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May 24, 2019

Mr. Scott Burden
MacGillivray Injury and Insurance Law
5777 West Street
Halifax, NS
B3K 1H9

Re:	Temple, David
Date of Birth:	January 18, 1973
Date of Accident:	March 3, 2009
Date of Assessment:	May 22, 2019

Dear Mr. Burden,

Thank you for your request to provide an Independent Pain Medicine Assessment on your client, Mr. David Temple.

PREAMBLE:

This is to certify that I, Dr. Kevin Smith, am a licensed medical practitioner in the Provinces of Ontario (72430), Nova Scotia (017029) and New Brunswick (08606). I am a specialist in Anesthesiology by virtue of a fellowship with the Royal College of Physicians and Surgeons of Canada. I obtained my medical degree at the University of Calgary in 1998 and completed specialty training in Anesthesiology at McMaster University in 2003. Following the first 13 years

of a mixed practice in hospital-based General Anesthesiology and Acute and Chronic Pain Management, I have since dedicated most of my practice to Chronic Pain Management. I have assessed and treated thousands of patients with a wide range and complexity of chronic pain conditions, with predominance for chronic spinal pain and neuropathic pain conditions, including neuropathies, Complex Regional Pain Syndrome (CRPS) and Persistent Post-Surgical Pain (PPSP). I dedicate 60-80% of my practice towards clinical care and 20-40% towards administrative, medical leadership and medico-legal assessment. I have been qualified as an expert in anesthesiology and chronic pain by Ontario courts.

This third party assessment was performed at the Aberdeen Hospital, Room B202, 835 East River Road, New Glasgow, NS, B2H 3S6.

INSTRUCTIONS PROVIDED:

I have been instructed to review the documentation forwarded to me, assess Mr. Temple, and provide a detailed report summarizing my findings and opinion.

NATURE OF OPINION SOUGHT:

I have been asked to perform this assessment specifically to address the issues of diagnosis, prognosis and disability or impairment as they relate to the injury on the indicated date of loss.

CONSENT:

Prior to the assessment, I explained my role as an independent assessor rather than a treating physician, and that my obligation was to the court. Mr. Temple understood the nature and purpose of this independent medical evaluation. Consent for release of this report was obtained.

A copy of CV is attached.

ASSESSMENT:

This assessment is based solely upon information provided in the supplied documentation, Mr. Temple's personal report and today's assessment. If there have been distortions or inaccuracies in Mr. Temple's reporting, diagnostic impressions and conclusions could be altered.

The history outlined below was relayed to me during this assessment and supplemented by information from the documentation. The documentation provided was also reviewed and is listed in the appendix.

Mr. Temple has been advised that upon request a copy of this report can be forwarded by counsel to the primary family physician to consider any medical recommendations provided in this assessment.

Please note that the term **possible** in this report is referring to an anticipated outcome or result of less than 50% and the term **probable** is referring to an anticipated outcome or result of greater than 50%. The term **potential** is referring to an uncertain outcome or result, such as a differential diagnosis yet to be confirmed.

HISTORY OF PRESENT INJURY AND TREATMENT COURSE:

Mr. Temple attended the assessment with his wife, Kelly.

Mr. Temple is a 46 year-old right-handed man who was involved in a motor vehicle accident on March 3, 2009, at which time he was 36 years old. He was a pedestrian that was struck by a vehicle while working with the City of Corner Brook. He was called to fill a pothole in the road and was wearing his helmet and safety clothing. As the sun was setting, it was not yet dark – he recalled seeing a light than was struck and thrown perhaps 20-25 feet. His colleague was also struck by the vehicle.

He lost consciousness for a period of time and woke on his stomach, looking at his colleague on the ground near the vehicle. His boots had been thrown off. He tried crawling and believes he was assisted to the side of the road by someone. A bystander happened to be a nurse and came to help. He recalled calling a friend the wrong name. Police and EMS attended the scene but was delayed about 45 minutes while they were attending to other calls.

He was taken by ambulance to the Western Memorial Regional Hospital where he reportedly vomited. He reported having bleeding from his ears and from under his tongue. He was sent for the following investigations:

- March 3, 2009: X-Ray Report of Cervical Spine, Left shoulder and Right femur [Page #32]:

  "Cervical Spine: Cross table lateral, cross table swimmer's, AP and open mouth odontoid views of the cervical spine are provided. Visualization is only afforded of the upper cervical spine from the skull base down to C6. The visualized ***cervical spine is normal****. The prevertebral soft tissues are unremarkable. There is no fracture or listhesis. Allowing for the limitations of this study no traumatic injury is identified. Clinical caution is recommended.*

  Left Shoulder: No bony or joint abnormality is identified involving the left shoulder. There is no fracture or dislocation.

  Right Femur: The right femur is unremarkable with no evidence of fracture. The hip and knee are preserved."

He was discharged home. The next day, his union representative visited him at home and informed his foreman of Mr. Temple's condition, which was reportedly confused and "out of it" according to his wife. The foreman called an ambulance to bring him back to hospital, where he remained for three days.

While in hospital, the following investigations were completed:

- March 5, 2009: X-Ray Report of Right Knee, Right Tibia/Fibula, Left Femur, Left Knee, Left Tibia/Fibula and Left Ankle/Foot [Page #34]

"Right Knee: Comparison is made with a previous study dated March 3, 2009. No bony or joint abnormality is identified involving the right knee. The joint space is preserved. No effusion is seen.

Right tibia/fibula: No bony or joint abnormality is identified. There is no evidence of fracture. The soft tissues are unremarkable. At the ankle, the mortise is congruent.

Left femur: The hip joint is preserved. The left femur is otherwise unremarkable with no evidence of fracture.

Left knee: The joint space is preserved. There is no evidence of fracture or dislocation. No effusion is seen.

Left tibia/fibula: No bony or joint abnormality is identified. There is no evidence of fracture. The regional soft tissues are normal.

***Left ankle/foot**: The ankle mortise is congruent. There is no evidence of fracture. The **left foot is normal** with no traumatic injury identified."*

- March 6, 2009: Ultrasound Report of Lower Limb [Page #33]:

"Findings: Levels between the right common femoral vein and popliteal trifurcation demonstrate normal compressibility and flow augmentation. No sonographic evidence of DVT within the right lower limb."

Mr. Temple visited his Family Physician, Dr. Peter Callahan, on March 16, 2009, who noted the following:

*"History: **Recheck for gout**. Indocin prescription has run out. **Hasn't had any recent flareups** but finds that when he gets it, he needs the medication. Also see 8/10 report. Working as a laborer for the city of Corner Brook patching the pavement on March 3,*

2009. Was turning towards traffic that was approaching when he was ***hit on the right medial calf and left pretibial area with reports that he was thrown up on top of the car with a colleague.*** *The car then hit the back of their pickup truck that was parked 20 feet further up the road. He and his coworker or thrown off the car and he claims that he had* ***loss of consciousness****. States he woke up in a daze states that he was* ***wearing his helmet and safety equipment.*** *Seen in the emergency department with x-rays revealing no fractures. Was felt to have a* ***concussion****. Advised to take Advil or Tylenol. Seen back in hospital for pain control two days later and was admitted for pain control and early mobilization. Further x-rays revealed no fractures. Subjective: Patient Complaints: Currently he* ***complains of tightness and tenderness in the right sternocleidomastoid with restrictions and cervical rotation. Has some pain in the left shoulder area. Head skin abrasions left posterior thoracic which have healed. Complains of pain in the right proximal thigh with elevation of the right hip. Bruising in the right thigh and right medial calf with bruising extensively left pretibial in the left lateral ankle. Pain with a pulling sensation in the left lateral malleolar area. Headaches with a tender sensation in the posterior occipital area but no nausea vomiting or visual change****. Has been mobilizing very slowly at home with* ***difficulties with most activities of daily living****. Can't completely dress himself. Difficult to go to the washroom. Difficult to sit stand. Physical Exam: Positive Findings:* ***Tender on palpation right sternocleidomastoid. Reduce cervical range of motion approximately 25% of normal bilaterally. Shoulders full active external/internal rotation to 90 degrees with full flexion bilaterally to 160 degrees in abduction bilateral to 180 degrees. full flexion-extension knees and hips. Internal/external rotation hips normal bilaterally. Tenderness on palpation left lateral malleolus with complete range of motion dorsi and plantar flexion bilaterally. No neurological deficits bilaterally. Yellow bruising left pretibial and right medial calf with tenderness on palpation right medial calf.*** *No defect in the muscle with power testing."*

He was reportedly picking glass from his head for weeks following the accident.

After visiting with Dr. Fenwick for a follow-up of his lungs (i.e. related to sarcoidosis, booked prior to the accident), he was sent urgently for further investigations, which were completed on April 9, 2009 at Western Memorial Regional Hospital:

- April 9, 2009: Whole Body Bone Scan [Page #46]

  *"Focal **calvarial uptake is identified involving the left parietal region which measures approximately 2cm in diameter**. The appearance would be atypical for a traumatic fracture and it is posterosuperior to the mastoid air cells. Dedicated plain films are suggested. Ultimately, CT may be necessary. Along the **left anterior rib cage, focal uptake** is identified involving three contiguous rib ends, **likely ribs 4,5 and 6**. This could be related to a **simple costochondritis but could be trauma related**. Chest x-ray was not performed in March 2009 at the time of trauma. **Scattered uptake is noted involving the left ankle and mid foot. The mid foot uptake is predominantly seen laterally at the level of the cuneiforms**. No traumatic injury was identified involving the left foot on previous X-rays. Repeat plain films are recommended.*

  *Opinion: **Focal areas of abnormal uptake are identified involving the left calvarium, left anterior rib cage, and left ankle/mid foot.** Dedicated skull x-rays were performed today- please refer to that report. Dedicated left rib views and left foot views are suggested."*

- April 9, 2009: X-Ray Report of Left Ankle [Page #48]

  *"**No bony or joint abnormality is identified involving the left ankle**. The ankle mortise is congruent."*

- April 9, 2009: X-Ray Report of Skull [Page #49]

  *"**No bony abnormality is identified to explain the left parietal bone scan uptake**. There is no obvious traumatic injury. The paranasal sinuses are normally pneumatized. Given the negative plain film study, CT head is recommended. The abnormal uptake could*

correlate with a meningioma and therefore a contrast enhanced study should be performed."

He returned on April 21, 2009 for a CT Scan of the head, which reported the following: [Page #50]

"Findings: The midline structures are unremarkable. In the left basal ganglion, there is a well-defined tiny hypodensity measuring 3 mm which does not demonstrate enhancement. Given the patient's age, this likely represents a prominent perivascular space. There is no evidence of hydrocephalus, hemorrhage, or acute infarct. Grey white matter differentiation is otherwise unremarkable. There are no abnormal areas of enhancement. No mass lesion is demonstrated.

Interpretation: ***Normal examination****."*

After the first month of recovery from his acute injuries, he recalled having persistent pain of the neck, back, hips and radiation to the left knee and left ankle. He reported that his left foot was initially purple and swollen on the lateral side between the ankle and baby toe, which resolved over several weeks but continues to flare and appear red periodically when he walks on an uneven surface.

He developed hypervigilance, anxiety, sensitivity to loud noises and severe mood changes within 6-8 weeks of the accident, which was confirmed by his wife. He developed sleep disruption and nightmares almost immediately.

He started light physiotherapy and massage perhaps approximately one month after the accident and continued to attend approximately two years, reporting gradual benefit with intermittent flare-ups. He found temporary relaxation with massage therapy. He has returned periodically for physiotherapy and/or massage for flare-ups. He last attended in April 2019, with a focus on his right knee injury (see below). He has developed recurrent swelling of the right knee as discussed below.

Psychological counseling was initiated after meeting November 28, 2012, as summarized below, and continues approximately monthly with Dr. Steve Pinsent. He clarified that prior to that, he tried to access counselling through EAP perhaps 6 months post-accident but found it unhelpful.

Subsequent chronological medical care is summarized below:

- June 16, 2009 [Dr. Peter Callahan, Family Physician, Page #68]: *"**Cervical range of motion reveals 80% flexion with 70% of normal extension and rotation 60% of normal to left and 80% of normal to the right. Left ankle dorsiflexion approximately 50% of normal and plantar flexion approximately 60% of normal with restrictions in inversion and eversion by approximately 50%. Paraspinal spasm in the cervical area from C4 to the occipital area. Tender to palpate**."*

- July 16, 2009 [Dr. Peter Callahan, Family Physician, Page #74]: *"History: **Has flareup frequently with lifting more than 30 pounds**. **Upper back with spasm to the cervical region. Also, low back with frequent bending over.** Some difficulties squatting with the **left ankle with persistent sharp pain in the lateral aspect**. Using heat and range of motion exercises. Has **lost weight and is trying to do core strengthening exercises. Massage therapy and physiotherapy ongoing**. Feels it is getting excessive number of phone calls from the insurance company of the person who struck him with the car. Has redirected as best he can to the lawyer. Patient Complaints: Pain in the left lateral neck area into the shoulder. Difficulties with right lateral bend. No paresthesias. Frustrated with limitations at work and coworkers are not completely understanding."*

- August 18, 2009 [Dr. Peter Callahan, Family Physician, Page #79]: *"History: MVA was March 3. Still doing passive modalities of treatment including physiotherapy and massage. Actively walking and doing some stretching and conditioning exercises at home as well. **Work still restricted to modified duty**. Uses good back care to bend over however has difficulties with left ankle limited flexion. **Complains of spasm and pain in the low back in addition to the right parathoracic area into the right neck back of the head with***

headaches in front. Pain with restrictions in dorsiflexion left ankle. Sharp pain in the left lateral foot with eversion and inversion attempts.*"*

- December 7, 2009 [Dr. Peter Callahan, Family Physician, Page #95]: *"History:* ***Complains of insomnia with increased pain in the left shoulder, central low back, left knee and left foot.*** *Doing conditioning exercises with physiotherapy. Has cut down the consumption of soft drinks. No current calorie counting. No radicular pain.* ***Difficulties to tolerate anything more than moderate activities with bending lilting or stooping****, Physical Exam: Positive Findings: Shoulders full range of motion with tenderness in the rhomboid and Trapezius group on the left. Central lumbar tenderness however flexion fingertips 1 foot from the floor and lateral bending and rotation approximately 75% of normal. Straight leg raising 70 degrees bilaterally with no nerve root tension signs. Neurovascular exam intact. Left ankle dorsiflexion to neutral at 90 degrees with plantar flexion 20 degrees.* ***Some swelling over the base of the left fourth and fifth metatarsals. Tenderness In the fifth metatarsal area.****"*

- April 7, 2010 [Dr. Peter Callahan, Family Physician, Page #110]: *"History: Recheck for MVA related Injuries. Still attending massage therapy as well as physiotherapy,* ***Complains of daily ongoing symptoms with intermittent flareups on a daily to weekly basis. Pain and swelling in the left lateral foot and ankle with stiffness in the mornings. Progressive symptoms worse with standing. Sharp shooting pain in the lateral calcaneus area to the fifth metatarsal base two to 3 days per week****. Some relief with stretching of the Achilles area.* ***Difficulties climbing stairs or using a ladder****. Complains of* ***constant aching pain in the lumbar area with tightness and spasms and radiation to the left buttock****. Daily flareups that are not necessarily related to activity with* ***left lumbar sharp lancinating pain with radiation to the lateral thigh occasionally down to the left lateral foot. Occasional paresthesias in the left lateral foot into the fifth toe area****. No weakness but has continued difficulties with postures involving flexion, squatting, bending or any lifting more than 30 to 40 pounds.* ***Needs frequent rest breaks even for light activities****. Low back pain severity 6 out of 10 on a usual basis with flareups and sharp pain 10 out of 10.* ***Straight leg raising 60 degrees bilaterally in sitting and lying positions with negative nerve root tension signs.***

Neurological examination of the lower extremities reveals plus 3 bilateral deep tendon reflexes with power and sensory exams normal. Palpation reveals tenderness and spasm in the paravertebral muscle groups from approximately L2 to S1. ***There is tenderness over the left upper buttock area and including the SI area****. Mr. Temple also complains of* ***neck tightness and stiffness with constant aching pain*** *approximately 2 out of 10 severities. There is* ***radiation of discomfort from the base of the neck bilaterally to the occipital area****. There are pressure throbbing-type headaches on daily basis. Pain also radiates to the* ***left posterior shoulder*** *with occasional spasm. Daily activities involving work overhead reaching up and difficulties with left shoulder. Difficult to look overhead. 5/10 discomfort with spasms. Cervical range of motion reveals flexion 80% of normal, extension 75% of normal, rotation 50% of normal to the right 75% to the left, lateral bending 50% of normal bilaterally. Shoulder range of motion reveals abduction right 170 degrees, left 160 degrees. Flexion right 180 degrees, left 140 degrees. Extension right 40 degrees left 40 degrees. Internal Rotation 70 degrees right 60 degrees left, external rotation 80 degrees bilaterally. Palpation of the cervical area reveals tenderness and spasm in the left paravertebral muscles from C1 to C7. There is also tenderness and spasm in the left Trapezius, rhomboid and supraspinatus area."*

- August 12, 2010 [Dr. Peter Callahan, Family Physician, Page #130]: *"History:* ***Ongoing left knee pain but recent flareup of left lumbar pain with radiation to the left lateral foot. Occasional paresthesias. Still intolerant of frequent lifting bending or twisting****. We do straight leg raising on the left and her root tension signs, continuation soft touch in lateral foot slightly reduced power in dorsiflexion.* ***L5-S1 prolapse clinically suspected however x-ray relatively normal.*** *Subjective: Patient Complaints: No change in bowel function. Physical Exam: Positive Findings:* ***Tenderness in the left S1 area. Limited straight leg raising 60° on the right and 30° on the left with positive nerve root tension signs on the left,*** *Questionable sensory continuation left lateral foot. Power slightly less at +4 on the left. Dorsiflexion. Deep tendon reflexes equal +3. Lumbar forward flexion fingertips at the patella bilaterally****. Prescription Amitriptyline 25 mg QHS, referral to Dr. Lewis ?nn root irritation L5-S1****."*

- September 2, 2010: Clinical Note by Dr. Brendan Lewis, Orthopedic Surgeon [Page #1]

  "Impression: ***At the moment the symptoms in his back are mechanical in origin with no objective evidence of any neurogenic dysfunction, spinal cord pathology, disc herniation or nerve root entrapment****. He has a significant protuberant abdomen and this I believe is causing some aggravation in his lower back. I explained all of this to this gentleman and he indicated that he had a protuberant abdomen all of his life and doesn't feel that this is a contributing factor. However, either way around there is no indication here for surgical intervention. Going program would be my recommendation."*

- January 4, 2011 Physical Rehab Report by Ms. Deanne Costello, Massage Therapists [Page #1]

  "I have been ***treating Mr. Temple since March 30, 2009****. Mr. Temple was involved in a MVA / pedestrian accident on March 3rd 2009. Mr. Temple was referred to me by Dr. Callahan and his Physiotherapist Cyril Walsh. On my initial subjective assessment of Mr. Temple his* ***primary concerns were his lower back, neck and ankle****. He complained of "spinal pain" and "stiffness" in his lower back. Mr. Temple also mentioned an increase in* ***headaches****, which were becoming very "annoying". On my initial objective assessment of Mr. Temple, I found that his spinal ROM was limited in all directions especially lumbar flexion and thoracic extension. His* ***ankle ROM was very painful*** *when brought to end range. On palpation Mr. Temple had multiple trigger points in his suboccipitals, upper traps, rhomboids, thoracic erectors, QL's, glute and piriformis muscles. All neurological tests were negative but strength tests were generally weak. On my most recent subjective assessment of Mr. Temple he* ***continued to complain of the same back, neck and ankle pain but it had faded slightly****. He explained that he experiences* ***pain that "shoots down his leg and all the way to his toes"****. He said he feels as though the joints in his spine are "seized" or "locked up". Mr. Temple constantly has* ***trouble sleeping*** *due to not being able to get comfortable in bed. He also mentioned that when the weather is damp, he feels like there is "an aching in his bones". He still experiences headaches and feels as though they "shoot right up to the top of his head". However, he explains that his* ***headaches have***

***decreased somewhat**. Mr. Temple **can work and participate in activities but if he even slightly over does it, he "pays for it the next few days".** He added that he is getting very frustrated with this long rehabilitation. On my most recent objective assessment of Mr. Temple, his spinal ROM continues to be limited. He continues to have multiple active trigger points in his upper traps, thoracic erectors and glute and piriformis muscles. I have noticed that during treatment Mr. Temple is constantly moving around on the table mostly his neck and feet. I have been treating Mr. Temple with Swedish massage techniques, PR ROM, PR stretches, joint mobilizations, heat and trigger point therapy. He can usually tolerate an aggressive treatment unless he is having a flare up that day. It seems that Mr. Temple is **progressing very slowly with his rehabilitation**. I do see some improvements when he attends therapy on a regular basis. I believe that if he committed himself to his physiotherapy exercises, he would see more improvements. Mr. Temple needs to focus on strengthening and conditioning. I feel that he should also continue massage therapy because it does assist him in coping with the pain and discomfort from his exercise program and his daily activities."*

- March 14, 2011 [Dr. Peter Callahan, Family Physician, Page #143]: *"History: **Pressure at work** w warmed pavement patch compound, 35 kg, 22 kg. Difficulty standing w flagging w longer work. **Frequent shoveling and lifting, bending. Flare up of low back pain w some radn to leg. Some stress emotionally** due to past MVA when hit by car on road. Safety is high on list and need for flags/signage. **Not always feeling safe**. Central lower back pressure w sharp pain to LSI area. Difficulty to bend/lift. Physical Exam: Positive Findings: forward LS flexion FT 6 inch to floor. ext 10 deg. lat bend 50%. SLR L 70 deg w pas hamstring. R 70 deg . Sensory N, power +5. dtrs +3 bilat. spasm paravertebral."*

- May 16, 2011 [Dr. Peter Callahan, Family Physician, Page #146]: *"History: **Still Pain R achilles but able walk normal and min sx on steps R heel.** Pain if stretch w R Dorsiflex. Work, scraping rd w shovel, stooping for garbage, was using R leg to spare L lumbar and L ankle pain from past accident. **Occ flare L lumbar w sharp pain, L lat foot pain w incr use**. Occ neck spasm w sudden pain for few minutes. No paresthesias or weakness UE or LE, L. Weight: 270 LBS (122.47 KG) Subjective: **Patient Complaints: Still having***

difficulties bending and lifting at home. Difficult Washing clothes. Pain with any sustained postures washing dishes.*"*

- December 16, 2011 [Dr. Peter Callahan, Family Physician, Page #151]: *"History:* ***Continues to have intermittent pain in the left lumbar area radiating down the left leg. Seems to be worse with prolonged sitting or sit stand****. No numbness or tingling. Has a routine of stretching every morning that seems to relieve some of the spasm. 3-4 days per week has several hours of increased spasm and impairment in function with the need to lie down and use heat.* ***Worse in the week if working in the heavy equipment at the city****. No recent physiotherapy however a strengthening program. Core stability exercises. Seems to give some relief of discomfort.* ***Sleep is interrupted****. Requires a melena most nights. Still waking frequently.* ***Significant difficulties coping with driving at work with the larger trucks with a sense of nervousness and anticipation of a possible accident****. Feels is related to being struck by the car. Cannot allow himself to be involved in slight work in traffic.* ***Unable to focus. Sense of panic****. Physical Exam:* ***Positive Findings: Significant tenderness on palpation of the left lumbar region. Vertebral muscle spasm from T10-L4. Restrictions and forward flexion with fingertips to the mid tibia bilaterally. Straight leg raising 60° bilaterally with no nerve root tension signs.****"*

- December 30, 2011: Letter by Ms. Jennifer Veitch, Physiotherapist [Page #1]

  "I initially assessed David Temple on January 21, 2010. He had previously been under the care of Cyril Walsh, Physiotherapist and was transferred to my caseload on January 21, 2010. I have included a copy of the initial assessment from Mr. Walsh, dated November 26, 2009. As well, to quote Mr. Walsh's clinical notes to me of January 14, 2010 which would be the last time that Mr. Walsh treated this client"++ ***poor compliance****. I see him 1 time per 2 weeks secondary to cancellations. I have advised him ++ of the importance of rehab and general health. Please continue to do the same". At the time of my assessment on January 21, 2010, Mr. Temple was reporting* ***left side neck pain with suboccipital headaches occurring daily, aggravated by lifting and reaching, alleviated with rest****. He denied any referral to the upper extremities. Mr. Temple also reported* ***low back pain***

aggravated by bending and lifting. *The treatment plan suggested for Mr. Temple following his initial assessment included modalities for pain such as moist heat, manual mobilizations, soft tissue release techniques as well as exercises for strength and conditioning. I* ***recommended attendance of two to three times per week***. *Since his initial assessment of January 21, 2010 up to and including September 13, 2011 I have seen Mr. Temple 46 times in that 20 month period. I have included as an attachment to this letter the dates of his attendance. At his most recent appointment of September 13, 2011 Mr. Temple was reporting* ***ongoing headaches as well as left side buttock pain that would refer as far as the left ankle***. *We had trialed some manual traction in sessions prior to this and he reported that this was helpful in reducing his symptoms. There were multiple active trigger points through the left buttock, particularly through the left piriformis. Through the course of treatment we also trialed acupuncture and discussed relaxation techniques in addition to the above mentioned treatment plan. I received a telephone call from Mr. Temple in December of 2011 indicating that at his most recent appointment with his family physician, Dr. Peter Callahan, it was recommended to Mr. Temple that he continue to attend Physiotherapy on an "as needed basis". There is absolutely no doubt that the injuries sustained by Mr. Temple in his pedestrian accident were severe and that the accident itself was tragic. From a rehabilitative perspective however I find it difficult to comment on how far he may have recovered from his injuries had he been able to attend according to the original treatment planned outlined by both Mr. Walsh and myself. In that light it also makes it difficult to give an informed opinion on this patient's prognosis and need for further intervention. A formal* ***Functional Capacity Evaluation*** *completed by an independent source may answer some questions as to his current functional abilities in relation to his current employability and restrictions/abilities."*

- November 28, 2012 [Dr. Stephen Pinsent, Psychologist, Page #31]: *"The client attended at the request of his physician and with the knowledge of his lawyer. The client was in an accident almost three years ago in which he suffered physical injuries from which he has not recovered. He seems to have* ***developed post-traumatic stress disorder*** *as well. He presented several issues that are consistent with PTSD and related a number of experiences since his accident that are typical and consistent with reports from others who have been*

diagnosed with the disorder. The client described several situations that illustrated features of PTSD characteristics. The client has been troubled by his experiences because they are foreign to him and not similar to how he knew himself to be prior. He described a ***number of situations in which he noticed strong physiological and psychological reactions that were consistent with PTSD****. Anxiety provoking situations and elevations in responses were also noted and connected with specific triggers. The client wants to return to his former self, someone with little fear and who enjoyed exciting activities. He will continue to attend for assessment and intervention."*

- April 10, 2013 [Dr. Peter Callahan, Page #79]: *"History:* ***Flareup of gout 3 times in the past 3 months.*** *Probably diet. No further supply of Indocin. Not quite settled.* ***Left foot pain****. Redness decreased. Stopped allopurinol several months ago. Physical Exam: Positive Findings:* ***Tenderness and redness the left great toe****. Antalgic gait."*

- November 18, 2013: Clinical Note by Dr. Peter Callahan, Family Physician [Page #1]

  "Summary: ***Current diagnosis includes MSK injury involving neck, upper back, lower back and left ankle. There is sufficient evidence of recurrent symptoms that worsen with increasing physical demands.*** *Good back care with pacing of activities, heat and rest are required. Although Mr. Temple has been* ***able to maintain employment at the city in the daytime and an independent business with lawncare in the evenings he still has to pace his activities.*** *Again, it is highly probable that ongoing symptoms are attributable to the motor vehicle accident. Although Mr. Temple has been* ***referred to a psychologist regarding possible PTSD****. I have no documentation of the psychologist's findings.* ***Anxiety and emotional issues again are attributable to the motor vehicle accident. Prognosis for full recovery is poor.*** *Mr. Temple is advised to maintain an active lifestyle and continue with stretching and conditioning exercises.* ***He must continue to work within the tolerances of his physical impairments. Ongoing disability is expected****. Physio and massage may be required, possibly chiropractor. At this point I do not expect the need for any surgical intervention with soft tissue injury and no evidence of any neurological injury.* ***Over time it's quite possible that Mr. Temple will require reduced workhours with focus***

on light physical job requirements. This might require retraining and could prevent Mr. Temple from being competitive in the job market"

- November 20, 2013 [Dr. Peter Callahan, Page #75]: *"History: Ongoing low back, L foot tender w achy. Seeing Psychology w psychotx for PTSD related to past MVA. Overcautious, checks and rechecks locks, stove door. Can't drive close to traffic. Nervous walking on the sidewalk if any traffic. Sleep still difficult. Early morning waking. restless, dreams.* ***Recurrent flashback w bright lights bringing back memories of the car headlights*** *when was thrown up on the bonnet of the car on the MVA day. Physical Exam: Positive Findings: good eye contact, speech normal rate and vol. good insight."*

- November 28, 2013 [Dr. Stephen Pinsent, Psychologist, Page #15]: *"****Since the client's accident, he has developed significant anxiety symptoms and characteristics of Post-Traumatic Stress Disorder****. Formal assessment with him, using appropriate psychometric measures and the client's self-report have determined that the diagnosis of PTSD is appropriate. He experiences a number of the classic symptoms of the disorder including re-experiencing in the form of nightmares, dreams and physical reactions when reminded of the accident. He also experiences avoidance in the form of finding it difficult to talk about the incident or the impact he's experiencing and feeling more distant from friends and acquaintances.* ***Hypervigilance*** *is also a problem as is expressed in his difficulty with sleep, concentration and being hyper alert. The client has attempted to continue working since coming back from the accident injuries. He has consistently had difficulty working in situations that remind him of his accident. He has a variety of triggers that stimulate recollection and result in intense psychological and physiological arousal both during waking and non-waking moments.* ***The client is being treated with cognitive behavior therapy, relaxation training and some hypnosis****. It is possible that EMDR (Eye Movement Desensitization and Reprocessing} may be used in future. He has experienced some improvement over the period of treatment time. Of significant loss for the client is the comfort and relaxed attitude he had about a number of activities, both work and recreational. He was* ***formerly the type of fellow who would take risks in some activities to enjoy himself and to push some limits in developing skills and abilities at work or***

enjoying recreational pursuits. The client has also slipped considerably back in his socializing with fellow employees and friends outside of work. He has also noted a significant protective attitude toward people who were close to him. The client's activities have been reduced because of the many triggers that seem to remind him of potentially dangerous situations*. With adjustments and considerations, the client has been able to return to work but has to be mindful and careful as to the activities he can take on with confidence. He has been able, and appropriately so, to be considered for jobs that are less likely to trigger an undesirable response. The client is* ***far more safety conscious*** *than he used to be so he finds it difficult when he's in a situation where safety procedures are less than ideal. This sometimes creates a bit of* ***frustration for some of his coworkers and supervisors.*** *The client is self-conscious about what other people think and feel about him. The climate in which he works has some people who may not be as understanding about his difficulties as would be preferred. This is likely because they have not experienced Mr. Temple's type or extent of accident and injury."*

- February 12, 2014 [Dr. Peter Callahan, Page #74]: *"History:* ***L gluteal/lumbar ache, had flare over Xmas w spasm to L knee. numbness. limp. Upper back ache w some headaches if spasm.*** *Driving w City at work, ace feeling panic if slippery, brakes skidding on ice. Tight and neck/back ache. Has to relax and use deep breathing practice. Some days at work overcautious and work is slowed down; some coworkers understanding of difficulty w safety issues not too compassionate. Seeing Psychology for lack sleep, PTSD sx, doing relaxation w music and systematic relaxation exercises. Hypervigilant. w senses very keen, trying to desensitive.* ***Frequent recheck of safety, i.e. oven, fireplace, checking the door if cat meows. Disrupting relationship w partner w difficulty sleeping****. Difficult to work night shifts w disruption of sleep. Physical Exam: Positive Findings: Tender paralumbar. SLR 70 deg bilat. Flex FT to one inch to floor. Sensory N. power +5. Tender LSI area whip flex 100 deg."*

- February 24, 2014 [Dr. Stephen Pinsent, Psychologist, Page #18]: *"Treatment Plan: Mr. Temple will continue in the care of his physician and this psychologist for the foreseeable future. A positive therapeutic relationship has already been established. The client will*

continue to engage in psychotherapy utilizing the approaches indicated in my last correspondence. Hypnosis will also be utilized to see if this approach can be of some assistance. It is anticipated the gentleman's treatment will continue for at least the next six months if not longer. Duration will be better determined based on success with current interventions and progress made over time. As stated in my last report, ***Mr. Temple is positively engaging in therapy. It is clear he is working very hard to try to return to his level of previous functioning and comfort****."*

- March 28, 2014 [Dr. Stephen Pinsent, Psychologist, Page #51]: *"The client attended and noted he continues to be* ***more hypervigilant at his work that he has been in the recent past due to a couple of recent small accidents that have rekindled some difficult thoughts, feelings and memories of a more serious incident a few years ago. He has noted that he is more irritable with people and quick to react,*** *often followed by feelings of guilt for having responded as quickly as he did. The client noted that his performance at work is being affected somewhat in that he is being again more cautious than he's been in some time.*

  The client continues to find it more challenging to do certain tasks at work when there is any perceived risk. He has had a few exchanges with people at work when he's felt that risk or when others are not doing things in as safer way as he believes they should be done and as I have been taught to do them. The client also noted that he continues to be concerned about how people view him. Some people are consider it while others can be insensitive to his concerns. It is understood that their lack of experience in certain matters contributes to their views. It is obviously impossible poor people to truly understand how a person might be affected by an event if they have not had similar experience themselves. However, the client would still want and expect that people would be more understanding. He realizes this will not be the case for everybody and that it really doesn't make sense to be. He recalls time before his accident when his own understanding and appreciation for the impact of a significant event to a person would not of been understood by him either."

- July 18, 2014 [Dr. Peter Callahan, Page #64]: *"History: 41-year-old with back issues,* ***stepped off curb and twisted L ankle, next day incr pain L lat malleolar w flex/ext****. Physical Exam: Positive Findings: L lat malleolar, post peroneal tendon area swollen w pain flex/ext/eversion. No heat? crepitus."*

- July 25, 2014 [Dr. Peter Callahan, Page #63]: *"History:* ***Work-related left ankle sprain with peroneal tendon swelling and tenderness. History of gout. Complaints of flareup of left great toe redness and tenderness. Started on colchicine right away.*** *Had pain with difficulties walking as a result of the great toe pain for approximately 48 hours. Feeling better now. Lateral ankle discomfort gradually decreasing with rest and elevation. Using ice. Physical Exam: Positive Findings: No erythema or tenderness of the right great toe. Swelling left posterior malleolar area laterally is resolved. Recently full range of motion left ankle."*

- April 23, 2015 [Dr. Stephen Pinsent, Psychologist, Page #60]: *"The client attended and noted that he continues to experience* ***elevated levels of posttraumatic stress symptoms since having been involved in the second incident in which he was injured****. Though the circumstances were less serious they left him experiencing higher levels of difficulty with relaxing and feeling comfortable around coworkers as well as in other situations. As far as coworkers are concerned the client notices he is less trusting of other people's judgment so he watches their behavior much more scrupulously than usual, always on the lookout for behavior that might be unsafe. He has also noticed noticing the sounds of traffic, especially the apparent increase in speed that vehicles are moving since the road conditions have gotten a bit better with the arrival of spring. The client also noted that his sleep is more disturbed then it was and that he seems to now hear everything in his environment and experience startle. The client indicated so spoke to the person driving machinery during the incident in which he was recently struck. He also spoke to some other people about care and caution when using some of that equipment including some management level people. He suggested to them that there needed to be a better communication system between people inside and outside of the work vehicle in certain situations. The client is relatively satisfied that he has spoken to the people he needed to*

inform. However, he did not inform supervisory staff about the details of the actual incident. He was advised to reconsider not telling as there may be some additional negative response to the incident to is already compromised situation. The client also conveyed that he is having some significant problems with his feet. There is some question as to whether this is related to the serious accident in which he was involved in a number of years ago. The medical investigation into this is ongoing. The client also indicated that he will be meeting with a lawyer from the firm handling his case sometime soon. The client and psychologist discussed some of the issues that needed to be raised related to time off for medical appointments, the impact of injuries that may be ongoing after any settlement, and, in general, ensuring that he will be looked after appropriately going forward."

- April 29, 2015 [Dr. Stephen Pinsent, Psychologist, Page #22]: *"Treatment Plan: Mr. Temple will continue in the care of his physician and this psychologist for the foreseeable future. It is anticipated the gentleman's treatment will continue for at least the next six months if not longer. As expected, duration will be determined based on success with current interventions and progress made over time. A positive therapeutic relationship continues to exist. The client will continue to engage in psychotherapy utilizing the approaches often used to treat the client's issues. There is a significant focus on teaching the client to relax as he* ***presents as a very stressed individual, not at all the way he believes he was prior to his accident."***

- May 21, 2015 [Dr. Peter Callahan, Page #55]: *"History: 42 yo male w h/o gout, no great toe swelling, knee not red lately.* ***Still intermittent pain and swelling L lat heel to 5th toe, worse w twist or step on gravel w instability. Sharp flares, swells, red. crp 10H, normal 8. RF neg.*** *Eating healthier, less evening snacks/meals. eats out less, healthy choices. Patient Complaints: Still CCC backpain to L lat ankle."*

- July 23, 2015 [Dr. Peter Callahan, Page #51]: *"History: 42-year-old city worker with pedestrian motor vehicle accident dating back to 2009.* ***Has had low back injuries with sciatic pain radiating to the left foot intermittently but persisting since that time. Any during movement can flareup the left back pain with radiation to the left lateral calf.***

Has also had a history of gout with usual gout in the left great toe. Treated for possible gout involving the lateral foot and ankle in recent years.

In the early months after the accident did have suspected strain to the left lateral foot at the base of the fifth metatarsal area into the lateral ankle. Early x-rays were negative. In more recent months complaints of persistent pain with instability on an irregular surface are working on an incline with pain flaring up in the left lateral ankle/lateral foot. Question of cuboid syndrome with repeat x-rays. June 30, 2015: x-ray report Foot: There is focal Irregularity of the contour of the dorsal/proximal aspect of the cuboid, at the calcaneocuboid, articulation, with suggestive a small ossific density in this region measuring 3 mm, best seen on the oblique radiograph. *There are no acute dislocations. There is mild osteoarthrosis of a few interphalangeal joints, most dated the third DIP joint. The bones are well aligned. There is a small Achilles tendon insertion enthesophyte. Note is made of an os peroneum. There is a bone island in the cuboid. The soft tissues are unremarkable. Impression: Normal radiographs of the left knee.* ***Suspected age indeterminate but interval development of fracture of the dorsal/proximal aspect of the cuboid, at the calcaneocuboid articulation. Discussed potential a avulsion fracture of the cuboid following the accident.*** *Subjective: Patient Complaints****: Still having lateral ankle and foot pain with irregular surfaces, inclines.*** *Stiffness in the morning. Regular stretching exercises and conditioning exercises for the lumbosacral spine.* ***Several days a week has left lumbar pain radiating into the left leg and has to pace activities****. Some days are better other's with avoidance of twisting or during activities. Physical Exam: Positive Findings: On examination of the left ankle has tenderness with the version and in version, plantar flexion 40°, dorsiflexion 10° with tenderness in the anterior cuboid calcaneal area. Also tender at the base of the left fourth and fifth metatarsal's."*

- September 28, 2015: Emergency Record by Western Memorial Regional Hospital [Page #29]

"Presenting Complaint: ***Struck by vehicle- Right knee and arm injury****."*

Mr. Temple clarified that he was at the bank and struck (i.e. “a nudge”) on the right hip/knee area by a vehicle that reversed accidentally. He was slightly pushed but did not fall. He felt shocked and wanted to return home. He was driven to work and spoke to the foreman, after which he went to hospital. He reported that he was emotionally triggered and developed an exacerbation of sleep disruption requiring more sleeping pills for perhaps one month, but did not sustain any new physical injuries or change in his pain complaints.

- October 7, 2015 [Dr. Peter Callahan, Page #47]: *“History: 42 y/o male.* ***Hit by car in parking lot Monday (Sep 28th), low speed, impacted right lateral knee, no injuries. Proceeding to have a panic attack and presented to emerge, discharged with rx Naproxen and Flexeril prn.*** *Describes long history of PTSD related to previous MVA. Has always suffered from some anxiety, racing thoughts, poor sleep, nausea, chest tightness secondary to racing thoughts (not activity related).* ***Currently feeling quite anxious, staying in house or garage most the time, pacing around, thoughts racing, very anxious about noises, nauseous, chest tightness when stressed. No SI/HI. +stress about returning to work, doesn't like being outside.*** *DR French as above, given Zoloft but not sure If needed. S Pinsent contacted, away for the week. Trying to practise relaxation techniques. Subjective: Patient Complaints: Still hypervigilance w sounds of cars, worry. Planning for emergency maneuvering w everyday driving and no slg safety Issues Immediately. Poor sleep, using zopiclone 1.5 tabs of Immovane. Dreams early am. Nightmares of headlight and grey car w past mva occ once or twice a month. no sig Increase since recent MVA. Emotional outbursts are nil, occ feeling down. Assistants running the Business. L foot issues due r/c, tender w Irregular surfaces, being very careful to not jar the L foot. occ sharp ache w twist. no clicking or snap lately.* ***Discussed Dr Croft for? Suspected age indeterminate but Interval development of fracture of the dorsal/proximal aspect of the cuboid, at the calcaneocuboid articulation. Physical Exam: Positive Findings: On examination of the left ankle has tenderness with the version and in version, plantar flexion 40°, dorsiflexion 10° with tenderness in the anterior cuboid calcaneal area. Also tender at the base of the left fourth and fifth metatarsal's.”***

- December 23, 2015 [Dr. Peter Callahan, Page #45]: *"History: Post situational stress disorder from previous motor vehicle accident followed by a local psychologist. Work-related with the original Injury.* ***Aggravation of symptoms in early October with a second incident with a motor vehicle with anxiety, racing thoughts, poor sleep, nausea, chest tightness secondary to racing thoughts (not activity related).*** *Currently feeling quite anxious, staying in house or garage most the time, pacing around, thoughts racing, very anxious about noises, nauseous, chest tightness when stressed. No SI/HI. +stress about returning to work, doesn't like being outside hypervigilance w sounds of cars, worry. Planning for emergency maneuvering w everyday driving and no sig safety issues immediately. Poor sleep, using zopiclone 1.5 tabs of Immovane. Dreams early am. Nightmares of headlight and grey car w past mva occ once or twice a month. No sig increase since recent MVA. Emotional outbursts are nil, occ feeling down. Assistants running the Business. when seen Oct 7th. Seeing S Pinsent, helping w anxiety, less edgy.* ***Still reacts w trust issues at work if new driver at work, on edge and snappy w emotions and speech to family. Worry about common everyday issues. Nervous and overthinks possible catastrophic events from very unlikely everyday driving, walking****. More restful sleep. still needs zopiclone. Home business close dn seasonal two weeks ago, not too busy w wind, quick clean ups. less stress. Min snow clearing now. Two employees laid off. Physical Exam: Positive Findings: still speech sl pressured, rapid. Reasonable insight but focus on poor outcomes. No delusions. Good eye contact, affect sl somber, mood congruent. Focus on work stress."*

- February 5, 2016: Consultation Note by Dr. Milton Parai, Orthopedic Surgeon [Page #41]

  "I saw David Temple in clinic today, February 5, 2016. He is here as per a referral made on February 1 regarding ***a slip and fall. He had some pain over his Achilles tendon at that time. This occurred at work. He reports today that basically he got out of a vehicle, at which time he slipped on the right-side causing injury to this region****. This was at his place of work.*

Examination of the lower extremity reveals pain at the Achilles tendon insertion. Thompson's test does show that the plantar flexion is created with squeezing of the calf. Distally he is neurovascularly intact but he does have some discomfort. He also states there is some dependent swelling that comes and goes with laying the foot down.

Assessment and plan: At this point, we are going to treat him with a ***sprain soft tissue injury protocol for his knee with physical therapy****. I will put him in a plantar flexion splint and we will characterize the Achilles tendon better with an ultrasound. I have advised him to call once this is done. He will be non-weightbearing with crutches. I have advised him to stay active and counselled him on the signs and symptoms of thromboembolic events. I have advised him to go to Emergency Department if something like this occurs. Otherwise I will see him back once the ultrasound is performed hopefully in the next week or so. They are happy with this treatment plan."*

- February 24, 2016 [Dr. Stephen Croft, Orthopedic Surgeon, Page #127]: *"I saw Mr. Temple back in clinic with regards to his left foot. As you are aware, he was referred with regards to his injury to the lateral border of his left foot. It was quite painful for him at the last visit with me. He would not let me examine.* ***He is back to work but unfortunately, he injured his Achilles tendon recently at work. It is the opposite side now giving him much grief.*** *He is continuing to use one crutch to off load the right side at this point. On review he is tender along his distal Achilles insertion on the right side. And he has some mild tenderness on the joint lines of his knee. He seems to be improving so he says from these points of view. It seems like he has an aspect of Achilles tendonitis with a potentially a partial musculus injury. He did have an ultrasound of his Achilles tendon which did not show any tear.* ***With regards to his left foot he remains lender around his calcaneal cuboid and cuboid 4th and 5lh metatarsal articulation*** *but he is obviously putting all of his weight through it now and seems to be doing reasonably well. At this point in time there is nothing I can offer him to essentially improve him more. I think he should continue with shoe wear modification, orthotics and activity as tolerated. He should try to get back to work if the right leg allows. Continue with activities as tolerated. I will see him on a pm basis."*

- April 29, 2016: Clinical Report by Dr. Milton Parai, Orthopedic Surgeons [Page #44]

  "Assessment and Plan: I think it is reasonable for him to ***consider a back to work assessment program*** *as discussed. I did advise him that if he does become symptomatic enough, surgical exploration is an option for him. For now he feels he would like to hold off on any surgical endeavor and try easing back at 4 hours a day with a day break between shifts. He is hoping that after a few weeks, he may be able to do 4 hours a day on a daily basis. The usual rest period i.e. time off and weekends should be also honored as well I believe this and we will see him back in six weeks time to see how he is coming along."*

- May 4, 2016 [Dr. Stephen Pinsent, Psychologist, Page #63]: *"The client attended and noted there have been several happenings since his last visit. The client is* ***off work with an injury to one of his feet. He may soon return to work on ease back. He noted an increase in irritability since being off work****. The work is somewhat distracting in a positive way. While off work, the client has the tendency to ponder past difficult times and worry more about how safe his family may be when they leave home. The client noted he is frustrated with his legal representation. They have been slow to get back to him and he is still not clear as to what they are actually trying to get for him. The client has to get his own business up and running. This is usually stressful in any event. There has been some pressure to hire his step-son. He may have preferred to hire someone outside the family. The client is not particularly confident in his family physician or specialist. There seems to be some focus in the wrong areas or with issues that are not primary."*

- October 3, 2016 [Dr. Peter Callahan, Page #38]: *"History: Complex L foot injury w prior work injury w MVA.* ***R Achilles/ meniscal injury since, rehabbing well Physio w work hardening, easeback. 6hr/d 3x/wk. some flare L foot w stretches for Achilles R, did same stretch on L, lat foot pain. has a small # fragment, Dr Croft suggested cont w even surfaces, avoid irreg surfaces****."*

- December 22, 2016 [Dr. Peter Callahan, Page #36]: *"History: **Somewhat upset recently, modified return to work following me and Achilles tendon injury with physiotherapy and the employer organizing job description.** Has had issues working on the loader plowing the roads as a result of previous motor vehicle accident pedestrian incident while working on the road himself. Still seeing psychology. Was previously cleared to work on the big sander, now only cleared on the small sander. This is resulted in **loss of income** with a two dollar fee differential for individuals who can work on all the equipment. There are some inconsistencies with the application of this fee differential with some individuals not able to complete all equipment operation however still seemingly getting the differential. Feels that this is unfair. Does have ongoing issues **with anxiety. Frequent waking at night with any increased noises, even if the cat meows. Wakes frequently if the wife snores, fearful of her not being able to breathe. Still hyper aware with driving. Still double checking stove, heaters, locked doors. Usually has monthly checkups with the psychologist.** Still does not feel comfortable working on the loaders. Also uncomfortable working doing cold patch unless there Is a truck parked behind him in one parked in front. Discussed further checkup with psychology to ascertain whether or not he may be cleared for all duties. This would of course also include the loader if the employer pushes it, might also have an exemption if they are understanding."*

- January 26, 2017 [Dr. Stephen Pinsent, Psychologist, Page #67]: *"The client attended and outlined some of his concern about how his **PTSD is affecting his job**. He believes he is perceived as being of less value and a bother in some ways. He also shows a strong concern for the opinions of others. He wants to be viewed as being "normal" but feels some people think otherwise. The client also appears to feel totally responsible for all of his behavior, including his reactions to perceived risk. The psychologist attempted to help the client realize that some of his reactions are not conscious and deliberate. He becomes aware of them in the act or afterward. The client also has the habit of berating himself for his responses, as if he was able to prevent it from happening. It would take a lot of work and experience to possibly change some of it. The client is also concerned about his status at work. There are levels and certifications he wants to have because of the skills he has or can learn. He believes he is being passed over for training and should be moving up the*

ladder at the pace of others. The client noted some experiences he had in which he felt anxious, had anticipatory negative thoughts, and then proceeded to do the requested work. As it happened, things went well. There was discussion about the brain's tendency to go to the negative predictions as a safety mechanism. This was presented as being involuntary, not purely chosen. The thoughts have to be worked with by using self-talk and doing things slowly until confidence and competence build. The client was informed about the psychologist's intention to write his lawyer about unpaid expenses and whether it was expected the matter might be settled soon."

- February 6, 2017 [Dr. Peter Callahan, Page #34]: *"History:* ***Still having Issues with the left leg pain and left foot pain. Intermittently has swelling and tenderness. Doesn't interfere with the ability to operate a motor vehicle or tractor.*** *Right knee meniscal tear his heels. Achilles is healed.* ***Has progress with physiotherapy. Return to work. Ongoing issues with anxiety especially if exposed as a person to traffic. Some hypervigilant behaviours at home with double checking safety issues****, still seeing psychology. Able to operate equipment with class 1 drivers license however would not be able to flag. Reviewed drivers license renewal. No driving if using Imovane."*

- March 17, 2017 [Dr. Stephen Croft, Orthopedic Surgeon, Page #137]: *"I saw Mr. Temple back in your referral for his left foot. As you know, he is a fellow who is quite active in the woods and throughout his life, he finds he gets an* ***occasional shooting pain on the lateral side of his foot which he describes around the sinus tarsi or calcaneocuboid joint****. I saw him previously and it seems as though he had an aspect of degenerative change there or an aspect of sinus tarsi syndrome. He is back today with similar type symptoms; however,* ***more infrequent now****. Twice it has occurred since he saw me. When it does occur it is painful; however, today he is quite asymptomatic. He just needs to watch where he is walking and continue with good footwear. Examination today reveals that he has physiologic alignment. He does have* ***very mild tenderness in his sinus tarsi and around his calcaneocuboid joint.*** *He does not have new x-rays completed but the ones from last year do not show any significant disease there. Ultimately, I do believe that Mr. Temple is experiencing and aspect of sinus tarsi syndrome. I think he is doing the right thing with*

shoewear modification, orthotics and bracing as needed. He should continue with these modalities. No great surgical option at this point.*"*

- August 17, 2017 [Dr. Peter Callahan, Page #29]: *"History: 44-year-old gentleman with* ***continued anxiety and hypervigilance****. When driving very aware of traffic around him, in fact witnessed a motor vehicle accident where one vehicle rear-ended another and sought coming approximately 10 seconds before it happened. Triggered with increased anxiety, increased breathing rate, fight or flight sympathetic output. Increased heart rate.* ***Continually checking stove at the house, checking windows and worried about possible burglary.*** *Recent concerns regarding possibility of the funeral home putting in a crematorium with potential noxious gases in his opinion. Has spoken with other people and other towns that have the men some people have sold their homes when it's in a residential area. Very concerned. Addressing the city Council. Discussed his previous sarcoid would make him no more prone to adverse outcome than the other citizen.* ***Has ongoing left low back pain also right lumbar pain with left foot discomfort. Very careful and ambulating on any uneven surfaces, has to were supportive footwear. Finds it difficult to go salmon fishing, needs a cane or another person for support. Very careful and has had no significant flare up of the left foot issue and some months.*** *Reviewed Dr. Croft's report of March 2017 where he was coping fairly well. Printed a copy of the report for the Legal review.* ***Usually monthly attendance with psychology, finds this helpful however still challenge to use coping strategies in the home when being triggered.*** *Deep breathing, relaxation, meditation, distraction. Nonetheless still triggered on a daily basis. Some agitation also from ongoing legal representation with four different lawyers, seven years later with no resolution or outcome.* ***Discussed recent assessment with orthopedics planning possible left foot surgery that was disrupted by right Achilles and knee injury,*** *once improve to the point where the left foot could be assessed again for possible surgery Dr. Croft was leaving the area and his letter indicates that he wouldn't advise surgical intervention at this time. Physical Exam: Positive Findings:* ***Looks very concerned, mood down, serious demeanour, speech normal rate with reduced volume. Good insight but thoughts focused on potential for injury, fear of loss. Wishes to have full function of the left foot and frustrated that surgery is not being planned****. Discussed limited number*

specialists that deal with this problem, Dr. Croft was one, Dr. Stone another with a very long wait list especially with local reassurances that surgical intervention might not be necessary. Discussed the need to live in harmony with current symptoms and pace activities. Definitely has a disability and loss. There may be some financial compensation and access to assistive devices, orthotic footwear, canes in the future after legal settlement. Discussed indeed there is a risk of premature arthritis in the foot and possibly back as a result of the injury. Further orthopedic surgeon referral may be necessary."

- September 25, 2017 [Dr. Peter Callahan, Page #28]: *"History:* ***Two days of L heel pain, awoke w red, tenderness.*** *Is the chronic injury side w past MVA, cuboid syn. flat footed, care w irreg surfaces? No slg. ladder work, no tiptoes. Physical Exam: Positive Findings: tender bilat post calcaneal area below insertion of Achilles, red, min swelling lat to calcaneous."*

- December 14, 2017 [Dr. Stephen Pinsent, Psychologist, Page #28]: *"Mr. Temple's life continues to be negatively affected by the trauma he has experienced as a result of the accident in which he was struck by a vehicle while on the job.* ***His ability to operate machinery and do things at work he used to do prior to the accident has been negatively affected. Attempts to use some equipment have been made with limited success and high levels of anxiety, lack of self-confidence, and concerns for harm done to others or himself. The client also avoids many previously enjoyed social and recreational activities, leading to less satisfaction with his quality of life, some relationship strain, limited job opportunities, and a view of the future with reduced enjoyment potential.*** *Mr. Temple's situation, though better in some ways from when he was initially injured, still leaves him with stubborn symptoms that continue to challenge him and will likely need treatment for some time to come."*

- January 9, 2018 [Dr. Peter Callahan, Page #28]: *"History:* ***Injury to R knee? 18 mo ago****. Improved to a plateau 9 mo ago. Still lifts R leg into truck after L. Over three months, R post pop fossa swollen, tender, past Baker's cyst, Felt tightness, release two months ago, Baker's cyst flattened, into R calf, settled over two weeks. Limp, pain w walking, slowly*

swelling post knee w pressure, relief w Naproxen. Home exercise program, getting back to Ball Hockey, quick walk, passing plays, not running, no plant and pivot w L foot. Some walking. Hard w winter, L foot unstable. Often overuse of R leg w L foot pain. Physical Exam: Positive Findings: ***R post knee small lat post bakers' cyst*** *w ext, nil w flex flex 120 deg, no ext lag. No collar lax, neg mcmurrays."*

- March 17, 2018: Emergency Record by Western Memorial Regional Hospital [Page #13]

  "Presenting Complaint: **Lower extremity injury**."

- March 17, 2018: X-Ray Report of Left Foot [Page #95]

  "Bone mineralization is generally preserved. The plantar arch is maintained. No bony or joint abnormality is identified. The soft tissues are unremarkable."

- June 6, 2018 [Dr. Peter Callahan, Page #20]: *"History;* ***Ongoing Issues with tenderness and swelling left lateral foot the cuboid area. Was assessed for orthopedic surgery by Dr. Croft however had further injury to the right knee and lower leg that required rehabilitation prior to consideration of surgical intervention****. Dr. Croft was leaving the area unable to follow-up. Complaints of* ***intermittent swelling tenderness, redness left lateral foot. Still very difficult to walk on uneven surfaces.*** *Better in a supporting boot, work mood Is best.*

  Additional PTSD type symptoms *from the motor vehicle collision when he was the pedestrian. Heightened concerns about various things such as turning off the stove, making sure the doors locked. On holiday the spring, Myrtle Beach than Toronto, hypervigilance with unfortunate there was an ice storm while he was In Toronto, 1200 collisions with the ice in an hour. Added to the stress. Reviewed visits in March related to injury at work, no previous workers compensation claim due to the motor vehicle related incident prior. Aggravation of symptoms with ankle sprain. Will clarify the time of the incident, just prior*

to March 13. Back to work April 2. Physical Exam: Positive Findings: No antalgic gait pattern left lateral foot tender with decreased range of motion."

- June 7, 2018 [Dr. Stephen Pinsent, Psychologist, Page #74]: *"The client attended and noted some things that were happening at his workplace. He is not pleased with some of the decisions related to his placement and feels he is being treated unfairly and that it may be related to his accident of several years ago and the ongoing legal matter related to that workplace incident. The client* ***continues to have medical and psychological issues as a result of the accident.*** *He feels the medical care has not been timely and that his situation is not well understood."*

- July 26, 2018: Emergency Record by Western Memorial Regional Hospital [Page #9]

  "Presenting Complaint: **Right knee injury**."

- July 26, 2018: X-Ray Report of Right Knee [Page #73]

  "There is no fracture or dislocation. The bones and soft tissues are normal. The joint spacing is maintained. Moderate size joint effusion.

  Summary: ***Moderate size joint effusion*** *etiology for which not identified."*

- October 30, 2018 [Dr. Peter Callahan, Page #16]: *"History: 45 yo gentleman w work pedestrian MVC, dating back to Mar 2009.* ***Still episodes of catch/lock L foot, last one May 2018.*** *Ortho, Dr Croft, no surgical options. Bones scan to ensure no occult. Remote left foot Injury. Questionable occult fracture. A triple phase bone scan of both feet including SPECT/CT was performed. There is no increased activity within either foot on the blood flow or pool images. There is mildly Increased activity within the mid foot bilaterally, most prominent at the 2nd and 4th TMT joints. There is mildly increased activity along the lateral aspect of the ankle mortise on the left. This increased activity is all likely secondary to underlying degenerative change. Impression: There are*

degenerative changes of the midfoot bilaterally. There is no occult fracture demonstrated. Issues w irreg footing. ***Currently off W R knee injury, twisted, flared, WCB for R knee see WCB report,*** *gaining strength w home exercise program for R leg, plan for small mm stabilizers, might improve L ankle stability. Physical Exam: Positive Findings: tender L ankle Lat cuboid area, plantar flex 50 deg, Dorsiflex 20 deg; eversion 10 deg, Inversion 30 deg. sensory N. power +5. R knee flex 110 deg, collat, acl intact. no eff, good quad bulk."*

- February 6, 2019 [Dr. Peter Callahan, Page #10]: *"History:* ***Experienced aggravation of right knee pain with mild twist on the ice Jan 30th. Painful and swollen. Pre-existing work- related injury.*** *Time of Injury was going down hill on ice, shuffling, pain that night in bed,. Tried to settle it w physic. was still doing easeback under the guidance of physic, still swollen w pain to flex the R knee, sitting, elevating, Ice. Subjective: Patient Complaints:* ***Additional issues with new diagnosis of diabetes****. Started Metformin twice daily, soreness in the legs with use of Crestor. Significant modification of diet with decreased simple sugars/processed foods, pop. struggling w not being up to walk, less acty. Physical Exam: Positive Findings: R knee eff, tender w flex 90 deg, ext 10 deg lag., min colat lax, difficult to assess w pain."*

- February 20, 2019 [Dr. Peter Callahan, Page #9]: *"History: 46-year-old gentleman with* ***recent work-related injury to the right knee, aggravation****. Still lateral joint line swelling with pain with limited activity around the house, sedentary.* ***Limping with inability to use the right knee for stairs, aggravation of pre-existing injury to the left lateral foot. Lateral cuboid area****. Additional issues with* ***low back pain since last visit****. Difficult to bend and flex. Felt to be related to the abnormal gait pattern. No radiation to the legs, causing significant stress, inability to maintain usual activities around the home. Did get the diabetic education, sugars between eight and 10 usually, occasionally higher, worse with pain. Acknowledges significant adjustment in diet is necessary and has already taken steps, excluded candies, pop. No significant diarrhea with Metformin. Physical Exam: Cardiac: Normal S1 & S2 No S3 or S4 No Murmurs Lung Fields: Normal A/E No Crackles or Wheezes. Positive Findings:* ***Antalgic gait pattern with pain in the left lateral cuboid area***

on palpation, swollen. Straight leg raising 70° bilaterally with low back discomfort*. Power +5, sensory exam normal. Right knee flexion 90° with pain at the endpoint, effusion, mild medial collateral laxity with medial quadriceps discomfort. No extension lag. Difficult to examine menisci with pain with range of motion."*

He clarified that he bent to pick a weed at work and felt a pop in his knee with subsequent knee pain. The knee swelled later that day. He reported having another right knee injury perhaps two years before and was informed he had a Baker's cyst. He explained that he has been compensating for his left foot with his right leg since the 2009 accident.

- February 21, 2019: Emergency Record by Western Memorial Regional Hospital [Page #3]

  "Presenting Complaint: ***Lower Extremity Pain****."*

- February 21, 2019: X-Ray Report of Right Knee [Page #79]

  "Comparable to previous imaging, there is ***mild patellofemoral arthrosis*** *but relative preservation of the tibiofemoral compartment. There is a* ***persistent moderate effusion****.*

- March 7, 2019 [Dr. Stephen Pinsent, Psychologist, page #78]: *"The client attended and discussed the fact he has changed legal counsel. He noted dissatisfaction with the timeline and apparent interest in his situation. He also noted that discussions with others, including lawyers, suggested this matter has not been handled anywhere near to how it should have been. The client is hopeful the matter will get more aggressive and speedy attention, as well as bring attention to the perceived lack of attention to the medical issues related to the accident some ten years ago."*

- April 2, 2019: Clinical Note by Ms. Erika Fawar, Occupational Therapist [Page #141]

  "Your patient, Dave Temple has been participating in a ***clinic-based occupational rehabilitation (CBOR) program under my direction since March 4, 2019****. As indicated*

in the chart below, Mr. Temple demonstrated ***significant gains in the first 3 weeks of his program without reporting changes in pain levels to his monitoring practitioners****. He was also noting* ***progress in his activity tolerance and abilities at home****. In his most recent assessment on March 25th. Mr. Temple* ***demonstrated the ability to stand for intervals of 30 minutes, push/pull heavy forces, carry up to 40 lbs, lift 45 lbs from floor to waist, lift up to 40 lbs from waist to shoulder, with minor tolerances for law-level postures****. Mr. Temple's program is closely monitored and exercises are graduated based on his demonstrated progress and reported symptoms. Repetitions of exercises are completed as tolerated. To date, Mr. Temple has been completing primarily non-weight bearing exercises In CBOR (please see the attached program), On March 25th he indicated that he felt the exercises were helping him improve slating "I started at 20%, I'm, now at 40%" but noted more progress can be made. In the most recent sessions, he did not complain of knee pain but reported some low back pain and was given some stretches to address the symptoms, In conjunction with CBOR,* ***Mr. Temple increased to 8-hour shifts at work, on non-consecutive days and chose to remain at that level*** *when it was discussed at his appointment on March 25, 2019. Mr. Temple was advised upon starting his program that he always has the option of having heat/Ice for symptoms management upon completion of his session: In the 9 appointments since starting his program, he has not made a request. He was also advised to schedule an appointment with his physiotherapist. Michael Wight if experiencing symptoms. Since commencing his CBOR program, he has not utilized physiotherapy services. Throughout CBOR, the circumference of Mr. Temple's knee has been monitored, Fluctuations in circumference were up to 1.3 cm between appointments. A knee brace was requested through Workplace NL to provide compression and light support; it has been approved by the case manager but has not arrived. Finally, Mr. Temple's rehabilitation team feels that he can benefit from further strengthening given his demonstrated progress. As you are aware, Mr. Temple has a long history of injuries, which was taken into consideration when developing his CBOR program. Exercise can have positive implications for his demonstrated bilateral lower extremity weakness, chronicity of symptoms, and elevated body mass index.* ***With continued targeted strengthening and stretching, Mr. Temple's issues may be managed conservatively****."*

- April 12, 2019 [Dr. Peter Callahan, Page #3]:

  "Subjective: Patient Complaints: ***Over the past three days has been able to put away the crutches, still has swelling and tenderness****. Avoiding flexing the right knee past 80°. Physical Exam: Positive Findings: Expressed* ***considerable fear of reinjury*** *with having examination done. Able to actively flex the right knee to 80°. With very gentle exam tested the collateral ligament, intact, medial collateral ligament slight laxity with gentle examination. Patient expressed significant discomfort. Does have effusion. Warmth with no redness. Plan Notes:* ***Discussed possible perception of magnification of symptoms with significant fear of reinjury. Denied that this is the case, feels that examiners are not being careful and he is reinjuring himself with even active examination with his own range of motion with no assistance. Left and a highly emotional state, frustrated with lack of support****. Discussed that the intent was not question his character or amplification rather it prevented some examiners from doing a proper exam as well as leads to the Impression that he has high fear of reinjury, anticipation of catastrophic event. Will be difficult to get objective assessments. Suggested contacting us caseworker. Recheck In two weeks if willing to return."*

- May 9, 2019 – Picture of right knee showing substantial swelling of the right thigh, knee and upper shin

Other relevant investigations are summarized below:

- July 30, 2010: X-Ray Report of Lumbar Spine

  "There is normal alignment of the lumbar spine. The vertebral bodies and posterior elements are intact. The disc spaces are preserved. No bony lesion is seen. There is no soft tissue abnormality.

  Impression: ***Normal lumbosacral spine****."*

- December 31, 2010: X-Ray Report of Chest

  "The lungs are clear with no significant interstitial disease or airspace consolidation. There is ***concern for bilateral hilar fullness most notably within the right suprahilar region. Lymphadenopathy may be present****. Given the previous history of sarcoidosis, non-urgent CT thorax is recommended."*

- October 3, 2012: X-Ray Report of Right Foot and Right Ankle [Page #55]

  "Right Foot: The projected bony structures and soft tissues are normal. The joint spaces are intact. There is no evidence of recent fracture.
  Impression: Normal examination.

  Right Ankle: The projected bony structures and soft tissues are normal. The joint spaces are intact. There is no evidence of recent fracture.
  Impression: Normal examination."

- October 18, 2014: X-Ray Report of Left Foot [Page #57]

  "There is no previous study for comparison. No bony or joint abnormality is identified. The soft tissues are unremarkable. There ***is no significant degenerative change****. The plantar arch is maintained."*

- April 28, 2015: X-Ray Report of Right Knee, Right Tibia and Fibula

  "Right knee: The joint spacing is normal. The projected bony structures are intact. There is no suprasellar effusion.

  Right tibia and fibula: No bony abnormality is demonstrated."

- June 30, 2015: X-Ray Report of Left Foot and Left Knee [Page #58]

  "Knee: There are no acute fractures or dislocations. The knee joint spaces are grossly preserved. There is no knee joint effusion. There are no intra-articular bodies. The soft tissues are unremarkable.

  Foot: There is ***focal irregularity of the contour of the dorsal/proximal aspect of the cuboid, at the calcaneocuboid articulation, with suggestive a small ossific density in this region measuring 3 mm, best seen on the oblique radiograph****. There are no acute dislocations. There is* ***mild osteoarthrosis of a few interphalangeal joints****; most dated the third DIP joint. The bones are well aligned. There is a* ***small Achilles tendon insertion enthesophyte****. Note is made of an os peroneum. There is a bone island in the cuboid. The soft tissues are unremarkable.*

  Impression: Normal radiographs of the left knee. ***Suspected age indeterminate but interval development of fracture of the dorsal/proximal aspect of the cuboid, at the calcaneocuboid articulation****."*

- September 28, 2015: X-Ray Report of Right Knee, Right Tibia and Fibula [Page #60]

  "Right knee: The joint spacing is normal. The projected bony structures are intact. There is no suprasellar effusion.

  Right tibia and fibula: No bony abnormality is demonstrated."

- February 1, 2016: X-Ray Report of Right Foot and Right Ankle [Page #62]

  "Normal ankle joint alignment. No fractures. Normal subtalar joint. No fractures in the foot. No erosive or degenerative changes."

- February 5, 2016: X-Ray Report of Right Knee [Page #63]

*"Mild joint space narrowing is seen in the medial compartment most likely representing **osteoarthritis**. This could be the cause of patient's symptoms. No fracture is seen and bone alignment is normal."*

- February 5, 2016: X-Ray Report of Left Foot and Left Ankle [Page #64]

  *"**A mild to moderate amount of degenerative changes seen at the left first MTP joint**. There are no fractures and bone alignment is normal. There **is further concern of occult injury of the calcaneus or cuboid bones**, triphasic bone scan with SPECT CT is suggested for further assessment."*

- February 17, 2016: Ultrasound Report of Left Achilles [Page #66]

  *"Findings: The **left Achilles tendon appears normal** and symmetric with the right, with no evidence of tear or paratendonitis."*

- March 3, 2016: MRI Report of Right Knee [Page #67]

  *"Opinion: While there is no significant intrinsic derangement, there is concern for **possible capsular injury. A relatively large knee effusion and Baker's cyst** are associated with some soft tissue edema. Clinical correlation is advised."*

- March 21, 2016: Doppler Ultrasound Report of Right Lower Limb [Page #70]

  "Impression: No evidence of above-knee DVT in the right lower limb, cyst unchanged from MRI knee performed March 3, 2016."

- March 17, 2018: X-Ray Report of Left Foot [Page #95]

"Bone mineralization is generally preserved. The plantar arch is maintained. No bony or joint abnormality is identified. The soft tissues are unremarkable."

- March 21, 2018: CT Scan Report of Left Foot [Page #72]

  *"Findings: There are **enthesopathic changes of the posterior and plantar aspects of the calcaneus.** There are no bony erosions. The projected bony structures are intact **without evidence of fracture**. There is no cortical disruption to suggest osteomyelitis.*

  *Interpretation: **No evidence of osteomyelitis**. However, MR would be more sensitive."*

- July 26, 2018: X-Ray Report of Right Knee [Page #73]

  "There is no fracture or dislocation. The bones and soft tissues are normal. The joint spacing is maintained. Moderate size joint effusion.

  *Summary: **Moderate size joint effusion** etiology for which not identified."*

- October 2, 2018: X-Ray Report of Left Foot

  *"There is no fracture or dislocation. There is a **small posterior calcaneal spur**. The bones and soft tissues are otherwise normal. The joint spacing is maintained."*

- October 2, 2018: X-Ray Report of Left Pelvis Hip [Page #98]

  *"The bony pelvis is intact. The **hips and SI joints are normal**. The hip joint spacing is maintained bilaterally."*

- October 4, 2018: **Spect CT Scan Report of Both Feet**

"A triple phase bone scan of both feet including SPECT/CT was performed. There is no increased activity within either foot on the blood flow or pool images. There is mildly increased activity within the mid foot bilaterally, most prominent at the 2nd and 4th TMT joints. There is mildly increased activity along the lateral aspect of the ankle mortise on the left. This increased activity is all likely secondary to underlying degenerative change.

Impression: There are ***degenerative changes of the midfoot bilaterally****. There is* ***no occult fracture*** *demonstrated."*

- November 8, 2018: MRI Report of Right Knee

"Interpretation: ***No signs of internal derangement. Small joint effusion. Small popliteal cyst.*** *Best appreciated on the recent plain films, there are mild degenerative changes in the right knee."*

- February 21, 2019: X-Ray Report of Right Knee [Page #79]

"Comparable to previous imaging, there is ***mild patellofemoral arthrosis*** *but relative preservation of the tibiofemoral compartment. There is a* ***persistent moderate effusion****.*

His current treatments includes:

- TENS, cold packs
- Exercises at home, as advised
- Psychotherapy monthly
- Regular follow-ups with Dr. Callahan
- Periodic physiotherapy

Overall, Mr. Temple reported that the pain condition has improved compared to his post-accident condition within the first few months and plateaued perhaps within 1-2 years, with periodic flare-ups in the left foot in particular. He frequently presented to Dr. Callahan to investigate the left

foot that eventually led to suspicion of an occult fracture of the cuboid bone at the calcaneocuboid articulation, that was assessed by Orthopedic Surgeon Dr. Croft. He is planning a follow-up with Dr. Croft on June 14, 2019 to discuss his left foot, as he is hoping that something more can be done.

PREVIOUS ACCIDENT AND MEDICAL HISTORY:

Mr. Temple reported being involved in no previous motor vehicle accidents or serious injuries that he could recall aside from the occasional sports-related strain. There was a negative pre-accident history of persistent chronic pain, depression, anxiety or addiction. There were no relevant surgeries.

He had an episode of gout of the right big toe remotely, and perhaps a wrist (but uncertain). There was a history of sarcoidosis that was in remission pre-accident.

Cigarette smoking: negative prior to and since the accident.

Alcohol consumption: modest prior to the accident; unchanged since the accident.

Recreational drugs: negative prior to and since the accident. He has been trying CBD oil and finding it helpful, intending to pursue a medical prescription soon.

Medications prior to the accident:

- None regularly
- Indomethacin for gout at times
- Allopurinol and Colchicine for gout in 2007 via Dr. van Wijk [page 50]

Current medications:

- CBD oil at night
- Tylenol arthritis 650 mg x 6 per day
- Voltaren recently
- Lorazepam 1 mg prn for travel

- Robaxacet seldom for flare-ups
- Metformin (for possible diabetes, but felt to be in error related to excess sugar consumption at the time, since cut back and lost 30 pounds)
- Rosuvastatin

Other medications attempted since the accident, and reason for discontinuing (if recalled):

- Escitalopram 20 mg OD – stopped perhaps 3 months ago due to a perception that he was "not right" emotionally/cognitively
    - Kelly reported that he has been more irritable and less focused since stopping
- Zopiclone 7.5 mg 1-2 qhs – weaned off and taking CBD oil instead
- Toradol 10 mg TID – held
- Naproxen 500 mg bid - held
- Aleve 220 mg bid prn - held

Allergies are reported to Biaxin.

The following clinical records were reviewed from the documentation:

- January 3, 2003: X-Ray Report of Right Foot [Page #33]

  *"There is a **small posterior calcaneal spur**. 3 x 2 mm density projected just superior to this bony spur may be due to localized soft tissue calcification (may be calcific tendonitis or related to old trauma), or could be due to old avulsion of the posterior calcaneal spur."*

- April 14, 2005: Clinical Note by Dr. J. Van Wijk, Family Physician [Page #63]

  "History: Your patient presented with a two-week history of a chronic non-productive cough, which was partially relieved by taking a beta 2 stimulant inhaler. The cough was mainly non-productive but it was gradually getting worse in intensity. He denies having any hemoptysis, palpitations or any other pathological symptoms on systemic

interrogation. The rest of the systemic interrogation, particularly related to systemic effects of sarcoidosis, were negative.

On Examination: Temperature 36.3 C. General examination normal. Thyroid normal on palpation, no pathological lymphadenopathy identified. His right radial pulse was present at a rate of 90 bpm with a regular rhythm and his peripheral circulation satisfactory. Blood pressure 160/100 lying down, taken 5 minutes later 140/90 lying down. Jugular venous pressure not raised. The rest of the clinical examination did not reveal any other pathological findings of note.

Opinion: This patient's condition fits in with ***sarcoidosis*** *and I've started him on Prednisone 40 mg. daily. I've asked him to see me again in two weeks' time when I will repeat his chest x-ray. I will report back to you once I have any further information regarding his condition."*

- June 3, 2007: Emergency Record by Western Memorial Regional Hospital [Page #39]

  "Patient complaint: ***Injury to left knee****"*

- June 6, 2007: X-Ray of Left Knee & Patella [Page #28]

  "No fracture or subluxation is seen. There is a ***trace amount of joint effusion. There are signs of mildly narrowed medial and lateral articular cartilages****."*

- December 18, 2007: X-Ray of Chest [Page #27]

  "The ***lungs are adequately inflated and clear*** *with no evidence of acute parenchymal, pleural or mediastinal abnormalities are identified."*

He clarified that he did not specifically recall these events but that he had the occasional sports-related sprain without lasting symptoms or any pre-accident restrictions or limitations.

SOCIAL HISTORY:

Mr. Temple was born in Newfoundland. He was educated to grade 12 and completed post-secondary education in heavy equipment operation. At the time of the accident Mr. Temple was living in his own home with his common law spouse Kelly, to whom he has been with for 16 years. Following the accident, their relationship has become strained due to his hypervigilance and reactivity, noting that they no longer sleep together as he wakes so easily with a fright. They have two children, ages 28 and 23, one from each partner from former relationships. The 28 year-old lives in Edmonton and the 23 year-old lives at home with them but will be moving to South Korea to teach English in August. The parental relationship has become strained, explaining that he frequently warns them to "be safe" and has become excessively cautious, which has disrupted his relationships with his family and co-workers. Kelly reported that he acts like he has "OCD" and frequently checks things over and over. They both clarified that he was extremely laid back and care free without anxiety or obsessive traits prior to the accident.

Recreationally, Mr. Temple was previously active with family and friends. He enjoyed long walks, ball hockey, fishing, hunting, snowmobiling, bike riding and boating. Following the date of loss, the recreational activities stopped almost completely for approximately the first five years, with occasional trips to their cabin. He was able to ride a UTV on occasion due to a more comfortable seated position. In 2014 he purchased a snow mobile and rides occasionally. He tried ball hockey two years ago a few times but was unable to exert himself, primarily passing the puck.

Socially, he has become more withdrawn. He spend his free time at his cabin, mostly on his own and out of touch or with Kelly and close relatives.

FUNCTIONAL ENQUIRY:

Mr. Temple's weight has increased substantially since the date of loss by over 80-100 pounds (230 pounds pre-accident, 330 pounds at his highest), but lost about 30-40 pounds with diabetic counseling more recently.

Sleeping habits have worsened since the date of loss, with symptoms developing almost immediately. He previously slept 7-8 generally restful and unbroken hours per night and seldom required rest during the day. He now sleeps 3-4 hours per night, waking frequently times due to pain, noises or nightmares. Mr. Temple does not feel rested in the morning and spends about one hour during the day resting due to pain. He continues to have nightmares about the accident several times per month.

MENTAL HEALTH STATUS:

Mr. Temple's mood was described as mostly sad, depressed, worried, anxious, angry, irritable, fatigued, frustrated, lacking interest, empty, unable to cope and wanting to be alone. His mood changes have been unchanged for the past few months. He reported developing significant difficulty with concentration and memory since the accident in addition to substantial personality changes. He has reportedly not been evaluated for cognitive function. He continues to feel hypervigilant while driving and frequently plans for alternate routes in the event that something wrong might occur. He has undergone psychological counseling, with reported benefit.

ACTIVITIES OF DAILY LIVING:

Mr. Temple reported having moderate difficulty with the following activities of daily living:

- climbing up 5 steps
- getting in and out of a car

Despite ongoing pain, he remains mostly independent with self-care, including dressing, bathing and showering. For the first 3-6 post-accident months, he was highly dependent on Kelly for most routine care, including personal hygiene following use of the bathroom. On occasion, Kelly continues to help with dressing his lower body during flare-ups. She has reportedly been accommodated to leave work early at times to attend to Mr. Temple, which he perceives has affected her income.

With respect to homemaking duties, Mr. Temple was fully independent prior to the date of loss, including shoveling, lawn care, heavy gardening and home repairs. After the accident, Mr. Temple

withdrew from most chores. He has since resumed some lawn care on a ride-on lawnmower, some shoveling (with a tractor) and carrying groceries, but he continues to be dependent on his wife for most routine housekeeping and home maintenance.

OCCUPATIONAL HISTORY/STATUS:

At the time of the accident, Mr. Temple was working as a laborer/operator of heavy equipment with the City of Corner Brook, working 40 hours per week, and formerly with Murphy's Transport and A-1 Transportation landfill. He had worked in this capacity for over 10 years. Demands of the employment included heavy and light lifting, bending, sitting, standing, twisting, reaching up and concentration. Prior to the accident, he seldom took sick leave, reporting that he took some time off after an unrelated surgery in approximately 2006.

Following the accident, Mr. Temple stopped working for three months then returned on a graduated basis while he maintained physical therapy. He has continued working since, with periodic time off sick due to flare-ups and seasonal lay-offs. He has required frequent sick leave over the post-accident years, noting that there have been some periods where he managed without days off for several months concurrently. He has been modified for lighter duties and no longer holds the flags on the road. At some point he was moved to a lighter role in Parks and Recreation where he manages the flower beds and watering. He feels too much anxiety doing certain tasks and operating certain machines and therefore is accommodated substantially. He has therefore been demoted in salary. He has been able to manage full-time hours in this capacity, in part depending on who he is partnered with, which reportedly influences his emotional stability.

Mr. Temple is currently on alternating 8 or 4 hour days due to the recent right knee injury, but he remains a full-time employee. He expressed concern about the long term sustainability of his position, as he feels he has been heavily accommodated. A new staff member has been paying closer attention to staff sick leave and identified a co-worker who felt harassed and went on sick leave after being disciplined for her sick leave. He continues to struggle with conflicting instructions from his WCB caseworker and his physician. There are some weeks when he has to leave early due to his symptoms, including pain and/or irritability; there are some "good" weeks when he manages the full week. Some foremen have been more accommodating than others. He

also reported he has been harassed at work by co-workers because of his accommodations but has been reluctant to say anything. There have been a few circumstances when his co-workers have driven quickly or driven through a red light, which he perceived as a deliberate way to trigger his anxiety. He reported several moments when he felt highly irritable and impulsive to respond physically, but controlled his urge and responded verbally instead, at times loudly reactive.

CURRENT STATUS INCLUDING SYMPTOMS IN ORDER OF SEVERITY:

The American Medical Association (AMA) guides to the evaluation of permanent impairment recommends that assessments for disability due to pain include reproducible methodologies to evaluate the severity of pain, activity restrictions, emotional distress and pain behaviours. Due to the complex interaction of physiological, psychological and social factors associated with musculoskeletal and, specifically, spinal disorders, it is difficult to evaluate these disorders through traditional biomedical techniques. As a consequence of this complexity, and because pain and disability are the most significant issues for injured patients, the evaluation of functional status is essential in the treatment of chronic disabling musculoskeletal disorders [Anagnostis et al]. Patient self-report is one means being increasingly relied upon to evaluate functional status. To incorporate these factors into this assessment, the following questionnaires were completed:

a. Pain Disability Questionnaire (PDQ)

The PDQ [Anagnostis et al] is a simple and quick methodology for measuring the degree of impact that pain has on a person's ability to perform essential life activities, including housework, personal care, basic physical activities and social and recreational activities. The level of disability increases as the total point score out of 150 increases. Total score classification: mild/moderate (0-70), severe (71-100) and extreme (101-150). The score can be divided into a physical component (out of 90 points) and a psychological component (out of 60 points).

The following scores were calculated:

Physical score	51/90 (Items 1-7, 12-13; Score >22/90 is above normal range)
Psychosocial score	53/60 (Items 8-11, 14-15; Score >15/60 is above normal range)
Total score	104/150 (Score > 37/150 is above normal range)

This result suggests a finding consistent with Chronic Disabling Musculoskeletal Disorder (CDMD). Scores consistent with the CDMD group (range 72-120) are associated with a severe level of pain-related disability that has not responded to primary and secondary levels of treatment.

b. Pain Scores

Overall pain levels were reported, ranging from 6/10 at its best to 9/10 at its worst, with an average pain score of 8/10.

Reported pain scores of 6-7 are considered moderately severe, 8-9 are considered severe and 10 is considered extremely severe or equivalent to the worst pain ever experienced by the individual. Most people report being able to generally cope with pain intensities up to 5-6, at which point function, quality of life and capacity to cope begin to deteriorate when the average pain is in this range or higher.

The following details the pain sites, in order of severity from worst to least.

- Left foot pain

  Described as intermittent left sided foot pain characterized as variably sharp, shooting, stabbing, throbbing, aching and tight with intermittent swelling. He reported that the two lateral toes no longer "work right" and feel cold. When present, the pain shoots from the side of the foot to the lateral toes. There is intermittent numbness, tingling and pins and needles when swollen. The lateral foot turns red spontaneously and occasionally bluish along the bottom edge. The pain is aggravated by walking, climbing stairs or walking on uneven ground. The pain is partially alleviated by medication, rest, variably by sleep, exercise, stretching and physical therapy.

- Right knee pain

  Described as right-sided knee pain characterized as variably throbbing, aching, tight and swollen since the work-related injuries described above, starting around 2016. There is periodic swelling of the knee, which can be severe and spreads up the thigh at times. The

pain is aggravated by lifting, bending, walking, standing, sitting and climbing stairs. The pain is partially alleviated by avoidance.

- Low back pain and "sciatic"

  Described as intermittent lower midline back pain characterized as variably sharp, shooting, stabbing, throbbing and aching. The pain radiates down the left leg posteriorly from the buttock to the knee, at time down to the lateral two toes, as described above. The pain is aggravated by lifting, bending, walking, standing, sitting, climbing stairs, coughing and sneezing. The pain is partially alleviated as above. There is no associated bowel or bladder incontinence.

- Neck pain

  Described as intermittent posterior upper neck pain characterized as variably shooting, throbbing, aching, tight and spasmodic. The pain radiates to the posterior head and shoulder blade on the right side, occasionally leading to headache. There is no paresthesia down the arm. The pain is aggravated by lifting, coughing, sneezing, turning the head, looking up and looking down. The pain is partially alleviated as above.

- Headaches

  Described as intermittent frontal or occipital headaches, characterized as variably sharp, aching and tight pain, at times behind the right ear. The headaches are usually right sided and occur 3-4 times per month, lasting 30 minutes to two hours on average. The headaches are not associated with aura or nausea, but he experiences chronic phonophobia and photosensitivity. The headaches are aggravated by neck pain, reading, thinking and stress.

c. Neuropathic Pain Questionnaires

   a. S-LANSS [Bennet MI et al 2005]:

      The S-LANSS questionnaire scored 22/24 based on the following items related to left foot pain: ☒ pins and needles, tingling or pricking sensations (5), ☒ skin

changes colour (5), ☒ abnormal skin sensitivity (3), ☐ sudden pain like shocks (2), ☒ burning pain (1), ☒ allodynia (5), ☒ abnormal touch to pressure (3).

A score of at least 12 is generally consistent with neuropathic pain.

PHYSICAL EXAMINATION:

Reported height was 5 feet 8 inches and weight 295 pounds.

Mr. Temple appeared comfortably groomed with a somewhat cautious gait and striking each foot flat on the ground upon entering the examination room. He explained that he was advised to walk that way to avoid "cupping" his left foot on any uneven surface and therefore walked very cautiously. He wore a brace on the right knee. He appeared comfortable while sitting and stood to be examined reporting some stiffness initially. The affect appeared normal and pleasant, explaining that he has relied on positive thinking and humor to deal with his condition. Information provided was forthcoming, but often requiring redirection and focus as he tended to lose track of what he was answering. His speech was at times pressured, but easily redirected.

He requested Kelly's assistance with removing and applying his right foot sock.

Examination of the head and neck revealed a forward flexed head carriage. The temporalis, frontalis, masseter and occipitalis muscles were nontender. The occipital groove was nontender at the region of the greater and lesser occipital nerve bilaterally. He reported that the painful area was deep at the right upper neck where it joins the occiput. There was no tenderness to the trapezius and paracervical muscles, but hypertonicity of the trapezius muscles. Parathoracic muscles were hypertonic but nontender. Periscapular muscles were nontender. Range of motion of the cervical spine demonstrated flexion (chin to chest wall 1-2 cm), extension to 45 degrees, leftwards rotation to 80-85 degrees, rightwards rotation to 80-85 degrees, left lateral flexion to 45 degrees and right lateral flexion to 45 degrees. Spurling's maneuver was negative for radicular symptoms on the right.

Upper extremity neurological examination revealed the following findings:

- Light touch was normal from the shoulder to fingers bilaterally
- Strength testing was normal for biceps, triceps, grip, thumb extension, finger abduction and finger opposition bilaterally
- Biceps reflex was 2+, normal bilaterally
- Triceps reflex was 2+, normal bilaterally

The shoulders were nontender. Range of motion of the shoulders was normal for abduction to 180 degrees and external rotation to 80-85 degrees on the right, and for abduction to 180 degrees and external rotation to 80-85 degrees on the left.

Examination of the back revealed normal alignment and normal paralumbar musculature. Flexion was fingertips to lower shins, extension was to 10 degrees and lateral flexion was to 30 degrees bilaterally. Right lateral flexion and rotational extension to the right were painful on the right lower back. The peri-sacroiliac soft tissue was tender bilaterally. Provocative testing of the sacroiliac joints using the FABER maneuver revealed positive findings to the left joint for sacroiliac pain. I did not FABER the right side due to reluctance to flare-up the right knee. The lateral hips were nontender bilaterally, and there was no pain upon internal and external rotation, which was unrestricted.

Lower extremity neurological examination revealed the following findings:

- Light touch was normal from the thighs to feet bilaterally
- Strength testing was normal for knee flexion, knee extension, ankle dorsiflexion and ankle plantarflexion bilaterally
- Knee jerk testing was 2+, normal bilaterally
- Ankle jerk reflex was 2+, normal bilaterally
- Leg raise testing was negative to 90 degrees on the right, but equivocal to 90 degrees on the left with back pain, radiating down the left calf upon ankle dorsiflexion.
- Ankle flexion, extension, inversion and eversion was not painful and equal bilaterally, without tenderness.
- There was a tender spot on the left lateral foot around the proximal metatarsal of the fifth toe, with a subtle prominence compared to the right foot.

The appearance of the legs was normal for colour, skin texture, hair growth and palpable temperature. The lateral two toes were somewhat raised compared to the other toes and compared to the right foot, noting that they felt "different" than the others. There was a fungal infection of the left fifth toenail.

DIAGNOSIS AND DISCUSSION:

As my opinion is based solely upon information provided in the supplied documentation, Mr. Temple's personal report and today's assessment, I reserve the right to revisit my opinion should further information become available.

Based on the history, physical examination and review of the Medical Brief, Mr. Temple has the following diagnoses:

- Chronic pain syndrome associated with:
    - Psychological/emotional disturbance due to:
        - Post-Traumatic Stress Disorder (PTSD)
        - Potential Obsessive-Compulsive Disorder
    - Probable traumatic brain injury, not yet defined
    - Chronic left foot pain due to:
        - Acute (accident-related) contusion left foot and ankle
        - Presumed delayed diagnosis of fracture injury to cuboid at the calcaneocuboid articulation with Persistent Post-Fracture Pain
        - Probable neurogenic/radicular pain associated with lumbar nerve root impingement, not yet defined
        - Potential sarcoid arthritis
    - Chronic right knee pain due to:
        - MRI-documented possible capsular injury, large knee effusion, Baker's cyst
        - Potential sarcoid arthritis
    - Chronic low back pain due to:
        - Acute lumbar strain injury

        - Probable radicular pain down the left leg
        - Probable facetogenic pain
        - Probable sacroiliac joint pain - left and potential right
    - Chronic neck pain due to:
        - Acute Whiplash Associated Disorder, Type II
        - Probable facetogenic pain
    - Chronic headaches due to:
        - Post-traumatic headache
        - Probable cervicogenic headache

Mr. Temple has developed the features of a chronic pain syndrome. Although definitions vary, a chronic pain syndrome is usually associated with sleep disruption and mood changes and interferes with most of the patient's activities (usually reflected as a 50% or more reduction in global function), consistent with Mr. Temple's chronic pain experience. A chronic pain syndrome starts off with acute pain. As a result of the acute pain impulses, there are secondary changes in the spinal cord and brain that in some patients cumulatively result in central sensitization. As a result of this, pain becomes more diffuse and typically no longer follows a dermatomal pattern. There is often secondary disuse in the musculoskeletal system.

Central sensitization is broadly defined as "an amplification of neural signaling within the CNS [i.e. central nervous system] that elicits pain hypersensitivity [Woolf, C 2011]. The effect of central sensitization is that stimuli that do not normally elicit pain can be perceived as painful (i.e. allodynia), normally painful stimuli can be more painful than usual (i.e. hyperalgesia) and pain can be felt spontaneously without noxious stimuli. Although it is generally considered in the context of pain, central sensitization is increasingly recognized to influence many systems through the body in which the CNS affects the sensitivity of function or sense, such as hypersensitivity to smell and irritability of the bowel in irritable bowel syndrome [Verne et al 2002; Moshire et al 2006]. In Mr. Temple's case, it is probable that his reported hypersensitivities relate in part to an undiagnosed traumatic brain injury that requires further assessment, in addition to the effects of probable central sensitization without allodynia.

The AMA Guides to the Evaluation of Permanent Impairment, sixth edition ("AMA Guides") defines chronic pain syndrome as "pain that continues beyond the normal healing time for the patient's diagnosis and includes significant psychosocial dysfunction." Three or more of the following characteristics are required to fulfill the AMA Guides' definition:

- Use of prescription drugs beyond the recommended duration and/or abuse of or dependence on prescription drugs or other substances;
- Excessive dependence on health care providers, spouse or family;
- Secondary physical deconditioning due to disuse and/or fear-avoidance of physical activity due to pain;
- Withdrawal from social milieu, including work, recreation or other social contacts;
- Failure to restore pre-injury function after a period of disability, such that the physical capacity is insufficient to pursue work, family or recreational needs;
- Development of psychosocial sequelae after the initial incident, including anxiety, fear-avoidance, depression or nonorganic illness behaviours.

Mr. Temple meets 5 of 6 of the criteria, excluding the first one related to prescription drug use.

In addition, it is probable that Mr. Temple sustained a traumatic brain injury secondary to the head trauma that is presumed based on multiple factors, including but not limited to:

- Direct head trauma with bleeding reported from the ears and mouth;
- Loss of consciousness;
- Mechanism of injury – traumatic pedestrian versus car accident, being thrown several feet until striking the ground;
- Acute and chronic cognitive symptoms with reported change in personality and development of obsessive-compulsive symptoms, irritability and impulsivity, hypervigilance and loss of focus, concentration and memory;

It is concerning that a more comprehensive neurological assessment was not completed upon his initial Emergency Room visit on March 3, 2009, including a head CT to rule out intracranial

hemorrhage. The CT head was also not completed on March 5 when he returned to the Emergency Room with symptoms strongly suggestive of concussion. Fortunately, the CT was finally completed on April 21 (i.e. approximately 7 weeks from the time of injury) and reported normal findings, but does not imply the absence of concussion-related injury. A formal neurocognitive/neuropsychological evaluation is recommended to establish the severity and etiology of cognitive symptoms, as this is relevant to his overall level of function, quality of life and prognosis of long term employability.

Mr. Temple also reported developing a highly anxious and labile mood following the date of loss and has reported a significant amount of social and emotional upset as a result of this motor vehicle accident. Psychological diagnosis was delayed until meeting Dr. Pinsent in November 2011, at which point he was diagnosed with PTSD and has been under his care since. He and Kelly report that he has also developed obsessive and compulsive symptoms of frequent checking and excessive concern for safety since the accident that have been negatively influencing their quality of life. Evaluation for a formal diagnosis of post-traumatic Obsessive-Compulsive Disorder is recommended.

Given the International Association for the Study of Pain (IASP) definition of pain as, "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage," the development and maintenance of Mr. Temple's chronic pain involves a combination of biological, psychological and social factors that are unique to the individual experiencing pain [Gatchel et al 2007]. Furthermore, there is a high prevalence of psychiatric disorder in patients with chronic pain, reportedly between 59-75% of chronic pain patients [Annagur et al 2014]. The most common disorders identified were major depressive disorder, generalized anxiety disorder, somatization disorder and substance abuse. Consistent with the biopsychosocial model of chronic pain, the presence of psychological pathology will often adversely affect the severity of chronic pain, the ability to cope with chronic pain as well as the efficacy of treatment and have a deleterious effect on social, interpersonal, professional and recreational activities. Furthermore, without adequate treatment for severe depression or anxiety, chronic pain will probably be permanent despite other treatments discussed. Given the co-dependence of chronic pain with Mr. Temple's psychological symptomatology, repeat

psychological assessment and ongoing treatment is recommended, preferably in association with a multidisciplinary pain management program as summarized below to help establish more productive self-management strategies.

As a result of the chronic pain and PTSD, Mr. Temple has developed a sleep disruption resulting in a non-restorative and broken sleep pattern. Sleep disorders are known to worsen the degree of chronic pain as well as treatment efficacy in patients with chronic pain. The negative impact of sleep disruption and fatigue on cognitive function is also well established in the literature [Durmer J et al 2005].

With respect to the spinal pain, although reported incidences vary, there is a high incidence of progression from acute whiplash injury to chronic neck pain. A series of reviews in 2011 concluded that approximately 50% of whiplash patients progress to chronic pain, and of those who do not recover, between 30% and 40% have persistent mild to moderate pain and between 10% and 20% have moderate to severe pain syndromes. This is probably due to a variety of factors, including soft tissue or structural spinal element injury, central sensitization, stress response and psychosocial and sociocultural factors [Jull et al 2011]. Curatolo et al summarizes the etiology of musculoskeletal spinal injuries and describes disruption and damage to the supportive and structural spinal elements, including intervertebral discs, facet joints and/or spinal ligaments as a result of strain beyond normal physiologic limits. This type of pathology has been shown in human (cadaveric) and animal studies, with the greatest body of literature identifying damage to the facet joints. [Uhrenholt L et al 2002; Uhrenholt L et al 2008]. Although current imaging modalities lack sufficient resolution to identify subtle pathological changes, validated fluoroscopically-guided diagnostic facet joint medial branch anesthetic blocks can be used clinically to more objectively diagnose facet joint-mediated pain. In Mr. Temple's case, it is probable that his cervical strain also resulted in cervicogenic headaches from injury to the upper cervical facets and third occipital nerve. He is a reasonable candidate for diagnostic medial branch blocks, in consideration of potential radiofrequency facet neurotomy for more long-term management of his chronic neck pain and headache.

Similar to injuries sustained by cervical strain, a retrospective chart review reported that the most common source of motor vehicle collision-induced chronic low back pain appeared to be the disc (56%), followed by the sacroiliac (26%) and facet joints (19%) [DePalma et al 2011]. This is probably due to soft tissue or structural spinal element injury, including damage to intervertebral discs, sacroiliac joints or facet joints, similar to the pathology demonstrated in humans and in animal studies related to whiplash injuries. Approximately 20% of individuals who develop acute low back pain will develop chronic back pain at one year following injury [U.S. Department of Health and Human Services 2014]. Similar to risk factors for developing chronic disabling neck pain, predictable features for chronic disabling low back pain include maladaptive pain coping behaviours, nonorganic signs, functional impairment, general health status and presence of psychiatric comorbidities [Chou and Shekelle 2010]. In Mr. Temple's case, he has symptoms and physical findings of probable nerve root irritation or impingement requiring further investigation with MRI of the lumbar spine. If present, a component of his chronic left foot pain probably results from neurogenic radicular pain and could potentially respond to treatments targeting the nerve roots, such as epidural steroid injections.

With respect to his left foot injury, Mr. Temple produced photographs supporting his report of severe swelling of the left foot and ankle following the accident as well as recurrent reddish discolouration of the left lateral foot, reportedly following walking activities requiring "cupping" of his foot (i.e. walking on uneven surfaces). Although initial x-rays were negative for fracture, his symptoms persisted and a bone scan on April 9, 2009 reported scattered uptake in the left ankle and midfoot, mostly at cuneiforms, strongly suggestive of an acute bony trauma. A subsequent x-ray on June 30, 2015 reported an irregularity of the dorsal/proximal aspect of the cuboid bone at the calcaneocuboid articulation and small ossific density, suggestive of an occult fracture site. It is unclear whether this was attributed to the 2009 accident or a more recent ankle sprain. Dr. Croft reportedly acknowledged the injury but at the time felt that surgery would not be helpful. Assuming there was an occult fracture of the foot at the time of the 2009 accident, the subsequent chronic pain is called Persistent Post-Fracture Pain and is analogous to Persistent Post-Surgical Pain (PPSP). PPSP is defined as chronic pain following surgery beyond the natural expected time for healing. In the January 2011 edition of Pain Clinical Updates, published by The International Association for the Study of Pain, the incidence of severe disabling post-operative pain ranges

from 2% to 10%, with 20-50% of major surgeries resulting in some degree of chronic pain [Schug 2011]. Similarly, chronic pain has been reported following calcaneus fractures [Lim et al 2001; Clare et al 2017; Sutherland 2013]. Furthermore, a 20-40% incidence of chronic pain following ankle sprains has been reported, which are commonly associated with calcaneus fractures [Kirchner 2005]. Chronic pain has also been reported following cuboid fractures [Pountos 2018].

In addition to the presumed occult cuboid fracture, Mr. Temple has a history of sarcoidosis and gout that pre-dated the accident. His symptoms were periodic and in remission at the time of the accident, consistent with Dr. Callahan's record of March 16, 2009. However, a review by Sweiss et al in 2018 summarizes the rheumatologic manifestations of sarcoidosis, which includes an incidence of arthritis and joint swelling, as well as a relationship with gout. Therefore, some of his joint symptoms may be related to sarcoidosis and/or gout, notably likely for the recurrent severe swelling of the right knee disproportionately to underlying joint pathology reported on MRI. The left ankle may also be a site for sarcoidosis and/or gout, although the predominant site of recurrent pain and erythema is the dorsum and lateral foot. As these rheumatologic conditions are beyond my scope of expertise to discuss in greater detail, additional Rheumatological assessment is recommended, including lab tests for rheumatological markers (e.g. ANA, RF, ESR, CRP), rheumatological consultation for diagnosis and treatment, and independent rheumatological assessment to explore the extent of his current condition related to sarcoidosis and/or gout.

CAUSALITY:

Q: What injuries were caused by or materially contributed to by the March 3, 2009 motor vehicle accident?

Mr. Temple sustained direct injuries from the pedestrian motor vehicle accident on March 3, 2009, including:

- Multiple contusions and abrasions involving the face, upper back, right thigh, right calf, left pretibial region and left lateral ankle (as documented by Dr. Callahan on March 16, 2009)
- Presumed occult fracture of the left cuboid at the calcaneocuboid articulation

- Acute cervical strain
- Acute lumbar strain
- Closed head injury

The painful symptoms reported were not present prior to the accident and all developed at the time or soon after the accident. The injuries are consistent with the mechanism of injury. The persistence and severity of these painful injuries has resulted in the development of the chronic pain syndrome.

Mr. Temple also developed the symptoms of PTSD following the March 3, 2009 accident. A repeat comprehensive Psychological assessment is recommended to discuss the accident-related psychological injuries, to include consideration of post-traumatic obsessive compulsive disorder.

In addition, Mr. Temple developed severe personality and cognitive changes following the accident, strongly suggestive of a traumatic brain injury. A Neuropsychological evaluation is recommended, as discussed above.

Given the occurrence of more recent work-related right knee injuries, the development of chronic right knee symptoms is at most indirectly related to the accident as a result of chronic compensation for the persistent left leg and foot symptoms, and are potentially complicated by sarcoidosis and/or gout.

Q: Did the March 4, 2009 motor vehicle accident result in exacerbation and/or aggravation of Mr. Temple's pre-existing conditions?

Mr. Temple had a pre-accident history of sarcoidosis, which was reportedly in remission, and gout, which was reportedly rarely symptomatic. Although a rheumatological assessment is recommended to explore this issue further, it seems unlikely that the accident directly exacerbated or aggravated either condition, but rather the subsequent periodic recurrence of either condition has contributed to the multifactorial symptoms of his chronic pain syndrome.

Regardless, Mr. Temple was physically unrestricted and active in the pre-accident period, including physically demanding full-time employment and participation in several strenuous recreational activities. Had the accident in question not occurred, Mr. Temple would not have developed the serious impairments described below related to a complex chronic pain syndrome with PTSD, potential mood disorder and probable traumatic brain injury.

PROGNOSIS:

Q: If Mr. Temple did suffer impairment, do you expect his condition to improve substantially?

Based on the chronicity and severity of the signs and symptoms, the prognosis for recovery to pre-accident levels of function from these diagnoses is extremely poor.

After ten years of chronic pain since the accident, Mr. Temple will have permanent chronic pain and associated functional impairments. The chronic pain syndrome involves a combination of both anatomical injuries as well as a strong psychosocial component in terms of the ability to cope with the development of these injuries and with life with chronic pain. Engaging in higher axial impact physical and recreational activity will be difficult and will aggravate the pain. Social and familial relationships tend to progressively worsen over the years. This is consistent with Mr. Temple's reported post-accident experience with both recreational and social activities.

It is probable that Mr. Temple's level of function will not significantly improve at any point in the future, and in fact, will probably progressively deteriorate with time as he ages and becomes more deconditioned, in part depending on the extent to which sarcoidosis and/or gout are influencing his condition.

Future treatments goals should not seek a cure or resolution of his pain, but rather should focus on optimizing the severity and stability of permanently painful conditions and on learning more productive self-management strategies.

DISABILITY:

Q: Following the March 3, 2009 motor vehicle accident, did Mr. Temple suffer an impairment resulting in a substantial inability to perform the activities of his normal daily living, including, but not limited to, leisure time activities?

These diagnoses result in impairments that limit the following important functions: prolonged walking, stair or ladder climbing, prolonged sitting, prolonged standing, repetitive bending/pushing/pulling, heavy lifting, higher axial impact physical activities (for example, running, jumping) and walking on uneven surfaces. Although Mr. Temple is physically capable of performing these functions, they are expected to exacerbate the painful symptoms and materially contribute to a lessening of his quality of life and level of function.

The relatively high score on the psychosocial score of the pain questionnaire is consistent with a significant degree of impairment due to ongoing psychosocial changes.

Further, Mr. Temple probably experiences some degree of cognitive impairment related to chronic pain, in addition to the effects of a probable traumatic brain injury. The International Association for the Study of Pain (IASP) provides a review of cognitive impairment in chronic pain. In summary, chronic pain results in impaired cognitive function particularly on tests of attentional capacity, processing speed and psychomotor speed, in addition to the cognitive effects of medications (such as opioids and anxiolytics), co-existing mood disorder (for example depression and anxiety) and sleep disruption. "Objective cognitive deficits are mainly in the domains of memory, attention, speed in performing structured tasks, speed in responding to stimuli of a cognitive task, verbal ability, and mental flexibility" [Kreitler 2007]. The negative impact of sleep disruption and fatigue on cognitive function is also well established in the literature [Durmer J et al 2005].

When considered together in the context of a chronic pain syndrome, these diagnoses result in impairment that affect Mr. Temple's ability to maintain several important activities of daily living, including personal care (at times requiring his spouse's help for washing and dressing his lower body), prolonged driving or driving in traffic, heavier or prolonged cooking and leisure/recreational activities and social activities that require the use of the above-noted functions

that were normally engaged in at the time of the accident. This includes minimal participation in many of the recreational activities he enjoyed, such as taking long walks, more active ball hockey, fishing, hunting, aggressive snowmobiling and bike riding.

Mr. Temple has limitations to perform homemaking duties requiring heavy lifting, repetitive bending and prolonged standing or walking and should avoid the heaviest chores, such as manual snow removal, manual lawn care and heavy gardening.

However, as a general principle of chronic pain management, Mr. Temple should be encouraged to re-engage in low impact physical activities that maintain movement and conditioning of the body as much as can be tolerated without resulting in significant symptom exacerbation. This includes maintaining lighter housekeeping chores using pacing strategies to preserve energy and avoid pain exacerbation. Participation in a formal self-management program is highly recommended for this purpose.

Q: If Mr. Temple did suffer an impairment following the motor vehicle accident, has the impairment been ongoing since the accident?

Yes, the impairment has been ongoing since the accident and is expected to remain permanent.

EMPLOYABILITY:

Q: Did the March 3, 2009 motor vehicle accident cause or materially contribute to Mr. Temple suffering an impairment resulting in a substantial inability to perform his employment?

Mr. Temple was working as a full-time laborer/operator of heavy equipment with the City of Corner Brook prior to the accident, and formerly with Murphy's Transport and A-1 Transportation landfill for many years. His jobs consistently required heavy demands, in addition to cognitive demands while operating heavy equipment. Prior to the accident, he reportedly seldom took sick leave.

Following a period of several months following the accident, and despite his persistent symptoms, Mr. Temple returned to modified work and gradually returned to full-time hours. He has, however, required substantial accommodation since his retur and has been transferred to a less physically demanding position with Parks and Recreation. He has relied heavily on co-workers for more strenuous tasks and those tasks that cause recurrent anxiety, such as directing traffic. He explained that he pushes himself to work and "does what he is told" by his supervisors and co-workers despite his pain, often at the expense of symptom exacerbation. As a result, he has required frequent sick time, unlike his pre-accident work experience. He seldom has residual energy to participate in recreational and social activities. As well, he reported moments of emotional lability that have influenced his relationships with co-workers and his quality of work-life, adding that he has felt harassed by some of them but is too concerned to lose his position by complaining.

Given Mr. Temple's demonstrated resiliency, it is probable that he will be capable of maintaining some form of productive employment into the foreseeable future. However, based on Mr. Temple's permanent limitations and periodic restrictions related to flare-ups of his joints, in addition to potential restrictions for heavy lifting and repetitive bending related to nerve root impingement (i.e. to be confirmed), he will have permanent impairment limiting his ability to maintain working in his chosen profession at unrestricted pre-accident levels, therefore limiting his vocational options. It is also probable that it will become increasingly difficult for Mr. Temple to cope with his multiple injuries and conditions as he ages. This is due to the global impact of chronic pain on Mr. Temple's condition, including physical restrictions, deconditioning, poor sleep, altered cognition and mood changes, in addition to the substantial impact of cognitive impairment related to probable traumatic brain injury and psychological impairment related to PTSD (and potential Obsessive Compulsive Disorder). He will therefore require permanent modifications and accommodations in his work-life, including avoidance or minimization of the above noted limited functions to minimize symptom aggravation and flare-ups. Mr. Temple will also require frequent breaks throughout the workday to maintain pacing strategies and avoid excessive fatigue or pain exacerbation and will probably require intermittent additional sick leave to accommodate flare-ups and appointments for treatment. Preservation of some energy towards non-employment activities is recommended for individuals, including Mr. Temple, who live with chronic pain in order to maintain balance and quality of life.

A Neuropsychological assessment will help determine the severity of cognitive impairment, and in particular discuss his level of judgment as it relates to the safety of operating heavy equipment.

A Functional Abilities Evaluation followed by Vocational Assessment and Labour Market Survey would help identify more appropriate vocational options given his permanent limitations and restrictions, notably if he ever loses his current position.

Given the extent of accommodation Mr. Temple has been provided by his employer, it is highly probable that his accident-related injuries result in a loss of competitive employability should he have to search for another job in the future. It is also probable that the injuries will result in Mr. Temple's pre-mature retirement. Chronic pain has been strongly associated with disability retirement, with a higher risk specifically for musculoskeletal diseases and when there is co-existing longstanding illness [Saastamoinen et al 2012]. 41.4% of Australians between the aged of 45 and 64 who indicate that back pain is their main health problem are no longer working, suggesting that extreme back pain can lead to early retirement [Schofield et al 2008]. Statistics Canada data indicates a statistically significant effect of individual health status on early retirement, with five-times greater likelihood of early retirement for men with negative self-perceived health (i.e. poor or fair). Furthermore, for each additional co-existing chronic condition, there was a 25% increase in the risk of early retirement, particularly relevant for back pain, migraines, eye problems and ulcers. [Park J 2010].

The New Worklife Expectancy Tables (2006 edition) indicates that normal work life is expected from age 25 to approximately age 60-65. The presence of some work disability reduces this expectancy by 5-10 years. Other factors that predict further reductions in work life expectancy include decreased levels of education and severity of the disability (physical and/or cognitive). A Canadian study concludes that individuals with arthritis and musculoskeletal conditions have an average reduction in work expectancy of 4.2 years for males and 3.12 years for females [Lacaille et al 2001]. Because these figures exclude those with back pain, the addition of chronic back pain would be expected to further reduce work life expectancy.

Q: Do you consider Mr. Temple to be partially or totally disabled from performing the functions of his own occupation?

i. If your answer is yes, then do you consider this disability to be permanent?

ii. If your answer is yes, do you believe the March 3, 2009 motor vehicle accident is the cause or the materially contributing cause of Mr. Temple's disability?

Despite the severity and complexity of Mr. Temple's current condition, he has demonstrated substantial commitment to his employment and resiliency since the accident. Since he has been able to maintain full-time employment in a substantially modified and accommodated capacity, I consider him to be permanently partially disabled from performing the functions of his own occupation, as a direct result of the March 3, 2009 accident.

FUTURE MEDICAL TREATMENT AND RECOMMENDATIONS:

Q: Please provide your opinion on any potential for further treatment in the future, and the potential long term medical and paramedical needs/requirements.

The following are recommended to further clarify the extent of injury, impairment and prognosis:

- Investigations:
    - Rheumatological studies, including ANA, RF, ESR and CRP;
    - Rheumatological consultation to consider the potential influence of sarcoidosis and gout on Mr. Temple's current condition and future treatment;
    - MRI lumbar to investigate for features of nerve root impingement;

- Rheumatology assessment to review Mr. Temple's history of sarcoidosis and gout and to provide an opinion on their relationship, if any, to his post-accident and current condition;

- Psychological re-assessment of PTSD and potential diagnosis of post-traumatic Obsessive Compulsive Disorder, and ongoing psychological treatment with a stronger focus on the evaluation and development of coping mechanisms and adaptive strategies for dealing with

persistent pain, including self-management strategies, preferably in association with a multidisciplinary pain management program;

- Neuropsychology assessment to assess for cognitive impairment and investigate for traumatic brain injury;

- Functional Abilities Evaluation;

- Vocational Assessment and Labour Market Survey;

The following are recommended to attempt to stabilize current pain and function and to possibly delay further deterioration. Subject to Mr. Temple reasonably participating in the recommended treatment, it is possible that the symptoms will be better controlled, but it is probable that the impairment will not significantly improve due to the chronicity and severity of the diagnoses.

- Medical options for the family doctor to consider include multimodal analgesia (i.e. multiple medications targeting different aspects of the pain pathways concurrently, generally at lower doses with fewer side effects and acting more effectively in combination) that can immediately help to stabilize the pain and sleep-wake cycle without the side effects of opioid analgesia, including:

    - Sustained-release NSAID, such as Celebrex 200 mg bid, notably given frequency and severity of joint effusions and flare-ups;

    - Nortriptyline (Aventyl) starting at 10-20 mg nightly, which can help with both pain and sleep disruption;

    - SNRI anti-depressant, such as Duloxetine (Cymbalta) or Venlafaxine (Effexor), which can help with both pain and mood disorder;

- Slowly titrated Gabapentin (Neurontin) 100 mg to 800 mg tid or Pregabalin (Lyrica) 25 mg to 150 mg bid, starting at the lowest dose and increasing every 1-2 days to clinical effect as tolerated to avoid side effects;

- Medical cannabis, with a focus on daytime high CBD with minimal THC levels to minimize cognitive side effects, and nighttime blended CBD:THC, in strong preference to opioids at this chronic stage;

- Reduction of Tylenol Arthritis from 6 per day (i.e. 3900 mg, risking liver toxicity) to 1-2 bid maximum;

- Aquatherapy, swimming and a supervised low impact aerobic exercise program is recommended for stabilization and long-term management of this pain condition;

- Referral to an Interventional Pain Clinic to consider evidence-informed interventional treatment options to help stabilize the pain and enable less pain with more rehabilitative efforts, including:

    - Fluoroscopically-guided diagnostic facet joint medial branch blocks (MBB) to objectively document facet-mediated pain, which can also help determine a potential treatment option to stabilize ongoing mechanical spinal pain;

      Based on the characteristics and location of spinal pain, it is probable that some of the pain is generated from the facet joints of the spine. In the case of neck pain with occipital headaches, both the spinal pain and headache can be generated from upper cervical facet joints. A diagnostic MBB provides a more objective and evidence-based method of determining if the facet joints are the source of pain generation and are valuable in the determination of prognosis for long-term symptom control treatment options for mechanical spinal pain. A negative result would suggest that the pain generator is more likely from an alternate source, such as myofascial tissue, intervertebral disc or alternate spinal anatomy. Two positive results strongly supports the facet joints as the source of spinal pain and provide

some direction for potential long-term pain management options for post-facet joint strain injuries, such as radiofrequency facet neurotomy, which is generally a Provincially-insured service that generally requires repeating approximately every year to maintain pain control.

- Fluoroscopically-guided or ultrasound-guided diagnostic sacroiliac joint (SIJ) injections to objectively document SIJ-mediated pain, which can also help determine a potential treatment option to stabilize ongoing mechanical back pain;

  Sacroiliac joint pain is often associated with chronic low back pain and tends to remain chronic without further treatment. Diagnostic SIJ injections can help to determine if the sacroiliac joints are contributing to the pain. A negative result would imply that the pain generator is more likely from an alternate source, such as myofascial tissue, intervertebral disc, facet joints or neuropathic in nature. Noninvasive treatments include swimming/Aquatherapy and wearing a SIJ supportive belt during activity, which helps to stabilize the pelvis and sacroiliac joints, thereby decreasing pain. This pain may also improve with concurrent treatment of back pain from alternate pain generators. Occasionally SIJ injection with corticosteroid, prolotherapy (for hypermobility) or radiofrequency neurotomy is necessary for control of persistent symptoms. Most SIJ injections are Provincially-insured other than the medication injected. Osteopathic and chiropractic treatment appear particularly beneficial in my experience for sacroiliac pain as part of a multidisciplinary treatment model.

- Fluoroscopically-guided epidural steroid injections for radicular pain;

  Based on the description of pain radiating down the left leg, supported by physical examination of radiating left leg pain to the calf upon straight leg raising with ankle dorsiflexion, it may be reasonable to consider a trial of fluoroscopically-guided epidural steroid injections, notably if the above diagnostic injections are incomplete and/or an MRI reveals findings to support nerve root impingement or spinal

stenosis. These injections can improve the painful symptoms of limb +/- spinal pain due to underlying disc disease with nerve root impingement or radiculitis. If efficacious, these treatments are often repeated every 3-6 months to maintain stability and treat anticipated flare-ups, and are generally Provincially-insured other than the medication injected.

- Periodic physical therapy for symptom maintenance and treatment of flare-ups, with priority for massage therapy for myofascial tension release, chiropractic or osteopathic therapy to offer multiple physical therapy modalities, and physiotherapy for acute flare-ups;

- Referral to a formal self-management program for chronic pain;

- Referral to a multidisciplinary pain management program, addressing physical, psychological and self-management issues concurrently. Multidisciplinary rehabilitation is recommended for the treatment of chronic pain by several authoritative bodies, including the College of Physicians and Surgeons of Ontario, American Society of Anesthesiologists and the International Association for the Study of Pain. Goals of multidisciplinary care include both subjective outcomes as well as objective functional outcomes (e.g. return to work). The physical component generally involves a reconditioning program that focuses on improving strength, endurance and flexibility of the upper and lower extremities, cervical and lumbar spine regions and core stability as well as lower impact cardiovascular and respiratory conditioning. This is carried out in a supervised and progressive manner in order to be effective. The overall objective is to stabilize both the pain condition and level of function. Mr. Temple would be a strong candidate for a multidisciplinary pain management program. Unfortunately, there are few publicly funded community-based multidisciplinary pain management programs, but a coordinated effort amongst providers addressing each area of need would be appropriate.

This concludes the Independent Pain Medicine Assessment on your client, Mr. Temple. Please feel free to contact my office for clarification of any of the materials presented.

Yours sincerely,

K. Smith, M.D., F.R.C.P. (C)

REFERENCES:

The following references have been used in support of opinions in this assessment. This list is not all-inclusive and may be updated from time to time.

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APPENDIX: INDEX OF MEDICAL BRIEF AS PROVIDED

Document Number	Document
1.	Western Memorial Regional Hospital File 2009-April 24, 2019
2.	Dr. Peter Callahan Doctor Chart 2013-April 17, 2019
3.	Dr. Peter Callahan Report November 18, 2013
4.	Dr. Peter Callahan Report April 8, 2010
5.	Broadway Family Health Clinic Charts 2008-2013
6.	Dr. Donald Chaulk Doctor Chart 2003-2007
7.	Dr. Brendan Lewis Report September 2, 2010
8.	Physical Rehab Report January 4, 2011
9.	Physical Rehab Report December 20, 2011
10.	Stephen Pinsent Chart complete until April 6, 2019
11.	Lawton's Pharmacy File 2009 to April 8, 2019
12.	RNC Photos of Accident
13.	Newfoundland and Labrador Medical Care Plan-Medical Claims History January 10, 2005 to July 23, 2015
14.	Photos of Leg
15.	Workplace Health, Safety and Compensation Commission of Newfoundland and Labrador File until June 21,2016
16.	City of Corner Brook Employment file until May 24, 2017

Additional documentation:

17. May 9, 2019 Photo of leg