

SUPREME COURT OF NOVA SCOTIA

Citation: McIntosh v. Isaac Walton Killam-Grace Health Centre,
2011 NSSC 260

Date: 20110712

Docket: Hfx. No. 264101

Registry: Halifax

Between:

Lisa McIntosh

Plaintiff

v.

Isaac Walton Killam-Grace Health Centre For Children, Women and Families

Defendant

Judge: The Honourable Justice Pierre L. Muise

Heard: October 18, 2010 to October 21, 2010, in Halifax, Nova Scotia

Counsel: Colin D. Bryson, for the plaintiff
Karen N. Bennett-Clayton and Tyana R. Caplan
for the defendant

By the Court:

INTRODUCTION

[1] Lisa McIntosh was admitted to the Isaac Walton Killam - Grace Health Centre for Children, Women and Families (“IWK”) for the purpose of delivering her first child. After an attempt to deliver the child vaginally, the child was delivered by caesarean section on March 23, 2000.

[2] McIntosh was discharged from the hospital on March 26, 2000. Around April 2 or 3, 2000, she became aware of pain in the area of her left hip, inner thigh and groin. She initially saw a general practitioner on April 6, 2000. She was eventually referred to an orthopaedic surgeon.

[3] In December of 2000, an x-ray examination revealed that she had hip dysplasia. This is a condition she would have had since at least the time she stopped growing. The condition increases the risk of degenerative changes in the hip. However, Ms. McIntosh indicated she had no problems with her hip prior to the delivery.

[4] In July of 2001, further diagnostic imaging revealed what appeared to be loose fragments within the hip joint.

[5] Arthroscopic surgery was performed on Ms. McIntosh’s left hip in October of 2005. The fragments were removed and other damage to the hip joint was repaired. However, Ms. McIntosh’s hip degenerated to the point where she had to have her hip replaced. That surgery was performed in March of 2007. It dramatically improved the function of her hip. However, she is not able to participate in all activities that she participated in prior to the delivery of her first child.

[6] Ms. McIntosh alleges that the damage to, and degeneration of, her hip was caused by the way her left leg was handled during attempted vaginal delivery. She alleges that the student nurse who was shadowing the delivery room nurse pushed against her left foot and moved her leg back towards her head in a way which failed to meet the applicable standard of care and caused the damage that was later observed in her hip.

[7] The parties agree that the student nurse owed a duty to Ms. McIntosh to conform to normal nursing practices. The parties also agree that the IWK would be vicariously liable for the nursing student's actions. This Court must determine the following:

1. Whether Ms. McIntosh has established that the nursing student failed to meet applicable standard of care;
2. If so, whether the nursing student's actions caused the damage that was observed in Ms. McIntosh's left hip and resulted in it deteriorating to the point where it had to be replaced; and,
3. If so, what losses and damages Ms. McIntosh suffered as a result.

LAW, EVIDENCE AND ANALYSIS

1. WHETHER MS. MCINTOSH HAS ESTABLISHED THAT THE NURSING STUDENT FAILED TO MEET THE APPLICABLE STANDARD OF CARE

[8] To answer this question I must determine:

- (A) The applicable standard of care;
- (B) The nursing students actions during attempted vaginal delivery; and,
- (C) Whether the nursing student's actions were within the applicable standard of care.

(A) Applicable Standard of Care

[9] The nursing student is to be held to the standard of care expected of a registered nurse of average competence and ordinary skill facing the circumstances in question. Judicial comments to that effect have been made in **Tekano (Guardian ad litem of) v. Lions Gate Hospital**, 1999 CarswellBC 1709 (B.C.S.C.), at paragraph 109, and in **Dixon v. Calgary Health Region**, 2006 CarswellAlta 378 (A.B.Q.B.), at paragraph 73.

[10] The standard of care expected of nurses is dealt with in the same way as the standard of care expected of other health professionals. Useful comments, in relation to the standard of care of health professionals generally, are contained in paragraph 6.26 of the Canadian Health Law Practice Manual (Markham: LexisNexis Canada Inc., 2000) where it is stated:

“The conduct of the institution and its health professionals will be judged on whether the care provided met a reasonable standard in the particular circumstances of the case. The health practitioner is not held to a standard of perfection. The test is not whether the patient received the best care possible from the health practitioner in question. Rather, the Court will look at what the reasonable health professional in a comparable setting would have done in like circumstances.”

[11] Dr. Katherine Ann Robinson provided a report, dated November 6, 2009, in which she outlined the standard of care to be followed in supporting a patient’s leg during delivery.

[12] In that report she indicated that Ms. McIntosh had an epidural during the pushing stage of her delivery. Therefore she would not have been able to provide as much feedback in relation to discomfort in her hip as she would have if she had not received the epidural.

[13] Dr. Robinson outlined her view of the applicable standard of care as follows:

“It is my practice to encourage the people who are supporting the legs of the woman while pushing to hold the leg in a manner that supports the patient’s leg. The legs have to be open. That is, the hips must be abducted, the knees must be flexed and the knees may be held in a position which is slightly past the 90 degree angle of flexion. However, the hip should not be hyperflexed with the knees towards the armpits, unless there is a difficulty shoulder delivery, which was not an issue in Lisa’s case at all because the head never descended far enough to consider vaginal delivery. It sometimes happens that patients while they are

pushing, will push into their legs as though they are pushing against the wall; however, the patient, if this happens, should be encouraged to relax their legs and put all of their pushing efforts into pushing the baby out. Pushing into their legs causes exhaustion; it causes support person fatigue because they are struggling with the patient or the position of the leg and it tightens the muscles in the pelvis and impairs descent of the baby. Also, during the pushing phase, the woman is encouraged to put her hands behind the back of her thighs and roll up as if she is doing a stomach crunch to maximize the power through the pelvis. It is not uncommon that patients require some training in order to be successful in this.

Leg holding is often a skill that is taught on site to lay family members and support people who accompany the woman in for her labour. So, teaching somebody to appropriately support a leg is something with which the staff nurse would have had lots of experience. The supported leg and a minimal amount of resistance would be standard of care. A lot of resistance or hyperflexing the legs back on the hips would not be considered the standard of care.”

[14] Dr. Robinson was cross-examined in relation to these comments in her report. During cross-examination she confirmed and expanded upon her report as follows.

1. She was describing her practice.
2. It is her practice to encourage the people who are supporting the legs of the woman while pushing to hold the leg in a manner that supports the patient’s leg.
3. The legs have to be open.
4. The hips have to be abducted which means apart or open.
5. The knees must be flexed.
6. The knees may be held in a position that is slightly past the 90 degree angle of flexion at the hip such that it slightly hyperflexes the hips. For example, if the patient was lying completely horizontally, a 90 degree angle of flexion would mean that the knees would be pointing directly towards the ceiling, and the part of the leg from the knee to the foot would be parallel to the bed. This applies to the pushing position known as the semi-sitting position.

7. The hip should not be hyperflexed with the knees to the armpits. To hyperflex means to push a joint past its normal limit. In general, when a patient is in the semi-sitting position, they sometimes hold the knee a little further than the 90 degree angle, but not “frog-legged” into the armpits. Not all women have the same degree of flexibility. Most women have flexibility past the 90 degrees. However, unless there is an emergency, no one should have their knees in their armpits. That would constitute hyperflexing.

8. Sometimes the patient grabs the back of her legs and holds on to her own legs. The weight of the leg is usually held by the support person, particularly if the patient has had an epidural. The woman is using her legs to roll up against.

10. If she’s not holding up her own legs, she requires someone to provide support to her legs. It sometimes happens that patients push into their legs as if they are pushing into a wall. If that happens the patient should be encouraged to relax their legs and put their pushing efforts into pushing the baby out.

11. If a patient in the pushing phase is pushing their legs against the person holding their legs you expect the legs to move forward, unless there is sufficient counter-pressure to keep the legs where they were originally. The counter-pressure would prevent the leg from moving forward. It would keep the leg at the proper 90 degree angle or slightly past the 90 degree angle of flexion; but, the purpose is to improve pushing and not to provide counter-pressure. If it is not improving the pushing, it’s purpose would be to hold the leg in the proper position.

12. Leg holding is often taught to lay people, such as family and other support people. Usually the holding method is demonstrated and described by the nurse. The nurse is holding one leg while the support person is holding the other. It gives the patient a chance to give some feedback and to say if one is doing it differently from the other.

13. If she were in the room and the support person was not holding the leg properly she would correct the support person. That is something she has done before. She does it to maximize the pushing effort and to minimize

injury. The most common injury would be a strain of the muscles in the back of the leg.

14. She was asked to comment on her statement that “a minimal amount of resistance would be standard of care”. When she was referring to resistance, she meant counter-pressure. The purpose of counter-pressure would be to keep the leg at a proper position if the mother was pushing with her legs and if the pushing moved her legs out of the proper position. The legs are generally not supported throughout the entire pushing phase. Generally they are put down between contractions. This allows the patient and the support person to rest between contractions. There is usually no resistance during that period of time. The patient is encouraged to relax. However, if the baby were about to be born the legs would be held up even between contractions.

15. If the patient has their legs supported and is pushing into their legs, it is possible that the legs would move forward. The support person would move them back to the 90 degree angle. There could be a slight back and forth movement. The legs, ideally, should be limp so that all the power goes into the pelvis. Ideally, the person holding the leg should do so such that it is like a sling which would hold the leg in the proper position. The sling would have some movement. This holding like a sling, and the slight movement, is within the standard of care.

[15] The parties agree that the standard of care described by Dr. Robinson is the applicable standard of care in the case at hand.

(B) Nursing Student’s Actions During Attempted Vaginal Delivery

[16] In order to determine the nursing student’s actions during attempted vaginal delivery, I must assess the reliability of the evidence relating to what occurred during that time.

Lisa McIntosh

[17] In direct examination Ms. McIntosh testified about what occurred and the way that her legs were handled during attempted vaginal delivery as follows.

[18] There was a shift change early in the morning of March 23, 2000. For a bit of time she did not see anyone. Then “the nursing student and the nurse” came in and said to her “we’re going to try to push the baby down to a lower station”.

[19] The nursing student was Cynthia Mann. Ms. McIntosh was able to remember Ms. Mann because she came to visit her the next day in the hospital. She recalls making a connection with Ms. Mann because Ms. Mann had just had a baby herself. In addition Ms. McIntosh used to work with Ms. Mann’s mother-in-law. She recalls the mother-in-law talking about her first grandchild and had referred to the mother of the grandchild as Cindy or Cynthia.

[20] She recalled the nurse’s name being Margaret because that is her own middle name. Through the course of these proceedings it became apparent to her that the nurse in question was Margaret Duykers.

[21] Ms. McIntosh testified that: “They told me we were going to start pushing to see if we could move the baby down.” Nurse Duykers was the one giving the instructions. Ms. Mann was consulting with her and helping her to support the pushing techniques and the plans to push the baby down.

[22] She was feeling horrible and almost nauseous. She was tired and had kind of shortness of breath all the time.

[23] The pushing phase took at least one hour. It was a long time. She recalled it “perfectly”.

[24] She was instructed to use all the strength she could to push the baby down through her body like a bowel movement, the whole purpose being to use her internal strength to push the baby down to the opening.

[25] They showed her and told her what position to be in. They also moved her into the position she needed to be in to push. They walked her through what to do and how they would do it. They told her how it would feel.

[26] The back of the bed was angled somewhere between 45 degrees and 90 degrees. The bottom of the bed was straight out. She initially sitting with her legs straight out. Her back was supported with pillows and she would have been leaning back. She was instructed to lift her knees up and back. She was told to separate her legs and bend her knees, so that her legs were basically parallel to the ceiling or to the bed. Her legs were supported by each nurse's hands. A nurse was on each side of her.

[27] Her knees were almost as far as she could separate them with comfort.

[28] Ms. Mann was on her left and Nurse Duykers was on her right.

[29] Her legs were bent. They had to hold her legs up because she had been given an epidural. She could lift them; but, she could not hold them in the air. They used one hand to support her leg or foot in the air.

[30] Ms. McIntosh demonstrated with her hands how they held her legs. She showed that one hand was holding her leg up. The other hand was used to support the sole of her foot. She showed the hand holding her leg up in the air as being palm up and the other hand having the palm up against the sole of her foot, with the hands being held at approximately 90 degrees one to the other.

[31] She stated: "My legs were bent back as far as they could go."

[32] She indicated they wanted her to use their hand as resistance, so she would put as much pressure as she could with her foot on the hand. They could create like a wall. It was to give something to push against, like using a leg press. They were trying to create something offering resistance.

[33] She could also use her own hands on the side of the bed to use all her strength to push the baby down.

[34] The nurses were actually pushing with their hands so that she would have something more stable. Otherwise, she would have kicked their hands freely away. She was pushing her legs out. They were using their hands to push back to create resistance.

[35] She said she "pushed all night long".

[36] She recalls pushing back and forth with her foot. There was give and take between her feet and the nurses' hands as they tried to create that resistance, so she could stabilize and push during contractions. She compared it to trying to kick something soft and she pointed out the hand has to be strong to push back to create resistance needed to be able to push. The "give and take" was in trying to find the level of resistance needed to keep her foot stable so that she could push.

[37] The hand was moving "slightly" back and forth towards her and the other way. She agreed with the suggestion that it was from a midpoint. (The fact that it was in response to a suggestion, diminishes the weight of that evidence.) She felt that there was give and take between the ball of her foot and the hand as to where that proper resistance level lies.

[38] Her knees were bent back as far as they could comfortably be with the baby and in the position they were lifted and separated. During the whole time, she felt like her diaphragm was shrunk. It was an uncomfortable position to be in.

[39] She did not feel any pain in her left hip during the birth. She felt like the epidural took away her pain. She felt pressure and discomfort. She didn't feel any pain at all. The contractions were painful; but, mostly they were just really uncomfortable. She felt a dull pressure that increased during contractions.

[40] In cross-examination, in addition to confirming some of her evidence on direct-examination, she gave the following evidence in relation to what occurred during the attempted vaginal delivery.

[41] At the point of delivery she weighed approximately 202 pounds. That was approximately 56 pounds more than her weight at the beginning of her pregnancy. She had severe swelling. Her weight gain was fluid. She gained approximately 25 pounds in four weeks. The swelling was throughout her body, including her hands, feet and face.

[42] She was fully dilated at 8:30 a.m. She had to wait until that time before she could start pushing.

[43] She was shown the chart note saying that pushing started on March 23, 2000, at 9:00 a.m. She agreed that was the time-frame that she remembered starting pushing.

[44] Each time she pushed, her legs were supported by two nurses. One nurse held one leg and the other nurse held the other leg. She did not help by holding her own legs by the back of the thighs. She explained she was uncomfortable and quite swollen. Therefore, she was not sure whether she could have reached underneath her legs to be able to do that. She agreed her whole body was swollen, including her thighs.

[45] The whole time she was pushing there was only the nurse and the student nurse holding her legs. No physician came in to help and hold her legs. No family member or friend helped hold her legs.

[46] She is not sure whether she could still lift her legs herself after having had the epidural. She did know that she would not be able to hold the position, even though she may have been able to lift them.

[47] At the time of the first contraction to push, the nurses put her legs into position for her and instructed her how to push. With each contraction the nurse held one leg and the nursing student held the other. Both the nurse and the nursing student used the same technique. Ms. McIntosh did not hear the nurse admonish or correct the nursing student. She did not recall any conversation between the nurse and the nursing student regarding the holding technique. However, it seemed like the nursing student was following the nurse's lead. When they were holding her legs, they were at the end of the bed. They were facing her, not each other.

[48] Her legs were held slightly off to the side. Her knees were bent. Before she started to push, her legs, from the knee to the foot, were parallel to the ground. The nurse and nursing student would hold her leg underneath her ankle or her leg. She believes it was at her ankle or her calf. That was done with each contraction as she was trying to push.

[49] Part of what the nurses were doing was supporting her legs to keep them up because she could not hold them up herself. There were no stirrups. They were acting like a human stirrup. Part of what they were doing was keeping her legs steady while she was pushing. This was to prevent her leg from moving forward or

straightening out while she pushed. If they had not done so, her leg would have kicked out at them and straightened out or fallen down to the bed.

[50] What she considered to be the “starting position” was when she was positioned with her knees bent and her leg from the knee to the foot parallel to the ground. She does not recall it happening where she would kick through and restart in that position. To her it seemed like it was fairly constant. To her there was no break in the contact. At each contraction she started in the starting position. She did not feel her legs were parallel the whole time. She does not recall her leg being kicked out. She did “feel” they were being pushed back. She does not recall her leg being pushed out so the nurse had to push it back into the starting position.

[51] She was using all of her strength and the palm of their hands to keep the pressure during the contractions which seemed fairly long. It was to keep her leg in one place.

[52] She felt like the whole pushing was done forcibly. However, she does not recall any instance where her left leg was pushed back forcefully to her body. She does not recall any instance where her left leg was suddenly jerked back against her body. There was nothing traumatic like that.

[53] In between contractions she was encouraged to rest with her feet on the bed and she did so. Her legs were not held up in the air between contractions.

[54] There was no more pain in her hip than anywhere else. She had no specific recollection of any pain in the hip. There was no popping sensation in her hip while she was pushing. There was no pain radiating to her femur while she was pushing.

[55] She indicates that during the entire time she was pushing she was in the same sort of 45 degree to 90 degree bed angle position with her back elevated, the bed out flat, and her legs raised during each contraction. That position was constant the whole time, other than between contractions, when she was resting. (That position was referred to as the semi-sitting position by other witnesses.) She was definitely certain that she did not push from any other position.

[56] She was shown the chart note which indicated that, at 9:50 a.m., she was repositioned to sitting position and pushing well. She was asked whether that

helped her remember any other position she may have been in. She indicated she did not know what the note meant; but, that the only change would have been a change in the angle of the bed to support her back. She did not recall the angle of the bed changing.

[57] She conceded that she may not have remembered everything perfectly. However, she indicated that she remembered it very well, better than most days in her life. She indicated that she did not remember if they moved her bed. Therefore, “perfectly” didn’t mean quite perfectly after ten years.

[58] Ms. McIntosh stated that she and Ms. Mann had a conversation regarding the pushing phase when Ms. Mann visited her at her home. The evidence relating to that conversation is relevant to determining the nursing student’s actions during attempted vaginal delivery. It will be examined in the course of discussing inconsistencies in Ms. McIntosh’s evidence.

[59] In general, Ms. McIntosh was non-evasive and straightforward. She appeared to be intelligent and confident. She was able to make statements against interest. For example, she acknowledged that she did not feel any specific pain in her left hip during attempted vaginal delivery. She admitted that she had no specific pain in her hip during her post-delivery stay in hospital. She did not recall any instance where her left leg was pushed back forcefully to her body, nor any sudden jerking of her leg back towards her body, nor anything else traumatic like that. She acknowledged that during the pushing she did not experience a popping sensation in her left hip nor any pain radiating down to the femur.

[60] Those are factors which support a finding that she was credible. However, during the attempted vaginal delivery, she did not suspect that the nurse and the student nurse had done anything in breach of their duty and standard of care. She had no indication that anything they did would cause her any injury. Consequently, at the time, there was nothing to bring her attention to the details of how they were handling her legs. Her mind only turned to those details at some point after her release from hospital.

[61] At the time, she was only 33 years of age. She had been active and athletic. Once she started experiencing difficulty with her hip, she would have a natural inclination to attribute the cause of that difficulty to something outside her own actions or degenerative condition. She would have a natural inclination to think

back to the pushing phase of her attempted vaginal delivery and remember it in a way which would tend to identify it as the cause of her left hip difficulties.

[62] I must also bear in mind that Ms. McIntosh has an interest in the outcome of this trial.

[63] She gave her evidence more than ten years after the event. There was no indication that she made any notes contemporaneous with the event, nor even within a reasonable time after the event. Her evidence was based on her memory of an event that occurred more than a decade ago. Therefore, despite her evidence that she remembered the event perfectly, her memory more likely than not, has faded over time. She is not able to recall and recount the details as she could have immediately after the event.

[64] An admitted example of how she did not recall the event perfectly was that she did not recall any repositioning. She thought it probably meant that they repositioned the portion of her bed supporting her back. However, Nurse Duykers testified that, with most patients, more than one pushing position is used. In addition, when she writes “repositioned to sitting position” in her notes, it would mean that, previous to that, she was pushing in a different position. More likely than not, that is what occurred. That indicates that Ms. McIntosh’s memory of the event is more faded than she acknowledges. She surmised that the note may simply have been to indicate that the position of the bed was changed. Even if that was the case, Ms. McIntosh did not recall it happening, which shows her memory of the event has faded.

[65] In addition, she indicated that she was not sure whether or not she could lift her own legs after the epidural. That is obviously something that would come up during the pushing phase. It would have been repeated multiple times during the pushing phase. Her inability to recall that shows that she does not recall the pushing phase nearly as perfectly as she says she does.

[66] In addition, her evidence was internally inconsistent in relation to whether or not she could lift her legs. On direct examination she said she could lift them; but, she could not hold them in the air. On cross-examination she said she was not sure whether she could lift her legs herself.

[67] She testified on direct examination, at one point, that she pushed all night long. At another point in her direct examination she said it was at least one hour and that it was a long time. On cross-examination she indicated that the pushing started around 9:00 a.m., not at the beginning of the night, Those are further internal inconsistencies within her own evidence at trial.

[68] She gave evidence at trial in relation to a conversation she had at her home with Ms. Mann in relation to the pushing. That evidence was inconsistent with the evidence she gave at discoveries about that conversation.

[69] Ms. McIntosh's evidence was as follows.

[70] Ms. Mann visited her in her home with a supervisor. The visit was after the MABLE nurse visit [which, according to the hospital records, occurred on March 27, 2000]. She thought it was in the first week after the MABLE nurse visit. It was more of a social visit. It was mostly conversation. They mostly talked about nursing. The visit had been pre-arranged at Ms.Mann's request as part of her nursing student program.

[71] Ms. McIntosh was moving around slowly. Ms. Mann asked if she was limping. Ms. McIntosh responded: "Yes cause I'm still really sore from the cesarean". At that time she wasn't really thinking anything was unusual about her recovery from the C-section. She was still not physically back to herself and knew that would take a while. Ms. Mann stood in front of her and said: "Is that the left side?" Ms. Mann said "that's the side I was on, I hope I didn't push too hard", or something to that effect. Ms. Mann was concerned she may have done something wrong. At the time, Ms. McIntosh was not overly concerned. She expected it was something which would go away in a few days. She thought it was just part of the normal recovery.

[72] Ms. McIntosh admitted on cross-examination she did not specifically recall what Ms. Mann said to her when she was standing in front of her. The way she recalled it was that Ms. Mann said "I hope I didn't push ... or push back too hard ... or push too hard". She was asked whether Ms. Mann could have said: "I hope nothing happened while we were pushing?" Ms. McIntosh responded that that was very similar. Ms. McIntosh was asked whether Ms. Mann could have said: "Maybe it's sore because of pushing". Ms. McIntosh confirmed that she may have said that. She confirmed that she did not recall for sure. According to Ms. Mann's last

comment, she was indicating it was something she had done, as she was on that particular side. It was not a comment about the pushing generally. It was more of a concern that it was something that she had caused by pushing. She appeared concerned. Ms. Mann did not specifically say she was concerned; but, Ms. McIntosh knew she was concerned when she followed up with a phone call a week or two after that when she asked about it.

[73] When Ms. Mann used the word pushing, Ms. McIntosh did not ask what she meant by pushing. However, she knew what she meant. Ms. McIntosh was aware what the positioning was, and they both were in agreement with what that position was. Ms. McIntosh did not think to ask what was meant by the word pushing since Mann was in the same room with her. She believed that she had the same understanding of what the word pushing was. She knows she didn't mean pushing for the baby to come out, because the baby didn't come out. She was pushing on the bottom of Ms. McIntosh's foot. Ms. McIntosh thought they had a mutual understanding about what was meant by "pushing" because they were both in the room when it occurred and it was about how it would have affected her leg or hip.

[74] Ms. McIntosh agreed with the suggestion that the nurse, at the time of the attempted vaginal delivery, explained what "we" were going to do to push the baby out. Ms. McIntosh understood that meant what she and the nurses were going to do to push the baby out or to lower the baby.

[75] A portion of the transcript of the discovery examination of Ms. McIntosh was submitted as evidence of the truth of its contents and marked Exhibit number 6. That portion of the transcript reveals that, during discoveries, Ms. McIntosh gave the following evidence in relation to the comments made by Ms. Mann in the course of the home visit.

[76] She stated:

“[Ms. Mann] said that was the side I was on I hope this isn't an injury that happened while you were pushing. ... [S]he also said, I hope nothing happened during ... when we were pushing. It may have been something that happened while we were pushing, maybe it's sore because of the pushing.”

[77] Looking at Ms. McIntosh's evidence as a whole, it is clear that when she refers to the nurses saying "we" it is a reference to something Ms. McIntosh would

have to do with their assistance. Comparing the discovery transcript with the evidence on direct examination reveals a clear shift in how McIntosh remembered or interpreted Ms. Mann's references to pushing. At discoveries, in my view, Ms. McIntosh was interpreting the pushing as being Ms. McIntosh's pushing to get the baby out with the assistance of the nurse and the student nurse. At trial, she had changed her recollection or interpretation of the reference to pushing as being a reference to Ms. Mann pushing on something.

[78] In my view, her discovery evidence is not consistent with her evidence at trial. The shift reveals a tendency on Ms. McIntosh's part to recall or interpret things in a way which bolsters her case. That is a natural inclination which is hard to resist. Further, there is natural inclination for her to interpret and recall things in a manner which points to a cause other than innate degeneration of her own body.

[79] It is agreed that she was experiencing severe swelling. She delivered a baby that was over nine pounds. She testified that the whole time she felt like her diaphragm was shrunk. She indicated that because of her swelling and the baby inside her she did not think that she could even grab her own thighs. If her legs had indeed been pushed back as far as they could go, more likely than not, she would have been able to grab her thighs. However, it is understandable that in her swollen and pregnant condition, she would have felt like her legs were being pushed back as far as they could go. If the whole time she felt like her diaphragm was shrunk and she felt discomfort the whole time, it is easy to see how she would feel like her legs were pushed way back.

[80] There was no explanation from any witness as to how Ms. McIntosh could push hard with her feet against the hands of the nurse and nursing student if she could not even lift her own legs, or, at least, would have had difficulty doing so. If the epidural masked the pain of the contractions to the point where it was mostly not painful, but merely a dull sensation or discomfort, it would be difficult to see how Ms. McIntosh could tell how hard she was pushing with her feet or even if she was pushing with her feet.

[81] She acknowledged that she had been instructed to push the baby through with her whole body like a bowel movement. That description indicates she understood that the force was to be directed towards pushing the baby out and not pushing her feet out.

[82] Nurse Duykers testified that when a patient is pushing with her feet the patient is told to push into her pelvis to push the baby out. More likely than not, if Ms. McIntosh had been pushing with her feet, the nurse would have corrected that. There is nothing in the chart notes indicating that Ms. McIntosh was pushing with her feet. The chart notes say she was pushing well. Ms. McIntosh's recollection of the pushing is inconsistent with those chart notes.

[83] More likely than not, Ms. McIntosh's recollection of how her legs were handled by the nurse and nursing student during the pushing phase is not completely accurate. However, I do accept that there would have been some back and forth movement of the feet, as well as some resistance, which would have been for the purpose of ensuring that her legs and feet were in the correct position.

Nurse Margaret Duykers

[84] Margaret Duykers testified on direct examination as follows.

[85] She started work in the birth unit at the IWK in February, 1999. Prior to starting work there, she completed a six week preceptorship program in which she was taught the skills needed to provide care for a patient in labour. The program includes a daily evaluation as well as a formal written evaluation at the end of the six weeks.

[86] Day-to-day work on the birth unit has not changed since she started there.

[87] She does not recall having Ms. McIntosh as a patient. However, according to the hospital chart she did care for her. As much as possible, she makes her chart notes contemporaneously to assure that they are accurate and timely. Occasionally, she has to add notes after-the-fact. She would note that as being a late entry. She is able to tell which notes are made at the time and which ones were added later. It is a practice that is taught to all nursing students and nurses in training.

[88] Her notes in the IWK patient chart in relation to Lisa McIntosh, located in Exhibit 1, Tab 1, at page 36, start at the notation where it says "(07:02) shift change".

[89] The role of a student nurse depends on the year of nursing that they are in. Second and third year nursing students are usually in an observer type role. They do things that family members or friends could do. For instance, they would hold legs during pushing phase. The role of the nurse being shadowed is patient care. However, as opportunities arise, they are used to teach to or demonstrate for the student nurse.

[90] Based on her review of the records, there was nothing unusual about the progression of Ms. McIntosh's labour. It was very routine. According to the chart, she progressed to the second stage (meaning her cervix was fully dilated) and she began the pushing stage. The usual positions that a mother would use in trying to deliver vaginally include the left or right side-lying position, the squatting position, and the semi-sitting position. All of those positions are used depending on individual situations. Most times, more than one position is used. She charted that, at 9:50 a.m., Ms. McIntosh was repositioned into the semi-sitting position. She would have wrote that note because she would have changed Ms. McIntosh from one position to another. When she writes about repositioning in her notes, it means changing from one specific position to another, such as changing from side-lying to squatting, or squatting to semi-sitting.

[91] There are no notes regarding what position Ms. McIntosh was in before 9:50 a.m.

[92] In the semi-sitting position, the head of the bed is elevated to approximately 45 degrees. The bottom part of the bed is flat. The patient's legs are flat out on the bed.

[93] Based on general practice, while Ms. McIntosh was pushing from a semi-sitting position, Nurse Duykers would have been supporting one of her legs and coaching her in proper pushing techniques. Her leg would just be supported during contractions and, when there were no contractions, the leg would generally be put down on the bed.

[94] When she is coaching a labouring mother, she tells her to take both hands behind her thighs and that someone will support her legs on each side to hold the weight of her legs. She tells her that she needs to pull behind her legs, almost to a sit-up type position, and to push down into her bottom, not into her legs. Pushing into her bottom is to lower the baby into the pelvis.

[95] The notation which she made in Ms. McIntosh's patient chart, stating "pushing well", means that a mother is: in a good position; pushing into her bottom; not using her legs; and, not pushing with little effort, or that they are seeing some good signs.

[96] She described the mechanics of how legs are supported as follows. The legs are spread wide apart and the knees are bent. With one hand, she supports under the heel, and the other hand is under the calf. The same thing happens with someone on the other side. The mother generally has her hands behind her thighs to help with the pushing effort. There are no other ways to place your hands on the mother's foot or leg.

[97] According to the chart notes, McIntosh laboured for vaginal delivery in Room 8. The layout of Room 8 is such that she would have been on Ms. McIntosh's right side.

[98] While Ms. McIntosh was pushing during contractions, the student nurse would have been holding the leg as Ms. Duykers demonstrated and explained to her to do. While the student nurse was supporting the patient's leg, she would explain to the student that: they were going to support the mother's leg while she's pushing because the legs are heavy from the epidural medication; and, they would provide support under the heel and under the calf with their two hands, and with the mother's knees being bent. She further explained that they were not pushing or straining on the legs, they were just providing support. She gave that instruction verbally. She would also explain and show how she would be holding the legs so the student could see.

[99] Every time she works they have to show a partner, husband, family member or a student how to provide that support.

[100] They always tell the person providing the support that they are not straining the leg or pushing on the leg. They are just providing support to help the mother because her legs are really heavy from the epidural. The patients often have epidurals.

[101] She described one circumstance when it would be appropriate to push the mother's leg back towards her body further than the normal. That would be during

what is called shoulder dystocia, which is an obstetrical emergency. It occurs when the baby's head has delivered but the shoulders are stuck. When that happens they lay the bed flat. She presses the emergency button. She calls for the obstetrical team and the neonatal team to come in. Pressure is applied above the pubic area and the legs are pushed back as much as possible. In such an emergency, they want the mother to push as hard as she can.

[102] This would not have been used with Ms. McIntosh because the baby had never descended that far into the pelvis, according to the notes. The manoeuvre is never used for anything but shoulder dystocia.

[103] The chart indicates that Ms. McIntosh stopped pushing at 10:10 a.m., when they decided they were going to deliver the baby by cesarean section.

[104] Nurse Duykers has never had her technique corrected by another nurse nor a physician. She has to correct family members, partners, and friends all the time and demonstrate how to do it properly.

[105] In cross-examination, Nurse Duykers provided the following additional evidence.

[106] She agreed she was out of the room from 8:45 a.m. to 9:30 a.m., on break. She agreed that would've been approximately the first half of the pushing stage.

[107] She vaguely remembers a day that Ms. Mann was shadowing her because Ms. Mann started as a staff member nurse after that.

[108] If the nursing student were only providing a support role it wouldn't be noted in the charts. The types of things they would note in the charts about a nursing student is if they were preparing an IV or a Foley catheter. The nurse would comment that it was being done by a student under nurse supervision.

[109] She was asked whether the chart note regarding repositioning could have been in relation to repositioning the patient from resting position. She indicated the resting position is just the legs being down flat. They would never have the bed flat with a pregnant woman. They always have the woman either lying on her side or in a semi-sitting position. It is most often lying on her side. When the contractions start there are a variety of those positions used.

[110] She agreed with Robinson's evidence that the legs should not be pushed beyond slightly past a 90 degree angle. She agreed that it can cause injury and discomfort for the mother. She agreed that sometimes, with the epidural, the labouring mother does not have strength or sensation, so they are always very careful they are just supporting the legs and not hyper-extending them.

[111] She indicated that the note about pushing well was made at the time.

[112] Approximately two pages of the transcript of Nurse Duykers discovery examination were read to her. The two page excerpt contains comments from Nurse Duykers about it occurring sometimes that the patient will push away at the hand that is supporting the foot, making it that, sometimes, you have to get the leg back into the right position. You have to bend the knee back if they have sort of straightened their legs to push you away. Your hand could use some resistance against the foot to get back into the knee-bent position which would not be a forceful push. Then the following question was put to her: "I wasn't even thinking forceful as much as providing resistance. Pushing it ... like pushing against the wall ... you know in that sense. Would that have been ... is that consistent with what your practice could've been in that circumstance?" Her answer was that she was not sure. She was then asked to look at the records and, based on those records, asked if she could say that it "would not have occurred, could not have occurred, possibly could have occurred?" Her answer was that it probably didn't occur because she's noted that Ms. McIntosh was pushing well.

[113] At trial she expanded upon those points. She indicated she did not recall that situation with Ms. McIntosh whatsoever. However, to put someone's leg back into position if they straighten out the leg or push into you involves: putting the leg back into the knee-bent position; supporting the leg; and, encouraging the mother to put her hands behind her thighs, hold the back of her legs, and push into her bottom. To put someone's leg back into position, if your hand is under the heel and under the calf, and the position changes, and you want to get it back into position, so you would move it back to the knee bent position. Your hand could possibly touch the bottom of the foot; but, it doesn't mean that you're pushing back. You're just pushing it back into what they call the pushing position (which is the knees being bent and the leg being supported). However, it's not in any way a forcible pushing of the leg back. It's just placing it back into the knee bent position.

[114] Ms. McIntosh could not have been instructed to push against the nurse's and nursing student's hand with her foot. Nurse Duykers' supports under the heel and under the calf. All that they are doing is supporting the weight. They don't want the patient to push into her legs. They want them to push into their bottom. You would not push back.

[115] Nurse Duykers frankly and without hesitation acknowledged that she did not recall the event. However, her notes were made at the time. She was trained in the taking of those notes. She knows what they mean. At the time that the notes were taken, there was no indication that any injury to or claim by Ms. McIntosh would result. There was no reason for Nurse Duykers to stray from the note-taking practice she had been taught. As a professional nurse, she has been referring to chart notes and knows how to make them. She knows what they mean. It is reasonable to expect that nurses are taught note-taking techniques to ensure consistent and accurate interpretation of those notes.

[116] The suggestion by Ms. McIntosh's lawyer that Nurse Duyker's note-taking habits may have changed since she made those notes in 2000 is speculation only. There was nothing in the evidence from which I could infer that was the case. She was testifying about her note-taking in the context of discussing the chart notes she made in 2000. There was no indication of any change in note-taking techniques and procedures.

[117] In the circumstances, in my view, Nurse Duykers' notes, and her interpretation of those notes, are reliable. Nurse Duykers is not a party in these proceedings. She does not stand to lose anything depending on the outcome. Her personal interest in the outcome would be limited to a judicial statement on whether or not the nursing student who was under her supervision breached the requisite standard of care.

[118] Nurse Duykers frequently repeated her message about how the delivery room nurse ensures that the patient is not pushing into her legs. Many of her answers reverted to that message. However, she made no attempt to evade the questions. She answered them in a straightforward manner. As a general comment, her evidence was internally consistent and externally consistent with that of Ms. Mann. I find her evidence to be both credible and reliable.

Cynthia Marie Mann

[119] In direct examination, Cynthia Marie Mann provided the following evidence relating to her actions during attempted vaginal delivery.

[120] She graduated with a Bachelor of Science degree in nursing from Dalhousie University in 2001. Approximately two years later she began a certificate program in perinatal nursing with the Canadian Nursing Association. She received her certificate from that program in 2003. The certificate must be renewed every five years. It is an acknowledgement of the nurse's clinical experience and theoretical knowledge. The field of perinatal nursing involves working with the child bearing population, including throughout the pregnancy, throughout the labour and birth, and in the postpartum period.

[121] She began working in the postpartum unit of the IWK in the spring of 2001. She was then cross-trained in the birth unit. For a while she was part of a small group of nurses who would go back and forth between the postpartum unit and the birth unit as needed. Since 2003 she has been in the birth unit full-time. Her duties in the birth unit include providing care to the patient pre-birth and immediately post-birth.

[122] She had a vague memory of a home visit with Ms. McIntosh. However, she had no memory of caring for her during her hospital stay at the IWK in March of 2000.

[123] She indicated that they do not do many home visits as nursing students. She recalls going to Ms. McIntosh's home with her clinical instructor. She vaguely recalls being there. She does not remember much detail about the visit. She does not specifically recall the conversation which took place.

[124] Her visit was one of the requirements of the clinical component of her nursing program. It's one of the things that they do in the maternity care portion of their training, to see how a patient adjusts to being at home.

[125] She did not recall anything about Ms. McIntosh's physical condition during the visit.

[126] In March of 2000, she was a third year nursing student. She recalls attending the IWK as part of the maternity component of her nursing studies. She recalls spending time in the postpartum unit and spending a day in the perinatal centre.

[127] She has no memory of attending the birth unit; but, she knows it is a requirement to spend one day in the birth unit for the maternity course. So she knows she did one 12 hour shift in that unit.

[128] In March of 2000, in the maternity course itself, they would have been taught the theoretical or classroom component in relation to providing nursing care to a labouring mother. However, because they only do one shift in the birth unit, there is no practical training component and no lab work. Since there is only one shift and limited time, you “really do shadow an RN in the birth unit”.

[129] In the birth unit, a third year nursing student shadows the registered nurse and stays with him or her throughout. The nursing student goes where the registered nurse goes. It essentially gives the nursing student a sense of the role. Nursing students can do things under the instruction of a nurse. They can do things that a family member would do. For example, when the woman is pushing they could support her legs.

[130] She recalled shadowing Margaret Duykers. She did not recall the specific day nor any conversation with Nurse Duykers that day. She does not recall what Nurse Duykers would have taught her or what they would have been doing.

[131] As a nurse who has worked at the IWK since 2001, she imagines she has attended thousands of births. She frequently has third year nursing students shadow her.

[132] In March of 2000, the way that she would have known how to hold a labouring mother’s leg was by being told how to do it by the registered nurse in the room she was shadowing. A third year student shadowing a nurse would be instructed like a family member. She described the instructions you give the student in essentially the same way Nurse Duykers did.

[133] The only time she was given different instructions on how to hold the leg during pushing is in the event of an obstetrical emergency known as shoulder dystocia. She described the shoulder dystocia emergency situation in essentially

the same way as Nurse Duykers and added the following. The labouring mother's legs are pushed quite forcefully back towards her body. In a shoulder dystocia situation, it is more of a forceful pushing back towards the body. It is not a holding of the legs up off the bed. Neither a support person nor a student nurse would be involved in that situation. They haven't been taught how to do it.

[134] She recalled the first time that she saw a shoulder dystocia situation quite clearly. It was in 2003. She was working independently. She and Dr. Lee were alone with the patient. She remembers the crowd that came. She remembers the manoeuvre that released the baby. She was the primary nurse. She pushed back on the legs and she is also the one who pushed on the pubic bone.

[135] She has no recollection of witnessing shoulder dystocia before that event in 2003. She has no recollection of using that method of handling a mother's leg prior to 2003. She has no other recollection of applying any kind of force to a woman's leg during support.

[136] She does not recall ever having her technique for supporting a labouring mother's leg corrected. She does clearly recall other nursing techniques of hers being corrected on two occasions. She indicates that she works very hard to do things right, and that she's very sensitive when she's made a mistake. So she clearly remembers being corrected those two times. Neither of them had anything to do with leg support technique. She has never been corrected by a physician.

[137] In cross-examination, Cynthia Mann gave the following additional evidence.

[138] A nursing student could be in the delivery unit one day and the postpartum unit the next. Records show that she was in the postpartum unit on March 24. Her attention was brought to the entry for March 24, 2000, at 11:00 a.m., on page 52 of Exhibit 1. She confirmed that the "C. Mann" written at the end of that entry was her, and that she was dealing with Ms. McIntosh.

[139] She does not recall the fact that Ms. McIntosh worked with her mother-in-law as being part of the conversation. However, she indicated that, in her testimony, Ms. McIntosh: did get her mother-in-law's name right; and, was correct that her daughter was her mother-in-law's first grandchild.

[140] She did not recall whether or not the training she received in her course on labour and delivery was extensive. She did not recall whether she received that training before or after the time she spent in the birth unit.

[141] Ms. Mann, although she is not a party to this action, does have a personal interest in the outcome because it involves a finding in relation to whether or not she did anything wrong. However, she freely admitted that she did not recall what occurred in the delivery room. It is reasonable that she would not remember that over a decade after-the-fact. She was not evasive. She answered the questions in a straightforward fashion. Her evidence was internally consistent. It was also externally consistent with that of Nurse Duykers.

[142] It is reasonable, given the place and circumstances she was in at the time, that she would have been shadowing Nurse Duykers and following her lead and instructions.

[143] I found her to be credible. Her evidence was reliable.

(C) Whether the Nursing Student's Actions were Within the Applicable Standard of Care

[144] In the post-trial memorandum submitted on behalf of Ms. McIntosh there are a number of submissions related to an unidentified nurse being present during the first half of the pushing phase. It is argued that this nurse did not testify and there is no evidence of her practice, nor of what might have occurred while she was there. It is suggested that, since the defendant had the ability to provide this evidence, the Court should draw an adverse inference from it not having been provided.

[145] As pointed out in the Defendant's rebuttal, the name of the nurse in question is clearly noted in the hospital chart. Her initials, DC, are included at the end of the chart notes she made. The name of the nurse associated with those initials is identified on the very next page as being D. Calder. Consequently, the nurse was not unidentified. There was no evidence in relation to whether or not it was in the power of the Defendant to present that witness. In addition, if it was in the power of the Defendant to present that witness, there was no evidence upon which the Court could infer that it would not also have been in the power of the Plaintiff to do so.

[146] More importantly, there is nothing in the evidence which calls into question anything that happened while Nurse Calder was present. As such, her evidence would be irrelevant. The evidence of Ms. McIntosh was that Ms. Mann's handling of her left leg had been in the presence of Nurse Duykers. Further, the evidence of Nurse Duykers and Ms. Mann was that Ms. Mann would have shadowed and stayed with Nurse Duykers at all times.

[147] The evidence of Ms. McIntosh shows that the only actions of Ms. Mann that are in issue are those which occurred while she was in the presence of Nurse Duykers. That evidence includes the following.

[148] The nurses had changed. She didn't see anyone for a bit. Then the nursing student and the nurse came in and told her they were going to push the baby down to a lower station. The nursing student in question was Cynthia Mann. The nurse's name was Margaret. She later found out that the nurse was Margaret Duykers.

[149] At some point before the shift change, there was a nurse by the name of Lisa also. However, there was no evidence she was in any way involved with the pushing phase of her attempted vaginal delivery.

[150] She was asked the role Ms. Mann and Margaret played in the delivery. She said: "They told me we were going to start pushing to see if we could move the baby down". Obviously Margaret was the nurse. She was the one giving instructions. Cynthia was the student and was consulting with her and helping her to support the techniques and what they were planning to do (that is push the baby down). She indicated her husband David was present during the pushing phase. She indicated Ms. Mann was present. She indicated she believed Margaret was there. She stated that the whole time she was pushing those two were there. She stated that Ms. Mann was on her left side and Ms. Duykers was on her right side.

[151] She indicated that no one other than the nurse and the student nurse held her legs. On the first contraction, the nurse put her legs in a position for her and instructed her how to push. She did not, at any point, indicate that any other nurse besides Nurse Duykers was there with Ms. Mann, while pushing in an attempt to lower the baby.

[152] In my view, the only handling of Ms. McIntosh's legs that is in issue is that which occurred while both Ms. Mann and Nurse Duykers were present. Consequently, what happened in the presence of Nurse Calder is not in issue.

[153] For the reasons noted during my assessment of the reliability of Lisa McIntosh's evidence, I am unable to accept that Ms. Mann pushed back on Ms. McIntosh's left leg so as to hyper-flex it on the hip. More likely than not, Ms. Mann only provided a minimal amount of resistance to ensure that Ms. McIntosh's leg remained in the correct position or to reposition it where it should remain. I accept that there would've been some back and forth movement, similar to the movement that would be experienced if Ms. McIntosh's leg had been in a sling.

[154] Although Nurse Duykers had no independent recollection of the event, she did make a comment that Ms. McIntosh was pushing well. It is clear from the evidence of Dr. Robinson, Nurse Duykers and Ms. Mann that, if there is pushing out with her legs, that is not considered pushing well. It is a counterproductive way of pushing. It tightens the muscles of the pelvis. It does not help bring the baby down. The comment that Ms. McIntosh was pushing well, in my view, indicates that, more likely than not, she was not pushing out with her feet.

[155] More likely than not, Ms. McIntosh's recollection, or interpretation, that her legs were pushed back too far are based on two things. First of all she felt discomfort and felt like her diaphragm was shrunk the whole time. She was severely swollen. Therefore, even a 90 degree angle of flexion, with the back of the bed raised approximately 45 degrees, would, more likely than not, caused her to feel like her legs were pushed back against her body. Secondly, she, more likely than not, fell into the trap of recalling what occurred in a way which pointed to a cause for her condition other than an innate degenerative process. It would be difficult for an active 33 year old woman to accept that her body was naturally degenerating to the extent which was discovered.

[156] Based on the foregoing, I find that the plaintiff has not established, on a balance of probabilities, that the student nurse, Cynthia Mann, breached the applicable standard of care.

[157] However, in the event that I have erred in coming to this conclusion, I will determine whether the plaintiff has established on a balance of probabilities, that Ms. Mann's handling of Ms. McIntosh's leg caused the damage that was observed

in Ms. McIntosh's hip and resulted in her developing osteoarthritis, requiring a hip replacement.

[158] The damage observed in Ms. McIntosh's left hip included osteochondral fragments, a tear of the ligament teres and a torn labrum. The medical terminology for the damage observed will be explained in the course of discussing the expert evidence on causation.

2. WHETHER MS. MANN'S HANDLING OF MS. MCINTOSH'S LEFT LEG CAUSED, WITHIN HER LEFT HIP, OSTEOCHONDRAL FRAGMENTS, A PARTIAL TEAR OF THE LIGAMENT TERES AND/OR A TORN LABRUM, RESULTING IN OSTEOARTHRITIS, REQUIRING THE HIP TO BE REPLACED

(A) The Test for Causation

[159] The parties agree that the test to be used determining causation in the case at hand is the "but for" test. In my view, the "but for" test is the appropriate test to be applied. This is not one of those rare cases where the "material contribution" test is to be applied. Even if it were clear that the Defendant breached a duty of care owed to the Plaintiff, and thereby exposed her to an unreasonable risk of injury of the type alleged, there is no indication that it is impossible for the Plaintiff, due to factors outside her control, to prove that Ms. Mann's actions caused her injuries.

[160] Under the "but for" test, "[t]he plaintiff bears the burden of showing that 'but for' the negligent act or omission of each defendant, the injury would not have occurred". The plaintiff must establish that on a balance of probabilities. The "but for" test "ensures that the defendant will not be held liable for the plaintiff's injuries where they 'may very well be due to factors unconnected to the defendant and not the fault of anyone' ". [**Hanke v. Resurfiice Corp.**, 2007 SCC 7, at paragraphs 21 to 23].

[161] "[I]n the absence of evidence to the contrary adduced by the defendant, an inference of causation may be drawn although positive or scientific proof of causation has not been adduced." The amount of affirmative evidence required to justify drawing an inference of causation, in the absence of positive or scientific proof, depends upon the knowledge possessed by the respective parties and the evidence which one party has the ability to produce, in addition to the ability the

other party has to contradict that evidence. [**Snell v. Farrell**, [1990] 2 S.C.R. 311, at paragraphs 30 to 35]

[162] In the case at hand, the nurse and the nursing student have very little recollection of the event. Their evidence is heavily reliant on the patient chart notes. The Plaintiff has copies of them.

[163] The Plaintiff's causation expert, Dr. Michael Dunbar, had the ability to access all of the materials the Defendant's causation expert, Dr. Michael Gross, accessed to prepare his opinion. The Defendant is in no better position than the Plaintiff to lead evidence of causation. In addition, although Ms. McIntosh's sensation may have been numbed by the epidural she received, she was conscious during the event. It is not a situation where the Plaintiff was unconscious during the event in question and unable to provide any evidence of what occurred.

[164] In the case at hand, it cannot be said that "the facts lie particularly within the knowledge of the defendant". Therefore, it is not one of the cases where "very little affirmative evidence on the part of the plaintiff will justify the drawing of an inference of causation in the absence of evidence to the contrary". [**Snell v. Farrell**, paragraph 31]

[165] As submitted by the Plaintiff, in her post-trial memorandum, based on **Bohun v. Sennewald**, 2008 BCCA 23, the "Plaintiff has to establish that it is more likely than not that the Defendants caused the Plaintiffs injury". As submitted in the closing arguments of the Defendant, "there must be a substantial connection between the Plaintiff's injury and the Defendant's conduct".

[166] I will now turn to the evidence that is relevant to the issue of causation.

(B) Evidence Relating to Causation

Dr. Michael Dunbar

[167] On direct examination, Dr. Michael Dunbar provided the following evidence relating to causation.

[168] He confirmed that the document in Exhibit 1, Tab 2, at page 87, was the consult report he prepared following his initial consultation with Ms. McIntosh on July 16, 2001. That consultation was 16 months past the birth in question.

[169] In preparing the report, he reviewed the documentation on file, interviewed the patient, examined the patient, reviewed and interpreted the radiographs. He had a discussion with the patient regarding her history, including her history in the lithotomy position. He described the lithotomy position as being her lying on her back, with both hips and knees flexed.

[170] The consult report referred to the difficulty with her hip being “related to an episode of forced flexion of the left hip during a trialed labour for delivery of a child in March of 2000”. He explained what he meant by “forced flexion” by stating that he understood that, in some circumstances, it is necessary to open the birth canal. To do that the knees are brought up towards the head and closer to the chest, past, for example, “the 90 degree angle”.

[171] His consult report went on to state: “At that time, while in the lithotomy position, she had both legs forcefully flexed and she felt a pop in her left hip.” Exhibit 2, Tab 6, is a letter dated June 1, 2009 from him to Colin Bryson, solicitor for Lisa McIntosh. That report included the following:

“In my note regarding the history of Ms. Lisa McIntosh’s present condition dated April 26, 2002, I stated Ms. McIntosh specifically felt a ‘popping’ sensation in the left hip resulting in pain in the groin area. It has come to my attention that this was not specifically the case and Ms. McIntosh did not experience this popping sensation or immediate onset of pain in the hip.

I am writing to inform you, in my opinion, this does not affect the rest of my statements with the report and it continues to be my opinion that the injury to her hip was sustained during the delivery in question.”

[172] His letter of June 1, 2009 to Mr. Bryson was to correct the error he had made. It was his understanding that the popping sensation alluded to was the sensation of “crunching” in the hip Ms. McIntosh began to feel at some point after delivery. That error did not change his opinion.

[173] The absence of pain immediately in the delivery room and the fact that the pain was only felt subsequently, did not affect his opinion either.

[174] When you're taking a history from a patient, a lot of information is exchanged between the patient and the consultant in a short time. His interpretation was that something happened during delivery. He doesn't think that the popping relates directly to there being a problem. It is insignificant to the specific episode because the patient was under spinal anaesthesia. Consequently, he doesn't think that whether or not she sensed the pain at the time is relevant.

[175] Part of the natural physiology of delivering a baby is that the body produces endorphins. These also arise when breastfeeding. Immediately postpartum, the symptoms may be masked by the physiological effects of having a baby.

[176] It is noteworthy that, by agreement, Dr. Dunbar was qualified as an expert in "orthopaedics, capable of giving evidence in that field of expertise, including the cause of hip injuries, notably a labral tear, a partial tear of the ligament teres and the presence of osteochondral fragments in a hip, the treatment required and the resulting prognosis and medical restrictions". Nowhere in those qualifications was there any specific indication of capability of giving expert evidence relating to the physiological effects of having a baby. As a medical doctor he can assist the Court in assessing what if any part the physiological effects of having a baby may have played. However, that portion of his opinion carries little or no weight.

[177] Exhibit 2, Tab 3, is a report from him to Mr. Bryson dated April 26, 2002. On the second page, at the third and fourth full paragraphs, it states:

"Review of radiographs demonstrated essentially normal plain films. However, the bone scan of the region showed a diffuse uptake around the hip joint, indicative of pathology within the region. A CT scan compared to MR arthrogram demonstrated two osteochondral fragments within the synovium of the left hip, which had migrated to the inferior recesses, out of the weight-bearing dome. Unfortunately, due to the lack of resolution on the MR arthrogram and CT scan, we were unable to see the bony beds from which they came. These were, however, definitely intraarticular osteochondral fragments.

I have had several frank discussions with Ms. McIntosh regarding what this means. In my professional opinion, these two lesions did occur at the time of childbirth and the mechanism is in keeping with such an injury. As to whether or not this is common or a foreseeable complication of childbirth, I would have to say that in my opinion it is not, as certainly this is the first case such as this that I have seen in my practice and in my surgical training. Furthermore, I have not

come across this in my surgical readings as a cause for hip pathology in a young patient.”

[178] The meaning of “diffuse uptake” is explained as follows. When conducting a bone scan, a radioactive isotope is introduced into the hip. That radioactive isotope goes to the area of increased bone activity. Increased bone activity results in increased uptake. It indicates a general area of insult. For instance, it can occur if you have a trauma to that area.

[179] Osteochondral fragments are composed of both cartilage and bone bed. Such fragments are unique to an articular surface. When osteochondral fragments become detached, it leaves lesions in the articular surface, similar to a golf divot.

[180] The socket in the pelvis in which the head of the femur sits is called the acetabulum.

[181] Osteochondral fragments in the hip are most often caused by some sort of trauma.

[182] “Lesions” could be osteochondral lesions and labral tears.

[183] The meaning of a “labral tear” was explained as follows. The labrum is the gasket around the hip socket. It is made of fibrous cartilage and holds a capsule or wall that goes around the acetabulum. On occasion, particularly if there is forced flexion, the neck of the femur can impinge on the bony rim of the acetabulum as the femur is flexed. The gasket of cartilage will be between the bony rim of femur and the acetabulum. They deduce that the mechanism is that this impingement leads to the detachment of that labrum or gasket. Once it is detached, it does not repair itself.

[184] He deduced, through a train of logic, that the labral tear was in keeping with an injury at the time of childbirth. In his view, forced flexion leads to impingement of the labrum and subsequent subluxation of the hip joint, which means it becomes nonconcentric, and through that process damage is created in the weight-bearing joint of the acetabulum.

[185] He was asked to comment on his statement that he had not come across this before. His answer was that this was something which was rare and it is not something you see of often.

[186] The fifth full paragraph, on page two of his report of April 26, 2002, contains a statement that it cannot be determined when Ms. McIntosh might be expected to require a hip replacement and that she was a long way off from it. It was pointed out to Dr. Dunbar that she ended up having a hip replacement in 2007. He responded that Ms. McIntosh had a more rapid deterioration than had been anticipated in 2002. Hip “arthroplasty” means hip replacement.

[187] In the last paragraph at page two of his report, Dr. Dunbar recommended arthroscopic debridement of the hip. He recommended that partly because of its therapeutic potential. Through that procedure, there was a possibility of reattaching the labrum and it could be used to remove loose bodies within the joint. It was also partially diagnostic. It would help better understand the environment the hip was in.

[188] Exhibit 2, Tab 4, contains a report dated February 6, 2006 from Dr. Dunbar to Mr. Bryson. It outlines the additional pathological abnormalities that were observed at the time of the arthroscopic surgery, including the labral tear and the partial tear of the ligament teres.

[189] The ligament teres is a ligament that connects the femoral head to the acetabulum. It helps hold the hip in place to prevent it from subluxing, which means coming partially out of its socket. It is what catches first when the hip is about to sublux. It becomes taut. Normally, it is slack to allow movement of the hip joint. In this case it was only a partial tear. Therefore, it had been under stretch.

[190] The arthroscope confirmed the fragments that had been seen in the CT scan. They are bits of bone and cartilage. During the arthroscopic surgery they could see the area where they came from. It had divot-like negative lesions and was in the articular surface of the dome of the acetabulum. The third paragraph, on the first page of the February 6, 2006 letter, states:

“With regards to arthroscopic confirmation of the suggested injuries that occurred at a the time of child delivery, the arthroscopic examination has confirmed our working diagnosis of osteochondral fragments as well as a labral tear. Based on

the pattern of the labral tear as well as the osteochondral fragments, the arthroscopic findings add more supportive evidence to the theory that this occurred during a difficult child delivery. I do not think it is possible to definitively state however after the arthroscopic debridement that these were lesions definitively caused by the difficult childbirth, however I think it is highly probable that they did. I feel more assured of this based on the arthroscopic examination but again, I cannot definitively confirm this.”

[191] Dr. Dunbar explained this portion of his report by stating that the compelling finding was the constellation of findings. You often see a labral tear. However, you rarely see osteochondral fragments. He doesn't recall ever seeing a torn ligament teres. Seeing all three, without any antecedent trauma, in a young patient, brought him to conclude the constellation of findings was in keeping with the mechanics that would have occurred. His statement that this was “highly probable” meant that there was a 90 percent chance that this was the mechanism.

[192] The hip is a constrained joint. It has a gasket up front (known as a labrum) and has a check-rein known as the ligament teres. Therefore, the constellation of events could have been as follows. When the hip would have flexed, it would have impinged the labrum first, then it would have levered, tearing the check-rein partially, then it would have become sloppy and caused damage by bouncing around and being sloppy. It is those three things together that, in his opinion, were suggestive of the mechanism being discussed.

[193] At page two of that letter, Dr. Dunbar stated:

“I think it is quite well demonstrated now that Ms. McIntosh had extensive intraarticular pathology to her hip including the labral tear and the damage to the chondral surfaces. This will lead to further pain and disability in the way of stiffness and loss of mobility. She is much more likely to come to early hip arthroplasty on the left side than if she did not have these lesions. The next five to ten years will be quite telling with respect to the progression of the pathology within her hip. I do believe that she will constantly have complaints of some stiffness and pain within her hip despite the fact that we have been quite aggressive with respect to the surgical treatment. I believe that the arthroscopic surgery will ultimately improve her symptoms but will not alleviate them completely and I do not believe that the arthroscopic surgery has changed the natural history of the disease process that is occurring within her hip.”

[194] Dr. Dunbar commented on that paragraph as follows. There was a lot of damage to the hip for a person of such young age. The hip had raw tissue, loose fragments, and tearing. You cannot predict the rate in which the disease will progress. It depends on physiology and variables that are not understood because of the complexity of the human condition.

[195] An injury has to be extensive enough for a young patient to require hip replacement. It is a salvage procedure. The average age of hip replacement in Canada is 72.

[196] Dr. Dunbar wrote a rebuttal report dated February 25, 2010, in response to the report of Dr. Michael Gross dated September 30, 2009. This report is contained at Tab 7 of Exhibit 2. At one point in that rebuttal report, Dr. Dunbar referred to the part of Dr. Gross' report which pointed out that Ms. McIntosh did not recall any point where there was a "forcible movement of the legs back against the body". Dr. Dunbar agreed with that; but, pointed out that there was a difference between stationary resistance and forcible movement of the legs back towards the body. According to him, Dr. Gross's interpretation was that there was stationary resistance. Dr. Dunbar was asked what he meant by "forcible". He indicated that he took it as a crisis situation. One in which you had to act immediately to save the mother or the baby. There is a spectrum from static to forcible pushing.

[197] If the legs were in a static position, the flexion, impingement and subluxing could not be produced.

[198] Point number 3, on the second page of Dr. Dunbar's rebuttal report, stated:

"I think a much more likely scenario is that the relaxation effect of the hormones on Ms. McIntosh's own hip as well as the increased diameter of her thigh, secondary to fluid retention, associated with her recollection that the nurses pushed her legs towards her body would provide a lever effect which would have caused a subluxation of the hip with associated tear of the ligamentaries and labrum."

[199] Dr. Dunbar explained that comment. Relaxation of the joints because of hormones secreted during pregnancy, together with the swelling experienced would create a higher risk of subluxation for two reasons. One was because the

joints would be looser. Secondly, the fluid buildup would create limbs of a greater diameter, which would create more leverage and torque.

[200] Point number 5, in Dr. Dunbar's rebuttal report, referred to Dr. Gross' allusion to acetabular dysplasia being a variable in Ms. McIntosh, and stated:

"In reviewing her pre-total hip arthroplasty x-rays, I believe there is a mild component of acetabular dysplasia in Ms. McIntosh's left hip. However, the acetabular dysplasia, in my opinion, did not cause the constellations of findings that were demonstrated at the time of arthroscopic surgery and subsequent total hip arthroplasty. Instead, I think a more likely scenario is the mild acetabular dysplasia would have predisposed her to subluxation of the hip as described above, because of the relatively shallow socket. I think this is a much more likely scenario."

[201] Dr. Dunbar explained that acetabular dysplasia means a malformation of the socket and femoral head. There is a wide spectrum of acetabular dysplasia. The socket is not fully developed and is not properly seated. It is not uncommon. You often see acetabular dysplasia with a labral tear; but, not with osteochondral fragments and a tear of the ligament teres. All these things, including the acetabular dysplasia, may have conspired to lead to the damage to the hip. Acetabular dysplasia could explain the torn labrum in an isolated case. However, it is very unlikely to explain the torn ligament teres and the osteochondral fragments. On cross-examination he elaborated on the subject of acetabular dysplasia. He remarked that a person is not born with it. It is something they develop. It is not specifically congenital. It can be; but, more often it is related to how you position the baby post-delivery. It is most commonly not caused by an injury mechanism. Ms. McIntosh's acetabular dysplasia may have predisposed her to subluxation, which means partial dislocation, of the hip.

[202] Point number 8, in Dr. Dunbar's rebuttal report, addresses the comment in Dr. Gross' report that part of the most likely explanation for Ms. McIntosh's condition was "the pre-eclampsia and attendant soft tissue swelling and physiological changes secondary to pregnancy increased her pre-existing changes to the hip, and made the hip more symptomatic." Dr. Dunbar's rebuttal report responded by stating:

"I believe that this would be exceptionally rare and not supported by the literature. Again, I feel a more likely mechanism is that the swelling of the hip

associated with mild acetabular dysplasia and the placement of the legs towards the chest, again, all associated with relaxing hormones, lead to the subluxation of the hip and damages seen at the time of arthroscopy.”

[203] Dr. Dunbar confirmed his opinion that it was unlikely to cause those findings.

[204] In cross-examination, Dr. Dunbar provided the following additional evidence in relation to causation.

[205] He was part of the surgical team for the arthroscopic surgery and the hip replacement. He continued to see Ms. McIntosh in followup. He briefly reviewed Dr. Stanish’s ambulatory chart notes. He would probably have gone over Dr. Stanish’s diagnostic imaging work-up with Ms. McIntosh during a meeting briefly. He agreed that Dr. Stanish had noted acetabular dysplasia.

[206] Acetabular dysplasia is linked with development of osteoarthritis. There are several studies linking acetabular dysplasia with a requirement for an early joint arthroplasty. People will typically require a hip replacement earlier in life than a person with a normal hip.

[207] Acetabular dysplasia can be asymptomatic. Often acetabular dysplasia is asymptomatic, then when osteoarthritic changes occur, the symptoms emerge. Once osteoarthritic changes develop in dysplastic hip, an audible clicking may be a symptom. Pain during activity is another symptom that may occur. Symptoms of hip dysplasia in a patient often cause a notable limp.

[208] It is possible that a person with a dysplastic hip has their hip moving abnormally in general day to day life and subluxing with day to day activities.

[209] The presence of osteochondral fragments could be part of the normal degenerative process in a hip with acetabular dysplasia.

[210] The fragments, which Dr. Dunbar found, had migrated into the synovium. So they had moved from their initial source. There was nothing in the diagnostic imaging from which he could determine where they came loose from. It is only if they are very fresh (for example within a week or so) that you can tell because they

are not rounded yet. You may be able to tell up to a few months old; but, past a few months you cannot tell.

[211] There is nothing in the diagnostic imaging which tells you the process by which the osteochondral fragments came loose. With diagnostic imaging alone, you cannot tell if the fragments are due to degeneration, as opposed to an injurious event. In addition, you cannot tell when the pathology occurred. You need more context to see whether it is degenerative or traumatic.

[212] With the arthroscope alone, you cannot tell when the pathology occurred. You can only get deductions and inferences. Ms. McIntosh had her arthroscope in 2005. It was almost six years after the birth in March of 2000. It is accurate, from a lay person's point of view, to say that the arthroscope revealed a lot of arthritis. The arthroscope confirmed a labral tear and a partial tear of the ligament teres.

[213] The labrum, which is the gasket that goes around the hip socket, is made of fibrous cartilage that runs around a bony rim. The labrum and the associated ligaments in the hip are tissues that are extremely strong. Their attachment to the hip is less strong; but, the tissues themselves are very strong. A labral tear means that this fibrous cartilage is coming loose from the bony rim.

[214] There are two types of labral tears. One is a degenerative labral tear. The other is a traumatic or acute labral tear. If it is a traumatic labral tear, it would have occurred all at once. If it was a degenerative labral tear it would have occurred from an ongoing chronic process, over time. A degenerative labral tear could be asymptomatic and become symptomatic with the use of the hip over time. Dr. Dunbar did not think you could tell whether a specific labral tear was degenerative or the result of an injurious event. He indicated that there is "something going on with" the labrum in a lot of patients.

[215] It was Dr. Dunbar's view that Ms. McIntosh's labral tear was caused by a traumatic event. This was based on his review of the history of symptoms as related by her, as well as by the arthroscopic findings. It detached as opposed to wearing down. Its structure was still there. However, its presence was not confirmed by scope until 2005. Dr. Dunbar had already decided by then that the cause was probably traumatic.

[216] A labral tear is usually caused from a sporting injury, a fall or some twisting while lifting. It is possible that they already had the labral tear before the event. The conclusion that the event caused the tear is just a supposition that the doctor makes when the patient comes in.

[217] In most cases, when a labral tear is caused by a traumatic event, the patient can say when it happened. Doctors assume that the hip has to be really wrenched to cause a traumatic labral tear. It could occur in day to day activity; but, it would be the extreme of the activity that would cause it to occur.

[218] In most cases, the person would have pain. He thought that there would also be an inflammatory response; but, he was not sure. He stated that because it is a deep joint you cannot necessarily tell if there is swelling. He agreed that swelling and inflammation would engender pain.

[219] In 2005, he identified a partial tear of Ms. McIntosh's ligament teres. The ligament teres being worn away by a degenerative process, resulting in a partial tear, was not a common mechanism. When he does hip replacements he has to dislocate the hip. The ligament teres holds even in a degenerated hip making it hard to dislocate. He has dislocated hips and seen the ligament teres torn. It is possible that it is part of the degenerative process. However, that is a rare finding. An intact ligament is a more consistent finding. The ligament teres is a very strong and thick tissue. You have to go past the physiological limit of the slack of the ligament teres to tear it. In a partial tear you have to go just past the point of slack. To completely dislocate the hip, you have to completely tear the ligament teres. That's why he believes in a subluxation concept. He agreed that 45 kilograms of force was not an unreasonable breaking force for the ligament teres. However, there are extreme differences from person to person. The person's individual anatomy trumps any average or median. Five kilograms of force would not be enough. Most often an impressive amount of force is needed. When performing surgery you usually have to cut the ligaments so that you don't break something that shouldn't be broken. That's how much force you have to apply.

[220] Dr. Dunbar agreed that each symptom observed individually could be the result of degeneration.

[221] Dr. Dunbar agreed that sometimes you may have the same findings with no symptoms, and sometimes you may have the symptoms with no findings.

[222] Dr. Dunbar acknowledged that he did not review the records from the Dalhousie Health Clinic nor from the IWK.

[223] Acetabular dysplasia may result in a slight difference in leg length. People prescribe orthotic lifts for acetabular dysplasia all the time. However, he does not feel that it should be treated that way. Dr. Dunbar was not aware that Ms. McIntosh used orthotics in the 1990's. However, that would have no significance to him in relation to a dysplastic hip. He sees many people who use orthotics. He does not put any weight on it. He simply dismisses it.

[224] During his first interview with Ms. McIntosh he reviewed the diagnostic imaging. He would only have briefly reviewed Dr. Stanish's notes for the following reasons. First, he would not have much time. Secondly, he would not want to bias himself. The starting point for him is the history given by the patient. History is an important tool for him. It is part of what he uses in deciding whether the condition is the result of an injurious event or degeneration. If you cannot say when the symptom started it is difficult to find the origin of the injury.

[225] Within 15 minutes you make a decision about people's bodies that is life changing. A ton of information is exchanged; but, it is not all captured in the notes.

[226] He agreed that, apart from the written record, he had no specific independent recollection of meeting with Ms. McIntosh. He sees a lot of patients.

[227] Dr. Dunbar was referred to his ambulatory care chart note which arose from Lisa McIntosh's visit with him on July 16, 2001. That chart note is located in Exhibit 1, Tab 2, at page 87. He would have reported the key facts in that chart note.

[228] The first paragraph of that chart note states:

“This very pleasant 35-year-old is having difficulty with her left hip now related to an episode of forced flexion of the left hip during a trialed labour for delivery of a child in March of 2000. At that time, while in the lithotomy position, she had both legs forcefully flexed and she felt a pop in her left hip. This resulted in pain in the groin area radiating medially down the femur. She had a great deal of difficulty walking for three months post-delivery and was treated expectantly.”

[229] The word “this” was a reference to the series of events he described. Ms. McIntosh feeling a pop in her left hip, and this series of events resulting in groin pain radiating down the leg, with difficulty walking for a three month period after delivery, was the history he came away with during the meeting. He only puts something down if it’s clinically significant. The pop was the smoking gun which led to him thinking that the cause of injury was traumatic. That would have indicated causation. He tried to be accurate in his letters to Mr. Bryson. He chose his language carefully. However, he professed to be naive in legal matters.

[230] He indicated that, when he wrote the report, he was not thinking about the medico-legal environment. He was just thinking about treating the patient.

[231] He is aware that what he writes carries weight and that it is important to be as factual as he can be. However, the environment in which the information is gathered is imperfect. Yet, that approach stands up every day his making decisions regarding the treatment of patients. Nevertheless, he knows that it is important to relate all relevant information when providing a report for court use.

[232] Dr. Dunbar had not reviewed the hospital records and the general practitioner’s file when he prepared the ambulatory chart note from the July 16, 2001 visit. He was asked whether, between that time, and the time that he prepared his first letter to Mr. Bryson dated April 26, 2002, he reviewed the notes of the general practitioner and the IWK records. He said he would have reviewed them if they were provided. But he didn’t recall whether they were provided or whether he reviewed them. Mr. Bryson interjected and indicated that his recollection was that neither the GP charts, nor the IWK hospital records, were provided to Dr. Dunbar.

[233] Dr. Dunbar stated in his letter to Mr. Bryson of April 26, 2002 that:

“In the immediate perinatal course while in hospital, Ms. McIntosh had difficulty ambulating secondary to pain in the left groin region with, again, radiation down the femur. This was treated expectantly, to the best of her understanding, by the attending medical staff.”

[234] That narrowed down the period he was asked about earlier when he had indicated it was in the first three months. That was his recollection of the events. He is unsure where it came from. He explained that treated “expectantly” meant

treated with the expectation that it would get better. He had not reviewed the IWK records regarding Ms. McIntosh's admission there in March of 2000. He did not, at any point, cross-reference his statements regarding in-hospital complaints with the actual records. He did not do so because he based his opinion on what Ms. McIntosh told him. They are extrapolations on his part, perhaps to fill in gaps.

[235] Dr. Dunbar was asked to review the IWK notes while on the stand to see whether there were any notes of a hip complaint "in hospital". Mr. Bryson, agreed, on behalf of the Plaintiff, that there were no such notes. Dr. Dunbar agreed that if he had read the hospital records he would not have written, in his letter to Mr. Bryson and to the Court, that there was pain in the hospital and that Ms. McIntosh was treated by attending staff.

[236] Point number 4, in Dr. Dunbar's rebuttal report, stated:

"It is possible hip pain could have been masked by natural physiology during the immediate postpartum period."

[237] Dr. Dunbar confirmed that it was possible; but, he could not say that it was probable. He thought it was possible; but, he did not know the answer. He is not an expert in that area. He indicated that humans have endorphins to get them through traumatic events. He thought that breast feeding produced endorphins; but, confirmed his lack of expertise in that field. He indicated that there are no studies showing that endorphins associated with delivery of a baby could mask a traumatic event.

[238] In his opinion, problems with the hip would be lost in the environment of fluid retention, waddling during pregnancy and all the physiological changes that occur pre-delivery and post-delivery.

[239] What he described in his reports as popping and pain would be symptoms of an injury that would require significant force to be caused during pushing.

[240] He confirmed that Ms. McIntosh's case is the only one where the findings in question were seen to have occurred during childbirth, as far as he is aware. He could not recall of any other such case. He has never read about this occurring in labour for childbirth.

[241] If Ms. McIntosh had come to him in July of 2001 and told him that there was nothing unusual in the hospital or when delivering; but, that three weeks later she experienced problems, he would not have automatically concluded that the problems arose from leg positioning in labour. He would have thought about other things related to pregnancy.

[242] It is in summation of all of the evidence and trying to fill in the gaps that he concluded that the cause of Ms. McIntosh's hip damage was the way that Ms. Mann pushed her leg.

[243] His attention was brought to the fact that, in his testimony, he had indicated that the expression "forced flexion" in his report was suggestive of violence or an emergency. He added "some enthusiasm". He confirmed, however, that, if it happened, it was exceptional. It was not part of the standard procedure and would require a forceful push back. He agreed that he would imagine an extreme manoeuvring of the left leg. He imagined the pushing back of the knees towards the arms and shoulders. He indicated the "safe zone" differs in each individual. It depends on the shape of the acetabulum and the shape of the femoral head. It likely would be different in a dysplastic hip; but, it's possible that a dysplastic hip could have the same relative geometry. In addition, the rotation of the hip can be a component that would cause injury, not just forced flexion.

[244] Dr. Dunbar did not know that Ms. McIntosh did high impact aerobics prior to the delivery in question. He did not consider the role of high impact sports while arriving at his opinion. It may be because he felt he had a sufficient chain of events to make surgical recommendations for treatment. It made sense. It fit. He did not labour over it. He did not tear it apart. He did not second guess himself. At the end of the day, with all of the findings, it fit further.

[245] Dr. Dunbar agreed that, before he read Dr. Gross' report, he did not mention acetabular dysplasia, swelling, nor fluid retention in any of his opinions. However, it was in his thought process.

[246] It was pointed out to Dr. Dunbar that, in his early reports, he referred to forced flexion and pain radiating down the leg. Then, in his 2010 report, he referred to "placement of the legs towards the chest". He agreed that was different. He indicated that you do not need forced flexion. You can apply a lot of force all at

once or you can apply a little force over time and have the same effect. It depends on how you want to define force.

[247] He admitted the factual errors in his initial reports, and that they were brought to his attention. However, he stated that he didn't "think" that it changed his opinion. He needs to decide what he sees to make treatment plans. That is the conclusion he came to based on his expertise.

[248] He agreed that the hip is at risk for anyone going through pregnancy.

[249] The Court asked Dr. Dunbar to comment on the chances of a person with acetabular dysplasia, without any intervening event, requiring a hip replacement. He indicated that they were more likely to do so and it was more likely that they would require one at an earlier age. He pointed out that the majority of people who have hip replacements, also have hip dysplasia. They are generally in the 55 to 65 year range.

Dr. Catherine Anne Robinson

[250] Dr. Catherine Anne Robinson gave the following evidence relating to causation on direct examination.

[251] She has been Ms. McIntosh's family doctor for approximately 15 years. To her knowledge, Ms. McIntosh had no problem with her left hip prior to the birth of her child Burke in March of 2000. There are no notations in the file of any such problems.

[252] In Exhibit 1, Tab 2, at pages 79 and 80, there are notes written by Dr. Glen Andrea, relating to visits by Ms. McIntosh on April 6, 2000 and on April 21, 2000. Dr. Robinson read the notations and included her interpretation of the abbreviations contained therein, as well as her translation of medical terminology.

[253] In relation to the entry for April 6, 2000, she read and stated:

"Complaint of left hip joint pain (inner thigh) difficulty to walk for three or four days. She was having some sweats. On examination she had no fever. Left groin tender to palpation and firmness along superficial vein just above and below the inguinal ligament. The abdomen was soft and slightly tender to firm pressure of

her uterine fundus. In her hip she had full range of motion; but, increased tenderness with straight leg raise (active raising) and extremes of rotation. He thought she might have a soft tissue strain. He wondered if she might have a superficial venous thrombosis. Patient to come back if the symptoms increased, especially if she has any increased hip pain, stiffness or any fever, she's to return to the office as soon as possible."

[254] In relation to the entry for April 21, 2000 she read and stated:

"C-section four weeks ago. Two days erythema midway along the incision, with a looney sized area of erythema and induration. He wondered about early infection versus a reaction to the suture material. Lisa is leaving for the weekend to go to P.E.I. tonight, so will cover with Cloxacillin 500 grams every six hours for seven days."

According to Dr. Robinson, this entry was not related to the left hip. It was all related to post-delivery complications.

[255] The entry for May 5, 2000, at page 80, was written by her. She read it as stating:

"Left hip pain with walking six weeks postpartum. She was limping at that visit. At that visit I referred her to physiotherapy."

It is noteworthy that the note itself clearly states "groin" pain, not "hip" pain. Despite that, Dr. Robinson read it as saying "hip" pain. That suggests she tended to interpret the entries in a way which supported the Defence theory on causation.

[256] Dr. Robinson was asked whether there was any reference in the notes to hip pain. She pointed to Exhibit 1, Tab 2, page 85, which contains a prenatal record. At the bottom left, under the heading "Life Styles/Special Needs", there is a notation which, in the exhibit book, is barely legible. She read what the notation said from the original record which she had with her. It stated:

"Decreased activity recently secondary to pain in the left hip."

[257] She indicated that this record was made before the birth of Ms. McIntosh's second child. The date of the record, according to her, was October 16, 2001. She indicated that there was a prenatal record for her first child, Burke. The same question was asked. That record is contained in Exhibit 1, Tab 2, at page 115. It

states that Ms. McIntosh was doing aerobics twice per week, biking and taking walks.

[258] On cross-examination, Dr. Robinson provided the following evidence relating to causation.

[259] She confirmed the statement in her letter of November 6, 2009 to Colin Bryson [Exhibit 2, Tab 1] that she had “no specific recollections of the pushing stage of [Ms. McIntosh’s] labour”; and, her comments are based upon her notes, not on her memory. Dr. Robinson does recall seeing Ms. McIntosh. She remembers discussing the caesarean section with her. That discussion would have occurred during the pushing phase. However, she has no actual memory of the pushing mechanics themselves.

[260] The prenatal record used at the time of Burke’s birth [Exhibit 1, Tab 1, pages 12 and 13] was completed by her. There is nothing noted in it about hip pain.

[261] Dr. Robinson did not recall Ms. McIntosh making any complaint of hip pain while they were discussing the caesarean section. She does not recall any complaint at all during that discussion. She confirmed that it was something which she, presumably, would have charted. If there was a complaint of a popping sensation in the hip, she would have charted it.

[262] Dr. Robinson was referred to the progress notes at pages 52 to 58 in Exhibit 1, Tab 1. She indicated that she did not write anything on those progress notes. She would have done so if she would have been there. If there is nothing in the progress notes it means that she didn’t see Ms. McIntosh in the hospital after the delivery. The entry on March 24, 2000, at 14:00 hours, was not hers. However, she read it as stating:

“Post-operative update number one - doing great - [something] vital signs stable and abdomen check stable.”

[263] On redirect, Dr. Robinson presented the following evidence. In the pushing phase, Ms. McIntosh was on an epidural anaesthetic. That would blunt any pain response in the abdomen, pelvis, hips and legs. In the days she spent in the hospital post-delivery, Ms. McIntosh was taking Tylenol 3, which is a narcotic pain killer,

and Naprosyn, which is an anti-inflammatory pain killer. These medications are designed to blunt the experience of pain.

[264] On questioning by the Court, she gave the following evidence. Ms. McIntosh had an epidural with epimorph. It provides good pain control for 24 hours after surgery. It is a pain control that is of longer duration. Part of the epidural given provides complete anaesthesia. That would usually have worn off within four to six hours. However, with the epimorph, it can be expected that there will be significant pain control for 24 hours postpartum.

[265] On re-cross-examination, Dr. Robinson stated that the epidural was given at 00:40 hours. However, the chart notes at page 32 of Exhibit 1 indicate that: the epidural was requested at 00:40 hours; the doctor came in at 01:05 hours for the epidural; and, it was completed at 01:16 hours.

[266] The epimorph was given at the time the decision was made to perform the caesarean section. It was given because she was about to have the caesarean section. Dr. Robinson did not provide the time of the epimorph. The chart notes at page 35 of Exhibit 1 indicate that the decision was made to perform the caesarean section shortly after 10:10 hours. The chart notes at page 15 indicate that Ms. McIntosh received the “epimorphine” at 11:25 hours.

Dr. Michael Gross

[267] Dr. Michael Gross testified in relation to the issue of causation on behalf of the defendant. He was qualified as an expert in the field of “orthopaedics, capable of giving opinion evidence on all aspects of that field of expertise, including the cause of a labral tear, a partial tear of the ligament teres, and the presence of osteochondral fragments within the synovium of the hip of an adult female”.

[268] On direct examination Dr. Gross provided the following evidence.

[269] He confirmed that he prepared the report dated September 30, 2009 at Tab 10 of Exhibit 2. He indicated that, in preparing the report he reviewed the items listed in the report, which included: the discoveries of Cynthia Mann, Lisa McIntosh, and Margaret Duykers; and, the lists of documents filed (which

included, among other things, the records of the IWK Health Centre, the Dalhousie University Health Centre Services' medical records, Dr. Dunbar's report dated April 26, 2002 and Dr. Dunbar's report dated February 6, 2006).

[270] In his view, Ms. McIntosh had hip dysplasia, developed osteoarthritis in the hip, and went on to have a hip replacement.

[271] He described hip dysplasia as a shallow socket, with varying degrees of shallowness. It creates more stress in the area of the hip. When you have hip dysplasia you have a much larger labrum. Hip dysplasia usually develops in childhood. It is something which develops prior to the person's hip becoming full grown.

[272] A patient with mild hip dysplasia may not notice that there is anything abnormal. However, as the hip is exposed to stresses from day-to-day activity, it is more likely to develop osteoarthritis. The symptoms do not arise until there is degeneration in the hip.

[273] The time when degeneration will occur varies from person to person. Not everyone with hip dysplasia goes on to develop osteoarthritis. However, there is a well recognized tendency for that to occur. It is so well recognized that people do corrective surgery to build up the socket.

[274] Osteochondral fragments (bits of bone and cartilage) can become knocked off as a result of the degeneration of the joint that occurs with arthritis. The joint degenerates to the point where it is no longer smooth. It undergoes tears and fissuring. Bits are rubbed off by movements. Those bits can come out, circulate and grow inside the joint. They can stay alive and can have bone form within, or outside, them. They can also be knocked off because of a traumatic event, which is a mechanical cause.

[275] In order for it to occur by mechanical means you would have to dislocate or break the hip. For instance, if you are in a vehicle accident, you could drive the head into the socket, breaking the bone, and breaking off some of the cartilage as well.

[276] Having osteochondral fragments in your hip is like putting sand in the joint. The bits catch and grind and it can cause more damage.

[277] An x-ray may show the thinning of cartilage which occurs with an osteoarthritic hip. It is an associated finding which is relevant to determining how osteochondral fragments occurred.

[278] You cannot tell from diagnostic imaging when the fragments occurred.

[279] Determining the cause of osteochondral fragments involves looking at the history of the patient. When you see osteoarthritis, you consider things which may cause it, such as distant or recent injury to the hip. If you have a dysplastic hip, and no other indications of a traumatic cause, the dysplastic hip is the accepted cause of the osteoarthritis.

[280] To cause osteochondral fragments, the trauma has to be a significant trauma. The hip is an inherently stable joint. The ball will stay in the socket until it is removed. It is possible to dislocate the hip; however, it takes a huge amount of trauma to do so. A car accident or sporting injury can dislocate the hip. You have to tear the ligament teres. You have to tear the capsule. As the hip goes out of the socket it has to scrape. The socket can be broken if the bone is driven into the pelvis. That would cause a significant amount of damage to the lining of the joint in addition to breaking the bone.

[281] People would know if they had experienced a traumatic event to the hip causing osteochondral fragments. There is usually immediate pain. You get soft tissue damage which causes pain. You have to be treated in the hospital. It may require putting the hip back in the socket. It may require surgery if it is broken.

[282] The labrum is like a washer that surrounds the hip socket. In a normal hip it is very small and thin. In a dysplastic hip, because the socket is shallow, the labrum is bigger. It is a natural adjustment the body makes to try to provide support for the femoral head. Since it is bigger, it is more likely to be torn, because it can get in the way of normal movement of the ball and socket.

[283] It is theorized that the tearing of the labrum occurs because it is catching in the socket of the hip. They tend to see it towards the end of the degenerative process because that is when it becomes symptomatic. The degenerative process can be ongoing for a long time without the condition becoming symptomatic. You

can have hip arthritis with no symptoms. You cannot always tell, by the x-rays, how severe the patient's symptoms are.

[284] For a traumatic event to tear the labrum, it has to be a significant violent event of the same type described as being required to cause osteochondral fragments.

[285] Labral tears can be observed on an MRI, during arthroscopic surgery, and during general surgery on the hip.

[286] If the labrum is torn from a single traumatic event it requires the head to be taken out far enough to cause the tear. This is significant trauma which results in significant pain. It is too painful for the patient to do anything. He or she could not stand, and would be down. The hip would go into protection mode. It would fill with blood. It would be sending the message to the patient that the hip should not be moved.

[287] As an isolated incident, a labral tear is something which brings patients into the hospital. A professional athlete would be brought in right away and undergo an MRI. A recreational athlete may go for a month before seeing a doctor, hoping it will get better. You would notice the pain immediately when the injury occurs. In response to questions from the Court, at the end of his testimony, Dr. Gross expanded and clarified by pointing out that, as soon as the injury occurred, an athlete, in both cases, would be laying on the ground and unable to move. The amateur athlete would go home and use crutches to get around, thinking it would get better. However, he or she would end up going to the doctor.

[288] Determining that the labral tear occurred in a traumatic event requires a clear history that it was torn during such an event. If it is found as part of osteoarthritis, it is not significant on its own. It is simply part of the constellation of changes that occur in a degenerating hip.

[289] If you find a torn labrum with an osteoarthritic hip it is simply a finding, which, like osteochondral fragments and thinning of the cartilage, fits in with the diagnosis of an osteoarthritic hip. If the labral tear is associated with a constellation of findings, it indicates that the osteoarthritis will progress.

[290] The ligament teres is a strong piece of fibrous tissue which comes up from the base of the acetabulum and goes into the ball of the femoral head. It helps stabilize the ball and socket.

[291] When you have osteoarthritis, a number of physiological changes occur. Osteophytes and spurs grow out on both sides of the head of the femur. The spurs can abrade the ligament teres because they are all around the head. They can rub on the labrum and the ligament teres with normal day-to-day movement.

[292] The only other way that you can get a partial tear of the ligament teres is when it is cut or ripped in a traumatic event, such as dislocation or fracture of the hip.

[293] If the partial tear of the ligament teres occurred by rubbing on it or wearing it away, the patient would not know that. However, if there was a semi-dislocation of the hip which was significant enough for the ball to come out of the socket and partially tear the ligament teres, it would cause the artery that's there to bleed. The patient would get swelling. There would be pain in the joint. The pain would be immediate. If the partial tear occurred as an acute event the patient would know about it. The patient would not be able to walk or stand. He or she would be lying on the ground in agony. It would be extremely painful.

[294] You can tell from an MRI if someone has a partial tear of the ligament teres as it gives you an idea of the structures around the hip. You can also tell during arthroscopic surgery because you can see around the hip joint.

[295] The MRI cannot tell you when the partial tear occurred unless there are other signs, like blood in the joint and swelling around the joint. The MRI has to be relatively close to the event for that to be seen.

[296] Arthroscopic surgery would give you an indication of whether there are spurs in the hip joint. That would give you a feel for how a partial tear of the ligament teres may have occurred. You cannot tell from arthroscopic surgery when a partial tear of the ligament teres occurred.

[297] When you see a tear of the ligament teres as an isolated finding, it is normally because the patient has a history of a significant injury and a painful hip examination which leads to further investigation. You see it on an MRI. It would

be very unusual to have a tear of the ligament teres as an isolated finding without a traumatic event.

[298] In an osteoarthritic hip, you often see a torn ligament teres. However, it is just an incidental finding at the time of the hip replacement surgery. If you were to see a torn ligament teres as part of osteoarthritis, it would be an immaterial finding.

[299] In his opinion, Ms. McIntosh's osteochondral fragments, labral tear and partial tear of the ligament teres, were caused as a result of her having osteoarthritis, secondary to hip dysplasia.

[300] He saw the symptoms as being consistent with the normal progression of osteoarthritis in the hip joint. He saw Ms. McIntosh as fitting in a very normal pattern where the patient with hip dysplasia develops osteoarthritis and goes on to have a hip replacement. He has replaced hips in patients ranging in age from 18 to 92. He saw nothing to suggest that, in Ms. McIntosh's situation, there was any deviation from the normal pattern, where you have a dysplastic hip, which goes on to develop osteoarthritis, followed by degeneration. That is normal. There is nothing to suggest there was anything different about Ms. McIntosh's hip compared to anyone else who had the same underlying hip dysplasia.

[301] The fact that he did not examine Ms. McIntosh had no impact on his ability to form an opinion. The ultimate effects had already occurred. She had already had a hip replacement. There would be no more information available by examining the hip at that stage.

[302] On cross-examination, Dr. Gross provided the following additional evidence.

[303] He did not review the x-rays or any of the imaging. Dr. Dunbar did. However, that does not put Dr. Dunbar at an advantage in arriving at a conclusion because there is no dispute that Ms. McIntosh had hip dysplasia and because he based his opinion on Dr. Dunbar's assessment of Ms. McIntosh's hip.

[304] Bone spurs show up on x-rays. He was asked whether there was any evidence of bone spurs in Ms. McIntosh. He indicated he had to look at the evidence. He looked at Exhibit 1, Tab 2, pages 86 to 89. He saw nothing. At the

end of his testimony, the Court asked whether there was anything at pages 90 to 92 which provided any indication of bone spurs. He pointed out that, at page 90, there was a mention of calcification within the iliopsoas. Page 91 is an ambulatory care chart note written by Doctor William Stanish further to a visit from Ms. McIntosh on January 4, 2011. That chart note indicates that an x-ray of the hip “revealed a calcific density about on the medial side of the femoral neck. Dr. Gross indicated that could be a bone spur or a loose body.

[305] If something had occurred during the attempted vaginal delivery that caused the damage to her hip it would be noted in the records made by the nurses. It is a lot of damage to a hip joint. It would normally be apparent at the time that it happened.

[306] She was on an epidural at the time. However she would have been in pain as soon as it wore off. She would have been able to localize the hip pain and distinguish it from the pain arising from the caesarian section.

[307] The mechanism of pushing the knees back towards the armpits could only cause the injury in question if you apply excessive force and it subluxes or dislocates the hip joint.

[308] Dr. Gross did not consider that the pushing described by Ms. McIntosh, in the portion of transcript of her discoveries entered as Exhibit 7, as being abnormal, because it described some pushing back and some movement back towards the body.

[309] Pushing of the legs back and reducing the hip angle does not necessarily create stress on the hip. The stress occurs when you push the hip and it won't move any further. There is no increased stress on the hip when it is within its range of motion. Once it gets to the end of its range of motion, another part of the body will move, such as the pelvis. Once there is no further movement to the other parts of the body, to push the leg further back you have to start dislocating the hip. At that point, the mechanics of this type of injury could occur. A sudden strong stress could force the hip out of the socket, if you take the hip, bend it all the way up, and really come on to it with a huge amount of force. The amount of force would be comparable to that experienced in a motor vehicle or sport's injury where there are a lot of forces involved.

[310] It was suggested to Dr. Gross that lesser stresses applied more frequently can produce the same result. He disagreed. He indicated you have to reach an inflexion point. There has to be enough stress to cause something to give way in the hip, and dislocate or break it. To do something to the ligament teres you have to sublux or dislocate the hip. Within the normal range of motion in the hip, you're not going to do damage to the ligament teres, labrum, capsule or osteocartilage.

[311] Pain subsequent to a traumatic event can include groin pain and pain radiating down the leg.

[312] Dr. Gross was aware that there was no record of a traumatic event prior to the birth in question and no record of prior hip pain.

[313] One of the reasons he came to the conclusion he did was the absence of pain after the delivery. He saw that as evidence of being no traumatic event. In his view, there was no history to support the diagnosis. He's saying that there was no pain after-the-fact because Ms. McIntosh did not complain in the immediate days following her caesarean section.

[314] He is not an expert in post-c-section pain, nor in the body's physiological response to birth. He does not know what pain Ms. McIntosh was feeling post-c-section. He does not know Ms. McIntosh's subjective ability to distinguish different sources of pain.

[315] He agreed that Ms. McIntosh reported left hip joint pain on April 6, 2000. That was about two weeks after the birth in question. That is not the four to six weeks that he mentioned at page 8 of his report.

[316] His attention was brought to the doctor's note in relation to Ms. McIntosh's April 6, 2000 visit. Dr. Gross pointed out that the note says "full ROM", which is an abbreviation for full range of motion. It goes on to say that the patient has increased tenderness with straight leg raise (active raising) and extremes of rotation. He stated that: "That is not a hip joint that has undergone a significant injury, two weeks after an event. That description does not support a diagnosis of an acute injury two weeks earlier".

[317] Dr. Gross was asked whether, as a general question, pain on April 6 would be consistent with a traumatic event on March 23. Doctor Gross answered that pain

can be localized; but, come from somewhere else. However, the most significant statement made in the note is that there is full range of motion. That says that the hip joint does not have a major problem. If there was a traumatic event you would have hip pain and hip findings two weeks later.

[318] The doctor who examined Ms. McIntosh on April 6 was not looking at a hip joint injury. He was looking at a soft tissue injury.

[319] In the normal course of medical practice, a patient's complaints of pain are noted, documented and explored. He expects that if Ms. McIntosh had experienced hip pain in the post-delivery period while in hospital it would have been charted.

[320] He does not think it was possible for the damage in question to have been caused through a normal delivery. He's never seen it. It has never been described. He has never come across any patient with those complaints and results following normal delivery.

[321] If Ms. McIntosh had experienced a major trauma as he described earlier in his testimony, it is possible that it would result in her developing osteoarthritis and lead to her requiring a hip replacement.

Lisa McIntosh

[322] On direct examination, Ms. McIntosh gave the following evidence relating to causation.

[323] Her first child, Burke, was born March 23, 2000. Her second child, Audrey, was born May 6, 2002.

[324] Prior to March, 2000, she never had injuries to her left hip. She had a broken ankle and tibia on her left leg when she was 11 or 12. She had a back injury related to exercise when she was approximately 25 years of age. She underwent six months of physiotherapy, a couple of times per week, for that. She was unable to walk normally for a couple of days.

[325] Prior to Burke's birth, in March of 2000, she did not have any pain in her left hip. Her health prior to that was excellent. She was active her whole life. She

was involved in a regular exercise routine, which carried over from playing competitive sports. When she was younger she ran regularly. She played softball a couple of times per week in the summer. She did step aerobics twice per week. She did kickboxing. She cycled a lot. She played tennis. She went on ski trips two or three times a year and on weekends, if possible.

[326] During her first pregnancy, she felt things were fairly normal in the beginning. There was a concern with her doctor that she was at risk of gestational diabetes. At approximately six months she started retaining a lot of water. There was a jump in her blood pressure. It was considered higher than normal though not dangerously high. In February, towards the end of her pregnancy, she gained a significant amount of weight. It was mostly water. Her doctor recommended that she take a modified bed rest for the last four to six weeks of her pregnancy. She was at home. She had to rest a couple of hours per day to be on the safe side.

[327] She was admitted to the hospital on March 22, 2000, in the late afternoon. She was induced at approximately 6:00 p.m. She started to feel contractions very soon after that. It continued to increase. She became more uncomfortable. She eventually had an epidural. The pain and discomfort subsided after the epidural. Because of the epidural it was suggested that she stay in bed. They gave her a catheter so she would not have to get up and use the washroom.

[328] During the pushing, she knew when the contractions were coming, without looking at the monitor.

[329] After the pushing, her abdominal muscles were really sore. She had a caesarean section. After the caesarean section she had a very difficult time walking or moving around at all for the first couple of weeks.

[330] During birth, she felt pressure and discomfort. However, she did not feel any pain. The contractions were painful, but mostly just really uncomfortable. She felt a dull pressure that increased during contractions.

[331] She was in the hospital five nights in total, four of which were after the delivery. In the hospital, she felt very uncomfortable. She was very sore after the caesarean section. She was not getting out of bed on her own. She was unable to move on her own, without assistance of a nurse. In order to nurse the baby, she needed one of the nurses to bring the baby to her and put the baby back. It took her

a long time to be able to get out of bed. She was sore and exhausted everywhere because of the caesarean section. Her whole mid-section was sensitive and sore. She had pain.

[332] She did not specifically have any pain in her left hip. The pain there was no more than anywhere else.

[333] The day after the delivery, she could not do anything without the nurses. She experienced a lot of pain just getting in and out of a position where she could nurse the baby.

[334] When she was discharged, she went home. Her mother came from Prince Edward Island to help her after she went home with the baby. Her husband, David, was also off work for the first few days. She had lots of support at home.

[335] When she got home, she slept most of the time. Her mother did the cooking and cleaning and took care of her. She just nursed. She was still recovering from the surgery and the birth. They were helping her get up out of bed and to get back into bed. They helped her to get to the washroom comfortably. She was spending a lot of time releasing fluid that she had retained during the pregnancy. She was uncomfortable. She was limping around.

[336] She believed that she was still taking something for the pain from the caesarean section. She was still sore all over.

[337] She was moving really slowly. She needed help to get into position to nurse. She needed quite a bit of support around her, such as pillows and a specific chair, to be able to nurse.

[338] The day after she got home, the MABLE nurse came to visit. Cynthia Mann also visited once with her supervisor. During that visit, Ms. McIntosh was moving around slowly. Ms. Mann asked if she was limping. Ms. Mann stood in front of Ms. McIntosh and asked whether it was the left side. She indicated that was the side she was on. At that time, Ms. McIntosh was not overly concerned as she was not thinking there was anything unusual. She thought it was simply part of the usual soreness you would feel as part of a recovery from the caesarean section. She was still not physically back to herself and knew that it would take a while. She expected it was something which would go away in a few days.

[339] Ms. McIntosh became concerned when she was starting to feel pain more on one side. It felt internal. She worried that she had an infection where her caesarean cut was. She went to see Dr. Robinson. Dr. Robinson was not in, so she saw Dr. Andrea. She showed him that it was on the left side.

[340] When the pain started to disappear and she didn't feel it was everywhere, she started to move around. She started getting out with the stroller so she could do a little walking. She noticed that when she would walk for a short distance, she felt her left leg was heavy. It started to get really tired. She had to lift it. She noticed, when going upstairs, that she had to use the railing and go up one step at a time and she would take a right step and lift her left foot up. This was from approximately 1 to 1.5 weeks after she got home.

[341] She was asked to explain what she experienced in pain up to 1.5 weeks post-delivery. She indicated that she was never without pain the whole time. She was uncomfortable the whole time. It went from being all over her body, most of her abdomen and back, to becoming only when she did certain things. She started to notice she was feeling pain around her abdomen more. She was becoming more mobile. She started to feel pain on her left hip.

[342] She was avoiding certain things. She went to see Dr. Andrea with the concern of infection in her caesarean section incision. She showed him she was starting to feel it on her left side. He told her she was fine.

[343] When she went to see Dr. Robinson again, which may have been part of a followup visit, they discussed her hip. Dr. Robinson suggested that she go to physiotherapy. She started going to Scotia Physiotherapy. She had trouble getting in and out of the car. She couldn't really take the baby for a walk because she was recovering from delivering a baby.

[344] She went to physiotherapy for a couple of months, a couple of times per week. She found that she was able to walk further (ie a block) without experiencing pain. This was six to eight weeks after March 23, 2010.

[345] She was feeling like her walk was improving. However, she didn't feel that it had anything to do with the physiotherapy. She felt that the physiotherapy was

making things worse, so she stopped going. She found that the pain started to “disappear in time”.

[346] She felt her hip was getting better throughout the year. It was easier to walk further distances all the time. However, stairs were always a problem. She had difficulty holding the baby and getting up stairs. She would drag the left side of her body while using her right leg to go up stairs. People around her started to notice and ask what was wrong.

[347] There are many things she could not do normally. She was using ice a lot. She would use it sometimes so she could sleep. She wanted to be able to walk around and be active. She could not walk. She could not go up stairs. It seemed to go on and on, not getting better.

[348] Her father, who was a general practitioner, referred her to Dr. Stanish, an orthopaedic surgeon.

[349] Her attention was directed to the ambulatory care chart note of Dr. William Stanish prepared from a visit on November 30, 2000 and sent to Dr. Robinson. Ms. McIntosh was asked to comment on the statement in the report that she complained of a “clicking sensation, especially when internally rotating the hip and flexing the hip to the extreme”. Ms. McIntosh commented that, after the pain subsided in her hip, she found she couldn’t lift her knee fluidly without it moving side to side. It was like something was obstructing the fluid and she could hear a click. She could lift it straight but it would kind of go off to the left or right, sort of loosely. It felt really unstable. She could not support herself completely.

[350] Dr. Stanish ordered tests, including an x-ray and a bone scan. She told him her symptoms at the time. She told him her hip was not stable on that side. Dr. Stanish referred her to Dr. Michael Dunbar, an orthopaedic surgeon who specializes in hips.

[351] Ms. McIntosh’s attention was directed to the ambulatory care report of Dr. Dunbar, sent to Dr. Robinson and Dr. Stanish, and emanating from a visit by Ms. McIntosh on July 16, 2001 [located in Exhibit 1, Tab 2, at page 87]. Ms. McIntosh confirmed that this was her first visit with Dr. Dunbar. Dr. Dunbar was examining the results of the bone scan and the x-ray. She had also had an MRI. They were discussing the state of her hip. She told him how she believed it happened. She

described to him the techniques used during the pushing phase to the best of her recollection “at the time”.

[352] She confirmed that, contrary to Dr. Dunbar’s report, she did not feel a pop in her left hip while in the lithotomy position. He believes the pop she was referring to was the same as the clicking referred to in Dr. Stanish’s report. That is a symptom she noticed a few months afterwards.

[353] She discussed with Dr. Dunbar a number of treatment or surgical options. She chose arthroscopic surgery because it appeared to be the least intrusive. However, it was not until 2005 that she was able to have the scope. (She added in cross-examination that it was in October.)

[354] Prior to the scope, she had never been able to resume the activities that she participated in before the birth of Burke. She was unable to run. She was unable to walk for long distances without discomfort. At the time of the scope she could walk two blocks without discomfort. She couldn’t do aerobics, skiing or tennis or anything with knee impact. She could only use the elliptical trainer and the stationary bike without pain to the hip, as there was no impact on the legs.

[355] She was walking with a brace right after the surgery. That continued for four to five weeks. She attained her maximum recovery approximately six weeks following that surgery. She had certain restrictions. During that period she was unable to drive. She was able to walk with a knee brace. Four to six weeks after the scope she was walking fairly normally again. However, she had increased pain after the scope. She was in more pain than before the surgery. She felt it had removed the obstruction of the pain. After the scope she could not walk as far before she felt pain. After the arthroscopic surgery her range of motion had been completely restored. The clicking was gone. She could lift her leg straight all the way up.

[356] She found out that there was a lot of arthritis on her left hip after the scope.

[357] The pain increased over time. She found that the length of time she would have in her day before the pain set in was getting shorter. Negotiating stairs was bothering her more and more. She was unable to pick up anything of any weight. She was unable to pick up her two young children. She was on as many Tylenol as she could take. She was icing. She was going to physiotherapy. Nothing was

improving her condition. She ultimately had a hip replacement operation in March of 2007.

[358] She indicated she had not been able to run after her children since she had Burke. She was worried she couldn't get them if they ran across the street. She had difficulty looking after them. She had difficulty sitting in a car for any amount of time. She experienced pain.

[359] In cross-examination, Ms. McIntosh gave the following additional evidence related to causation.

[360] She agreed she was put off work for high blood pressure. She indicated she was at risk for preeclampsia and put on rest as a precaution. She had severe swelling. She gained approximately 25 pounds in approximately four weeks. It was throughout her body including her hands, feet and face. She weighed 146 pounds at the beginning of her pregnancy and approximately 202 pounds at delivery.

[361] The time frame she remembers starting pushing was 9:00 a.m. The epidural she had been given was still active at that time. However, she could feel when each contraction was coming.

[362] She could not recall any instance where her left leg was pushed back forcefully to her body or suddenly jerked back. There was nothing traumatic like that.

[363] While pushing she felt no more pain in her left hip than anywhere else. She has no specific recollection of any pain in the hip. While pushing there was no "popping" sensation in the left hip and there was no pain radiating to the femur in the left leg. However she did feel pain radiating to her femur in the left leg months later.

[364] During her stay in the hospital following Burke's birth, she was attended to by the nurses. The nurses helped her and went to see her frequently. She had no problems expressing problems to the nurses. She was comfortable bringing her problems to the attention of the nurses. She does not recall expressing any concern that was not responded to.

[365] While she was still in the hospital, she remembers Dr. Robinson coming. However, she does not remember Dr. Robinson's colleague, Dr. Connell.

[366] If she had problems she would have told Dr. Robinson about the problems. She felt comfortable talking to Dr. Robinson about any problems or concerns she may have.

[367] She was quite sore after the caesarean section. She had an incision in her abdomen, staples, and bandages over the staples.

[368] She had a catheter, so she did not have to get out of bed for the washroom. She indicated she didn't really feel strong enough to get up. She was sore. She just had a caesarean section. She just had 15 hours or so of labour. It was quite exhausting. She was up all night. She was unable to sleep. She was exhausted.

[369] Eventually she was able to get out of bed and she was able to walk very slowly. Initially she had assistance with walking. However, she was able to walk.

[370] Ms. McIntosh's attention was brought to the progress notes located at page 52, Tab 1, in Exhibit 1. The notation for March 23, 2000 at 22:20 hours was read to her. It stated:

“Assisted up to bathroom. Moves well. Peri-care assisted. Back to bed - no ill effects.”

[371] She indicated she did not recall the first time she got up to go to the bathroom. She indicated that must have been the first time she went to the bathroom on her own, following the removal of the catheter.

[372] The entry for March 24, 2000 at 15:30 hours, located on the same page, was read to her. It stated:

“Shower taken”.

[373] After initially saying she remembered the shower, she said she didn't remember it; but, she was sure she took a shower while she was in the hospital. She acknowledged that she would have walked to the shower and back to the bed.

[374] Still on the same page, the entry for March 24, 2000 at 08:00 hours was read to her. It stated:

“Ambulation encouraged.”.

[375] She agreed that she was encouraged to ambulate or walk. She agreed that the shower was taken later that day. However, she wondered how she did that with the incision. Then, she indicated that she may be confusing that post-surgery period with the post-surgery period following her hip surgery because she also had an incision in the course of her hip surgery.

[376] On the same page, her attention was brought to the entry for March 24, 2000, at 11:00 hours It stated:

“IV and Foley ordered to be removed. Patient tolerated breakfast well. 2300 cc removed from Foley. A: IV and Foley removed R. patient voided at 12:30 550 cc again at 14:30 200 cc.”

[377] Ms. McIntosh confirmed that, after the Foley catheter was removed, every time she used the washroom or voided she had to walk from the bed to the washroom and from the washroom back to the bed. She agreed that, according to the note, she used the washroom at 12:30 and again at 14:30. She pointed out that the washroom was in the room.

[378] She agreed that she: was having gas following the surgery; was encouraged to go for a walk to move the gas along; and, did that.

[379] The entry for March 25th, at 9:09:10 hours, located at page 52, was read to her. It stated:

“All well comfortable.”.

[380] She indicated that, she was not comfortable for a long time. She was asked whether she disagreed with the note. She responded by asking whose definition of “all well and comfortable” it was.

[381] She did not specifically recall talking to a nurse or a physician around 9:00 a.m. on the morning of March 25th. She did not recall specifically expressing any concern to a nurse or doctor around 9:00 a.m. on March 25th.

[382] She acknowledged having concerns about breastfeeding. She hadn't produced milk yet. She would ring for assistance. She did not hesitate in asking the nurse for help with that problem, at all.

[383] She made no specific complaint of left hip pain while in the hospital to any doctor or nurse. She received no treatment for left hip pain while in the hospital.

[384] Ms. McIntosh's attention was brought to the entry for March 26, 2000, on the IWK physician's order sheet, at page 17. It was written by Dr. C. Connell. It stated:

“D/C [discharged] home on MABLE - some nursing difficulties.”

[385] Ms. McIntosh did not recall talking to Dr. Connell about nursing difficulties at the time of discharge. However, that was the only difficulty she was concerned about in terms of going home. If she had other concerns she would have mentioned those to the doctor as well. She agrees she was discharged. When she went home she was able to walk slowly.

[386] She was recovering from a caesarean section. She was given instructions regarding caring for the incision, including that she was not to lift anything heavier than her baby. Her baby was over nine pounds. She was told not to drive for four to six weeks. She was told she shouldn't return to any type of exercise for about four to six weeks. That was to allow the incision to recover. She was not told she could not walk around the house. She was able to walk around the house when she got home.

[387] When she went home she was losing a lot of fluid. She lost approximately 30 pounds in about eight days, including the weight of the baby. She was losing a significant amount of fluid through urinating. She agreed she was going to the washroom a lot. She agreed that she was walking back and forth to the washroom. Then she stated that, when she was going, it was for long periods of time but she wouldn't say she was going a lot. She also added that she had a small flat and the washroom was never very far.

[388] She had a visit from the MABLE nurse. Her attention was brought to the MABLE Program Admission Information Form at page 58 of Exhibit 1, Tab 1. The second page of that form indicates that, at the time of discharge, the concern she had was about breastfeeding. Ms. McIntosh confirmed that was the case. She agreed that there was nothing in the MABLE nurse's notes about hip pain. She agreed that the MABLE visit was the day after she was discharged.

[389] Her attention was brought to page 57, which is an IWK progress note with an entry on March 27, 2000 regarding the MABLE visit. She confirmed the MABLE nurse came to the house and examined her. She would have mentioned concerns to and discussed concerns with the MABLE nurse, if she had any. She agreed the MABLE nurse examined her and her incision. She agreed she would have talked to the MABLE nurse about how she was feeling and how she was doing.

[390] Her attention was brought to the IWK Summary of MABLE Visits form at pages 9 and 10 of Exhibit 1, Tab 1. Under the heading dealing with assessment of the mother's general well-being there is a checkmark in the box indicating "no concerns". Under the heading episiotomy/tear/incision, in the box for concerns, there is a reference to a red area above the incision that looks like a reaction to tape. Ms. McIntosh didn't recall whether that was accurate, but she did not disagree that it was.

[391] Ms. McIntosh agreed that the entry for the March 27, 2000 MABLE visit, in the progress notes on page 57, contained nothing about any pain in the hip. She agreed that, from reading the note, it also looked like she had a scheduled appointment to see her GP that Thursday for a regular postpartum check.

[392] It was a few days after the MABLE visit that Ms. Mann came to visit her at her home and the exchange regarding her limping occurred.

[393] The entry at page 79 of Exhibit 1, Tab 2, relating to her April 6, 2000 visit, to the doctor was read to her. Ms. McIntosh recalled going to the doctor on April 6, 2000. She indicated she was getting increasing pain in that area. She felt it was internal. It was definitely on the left side. She was having difficulty lifting her left leg. She felt like she was dragging it while walking. She felt she was perhaps having symptoms of infection from her incision. She needed to see someone right

away. Dr. Robinson was not available. So she saw Dr. Andrea, who was on call, at the clinic. The note, as read out, correlates with her recollection of her complaint at the time. She was asked whether the note regarding difficulty walking "3-4" days meant three to four days. Ms. McIntosh was not sure what it referred to. She thought it meant difficulty walking three out of four days, because most days she had difficulty walking. She was just guessing. She does not know what it means. When she went there it was fairly constant during the day. She agreed that if this note meant difficulty walking three to four days it would have been backdated to April 2 or 3. [Dr. Robinson read the note as saying difficulty walking for three or four days.]

[394] Ms. McIntosh agreed that during that April 6, 2000 visit she would have: described the kind of pain she was having; how long she was having it; what she felt she could and could not do with her leg; what she could do without pain; and what would cause her pain .

[395] Ms. McIntosh expressed confusion and uncertainty over whether it was the April 21 or April 6, 2000 visit to the doctor that was about a concern with infection in her incision.

[396] She indicated that when she went to see the doctor [on April 6] they were looking at the range of motion, trying to determine what the pain was and where it was coming from. That's the best she could recall. Dr. Andrea also looked at the incision because she thought they were related. She knows that was part of the visit. He said it was not infected so she did not get an antibiotic.

[397] She saw Dr. Stanish on November 30, 2000. He ordered x-rays, an MRI and a bone scan. He wrote a report to Dr. Robinson on December 21, 2000. This is located in Exhibit 1, Tab 2, at page 128.

[398] He referred to her having acetabular dysplasia. Dr. Stanish explained to her what that meant.

[399] Her first visit with Dr. Dunbar was on July 16, 2001. Exhibit 2, Tab 3 contains the report of Dr. Dunbar dated April 26, 2002. The report states:

“While her left hip was being forcefully flexed in this effort [to facilitate vaginal delivery], she recalls specifically that she felt a ‘popping’ sensation in the left hip, resulting in pain in the groin area that radiated medially down her leg.”

[400] She indicated that did not happen while she was trying to push the baby out. She did not agree with that description of what happened. The popping sensation was actually the clicking sensation. The radiation was also something she was feeling with the clicking. However both of those were after- the-fact, but leading up to the visits with Dr. Stanish and Dr. Dunbar. She believes that Dr. Dunbar misunderstood her.

[401] Dr. Dunbar’s letter also stated:

“In the immediate perinatal course while in hospital, Ms. McIntosh had difficulty ambulating secondary to pain in the left groin region with, again, radiation down the femur.”

[402] Ms. McIntosh did not agree with that. She indicated the pain in the left groin was after she left the hospital and coincided with her visits to the doctor. She was not aware of anything specific. She was on pain medication. It was quite a few days before she felt pain. She does not know if it was there all along and masked by the pain medication she was taking. She would not say she was normal ambulatory while in hospital. She was in bed with a catheter. She was walking very slowly when she did move around. It was after she left the hospital that she could specifically say the pain was in the groin area.

[403] She agreed, that while she was in the hospital, she did not have difficulty walking secondary to pain in the left groin region with pain radiating down the femur.

[404] The report of Dr. Dunbar further stated:

“This was treated expectantly, to the best of her understanding, by the attending medical staff.”

[405] She agreed that she received no treatment in the hospital for difficulty ambulating secondary to pain in the left groin region. The treatment was afterwards with physiotherapy. The attending medical staff did not treat her for that. In addition, she did not have difficulty walking due to hip pain.

[406] She was referred to a clinical record from the Dalhousie University Health Service, which had an entry for July 17, 1995 stating:

“Can only use orthotics for one hour - using sandals all summer.”

[407] Ms. McIntosh indicated that she doesn't recall having orthotics before. She indicated she never wore orthotics in 1995. She indicated maybe the date of the entry was wrong. She indicated she had orthotics the summer after her hip replacement because of the difference in the length of her leg.

[408] She underwent arthroscopic surgery in her left hip in October of 2005. The scope revealed a lot of arthritis in her hip. She had a hip replacement in March of 2007. It was performed by Dr. Dunbar.

[409] The apparent internal inconsistencies in Ms. McIntosh's evidence include the following.

[410] She indicated that four to six weeks after her arthroscopic surgery she was walking fairly normally. Then she said that after the scope she could not walk as much before she felt pain.

[411] She first answered that she remembered the shower she took in the hospital on the 24th of March, 2000. Then she immediately said that she did not recall it specifically; but, that she's sure she took a shower.

[412] She first agreed that when she went home she was going to the washroom a lot. Then when she was questioned about walking back and forth to the washroom she changed it to saying that she would not say she was going a lot, instead she was going for long periods of time.

[413] The apparent inconsistencies between Ms. McIntosh's evidence and evidence external to it include the following.

[414] She testified that prior to the arthroscopic surgery she was unable to resume the activities that she had participated in prior to Burke's birth. She indicated she had been unable to run after her children since Burke's birth. However, in Dr. Stanish's ambulatory care chart note, in Exhibit 1, Tab 2, at page 90, states:

“At this point she is relatively asymptomatic, she is back to her sporting activities.”

[415] That chart note was prepared further to a visit date of February 22, 2001. I infer that the information that Ms. McIntosh was back to her sporting activities would have come from her during that visit. It is a prior inconsistent statement of hers, and admissible as such. The statement that she was “relatively asymptomatic” is, in essence, like the chart notes that have been admitted as business records. In my view that is admissible evidence which I may consider. It appears to be inconsistent with Ms. McIntosh’s evidence.

[416] Ms. McIntosh recalls Dr. Robinson coming to see her in the hospital after Burke’s birth. This is inconsistent with the chart notes and with Dr. Robinson’s evidence that, since she did not write anything in Ms. McIntosh’s chart, regarding any visit in the hospital post-delivery, that would indicate that she did not visit Ms. McIntosh in the hospital after Burke’s birth.

[417] It is also noteworthy that Ms. McIntosh acknowledged that she may be confusing that post-surgery period with the post-surgery period following her hip surgery.

[418] The expressed confusion, as well as the internal and external inconsistencies in Ms. McIntosh’s evidence, show that she does not have a clear and precise recollection of the events, her condition, and her limitations following her first delivery, and in the ensuing couple of years. More likely than not, she recalled and recounted them in a way which exaggerated her condition and limitations. I am of the view that she did so: partly because of the natural inclination to support a non-innate cause for her hip deterioration; partly because she confused what occurred during and after her March, 2000 hospitalization with what occurred during and after her other hospitalizations; and, not because of any deliberate attempt to mislead the Court.

[419] Her lawyer, in his post-trial brief, stated that Ms. McIntosh’s claim that her legs were forcibly flexed back was recorded by Dr. Dunbar as part of the history given to him by her. He suggested this shows lack of recent fabrication and bolsters the reliability of Ms. McIntosh’s claim. However, it is clear that Dr. Dunbar’s recording of the history related to him is not reliable. He acknowledged

three significant errors. In addition, Dr. Dunbar testified that he agreed with Dr. Gross that Ms. McIntosh did not recall any point where there was forcible movement of the legs back towards the body. Dr. Dunbar moved from giving an opinion based on the legs having been forcefully flexed to one based on placement of the legs towards the chest. In my view, neither Dr. Dunbar's records, nor his testimony, bolster the reliability of any claim by Ms. McIntosh that her legs were forcibly flexed back.

[420] However, her complaints of pain in the area of the left hip or groin after her 1st delivery are consistent with the notes of her visits to the doctor on April 6, 2000, and May 5, 2000. More likely than not, she did experience pain in that area, around those dates.

Chart Notes and Other Evidence

[421] It was agreed by both parties that the chart notes under Tab 1 of the joint exhibit book filed as Exhibit 1 were admissible without the writers of the notes testifying to the truth of their contents. The following chart notes, located under Tab 1 of Exhibit 1, are relevant to the issue of causation.

[422] The MABLE nurse notes in relation to the March 27, 2000 home visit, at page 10 indicate the following. There were no concerns regarding Ms. McIntosh's general well being. She had a one inch wide red area, one to two inches above her incision, which looked like a reaction to tape.

[423] The IWK physician's order sheet at page 14 indicates that, at 40 minutes after midnight, on March 23, 2000, Dr. Robinson phoned in an order for an epidural. The chart notes, at page 32 of Exhibit 1, confirm that is when the epidural was requested. They also indicate that the doctor came in for the epidural at 01:05 hours and it was complete at 01:16 hours.

[424] The IWK Physician's Order Sheet, at page 15 of Exhibit 1, notes that, on March 23, at 11:25 hours, Ms. McIntosh received 3.5 milligrams of epimorphine.

[425] In the portions of the nursing medication profile located at pages 19, 21 and 22, it is noted that Ms. McIntosh was given Tylenol number three on March 23, 24 and 26, 2000, and Naprosyn on March 23, 24, and 25, 2011.

[426] In the maternal assessment nursing notes at page 23, it is noted that Ms. McIntosh had been off work since February of 2000 with increased blood pressure and increased weight gain.

[427] The IWK nursing notes, in relation to the second and third stages of delivery, indicate that, on March 23, 2000, the following occurred. At 09:30, Ms. McIntosh was pushing. At 09:50 she was “repositioned to sitting position” and “pushing well”.

[428] In the progress notes at page 52 it is noted that, on March 23, 2000, at 22:20 hours, when Ms. McIntosh was assisted up to the bathroom, she was moving well, and on March 24, 2000 at 14:00 hours she was “doing great”. Also, at page 52, it is noted that on March 24, 2000, at 11:00 hours her Foley catheter was removed and she voided at 12:30 and again at 14:30. Continuing on page 53, it is noted, at 16:00 hours, that her “urine output continues to be in good amounts”. At 23:00 hours there’s a note stating: “Go for a walk following feeding to move the gas.”

[429] There’s a note on March 25, 2000 at 09:10 hours stating: “All well - comfortable”. According to Dr. Robinson, that was a note from Dr. Zilbert.

[430] The doctor’s notes from the April 6, 2000 visit, at page 79, have already been discussed in detail. Particularly noteworthy is the comment that Ms. McIntosh had full range of motion in her hip. It is also noteworthy that she had only been having difficulty walking for 3 or 4 days.

[431] Dr. Robinson’s note from the May 5, 2000 visit, at Page 80, indicates Ms. McIntosh was having left groin pain with walking and was limping.

[432] In the Ambulatory Care Chart Note, at page 92, Dr. Jim Kanellakos dictating for Dr. William Stanish, noted that, in examination of Ms. McIntosh on November 30, 2000: “Range of motion of the hip is normal, however there is a clicking sensation of the anteromedial aspect of the hip joint on internal rotation and flexion.”

[433] Cynthia Mann testified that she is 5foot 4 inches tall and, in March of 2000, weighed only 110 or 112 pounds.

(C) Weighing the Expert Evidence on Causation

[434] The opinions of Dr. Dunbar and Dr. Gross differ on the following specific points:

- a) the most likely cause of the type of hip condition and deterioration noted in Ms. McIntosh, in the type of circumstances in question;
- b) whether, if the injurious event required to produce such a condition occurred during pushing, the patient would have been aware of pain in her hip during pushing or during her post-delivery hospitalization; and,
- c) whether, the cumulative effect of smaller repeated forces during pushing could result in a traumatic injury to the hip producing the type of condition in question.

Otherwise, their opinions were fairly similar. In particular, they were fairly consistent on general points relating to hip injury, conditions, pathology, and, degeneration. They both agreed they had not previously seen, heard about, nor read about any case where such injury would have occurred during childbirth.

[435] The factors which, in my view, are relevant to the weight to be attached to Dr. Dunbar's opinion on the specific points in dispute, include those which follow.

[436] Dr. Dunbar acknowledged he did not review the hospital records from the Dalhousie Health Clinic and the IWK, nor the general practitioner's file.

[437] His initial opinion was based, in part, on his understanding that Ms. McIntosh: during the pushing phase, "felt a popping sensation in the left hip, resulting in pain in the groin area that radiated medially down her leg"; during her post-delivery stay in the hospital, had difficulty walking because of pain in the left groin area radiating down the femur; and, was treated for this by the medical staff

attending to her during her post-delivery hospital stay, expecting it would get better. None of those three events occurred.

[438] He felt the popping sensation was insignificant because the patient was under spinal anaesthesia. However, Dr. Robinson estimated the complete anaesthetic effect of the epidural would have worn off within four to six hours. It was, according to the chart note complete at 01:16 hours. Therefore, it would have worn off: approximately 2 to 4 hours before the pushing phase started, and, approximately 2.5 to 4.5 hours before Ms. Mann and Nurse Duykers were involved in the pushing phase. Consequently, more likely than not, during the pushing in question, Ms. McIntosh was not under the complete anaesthetic effect of the epidural. She did not receive the epimorph until almost 1.5 hours after the pushing stopped.

[439] He was of the view that, immediately postpartum, the symptoms may be masked by the physiological effects of having a baby. Therefore, he did not see it as significant that Ms. McIntosh did not complain of hip pain while in the hospital post-partum. That is an area that is outside his direct area of expertise. It carries

little or no weight. In addition, he indicated that he could not say that was probable. Further, he stated that there were no studies showing that the endorphins associated with the delivery of a baby could mask a traumatic event.

[440] He arrived at his conclusion in relation to causation at the time of Ms. McIntosh's initial visit with him on July 16, 2001. At that time he had only briefly reviewed Dr. Stanish's notes. The starting point for him was the history given by Ms. McIntosh, which turned out to be incorrectly understood by him. He would have a natural tendency to interpret subsequent findings in a way which supported his conclusion.

[441] Based on Dr. Dunbar's description of how he arrives at such conclusions, the circumstances in which he arrived at his initial conclusion, more likely than not, were as follows. A lot of information would have been exchanged between Ms. McIntosh and him in a short time. Within 15 minutes or so he would have made a decision. The environment in which the information was gathered was imperfect. The incorrect events he listed were extrapolations he made, perhaps to fill in the gaps. When he wrote the report for Mr. Bryson, he was not thinking

about the medico-legal environment. He is naive in legal matters. He was just thinking about treating the patient. That approach stands up every day he is making decisions regarding the treatment of patients.

[442] It is understandable that the approach followed by Dr. Dunbar would suffice for treatment purposes. The decisions regarding Ms. McIntosh's treatment were made after exploring and monitoring the condition of her hip. Dr. Dunbar did not indicate that the treatment would have been any different if he had concluded that the cause was degenerative. There is no indication the cause was of particular importance to treatment decisions. However, in the matter before the Court, the cause of Ms. McIntosh's hip condition is the very thing to be determined. Consequently, Dr. Dunbar's approach diminishes the weight of his opinion for the purpose of this proceeding.

[443] Dr. Dunbar was not aware that the Dalhousie University Health Service Clinical Record chart entry for April 6, 2000, indicated that Ms. McIntosh had full range of motion in her hip. He only briefly reviewed Dr. Stanish's Ambulatory Care Chart Note from Ms. McIntosh's visit of November 30, 2000 indicating that

the range of motion of her hip was normal. Dr. Dunbar made no mention in his reports, nor in his oral evidence, of Ms. McIntosh having full range of motion in her hip in April and November of 2000. There is no indication he considered that in arriving at his opinion. It was a significant point for Dr. Gross. In my view, it is a significant point which, more likely than not, was not considered by Dr. Dunbar. In my view, that greatly diminishes the weight of his opinion.

[444] In his oral evidence, he indicated that applying a little force over time can have the same effect as applying a lot of force all at once. He stated that to explain why, in his 2010 report, he had referred to “placement of the legs towards the chest”; while, in his earlier reports, he had referred to forced flexion as being the causative mechanism. He did not elaborate on how little or how great the force would have to be. He did not say over what period of time the force would have to be applied. He said nothing about how many applications of force would be required. That portion of his opinion provides little or no assistance in determining whether what occurred during the pushing phase caused Ms. McIntosh’s hip condition.

[445] On the other hand, Dr. Dunbar was present during the arthroscopic surgery on October 14, 2005. He observed the condition of McIntosh's hip at that time. However, that was more than five and a half years after the incident in question. It does not reveal the condition of McIntosh's hip before the incident in question, nor within the five and a half years following it. In addition, Dr. Dunbar acknowledged that the arthroscope does not reveal when the pathology occurred.

[446] Dr. Dunbar also performed the hip replacement surgery.

[447] However, neither being present during the arthroscopic surgery, nor performing the hip replacement surgery, formed the basis of his assessment of the extent of McIntosh's acetabular dysplasia, he based that on his review of the x-rays taken before the hip replacement surgery.

[448] Further, there was little evidence before the Court of the details of what was observed during those surgical procedures, nor of their impact on Dr. Dunbar's opinion. Subject to one exception, there was only a general description of what was observed. If there had been such noteworthy detail, one would have expected it to

be in the evidence at trial. It was the constellation of findings Dr. Dunbar saw as significant, not the detail. He acknowledged that, after so much time had passed since the alleged causative event, such detail would no longer be apparent.

[449] The one exception was that Dr. Dunbar testified that, during the arthroscopic surgery, he noted that the labrum had detached, instead of wearing down. He said that indicated a traumatic cause, rather than a degenerative cause. However, he had previously stated that: a labral tear means the fibrous cartilage is coming loose from the bony rim; a labral tear can be degenerative; and, he didn't think you could tell whether a specific labral tear was degenerative or the result of an injurious event. He did not qualify his evidence by stating that you could tell that a labral tear was the result of an injurious event if it was not accompanied by labral wear. He did not explain why he would have expected the labrum to wear down, instead of tear, if the cause was degenerative. Consequently, the reference to that detail provides little assistance to the Court.

[450] Mr. Bryson, in the post-trial brief submitted on behalf of Ms. McIntosh suggested that Dr. Dunbar testified that, during the arthroscopic surgery, he saw

“divets evidencing the pulling of the ligaments away from the bone”. However, Dr. Dunbar did not state that anywhere in his evidence. What he stated is that, when osteochondral fragments detach it leaves lesions in the articular surface that are similar to a golf divot.

[451] The factors which, in my view, are relevant to the weight of Dr. Gross’ opinion on the specific points in dispute, include those which follow.

[452] He did not view the diagnostic imaging. He was not present for the arthroscopic surgery. He did not perform the hip replacement on Ms. McIntosh. However, his opinion took into consideration the conclusions drawn from the imaging and the findings made during those surgical procedures. He did not dispute them. There were no points proven by evidence before the Court in relation to those conclusions and findings which he did not have before him when he arrived at his opinion.

[453] Viewing the diagnostic imaging may have helped him determine more precisely the location of the calcific density which Dr. Stanish’s note stated was revealed on the x-ray as being “about on the medial side of the femoral neck” in January of 2001. However, the description given by Dr. Stanish as to its general location, put it in the

general area where Dr. Gross testified it could abrade the ligament teres if it was a bone spur (*i.e.* the sides of the femoral head). Further, the partial tear of the ligament teres was not discovered until October of 2005. Therefore, an x-ray taken in or before January 2001 would be less helpful than one taken closer to the time the partial tear was discovered.

[454] If Dr. Gross had been present during the arthroscopic surgery, it would have permitted him to explore the issue of bone spurs. However, Dr. Dunbar did not mention anything about the presence or absence of bone spurs. It was not something he considered in his opinion. Consequently, Dr. Dunbar's presence, compared with Dr. Gross' absence, during the arthroscopic surgery is a neutral factor in comparing the weight of their respective opinions.

[455] Dr. Gross' report of September 30, 2009, was based on the hypothetical that the patient's complaints arose after discharge from the hospital, and possibly four to six weeks after delivery. The April 6, 2000 chart note does refer to a complaint of hip joint pain. However, the attending physician, after manipulating the hip, thought it was a soft tissue strain or a superficial venous thrombosis. It was not until May 5, 2000, that Dr. Robinson charted that Ms. McIntosh had "left groin pain with walking six weeks post-partum". Therefore, the source of the pain was possibly localized as

being the left groin only about six weeks after delivery. It is possible that was actually the left hip, not the groin. Further, his opinion is based on the complaint being post-discharge, with a possibility of it being as much as four to six weeks post-discharge. Therefore, his opinion is based on a post-discharge complaint, not on it being four to six weeks after delivery. There is no dispute that the initial hip pain complaint was post-discharge. Commenting on the possible length of the delay, in my view, does not reduce the weight of his opinion.

[456] Dr. Gross' formed his opinion specifically for the purpose of assisting the court in determining the cause of Ms. McIntosh's hip condition. It was not arrived at in the rapid and imperfect environment described by Dr. Dunbar as being the type of environment in which causation determinations are made for treatment purposes and as being the type of environment in which he arrived at his opinion. It more fully considered that the pain control would not have been complete during pushing and would have further diminished 24 hours after the epimorph. It considered that there was no record of a traumatic event prior to the birth in question and no record of prior hip pain. It considered and addressed the impact of Ms. McIntosh having full range of motion on April 6, 2000.

[457] Considering all of these factors relating to the weight of the opinions of Dr.

Dunbar and Dr. Gross, I ascribe significantly more weight to the opinion of Dr. Gross.

(D) Finding on Causation

[458] Prior to Burke's birth, on March 23, 2000, Ms. McIntosh had not complained to health care providers about having pain in her left hip. On April 6, 2000, she complained to the physician on duty at the Dalhousie University Health Service that she was having left hip joint pain and had been having difficulty walking for three or four days. There was no evidence of any intervening event which would have injured her hip. Starting in November of 2000, she consulted specialists regarding problems with her hip. She underwent arthroscopic surgery in October of 2005. It degenerated to the point where she had a hip replacement in March of 2007. This series of circumstances and events causes one to strongly suspect that the hip condition was caused by something which occurred during the delivery process. Standing by itself it may justify inferring that was the cause. However, the drawing of inferences must be made on the basis of all of the evidence. That includes the uncontradicted evidence of: the lack of complaints of pain in the peri-natal period while in the hospital; and, the fact that Ms. McIntosh had full range of motion in her left hip approximately two

weeks after the event. That evidence, in my view, makes the drawing of such an inference unjustified.

[459] I cannot find that Ms. McIntosh has shown that, during pushing, there was a trauma significant enough, whether by one large force or repeated smaller forces, which would, more likely than not, have caused the damage observed in her hip.

[460] Ms. McIntosh could not recall any instance where her left leg was pushed back forcefully to her body or suddenly jerked back. There was nothing traumatic like that. The IWK nursing notes indicated that she was “pushing well”.

[461] Dr. Gross’ opinion that a large amount of force is required to cause that damage as a traumatic injury makes sense. Dr. Dunbar agreed that an impressive amount of force is required to break the ligament teres. It makes sense that even if the hip joint had been pushed back as far as it could go, the pelvis would have started to tilt and no damage would have occurred to the hip joint. Pushing of the legs back towards the head as part of trying to keep the leg stationary, even if it occurred, in my view, was not, more likely than not, enough to cause the damage observed. There was no evidence upon which the Court could determine that the forces which would have been created by such pushing of the legs back towards the head would have been

sufficient to cause the damage observed. There is only a bare statement of opinion that repeated smaller forces can have the same effect as one larger force.

[462] Cynthia Mann was of very small build. It is difficult to see how she could generate the tremendous force needed to cause the alleged injury simply by pushing. More likely than not, she could not have produced forces comparable to a car accident or sports injury.

[463] While pushing, Ms McIntosh felt no more pain in her left hip than anywhere else. She did not complain to Dr. Robinson of pain in her hip when Dr. Robinson was discussing her caesarean section with her. More likely than not, the complete anaesthetic effect of the epidural had worn off and the epimorph had not yet been administered. Ms. McIntosh could feel when the contractions were coming. She said the contractions were painful. Then she added that they were mostly just really uncomfortable. She felt a dull pressure that increased during contractions. However, she did experience painful contractions. More likely than not, she would have experienced those when the anaesthetic effect of the epidural was at its lowest, which would have been during the last part of the pushing, before the decision to proceed by way of caesarean section was made and the epimorph was given. If she could feel painful contractions, more likely than not, she would have been able to feel the pain

of a traumatic injury to her hip causing one, some or all of the damage later discovered in her hip.

[464] There was no complaint of hip pain during her stay in the hospital. Ms. McIntosh would have told the physicians and nurses if she was having problems with her hip. The chart notes indicate that, with the exception of having difficulty getting the baby to nurse properly, Ms. McIntosh was “doing great”. She was walking. She was moving well. There’s a note written by Dr. Zilbert on March 25, 2000 at 09:10 hours stating: “All well - comfortable”. There was no indication of any unexpected difficulty walking, nor of any hip pain while walking. The epimorph would have worn off within 24 hours. The other pain medication did not totally mask pain, it only blunted it. If she had hip pain in the hospital, more likely than not, it would have been charted.

[465] She agreed, that while she was in the hospital, she did not have difficulty walking secondary to pain in the left groin region with pain radiating down the femur, and, she did not receive any treatment for it. In addition, she did not have difficulty walking secondary to hip pain.

[466] Similarly, she would have told the MABLE nurse who visited her at home if she

was having problems with or concerns about her hip. She did not. In fact the MABLE nurse noted, in the IWK Summary of MABLE Visits form, that there were “no concerns” in relation to Ms. McIntosh’s general well-being. In contrast, the nurse noted a red area above the incision that looked like a reaction to tape.

[467] Ms McIntosh did indicate that she was very sore everywhere because of the caesarean section. Her whole mid-section was sensitive and sore. She had pain. If she could feel the pain associated with the caesarean section, more likely than not, she would have felt and distinguished the severe pain which would have been associated with a traumatic injury to her hip causing a labral tear, osteochondral fragments and/or a partial tear of the ligament teres. She said she did not specifically have any pain in her left hip. The pain there was no more than anywhere else.

[468] It was 9 or 10 days after the delivery before she noticed pain in the hip area. During that period, she had not been immobile and her hip had supported at least the weight of her upper body and, more likely than not, that of her baby as well. She indicated that she was advised she could lift a weight up to the weight of her baby following the caesarean section.

[469] Dr. Gross’ opinion was that such a traumatic injury would engender extreme

pain and that the person experiencing such pain would know it, and would require crutches to walk. His opinion was also that each injury individually, if caused by a traumatic event, would result in extreme immediate pain. His opinion makes sense.

[470] I accept the following opinions he gave in relation to each individual condition found in Ms. McIntosh's hip.

[471] If a partial tear of the ligament teres occurred as an acute event, the patient would not be able to walk or stand. He or she would be lying on the ground in agony.

[472] If the labrum was torn from a single traumatic event it would result in pain that would be too great for the patient to do anything. He or she could not stand. The hip would go into protection mode. It would fill with blood. It would be sending the message to the patient that the hip should not be moved.

[473] People would know if they had experienced a traumatic event to the hip causing osteochondral fragments. There is usually immediate pain. You get soft tissue damage which causes pain. You have to be treated in the hospital.

[474] Even Dr. Dunbar acknowledged that such injury would likely cause pain and

that most often the person suffering the injury would know.

[475] In relation to labral tears specifically, Dr. Dunbar was of the view that, in most cases where they are caused by a traumatic event, the patient can say when it happened. Doctors assume that the hip has to be really wrenched to cause a traumatic labral tear. It could occur in day to day activity; but, it would be the extreme of the activity that would cause it to occur. In most cases, the person would have pain. He thought that there would also be an inflammatory response. Swelling and inflammation would engender pain.

[476] There was no evidence to show that Ms. McIntosh's ability to sense and distinguish pain was outside what is considered normal.

[477] I find that, more likely than not, if Ms. McIntosh had sustained the injuries in question, or any one of them, during the pushing, she would have known it between when the epidural wore off, allowing her to feel the pain of the contractions, and when she was administered the epimorph. In addition, she would have felt it again once the effect of the epimorph wore off. She would have experienced severe pain and would not have been able to walk while in the hospital, nor upon her release, without crutches. She would have been able to distinguish it from the pain of the caesarean

section.

[478] Most importantly, she would not have had full range of motion in her hip on April 6, 2000, only 13 days after the alleged traumatic injury.

[479] There is no onus on the IWK to show what caused Ms. McIntosh's hip condition and deterioration. However, in my view, the IWK has shown that it is more likely to have been caused by her pre-existing hip dysplasia leading to osteoarthritis and the continuing degeneration of the hip.

[480] Many points in Dr. Dunbar's findings, observations and opinion support a finding that it is more likely, or at least equally as likely, that the condition and degeneration of McIntosh's hip was caused by something other than what occurred during attempted vaginal delivery. Those points include the following.

[481] Ms. McIntosh had acetabular dysplasia. People with that condition are more likely to require a hip replacement without any intervening event; and, are more likely to require one at an earlier age.

[482] Acetabular dysplasia can be asymptomatic. Often acetabular dysplasia is

asymptomatic, then when osteoarthritic changes occur, the symptoms emerge. Once osteoarthritic changes develop in dysplastic hip, an audible clicking may be a symptom. Pain during activity is another symptom that may occur. Symptoms of hip dysplasia in a patient often cause a notable limp.

[483] It is possible that a person with a dysplastic hip has their hip moving abnormally in general day to day life and subluxing with day to day activities.

The presence of osteochondral fragments could be part of the normal degenerative process in a hip with acetabular dysplasia.

[484] A degenerative labral tear could be asymptomatic and become symptomatic with the use of the hip over time. He did not think you could tell whether a specific labral tear was degenerative or the result of an injurious event. There is “something going on with” the labrum in a lot of patients.

[485] Each symptom observed individually could be the result of degeneration.

[486] Sometimes you may have the same findings with no symptoms, and sometimes you may have the symptoms with no findings.

[487] Although, he thought it was “possible hip pain could have been masked by natural physiology during the immediate postpartum period”, he could not say it was probable. He is not aware of any studies showing that endorphins associated with delivery of a baby could mask a traumatic event.

[488] In his opinion, problems with the hip would be lost in the environment of fluid retention, waddling during pregnancy and all the physiological changes that occur pre-delivery and post-delivery.

[489] The hip is at risk for anyone going through pregnancy.

[490] The points in Dr. Gross’s opinion which support a finding that something other than what occurred during the pushing phase caused Ms. McIntosh’s hip condition, include the following.

[491] A patient with mild hip dysplasia may not notice that there is anything abnormal. However, as the hip is exposed to stresses from day-to-day activity, it is more likely to develop osteoarthritis. The symptoms do not arise until there is degeneration in the hip.

[492] Osteochondral fragments (bits of bone and cartilage) can become knocked off as a result of the degeneration of the joint that occurs with osteoarthritis. The joint degenerates to the point where it is no longer smooth. It undergoes tears and fissuring. Bits are rubbed off by movements. Those bits can come out and circulate inside the joint.

[493] In a dysplastic hip, because the socket is shallow, the labrum is bigger. That makes it more likely to be torn, because it can get in the way of normal movement of the joint. It tends to become symptomatic towards the end of the degenerative process. You can have hip arthritis with no symptoms.

[494] If a labral tear is found as part of osteoarthritis, it is not significant on its own. It is simply part of the constellation of changes that occur in a degenerating hip. If the labral tear is associated with a constellation of findings, it indicates that the osteoarthritis will progress.

[495] When you have osteoarthritis, osteophytes and spurs grow out on both sides of the head of the femur. The spurs can abrade the ligament teres because they are all around the head. They can rub on the labrum and the ligament teres with normal day-to-day movement. If the partial tear of the ligament teres occurred by rubbing on it or wearing it away, the patient would not know that.

[496] In an osteoarthritic hip, you often see a torn ligament teres. However, it is just an incidental finding at the time of the hip replacement surgery. If you were to see a torn ligament teres as part of osteoarthritis, it would be an immaterial finding. However, it would be very unusual to have a tear of the ligament teres as an isolated finding without a traumatic event. Consequently, the fact that it was part of a constellation of findings supports a degenerative cause.

[497] The degenerative process can be ongoing for a long time without the condition becoming symptomatic.

[498] He saw the symptoms which it was noted Ms. McIntosh had experienced, as being consistent with the normal progression of osteoarthritis in the hip joint. He has replaced hips in patients ranging in age from 18 to 92. He saw nothing in the situation Ms. McIntosh was noted as having experienced to suggest that there was any deviation from the normal pattern, where you have a dysplastic hip, which goes on to develop osteoarthritis, followed by degeneration.

[499] Viewed in the light of these points in the opinions of Dr. Dunbar and Dr. Gross, the history and chronology of Ms. McIntosh's circumstances, hip condition and symptoms, support a degenerative cause.

[500] At approximately the six month point in her pregnancy for Burke, Ms. McIntosh started retaining a lot of water. In February 2000, towards the end of her pregnancy, she gained approximately 25 pounds in approximately four weeks. It was mostly water and was throughout her body. Any problems with the hip that would

have developed before the delivery would have been lost in this environment of fluid retention and waddling during pregnancy.

[501] She was on modified bed rest for the last four to six weeks of her pregnancy. She was at home. She had to rest a couple of hours per day to be on the safe side. While she was on bed rest and extremely swollen due to fluid retention, she would not have engaged in her usual physical activities. Therefore, any symptoms emerging from degenerative changes during that period would be less likely to be detected.

[502] Ms. McIntosh's pregnancy, excessive weight gain and swelling would have put her already dysplastic hip at further risk of developing degenerative conditions because of the additional stresses on it. Dr. Dunbar noted more rapid deterioration at a later stage than expected. That indicates that Ms. McIntosh likely experienced more rapid degeneration than the usual. If her hip conditions were caused by degeneration she would not be able to say when they occurred. She would only identify the problem when the symptoms emerged fully. That would explain her inability to pinpoint the problem initially, continuing to think it would get better, and not seeing a specialist until her father referred her to Dr. Stanish in July 2001.

[503] It would explain why she would be unable to distinguish the problems developing in her hip from the effects of the caesarean section. After her discharge from the hospital she wasn't really thinking there was anything unusual. She thought what she felt was simply part of the usual soreness you would feel as part of a recovery from the caesarean section.

[504] Ms. McIntosh became concerned when she started to feel pain more on one side, because she thought she had an infection in the caesarean incision. She saw Dr. Andrea on April 21, 2000. He observed an area of erythema and induration. He wondered whether it might be a reaction to the suture material and prescribed medication. When the pain started to disappear and she didn't feel it was everywhere, she started to move around. She noticed that when she would walk for a short distance, she felt her left leg was heavy. It started to get really tired. She had to lift it. She noticed, when going upstairs, that she had to use the railing and go up one step at a time and she would take a right step and lift her left foot up. This was from approximately 1 to 1.5 weeks after she went home. These circumstances are more indicative of the emergence of symptoms of degenerative damage than the detection of symptoms of damage that would have been caused by a sudden traumatic injury.

[505] She began experiencing symptoms which included an audible clicking, pain during activity and a limp. They were all symptoms which Dr. Dunbar agreed would be experienced by someone with hip dysplasia who developed osteoarthritis.

[506] Dr. Andrea charted that she had full range of motion on April 6, 2000. Dr. Stanish reported she had normal range of motion on November 30, 2000. Dr. Dunbar reported that, on July 16, 2001, she had painful range of motion and osteochondral fragments in her hip.

[507] After the arthroscopic surgery in October 2005 her range of motion was completely restored and the clicking was gone.

[508] Therefore, the diminished range of motion was, more likely than not, due to something which occurred between April 6, 2000 and July 16, 2001, not on March 23, 2000, during the pushing phase. More likely than not, the improved range of

motion resulted from the removal of the fragments and/or the repair of the labral tear. Therefore, more likely than not, those arose at some point after April 6, 2000.

[509] Similarly, whatever condition produced the clicking arose at some point after the delivery and was rectified by the scope.

[510] The arthroscopic surgery on her left hip in October of 2005 revealed a lot of arthritis in her hip. I accept Dr. Gross' opinion that: when you have osteoarthritis, spurs grow out on the sides of the head of the femur and can abrade the ligament teres with normal day-to-day movement; this can cause a partial tear which the patient would not know has happened; and, you often see a torn ligament teres in an osteoarthritic hip. The ambulatory care chart note written by Dr. Stanish, further to a visit from Ms. McIntosh on January 4, 2001, indicates that an x-ray of the hip "revealed a calcific density about on the medial side of the femoral neck". Dr. Gross indicated that could be a bone spur. There was no evidence from Dr. Dunbar or anyone else that Ms. McIntosh had no bone spurs. The osteoarthritis finding during the scope and the calcific density revealed on the x-ray, along with Ms. McIntosh not

having noted when the tear occurred, are more supportive of a degenerative cause than a traumatic cause.

[511] These points, in my view, establish that Ms. McIntosh's hip condition is more likely to have been caused by her having hip dysplasia, developing osteoarthritis, and experiencing the normal degeneration associated with it, than to have been caused by a traumatic injury during attempted vaginal delivery.

[512] In my view, Ms. McIntosh has not shown, on a balance of probabilities, that her hip condition and degeneration would not have occurred when it did but for the way her legs were handled during attempted vaginal delivery.

3. DAMAGES

[513] Given my conclusion on the issues of standard of care and causation, it is unnecessary for me to assess damages.

CONCLUSION

[514] For the reasons noted above, in my view, Ms. McIntosh has failed to establish, on a balance of probabilities, that the way her leg was handled during attempted vaginal delivery breached the applicable standard of care and caused her hip condition and degeneration. Therefore, her action is dismissed.

[515] If the parties are unable to agree on costs, I will determine that issue after receiving written submissions from the parties.

J.