

## Regional

Advanced training in regional anaesthesia should be delivered in centres undertaking a wide variety of simple and complex regional anaesthetic techniques on both elective and, where appropriate, emergency surgical cases. It is recommended that up to six months are spent on this dedicated advanced unit of training and that, where appropriate training and experience should be gained in more than one centre.

### **Learning outcomes:**

- Gain mastery in a wide range of regional anaesthetic techniques using a variety of methods to assist in the identification and safe placement of needles and catheters, including in-depth understanding of the place and use of ultrasound
- Gain mastery in the management of surgical lists in which regional anaesthetic techniques have a major role in the peri-operative anaesthetic care and in doing so demonstrating the necessary leadership, communication and team-working skills necessary to ensure this benefits both the patient and the organisation
- Integration of regional anaesthetic techniques into acute pain management in surgical, trauma and medical patients where appropriate
- Gain maturity in understanding the importance of utilising the time allocated to clinical sessions effectively, optimising throughput whilst not compromising patient safety
- Gain the necessary maturity to guide the choice of audit cycles/quality improvement projects in developing practice
- Becomes familiar with recent developments in regional anaesthesia, to evaluate these developments and to advise colleagues of useful changes in practice
- Becomes a balanced advocate for the use of regional anaesthetic techniques

### **Core clinical learning outcomes:**

- To be capable of undertaking a wide variety of regional anaesthetic techniques independently; this implies an ability to:
  - Provide perioperative anaesthetic care to a wide-range of surgical cases performed under regional anaesthesia, demonstrating a fundamental understanding of the problems encountered
  - Show the decision making and organizational skills required of an anaesthetist to manage busy operating sessions that involve patients having regional anaesthesia as part of their anaesthetic planned care
  - Assist colleagues in decisions about the use of regional anaesthesia in difficult situations and where their use might be controversial
  - Provide teaching to less experienced colleagues of all grades
- Provide advice to colleagues on the appropriate practice of regional anaesthesia

## **Knowledge**

<i>Competence</i>	<i>Description</i>	<i>Assessment Methods</i>	<i>GMP</i>
RA_AK_01	<p>Demonstrates in-depth understanding of advance ultrasound scanning, including:</p> <ul style="list-style-type: none"> <li>• The effect of ultrasound imaging modalities on the performance of regional anaesthetic techniques e.g. harmonic imaging, multibeam, 3D and volume rendering</li> <li>• The use of advanced ultrasound needle design to maximise visibility during procedures</li> <li>• Describing ideal and non ideal patterns of spread of local anaesthetics, with respect to efficacy and complications e.g. intraneural and intravascular injection</li> <li>• Detailed knowledge of the relevant sonoanatomy in relation to sectional anatomy, including anatomical variations, of vascular, nervous [e.g. the brachial plexus, lumbosacral plexus and terminal peripheral nerves] and muscular tissues</li> <li>• A knowledge of common ultrasound artifacts</li> <li>• The need to record, and store, ultrasound images relevant to clinical practice</li> <li>• The place of ultrasound in clinical management of patients, including medico-legal aspects</li> </ul>	A,C	1,2

<b>Skills</b>			
<i>Competence</i>	<i>Description</i>	<i>Assessment methods</i>	<i>GMP</i>
RA_AS_01	<p>Demonstrates mastery in a wide variety of regional anaesthetic techniques, including but not exclusively:</p> <ul style="list-style-type: none"> <li>• The interscalene, supraclavicular, infraclavicular and axillary approaches to the brachial plexus</li> <li>• Thoracic paravertebral and intrapleural blocks</li> <li>• Lumbar plexus and combined lumbar plexus and sciatic blocks</li> <li>• The initial placement and use of indwelling catheters</li> </ul>	A,D	1,2,3,4
RA_AS_02	Demonstrates the use of advanced ultrasound techniques in regional anaesthesia including neuraxial scanning and catheter placement	A,D	1,2
RA_AS_03	Demonstrates mastery in the use of adjuncts to enhance safe practice when providing regional anaesthesia techniques [including ultrasound and nerve stimulators]	A,D	1,2,3,4
RA_AS_04	<p>With regard to ultrasound, demonstrates high levels of skill including:</p> <ul style="list-style-type: none"> <li>• The use of appropriate selection of probes for different techniques, with precise probe control and minimum unintentional movement</li> <li>• Demonstrate the relevant sononatomy of the peripheral nerves and surrounding structures of the brachial plexus and arm ,thoracic and lumbar spine, lumbosacral plexus and lower limb,including the muscles of the anterior abdominal</li> </ul>	A,D	1,2

**Skills**

<i>Competence</i>	<i>Description</i>	<i>Assessment methods</i>	<i>GMP</i>
	wall and inguinal region and be confident in the performance of regional anaesthetic techniques in these areas.		