

NAP8: Major complications of regional anaesthesia and other perioperative nerve injuries

Local Coordinator Guide Version 3.3

Content

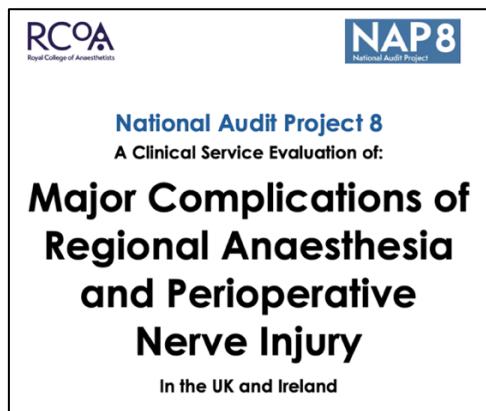
Introduction	2
Baseline Survey	3
Individual Case Registry	4
One Year Registry Period	4
Inclusion and Exclusion Criteria	4
How to report an individual case	12
Activity Survey	14
Regulatory approvals, data security and confidentiality	15
Organising and promoting NAP8 within your department	16
Local organisation	16
Resident/Specialty/Locally Employed Doctor doctor input	16
Department presentation	17
Posters and flowcharts	17
Letter and email templates	17

Introduction

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

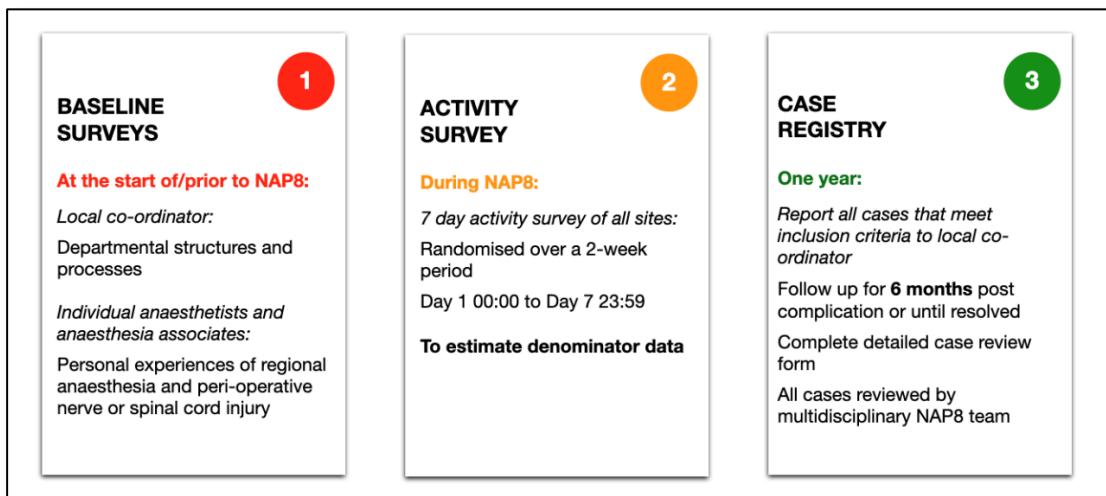
NAPs investigate serious, rare events during anaesthesia that are important to both patients and clinicians. Previous topics include complications of airway management during anaesthesia, awareness during anaesthesia, perioperative anaphylaxis and cardiac arrest. They are highly respected, supported by patients and clinicians, and have influenced the practice of anaesthesia 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 'NAP8 Collaborative Group'.

NAP8 will investigate **major complications of regional anaesthesia as well as perioperative spinal cord and peripheral nerve injury**. We aim to assess the incidence, current practice and outcomes of these various complications.



Some LCs have participated in previous NAPs and will therefore be familiar with the overall process, while others will be doing this for the first time. This guide aims to help you understand the NAP8 structure and plan locally to collect the data needed.

The structure of NAP8 will be similar to NAPs 4, 5, 6 and 7 and includes three core components, outlined below.



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 nap@rcoa.ac.uk.

Baseline Survey

The baseline surveys will be distributed before the launch of NAP8 and there will be two components:

- 1. Individual anaesthetist baseline survey.** An online survey for all UK and Republic of Ireland anaesthetists and Physician Assistants in Anaesthesia (PAA) (legally known as Anaesthesia Associates). This will investigate attitudes, experience and training in regional anaesthesia as well as previous experience of complications of regional anaesthesia.

It will take 10-20 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 (SmartSurvey®). Please distribute this link to **all anaesthetists and Physician Assistants in Anaesthesia**. A different link (for the same survey) will be sent to every hospital/group of hospitals overseen by the same LC/group of LCs. Please also ask that this link is not shared online or with anyone else.

The survey should be completed by **all grades of anaesthetists and Physician Assistants in Anaesthesia**, but only one answer is required per person, so please remind colleagues who work across different hospitals/residents who may rotate that if they have already filled out the survey this does not need to be completed again.

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 Associate Local Co-ordinators (see later) 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 similar to previous NAPs which have attained high response rates.

LCs will receive a link for the Baseline Survey in December 2025. They should distribute the survey to colleagues on the dates provided or as soon as possible after this.

- 2. Local Coordinator baseline survey.** This seeks additional summary data about department size, structure, equipment and preparedness for management of regional anaesthesia complications. Patient follow up pathways, local guidelines and the availability of investigations such as MRI and electrophysiology studies and access to relevant neurosurgical or peripheral nerve surgeon expertise will also be explored.

The deadline for completion of both surveys is yet to be confirmed but is likely to be early 2026.

Individual Case Registry

The individual case reports are the central focus of NAP8 and a multidisciplinary review panel will review each complication reported.

One Year Registry Period

The case registry will provide detailed information about the occurrence, management and outcomes of all major complications of regional anaesthesia and also other cases of spinal cord and peripheral nerve injury unlikely to be directly related to the operative procedure.

Every case reported will be reviewed; most cases will undergo a more detailed review by a panel to identify key issues and themes.

You will be asked to enter into a secure online case reporting database: there will be a brief screening process followed by narrative description of the event, then a structured report detailing patient demographics, pre-operative data, intra-operative management, post-operative management and outcome of the complication. For Peripheral nerve injury (whether under regional or general anaesthesia/MAC/sedation) and also any form of spinal cord injury the outcome will be defined as permanent if still present at 6 months.

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 the multidisciplinary team would like to know in order to understand the case as best as possible. An automated email will be sent approximately 6 months after the complication date for any patient who has suffered a perioperative nerve or spinal cord injury whether secondary to regional anaesthesia or following general anaesthesia, sedation or monitored anaesthetic care. This is to seek information on all investigations and outcomes since the initial report. No specific treatment or patient contact must occur as part of NAP8. The report must simply reflect whatever standard care the patient has received as part of the follow up to the complication. The NAP8 team understand that some investigations may be outstanding or that it is not possible to answer all of the questions at the 6 month time point and ask that you complete as much as you can because after this time point no more data can be collected. The NAP8 team will use the data entered at the 6 month time point to determine if the injury is classified as permanent and also to try to determine the likelihood the nerve injury was secondary to regional anaesthesia or any other cause.

ALL CASES MUST BE REPORTED ANONYMOUSLY. PLEASE DO NOT INCLUDE ANY PATIENT, CLINICIAN OR HOSPITAL IDENTIFIERS IN ANY PART OF THE REPORT.

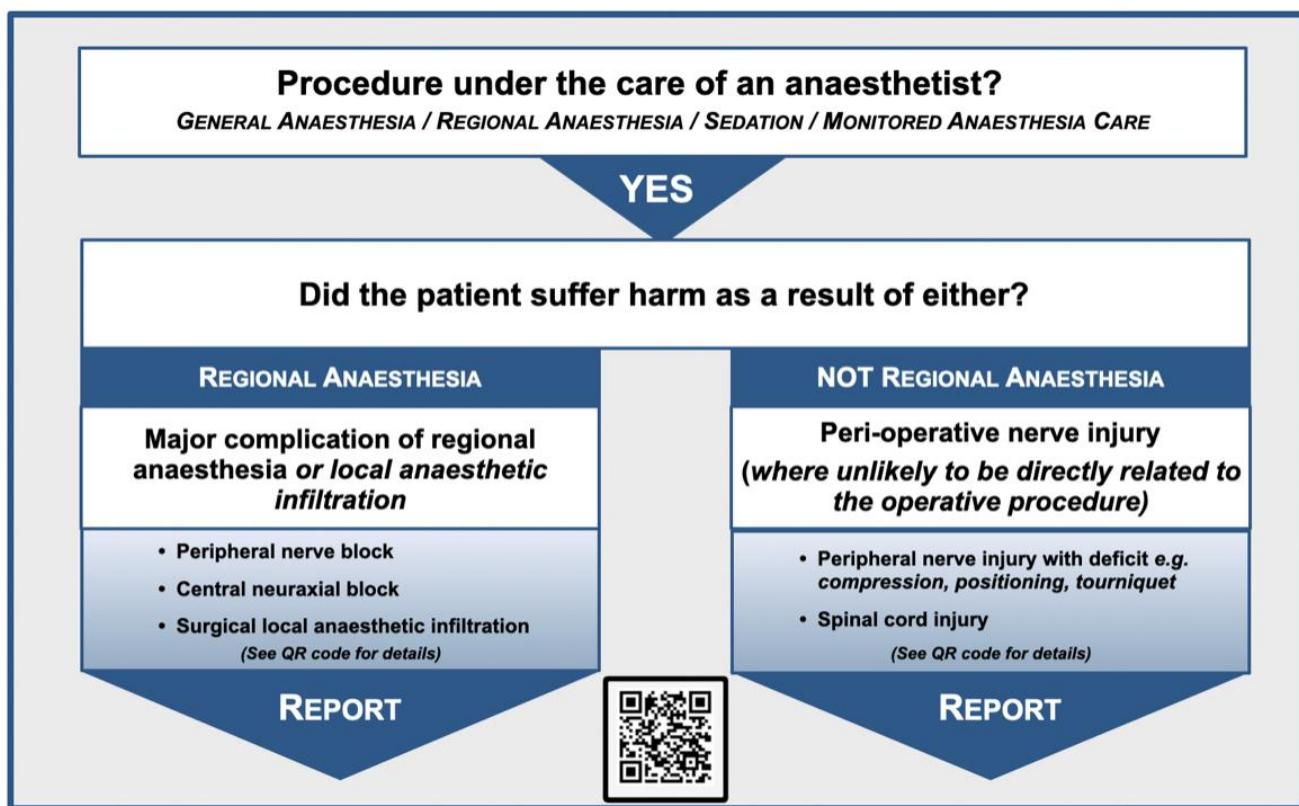
The date for commencement of the registry phase is yet to be confirmed but we are hoping to commence in early 2026. The case registry phase will last for ONE YEAR.

After the one year case registry period has ended the reporting system will remain open for 8 months to allow the 6 month follow up of any peripheral nerve or spinal cord injury as outlined above plus an additional 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 as well as other cases of spinal cord and peripheral nerve injury unlikely to be directly related to the operative procedure. Detailed definitions of these complications are outlined below (also available on the NAP8 website):

NAP8: Inclusion Criteria



All adults and children under the care of an anaesthetist or Physician Assistant in Anaesthesia involving general anaesthesia, regional anaesthesia or analgesia, local anaesthesia or monitored anaesthesia care (i.e. care by an anaesthetist but without administration of anaesthetic drugs) will be included. This includes cases occurring in the following clinical areas:

- All elective and emergency surgical procedures undertaken in main, trauma, day surgery and maternity (labour ward and obstetric theatres)
- All isolated sites (e.g. Electroconvulsive therapy)
- Interventional pain procedures in clinic or operating theatre
- All regional anaesthetic procedures in intensive care
- Any anaesthetic, sedation, or regional anaesthetic/analgesic procedure administered by an anaesthetist or anaesthesia associate in the Emergency Medicine department (See below)
- Any regional anaesthetic/analgesic procedure carried out by an anaesthetist or Physician Assistant in Anaesthesia other than for the above circumstances including in intensive care or the wards e.g. rib fracture analgesia. Post-operative rescue nerve block should be treated as a separate entry if the NAP8 activity form for that patient has already been submitted.

GENERAL EXCLUSIONS

- All sedation or anaesthesia for critical care patients not involving regional anaesthesia
- All procedures on critical care except for regional anaesthetic/analgesic procedures (see above)
- Intra or interhospital transfers
- Any blocks performed by someone who is not either an anaesthetist or an Physician Assistant in Anaesthesia

EMERGENCY DEPARTMENT

- Includes:
 - We wish to capture those patients who have had a regional block under the care of an anaesthetist or Physician Assistant in Anaesthesia in the emergency department. Any regional block undertaken by an emergency department physician should NOT be included. There is a separate project planned with the Royal College of Emergency Medicine exploring the use of regional anaesthesia by Emergency Physicians in the Emergency Department.

All exclusions do not apply if the patient has already met, or later meets, inclusion criteria.

For complications listed below that occur during the registry phase secondary to regional anaesthesia or surgical local infiltration:

- The patient must be under the care of an anaesthetist or Physician Assistant in Anaesthesia at the time of the index procedure.
- The complication must be related to one or more of either a central neuraxial block (epidural, caudal, spinal or CSE), a peripheral nerve block or surgical local infiltration (including surgically placed local anaesthetic wound catheters)
 - This includes attempted central neuraxial or peripheral nerve blocks that were abandoned for whatever reason
 - This includes complications related to removal of any central neuraxial or peripheral nerve catheter
- Unless otherwise stated in the exclusion criteria please report all complications listed below irrespective of the level of harm that occurred to the patient. The NAP8 team will classify level of harm using the information provided during the case registry report.
- Precise time frames have deliberately not been included for most complications to encourage reporting. Whilst some complications present immediately, others can be delayed. For many of the complications listed below reports exist of delayed presentation by up to several weeks or longer.
 - If the complication occurs or presents during the case registry phase but the original procedure occurred before the start of the case registry phase, PLEASE REPORT.
 - If the procedure takes place during the registry phase but the complication occurs or presents after the end of the case registry phase, DO NOT report.
- If in any doubt report**

Complication	Inclusion criteria	Exclusion criteria	Comments
<i>Either CNB or PNB</i>			
Wrong route drug error	<p>Intravascular administration of a medication that was intended for perineural, intrathecal or epidural administration.</p> <p>OR</p> <p>Perineural, intrathecal or epidural administration of a medication that was intended to be administered by another route.</p>		NHS Never Event therefore report irrespective of whether physical or psychological harm was incurred
Local anaesthetic systemic toxicity (LAST)	<p>Administration of local anaesthetic by a surgeon for anaesthesia/analgesia AND/OR administration of local anaesthetic by an anaesthetist, by bolus or infusion for regional anaesthesia/analgesia.</p> <p>AND EITHER</p>	<p>Possible local anaesthetic toxicity which did not meet a threshold of at least moderate harm (for example patient report of circumoral tingling, tinnitus).</p> <p>LAST secondary to sole use of intravenous lidocaine for pain procedures or peri-operative analgesia (i.e. not in</p>	* Cardiac arrhythmia requiring unplanned monitoring, haemodynamic instability, and/or active intervention

	<p>Clinical features of moderate to severe LAST e.g. seizure, loss of consciousness, cardiac arrhythmia* or cardiac arrest.</p> <p>OR</p> <p>Administration of lipid emulsion therapy.</p>	<p>conjunction with central neuraxial block, peripheral nerve block or surgical local infiltration).</p> <p>Topicalisation of airway for awake tracheal intubation where no airway nerve blocks have been performed.</p>	
Pneumothorax	<p>New presence of air in the pleural cavity confirmed on radiological investigation</p> <p>OR</p> <p>New presence of air under tension in the pleural cavity requiring immediate decompression following a regional procedure with no time for radiological confirmation</p>	<p>Pneumothorax arising as an expected outcome following surgery (for example thoracic surgery) concurrent with central neuraxial or peripheral nerve blockade.</p>	
Cardiac arrest directly due to central or peripheral regional anaesthesia	<p>Five or more chest compressions or use of defibrillation.</p> <p>OR</p> <p>Withdrawal of care during procedure or in recovery</p> <p>OR</p> <p>Died during anaesthesia care or in recovery</p>	<p>Cardiac arrest, withdrawal of care or died during procedure or treatment but cause not directly related to regional anaesthesia.</p>	
Infection at site of central or peripheral regional anaesthesia	<p>Infection occurring within 30 days at or near the site of a previous peripheral nerve or central neuraxial block, either single shot or catheter, leading to localised abscess, discitis, osteomyelitis, systemic infection, or necrotising fasciitis.</p> <p>AND</p> <p>Required antibiotic therapy.</p> <p>AND EITHER</p> <p>Positive contributory micro-organism culture taken from either blood, abscess, or site swab.</p> <p>OR</p> <p>Imaging or clinical suspicion consistent with infection due to the central neuraxial or peripheral nerve block.</p>	<p>Insertion site inflammation or localised cellulitis.</p> <p>OR</p> <p>Catheter or insertion site colonisation (culture-positive perineural or epidural catheters but with no clinical evidence of site infection or requirement for antibiotic therapy).</p> <p>OR</p> <p>Vertebral canal abscess and infective meningitis (reported separately).</p>	
Anaphylaxis	<p>Life-threatening anaphylaxis* confirmed to be secondary to local anaesthetic, another drug mixed with the local anaesthetic administered during the central neuraxial or peripheral nerve block,</p>	<p>Anaphylaxis confirmed by allergen testing to be secondary to any drug used for sedation or general anaesthesia in a patient who had a concurrent central</p>	<p>*Unexpected severe hypotension</p> <p>AND/OR</p> <p>Severe bronchospasm</p> <p>AND/OR</p>

	or to skin preparation solutions for block performance**	neuraxial or peripheral nerve block	<p>Swelling with actual or potential airway compromise</p> <p>OR</p> <p>Cardiac arrest</p> <p>**Please log the anaphylaxis in the NAP8 case registry at the time of presentation. An automatic alert will be sent at 6 months to please review the patient case notes, log in and follow instructions to record if anaphylaxis has been confirmed as being secondary to any components of the regional anaesthesia technique.</p>
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.
CNB			
High/total/complete spinal	<p>Any patient who develops a high block in association with central neuraxial anaesthesia/analgesia which is associated with requirement for ventilatory support* or cardiopulmonary resuscitation**.</p> <p>OR</p> <p>Any patient who develops a high block from epidural or intrathecal spread of local anaesthetic following a peripheral nerve block</p>		<p>* Ventilatory support includes the additional use of 'bag/mask' ventilation, or ventilation assisted by the use of a supraglottic airway device or endotracheal tube</p> <p>**Cardiopulmonary resuscitation includes the use of basic and advanced life support</p>
Respiratory failure	<p>Any patient who develops respiratory failure due to neuraxial opioids which is associated with requirement for ventilatory support*</p> <p>AND</p> <p>Neuraxial opioids either intrathecal or epidural, via either single shot or continuous catheter</p>	<p>Respiratory failure secondary to high/total/complete spinal should be reported elsewhere</p> <p>Patients requiring supplemental oxygen or naloxone</p>	<p>*Ventilatory support includes the additional use of 'bag/mask' ventilation, or ventilation assisted by the use of a supraglottic airway device or endotracheal tube</p>
Vertebral canal haematoma	Confirmed new inadvertent accumulation of blood in the extra-cranial intramedullary, subdural or epidural space	<p>Purposeful injection of blood into the epidural space performed as part of dural blood patching.</p> <p>OR</p> <p>Vertebral canal haematoma presenting after spinal or neurological surgery and</p>	

		thought to have arisen as a surgical complication.	
Vertebral canal abscess	Confirmed new infection within the extra-cranial intramedullary, subdural or epidural space.	Vertebral canal abscess presenting after spinal or neurological surgery and thought to have arisen as a surgical complication rather than from regional anaesthesia.	
Infective meningitis	Clinical or laboratory diagnosis of infective bacterial or viral meningitis.	Infective meningitis presenting after spinal or neurological surgery.	
Adhesive arachnoiditis	Arachnoid inflammation, intrathecal scars and dural adhesions, identified on radiological imaging		
Nerve injury after central neuraxial block	Spinal cord ischaemia or infarction OR Direct spinal cord injury OR Direct radicular or other non-cord nerve injury	Cause, agreed by local multidisciplinary clinical team to be secondary to direct surgical injury or childbirth. If in doubt report.	
'Other' complication not listed above	Radiologically confirmed intracranial infarction or haemorrhage occurring after CNB (including but not limited to: Subdural haematoma, subarachnoid haemorrhage, intraventricular haemorrhage, cerebral venous sinus thrombosis or pituitary apoplexy). OR Radiologically confirmed Posterior Reversible Encephalopathy Syndrome (PRES). OR Cranial nerve palsy, where intracranial haemorrhage or space occupying lesion has been excluded on radiological imaging. OR Any other complication secondary to central neuraxial block not listed above	Accidental dural puncture with or without epidural blood patch which does not result in any of the listed complications.	

Peripheral nerve blocks

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
Phrenic nerve palsy	Unplanned requirement for non-invasive or invasive ventilation	The need for supplemental oxygen, but no requirement for non-invasive or invasive	

	OR Confirmed unilateral diaphragmatic weakness causing functional impairment more than 48 hours after either a single shot block or removal of a nerve catheter	ventilation after regional anaesthesia.	
Haemorrhage	<p>Haemorrhage arising from a regional anaesthetic procedure.</p> <p>AND EITHER</p> <p>Required treatment with blood products</p> <p>OR</p> <p>surgery</p> <p>OR</p> <p>interventional radiological intervention.</p>	Haemorrhage which requires observation or conservative management only (including manual pressure).	
Peripheral nerve injury following peripheral nerve block	Unintended new abnormality in one or more modalities (sensory, motor, pain or autonomic) lasting more than 48 hours after either a single shot block or removal of a nerve catheter*	<p>Cause, agreed by local multidisciplinary clinical team to be secondary to direct surgical injury or childbirth. If in doubt report.</p> <p>Abnormalities do not need to map to any particular nerve or radicular distribution.</p> <p>Neurological abnormality may be a change of function in any specific modality (e.g. in the sensory modality both unintended new loss of sensation and new paraesthesia should trigger reporting)</p> <p>*If a patient presents with a suspected nerve please log the nerve injury in the NAP8 database at the time of presentation. An automatic alert will be sent at 6 months to please review the patient case notes, log in and follow instructions. This information will be vital and will be used by the multidisciplinary review team to a) determine causality and b) to define the injury as permanent or not</p>	
'Other' complication not listed above	Any other complication secondary to peripheral nerve block not listed anywhere above		

For complications listed below that occur during the registry phase that were NOT secondary to regional anaesthesia or surgical local infiltration:

- The patient must be under the care of an anaesthetist or Physician Assistant in Anaesthesia at the time of the index procedure.
- If the patient has had either a central neuraxial block (epidural, caudal, spinal) or a peripheral nerve block, do NOT report here but please see the relevant regional anaesthesia definitions above and if appropriate report in the relevant section of the case registry

- Unless otherwise stated in the exclusion criteria please report all complications listed below irrespective of the level of harm that occurred to the patient. The NAP8 team will classify level of harm using the information provided during the case registry report.
- Precise time frames have deliberately not been included to encourage reporting. Whilst some complications present immediately, others can be delayed.
 - If the complication occurs or presents during the case registry phase but the original procedure occurred before the start of the case registry phase, PLEASE REPORT.
 - If the procedure takes place during the registry phase but the complication occurs or presents after the end of the case registry phase, DO NOT report.
- If in any doubt report**

Complication	Inclusion criteria	Exclusion criteria	Comments
Spinal cord injury (general anaesthesia /sedation/MAC)	<p>Clinical signs and/or symptoms consistent with unintended or unexpected, new spinal cord injury at any level whether temporary or permanent</p> <p>AND</p> <p>Supported by radiological and/or neurophysiological investigations and/or clinical intervention e.g. surgical decompression, evacuation of haematoma, spinal drain based on clinical judgement</p>	<p>Injury directly related to surgical manipulation during spinal surgery</p> <p>OR</p> <p>Any injury consistent with direct surgical cord injury</p> <p>OR</p> <p>Any isolated intracranial cause which explains symptoms/signs</p> <p>OR</p> <p>Any case where preoperative neurological status could not be reliably assessed, making confirmation of a new injury following anaesthesia uncertain e.g. patient required intubation of the trachea by pre-hospital team</p> <p>OR</p> <p>Cause agreed by local multidisciplinary team, to be secondary to central neuraxial block (report under CNB complications)</p>	Cases involving cross clamping of major vessels, cardiac surgery or endovascular work are to be included
Peripheral nerve injury (general anaesthesia /sedation/MAC)	Unintended new abnormality in one or more modalities (sensory, motor, pain or autonomic) lasting more than 48 hours following the end of the procedure*	<p>Cause agreed by local multidisciplinary team to be secondary to direct surgical injury or childbirth. If unsure report.</p> <p>OR</p> <p>Nerve injury secondary to airway manipulation e.g. lingual or hypoglossal nerves secondary to laryngeal mask positioning</p> <p>OR</p>	<p>For example brachial plexus injury following Trendelenburg position; common peroneal nerve injury following lithotomy position; ulnar nerve injury due to compression; tourniquet related injury</p> <p>Abnormalities do not need to map to any particular nerve or radicular distribution.</p>

Complication	Inclusion criteria	Exclusion criteria	Comments
		Critical illness polyneuropathy following surgery and ICU stay	<p>Neurological abnormality may be a change of function in any specific modality (e.g. in the sensory modality both unintended new loss of sensation and new paraesthesia should trigger reporting)</p> <p>*Please follow standard care pathways including referral to neurological/surgical services, imaging and nerve conduction studies where deemed appropriate by local team. Please log the nerve injury in the NAP8 database at the time of presentation. An automatic alert will be sent at 6 months to please review the patient case notes, log in and follow instructions. This information will be vital and will be used by the multidisciplinary review team to a) determine causality and b) to define the injury as permanent or not</p>

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. The following cases below will also trigger a follow up email at 6 months:

- General anaesthesia/MAC/sedation
 - Peripheral nerve injury
 - Spinal cord injury
- Regional anaesthesia
 - Central neuraxial blocks
 - Vertebral canal haematoma
 - Vertebral canal abscess
 - Nerve injury after central neuraxial block
 - Peripheral nerve block
 - Peripheral nerve injury

This will allow the NAP8 team to classify if the injury is permanent or not. There will also be a 6 month email following cases of anaphylaxis to follow up on any allergen testing results.

All reports will be anonymous and confidential.

All major complications of regional anaesthesia or other case of spinal cord and peripheral nerve injury fulfilling the inclusion criteria should be reported to NAP8 if anaesthesia care started between 00:00:00 hrs on xx (TBC) and 23:59:59 hrs on xx (TBC).

If the LC becomes aware of a major complication of regional anaesthesia or other case of spinal cord and peripheral nerve injury in their hospital(s), the following steps should be taken:

1. Liaise with the anaesthetist(s) involved if they have not already contacted you.
2. Contact NAP8 (nap@rcoa.ac.uk) who will issue you a secure login specific for the case on the database.
3. Retrieve anaesthetic and other relevant case notes.
4. Whilst logged into the database, extract the information needed in the structured case review. It is expected that you will need to discuss the case in detail with the anaesthetist(s) involved. It may be that you and the anaesthetist involved in the case will need to work together to enter the data.

A step-by-step guide to reporting the case will be attached to the login details and available on the [Local Coordinator resources page](#) of the website.

Monthly reminders

LCs will be contacted monthly to check if there have been any cases in their hospital. As in previous NAPs, please report this value monthly, even when there are no major complications of regional anaesthesia or other cases of spinal cord and peripheral nerve injury at your site.

As the inclusion criteria extend beyond the anaesthetic department, we request that LCs formally check with the following sources for potentially eligible cases:

- Surgical clinical directors
- Physiotherapists
- Neurologists
- Radiologists
- Electrophysiologists
- Clinical governance and medicolegal teams

Further information and supporting material is provided to help with this (see later).

Activity Survey

The activity survey will be carried out during the 12-month registry period (likely June 2026). It will serve two purposes:

- 1. Create a quantitative snapshot of anaesthetic activity in the UK and Republic of Ireland.**
This will be used to calculate denominator data for NAP8 and will be compared to previous NAP activity surveys to show how anaesthetic practice in the UK and the Republic of Ireland is evolving.
- 2. Collect details pertinent to regional anaesthesia, regional anaesthesia complications and spinal cord and perioperative nerve injury.**
This will help develop a more detailed understanding of regional anaesthesia practice across the UK as well as collecting specific patient, surgical and procedural risk factors that are relevant to the complications collected during the registry phase.

Each hospital site will be asked to survey for one week, from a Monday to Monday. The team are still finalising whether there will be a randomisation to one of two one-week periods. LCs will be asked to facilitate this survey in their hospital to ensure that all anaesthetists are aware of the survey and to check that all patients have a completed survey form.

As in previous NAPs, one activity survey entry will be completed by the anaesthetist or Physician Assistant in Anaesthesia for each interventional procedure during the survey period at each site (general anaesthesia, regional anaesthesia, sedation or managed anaesthesia care).

The activity survey will be completed electronically via SmartSurvey®. A link will be sent to the survey and each case will be recorded by completing the survey. We strongly advise that individual anaesthetists complete the link themselves as soon after the case as practically possible. This process should be aided by the LC and other assistants over the activity survey period to ensure all cases are captured. There will need to be oversight to ensure out-of-hours cases and remote site cases are captured. As all clinical areas covered by the case registry phase of NAP8 need to be covered by the activity survey, relevant remote sites need to be included – for example, the emergency department, obstetrics, radiology and the ECT suite.

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%.

More details about the activity survey will be distributed to you when the dates for your site(s) are assigned.

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.

On a local level Caldicott guardian approval will be required for each site in England, Scotland and Wales. We will seek assistance from each LC in identifying the Caldicott guardian in each trust/health board but the NAP8 team will make the application on your behalf. Discussions with the Information Governance lead of the Department of Health in Northern Ireland have taken place and we hope thereafter this will result in approval for all trusts in Northern Ireland to take part.

The Republic of Ireland are taking part in NAP8 and the project has been approved by the National Centre for Clinical Audit.

All members of the NAP8 panel have undergone information governance training in line with these regulatory bodies.

As for NAPs 3-7, NAP8 has sought endorsement from all four Chief Medical Officers of the United Kingdom, all of whom approve the project.

Case registry data will be uploaded via a secure web-based tool using SSL encryption onto the Royal College of Anaesthetists (RCOA) servers with high-grade anomaly and intrusion detection, and firewalls in operation.

Baseline and Activity Surveys

All individual survey returns will be confidential and will contain no clinician or patient identifiers. Hospital location for baseline surveys will be included only to enable management of the project (to identify whom to send reminders to) and will be removed before analysis. All data used for publication or presentation will be fully anonymised.

Review of Cases

Only members of the NAP8 review panel with authorisation from the NAP8 Clinical Lead (AJRM) and Chair of the RCoA Centre for Research and Improvement (IM) will have access to the data.

No panel member, including the Clinical Lead and Chair of the RCoA Centre for Research and Improvement, 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.

When the review panel assesses cases, data will be provided for review only. Review 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 within 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 on the [NAP8 website](#) 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. It is important to have contacts in areas you do not commonly work in. For example, if you are a general anaesthetist with separate obstetric, paediatric and pain anaesthetists for example, it would be good to identify one or more link persons. These persons can help identify cases in their area and clarify sub-specialty specific aspects of the case registry form.

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

- Review all NAP8 materials and contact the NAP8 team with any questions at nap@rcoa.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). PowerPoint slides for this are available [here](#).
- Try to attend a **NAP8 webinar** with Q&A session, hosted by the NAP8 team. If you are unable to attend, the recordings will be made available on the [NAP8 website](#).

Consider the best way to identify events that occur following the end of a patient's procedure. Whilst some of the complications will present at the time of surgery some will not always present at the time of the original hospital admission e.g. peripheral nerve injury. Patients may present post-operatively to surgeons, neurologists, physiotherapists, the acute pain team or other healthcare professionals. Some may even present via the medicolegal department. A list of such professionals is listed below and on the NAP8 resources page. Every site will not necessarily have each team listed below but we ask that contact is made with each relevant local healthcare provider or team in your hospital to alert them about NAP8 and ask them to highlight any relevant patients to you the local co-ordinator. This will help with post-operative event capturing. Sample emails can be found on the NAP8 [resources](#) page. Not all hospitals will have each of these multidisciplinary groups below on site. We would kindly ask that only the local co-ordinator on that site contacts the relevant team rather than multiple local co-ordinators for example who are served by a tertiary neurosurgical centre emailing that team to inform them about NAP8.

- Surgical clinical directors
- Physiotherapists
- Acute pain teams
- Neurologists and neurosurgical/spinal services
- Radiologists
- Electrophysiologists
- Clinical governance leads and medicolegal teams

Associate Local Co-ordinator Role for Resident/Specialty/Locally Employed Doctors

For the first time in a National Audit Project the steering group are recruiting resident, specialty or locally employed doctors to work alongside the Local Coordinator to assist with all aspects of the project including the baseline survey, activity survey and case reporting.

The scheme is aimed at any resident doctor in stage 2 or stage 3 training in a UK anaesthetic training scheme (or at an equivalent level if following a portfolio pathway scheme) or any specialty or locally employed doctor with a minimum of three years experience in anaesthetics. In the Republic of Ireland the position is open to doctors either who are at the level of SAT3 or above or who have two or more years experience and both parts of the MCAI. *In both the UK and Ireland more junior residents, specialty or locally employed doctors may however be considered if the LC feels this is appropriate depending on local circumstances.*

The role is designed for anaesthetists who do not primarily work in research but want to gain research experience in a national study. Students or those working in a fully-funded research role would not be eligible. We would expect applicants to be willing to make a significant contribution to the conduct and delivery of NAP8 at a local level over a period of 12-18 months. Experience in regional anaesthesia would be

advantageous but not essential. Ideally applicants would be based at the same hospital over the duration of the project but we appreciate this may not always be possible. If a doctor is appointed to one hospital and then moves hospital during a changeover period then we suggest discussing with the local co-ordinator at the new hospital if it is possible to continue to help there instead. The local co-ordinator at the original hospital can also fill the vacant position at their discretion with a new resident/speciality/locally employed doctor.

As the arrangements between hospitals vary it is difficult to ascertain a set amount of time required. During the activity phase however, where data is collected on every anaesthetic, we would expect this time to increase due to time spent actively promoting the project and checking to see if each case has been recorded.

Successful completion of NAP8 project data submission (baseline, activity survey and case registry) would result in the Associate Local Coordinator being recognised as a collaborator in all subsequent publications in which the study collaborative group is listed. This will not reach the level required for recognition as an author but will result in a citable PubMed ID for the individual collaborator.

We are not specifying the exact number of residents/specialty/LED doctors that can be appointed on each site but will rely on the judgement of local co-ordinators who will be aware of the potential workload depending on the size of the department. As a guide however we suggest one resident/specialty/LED doctor per local co-ordinator and we would not anticipate more than 3 resident/specialty doctor local co-ordinators on any site given a significant contribution must be made in order to be recognised as a collaborator.

We will be asking interested candidates to discuss the role with their Local Coordinator and that any appointment to this role is made by the Local Coordinator of the relevant hospital via an open and transparent process. We would ask that after any appointments are made to please then inform the NAP8 team who will keep a list of all resident/specialty/LED doctors who have been involved.

You are welcome to appoint on whatever basis you see fit but we have developed a short document with essential and desirable criteria along with a scoring system for you to use if you wish to help you shortlist if there are more applications than places available on the scheme at your site.

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

These will be provided to assist in advertising the project within your hospital, and to increase engagement and awareness amongst the perioperative team. Example locations to display these include anaesthetic departments, all post-operative areas and surgical wards, intensive care units, neurology and neurosurgical departments, physiotherapy departments etc. Posters can be found on the [NAP8 website](#) and printed locally.

Letter and email templates

1. For anaesthetic and intensive care consultants, resident doctors, SAS doctors and Physician Assistants in Anaesthesia.
2. All relevant medical and allied healthcare staff within the hospital as above.

The NAP8 team have provided suggested templates on the [NAP8 website](#).

If you have any further questions please contact nap@rcoa.ac.uk. An FAQs document can be found on the NAP8 website and will be updated regularly as needed.

Eric Makmur
CR&I NAP8 Fellow

Sofia Rosas
CR&I NAP8 Fellow

Yin Yin Lim
CR&I NAP8 Fellow