ANZCA
FPM

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Australian and New Zealand College of Anaesthetists (ANZCA) submission to the Therapeutic Goods Administration (TGA) re proposed amendments to the Poisons Standard in relation to nitrous oxide

Introduction

ANZCA welcomes the opportunity to provide feedback on the TGA's proposed amendments to the Poisons Standard regarding nitrous oxide.

ANZCA, which includes the Faculty of Pain Medicine and the Chapter of Perioperative Medicine, is responsible for the postgraduate training of medical practitioners to become specialist anaesthetists and specialist pain medicine physicians. One of the largest medical colleges in Australia, ANZCA is committed to setting the highest clinical practice standards, and promoting continuous safety and quality improvement, in anaesthesia, perioperative medicine and pain medicine throughout Australia and New Zealand.

Nitrous oxide in anaesthesia

Nitrous Oxide scheduling has significance to specialist anaesthetists who use it clinical settings for patient care. In both Australia and New Zealand, specialist anaesthetists work hard to reduce both usage and leaks. Total use in Australian public and private hospitals is about 600 tonnes a year (BOC, personal communication). Through the efforts of many anaesthetists, including decommissioning nitrous oxide pipelines, this is likely to fall to 150–200 tonnes, a saving of around 400 tonnes a year.

Recreational use of nitrous oxide

Unfortunately, the efforts of specialist anaesthetists are being overshadowed by the dramatic growth of recreational use. Nitrous oxide imports rose from 250 tonnes in 2015 to 3,800 tonnes in 2025, more than six times total hospital use (ABF FOI FA 26/03/01812). The growth in imports alone is around eight times the saving our profession is working to achieve.

Large canisters of 580 g to 3.3 L are sold online as "culinary" products, often with same-day delivery and no limit on quantity (for example, nangsboy.com.au and miamimagic.com.au). In hospitals, nitrous oxide is carefully stored and its use is carefully accounted for.

In the community, anyone can have kilograms of nitrous oxide delivered within hours. This undermines the efforts of specialist anaesthetists to both reduce the environmental impact of nitrous oxide and to keep it secure for responsible use.

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Nitrous oxide and harm to the environment and to people

- **Environmental:** 3,800 tonnes of nitrous oxide is about 1 million tonnes of CO_2-e, similar to the annual emissions of around 400,000 Australian cars (RAC figures 2.5t/car). Nitrous oxide is now the largest ozone-depleting emission worldwide (UNEP).
- **Health:** There is no national data collection, but the following give a sense of the scale:
    - **Deaths:** Between 2000 and 2023, the Victoria's Coroners Prevention Unit identified 11 deaths in which recreational nitrous oxide use contributed. Since 2020, eight deaths have occurred, and seven involved masks or bags used to concentrate the gas, leading to suffocation.
    - **Hospital presentations:** Between 2016 and 2023, Emergency Department presentations for nitrous oxide at New South Wales (NSW) public hospitals rose 23-fold (from 9 in 2016 to 192 in 2022). A review at just two Sydney hospitals identified 71 admissions over six years. NSW Health has estimated that, in 2022, acute-care costs were around $1.6 million (NSW Health, *Nitrous Oxide Reforms Consultation Paper*, March 2024).
    - **Chronic Neurological and Psychological harm:** Recreational N_2O users risk permanent spinal cord and brain neurological damage as well as the intractable social consequences of addiction.

Current regulation of nitrous oxide

ANZCA recognises nitrous oxide is hard to regulate because it has many legitimate uses including therapeutic (medical, dental and veterinary); culinary (whipping cream); motor sports; laboratory analysis; and chemical manufacturing.

The vast range of uses make it difficult for the TGA to schedule. Therapeutic nitrous oxide is Schedule 4. All other nitrous oxide is Schedule 6, which requires adequate warning labels. This classification was introduced in 2021 in response to rising harm, but labelling has not slowed use.

Enforcement is left to the states and territories, whose rules differ widely. NSW (from November 2026) and Western Australia (since November 2024) ban retail sale of canisters over 10 g. South Australia restricts trading hours and sales to minors. The other jurisdictions have few or no nitrous-specific rules. Because the trade is online, and many sellers have no fixed address, state laws are very difficult to enforce.

TGA proposals for rescheduling of nitrous oxide

- **Proposal 1:**

  ANZCA supports Proposal 1. Nitrous oxide, when packed in non-refillable containers each containing more than 10 g of nitrous oxide, will become Schedule 10 (prohibited). While this proposal is simple and should reduce asphyxiation deaths from large canisters, it leaves significant and important issues about nitrous oxide misuse, including that:

    - The proposal covers only non-refillable containers, so importers could switch to refillable cylinders to avoid it;
    - Users are likely to return to 8 g bulbs which can be bought by the thousands; and

- Enforcement would still fall to the states and territories, where penalties vary widely. In some jurisdictions, possession would not be an offence, while in others, the only penalty is a fine.

- **Proposal 2:**

  This would replace the Schedule 6 entry with Schedule 8 (Controlled Drug) for non-therapeutic use, with exemptions for limited personal possession and for legitimate industrial, automotive and hospitality use.

Nitrous oxide and border control of imports

ANZCA is of the view that whatever proposal is adopted, border control of nitrous oxide must also be an imperative. Nitrous oxide is cheap, bulky and shipped in heavy metal cylinders, so unlike vapes or illicit drugs, it is very hard to smuggle.

New Zealand faced problems of illegal importation of nitrous oxide, with imports of about 1,000 tonnes in 2025, up 60% on 2024. On 29 April 2026, the Government announced a crackdown, and, from 5 June 2026, all nitrous oxide imports have been prohibited without a permit from the Director-General of Health, assessed by Medsafe (Customs Import Prohibition (Nitrous Oxide) Order 2026).

Permits are granted for lawful uses where the importer takes reasonable steps to prevent diversion. The Ministry of Health describes the scheme as “straightforward and robust”, allowing legitimate importers to continue “without costs or delays”. Australia could introduce a similar system by regulation.