QUEENSLAND COURTS

# CORONERS COURT OF QUEENSLAND

# FINDINGS OF INVESTIGATION

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| CITATION: | **Non-inquest findings into the death of Ms D** |
| TITLE OF COURT: | Coroners Court |
| JURISDICTION: | BRISBANE |
| DATE: | 16 April 2021 |
| FILE NO(s): | 2020/951 |
| FINDINGS OF: | James McDougall, Coroner |
| CATCHWORDS: | CORONERS: licence holder, medical fitness to drive, assessing fitness to drive, insulin dependent diabetes, diabetes mellitus, obligations of medical and general practitioners, Transport and Main Roads, motor vehicle accident, recommendations |

# Contents

## Background

Ms D was 57 years old when she died. She suffered from diabetes, hypertension and thyroid. Ms D required a medical certificate to hold a driver's licence. The certificate was completed 1 October 2019 by her GP. It is additionally signed by Ms D. It is for private car standards. The box for "meets medical criteria for a conditional licence" is ticked. With the further box "person has a permanent or long-term medical condition, which is not likely to adversely affect their ability to drive safely and requires a further medical review". The condition listed is insulin dependent diabetes.

## Legislation

Safety to operate a vehicle with a medical condition in Queensland is covered by specific legislation. This is the Transport Operations (Road Use Management- Driver Licensing) Regulation 2010. Part 6 of this act entitled "Jet's Law: eligibility for licences and reporting of particular medical conditions" outlines requirements around reporting for medical conditions.

Section 50(1) reads:

> *"A person* is *not eligible for the grant or renewal of a Queensland driver licence if the chief executive reasonably believes the person* has *a mental or physicalincapacity that* is *likely to adversely affect the* person's *ability to drive safely"*

Section 50(2) reads:

> *"However, the person* is *eligible for the grant or renewal of a Queensland driver licence if the chief executive reasonably believes that, by stating conditions onthe licence, the* person's *incapacity* is *not likely to adversely affect the* person's *ability to drive safely."*

Section 50(3) reads:

> *"For this section, the chief executive may require the person to give the chief executive a certificate, in the approved form, from* a *stated type of health professional –*
>
> *(a) stating the person* does *not have a mental or physical incapacity likely to affect theperson's ability to drive safely; or*
>
> *(b) providing information about the* person's *mental or physical incapacity that may allow the chief executive to form a belief* as *mentioned in subsection (2)."*

Section 51(1) reads:

> *"At the time of applying for the grant or renewal of* a *Queensland driver licence, the applicant must give notice in the approved form to the chief executiveabout any mental or physical incapacity that is likely to adversely affect the applicant's ability to drive safely."*

Section 51(2) reads:

> *"The holder of* a *Queensland driver licence must give notice in the approved form to the chief executive about either of the following that is likely to adversely affect the holder's ability to drive safely, if either happens after the grant or renewal of the licence-*
>
> *(a) any permanent or long term mental or physical incapacity;*
>
> *(b) any permanent or long-term increase in, or other aggravation of,* a *mental or physical incapacity, if notice in the approved form has previously been given to the chief executive about the incapacity."*

This legislation references an approved form which is available through Queensland Transport and Main roads in office or online via their website.

To complete the form "Medical certificate for motor vehicle driver" (F3712), the attending doctor must answer the following questions:

a. Are you familiar with the medical history?
b. Assessment of visual acuity
c. Need for glasses
d. Eye disorders
e. Choose recommendation of unconditional driver's licence, conditional driver's licence or not meeting medical criteria for a driver's licence.

On page 1 of the above-mentioned form, it additionally stipulates that a form 3195 (Private and Commercial Vehicle Driver's Health Assessment form) is required to be filled then retained by the completing medical practitioner.

The form references the "Assessing fitness to drive for private and commercial motor vehicle drivers (AFTD) publication". It additionally stipulates the need to assess the person against standards for the type of licence.

It additionally states that if specialist input is sought then you must refer the person to the relevant specialist. It also makes several other stipulations:

a. *If you are uncertain about the impact of the person's medical condition on their ability to drive safely, you can refer the person to* a *specialist, physiotherapist, occupational therapist, optometrist, or ophthalmologist for an opinion.*

b. *Do not complete Part 2 Medical Assessment until you have received all the necessary reports back from the person's specialist, physiotherapist, occupational therapist, optometrist, or ophthalmologist.*

c. *All driver licensing decisions are the responsibility of the Department of Transport and Main Roads and your recommendation regarding the person's medical fitness to drive, is considered as part of the decision-making process.*

Relevant section of the "Assessing fitness to drive for commercial and private vehicle drivers". (note only relevant sections are being extracted)

Part 8: section 3 covers Diabetes Mellitus on Insulin.

(c)Definition of severe hypoglycaemic event:

> *"An event of hypoglycaemia of sufficient severity such that the person is unable to treat the hypoglycaemia themselves and thus requires an outside party to administer treatment, this includes hypoglycaemia resulting in unconsciousness or seizure."*

Advice to drivers regarding severe hypoglycaemia:

> *"The driver should be advised not to drive if* a *severe hypoglycaemic event is experienced while driving or at any other time until they have been cleared to drive by the appropriate medical practitioner. The driver should also be advised to take appropriate precautionary steps to help avoid* a *severe hypoglycaemic event."*

A non-driving period is recommended post severe-hypoglycaemic events, of 6 weeks. Reasoning for this period is outlined in the AFTD publication. Within the section on reduced awareness of hypoglycaemia, the AFTD publication states:

> *"A person with persistent reduced hypoglycaemic awareness should be under the regular care of* a *medical practitioner with expert knowledge in managing diabetes (an endocrinologist or diabetes specialist) who should be involved in assessing their fitness to drive."*

A table on page 64 outlines that "any driver who has a persistent reduced awareness of hypoglycaemia is generally not fit to drive unless their ability to experience early warning symptom returns or they have an effective management strategy for lack of early warning symptoms. For private drivers, a conditional licence may be considered by the driver licensing authority, taking into account the opinion of an appropriate specialist, the nature and extent of driving involved and the driver's self-care behaviours."

**Police investigation**

In March 2020 a single vehicle traffic incident occurred in South East Queensland. In this incident, a witness observed a Honda Accord driven by Ms D to be slowing down to 40km/h and then speeding up to 60km/h and moving in and out of the lane. The witness observed the vehicle almost collide with a guard rail, 80km/h sign and an elevated driveway (over drainage) on the northern side of the road.

Ms D was travelling east along the road when the witness observed the vehicle leave the sealed surface and impact a tree on the northern side of the road. The vehicle caught fire and Ms D was removed from the smouldering vehicle by witnesses. Queensland Ambulance Service (QAS) attended and Ms D was pronounced life extinct at the scene. The vehicle was engulfed in flames and destroyed. Ms D was the sole occupant of the vehicle.

The Forensic Crash Unit was advised of this incident at 10:20am and arrived at the scene at 10:45am to investigate the crash. The Forensic Crash Investigator gave the following opinion as to the cause of the crash:-

> "The physical evidence is consistent with the Honda Accord travelling south-east the road, having negotiated a slight right curve before approaching the straight. After the driveway of number 1073 the vehicle left the sealed road onto the grass shoulder. The vehicle continued south-east before impacting a tree at the front left of the vehicle. Post impact the vehicle rotated approximately 135° anti-clockwise to come to rest in the south-east bound lane facing north.
>
> Physical evidence indicates there was no driver input to correct the vehicle or avoid the collision prior to impact. A lack of driver input in these circumstances is commonly the result of fatigue or a medical condition. The witness described the vehicle as drifting off the road and then quickly correcting back into the lane or correcting speed rapidly. This is consistent with fatigue or a medical condition as the driver drifts in and out of sleep or consciousness.
>
> Interpretation of the report from (Ms D's) insulin pump indicates she had a low blood sugar episode at the time of the incident. The Forensic Physician further indicated the deceased had a low blood sugar episode around the same time in the preceding three days, and six episodes in the two weeks of data contained in the report. "

**Autopsy examination**

The opinion of a Forensic Physician was sought as to the contribution of hypoglycaemia as a cause of the accident. He examined the insulin pump and considered the information provided by Mr D concerning his wife's health leading up to the accident.

The Forensic Physician offered the following opinions: -

> "The insulin pump continuous glucose monitoring on the day of the crash indicates that a hypoglycaemic event occurred just after 10:00. On this day, Ms D had an episode of hypoglycaemia earlier that morning. She administered two bolus doses following this hypoglycaemic episode at 6:45 and 7:33am.
>
> The driving behaviour exhibited by Ms D would be consistent with someone who is in a depressed state of consciousness, as is seen in a hypoglycaemic event.
>
> In the insulin pump continuous glucose monitoring read out, Ms D registered as having 16 hypoglycaemic events in the month prior to the accident. Two of these episodes occurred at approximately 10am in the days prior to the crash.
>
> Ms D has an established history of hypoglycaemia and severe hypoglycaemic events. This has previously been commented on by the endocrinologist as per para 75 as being able to "occur anytime withoutwarning and is incapacitating for any activity that she is doing as the hypoglycaemia can cause unconsciousness."

Ms D's pump record indicates that she had a carbohydrate ratio to insulin units for bolus set to 14 grams of carbohydrate to 1 unit of insulin. This is much higher ratio than was last communicated by the endocrinology letters made available to me, of 20g:1U. A higher ratio is likely to contribute to hypoglycaemia. Given no Bolus Wizard boluses were administered on the day of the crash, this was likely only to contribute to hypoglycaemic episodes on previous days. Hypoglycaemic episodes actually occurring increase the risk of hypoglycaemic unawareness.

Ms D's pump would have provided her with adequate information prior to driving and while driving to indicate risk of hypoglycaemia on the day of the accident.

According to the insulin pump settings, Ms D would have had to ignore at least 3 alarms from her pump prior to the development of her hypoglycaemic episode on the day of the accident.

It is a requirement under the AFTD publication that for a Diabetic on Insulin, as per para 95, that someone with hypoglycaemic unawareness must have some alternate management strategy. An insulin pump with real-time glucosemonitoring would be an alternate strategy. The functionality of the pump, if used properly by the patient, would provide adequate warning of a need to avoid or cease driving.

It is unclear why more hypoglycaemic events were not reported by the family in the lead up to the crash, given the large number identified on the insulin pump sensor. These should have alarmed and required action by Ms D. It is also unclear what impact this had on her behaviour. It would seem despite all of this information it is reported by the family that Ms D had one recognised episode of hypoglycaemia in the months prior to the crash. This would strongly suggest ongoing poor hypoglycaemic awareness.

Based on the information in the AFTD publication, the characteristics of Ms D's diabetes would have necessitated endocrinology input to determine her fitness to drive, but her certificate was completed by her GP.

The history of severe hypoglycaemia as well as poor hypoglycaemic awareness would have likely made Ms D ineligible for a conditional licence, though this is ultimately up to the opinion of an endocrinologist as per the AFTD on diabetes. It is reasonable that the continuous glucose monitoring would negate the risk of hypoglycaemia.

The driving licence medical certificate completed by the GP was issued for 5 years, which is not concordant with the recommendations of 2 years in the AFTD publication, for persons with diabetes mellitus on insulin.

I could find no evidence of discussions about safety to drive in the notes of the attending GP or the attending endocrinologist. This is concerning as the endocrinologist has previously complete paperwork to the effect that Ms D was unfit or potentially unsafe to work due to her diabetes, and yet driving does not appear to have been discussed.

Proximity in care of a patient and maintaining trust in a therapeutic relationship can mean such difficult subjects are not always broached to the full extent they could be. I note in this case that Ms D reported a suicide attempt shortly after her licence was suspended. This would identify this as a sensitive topic.

One path around this apparent obstruction is identifying an independent clinical service to assess drivers. This is undertaken in the Victorian Institute of Forensic Medicine by my counterpart Forensic Physicians."

**Other inquiries**

In a statement to police concerning her diabetes Ms D's husband (Mr D) said: -

"Ms D was 20 when she was diagnosed with Type 1 Diabetes, she was classed as 'brittle' or 'unstable' - meaning that Ms D's blood glucose levels could swiftly change from being too low (hypo) to being too high (hyper) and was difficult to predict, which is why she was constantly monitoring and recording her glucose levels every couple of hours, alongside having the insulin pump. (The pump was set to stop at 5.9). Ms D had used insulin pump since 2009, and it was replaced every 3-4 years.

Ms D and I could recognize if she was low - she would let me know and I would make her a cup of coffee, (which would bring her levels back up) or, if I was not close by, she would just sing out that she was feeling low - and would make it for herself then I would come and check on her. Ms D carried jellybeans in the car if she was feeling low. I would often be the first to notice if she was getting low, as her general mood would change for no seemingly obvious reason.

Hyperglycaemic attacks were uncommon, I can recall only one event that was years ago.

I recall at 2:30am this morning my wife tested her levels and they came back to a 5, but they normally get higher throughout the night and improve.

Ms D had a hypo a day or two before the accident but had been back to herself and seemed to be behaving in a normal way. It had been approximately 2-3 months since her last hypoglycaemic event. She had recently 'flatlined' meaning that there had been little to no instability for months.

Ms D's last GP appointment was in December 2019 for prescription renewal.

Ms D's specialist for her diabetes was an Endocrinologist who she last visited in approximately December 2019 and would have appointments every three months.

Ms D's Medications are:

- Insulin by pump – daily
- Thyroxine - every 2nd day (mg unknown at this stage)
- Avapro - 300mg daily."

## Conclusions

The autopsy conducted on 6 March 2020 confirmed, and I find, that Ms D died in March 2020. The cause of death was found to be head and chest injuries due to, or as a consequence of a motor vehicle collision (driver).

I find that the cause of the collision, on the balance of probabilities was Ms D suffering a hypoglycaemic episode while driving, causing her to lose consciousness while driving.

Ms D was unfit or potentially unsafe to work due to her diabetes, and yet driving does not appear to have been discussed.

Proximity in care of a patient and maintaining trust in a therapeutic relationship can mean such difficult subjects are not always broached to the full extent they could be. I note in this case that Ms D reported a suicide attempt shortly after her licence was suspended. This would identify this as a sensitive topic.

One path around this apparent obstruction is identifying an independent clinical service to assess drivers. This is undertaken in the Victorian Institute of Forensic Medicine by Forensic Physicians.

## Findings required by s.45

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| **Identity of the deceased** – | Ms D |
| **How she died** – | Ms D died when she was involved in a single vehicle traffic accident. |
| **Place of death** – | South East Queensland |
| **Date of death** – | March 2020 |
| **Cause of death** – | 1(a) Head and chest injuries<br>1(b) Motor vehicle collision (driver) |

I close the investigations.

James McDougall
Coroner

CORONERS COURT OF QUEENSLAND
16 April 2021