

29th October 2024

Dear Mr Barlow,

Re: Regulation 28: Report to Prevent Future Deaths in the matter of Rachel Gibson

Thank you for sending us a copy of your report regarding the tragic death of Dr Gibson. We have reviewed the information available to us in the report via our [Safe Anaesthesia Liaison Group](#) (SALG). SALG is a collaborative project between the Association of Anaesthetists, NHS England's Patient Safety team and the Royal College of Anaesthetists. One of its core objectives is to analyse anaesthesia-related serious incidents and to share the learning with the specialty across the UK.

You highlighted concerns regarding the wide variation in the way local anaesthetic is prescribed, checked and administered in procedures where local anaesthetic is infiltrated into the operation site. We agree that for any procedure where this surgical technique is used there should be a clear protocol in place that is understood and followed by the entire theatre team. This should include:

- Agreement during the multidisciplinary team brief prior to the procedure, about the type and dose of local anaesthetic to be given to each specific patient. The team should agree the maximum safe dose of local anaesthetic that can be given to the patient, calculated in milligrammes. The concentration of local anaesthetic should be described in milligrammes per millilitre and used to calculate the total allowable volume that can be injected by the surgeon and/or the anaesthetist. In accordance with the National Safety Standards for Invasive Procedures, all staff members who undertake an active role in the invasive procedure should be present, including the most senior members of the anaesthetic and surgical teams¹. Some units have reported that they found it helpful to write the agreed drug dose and volume on the theatre whiteboard near to the swab counts.
- How and where the prescription for local anaesthetic should be documented. For example in units that use electronic systems, it might be appropriate to document on the e-prescribing system rather than the anaesthetic chart or in the surgeon's operating notes. We recommend that local anaesthetic prescriptions are recorded as '**the volume in ml** of a solution containing a **specified number of mg/ml** of a named local anaesthetic' to simplify any calculations of the total dose of local anaesthetic received. We strongly encourage manufacturers to make the concentration in mg/ml more prominent on their product labelling rather than using percentages.
- Mandated pause prior to the surgeon undertaking the infiltration during which the whole theatre team verbally confirm that the correct drug, volume and concentration has been provided.

Human factors science indicates that engineered solutions are far more effective at reducing the risk of similar events occurring than procedural steps. The use of pre-filled syringes have been shown to reduce the risk of drug error by up to seventeen times and the use of a pre-filled syringe of local anaesthetic at the correct dilution would have substantially reduced the chance of an overdose of local anaesthetic². We recommend that pre-filled syringes are used by default where

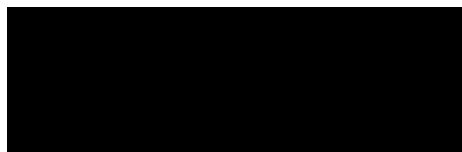
available. Where manufactured pre-filled syringes are not available, we recommend that doses are standardised for specific operations by patient weight and that dilutions are drawn up prior to the start of the procedure, potentially by colleagues within pharmacy to minimise the manipulation of medicines in clinical areas³. Additionally, we recommend that local anaesthetics intended for intraoperative local anaesthetic infiltration are not provided in volumes larger than 100mls per bag to further reduce risk.

We will disseminate these key safety messages through our regular [Patient Safety Update](#) publication, which is distributed to all members of the Association of Anaesthetists and Royal College of Anaesthetists. Since improvements in practise require multidisciplinary cooperation, we have reached out to our surgical colleagues to agree these proposals and ensure that the same key safety messages are shared with members of the Royal College of Surgeons of England and the Royal College of Surgeons of Edinburgh through the [Confidential Reporting System in Surgery \(CORESS\)](#) reports.

In the longer term, our next National Audit Project (NAP) is concerned with the complications of regional anaesthesia. NAPs study rare, but potentially serious complications related to anaesthesia in order to improve anaesthetic practice and patient outcomes. Local anaesthetic toxicity is one of the complications that will be looked at during the next study. The project is currently in the planning stages and we have asked the researchers leading the project to ensure that severe local anaesthetic toxicity secondary to surgical infiltration, as happened to Dr Gibson, is captured as part of this project.

We would be happy to respond to any questions that you might have.

Yours Sincerely



President
Royal College of Anaesthetists



President
Association of Anaesthetists

References

1. Centre for Perioperative Care, National Safety Standards for Invasive Procedures 2 (NatSSIPs), 2023 (<https://cpoc.org.uk/guideline/guidelines-resources-guidelines/national-safety-standards-invasive-procedures-natssips>)
2. Adapa RM, Mani V, Murray LJ, et al. Errors during the preparation of drug infusions: a randomized controlled trial. *British Journal of Anaesthesia* 2012; 109: 729–34.
3. Royal Pharmaceutical Society, Professional Guidance on the Safe and Secure Handling of medicines, 2018 (<https://www.rpharms.com/recognition/setting-professional-standards/safe-and-secure-handling-of-medicines/professional-guidance-on-the-safe-and-secure-handling-of-medicines>)