

**FACT SHEET**  
for health service  
organisations

# Identification of neural route medicines, fluids and lines

*Endorsed by the Australian and New Zealand College of Anaesthetists (ANZCA)*

This fact sheet summarises the identification of neural route medicines, fluids and lines as described in the [National standard for user-applied labelling of injectable medicines, fluids and lines](#).<sup>1</sup> It is intended for clinicians managing neural administration of injectable medicines and fluids.

Management of all neural syringes, bags and lines is consistent with the [Guideline for the safe management and use of medications in anaesthesia \(PS51\)](#).<sup>2</sup> To minimise the potential for wrong route administration errors, devices delivering intravenous medicines should be readily differentiated from those delivering medicines via the neural route. Labels for different routes should be colour-coded and populated in compliance with the [National standard for user-applied labelling of medicines, fluids and lines \(Labelling Standard\)](#).<sup>1,3</sup>

As a safety initiative to reduce the risk of wrong route administration of medicines and substances, neural devices are changing connectors from Luer to ISO 80369-6 compliant connectors consistent with [International standard ISO 80369-6:2016](#).<sup>4</sup> The [implementation of ISO 80369-6 compliant devices is supported in Australia](#).<sup>5</sup> Neural devices, including ISO 80369-6 compliant devices, should continue to be labelled in accordance with the Labelling Standard to identify the route of administration and medicine.

## Labelling

The Labelling Standard uses colour coded labelling of lines according to route of delivery.<sup>1</sup> For neural routes the colour is yellow (specifically Pantone Yellow). The Labelling Standard also colour codes medicine labels according to the class of medicine, although not all medicines or classes of medicines have a specified colour. Colour coding is consistent with the international standard for labelling drugs in

syringes used during anaesthesia (ISO 26825:2020)<sup>6</sup> However, the Labelling Standard also colour codes for anticoagulant/antiplatelet medicines.

## Background

In April 2021, ANZCA published revised [Guideline for the safe management and use of medications in anaesthesia \(PS51\)](#).<sup>2</sup> The PS51 background paper draws attention to the increasing use of infusions for anaesthesia and regional analgesia with an increased potential for medication errors to occur, particularly of wrong route administration.<sup>7</sup> PS51 guidance<sup>3</sup> includes the labelling of syringes, bags and lines by applying labels compliant with the Labelling Standard.<sup>1</sup> The only exception to label application is where a medicine is drawn up and immediately administered as a bolus, without leaving the hands of the practitioner who prepared it.

A [guide with a safety checklist](#) is available to support implementation of neural, including neuraxial, devices with connectors compliant with ISO 80369-6:2016.<sup>8</sup> Applied labelling of syringes, bags and lines with ISO 80369-6:2016 compliant connectors should comply with the Labelling Standard.<sup>1</sup>

**Perioperative labelling of medicines and fluids** is determined by whether the patient is in an open or closed practice environment. Open and closed practice environments are differentiated by the proximity to others of the patient and user. Examples of closed-practice environments are operating rooms, endoscopy rooms, catheterisation laboratories and radiology suites. All areas where more than one patient may be present, including the postoperative recovery area, are open environments.



## Syringes and bags

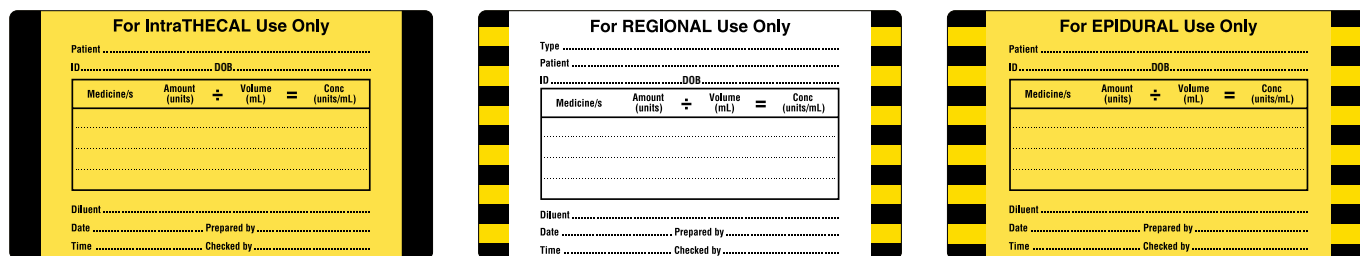
**In an open environment**, a container label with full patient and preparation details is used to identify the medicine in a syringe or that has been added to a fluid bag (Figure 1). This includes where a medicine is continued postoperatively, and the patient transferred to the postoperative recovery area and wards.

**In a closed environment**, where the patient and user are recorded in the operating room records, an abbreviated container label is used to identify the contents of the syringe, or the medicine added to

the bag. The abbreviated container label is colour coded according to the class of medicine and is not required to include details of the patient nor person preparing the medicine (Figure 2).

Note: Labelling is not required when the preparation and bolus administration of a medicine are one uninterrupted process, the syringe does not leave the hands of the person who prepared it and that same person administers the medicine immediately.

**Figure 1:** Neural route container labels (syringe, bag, bottle)



**Figure 2:** Examples of pre-printed abbreviated labels for containers such as syringes



## Lines and catheters

**In an open environment**, neural lines and catheters are labelled according to route (Figure 3).

In both the closed and open environments, the dedicated continuous infusion line is also labelled with the name of the medicine. Medicine labels are placed **in addition and adjacent to** the route line label (Figure 4).

Note: In practice, the abbreviated labels for syringes and labels to identify medicines in lines will be the same. Operating rooms may choose to include these labels within sterile procedure packs.

**Figure 3:** Labels to identify the route of the line or catheter



**Figure 4:** Examples of medicine labels for labelling lines



## References

1. Australian Commission on Safety and Quality in Health Care. [National standard for user-applied labelling of injectable medicines, fluids and lines](#). Sydney: Australian Commission on Safety and Quality in Health Care; 2015. Accessed 20 October 2021.
2. Australian and New Zealand College of Anaesthetists. [Guideline for the safe management and use of medications in anaesthesia PS51, April 2021](#). Accessed 20 October 2021.
3. Australian Commission on Safety and Quality in Health Care. [A joint statement supporting user-applied labelling standardisation for all injectable medicines and fluids](#) by the Australian Commission on Safety and Quality in Health Care, and the Australian and New Zealand College of Anaesthetists, Jan 2017. Accessed 20 October 2021.
4. ISO 80369-6:2016, [Small bore connectors for liquids and gases in healthcare applications – Part 6: Connectors for neuraxial applications](#).
5. Australian Commission on Safety and Quality in Health Care. [Joint statement on neuraxial connectors and ISO 80369-6:2016](#) by the Australian Commission on Safety and Quality in Health Care, and the Australian and New Zealand College of Anaesthetists, Mar 2017. Accessed 20 October 2021.
6. ISO 26825:2020, Anaesthetic and respiratory equipment – User-applied labels for syringes containing drugs used during anaesthesia – Colours, design and performance
7. Australian and New Zealand College of Anaesthetists. [Guideline for the safe management and use of medications in anaesthesia. Background paper](#). PS51PB, April 2021. Accessed 20 October 2021.
8. Australian Commission on Safety and Quality in Health Care. [ISO 80369-6:2016 neural connector devices to reduce misconnection errors – Guidelines for implementation in Australia](#). Australian Commission on Safety and Quality in Health Care, and the Australian and New Zealand College of Anaesthetists, December 2019. Accessed 20 October 2021.

