IN THE CORONERS COURT
OF VICTORIA
AT WARRNAMBOOL

Court Reference: COR 2013 /5467

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)
Section 67 of the ***Coroners Act 2008***

I, JOHN LEON LESSER, Coroner having investigated the death of **AARON JAMES McDONALD**

without holding an inquest:

find that the identity of the deceased was Aaron James McDonald

born on 24 December 1990 and aged 22 years

and the death occurred on 28 November 2013

at 2/3 Foster Street Warrnambool

from:

1 (a) Asphyxia

1 (b) Recreational use of nitrous oxide.

Pursuant to section 67(2) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances**:

1. Aaron McDonald was a 22 year old man who died on 28 November 2013 in tragic accidental circumstances from asphyxia following his recreational use of nitrous oxide.

2. The circumstances of the death of Mr McDonald have been fully addressed in the coronial brief, which is thorough and comprehensive, and includes statements of relevant witnesses, a medical report and some research material on nitrous oxide.

3. Based on the brief material, the following is a brief description of the directly relevant events:

Mr McDonald lived by himself and worked for the local council in Warrnambool. He had regular contact with his family, and almost daily telephone contact with his longtime girlfriend. On the day of his death, Mr McDonald was sent home from work for a half-hour meal break at approximately 5.30 pm. A colleague attempted to check on him at 6.15 pm. At approximately 7.55 pm, another

work colleague was able to gain entry to Mr McDonald's locked unit, and located Mr McDonald slumped in a lounge chair wearing a mask on his face that ran to a white canister on his lap.

Police attended and found a number of items in the unit which suggested that Mr McDonald had been regularly using nitrous oxide for recreational purposes, but otherwise found no suspicious circumstances surrounding his death, which appeared to be completely accidental, the conclusion drawn by the investigating officer, Detective Senior Constable E Smith after completing her investigation.

FORENSIC PATHOLOGIST EXAMINATION AND EVIDENCE

4. On 1 December 2013, an external examination was performed by Dr M Burke, a Forensic Pathologist with Victorian Institute of Forensic Medicine, who provided a report to the Coroner. His examination was generally unremarkable. Based on his examination, Dr Burke commented:

> "1. ... Mr McDonald was found to have a "breathing apparatus" covering his nose and mouth. This was connected to a canister of nitrous oxide. Other canisters were found in the deceased's car.
>
> 2. The postmortem CT scan was unremarkable.
>
> 3. The external examination showed no evidence of injury.
>
> 4. Without a full postmortem examination one may be unable to address medico-legal issues that could arise at a later date.
>
> 5. In the absence of a full postmortem examination, and in these circumstances, a reasonable cause of death would appear to be ...
>
> 1 (a) Asphyxia
>
> 1 (b) Recreational use of nitrous oxide."

5. A toxicology report dated 13 December 2013 detected no alcohol or other common drugs or poisons in Mr McDonald's system. It noted that the laboratory was unable to test for nitrous oxide.

FACTORS CAUSING AND CONTRIBUTING TO DEATH

6. The uncontradicted evidence is that Mr McDonald died on 28 November 2013 at 2/3 Foster Street Warrnambool and that the cause of his death was asphyxia resulting from the recreational use of nitrous oxide.

COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comment(s) connected with the death:

7. The death of Mr McDonald tragically occurred in accidental circumstances. There is no evidence that Mr McDonald had any intention to place himself at risk of death, although it appears that he was aware that his chosen method of ingesting nitrous oxide could result in him becoming unconscious from a lack of oxygen and, at the worst, in death by asphyxiation. It is clear that, except for his girlfriend, no one close to Mr McDonald was aware of his increasing interest in the recreational use of nitrous oxide. As a result, it appears that no one, including his girlfriend, was in

a position to influence him to give up or reduce the practice or, if he continued it, to do so only in circumstances where another person could monitor his health and breathing.

8. Mr McDonald's death starkly illustrates the very real dangers inherent in the recreational use of substances and drugs generally, and nitrous oxide specifically, in circumstances where the user is alone and the techniques employed involve using breathing apparatus to ingest the substance. It would appear that the mechanism of death by asphyxiation occurs as a result of the replacement of sufficient levels of oxygen in the person's body to sustain life with increased levels of the substance ingested, in this case nitrous oxide.

9. In conducting this investigation, the Coroner was assisted by the research undertaken by the investigating member and the Coroners Prevention Unit. As a result, it is clear from the available literature, which is not widely known or understood by the general public, that nitrous oxide is a "deleterious substance" and "volatile substance" as defined in the *Drugs Poisons and Controlled Substances Act 1981 (Vic)*, the legislation which regulates the use, distribution and enforcement in relation to drugs, poisons and controlled substances in our community, including many well-known drugs of dependence such as cannabis, heroin, methamphetamine and the like.

10. Very little relevant information and data are currently available regarding the recreational use of nitrous oxide in Victoria or Australia. In fact, very few relevant databases make any reference to recreational use of this specific substance, which is widely used and available for purchase within the catering industry and medical and dental professions. The records of the State Coroners Office and the National Coroners Information System did not identify any deaths which were recorded between 2000 and 2014 specifically related to the recreational use of nitrous oxide. The only two Victorian deaths investigated in which nitrous oxide was inhaled in non-therapeutic settings were recorded in 2000 and 2009 respectively. In both cases, the source of supply was from a hospital and a medical centre respectively, at which the deceased persons had worked or had previously worked.

11. In this case, from the available information, it appears that Mr Donald had developed his knowledge of nitrous oxide and its use primarily from the Internet and his own experimentation. He mainly sourced his supplies, including the breathing apparatus, from various legitimate retail outlets, and possibly from the Internet. It was also apparent that he had, over a period of months, experimented with and refined the process of ingestion of the substance, and had used and modified various apparatus in an endeavour to increase what he saw as the effects that he was presumably trying to achieve from his use of the substance.

12. Whilst there is a considerable community benefit in bringing to the attention of the general public the dangers inherent in practices such as those undertaken by Mr McDonald, which led to his tragic accidental death, the fact that so few deaths of this type have been recorded across Australia over the last 15 years raises the distinct possibility that publicising the practice may effectively increase the use of nitrous oxide for recreational purposes, and at the same time unwittingly increase the risk of further deaths. For that reason, taking account of the overall public interest, the Coroner took the view that any recommendations to be made as a result of this investigation should be directed to the appropriate authorities, rather than to the public in general. These authorities in turn can carefully review the current literature and consider the advantages and disadvantages of retailer and public education as harm reduction strategies.

RECOMMENDATIONS

13. The Victorian Department of Health should consider developing educational resources for recreational users of nitrous oxide, outlining the dangers of the substance in general, as well as the specific increased risks associated with practices such as using tubes and masks for ingesting the substance. Further, the Department could also distribute this information to, or develop specific

educational resources for, online retailers and suppliers of equipment and apparatus that can be used for the ingestion of nitrous oxide, as well as store-based retailers to the catering industry and medical and dental professions. Additionally, sharing this information with their counterparts in other Australian jurisdictions should also be considered, including the benefits of a national approach to prevention and harm minimisation.

14. The Coroner is aware that, unlike Australian websites selling nitrous oxide cream whipper bulbs similar to those used by Mr McDonald, at least one overseas website (details can be provided if required) contains the following specific warning:

> "When nitrous oxide is prepared and used by professionals in a medical environment then it is done so in a safe and controlled fashion. Any attempt at self-medication with laughing gas could lead to immediate death by asphyxiation (lack of oxygen) or at the very least there are serious long-term mental and physical side-effects. What is actually referred to as "Laughing Gas" is in fact not actually pure nitrous oxide which is what is contained within cream chargers, but is a mix of approximately 70% oxygen and 30% nitrous oxide."

The Department could consider using, and encouraging in appropriate quarters, the use of similar warnings on relevant websites and in relevant retail stores.

FINDING

I find that Mr McDonald died on 28 November 2013 at 2/3 Foster Street Warrnambool and that the cause of his death was asphyxia resulting from the recreational use of nitrous oxide.

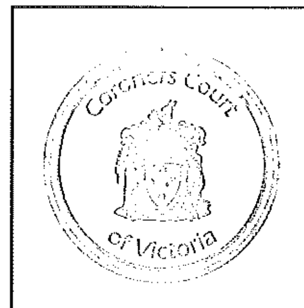
I direct that a copy of this finding be provided to the following:

Mr D McDonald, Mr McDonald's father

Secretary, Victorian Department of Health.

The investigating member, Detective Senior Constable E Smith.

Signature:



JOHN LESSER
CORONER
Date: 11/8/14