49. The applicant's impression finds some corroboration in the clinical evidence. On her first consultation with the deceased on 25 March 2004, Dr Mohr-Bell noted depression, insomnia and "weight gain". Notwithstanding, the advice of his doctor it is likely that the deceased continued to gain weight. On 9 May 2005, Dr Rosenberg observed that the deceased had a pot belly and weighed "at least 110 kilograms". This is the first reference to the applicant's weight in his serial reports addressed to Dr Mohr-Bell.

50. On 19 May 2005, Dr Mohr-Bell noted that the deceased was waiting for surgery and needed "to lose weight to recover better". The notes of Dr Mohr-Bell record that the deceased managed to consistently reduce his weight over the next several months. On 1 August 2005, Dr Rosenberg recorded that he had lost, at least 12 kg and weighs about 98 kg.

51. Following this appointment, the insurer declined liability for the surgery proposed by Dr Rosenberg. Thereafter, the evidence suggests that the applicant increasingly adopted the role of an invalid. He also gradually gained a very significant amount of weight. I do not propose to set out the serial record of weight increase, as it is set out in Dr Brooder's reports. On 5 of June 2007, Ms Pervan recorded that the deceased told her that he had gained approximately 15 kilograms in weight. It seems quite clear from the general practitioners notes that he continued to gain weight after that time up until 2010, when he managed to lose 7 kilograms. It is evident, however, that on 28 April 2009 the deceased's weight had dramatically increased to 117 kilograms.

52. On 24 February 2010, Dr Mohr-Bell notes that the deceased had lost 7 kilograms as a consequence of walking and weighed 110 kilograms. I am unable to find any reference in the medical evidence to the deceased's weight after that entry. If one accepts the evidence of the applicant, it seems likely that the deceased's weight increased again up until the time of his death.

53. While the evidence of weight gain is imprecise, it does, in my opinion provide an appropriate basis for the assumptions about weight gain in Dr Brooder's reports. While the respondent submitted at the arbitration hearing that proof of weight gain depended upon an "audit" of the clinical material, it did not submit that there was error in Dr Brooder's references to the applicant's weight in his reports or that the observations of the applicant in respect of the deceased's weight gain should not be accepted.

54. The increase in the deceased's weight between 2005 and 2010 was probably in the vicinity of 20 kilograms, although the increase in weight between injury and date of death may have been less. Critically, the medical record suggests that the applicant was diagnosed with diabetes and hypertension during this period. Certainly, by the time he saw Dr Mardini, the cardiologist, in October 2010 there is uncontested specialist medical evidence that he had both.

The cause/s of weight gain

55. Dr O'Sullivan expresses the opinion that the deceased's weight gain "would have just related to diet only and not to the lack of activity". Dr Brooder, on the other hand accepts that the fact that the deceased exercised less and ate more both contributed to an increase in his weight.

56. It is difficult to accept Dr O'Sullivan's hypothesis. The evidence paints the picture of a man who regressed from performing moderately arduous physical work to one who could not walk for more than 15 minutes and spent most of his day in front of the television. It is quite clear that he was reluctant to undertake a physical exercise program and informed Ms Pervan that the pain management program at RPAH was beyond his capacity. In those circumstances, common sense, as well as the evidence of Dr Brooder, suggests that inactivity probably contributed to his weight gain.

57. It must also be borne in mind that superimposed on his back injury, the deceased suffered a full-blown pain syndrome caused by the work injuries or its sequelae. I appreciate that the only evidence on this point comes from psychologists, as the deceased was not treated by a psychiatrist. However, the evidence of Ms Pervan and Mr Goldbach is uncontradicted. Importantly, it is supported by the diagnoses made by the general practitioner. There are many references to depression throughout the evidence of Dr Mohr-Bell and many examples of its debilitating effect upon the deceased.

58. The applicant states that the deceased had “little motivation to lose weight”. That may or may not be true. Certainly, the medical evidence relating to o the applicant’s psychological problems suggests that they may have been detrimental to a pursuit of both exercise and diet.

59. On the limited evidence available, I conclude that the applicant’s injury is a likely cause of his weight gain.

Results from

60. At the arbitration hearing, it was accepted that the question of whether the deceased’s death results from injury should be approached in accordance with the reasoning in *Kooragang Cement Pty Ltd v Bates* (1994) 35 NSWLR 452 (*Kooragang Cement*). In that case, Kirby P notably said this:

> “The result of the cases is that each case where causation is in issue in a workers compensation claim, must be determined on its own facts. Whether death or incapacity results from a relevant work injury is a question of fact. The importation of notions of proximate cause by the use of the phrase ‘results from’ is not now accepted. By the same token, the mere proof that certain events occurred which predisposed a worker to subsequent injury or death, will not of itself be sufficient to establish that such incapacity or death ‘results from’ a work injury. What is required is a common-sense evaluation of the causal chain.”

61. A common-sense evaluation of the causal chain requires consideration of all the evidence in the case. When, as here, the issue of causation can only be determined with the assistance of medical evidence, it is necessary to engage with that evidence; see *Wiki v Atlantis Relocations (NSW) Pty Ltd* (2004) 60 NSWLR 127 and *Tudor Capital Australia Pty Ltd v Christensen* [2017] NSWCA 260 (17 October 2017). Secondly, as the parties submitted, it is evident from the case law that the phrase “results from” is similar to the common law test of causation. It directs attention to whether the injury caused or materially contributed to the incapacity, loss or death: *see Sutherland Shire Council v Baltica General Insurance Co Limited and Others* (1996) 39 NSWLR 87 and *Accident Compensation Commission v CE Heath Underwriting and Insurance Australia Pty Ltd* (1994) ALJR 525. Thirdly, as Mr Stockley submitted, it is not sufficient in the circumstances of this case for the applicant to prove that increased weight *may* increase the risk of death. It is necessary for the applicant to prove that it did cause or materially contribute to the death of the deceased.

62. In *Seltsam Pty Ltd v McGuinness*; *James Hardie & Coy Pty Ltd v McGuinness* 49 NSW 262 (McGuinness**)** Spigelman CJ said this at [118] and [119]:

> “The issue in the present case is whether an increased risk <u>did</u> cause or materially contribute to the injury actually suffered.
>
> There is tension between the suggestion that any increased risk is sufficient to constitute a ‘material contribution’, and the clear o authority that a mere possibility is not sufficient to establish causation for legal purposes. The latter is too well established to be qualified by the former. The reconciliation between the two kinds of references is to be found in the fact that, as in *Chappel v Hart* and in the cases that suggest the former, the actual risk had materialised. The ‘possibility’ or ‘risk’ that X might cause Y had in fact eventuated, not in the sense that X happened and Y had also happened, but that it was undisputed that Y had happened <u>because</u> of X”.

63. The reasoning in *McGuinness* was considered and applied by Hoeben JA in King v Western *Sydney Local Health Network* [2013] NSWCA 162 (14 June 2013). While that case involved the application of section 5D(1) of the *Civil Liability Act 2002*, which rehabilitated the “but for” test as an essential element of the law of causation, the judge’s exposition of the law is

instuctive in circumstances where a common sense evalaution of causal nexus is appropriate.

Did the death of the deceased result from injury?

64. By letter of 10 July 2015, the applicant's solicitors asked Dr Brooder to assume four matters relevant to the deceased's health following the injuries. He was asked to assume that the deceased:

    (a) exercised less and ate more, including bad eating habits;
    (b) increased his weight;
    (c) insomnia and increased tiredness during the day, and
    (d) developed chronic pain syndrome, anxiety, stress and depression.

65. By his report bearing date 6 January 2016, Dr Brooder said this:

> "I would consider that, on the balance of probabilities, and on the available information provided the initial two factors (a) and (b) as listed in your correspondence are likely to have contributed to Mr Barbosa developing premature cerebrovascular disease and sustaining a 'basilar artery stroke' at a relatively young age".

Thus, in Dr Brooder's opinion, albeit not a "definitive" one, diminished activity and increased weight materially contributed to his basilar artery stroke and, therefore, to his death.

66. By his supplementary report, after considering additional material (but not the notes of Dr Braga) Dr Brooder states:

> "At the relatively young age of 53 years Mr Barbosa has developed significant cerebrovascular disease that has been associated with the development of thromboembolic occlusion of his basilar artery and branch vessels of his posterior circulation that has resulted in ishemic damage to his brain stem. As a result of the ischemic damage to his brain stem he had sustained a respiratory arrest and he had died from the ischemic damage to his brain.
>
> Factors considered to be significantly associated with an increased risk of developing cerebrovascular disease include hypertension, hyperlipidaemia, diabetes mellitus, smoking and a positive family history of cerebrovascular disease.
>
> Mr Barbosa had a significantly increased risk of developing cerebrovascular disease due to his recognised cerebrovascular risk factors including hypertension, hyeperlipidaemia and diabetes mellitus. He had been a non-smoker."

67. He concluded by stating that the factors (a) and (b) in the applicant's solicitors letter "would have materially contributed to Mr Barbosa developing premature cerebral vascular disease and to his death on 3 May 2012." I have set out assumptions (a) and (b) above. Thus, probably with greater conviction, Dr Drooder asserts that there was sufficient causal nexus between the deceased's injuries and his death to establish a prima facie case that death results from injury

68. In response to a specific question, Dr Brooder also expressed the opinion that the deceased's lack of exercise, increased eating and weight gain:

> "would have contributed to the development of his diabetes mellitus and thereby further increased his cerebrovascular risk factors that had contributed to his death on 3 May 2012".

69. In expressing the contrary view, Dr O'Sullivan argued that the deceased had "definite risk factors for the development of basilar artery thrombosis". He noted that diabetes mellitus predisposes to vascular artery disease and that the deceased had a history of hypertension which was "a risk factor for cerebrovascular disease". He expressed the opinion that the deceased's weight gain "would have been just related to diet only and not to the lack of activity as suggested by Dr Brooder". He thought that diet would have nullified the applicant's weight gain.

70. The respondent's solicitor asked Dr O'Sullivan to consider the respect of parts played in the deceased's death by the work-related back injury itself and any indirect consequences of the back injury including any resultant weight gain. In respect of the first question the doctor responded thus:

> "In my opinion the work related back injury itself would in no way have predisposed him to develop basilar artery thrombosis and his resultant stroke and subsequent death."

In respect of the second question relating to the indirect consequences of the injury including weight gain, the doctor replied:

> "Therefore, I do not think there is any direct consequences of his work related back injuries and his subsequent basilar artery thrombosis. Although central obesity, that is weight gain predisposes people to vascular disease the other risk factors in my opinion were more important, namely the presence of type 2 diabetes mellitus, hypertension and his past history of heavy smoking until 2001".

71. There are difficulties in accepting the opinion of Dr O'Sullivan. First, as I have indicated above it must be accepted that there is no proper evidentiary basis for his conclusion that the deceased had "a past history of heavy smoking up until 2001". He derived this information from a medical report of Dr Giblin prepared in 2011.The evidence of the applicant is to the contrary as is an entry in the clinical notes of Dr Mohr-Bell. Bearing in mind the caution which must be exercised when considering medical histories, I have little difficulty in accepting the applicant's evidence on this point. It was not suggested that the contrary conclusion was open.

72. Secondly, although he was asked to consider whether the matters raised by Dr Brooder were an indirect cause of the deceased's basilar artery thrombosis, the doctor responds that he does not believe that it is "a *direct* consequence of his work related back injury" (My italics). It is, therefore, not entirely clear that Dr O'Sullivan is addressing the issue before the Commission.

73. Thirdly, he does not consider the proposition advanced by Dr Brooder that lack of exercise and weight gain would have contributed to the development of the deceased's diabetes mellitus.

74. If Dr Brooder is accepted on this point diabetes mellitus is not a completely independent risk factor. The onset and progression of the disease of diabetes is also influenced by weight gain. There is no reason to reject Dr Brooder's hypothesis because it is not fairly and squarely considered or rejected by Dr O'Sullivan.

75. Dr Brooder's opinion has some support in the clinical record. It is evident that Dr Mohr-Bell first recorded a reference to impaired fasting glucose, which suggests the diabetic process was underway, in 2007. That is at a time when the evidence in respect of rapid weight gain by the deceased is well documented. Certainly, by 2010 when the deceased saw Dr Mardini, the cardiologist, the applicant was diagnosed with both hypertension and diabetes mellitus.

76. I am tempted to add that the influence of weight gain on diabetes mellitus and hypertension is a matter of common knowledge. I have seen it addressed by specialist medical evidence in several cases over recent years. However, to take that step may be to exceed the limits of the expertise which the Compensation Court was said to have and which the Commission may have in respect of medical evidence ; see *JLT Scaffolding International Pty Ltd (In Liq) v Silva* (New South Wales Court of Appeal, 30 March 1994, unreported); where Kirby P stated, at [12]:

> "The appeal comes to this court from a specialised Tribunal which is dealing with compensation cases and conflicting lay and medical evidence every day. The flavour of the expertise of the Compensation Court can be found in the judgment under appeal. Medical conditions, unfamiliar to a lay body are stated in the judgment without definition simply because those practising in the Compensation Court are, or are taken to be, familiar with the medical terms used and the ordinary and oft repeated conflicts of medical opinions expressed. It can be inferred from the establishment of a specialised Compensation Court (one might say especially given the abolition of such bodies elsewhere in Australia) that the Parliament of this State has entrusted the decision making in (relevantly) questions of medical causation and the aetiology of incapacity to a specialist tribunal comprised of specialist members whose expertise is refined by the repeated performance of their tasks."

77. Dr O'Sullivan is undoubtedly a highly respected specialist whose evidence I would ordinarily accord considerable weight. In the circumstances of this case, however, I do not find it cogent or persuasive.

78. Of course, it does not necessarily follow from a rejection of Dr O'Sullivan's opinion that the applicant succeeds in establishing causal nexus between the accepted back injuries and the death of the deceased. The applicant must prove causation on the balance of probabilities. The evidence on the issue is meagre. On my first reading of the material, I doubted that the evidence was sufficient to establish that death resulted from injury.

79. On reflection, however, I have concluded that Dr Brooder's opinion is founded on facts that I accept. It is logical and rational. Having rejected the evidence of Dr O'Sullivan, there is no compelling reason why I should not accept Dr Brooder. It is true that there is no opinion evidence from a treating doctor on the causation issue. But it was not argued at the arbitration hearing that the case should fail for that reason and it is difficult to envisage what weight the opinion of an orthopaedic surgeon, a pain specialist or a general practitioner might have on the issue of clotting of the basilar artery.

80. It is also true, that the evidence in respect of the applicant's weight gain is not as comprehensive as one might wish. But in many cases, it is necessary to determine the issues in dispute between the parties on the basis of the evidence tendered rather than the tribunal of facts conception of what might or should have been tendered on the issue: see the discussion in *Australian Securities and Investments Commission v Hellicar and Ors* [2012] HCA 17 (3 May 2012). The treating medical evidence provides a sufficient history of the applicant's weight gain to permit inferences to be safely drawn. There is also the evidence of the applicant on this issue. Taken together they provide an appropriate factual basis for Dr Brooder's opinion that the injuries materially contributed to the basilar artery stroke and the deceased death.

81. I make the following findings and orders:

    (a) Adao Barbosa (the deceased) died on 3 May 2012 as a result of injury arising out of and in the course of his employment on 8 October 2001 and 24 March 2003.

    (b) At the time of his death his wife Maria and his daughter Elizabeth were dependent upon him for support.

(c) On the evidence before the Commission, there was no other person dependent upon the deceased for support.

(d) At the date of the deceased that the amount payable in respect of the death of a worker pursuant to section 25 (1) (a) of the 1987 Act was the sum of $481,950.

(e) Order the respondent to pay Elizabeth Barbosa the weekly payment prescribed by section 25 (1) (b) of the 1987 Act from 3 May 2012 to date and continuing in accordance with section 25 (2) (b) of the 1987 Act.

(f) List the matter for telephone conference at 12 noon on 24 January 2020, or at such other time as is convenient to the parties to consider apportionment of the amount prescribed by section 25 (1) (a) and to make orders for payment of compensation.