IN THE CORONERS COURT

OF VICTORIA

AT MELBOURNE

Court Reference: COR 2011 1081

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)

*Section 67 of the **Coroners Act 2008***

I, AUDREY JAMIESON, Coroner having investigated the death of MICHELLE LORRAINE GRIFFIN

without holding an inquest:

find that the identity of the deceased was MICHELLE LORRAINE GRIFFIN

born on 13 June 1962

and the death occurred on 23 March 2011

at 6 Summit Rise, Maribyrnong VIC 3032

from:

1 (a) RESPIRATORY ARREST

1 (b) FAILURE OF VENTILATOR

Pursuant to section 67(1) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances**:

1. Michelle Lorraine Griffin was 48 years of age at the time of her death. She lived in Maribyrnong with her sister, Gwen Wilson. Ms Griffin had been diagnosed with motor neurone disease in July 2010 and by February 2011 she was fully dependent on a home Non-Invasive Ventilator (NIV).

2. At approximately 7.50pm on 23 March 2011, Ms Griffin asked her carer, Julie Manessis to take her to the toilet. Ms Manessis turned the lights on in the room, placed a commode chair next to Ms Griffin with the brakes on, put the ventilator cord around Ms Griffin's neck as she had asked, and started to lift her from under both of her arms while she stood up. Ms Manessis did

not notice that the humidifier had tipped over. Ms Griffin alerted her that there was water all over the floor, and that she could not breathe because the humidifier was not working. Ms Manessis tried to press the on/off button of the ventilator several times, but it was not working and said it was off. She kept changing the cords to the back-up machines behind Ms Griffin's recliner chair and asked Ms Griffin if this was working, but she said no.

3. At approximately 8.00pm on 23 March 2011, Ms Manessis telephoned Ms Griffin's friend, Kaye Georgiou. Ms Georgiou asked her daughter to call emergency services, while she tried to talk Ms Manessis through the procedures with the ventilator. An ambulance was dispatched and Ms Georgiou was asked to hang up the phone so that emergency services could speak to Ms Manessis.

4. The ventilator continued to indicate that there was a blockage, and Ms Manessis noticed that the cords leading to Ms Griffin's mask were filled with water. Ms Griffin was barely breathing. Ms Manessis spoke to emergency services on the phone and informed them that Ms Griffin was not breathing. The operator advised her to get Ms Griffin off the commode chair and onto the floor. Ms Manessis was initially unable to lift Ms Griffin, but then pulled her out of the chair and onto the floor.

5. On the way to Ms Griffin's house, Ms Georgiou rang Ms Manessis again and spoke to ambulance paramedics, who had arrived and were performing cardiopulmonary resuscitation (CPR). Ms Georgiou advised them that Ms Griffin had a 'not for resuscitation' request in place, upon which CPR was ceased and Ms Griffin was declared deceased. Police arrived a short time later.

INVESTIGATIONS

6. Dr Malcolm Dodd, Forensic Pathologist at the Victorian Institute of Forensic Medicine, performed a full post mortem examination on the body of Ms Griffin and referred to the Victoria Police Report of Death, Form 83.

7. Toxicological analysis of post mortem blood samples detected morphine,[1] amitriptyline,[2] metoclopramide[3] and paracetamol, at levels that Dr Dodd determined were non-contributory to Ms Griffin's death.

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[1] Morphine is a narcotic analgesic used to treat moderate to severe pain. It is also a metabolite of codeine.

[2] Amitriptyline is used to treat depression.

[3] Metoclopramide is an anti-emetic drug used for the treatment of nausea and vomiting.

8. Dr Dodd reported to the Coroner that the immediate cause of Ms Griffin's death was acute respiratory failure (cerebral hypoxia) in a woman who was dependent on a ventilator for breathing assistance, suffering from motor neurone disease.

Police investigation

9. The circumstances of Ms Griffin's death have been the subject of investigation by Victoria Police on my behalf. The police investigation did not identify any evidence of third party involvement.

10. Police obtained statements from Ms Griffin's sister Gwen Wilson, friend Kaye Georgiou, Oncall Personnel Carer Julie Manessis, Human Resources Manager at Oncall Personnel Patrick Mylonas, and Registered Nurse at the Austin Hospital and Clinical Nurse Consultant within the Victorian Respiratory Support Service (VRSS) Gavin Fahey

11. In the course of their investigation, police learned that Ms Griffin had been put on nocturnal non-invasive bi-level ventilation via a VPAP 4 ST machine in July 2010, for the symptomatic treatment of nocturnal hypoventilation related to respiratory muscle weakness secondary to a primary diagnosis of motor neurone disease. Mr Fahey reported that during Ms Griffin's admission at the VRSS, there were multiple phone and face to face contacts between Ms Griffin, her carers and the VRSS to manage equipment, mask fitting and multiple feeding tube (PEG) issues.

12. On 26 October 2010, VRSS Outreach provided Ms Griffin and her family with an external battery and charger, to enable her to travel. On 26 November 2010, they were provided with a second bi-level ventilation device, for use as a back-up.

13. In mid-February 2011, Ms Griffin spent three days at the Austin Respiratory Unit, and it was acknowledged that her neuromuscular condition had progressed to the point that she was essentially ventilator dependent all day.

14. Ms Wilson reported that Ms Griffin had received a grant from the Department of Health Services[4] for an Individual Support Plan. This plan would fund a carer to stay in the house so Ms Wilson could return to work. A company called 'Oncall Personnel' was engaged, and it supplied two carers who were trialled in mid-March. Ms Griffin was unhappy with one of the carers, but Ms Wilson reported that she and her sister had thought Ms Manessis, who had been trialled on 17 March 2011, would be acceptable, and she returned on 23 March 2011. Ms

[4] This department is now known as the Department of Health and Human Services.

Wilson also added that at Ms Manessis' trial, she had explained how to care for Ms Griffin, the importance of the ventilator and its operation, Ms Griffin's medication, and how to assist her to get into and out of her bed and chair. Ms Wilson said she explained the ventilator at length and they went through several times with the back-up ventilator and battery.

15. On 21 March 2011, Ms Griffin's daughter reported that her main ventilation unit (VPAP 4 ST) had sporadically stopped on two occasions and displayed the message 'System error 101'. Mr Fahey reported that although this unit was still operational, it was decided that the error should be investigated by the manufacturer. However, Ms Griffin did not find her breathing to be as comfortable on the back-up unit (BiPAP 20 STD), and her daughter told the VRSS that her mother did not want to remain on this unit while she travelled to the Austin to swap the main unit for a loan unit.

16. On the morning of 22 March 2011, Mr Fahey visited Ms Griffin's home and found that Ms Griffin was using the main bi-level unit (VPAP 4 ST) which had displayed the error message, and that she appeared quite comfortable, without shortness of breath at rest. Mr Fahey replaced the main bi-level unit with a loan unit of the same type and reported that the loan unit functioned appropriately during his visit. Mr Fahey also removed the back-up unit (BiPAP 20 STD) that Ms Griffin had found uncomfortable to use, and provided an alternative back-up unit (BiPAP Synchrony) which Ms Griffin had trialled and preferred. Education was provided to Ms Griffin and her daughter regarding the functioning of the back-up BiPAP Synchrony ventilator and changing of filters.

17. On 23 March 2011, Ms Georgiou came to the house to care for Ms Griffin. At approximately 5.00pm, Ms Manessis arrived, and Ms Georgiou explained again how to care for Ms Griffin and gave a quick run-through on how to use the ventilator. Ms Manessis was to care for Ms Griffin until 10.00am the following day.

Coroners Prevention Unit investigation

18. The Coroners Prevention Unit (CPU)[5] also investigated the circumstances of Ms Griffin's death on my behalf, in particular in relation to the health care and education provided to and for Ms Griffin by the Austin Hospital Victorian Respiratory Support Service (VRSS).

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[5] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations, as well as assisting in monitoring and evaluating the effectiveness of the recommendations. The CPU comprises a team with training in medicine, nursing, law, public health and the social sciences.

19. The CPU identified that after reviewing the evidence, it was unclear whether or not the ventilation device fell to the floor with the humidifier, and if either device was damaged. However, it appeared that Ms Griffin's main and back-up ventilators may have failed due to the excessive water having inadvertently tipped from the humidifier into the airway tubing.

20. VRSS Director Dr Mark Howard provided a statement and explained that the VRSS is the major provider of domiciliary chronic ventilator support in Victoria, and has inpatient, outpatient and outreach services. The VRSS does not provide day to day care of patients; it provides resources, in the form of assessment, equipment and clinical information. It also provides the initial training for patients, families and/or carers who will be managing ventilation in the community. The VRSS uses a 'train the trainer' model, whereby the primary trained carer then trains additional carers. It also provides a medical clinic for follow up services, a 24-hour on call service for troubleshooting clinical and equipment related problems, annual ventilator inspections and performance testing, as well as servicing of the ventilators. Dr Howard added that the VRSS does not set standards for the carers of the VRSS patients on chronic domiciliary ventilation.

21. The VRSS became aware of the knowledge deficit of disability support workers regarding chronic domiciliary ventilation through liaising with the Motor Neurone Disease Association of Victoria following Ms Griffin's death. In light of this, the VRSS commenced running workshops to provide an additional education option for carer training. The VRSS outreach nursing services has also developed a 15 hour accredited certificate course for carers entitled 'Course in Personal Care Training Using Non-Invasive Ventilation', but as of 4 September 2013, the course had not been taken up by any registered training organisations.

22. Oncall Human Resources Manager Ms Mira Robinson reported in her statement that Oncall had assessed that Ms Manessis had relevant experience with the Non-Invasive Ventilators (NIV), though she had been trained with a ventilator years ago and had not recently trained. Ms Robinson advised that Oncall employ a full time training manager, who coordinates and delivers training for a variety of health care and occupational health and safety areas. Oncall does not provide training for disability support workers who care for clients requiring ventilators, but they would be able to negotiate to provide such training for clients with specific needs. Ms Robinson also advised that Oncall 'very seldom' supply disability support workers to care for NIV-dependent clients. Ms Manessis had informed Oncall that she previously received NIV training from Disability Attendant Support Services Inc, and had gained practical experience with NIVs working at a Yooralla Accommodation Support Service.

23. DHS Hume Moreland Area Director Ms Jennifer Litsas provided a statement and explained that expected service standards exist for service providers of care staff in the community. However, these Department Standards – such as the expectation services providers understand the client's support needs and ensure that staff members are appropriately trained – only apply to registered DHS service providers. Oncall Human resources Manager Ms Susan Rundle explained in a statement that Oncall was not a DHS registered disability service provider at the time of its engagement with Ms Griffin. Oncall subsequently obtained accreditation on 4 June 2012. As of 16 February 2016, Oncall were listed on the DHS register of disability service providers, and their registration is valid until 18 August 2018.[6] Ms Litsas added that as part of her Individual Support Package funding from the DHS, Ms Griffin was able to select service providers who were both DHS registered and non-registered.

24. Physiotherapist Mr Christopher Smith, who had previously been employed as the Senior Physiotherapist for the VRSS and now works at the Frankston Hospital respiratory outreach service, which operates under the auspices of the VRSS, provided an expert opinion to the CPU. Mr Smith opined that Ms Manessis was insufficiently prepared to manage Ms Griffin and her ventilator care needs. While acknowledging that Ms Manessis did have some previous NIV education and experience, Mr Smith believed that the practical training provided by Ms Griffin's primary carers was not adequate for Ms Manessis to successfully manage the complication of an NIV malfunction. Mr Smith noted that the VRSS provided adequate NIV equipment to meet Ms Griffin's needs, but the provision on 22 March 2011 of a different type of NIV as a back-up was not ideal, as it created the requirement for additional training of any carers looking after Ms Griffin. Mr Smith noted that the back-up BiPAP Synchrony ventilator was a new machine that was supplied the previous day, and training had only been provided to Ms Griffin and her daughter, who had been caring for her mother at that time.

25. A joint statement regarding the testing of Ms Griffin's main and back-up NIVs dated 3 March 2016, was provided by Austin Health Biomedical Engineer Manager Mr Andrew Moorhouse; VRSS Clinical Nurse Consultant Ms Anne Duncan; and VRSS Specialist Technician Mr Choon Kwek. The equipment had been seized by police at the time of Ms Griffin's death, and had remained in storage until tested. The statement noted aside from some minor common wear and tear and expected degradation of the consumable materials, both the main NIV and humidifier,

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[6] Department of Human Services, 'Register of disability service providers', accessed online 16 February 2016, <http://www.dhs.vic.gov.au/for-service-providers/disability/service-quality-and-improvement/registration-requirements-for-disability-service-providers>.

and the back-up NIV, were all functioning well and within normal limits, with no errors, faults or significant damage identified. The internals of both ventilators were also examined, with no broken parts or loose connections found, including no signs of internal water damage. These findings support Mr Fahey's statement that the new NIVs supplied to Ms Griffin the day before her death were both functioning appropriately. The airway outlet filter was also examined during the testing, and while it allowed air to pass through, which seemed to suggest it was never exposed to fluids, the significance of this evaluation almost five years after Ms Griffin's death is uncertain.

26. The CPU identified that both NIV devices were successfully checked for adequate operation by Mr Fahey on 22 March 2011, the main NIV was operating without issue throughout the day of 23 March 2011 (as per Ms Georgiou's statement), and Austin Health reviewed both devices and were unable to identify any operational faults. In light of this information, it appears unlikely that both NIVs failed in unison on the evening of 23 March 2011. It is more likely that following the infiltration of water from the humidifier into the airway circuit and mask, that Ms Manessis was simply unable to successfully operate and troubleshoot the NIV devices and airway circuit, possibly due to her lack of recent NIV management experience. It was unclear whether or not the previous training undertaken by Ms Manessis in NIV management was adequate.

27. The CPU also suggested that the VRSS' reliance on the 'train the trainer' method that requires the primary carer to adequately instruct new additional carers on how to safely manage the NIV, was a factor that contributed to Ms Griffin's death. That the chronic domiciliary non-invasive ventilation certificate course developed by the VRSS would take 15 hours to complete emphasises the inadequacy of the 'train the trainer' approach. For health care interventions that involve a person's airway and breathing, complications of the respiratory system are time critical, and require a higher standard of training, experience and regulation than other long term medical devices and interventions.

COMMENTS

1. Regardless of who Ms Manessis should have contacted after the occurrence of the respiratory complication and subsequent medical emergency, the primary issue remains that she was likely not appropriately experienced or qualified to provide care for chronic domiciliary non-invasive ventilation dependent clients, and so she should not have been supplied by Oncall to perform such a service.

2. Agencies who supply disability support workers to care for ventilator-dependent clients in the community should ensure their staff are appropriately qualified to undertake the tasks for which they have been employed. While Oncall only supplied disability support workers for such clients on a very seldom basis, in March 2011 no other organisation was accountable for the qualifications of the Oncall staff, as the agency was not a DHS registered disability service provider at the time.

RECOMMENDATIONS

1. With a view to preventing like circumstances, I recommend that the Department of Health and Human Services and/or other regulatory bodies review or establish guidelines regarding the expected qualifications and/or experience of disability support workers employed to care for clients who require chronic domiciliary non-invasive ventilation.

2. And I further recommend that the Department of Health and Human Services secure funding for the establishment of an education course regarding caring for clients with chronic domiciliary non-invasive ventilation, such as the 'Course in Personal Care Training Using Non-Invasive Ventilation' developed by the VRSS outreach nursing service. This would establish an avenue for under skilled disability support workers (as well as family members and primary carers of clients, if desired) to receive appropriate and structured teaching of the skills and knowledge required to care for clients who are dependent on chronic domiciliary non-invasive ventilation. The course should cover practical training of patient transfer for NIV-dependent patients, as well as simulation of an emergency response to ventilator failure.

3. And I further recommend that the Department of Health and Human Services review the requirements for clinical governance of non-Department of Health and Human Services registered disability service providers, and consider excluding such organisations from providing disability support workers to care for clients who require chronic domiciliary non-invasive ventilation.

4. With the aim of preventing deaths in similar circumstances, I recommend that the VRSS be provided with information of the circumstances of Ms Griffin's death to enable an informed internal review of their policies and procedures. Focus points for the VRSS review should include:

    a. The risks and benefits of providing clients with main and back-up NIVs of identical versus alternative brands

b. Consideration for the provision of an anchoring device (such as a wheel-based vertical pole) to clients, to reduce the risk of NIVs tipping or being damaged. This would be of greatest benefit for clients with separate NIV and humidifier devices, such as the ones supplied to Ms Griffin.

c. The feasibility of including a manual airway resuscitation device as a further safety measure for the main and back-up NIVs, such as a bag-valve-mask kit or resuscitation mask.

FINDINGS

The investigation into Ms Griffin's death has illuminated the potential for tragic consequences when caring for people in the home who require constant domiciliary non-invasive ventilation, which is invariably fraught at the outset.

While the exact manner in which the main ventilator and its back-up malfunctioned is unclear, the evidence available to me indicates that a number of systemic failures contributed to the events on 23 March 2011. In particular, the delivery of a new back-up ventilator which was a different model to that previously used; a VRSS policy of existing carers training new carers in the use of equipment; the provision of carers by Oncall Personnel who were seemingly inadequately trained in the use of non-invasive ventilation; and the comparative lack of regulation for non-Department of Health and Human Services registered disability service providers.

I accept and adopt the medical cause of death as identified by Dr Malcolm Dodd, and find that Michelle Lorraine Griffin, who was suffering from motor neurone disease and wholly dependent on a ventilator for respiratory function, died from acute respiratory failure.

Pursuant to section 73(1A) of the *Coroners Act 2008,* I order that this Finding be published on the internet.

I direct that a copy of this finding be provided to the following:

Ms Jessica Griffin

Mr Christopher Smith

Ms Robyn Shea, Austin Health

Dr Mark Howard, Director, Victorian Respiratory Support Service

Ms Robyn Pollard, CEO, Oncall Personnel and Training

Ms Jennifer Litsas, Department of Health and Human Services

Detective Acting Sergeant Dean Maher

Signature:

AUDREY JAMIESON
CORONER

Date: **1 April 2016**