2025

NAP8: Major Complications of Regional Anaesthesia

Local Coordinator Guide

RCEM
Royal College of Emergency Medicine

IRISH ASSOCIATION FOR EMERGENCY MEDICINE

Content

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NAP8 National Audit Project

Introduction

Thank you for agreeing to be a Local Coordinator (LC) for NAP8. You are critical to the success of this important project.

NAPs investigate serious, rare events during anaesthesia that are important to both patients and clinicians. Previous topics include complications of airway management during anaesthesia, awareness during anaesthesia, perioperative anaphylaxis and cardiac arrest. They are highly respected, supported by patients and clinicians, and have influenced the practice worldwide. All local co-ordinators that have made appropriate contributions for their local site, will be credited with citable collaborator status in the main publications as part of the 'RCEM NAP8 Collaborative Group'.

NAP8 will investigate major complications of regional anaesthesia. We aim to assess the incidence, current practice and outcomes of these various complications.

Local Coordinator: Not just for Consultants

Non-consultant ED staff can take on the Local Coordinator role for NAP8, provided they have departmental awareness and consultant oversight. Participation supports CESR, SAS, ACP, and EM trainee portfolios in areas such as audit, governance, service improvement, leadership, and data work, though it does not replace EM curriculum requirements.

EM trainees (core, intermediate, or higher) may coordinate if supervised by a consultant or lead. This offers evidence for RCEM SLOs (supporting colleagues, research and data management, promoting patient safety, and leading projects), demonstrates leadership and audit involvement, and supports ARCP progression.

SAS doctors (staff-grade, associate specialist, or specialty doctors) can participate if established in the department and supported by the medical lead. Benefits include portfolio evidence for SAS objectives, leadership and governance experience, and recognition in a national audit.

CESR-route doctors require consultant or departmental oversight. The role provides audit, leadership, and governance evidence for CESR portfolios, recognition as a collaborator in publications, and alignment with RCEM SLOs.

Advanced Clinical Practitioners (ACPs) may coordinate if competent in leadership and data handling, with departmental support. This offers evidence for advanced practice portfolios, multidisciplinary leadership development, and recognition in a national EM project.

If you cannot be a Local Coordinator, you can still contribute by completing surveys, assisting with case identification, supporting activity reporting, and engaging in QI and governance discussions. Contributions provide portfolio evidence, appraisal support, and experience in a nationally coordinated project. Certificates of participation can be issued to acknowledge involvement.

Audit scope

Inclusion Criteria: This audit includes peripheral regional anaesthetic techniques used in the emergency department that involve the targeted blockade of named peripheral nerves, eg fascia iliaca blocks, femoral nerve blocks.

These procedures typically require anatomical knowledge, training in landmark or ultrasound-guided techniques, and are subject to governance processes such as documentation, consent, and patient monitoring. They are considered important tools in acute pain management.

Exclusion Criteria: The following procedures are excluded from this audit, as they either do not involve nerve-specific targeting, are considered basic or routine, or differ significantly in mechanism:

- Digital nerve blocks
- Ring blocks
- Local infiltration anaesthesia
- Field blocks (e.g., for scalp or abscesses)
- Haematoma blocks — excluded as they involve local infiltration into fracture sites rather than targeted nerve blockade
- Bier's blocks (IV regional anaesthesia) — excluded due to their distinct technique involving intravenous anaesthetic and a tourniquet, with limited ED application and differing governance requirements

Baseline survey

This guide aims to help you understand the NAP8 structure and plan locally to collect the data needed. The structure of NAP8 includes three core components, outlined below. It will open on the 1 March 2026 for four months.

All NAP8 reporting is **confidential** and **anonymous** and reviewers cannot identify the origin of any submitted report. If you have any questions or issues at any stage, please contact us at **nap8@rcem.ac.uk**.

The baseline surveys will be distributed and there will be two components:

1. Individual Clinician Survey: Individual EM clinician baseline survey. An online survey for all UK & Irish EM clinicians. This will investigate attitudes, experience and training in regional anaesthesia as well as previous experience of complications of regional anaesthesia. It will take 5-10 minutes to complete and will not require specialist knowledge.

All responses will be anonymous and confidential. LCs will be sent a link to the online survey. Please distribute this link to all EM clinicians in your department. The survey should be completed by all grades of clinicians working in the ED. After completion of the survey, respondents will be asked to send an email confirming completion to their LC to enable the LC to track who in their department has responded.

We appreciate that this may be an onerous task in large departments – LCs may wish to enlist the assistance of colleagues to monitor who has completed the survey so that non-responders can be reminded. LCs will be provided with certificates that they can send to colleagues who have completed the survey.

At the end of the survey period, LCs will be asked to report how many people they sent invitations to and how many confirmed their response. This will enable the response rate to be calculated. We are aiming for a 100% response rate.

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They should distribute the survey to colleagues on the dates provided or as soon as possible after this.

2. Local Coordinator/Departmental Survey: This seeks additional summary data about department size, structure, equipment and preparedness for management of regional anaesthesia complications.

Activity survey

The activity survey will be carried out during seven consecutive days commencing on Monday 1 June 2026 to Sunday 7 June 2026. It will serve two purposes:

1. Create a quantitative snapshot of activity in the UK & Ireland: This will be used to calculate denominator data for NAP8.

2. Collect details pertinent to regional anaesthesia and complications: This will help develop a more detailed understanding of regional anaesthesia practice across the UK & Ireland as well as collecting specific patient and procedural risk factors that are relevant to the complications collected during the registry phase.

Each hospital site will be asked to survey on seven consecutive days. LCs will be asked to facilitate this survey in their ED to ensure that the department is aware of the survey and to check that all patients have a completed survey form.

One activity survey entry will be completed by the clinician for each interventional procedure during the survey period at each site using an electronic form.

A link will be sent to the survey and each case will be recorded by completing the survey. We strongly advise that individual clinicians complete the link themselves as soon after the case as practically possible.

The NAP8 team will liaise with LCs to ascertain how many of the cases undertaken on those seven days were successfully captured. The target case ascertainment is 100%.

BASELINE SURVEYS 1ST MARCH 2026	ACTIVITY SURVEY 1ST-7TH JUNE 2026	CASE REGISTRY
At the start of/prior to NAP8	**During NAP8:**	**One Year:**
Local Co-ordinator: Departmental structures & processes **Individual clinician**: Personal experiences of regional anaesthesia	7 day activity survey of all sites: Day 1 00:00 to Day 7 23:59 to estimate denominator data	Report all cases that meet inclusion criteria to local co-ordinator Complete case review form

Individual case registry

One Year Registry Period:

The case registry will provide information about the occurrence, management and outcomes of all major complications of regional anaesthesia administered in the ED.

You will be asked to enter into a secure online case reporting database: there will be a brief screening process followed by a few questions to ascertain the type of block, the complication and the outcome.

When you are made aware of any of these complications please log them into the registry at that point in time. The system will guide you through the information needed.

Please note that this does not replace your standard reporting procedures used for adverse events.

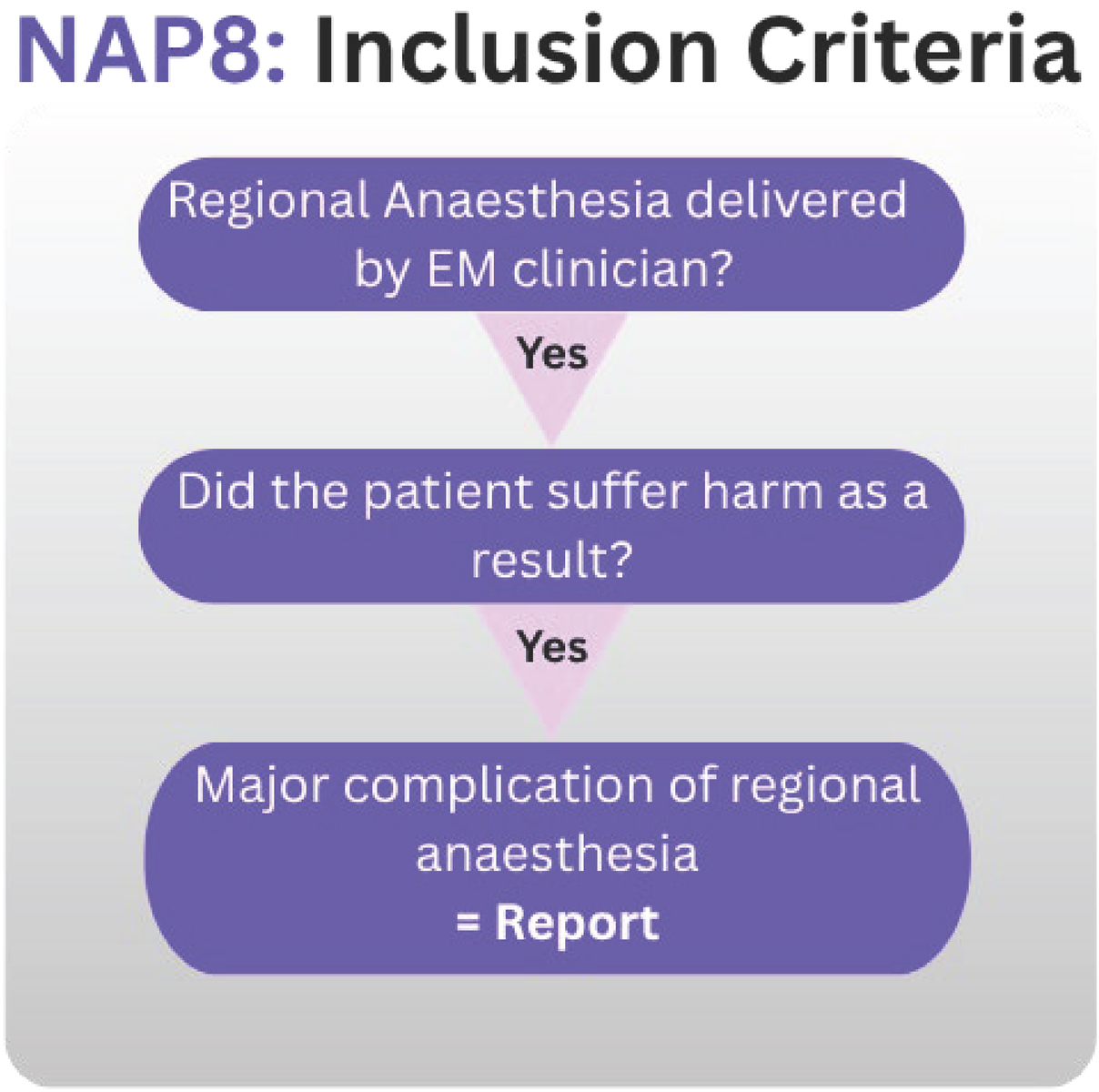
All cases must be reported anonymously. Please do not include any patient, clinician or hospital identifiers in any part of the report.

The date for commencement of the registry phase is yet to be confirmed but we are hoping to commence in early 2026. The case registry phase will last for **one year**.

After the one-year case registry period has ended the reporting system will remain open for 2 months to allow for the completion of data entry.

Inclusion and Exclusion Criteria:

NAP8 will collect reports of all major complications of regional anaesthesia. Detailed definitions of these complications are outlined below (also available at **rcem.ac.uk/nap8**):



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All adults and children receiving regional anaesthesia from an EM clinician in the ED will be included.

- For complications listed below that occur during the registry phase secondary to regional anaesthesia
- The complication must be related to a peripheral nerve block
- This includes attempted peripheral nerve blocks that were abandoned for whatever reason
- Unless otherwise stated in the exclusion criteria please report all complications listed below irrespective of the level of harm that occurred to the patient.
- **If in any doubt report**

General exclusions: Any block performed by someone who is not an EM clinician.

Complication	Inclusion criteria	Exclusion criteria	Comments
Wrong route drug error	Intravascular administration of a medication that was intended for perineural.		NHS Never Event therefore report irrespective of whether physical or psychological harm was incurred
Local anaesthetic systemic toxicity (LAST)	Administration of local anaesthetic, by bolus or infusion for regional anaesthesia/analgesia AND EITHER Clinical features of moderate to severe LAST e.g. seizure, loss of consciousness, cardiac arrhythmia* or cardiac arrest OR Administration of lipid emulsion therapy	Possible local anaesthetic toxicity which did not meet a threshold of at least moderate harm (for example patient report of circumoral tingling, tinnitus) LAST secondary to sole use of intravenous lidocaine for pain procedures or peri-operative analgesia (i.e. not in conjunction with central neuraxial block, peripheral nerve block or surgical local infiltration) Topicalisation of airway for awake tracheal intubation where no airway nerve blocks have been performed	* Cardiac arrythmia requiring unplanned monitoring, haemodynamic instability, and/or active intervention
Pneumothorax	New presence of air in the pleural cavity confirmed on radiological investigation	Pneumothorax arising as an expected outcome following a procedure.	
Cardiac arrest directly due to regional anaesthesia	Five or more chest compressions or use of defibrillation. OR Withdrawal of care during procedure or in recovery OR Died during anaesthesia care or in recovery	Cardiac arrest, withdrawal of care or died during procedure or treatment but cause not directly related to regional anaesthesia	NHS Never Event therefore report irrespective of whether physical or psychological harm was incurred

Complication	Inclusion criteria	Exclusion criteria	Comments
Anaphylaxis	Life-threatening anaphylaxis* confirmed to be secondary to local anaesthetic, another drug mixed with the local anaesthetic administered during the peripheral nerve block, or to skin preparation solutions for block performance**	Anaphylaxis confirmed by allergen testing to be secondary to any drug used for sedation or general anaesthesia in a patient who had a concurrent peripheral nerve block	*Unexpected severe hypotension AND/OR Severe bronchospasm AND/OR Swelling with actual or potential airway compromise OR Cardiac arrest
Visceral or other organ injury	Inadvertent traumatic needling injury to a visceral or other organ, whether recognised at the time or afterwards	Vascular, neurological or pleural injury are separate complications and should be reported elsewhere	Examples include liver capsule penetration leading to haematoma during transverse abdominis plane (TAP) blockade, bowel perforation during abdominal wall block, globe perforation during peribulbar blockade.
Wrong site block	A nerve block performed on the wrong patient or the wrong site, whether local anaesthetic was injected or not		Never event therefore report irrespective of whether physical or psychological harm was incurred
Haemorrhage	Haemorrhage arising from a regional anaesthetic procedure AND EITHER Required treatment with blood products OR surgery OR interventional radiological intervention	Haemorrhage which requires observation or conservative management only (including manual pressure)	
'Other' complication not listed above	Any other complication secondary to peripheral nerve block not listed anywhere above		

How to report an individual case

Cases should be reported as soon as possible after a complication has occurred.

This will ensure any details relying on recall are as accurate and complete as possible.

All reports will be anonymous and confidential. Please ensure that local procedures are followed to formally report the complication, NAP 8 does not replace this.

The exact dates for the inclusion period of major complications related to regional anaesthesia that meet the NAP8 reporting criteria have yet to be defined.

If the LC becomes aware of a major complication of regional anaesthesia in their ED, the following steps should be taken:

1. Liaise with the clinician(s) involved if they have not already contacted you.
2. Contact **nap8@rcem.ac.uk** who will issue you a secure login specific for the case on the database.
3. Retrieve relevant case notes.
4. Whilst logged into the database, extract the information needed.

A step-by-step guide to reporting the case will be available on the website.

Monthly reminders: LCs will be contacted monthly to check if there have been any cases in their hospital. Please report this value monthly, even when there are no major complications of regional anaesthesia in your ED.

Further information and supporting material is provided to help with this.

Regulatory approvals, data security and confidentiality

The NAPs are clinical service evaluations, rather than research, using strict criteria set by the Health Research Authority (HRA). This is because there is no intervention, no randomisation of patients and no change to normal patient care or treatment. The project is simply observing current practice.

Therefore, the project does not require research ethics committee approval, in line with the HRA's decision tools (The National Research Ethics Service (NRES) Defining Research table and the algorithm 'Does my project require review by a Research Ethics Committee?'). This has also been confirmed by review of the protocol and discussions with the chair of the West of Scotland Research and Ethics Committee.

Please ensure you register this project locally in your board/trust to allow them to opportunity to support. If they request you seek Caldicott approval please use the **Caldicott Approval Form**.

Baseline and Activity Surveys

All individual survey returns will be confidential and will contain no clinician or patient identifiers. All data used for publication or presentation will be fully anonymous.

Only members of the NAP8 SLWG will have access to the data.
No member will have access to the location or identity of the reporters, clinicians or patients at any stage of the project. It will not be possible to trace any data back to the reporter, clinicians or patients later.

Panel members are not permitted to discuss the details of cases outside of the review meetings. Further, if they feel they can connect the case they are reviewing with knowledge from outside the review process they are not permitted to share this. This will ensure that the review process is not biased by prior knowledge, and prevent possible identification of the reporters, clinicians or patients involved.

Organising and promoting NAP8 in your department

We aim to make the LC role as straightforward as possible and will supply electronic resources to help local organisation and promotion of the project. These will be available at **rcem.ac.uk/nap8** and you can customise them with your contact details as needed.

Local organisation: As LC, we are very grateful to you for ensuring that everyone at your site is aware of their roles within NAP8 at various stages of the project. As the LC in a small unit, the workload will likely be manageable. However, at larger sites, it may be more challenging, and we suggest forming a local network.

Before the launch of the project, LCs should complete the following checklist:

- Review all NAP8 materials and contact the NAP8 team with any questions **nap8@rcem.ac.uk**.
- Try to present at one or more **departmental meetings** and provide an overview of the project (e.g. audit, M&M, consultant meeting, trainee teaching).

Department presentation: We suggest that LCs aim to promote the NAP8 project locally with the help of a pre-populated PowerPoint presentation that can be downloaded from the NAP8 website (this will be available soon).

Posters and flowcharts: Posters can be found in the 'Resources' tab at **rcem.ac.uk/nap8** and printed locally. Use these to advertise in your department, and to increase engagement and awareness.

If you have any further questions please contact nap8@rcem.ac.uk

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Notes

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Contact us

Registered Charity Number: 1122689
Registered Charity Number in Scotland: SC044373
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