ANZSOM ASM 2022

MOCK COURT WORKSHOP

22 March 2022, 1530-1800 HRS

VICTORIA PARK CONFERENCE VENUE

309 HERSTON RD, HERSTON

REV 1

Facilitator:	A/Prof John Gall
Judge:	Mr Peter O'Connor, Director of the Workers' Compensation Prosecution Unit
Barristers:	Ms Emily Cooper Ms Georgina Morgan
Witnesses:	Dr Thea Leman (Case 1) Dr Sid O'Toole (Case 2)

Introduction

On Tuesday, 22 March, a mock court will be run in Brisbane during the 2022 ANZSOM meeting – a 2.5 hr session commencing at 3.30pm. In brief, the exercise involves a Judge, barristers and 2 registrants who are willing to partake as expert witnesses plus those in the 'audience'.

Learning objectives

The participant will gain an insight into legal and court procedures that will enable them to engage as an expert witness within their area of expertise. Upon conclusion of the session, the participant will understand:

- the requirements for preparation to provide expert testimony in court;
- how to present effective medical evidence in court;
- the need for effective communication in a courtroom;
- the need to be an impartial witness for the court and not for the complainant or defendant;
- how to manage difficult situations in court; and
- the need to remain within your area of expertise.

The purpose of this session is **not** designed either to test difficult/controversial aspects of occupational medicine or aspects of occupational health law. Its purpose is to acquaint participants with the role of being an effective expert witness for the court.

The Mock Court

The mock court will hear two expert witness giving evidence. There will be two different occupational health-related cases. The details of each case contain sufficient notes and material for the witnesses to prepare a report based on the material provided and the questions asked. Each witness will testify for about 45 minutes (examination in chief and a cross-examination). At the end of each case, commentary will be provided on the witnesses' performance. Questions will be sought from the audience.

Specific requirements of the barristers will be to incorporate into their case/questioning:

- Double negative
- Multiple questions in one
- Stray from expertise
- Aggressive approach
- Dispute theory
- Display bias

Reference

Freckelton I. Expert evidence and healthcare professionals. In: Gall J, Payne-James J (Eds). Current Practice in Forensic Medicine. Oxford: Wiley-Blackwell. Pp1-15, 2011.

Program

Your day in court – a mock court experience

1530	A/Prof John Gall	Welcome and introduction
1535	A/Prof John Gall	Giving Evidence
1545	**Case 1**	**Volar ganglion**
1545		Examination in chief (25 mins)
1610		Cross-examination (20 mins)
1630		Commentary on presentation (15 mins)
1645	**Case 2**	**Drugs and driving**
1645		Examination in chief (25 mins)
1710		Cross-examination (20 mins)
1730		Commentary on presentation (15 mins)
1745		General comments/questions (10 mins)
1755	A/Prof John Gall	Closing comments
1800		Close

Abstracts

YOUR DAY IN COURT – EXPERT EVIDENCE

Mrs Laguni (a 40 year old lady) is a full-time cleaner in a hospital who is working mopping the floors. Whilst pulling a lever of a mechanical squeezer to squeeze the mop, she experienced the acute onset of sharp right wrist pain with radiation up her forearm and arm. She attended the employer's doctor for management. Examination showed tenderness in the anatomical snuff box of the right wrist with a reduced range of movement and power. This doctor arranged an x-ray and ultrasound of the wrist which did not show any fracture but did display a volar ganglion. As Mrs Laguni had only worked for the hospital for three years, the doctor was of a view that the ganglion was not caused by her work there and that the ganglion did not develop as part of the injury which was a soft tissue injury. Mrs Laguni obtained a differing opinion from her GP namely that the ganglion was caused by her work at the hospital and that her injury was not a soft tissue injury but the development and effects of the ganglion. She wants compensation for this injury. Unable to settle the matter, it is brought before the court.

The issues being tested are:-

1. Did Mrs Laguni's ganglion develop as a result of her work at the hospital?
2. Was the ganglion the cause of the pain experienced or was it due to another cause such as a soft tissue injury or, at most, inflammation of or about the ganglion?

CASE 2 – DRUGS AND DRIVING

Mr Smith (a 52 year old) drives a multi combination truck on interstate routes and has been doing so for the last 25 years. For the last 10 years, he has experienced intermittent but gradually worsening low back pain. Currently, it occurs on a daily basis and is aggravated by heavy lifting, driving for long periods and driving over rough roads. The pain is dull and there is no radiation into his lower limbs. The pain has been fully investigated but beyond some non-specific mild osteoarthritic changes, a specific cause has not been identified. To manage his pain he takes Tramadol (200 mg qid) and, if the pain is bad, oxycodone (10 mg qid). Neither medication makes him drowsy either singly or in combination. Following a medical clearance from the company doctor, Mr Smith is involved in a non-fatal, single vehicle accident and a blood test taken two hours after the accident reveals Tramadol 2.5 mg/L (toxic level is > 2 mg/L), oxycodone 0.04 mg/L and noroxycodone. Alcohol was not detected. Mr Smith's case is reviewed by the Licensing authority and on medical grounds his heavy vehicle licence is cancelled. He challenges this in court.

The issues to be tested are:

1. Whether the decision to allow Mr Smith to continue driving was appropriate,
2. Whether Mr Smith is fit to hold a heavy vehicle licence, and
3. Whether the cause of the accident, from a medical perspective, was due to the combined effects of Tramadol and oxycodone.

Cases

Case 1 – Volar ganglion

Name: Mrs Lola Laguni

Address: 14 California Road, Redbank, Qld

DOB: 29/07/1973

Position: Cleaner

Company: Turbot Street Private Hospital

Referral from the employer for the management of the injury and an assessment of suitability for work:

You are provided a letter of referral dated 22 April 2021 advising the following:-

- Lola is a casual cleaner (position description provided)
- She has reported extreme right wrist pain to her supervisor;
- A review and determination for fitness for duty is sought;
- Lola tends to cancel shifts frequently for personal illness, is very unreliable, and her non attendance notice is usually short;
- Her last injury was an ankle injury sprain, where she rolled on her shoe walking down the corridor, there was no obstruction, no wet floor, it was carpet and no obvious reason other than inappropriate footwear. At the time of this review, the pain reported again was quite extreme and an x-ray was requested to rule out a fracture. Lola continued to report pain and the GP ordered an MRI to evaluate ligamentous injury. The result was of a sprain with some inflammation.
- She took a month off to rest the ankle before a RTW on full normal duties - there was evidence to prove that her pain relating to this was always out of proportion to the injury!

HR at Turbot Street Private Hospital would like an opinion as to whether the action of squeezing the handle of her mop would cause this much pain, whether the injury is consistent with the claimed cause, and your management plan and prognosis. It is also requested that you manage the injury; Mrs Laguni has consented to this.

Consultations:

<u>First consultation – Thursday, 23 April 2021</u>

Mrs Laguni stated that on the previous (8 days – 14th) Wednesday afternoon she injured her right wrist – she held a mop in her left hand, put it in a squeezer and pulled on the squeezer handle with her right hand to squeeze the water from the mop. She immediately developed a sharp pain in her right wrist with radiation up her forearm and arm. More specifically, the pain was in the median nerve distribution of her hand and flexor surface of her forearm. She claims not to have sustained any previous wrist injury. She had only worked for Turbot Street Private Hospital for 3 years. Prior to this she had worked as a waitress for 15 years for various companies. She did not have any significant medical or surgical conditions and had suffered from depression in the past. She had made two previous work-related claims:-

1. 2007 – burn to left thigh.
2. 2009 – depression due to bullying. This was managed by a psychologist and she claimed to have made a full recovery not requiring any treatment.

In relation to the right wrist problem, she saw a physiotherapist the day after the injury occurred. A diagnosis of a probable tendon injury was made and her wrist was placed in a brace

Examination: Mrs Laguni attended by herself. Only her wrist was examined. Her right wrist was tender at the base of the thumb (anatomical snuff box) and there was a reduced ROM of the wrist. Noted to have difficulty signing the work certificate. Grip strength couldn't be measured as the dynamometer was missing. It appeared poor on the right.

Treatment/Plan:

1. Work certificate for light duties and not to use right hand
2. X Ray right wrist and, if normal, ultrasound of right wrist

<u>X-ray and Ultrasound report</u>

Date: 26 April 2021

Clinical Notes: Injury to wrist. Pain base of thumb.

Findings:
X-Rays

The distal radius and ulna are intact. Scaphoid within normal limits. The other carpal bones are normal. The first carpo-metacarpal joint is within normal limits. Small erosion or cystic area on the radial aspect of the head of the first metacarpal is present. There is also some bony hypertrophy at this point. This is consistent with an old injury to the radial collateral ligament. No acute fracture.

Ultrasound

12 x 9 x 9mm complex ganglion arises from the volar aspect of the scapho-lunate articulation. It lies to the ulnar side of the radial artery and deep to the FCR tendon. FCR tendon and sheath are normal. The patient is tender on the volar side of the wrist. Incidental note of bifid median nerve is present. This is similar to the left side. No flexor or extensor tenosynovitis. Some bony irregularity of the dorsal aspect of the scapho-lunate joint. The ligament is slightly heterogeneous but no tear or dorsal ganglion is evident.

Comment: Volar wrist ganglion. The patient is tender at this point. No signs of tenosynovitis or acute ligamentous disruption.

Second consultation – 29 April 2021

History: Attended for review and to obtain her results. She is still in pain but now has pain in her left shoulder because she is using her left shoulder more. Despite the recommendations of the previous consultation, she has been using right hand as much as she can. She was given the result of the x-ray/untrasound report and advised that the ganglion was not a recent development and was not work-related (ie due to working at Turbot Street Private Hospital). The pain was due to a soft tissue injury.

Examination: Her wrist was still in a splint. She was noted to be carrying her hand bag and x-rays in right hand when she arrived. Her wrist was still tender at the base but there was a full range of movement. Grip strength still couldn't be measured as the dynamometer was missing. It appeared reduced on the right. She signed the work cert without difficulty and claimed that she couldn't use her wrist to work.

Treatment/Plan: A further work certificate was provided for 2 weeks for light duties - not to use right hand. To be reviewed in 2 weeks with the plan for a full return to normal unrestricted duties.

Third consultation – 7 May 2021

History: Attended for a review. The doctor was advised by her work that she had been suffering from a URTI and has been off work for the whole week prior to the consultation. Also advised that she had not been following the work restrictions as per the certificate at any time post injury.

Examination: Right wrist – FROM, not wearing a splint, still mild tenderness at base of thumb. Grip strength 32 left and 23 right.

Treatment/Plan: To return to full duties

Note: The hospital advise the examining doctor that Mrs Laguni has sought advise from her GP who has informed her that he believes that the ganglion is the cause of the problem and is work-related.

CASE

Appellant: Bright Spark Lawyers for Mrs Laguni

Respondent: The Regulator

Mrs Laguni has been referred to the occupational doctor (not the patient's GP but a doctor who provides work injury management services to the Hospital) by Turbot Street Private Hospital for an assessment and management of her injury. The doctor conducted an assessment of Mrs Laguni, managed her injury and provided a written opinion to Turbot Street Private Hospital. The hospital has passed this report to WorkCover (Qld). Mrs Laguni has consulted her solicitor about the injury and based on her GP's view, has decided to make a claim against WorkCover (Qld). Her view is that the ganglion was caused by her work at the hospital and that her injury was not a soft tissue injury

but the development and effects of the ganglion. She wants compensation for this injury. WorkCover rejected Mrs Laguni's claim on the basis of the occupational doctor's report. Mrs Laguni (the Appellant) appealed to the Regulator for a review but the decision is upheld. Mrs Laguni has now appealed to the Queensland Industrial Relations Commission.

Issues to be tested:

3. Did Mrs Laguni's ganglion develop as a result of her work at Turbot Street Private Hospital?
4. Was the ganglion the cause of the pain experienced or was it due to another cause such as a soft tissue injury or, at most, inflammation of or about the ganglion?

Legal comment re case in Queensland

This is a WorkCover claim. The threshold issue is whether Mrs Laguni has an injury for the purposes of the *Workers' Compensation and Rehabilitation Act 2003* (Qld). The most likely scenario is that the claim has been declined by WorkCover (Qld) and then on application for review by the Workers Compensation Regulator, the Regulator has upheld that decision.

Mrs Laguni would be bringing an appeal against the Regulator in the Queensland Industrial Relations Commission. The parties would be Mrs Laguni v The Regulator.

The relevant test is set out in s32 which defines the meaning of injury:

*(1) An **injury** is personal injury arising out of, or in the course of, employment if the employment is a significant contributing factor to the injury.*

(2) However, employment need not be a contributing factor to the injury if section 34(2) or 35(2) applies.

*(3) **Injury** includes the following—*

(a) a disease contracted in the course of employment, whether at or away from the place of employment, if the employment is a significant contributing factor to the disease;

(b) an aggravation of the following, if the aggravation arises out of, or in the course of, employment and the employment is a significant contributing factor to the aggravation—

(i) a personal injury;

(ii) a disease;

(iii) a medical condition, if the condition becomes a personal injury or disease because of the aggravation;

(c) loss of hearing resulting in industrial deafness if the employment is a significant contributing factor to causing the loss of hearing;

(d) death from injury arising out of, or in the course of, employment if the employment is a significant contributing factor to causing the injury;

(e) death from a disease mentioned in paragraph (a), if the employment is a significant contributing factor to the disease;

(f) death from an aggravation mentioned in paragraph (b), if the employment is a significant contributing factor to the aggravation.

(4) For subsection (3)(b), to remove any doubt, it is declared that an aggravation mentioned in the provision is an injury only to the extent of the effects of the aggravation.

(5) Despite subsections (1) and (3), ***injury*** *does not include a psychiatric or psychological disorder arising out of, or in the course of, any of the following circumstances—*

(a) reasonable management action taken in a reasonable way by the employer in connection with the worker's employment;

(b) the worker's expectation or perception of reasonable management action being taken against the worker;

(c) action by the Regulator or an insurer in connection with the worker's application for compensation.

Examples of actions that may be reasonable management actions taken in a reasonable way—

- *action taken to transfer, demote, discipline, redeploy, retrench or dismiss the worker*
- *a decision not to award or provide promotion, reclassification or transfer of, or leave of absence or benefit in connection with, the worker's employment*

Expert witness

Doctor: He/she is called on behalf of the respondent/Regulator.

He/she has conducted the examinations and management as outlined above. He/she provides a report providing:-

- an opinion as to whether the action of squeezing the handle of her mop would cause the amount of pain Mrs Laguni experienced;
- the diagnosis of the injury;
- whether the injury is consistent with the claimed cause; and
- the management plan and prognosis.

Note: Mrs Laguni's legal team have sought a medico-legal report from another occupational physician, Dr Smith.

Medico-Legal Report – Dr Thea Leman

13 February 2022

Human Resources
Turbot Street Private Hospital

Dear Mr Human Resources,

Employee: Lola Laguni
Date of Birth: 29/7/1973
Injury: Volar ganglion
Job role: Cleaner
Employer: Turbot Street Private Hospital
Date of Injury: 14 April 2021

Thank you for referring Ms Laguni, a reportedly otherwise well 47-year-old right hand dominant cleaner employed by Turbot Street Private Hospital. Ms Laguni attended unaccompanied on three occasions for review with myself. Consent was obtained.

I have read and understood the Supreme Court of Queensland [QSC] Common law Evidence Act 1977 (Qld) which contains the Uniform Civil Procedure Rules 1999 (Qld) Ch 11, Part 5, Division 2 Rules 423—429S which outlines the Code of Conduct for Expert Witnesses. I agree to be bound by the above code of conduct. The following report has been prepared in accordance with that Code.
I Dr Thea Leman graduated with a Bachelor of Medical Radiation specialising in Nuclear Medicine in 2005. I subsequently worked in Nuclear Medicine Imaging. I completed post graduate studies graduating with a Bachelor of Medicine and Bachelor of Surgery from Notre Dame University Fremantle in 2010. I have completed training in the Public and Private Hospital sector. I commenced training as an Occupational and Environmental Physician Registrar in 2018. I completed my Graduate Diploma of Occupational and Environmental Health at Monash University in 2021. I am a Rail Authorised Health Professional, and an OGUK qualified examiner.

Documents
The following documents have been provided to me an considered in the preparation of this report;
1. Written consent to provide and release medical information dated 23 April 2021
2. Referral letter dated 22 April 2021, HR Turbot Street Private Hospital
3. Position Description of cleaner
4. Consultation notes dated 23 April 2021 , 29 April 2021, 7 May 2021
5. X Ray report dated 26 April 2021
6. Ultrasound Report dated 26 April 2021

History

Ms Laguni attended on three occasions for review with myself for assessment and management of volar ganglion. On initial review conducted 23 April 2021 Ms Laguni reported working as a full-time cleaner employed by Turbot Street Private Hospital, a role she has held for three years. I understand from her self report and the duties set out in the provided position description of cleaner that her role involves mopping hospital floors. The role entails frequent repeated and sustained hand gripping, upper limb pushing and pulling and awkward sustained postures. When emptying the mop into the bucket Ms Laguni is required to forcefully squeeze the mop handle. Ms Laguni reported she is contracted on a full time basis. She denied being employed in other roles currently.

On 23 April 2021 Ms Laguni attended unaccompanied for review with myself. She reported injuring her wrist on 14 April 2021 when she "*held a mop in her left hand, put it in a squeezer and pulled on the squeezer handle with her right hand to squeeze the water from the mop*." Ms Laguni reported she immediately developed a sharp pain in her right wrist with radiation up her forearm and arm. The pain was in the median nerve distribution of her hand and flexor surface of her forearm. Ms Laguni attended a physiotherapist on 15 April 2021 and was placed in a brace. She recalled being advised she had a probable tendon injury.

My examination findings revealed tenderness to plaption at the right wrist at the base of the thumb (anatomical snuff box). Ms Laguni demonstrated reduced Range of Movement (ROM) of the wrist. I observed her to have difficulty signing the work certificate. Grip strength couldn't be measured as the dynamometer was missing. It appeared poor on the right on examination.
I provided fitness for light duties and advised her not to use her right hand. I referred her for an X Ray of the right wrist and, if normal, ultrasound of right wrist

Progress to Date

Ms Laguni attended unaccompanied on 29 April 2021 for review with myself. I provided her with the imaging results and I advised her I opined the ganglion was not the source of her pain nor was it a recent development. I advised her in my opinion the pain was secondary to a soft tissue injury of the wrist.

Ms Laguni reported ongoing pain in the right wrist. She noted increased pain in the left shoulder attributed to increased use. Ms Laguni reported using her right wrist "*as much as possible*." She reported being unable to use her wrist to work.

I observed she had a splint in situ. She was observed to carry her hand bag and x-rays in right hand when she arrived. On examination of the wrist she reported tenderness to palpation at the base. She demonstrated full active range of movement. Grip strength appeared reduced on the right clinically. She was observed to sign the work cert without difficulty.A certificate for restricted duties was provided, she was advised not to use her right hand.

Ms Laguni attended unaccompanied for review with myself on 7 May 2021. Ms Laguni's employer advised me she had been suffering from a Upper Respiratory Tract Infection (URTI) and had been off work for seven days prior to the consultation. Her employer advised that Ms Laguni had been observed to work beyond her restricted duties since last review on 29 April 2021.

On examination Ms Laguni demonstrated full active range of movement of the right wrist. She reported mild tenderness to palpation at base of thumb. She demonstrated grip strength 32 kg of force on the left and 23 kg of force on the right. I observed she was not wearing her splint at time of review. I recommended a return to full duties as a cleaner. I have subsequently been advised by Ms Laguni's employer that she has sought an alternative opinion and has lodged a Work Cover claim.

Current Symptoms
I have not assessed Ms Laguni since 7 May 2021.
Current Treatments
To my knowledge Ms Laguni is currently not receiving treatment for her condition.
Current Activities
As per my last assessment on 7 May 2021 Ms Laguni has been completing full unrestricted duties as a cleaner at Turbot Street Hospital.
Past Medical History
Ms Laguni denied prior injury to her right wrist. She denied previous significant medical or surgical conditions apart from depression.

The following Work Related Injuries were reported by the referrer Mr HR of Turbot Street Private Hospital; Ankle sprain, date unknown, resolved with conservative management over a period of months. Diagnosis was confirmed with MRI. Burns to left thigh 2007. Progress unknown. Depression due to bullying 2009. Received treatment from a psychologist, made a full recovery. No ongoing treatment required.

Social and Occupational History
Ms Laguni reported being employed prior to this role as a waitress for 15 years working for various employers. She denied other part time employment currently.

Examination
Most recent examination of 7 May 2021 demonstrated mild tenderness to palpation over the base of thumb. Grip strength was demonstrated to 32 kg of force on the left and 23 kg of force on the right.
Investigations
X-ray and Ultrasound report
Images were not made available to me at the time of review.
Date: 26 April 2021
"Clinical Notes: Injury to wrist. Pain base of thumb.
Findings:
X-Rays
The distal radius and ulna are intact. Scaphoid within normal limits. The other carpal bones are normal. The first carpo-metacarpal joint is within normal limits. Small erosion or cystic area on the radial aspect of the head of the first metacarpal is present. There is also some bony hypertrophy at this point. This is consistent with an old injury to the radial collateral ligament. No acute fracture."

Ultrasound
"12 x 9 x 9mm complex ganglion arises from the volar aspect of the scapho-lunate articulation. It lies to the ulnar side of the radial artery and deep to the FCR tendon. FCR tendon and sheath are normal. The patient is tender on the volar side of the wrist. Incidental note of bifid median nerve is present. This is similar to the left side. No flexor or extensor tenosynovitis. Some bony irregularity of the dorsal aspect of the scapho-lunate joint. The ligament is slightly heterogeneous but no tear or dorsal ganglion is evident.
Comment: Volar wrist ganglion. The patient is tender at this point. No signs of tenosynovitis or acute ligamentous disruption."

Assessment and Summary
Ms Laguni is a reportedly otherwise well 47 year old cleaner employed by Turbot Street Private Hospital, a role she has held for three years. Ms Laguni reported sustaining an acute onset of pain to the right wrist after forcefully squeezing a mop handle. Examination and investigation of the wrist revealed a volar ganglion cyst. Treatment to date has consisted of splinting and avoidance of activity.
In my opinion commensurate to my level of training as an Occupational Physician Registrar on the balance of probabilities, based on the evidence provided to me and in the absence of evidence to the contrary the volar ganglion is unlikely to have been caused by her employment as a cleaner.
By her report Ms Laguni experienced pain secondary to forceful wrist flexion during her activities of cleaning. I consider I have weighed the evidence provided to me and in my opinion it would appear that the action of forcefully squeezing the mop handle on 14 April 2021 has caused the ganglion to elicit pain to the wrist. Pain can occur secondarily to compression of nearby nerves. In my opinion the pain has arisen during the course of employment and is a significant exacerbation of a previous injury.

Ms Laguni denied previous wrist injury. I note Ultrasound and Xray imaging performed on 26 April 2021 demonstrated an old injury to the radial collateral ligament, no acute injury was identified. Ms Laguni denied prior injury to the right wrist. Ganglions can arise secondary to synovial herniation or trauma.

Non-tender cystic swellings may appear on the hand, usually on the dorsal surface of the wrist. The size can vary from pea to plum size. Thin walled cysts contain clear mucinous fluid. The aetiology is unknown. It may result from mucoid degeneration. Flexion of the wrist causes the cyst to enlarge and may induce pain. It is named a ganglion (G. swelling or knot). (Moore, 2006)
In my opinion commensurate to my level of training as an Occupational Physician Registrar, based on the evidence provided to me and in the absence of evidence to the contrary the injury is more likely than not to have been caused by her duties undertaken for 15 years as a waitress. The ganglion may have arisen secondarily to the previous wrist injury. Alternatively the cause of ganglion may be idiopathic from mucinoid degeneration. (MD, 2022)

Diagnosis

Ms Laguni presented with a right sided volar ganglion arising from the volar aspect of the scapho-lunate articulation.

Management

In my opinion observation is the most appropriate management of Ms Laguni's volar ganglion and is the recommended first line treatment in adults.

In my opinion surgical excision should be reserved for ganglions with severe symptoms or neurovascular manifestations. Volar ganglions have a higher recurrence rate than dorsal ganglions. Referral to an Orthopaedic Surgeon for surgical opinion may be appropriate. Closed rupture has a high recurrence rate and is not recommended.

Aspiration is recommended second line of treatment in adults, it is typically avoided on the volar aspect dur to the radial artery. It carries a higher recurrence rate than surgical resection but has minimal risk.

Prognosis

Volar ganglions resolve spontaneously in 50% of cases. (Volar Retinacular Cysts, 2022). The pain is likely to resolve with resolution of the ganglion. In my opinion Ms Laguni is reportedly completing her pre-injury tasks and surgical intervention is not indicated currently. She has returned to her usual pre injury role of cleaner. Her grip strength is likely to return to baseline in six to twelve weeks.

I trust this report has been of assistance. Please do not hesitate to contact me to discuss further. The factual matters stated in this report are true to the best of my knowledge and based on the information provided to me at the time of writing this report and in absence of information to the contrary. This report contains reference to all matters I consider significant. If further information becomes available I will happily review and provide an updated opinion.

Sincerely,

Dr Thea Leman

Dr Thea Leman
Occupational & Environmental Medicine Physician Registrar, MBBS, BMRad- Nuclear. Grad Dip OEH.

Works Cited

MD, M. D. (2022, February 7). *Ganglion Cysts*. Retrieved from Orthobullets: https://www.orthobullets.com/hand/6086/ganglion-cysts

Moore, K. a. (2006). *Clinically Oriented Anatomy, Fifth Edition.* Baltimore: Lippincott, Williams & Wilkins.

Volar Retinacular Cysts. (2022, February 7). Retrieved from Orthopedic and Sports Medicine Institute: osmifw.com

Case 2 – Drugs and driving

Name: Mr Bill Smith

Address: 14 California Road, Redbank, Qld

DOB: 06/07/1963

Position: Truck driver

Company: The Extremely Large Transport Company (TELTC)

Background:

Mr Smith drives a multi combination truck and has been doing so for the last 25 years. He travels between Melbourne and Brisbane on a regular basis and occasionally drives to other more remote inland rural towns. For the last 10 years, he has experienced intermittent but gradually worsening low back pain. Currently, it occurs on a daily basis and is aggravated by heavy lifting, driving for long periods and driving over rough roads. The pain is dull and there is no radiation into his lower limbs. The pain has been fully investigated but beyond some non-specific mild osteoarthritic changes, a specific cause has not been identified. Mr Smith has tried a number of different treatments including both non-pharmacologic and pharmacologic as follows:-

- physiotherapy – attended a few sessions but found that they didn't really help – the physiotherapist did made some recommendation to the truck seating and this was implemented and has been helpful ;
- exercise programs – which he didn't continue with due to time constraints;
- manual therapy with a chiropractor – some mild relief but the pain came back within a week or so;
- acupuncture – he admits to not following through with this as he doesn't like needles and it hurt on the first appointment;
- CBT was suggested but he didn't have the time and was un-accepting that he had any form of mental health issue;
- Panadeine forte – worked initially but then became less effective;
- NSAIDS – helpful in the early years but they cause stomach upsets and are not really helpful now;
- Amitryptaline – was tried but he developed severe side effects (headaches, palpitations and dizziness)

TELTC have been aware of Mr Smith's back problem and he was recently reviewed by the company doctor who, in addition to the above, noted the following:-

Past history: No significant conditions.

Smoker: 30 cigarettes per day and has been smoking for the last 30 years.

Alcohol: 1-2 cans of beer at the end of each day – more at the weekends on occasions

Medications: Tramadol 200mg qid
Oxycodone 10 mg every 4-6 hours if the pain is bad and isn't relieved with Tramadol alone

Mr Smith specifically stated that neither medication make him drowsy either individually or when taken together.

Paper assessments:

Epworth Sleepiness Scale:	score of 2
FAST:	score of 1 (an AUDIT was not undertaken)
K10:	score of 10

Examination:

BP 135/85; pulse 78 and regularly regular
Weight 102 kg; Height 169 cm (BMI 35.7)
Other than obesity, no findings of significance. Examination of his back did not reveal any focal tenderness. There was a full range of movement. SLR was 75° bilaterally.
Specifically, there was no evidence of cardiovascular disease or diabetes.

Company doctor recommendation:

Following the examination, the company doctor was of a view that despite the level of Tramadol and oxycodone being taken, Mr Smith was fit to continue driving.

Event:

Mr Smith continues driving for TELTC and at 1645 hours on 6 June 2021 is involved in a single vehicle accident on the Leichhardt Highway, 50 km north of Goondiwindi. He is driving a fully laden multi combination truck in the north-bound lane and is witnessed to gradually slow down and veer to the right crossing into the south-bound carriageway, narrowly missing oncoming vehicles who took evasive action. His vehicle leaves the carriageway and proceeds some distance into the verge before crashing into two large, adjacent gum trees where the vehicle stops. Mr Smith is not injured beyond a few bruises and scratches but appears drowsy. Police request him to undergo a blood test (taken 2 hours after the incident) which showed the following:-

Tramadol	2.5 mg/L (NB: > 2 mg/L is toxic)
Oxycodone	0.04 mg/L
Noroxycodone	detected
Ethanol	nil

CASE

Plaintiff: Mr Bill Smith / (TELEC)

Defendant: Licensing authority

Mr Smith's case is reviewed by the State Vehicle Licensing Authority and on medical grounds (the dose of Tramadol and oxycodone being used), his heavy vehicle licence is cancelled. He challenges this in court. Supporting him in the action is TELTC who are conscious of the insurance implications.

Issues to be tested:

1. That the medical opinion to allow Mr Smith to continue driving was inappropriate and contrary to the guidelines provided in the publication: Assessing Fitness to Drive for Commercial and Private Vehicle Drivers 2016 (Aug 2017 revision).
2. That Mr Smith is not fit, on medical grounds, to hold a heavy vehicle licence.
3. That the cause of the accident, from a medical perspective, was due to the combined effects of Tramadol and oxycodone.

Legal comment re case in Queensland

Mr Smith has had his heavy vehicle licence cancelled by the Department of Transport pursuant to Section 124 and 125 of the *Transport Operations (Road Use Management – Driver Licencing) Regulation 2010* (Qld).

Mr Smith may then ask for reconsideration of the decision under s132 of the Regulation or apply to QCAT for a review of the decision under s131 of the *Transport Operations (Road Use Management) Act 1995* (Qld) (**TORUM**).

The QCAT review is a "merits" review –it is a fresh hearing on the facts (Division 3 of *Queensland Civil and Administrative Tribunal Act 2009* (Qld)).

The issue is whether the decision was reasonable and the question which the doctors will ultimately address is whether "the licensee has a mental or physical incapacity that is likely to adversely affect the licensee's ability to drive safely".

Expert witnesses

Doctor: He/she is called on behalf of the plaintiff, Mr Smith and with the support of TELTC.

The plaintiff has requested a report from the Doctor who is the company doctor and has conducted the examination above. The report, outlining Mr Smith's medical condition as above, also requests answers to/information relating to the following:-

1. The side effects of Tramadol and oxycodone both separately and in combination.
2. What the normal blood levels of Tramadol are for the various therapeutic doses of Tramadol.
3. What doses of Tramadol are likely to result in toxic levels in blood.
4. What are the symptoms of toxic levels of Tramadol.
5. Did Mr Smith take the medications at the dose he claims.
6. The reasoning for allowing Mr Smith to continue driving.
7. Did the combination of the drugs taken cause the accident (from a medical perspective).

IMEsRock
An *Awesomely Opinionated* Company

19/11/2021

For the attention of:

Supreme Court
Queensland

Supplementary Fitness for Duty Assessment

Claimant Name: Bill Smith

Date of Birth: 06/07/1963
Date of Assessment: 21/09/2021
Accepted Date of Incident: 06/06/2021

Assessment Location: IMEsRock

Level 15
77 Awesome Road
Brisbane QLD 4000

PRIVATE AND CONFIDENTIAL

Introduction

It is my understanding that you have requested that I provide a Supplementary Report, answering specific questions, following my initial assessment of Mr Smith on03/07/2021.

Background and Reason for Referral

From your referral letter dated 18/09/2021 I have been asked to answer a series of specific questions following Mr Smith's involvement in a Motor Vechile Accident on 06/06/2021.

Your referral letter has outlined the following information for me to consider:

Mr Smith continues driving for TELTC and at 1645 hours on 6 June 2021 is involved in a single vehicle accident on the Leichhardt Highway, 50 km north of Goondiwindi. He is driving a fully

laden multi combination truck in the north-bound lane and is witnessed to gradually slow down and veer to the right crossing into the south-boundcarriageway, narrowly missing oncoming vehicles who took evasive action. His vehicle leaves the carriageway and proceeds some distance into the verge before crashing into two large, adjacent gum trees where the vehicle stops. Mr Smith is notinjured beyond a few bruises and scratches but appears drowsy.

The Victorian Police requested him to undergo a blood test (taken 2 hours after theincident) which demonstrated the following:-

Tramadol	2.5 mg/L (NB: > 2 mg/L is toxic)
Oxycodone	0.04 mg/L
Noroxycodone	detected
Ethanol	nil

Mr Smith's case was reviewed by the State Vehicle Licensing Authority and onmedical grounds (the dose of Tramadol and oxycodone being used), his heavyvehicle licence is cancelled.

Mr Smith is choosing to challenge this decision under s132 of the Regulation or apply to QCAT for a review of the decision under s131 of the *Transport Operations(Road Use Management) Act 1995* (Qld) (TORUM).

Response

As you are aware, I initially assessed Mr Smith on 03/07/2021 with respect to hislumbar spine. In order to provide context to my answers and ease of review, an outline of my findings and recommendations following that report are:

- *Mr Smith drives a multi combination truck and has been doing so for the last25 years.*
  - *He travels between Melbourne and Brisbane on a regular basis and occasionally drives to other more remote inland rural towns.*
- *For the last 10 years, he has experienced intermittent but gradually worseninglow back pain.*
- *Currently, it occurs on a daily basis and is aggravated by heavy lifting, drivingfor long periods and driving over rough roads.*
  - *The pain is dull and there is no radiation into his lower limbs.*
  - *The pain has been fully investigated but beyond some non-specific mild osteoarthritic changes, a specific cause has not been identified.*
- *Mr Smith has tried a number of different treatments including:*
  - *physiotherapy*
    - *attended a few sessions but found that they didn't really help*
    - *the physiotherapist did made some recommendation to the truckseating and this was implemented and has been helpful*
  - *exercise programs*
    - *he didn't continue with this treatment due to claimed time constraints;*
  - *chiropractor therapy*
    - *initial mild relief, however the pain returned within a week to tendays;*

- *acupuncture*
  - *Mr Smith only attended a single session and did not persist withthis treatment due to fear of needles the discomfort that he had following the initial appointment;*

- *Cognitive Behavioural Therapy (CBT)*
  - *This was suggested but Mr Smith expressed that he didn't havethe time and did not consider that he had any form of mental health issue;*

- *Panadeine forte*
  - *Mr Smith advised that this worked initially, but then became lesseffective;*

- *Non-Steroidal anti-inflammatory drugs (NSAIDs)*
  - *Mr Smith advised that he found this medication helpful in the early years, however they caused gastric irritation and lost theireffectiveness;*

- *Amitriptyline – was tried but he developed severe side effects (headaches, palpitations and dizziness)*

Past history:

Mr Smith denied any significant past medical history related to his lumbar spine otherthan what has already been discussed. He denied any other medical significant medical conditions.

Mr Smith described himself as a current smoker, smoking 30 cigarettes per day forthe past 30 years.

Mr Smith described himself as a regular drinker, consuming 1-2 cans of beer at theend of each day, and at times, more at the weekends.

Medications:

Mr Smith advised that his current medications are:

- *Tramadol 200mg QID (four times daily)*
- *Oxycodone 10 mg up to every 4-6 hours, for breakthrough pain. He advisedthat he takes this rarely, usually once per week at the end of his work swingwhen he is able to rest, and usually only prior to going to bed.*

Mr Smith advised that he is not experiencing side effects that may impact his abilityto drive or operate heavy machinery.

Examination findings:

On general examination, Mr Smith appeared well and in no obvious discomfort ordistress.

At rest his Blood Pressure was 135/85 mmHg and his pulse was 78 beats per minuteand regularly regular. Specifically, there was no evidence of cardiovascular disease or diabetes.

His 169 cm tall frame supported a weight of 102kg, resulting in a Body Mass Index(BMI) of 35.7 kg/m^2.

Examination of his lumbar spine did not reveal any focal tenderness. Mr Smith ambulated normally and was able to demonstrate an unimpeded ability to walk on both his heels and toes. There was a full range of movement in all planes. Straight leg raise test was 75° bilaterally, limited by body habitus, and without radiculopathy.

Epworth Sleepiness Scale: score of 2

FAST: score of 1

K10: score of 10 (low risk of Depression / Anxiety)

Conclusion and recommendations:

Mr Smith is a 58 year old man, employed with your organisation, TELTC, in the role of an interstate truck driver, who you have requested that I undertake a formal fitnessfor duty assessment with consideration to his lumbar condition and medication that he takes to manage this condition.

After assessing all of the available information provided, taking a history from Mr Smith and performing an examination, it is evident that Mr Smith has the followingconditions relevant to his workability:

- *Lumbar degeneration resulting in chronic pain*

Mr Smith consumes a significant regime of medication to manage his condition. At the outset, these doses are at the higher end of the recommended dosage spectrum,however consideration needs to be given to additional factors in Mr Smith's case. MrSmith has a BMI greater than 35kg/m^2, and therefore has a larger than average bodyframe within which to distribute the medication, reducing the risk of side effects from higher doses. He also has been taking this medication over a number of years, starting at lower doses and increasing in a step wise manner until reaching therapeutic levels. Over this time, he has habituated to the medication, that is his body has 'got used to it', and therefore he has not suffered from some of the common side effects of the medication. The use of Oxycodone to manage breakthrough pain in managed well, with Mr Smith only using it on days where he has a full 48 hours before he has to drive again. This is a well managed risk mitigation strategy.

I consider that though Mr Smith has a degenerative condition of his lumbar spine thatcauses ongoing discomfort, he is managing this well with his medications, and the manner in which his medication is taken does not result in risk of side effects that would impede his ability to safely drive a Multi-Combination vehicle in his role as an interstate truck driver for your organisation.

Additional reporting 19/11/2021

From your referral dated 19/11/2021 I have been provided with the additional information outlined above in the Background section of this report, and asked toprovide a response to the questions outlined below:

1. The side effects of Tramadol and oxycodone both separately and incombination.

Tramadol(*(1RS,2RS)*-2-(dimethylaminomethyl)-1-(*m*-methoxyphenyl)cyclohexanol) isan opioid agonist medication with a similar chemical structure to codeine. It binds to mu receptors in the central nervous system to bring about its analgesic effect.
Additionally it acts as both a serotonin and noradrenaline reuptake inhibitor, which has the effect of an anti-depressant, or stimulant. The two modes of action combine to bring about pain relief. As an analgesic, tramadol is approximately equipotent as codeine and has about 10% of the potency of morphine after parenteral administration. Because tramadol has a higher oral bioavailability than morphine, therelative potency of oral tramadol should be about 20% of that of oral morphine (1).

Oxycodone is a pure opioid. It acts centrally and in the gastrointestinal tract, bindingto mu receptors to bring about pain relief. Studies have shown that tramadol monotherapy (use on its own) does not usuallyprovide sufficient analgesia in moderate to severe pain (2), and therefore it is often used in combination with additional medications for breakthrough pain, including Oxycodone.

Tramadol has a number of potential side effects. The Australian Medicines Handbook, a publication produced by the Royal Australian College of General Practitioners. the Australasian Society of Clinical and Experimental Pharmacologistsand Toxicologists (ASCEPT), and the Pharmaceutical Society of Australia, provides the following information on Side effects of these two drugs:

Tramadol:

- Common (>1%): CNS stimulation, weakness, sweating, sleep disorder, rash
- Infrequent (0.1–1%): depression, difficulty concentrating
- Rare (<0.1%): anaphylactoid reactions, Stevens-Johnson syndrome, toxicepidermal necrolysis, coordination disturbance

Oxycodone:

- Common (>1%): nausea and vomiting (below), dyspepsia, drowsiness, dizziness, headache, orthostatic hypotension, itch, dry mouth, miosis, urinaryretention, constipation
- Infrequent (0.1–1%): dose-related respiratory depression, bronchospasm, confusion, hallucinations, delirium, agitation, mood changes, tremor, visual disturbances, urticaria, hypothermia, bradycardia or tachycardia, hypertension, biliary spasm, paralytic ileus, raised liver enzymes, muscle rigidity, myoclonus (with high doses), flushing due to histamine release (except alfentanil, fentanyl, tramadol and remifentanil), hypogonadism (morefrequent with long-term use and in men)
- Rare (<0.1%): SIADH, anaphylaxis, seizure

A combination of two opioids simultaneously can result in the interaction between thetwo and can lead to an increase risk of side effects, especially in the early stages of commencement of the second medication. The side effects would be more of the depressant component than the stimulatory component as only Tramadol has the stimulatory effect and it is the opioid effect that is enhanced. Typically, it would expected that more common side effects would be enhanced such as sedation, respiratory depression and slowing of gut motility.

2. What the normal blood levels of Tramadol are for the various therapeuticdoses of Tramadol.

There is significant variability within the literature regarding the peak plasma concentration, due to the individual's CYP2D6 status, renal function and other medications.

The findings of the Tramadol Update Review Report arising from the WHO ExpertCommittee on Drug Dependence 36th meeting in June 2014 (3) lists a peak plasma concentration of 0.31± 0.08 mg/L.

After administration of tramadol 100 mg prolonged release tablets the peak plasma concentration C_{max} 141 ± 40 ng/ml (0.14 ± 0.04 mg/L) is reached after 4.9 hours.
After administration of tramadol 200 mg prolonged release tablets a C_{max} 260 ± 62ng/ml (0.26 ± 0.06 mg/L) is reached after 4.8 hours (4).

Extrapolating this data, a dose of 400mg of Tramadol would be expected to result ina peak plasma concentration of approximately 0.5-0.6 mg/L

Therapeutic dose is considered between 0.1 and 1mg/L.

3. What doses of Tramadol are likely to result in toxic levels in blood.

A recent 2020 study published in the journal Critical Care *(5)* provides a comprehensiveassessment of common medications and illicit drugs, their therapeutic levels, toxic levels and comatose-fatal levels, as well as the half life of the substances.

For reference, the term Toxic level refers to:

- *Blood (plasma/serum) concentrations producing toxicity or clinically relevantadverse effects.*

This publication identified Tramadol as having 'toxic' blood-plasma concentration of1mg/L and a reported 'comatose-fatal' level that ranged from 2mg/L to 38.3mg/L. These numbers are derived from original papers, text books, and previous compilations, as well data collected in the authors' forensic and clinical toxicology laboratories, hence the range provided for the 'comatose-fatal' levels.

The 'toxic' blood-plasma concentration for Oxycodone is 0.2mg/L.

4. What are the symptoms of toxic levels of Tramadol.

The symptoms will largely vary amongst individuals, affected by not only the degreeof toxicity (as defined by the plasma concentration), but also the level of habituationor neuroadaption to the medication.

The most common effects of toxicity are mild, however they can range for reasonsoutlined above, and are summarised as:

1) Mild Toxicity
   a) lethargy and drowsiness
   b) agitation,
   c) Headache
   d) Nausea and vomiting
   e) Constipation
   f) Tachycardia
   g) Miosis

2) Moderate Toxicity
   a) Confusion
   b) Dizziness
   c) Ataxia
   d) Hypertension
   e) Respiratory depression
   f) Myoclonus
   g) Mydriasis
   h) Diaphoresis
   i) Acidosis
   j) Hypoglycaemia

3) Severe Toxicity
   a) Coma
   b) Seizures
   c) Rhabdomyolysis
   d) Hypotension
   e) Bradycardia
   f) Shock
   g) Asystole
   h) Apnoea
   i) Acute Renal Failure
   j) Hepatic Failure.

5. Did Mr Smith take the medications at the dose he claims.

Considering the expected plasma concentrations outlined above in response to Question 2, the plasma concentrations seen in the post accident blood test are consistent with Mr Smith taking a considerably higher dose that what was describedto me.

6. The reasoning for allowing Mr Smith to continue driving.

Based on the information that I had at that time I initially assessed Mr Smith, I was comfortable that the medication regime that he described to me, the manner that he had increased the medication systematically over time, and the avoidance of using his Oxycodone within a short time frame prior to driving did not pose a significant riskto his ability to safely drive. He denied any signs of side effects, that I considered to be due to his level of habituation /neuroadaptation over the course of taking themedication.

I refer you to Page 12 of 2016 Medical standards for licensing and clinical management guidelines a resource for health professionals in Australia

where it states:
“There is little direct evidence that opioid analgesics (e.g. hydromorphone, morphineor oxycodone) have direct adverse effects on driving behaviour. Cognitive performance is reduced early in treatment, largely due to their sedative effects, but neuroadaptation is rapidly established. This means that patients on a stable dose ofan opioid may not have a higher risk of a crash. This includes patients on buprenorphine and methadone for their opioid dependency, providing the dose has been stabilised over some weeks and they are not abusing other impairing drugs.”

7. Did the combination of the drugs taken cause the accident (from amedical perspective).

The plasma concentrations of Tramadol discovered post accident are indicative of arisk for side effects such as drowsiness, that could explain the accident that occurred. The Oxycodone level is within therapeutic range, however when added tothe toxic level of Tramadol, this would have increased the risk of side effects.

Having said that, consideration needs to be given to the degree of habituation that Mr Smith would have to these medications, which would have decreased the risk ofside effects.

Additionally, further investigation into the likelihood of other causes, such as fatigue, and Obstructive Sleep Apnoea (OSA) have not been fully explored, both of which aresignificant risk factors for micro-sleeps, a known and accepted cause of accidents such as seen in Mr Smith’s case.

Therefore I am unable to say with any sufficient degree of certainty that the combination of drugs caused the accident.

Should you have any queries regarding this case, or seek clarification on any matter raised, please do not hesitate to contact IMEsRock. This report may contain complex medical information and concepts and should not be released directly to theexaminee but may be released to the examinee’s treating medical practitioner for discussion.

Declaration

Pursuant to the relevant legislation, I confirm as follows:

- The factual matters stated in the report are, as far as I know, true.
- I have made all enquiries considered appropriate.
- The opinions stated in the report are genuinely held by me.
- The report contains reference to all matters I consider significant.

- I understand that I have complied with my duty to the court; and
  - As a witness giving evidence, I have a duty to assist the court;and
  - That duty overrides any obligation I may have to any party to the proceeding or to any person who is liable for my fee or expenses.

Yours sincerely,

Dr E.N. Abler
MBBS

Provider Number: 27272727WHY

References:

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2. Reinecke H, Sorgatz H (2009). [S3 guideline LONTS. Long-term administration of opioids for non-tumor pain]. Schmerz 23(5): 440-447
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4. *electronic Medicines Compendium (2014). Tramadol hydrochloride. Available at http://www.medicines.org.uk/emc/ingredient/1228/tramadol%20hydrochloride/*
5. Schulz M, Schmoldt A, Andresen-Streichert H, Iwersen-Bergmann S. Revisited: Therapeutic and toxic blood concentrations of more than 1100 drugs and other xenobiotics. *Crit Care*. 2020;24(1):195.Published 2020 May 6. doi:10.1186/s13054-020-02915-5

INFORMATION FOR THE BARRISTERS

Case 1

The case:

Mrs Laguni is a casual cleaner working for a private hospital for the last 3 years. Prior to this she used to work as a waitress for many years. On a Wednesday afternoon she injured her right wrist as a result of holding a mop in her left hand and pulling on a lever to function a squeezer to squeeze the fluid from the mop. She used her right hand to pull this squeezer. As a result of this, she developed the immediate onset of a sharp pain in her right wrist with radiation up her forearm and arm. Examination showed a limitation of movement and tenderness at the base of the thumb. An ultrasound showed the presence of a volar ganglion but no other abnormality. The treating doctor considered the problem to be due to a soft tissue injury and explained to Mrs Laguni that the volar ganglion didn't develop as a result of this single injury. The doctor was also of the view that the ganglion itself was not causing the pain but was due to a soft tissue injury with possibly some aggravation/inflammation of the ganglion. Mrs Languni, who on history seems to make the most of her injuries, attended her GP who was of the opinion that the ganglion is the sole cause of her problem and that the ganglion itself is work-related.

The issue in this case is that Mrs Languni is of the view that her work for the private hospital has caused her ganglion and is seeking compensation. The questions are whether or not Mrs Languni's

ganglion developed as a result of her work at the private hospital (which is unlikely) and whether or not the ganglion itself was the cause of the pain experienced (possible).

Volar Ganglion:

A *ganglion* is a small, harmless *cyst*, or sac of fluid, that sometimes develops in the wrist. Doctors don't know exactly what causes ganglions, but a ganglion that isn't painful and doesn't interfere with activity can often be left untreated without harm to the patient.

A *volar* wrist ganglion typically appears on the palm side of the wrist in the wrist crease just below the thumb. This is the second most common type of wrist ganglion.

Doctors don't know why ganglions develop. In some cases, the wrist has been injured previously. Repetitive injuries, such as those that can occur from playing tennis or golf frequently, seem to play a role in ganglion development as well.

One theory suggests that wrist ganglions are formed when connective tissue degenerates or is damaged by wear and tear. The damaged tissue forms a weakened spot in the joint capsule, just like a weak spot on a car tire that allows the inner tube to bulge through. The joint fluid may escape through this weakened area and begin to collect in a cyst outside the joint. Over time this cyst grows larger. The joint fluid seems to move out of the wrist joint into the ganglion, but not the other way. In the end, a clear, sticky fluid fills the cyst. The fluid is a mix of chemicals normally found in the joint.

A patient with a dorsal wrist ganglion may feel a bump or mass on the back of the wrist. With a volar wrist ganglion, the bump is felt on the wrist crease below the thumb. The mass may appear suddenly, or it may develop over time. The ganglion may occasionally increase or decrease in size.

The wrist may ache or feel tender. The ganglion may also interfere with activities. A volar wrist ganglion may compress the median or ulnar nerve, causing trouble with sensation and movement. An occult dorsal wrist ganglion may be quite painful and tender, even though it is smaller than other ganglions. Typically the symptoms from a ganglion are not harmful and generally do not grow worse.

Medico-Legal Report – for Ms Laguni

The Defence have obtained their own report which is as follows:

15 February 2022

PRIVATE AND CONFIDENTIAL

Report prepared by Dr Bob Smith

Consultant Occupational Physician

BRIGHT SPARK LAWYERS

Attention: Mr Bright Spark

GPO Box 1234

BRISBANE QLD 4001

Dear Sir

Re:	**Ms Lola LAGUNI**
Date of Birth:	**29/07/1973, aged 49 years**
Address:	**14 California Road**
	REDBANK QLD 4301
Occupation (at time of accident):	**Cleaner**
Date of Accident:	**14 April 2021**
Your Reference:	**150408/BS/Laguni**

Thank you for your request letter dated 16 January 2022 requesting an independent file review and report. Based on your client Ms Laguni's medical condition as specified in your referral, I confirm that my specialty is appropriate for the conduct of this assessment.

My qualifications in compiling this report include a Bachelor of Medicine and Bachelor of Surgery Degree obtained from the University of Queensland in 1996, a Graduate Diploma in Occupational and Environmental Health obtained from Monash University in 2010 and Fellowship of the Australasian Faculty of Occupational and Environmental Medicine of the Royal Australasian College of Physicians in 2011.

I acknowledge that I have read and understood Part 5 - *Expert evidence* of the Uniform Civil Procedure Rules 1999 as provided accompanying your letter of referral. I confirm that to the best of my knowledge and belief this report complies with all requirements.

DOCUMENT REVIEW:

I confirm I reviewed the following documents provided, the contents of which have been assumed by me to be true and correct in all aspects and have been relied upon by me in reaching my opinion as further expressed in this report.

1. Report by Dr Leman
2. Xray and Ultrasound right wrist report dated 26 April 2021

HISTORY:

From review of the file material provided I understand your client, Ms Lola Laguni, to be a 49-year old cleaner who has been employed by the Turbot Street Private Hospital on a casual basis for the last three years. I understand your client to have sustained a right wrist injury at work on 14 April

2021 when using a squeeze mop, the mop reportedly being held in her left hand and with the right hand pulling on a squeeze handle at the time of subject injury onset. It is documented that your client at the time of initial injury experienced the sudden onset of pain in the right wrist within the area of distribution of the median nerve.

I understand your client attended a physiotherapist the day following injury and was later seen by occupational physician Dr Leman on 23 April 2021 at the request of her employer. I note in her report dated 13 February 2022 that Dr Leman made an initial diagnosis of probable tendon injury and recommended the wearing of a wrist brace. I note examination findings as documented by Dr Leman to have included tenderness at the base of the thumb in the region of the anatomical snuffbox together with reduced range of motion of the wrist. Some difficulty was reportedly observed with Ms Laguni signing her work certificate at time of assessment. Grip strength was stated to have been clinically assessed as reduced on the right side but without further detail provided as to any objective assessment which may have been performed. In consideration of it being documented that your client presented with symptoms of possible median nerve origin I could find no detail with regard to any specific clinical assessment of sensory or motor function of the median nerve which may have been performed at time of initial assessment or indeed at any time thereafter.

Plain x-ray and ultrasound of the right wrist as had been arranged by Dr Leman was performed on 26 April 2021 and reported as demonstrating changes consistent with an old injury to the radial collateral ligament of the thumb. On ultrasound, a complex ganglion cyst measuring 12 x 9 x 9mm was noted to arise from the volar or flexor aspect of the wrist, specifically from the scapho-lunate joint capsule. Note is made of your client reporting tenderness overlying this region at time of imaging. Some bony irregularity was also reported overlying the dorsal or extensor aspect of the scapho-lunate joint. The median nerve was noted to be bifid, a normal anatomical variant. No signs of tenosynovitis or acute ligament disruption were reported.

I understand that despite your client continuing to complain of ongoing right wrist symptoms and despite there continuing to be documented abnormal findings on physical examination including significant weakness on grip strength testing, your client was cleared fit to resume her normal pre-injury duties on 7 May 2021.

I further understand that based upon opinion provided by Dr Leman in her report dated 13 February 2022 that your client's identified right wrist volar ganglion has been deemed to be unrelated to her employment and that your client's subsequent WorkCover injury claim for this condition has been rejected by the compensating authority, her injuring having been considered to be solely that of a minor wrist strain or sprain.

I understand your client's earlier occupational history to have included work in hospitality as a waitress for various employers over a 15 year period. As to your client's documented past medical history, I note no prior history of wrist injury reported. I do note a history of ankle sprain as occurring in 2013 for which x-ray and MRI imaging were apparently performed without abnormality found. I note a further documented history of depression arising in 2009 reportedly in relation to work-place bullying for which some psychological counselling was attended with full recovery reported. I note a further history of your client having suffered a work-related burn to her left thigh in 2007, the specific circumstances of which are unknown to me.

SUMMARY AND OPINION:

From review of the file material provided I understand your client to be a 49 year old cleaner who presented with an acute right wrist injury arising in the course of her employment on 14 April 2021 when using a squeeze mop. I understand your client's initial symptom report to be that of pain

experienced over the volar or flexor aspect of the right wrist in the distribution of the median nerve with subsequent ultrasound imaging performed on 26 April 2021 reported as demonstrating the presence of a ganglion cyst measuring some 12 x 9 x 9 mm arising from the volar scapho-lunate ligament associated with some localised tenderness overlying this region.

I do note that the identified ganglion cyst itself was reported to be complex in structure, thus suggesting in my view that it more likely than not pre-existed the date of subject injury, albeit that it was reportedly previously asymptomatic. I further note that results of radiological imaging performed to date do not support a diagnosis of wrist strain or sprain, the flexor and extensor tendons about the wrist reported to be of normal appearance and with no findings reported such as to suggest acute ligamentous injury. I further note that the location of the ganglion cyst as described could reasonably be considered to possibly give rise to some irritation of the median nerve as it passes through the carpal tunnel at the level of the wrist, such being consistent with the nature of initial presenting symptoms as reported by your client. The mechanism of injury as described I understand to have involved both forceful and repetitious right wrist movements in use of a mop squeeze handle, and such I would accept as sufficient to cause aggravation of a pre-existing volar ganglion cyst.

In consideration of all of the above, and in the absence of any other more likely cause being apparent, I consider it more likely than not that the nature of work injury sustained by your client was in fact that of symptomatic aggravation of a pre-existing volar wrist ganglion rather than that of a minor wrist strain or sprain.

I confirm that I have made all the enquiries which I believe are desirable and appropriate and no matters of significance which I regard as relevant have, to my knowledge, been withheld from the Court.

The contents of this report are true to the best of my knowledge and belief.

Yours faithfully

Bob Smith

Case 2

The case:

Mr Smith is a 52-year-old truck driver who has developed low back pain of uncertain aetiology. Investigations have not found a cause for this pain. Various treatments have been utilised and currently he is on very high doses of Tramadol supplemented by oxycodone. Although he is on very high levels of these two drugs, he is of the view that the drugs did not affect his ability to drive. He was subsequently involved in a motor vehicle accident (single vehicle) and noted to have toxic levels of Tramadol and a level of oxycodone in blood taken for blood analysis two hours after the accident.

Mr Smith is not unlike a number of people who are currently allowed to drive with relatively high levels of what would otherwise, in a normal person, be toxic levels of painkillers. In some patients, however, the toxic levels are necessary to enable them to maintain a normal lifestyle and to conduct their job. In others, excess use of the painkiller medication can result in side-effects being experienced.

The issues being tested here are as to whether or not Mr Smith should have been allowed to drive a motor vehicle and in particular to hold a heavy vehicle licence. Further, what the cause of the possible accident may have been and as to whether it may have been as a result of the combined effects of Tramadol and oxycodone.

Tramadol:

Tramadol is an atypical opiate analgesic that has central analgesic activity and is used for the treatment of moderate to severe pain. The drug produces little respiratory depression by virtue of its weak opiate activity (cf. morphine) but it may produce seizures in cases involving misuse of the drug. A number of cases involving fatalities have been reported usually involving significant amounts of other drugs that act on the central nervous system. The minimum toxic (ie to cause symptoms, not necessarily the level required to cause death) concentration of Tramadol in blood is greater than 2 mg/L.

The normal or therapeutic plasma concentration is usually less than 1 mg/L.

Thirty percent of Tramadol is excreted in the urine unchanged. Common doses range from 50 – 400 mg per day. Unless there have been some more recent papers which I shall try and find, the minimum fatal dose is uncertain.

Oxycodone:

Oxycodone is a potent orally active narcotic analgesic used for the treatment of moderate to severe pain. It goes under the name of a variety of drugs in Australia including Endone, Proladone, Oxycontin and a variety of others. It is metabolised to an active metabolite, Oxymorphone, and it is excreted in the urine as oxycodone and other metabolites. Common doses are of the order of 5 mg four times a day. Oxycodone is toxic at blood concentrations greater than 0.2 mg/L.

Medico-Legal Report – Dr Side (for the State Vehicle Licensing Authority)

15 February 2022

PRIVATE AND CONFIDENTIAL

Report prepared by Dr Misty Side

Consultant Occupational Physician and MRO

Dear Solicitor,

Re:	**Mr Smith**
Address:	**14 California Road**
	REDBANK QLD
Date of Birth:	**6 July 1963**

Thank you for referring Mr Smith for assessment.

OCCUPATIONAL HISTORY:
Mr Smith has worked as a truck driver for the last 25 years. He is currently employed by The Extremely Large Transport Company (TELTC). He drives a multi combination truck between Melbourne and Brisbane and occasionally drives to other inland towns.

Medical HISTORY:
Mr Smith has a history of low back pain over the last 10 years. This was initially intermittent but has been becoming progressively worse and he now has pain every day. It does not radiate to his legs and he does not have any neurological symptoms. He has had several investigations but these only showed mild non-specific osteoarthritis. He has tried a number of different treatments with little success. He has continued to do his normal driving duties.

Mr Smith was involved in a single vehicle accident on the Leichhardt Highway, 50 km north of Goondiwindi at 1645 hours on 6 June 2021. He was driving a fully laden multi combination truck in the north-bound lane and he was witnessed to gradually slow down and veer to the right, crossing into the south-bound carriageway, narrowly missing oncoming vehicles who took evasive action. His vehicle left the carriageway and proceeded some distance into the verge before crashing into two large, adjacent gum trees where it stopped. Mr Smith was not injured apart from a few bruises and scratches but was said to appear drowsy.

CURRENT symptoms:
He continues to complain of low back pain that is made worse by heavy lifting, driving for long periods and driving over rough roads. He does not have any leg pain or neurological symptoms.

TREATMENT:
Mr Smith attended physiotherapy but it did not really help him although some changes to the seating in the truck were of benefit. He was advised an exercise program but he did not continue with this because of time constraints. He also saw a chiropractor but this provided only temporary relief. He had acupuncture on one occasion but did not pursue it as it was painful.

He has taken a number of medications. He initially took Panadeine Forte but this stopped working after a little while and he also took some anti-inflammatory medication but is upset his stomach and it did not really help. He took amitriptyline to help him sleep but he developed side-effects and stopped taking it.

He currently takes tramadol 200 mg four times a day and oxycodone 10 mg every 4 to 6 hours if the pain is bad. He said that the medication does not make him drowsy.

INVESTIGATIONS:
I did not have access to any x-rays or scans but I understand that investigations have been undertaken that did not show any abnormalities beyond osteoarthritis of the spine.

Mr Smith underwent a blood test for drug screening two hours after the accident and this showed the following:

- Tramadol 2.5 mg/L
- Oxycodone 0.04 mg/L
- Noroxycodone detected
- Ethanol nil

Substance Use:
Mr Smith smokes 30 cigarettes per day and has done so for the last 30 years. He drinks 1-2 cans of beer at the end of each day and sometimes drinks more at the weekends.

PHYSICAL EXAMINATION:
On examination, Mr Smith was 169 cm tall and weighed 102 kg with a body mass index of 35.7. His blood pressure was 135/85 and his pulse was 78 and regular.

Other than obesity, there were no findings of significance.

There was no focal tenderness in his back and he had a full range of movement. Straight leg raising was 75° bilaterally.

There was no evidence of cardiovascular disease or diabetes.

Other tests:
The Epworth Sleepiness Scale had a score of two which is normal.

The FAST screening questionnaire for alcohol consumption had a score of one which is normal. A full AUDIT questionnaire was not performed.

A K10 questionnaire for psychological health had a score of 10 which is normal and does not indicate any psychological abnormalities.

Summary:
Mr Smith is a truck driver who had a single vehicle accident after which he was noted to be drowsy. He was taking a very high dose of tramadol for chronic low back pain and often combined this with a higher than recommended dose of oxycodone. Blood levels two hours after the accident revealed a toxic level of tramadol and the presence of oxycodone and its metabolite noroxycodone. The oxycodone was present at a therapeutic level. The possibility of him having a seizure as a result of the tramadol does not appear to have been considered. In my opinion he should not have been driving.

SPECIFIC QUESTIONS:
In answer to your specific questions:

The side effects of Tramadol and oxycodone both separately and in combination.

Both tramadol and oxycodone are known to cause drowsiness when taken separately and this effect is additive. Tramadol is also known to cause seizures in some people, even at therapeutic doses. The risk is increased at higher doses and with prolonged use.

What the normal blood levels of Tramadol are for the various therapeutic doses of Tramadol.

The blood levels will vary from person to person and are higher in people with liver or kidney disease. The peak blood level occurs about 2 hours after taking it and it has a half-life of about 6 hours. The mean blood level in healthy adults two hours after taking 100 mg of tramadol is 280 ng/ml (0.28mg/l) Blood levels above 2 mg/l are considered to be toxic.

What doses of Tramadol are likely to result in toxic levels in blood?

The actual dose that causes toxicity will vary from person to person but the recommended daily dose limit is 400 mg. Doses above this level will result in toxic levels although the effects will vary as tolerance develops in people who take it over a long period.

What are the symptoms of toxic levels of Tramadol?

Symptoms of toxicity are much the same as those of other opioid analgesics and include constriction of the pupils, vomiting, cardiovascular collapse, sedation and coma, seizures and respiratory depression.

Did Mr Smith take the medications at the dose he claims?

I believe that Mr Smith was taking the medications at least at the claimed doses although it is possible that he was taking more. He stated that he was taking tramadol 200 mg 4 times daily, which is twice the recommended upper limit of 400 mg daily. His blood level of 2.5 mg/l supports the taking of high doses. He was also taking higher than recommended doses of oxycodone which is 5 mg every 6 hours. He was taking 10 mg every 4-6 hours.

The reasoning for allowing Mr Smith to continue driving.

I am at a loss to know why Mr Smith was allowed to continue driving. He was taking tramadol at doses high enough to cause toxicity and it is also possible that he had a seizure as a result of his tramadol intake.

Did the combination of the drugs taken cause the accident (from a medical perspective).

In my opinion the combination of the drugs taken caused the accident.

I acknowledge that I have read the Expert Witness Code of Conduct and agree to be bound by it. I have made all the enquiries I believe are desirable and appropriate regarding this matter and no relevant matters of significance have, to my knowledge, been withheld from the Court. The contents of this report are true to the best of my knowledge and belief.

I am a consultant occupational physician and medical review officer and my qualifications and experience are attached.

Please do not hesitate to contact me if I can be of further assistance.

Yours sincerely,

Dr Misty Side

Reference information for Case 2:

Assessing Fitness to Drive for commercial and private vehicle drivers, 2016

- Relevant sections include:-
    - Part A 4 – medical fitness to drive
    - Part B 5 – musculoskeletal conditions
    - Part B 9 – substance misuse

Tramadol http://www.mayoclinic.org/drugs-supplements/tramadol-oral-route/description/drg-20068050

Trouble with Tramadol http://www.australianprescriber.com/magazine/27/2/26/7

Oxycodone http://www.mayoclinic.org/drugs-supplements/oxycodone-oral-route/description/drg-20074193

Product Information – Australia (TGA):

Tramadol
Oxycodone

16 March 2022