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Key findings

- A total of 199 UK NHS anaesthetic departments responded to the organisational survey, a response rate of 72%.
- Approximately two thirds of respondents described their hospital as a district general hospital and one third as a teaching hospital.
- Twenty-one hospitals (11%) were specialist children's hospitals with an on-site paediatric intensive care unit (PICU).
- Of the 165 hospitals caring for children, 144 (87%) did not have a PICU on site and had systems in place to stabilise critically ill children before retrieval to a specialist children's hospital.
- Remote site anaesthesia occurred in 182 (91%) hospitals. The top three most common subspecialties working in remote sites were diagnostic or interventional radiology (60%), interventional cardiology (34%) and dental surgery (30%).
- The proportion of departments using anaesthetic rooms to induce anaesthesia in adults decreased from 86% before the COVID-19 pandemic to 79% in summer 2021; for children, the use of anaesthetic rooms decreased from 84% to 79%.
- During COVID-19, 82% of departments anaesthetised adults and 73% of departments anaesthetised children in operating rooms.
- In 80% of anaesthetic departments an emergency bell was located in the anaesthetic or operating room (main theatre complex) to call for help in the event of an emergency.
- More than one in three departments that undertook remote site anaesthesia had a different standard procedure to call for help compared with the one used for the main theatre complex.
- While most departments had ready access to resuscitation guidelines, in 17 (9%) departments there was no physical access to emergency resuscitation guidelines and anaesthetists had to rely on their memory and use of their own electronic devices to access guidelines.
- There was good provision of emergency equipment in every theatre suite where anaesthesia takes place in the UK. Access to a defibrillator was available in 193 (99%) departments but advanced airway equipment was not available in 7% of departments and a difficult airway trolley in 3% of departments.
- Paediatric advanced airway equipment was not available in 15% of departments in all locations where paediatric anaesthesia takes place. A defibrillator with paediatric pads was accessible in 97% of departments.
- Advanced airway equipment (ie videolaryngoscopy, flexible optical laryngoscope) or a difficult airway trolley was not available in over 50% of departments in all remote locations where anaesthesia is undertaken, whereas a defibrillator was not available in approximately 10% of remote sites.

- Approximately 15% of hospitals that have an on-site emergency department do not have advanced airway equipment or a difficult airway trolley in their emergency departments.
- There was a departmental resuscitation lead in 58% of anaesthetic departments.
- Yearly updates in chest compressions were available in 76% of departments and in defibrillation in 67% of departments.
- A departmental wellbeing lead was available in 54% of departments and a departmental policy for staff wellbeing and support in 42% departments.
- Debriefing after a perioperative cardiac arrest was available immediately after an event ('hot' debrief) in 72% of departments and after a delayed period ('cold' debrief) in 75% of departments.
- Access to a peer support programme following a perioperative cardiac arrest was available in 29% of departments.

What we already know

Perioperative cardiac arrests are rare but there is an expectation that locations providing anaesthetic care have the staff, equipment and processes in place to treat cardiac arrest when it occurs. The Resuscitation Council UK (RCUK) quality standards include the recommendation that hospitals should provide annual training updates in cardiopulmonary resuscitation and have emergency equipment available as a standard of care (RCUK 2020). The Royal College of Anaesthetists' *Guidelines for the Provision of Anaesthetic Services (GPAS) 2023* recommend that departments should have emergency equipment immediately available in all areas where anaesthesia takes place, including a defibrillator and difficult (advanced) airway equipment for children and adults (RCoA 2023a, 2023c).

The aims of the Local Coordinator Baseline Survey were to identify organisational issues relevant to perioperative cardiac

arrest at hospital and departmental level, such as the structure and organisation surrounding equipment, workforce, training and support.

Within this survey, an immediately available defibrillator was defined as one that enabled defibrillation to be delivered within three minutes of cardiac arrest (RCUK 2020). A remote site was defined as any location where immediate support from another anaesthetist is not available, including those away from a main theatre complex or anaesthetic department. We used the term 'advanced airway equipment' to refer to access to videolaryngoscopes and fiberoptic scopes and 'difficult airway trolley' to refer to a specific trolley designed for management of the difficult airway.

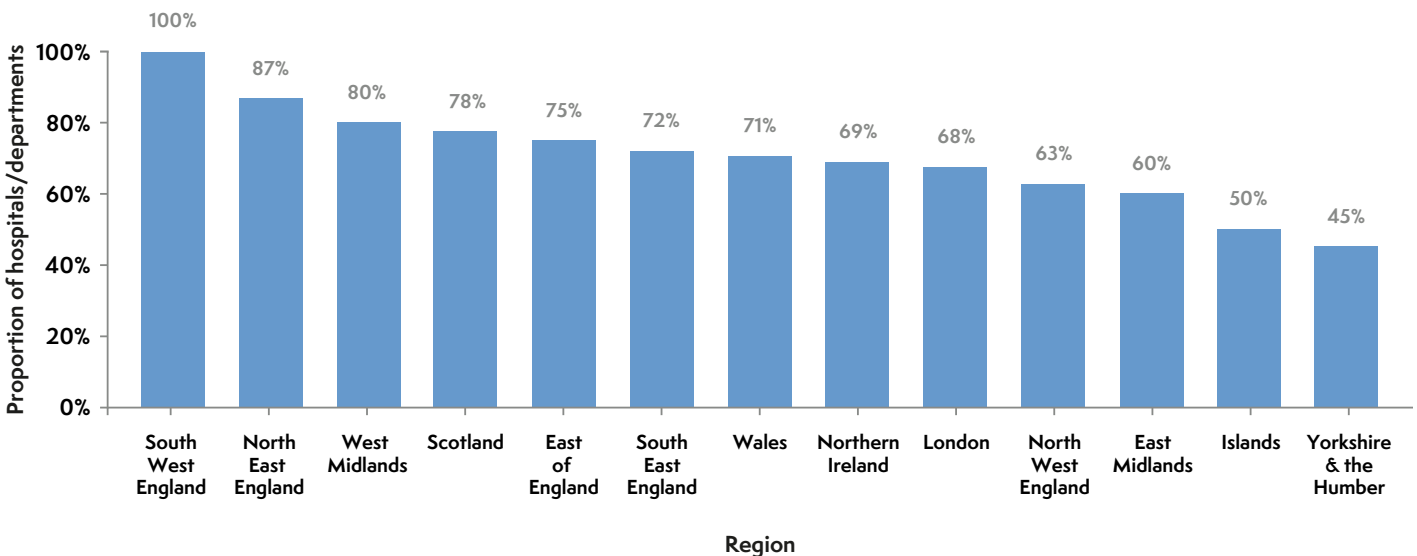
What we found

The following analysis includes responses from NHS hospital sites only. Results from the Independent sector are discussed in [Chapter 14 Independent sector](#).

For this stage of the project, we identified 416 NHS hospital sites (within 182 NHS trusts or boards) that deliver anaesthesia care in the UK, staffed by 277 anaesthetic departments. These 277 anaesthetic departments were represented by 328 NAP7 Local Coordinators, with some departments having more than one Local Coordinator to cover multiple hospitals. An online survey via SurveyMonkey® (Momentive, Niskayuna, NY, USA) was distributed to all Local Coordinators and the survey remained open for approximately nine months ([Chapter 6 Methods](#)). We asked that only one survey was completed per anaesthetic department and that the Local Coordinator completed this for their main hospital site.

Responses were received from 199 Local Coordinators, a 72% response rate (199/277) for anaesthetic departments, with the relevant Local Coordinators having responsibility for 288 (69%) of all 416 NHS hospitals sites. The response rates are shown in Figure 9.1.

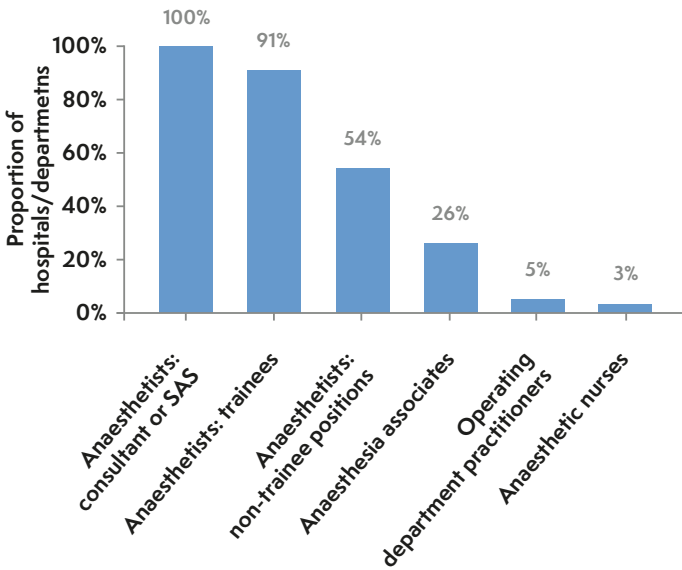
Figure 9.1 Survey response rates from anaesthetic departments according to UK regions (n = 199)



Hospital and anaesthesia services

All 197 (100%) responding departments reported that anaesthesia care was delivered by consultants or specialist, associate specialist and specialty (SAS) anaesthetists, 179 (91%) by anaesthetists in training and non-training positions, 52 (26%) by anaesthesia associates (including anaesthesia associates in training) and 14 (7%) by operating department practitioners or anaesthetic nurses (Figure 9.2).

Figure 9.2 Type of anaesthesia staff delivering anaesthesia in UK departments of anaesthesia (n = 197)



A total of 188 (95%) departments provided adult and 165 (84%) paediatric anaesthesia care; 32 (16%) hospitals delivered adult and 9 (5%) paediatric anaesthesia care only. There were 131 (66%) anaesthetic departments in district general hospitals and 59 (30%) in teaching hospitals. The type of hospitals and specialist services offered in the responding hospitals are shown in Figure 9.3. Access to specific emergency care services including intensive care and the emergency department is shown in Figure 9.4.

Of the responding hospitals, 162 (83%) of 195 sites had an emergency department, 174 (89%) an adult critical care unit (level 2 and/or level 3 care) and 79 (41%) a surgical enhanced level care unit (Figure 9.4). Some 21 (11%) of 195 responding hospitals were specialist tertiary paediatric centres with a PICU, whereas 78 (40%) hospitals had an on-site paediatric high dependency unit and 101 (52%) hospitals a neonatal intensive care unit (Figure 9.4).

With regard to 24-hour access to on-site emergency interventional treatments, primary percutaneous coronary intervention was available in 61 (31%) of 195 hospitals, interventional radiology in 83 (43%) hospitals and extracorporeal membrane oxygenation or extracorporeal cardiopulmonary resuscitation (ECMO/eCPR) in 18 (9%) hospitals. Of the 27 (14%) hospital sites that reported being cardiac surgery centres, 15 (56%) of them offered ECMO or eCPR.

Figure 9.3 Type of hospital and the delivery of specialised services, reported as proportion of hospitals (n = 197)

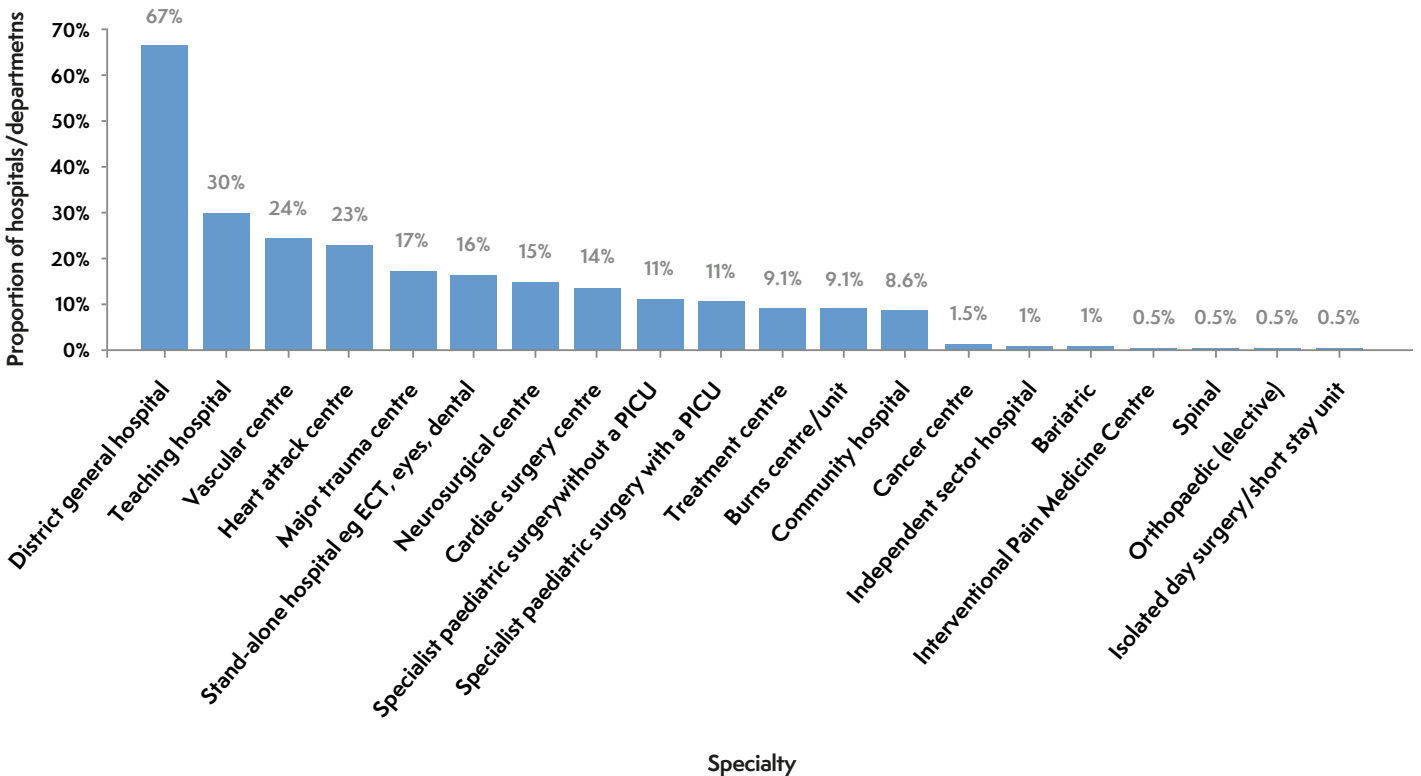
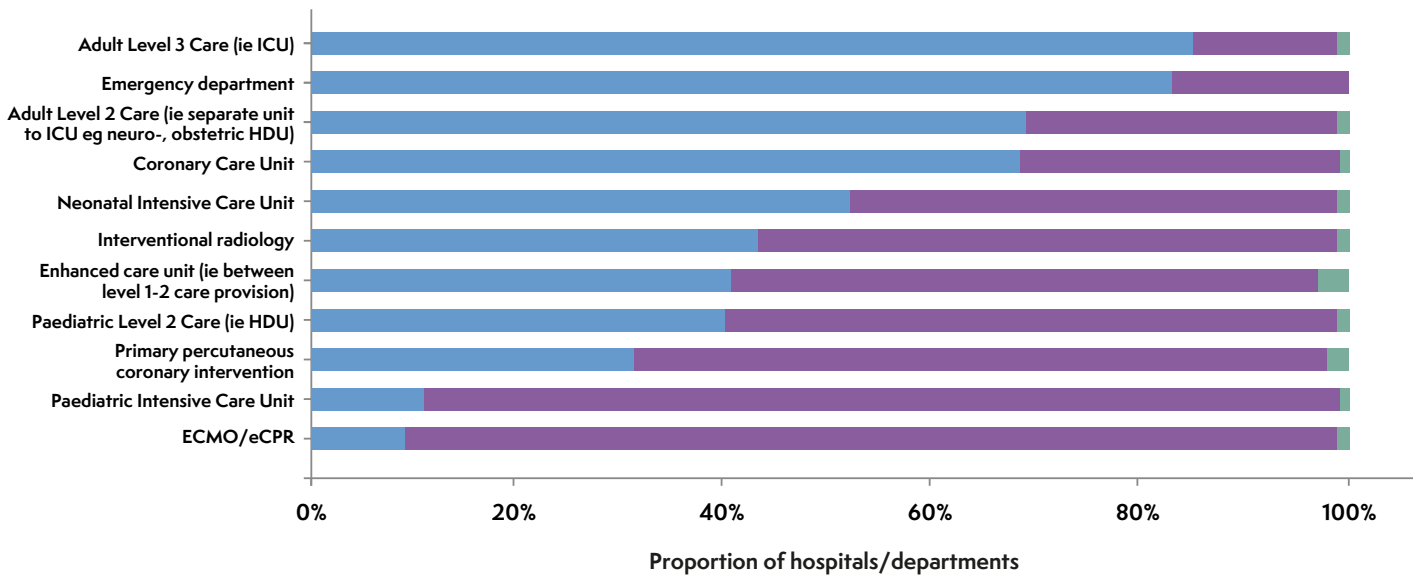


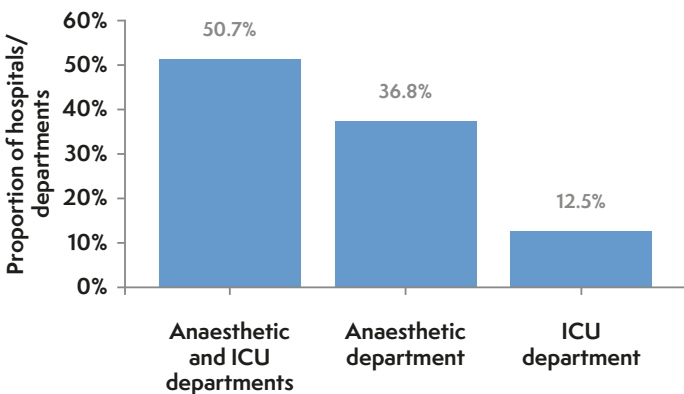
Figure 9.4 Proportion of hospitals with 24-hour on site access to specific emergency care services and therapy (n = 195). ECMO/eCPR, extracorporeal membrane oxygenation or extracorporeal cardiopulmonary resuscitation. Yes ■, No ■, Don't Know ■.



Stabilisation of children in hospitals without a paediatric intensive care unit

In total, 165 (84%) of 197 hospitals admitted children and 154 (78%) undertook paediatric surgery. Only 21 (13%) of the 165 hospitals that admit children have a PICU, meaning that 144 (87%) hospitals may need to transfer critically ill children to a tertiary centre. The stabilisation of critically ill children (in operating rooms, the emergency department or ward) before retrieval to a specialist tertiary children’s hospital is managed by both the anaesthetic and critical care team in 73 (51%) of 144 hospitals without a PICU, only the anaesthetic team in 53 (37%) hospitals and only the critical care team in 18 (13%) hospitals (Figure 9.5). Anaesthetists with specialist training in paediatric anaesthesia were routinely available to help with resuscitation in 33 (23%) of 144 responding hospitals without a PICU.

Figure 9.5 Proportion of anaesthesia and critical care staff involved in stabilisation of children in hospitals without a PICU before retrieval to a specialist children’s hospital (n = 144)



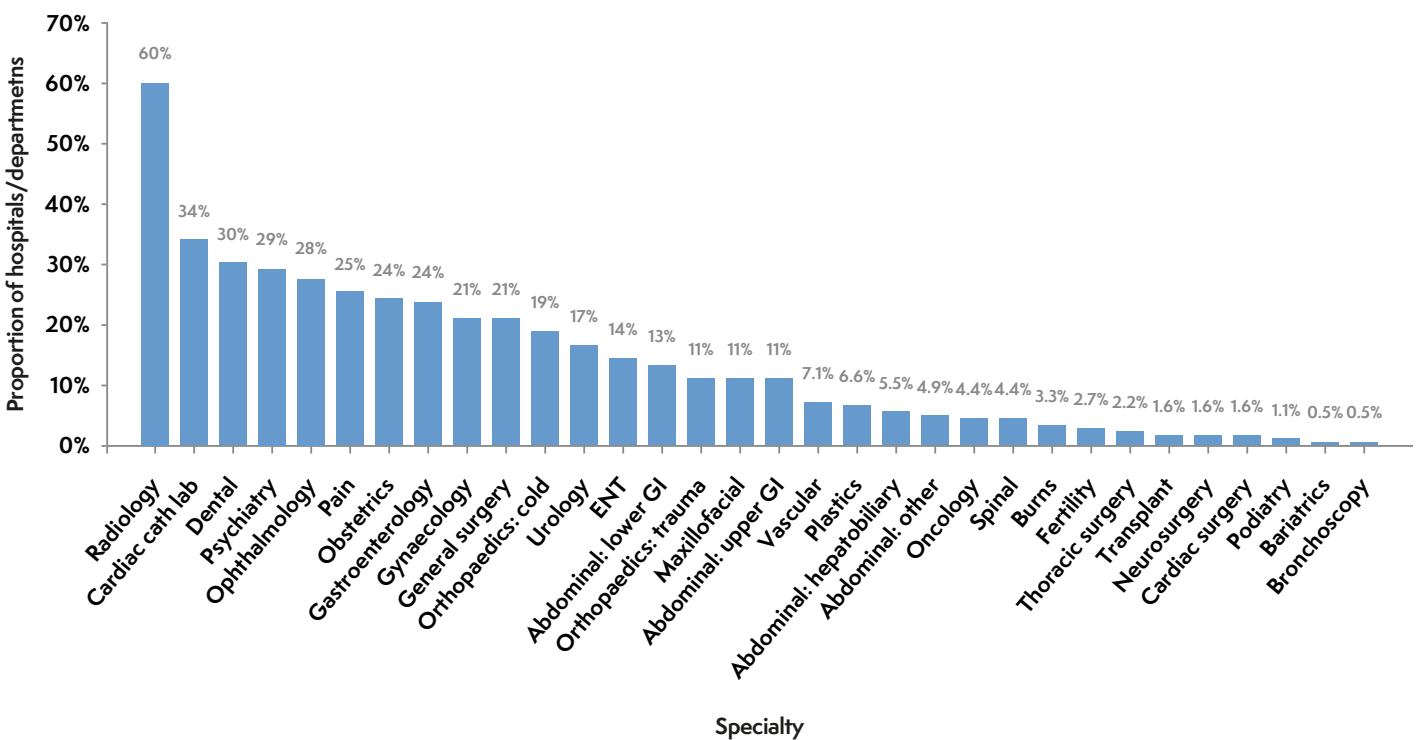
Remote site anaesthesia

Of the 197 responding departments, 182 (92%) reported remote site anaesthesia. The five most common subspecialties undertaken remotely were (and the proportion of departments providing remote anaesthesia; Figure 9.6):

- diagnostic or interventional radiology in 109 (60%)
- cardiac catheterisation in 62 (34%)
- dental surgery in 55 (30%)
- electroconvulsive therapy in 53 (29%)
- ophthalmic surgery in 50 (27%).



Figure 9.6 Proportion of departments reporting surgical and non-surgical anaesthetic sub-specialties undertaken at a remote site within their hospital (n = 182)



Obstetric anaesthesia

There were obstetric units in 139 (74%) of 188 hospitals caring for adults, with 44 (32%) of these being located at a remote site. A total of 69 (50%) of 139 obstetric units provided remifentanyl patient-controlled analgesia for labour analgesia, with 50 (72%) sites using them occasionally, 16 (23%) routinely and in 3 (4%) the service was being developed ([Chapter 34 Obstetrics](#)).



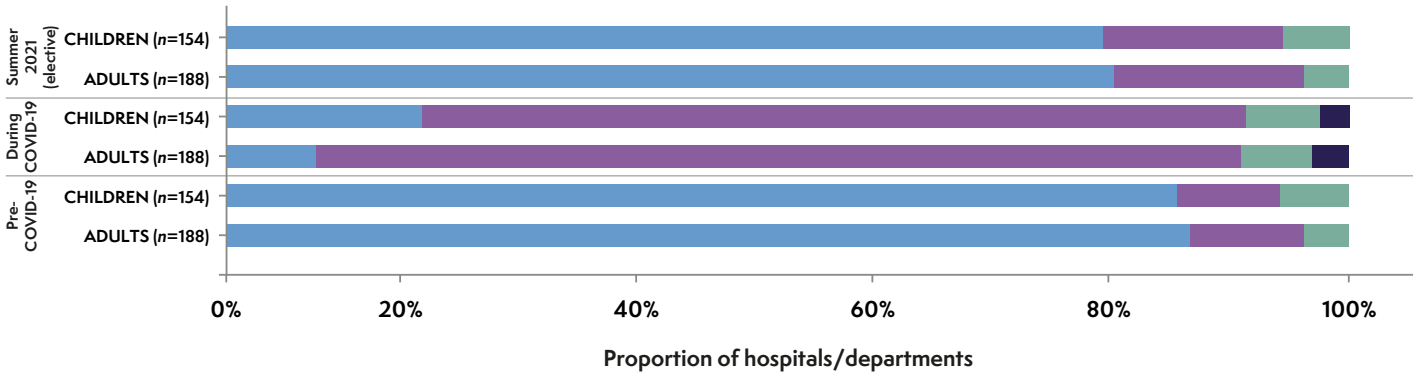
Location of induction of anaesthesia

The usual location for induction of anaesthesia in adults and children changed in the UK as a direct result of the COVID-19 pandemic. In 2019, the most frequent place to induce anaesthesia in adults was the anaesthetic room, reported by 161 (86%) of 188 departments that anaesthetise adults (Figure 9.7; Chapter 32 Anaesthetic rooms). During the pandemic, 155 (82%) departments anaesthetised patients in the operating room. In summer 2021, the default location largely reverted to the anaesthetic room ($n = 148$; 79% of departments).

A similar pattern was reported for hospitals that anaesthetise children. Before the COVID-19 pandemic, induction of anaesthesia in children took place most commonly in anaesthetic rooms ($n = 130$ (84%) of 154 departments that anaesthetise children), switched to operating rooms ($n = 113$; 73%) during the pandemic and changed back to anaesthetic rooms ($n = 121$; 79%) in summer 2021.

Overall, there was a 6% reduction in the use of anaesthetic rooms (adults and children) in summer 2021 compared with 2019.

Figure 9.7 Usual location for induction of anaesthesia in adults and children in 2019 (before the COVID-19 pandemic), during the pandemic and in summer 2021 in departments that anaesthetise adults ($n = 188$) and children ($n = 154$). AR, anaesthetic room. Anaesthetic room ■, Operating room (AR available) ■, Operating room (AR not available) ■, Not applicable/unknown ■.

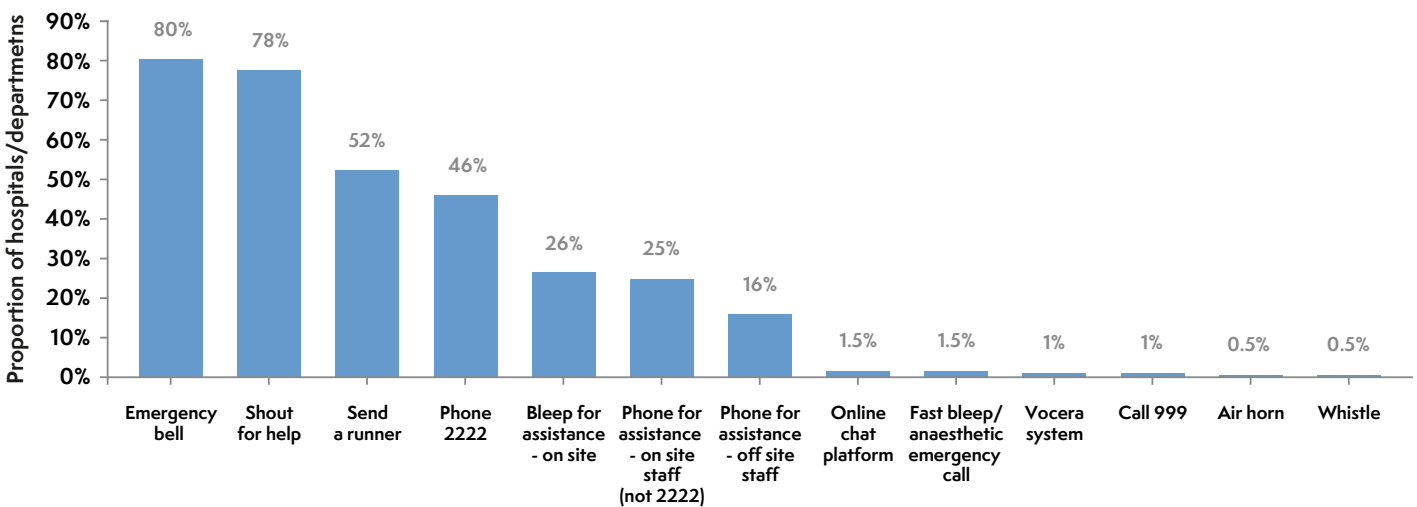


Summoning help and emergency resuscitation guidelines

The most common method for summoning help within the main theatre complex was the use of a bell in the operating or anaesthetic room in 158 (80% of those reporting) departments, followed by shouting for help ($n = 153$; 78%) and sending a

runner ($n = 103$; 52%). Less common systems, (none of which were reported by more than three, 2%, respondents) include use of a fast bleep, a dedicated online chat platform, calling 999, a Vocera® (Vocera Communications, San Jose, CA, USA) communication system, a whistle and an air horn (Figure 9.8).

Figure 9.8 Procedures for calling for help in the main theatre complex, may be >1 answer per respondent ($n = 197$)

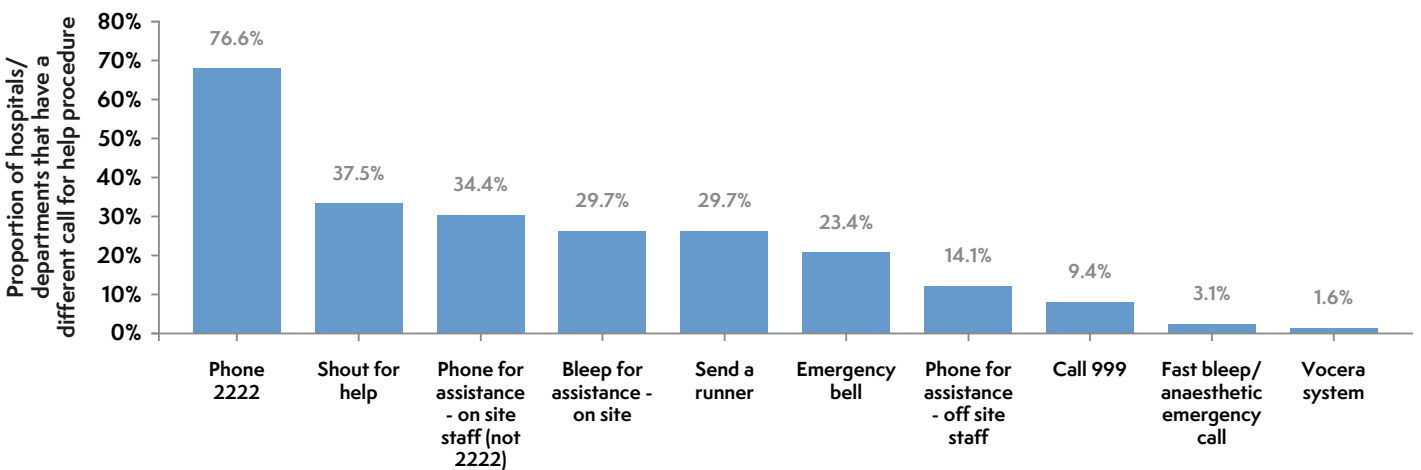




When calling for help in a remote anaesthesia location, 64 (35% of the 182 sites providing remote anaesthesia care) reported having a different standard procedure to call for help from that

used in main theatres. Methods included phoning '2222' (n = 49; 77% departments), shouting for help (n = 24; 38%) and phoning for on-site assistance by other means (n = 22; 34%; Figure 9.9).

Figure 9.9 Respondents reporting different procedures to call for help outside the main theatre complex, may be > 1 answer per respondent (n = 64)



Local Coordinators reported that immediate access to printed emergency resuscitation guidelines was not available in 17 (9%) of 197 responding departments and anaesthetists had to rely on their memory or personal electronic device. In 136 (69%) departments emergency resuscitation guidelines were available in every location where anaesthesia took place and in 40 (20%) they were available in most but not all locations. The systems for how anaesthetic departments provide physical access to emergency guidelines and the type of emergency guidelines accessible are shown in Figure 9.10 and Figure 9.11, respectively.

Emergency equipment and organisation

Of the 195 responding departments, 180 (92%) had immediate access to advanced airway equipment, 188 (96%) to a difficult airway trolley and 193 (99%) to a defibrillator in every theatre suite/complex (Figure 9.12). Some 66 (34%) of the 193 departments had a manual-only defibrillator, 20 (10%) an automated external defibrillator (AED), and 107 (55%) a defibrillator with combined manual/AED functions. A total of 163 (84%) departments had a defibrillator with capacity to provide external pacing.

In the 154 departments that conducted paediatric anaesthesia, 23 (15%) departments did not have access to paediatric advanced airway equipment and 24 (16%) departments to a difficult airway trolley (Figure 9.12). A defibrillator with paediatric pads was available across 149 (97%) of 154 sites; 54 (36%) of 149 departments provided only a manual defibrillator, 15 (10%) an AED and 80 (54%) a defibrillator with combined manual/AED function. A total of 128 (86%) of 149 departments had a defibrillator with capacity to pace.

Figure 9.10 Methods of accessing emergency resuscitation guidelines among those respondents with immediate physical access to these in all or most locations where anaesthesia takes place ($n = 176$). More than one response possible.

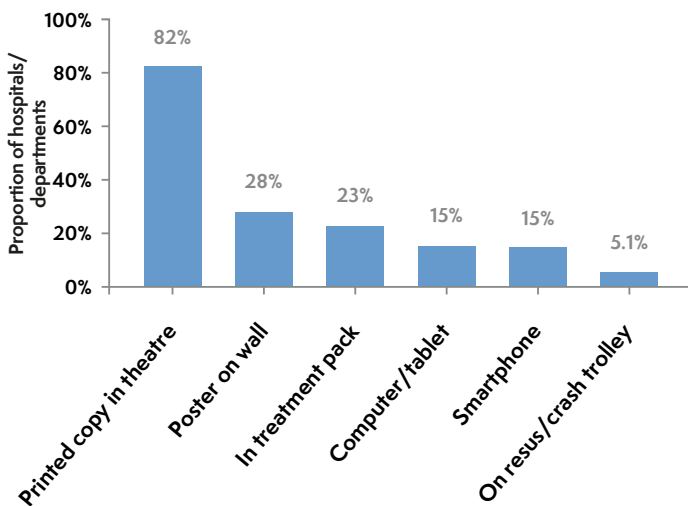
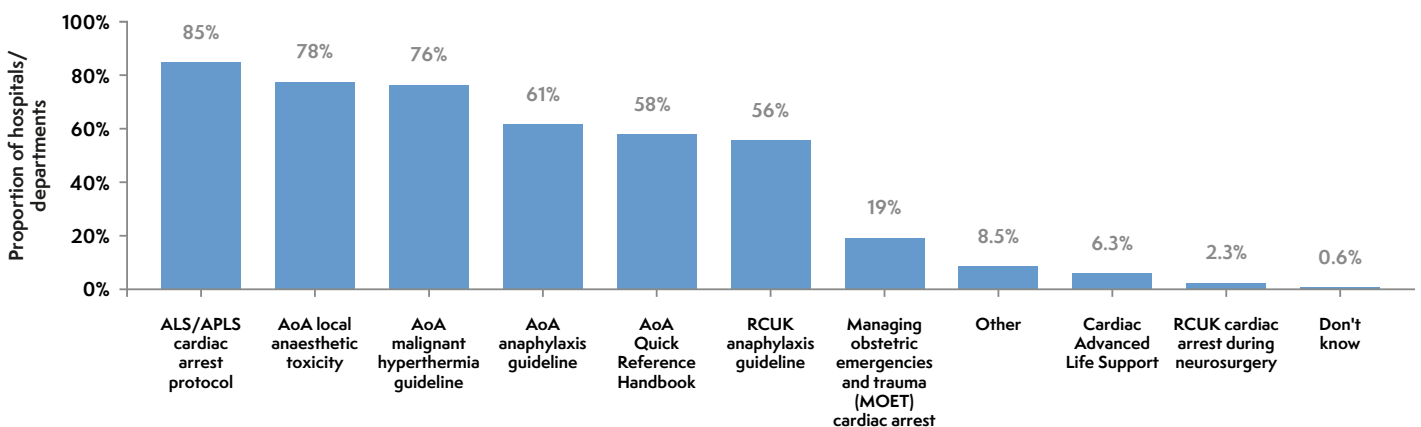


Figure 9.11 Emergency resuscitation guidelines available among those respondents with immediate physical access to these in all or most locations where anaesthesia takes place ($n = 176$). AoA, Association of Anaesthetists; RCUK, Resuscitation Council UK.



The availability of emergency equipment for remote site anaesthesia is shown in Figure 9.12. Of the 180 departments that provided remote anaesthesia care, access to emergency equipment was: advanced airway equipment in 65 (36%) departments, a difficult airway trolley in 72 (40%) departments and a defibrillator in 155 (86%) departments. Defibrillators included manual devices in 50 (32%) of 155 departments with remote sites, an AED in 32 (21%) and a defibrillator with combined manual/AED function in 73 (47%); 98 (63%) of 155 departments offered a defibrillator with external capacity for pacing. Figure 9.13 shows a more detailed distribution of emergency equipment in remote locations within the 180 anaesthetic departments.



Figure 9.12 Access to emergency equipment in every theatre suite ($n = 195$), in every theatre suite providing paediatric anaesthesia ($n = 154$), and in every remote location ($n = 180$). Yes ■, No ■, Don't Know ■.

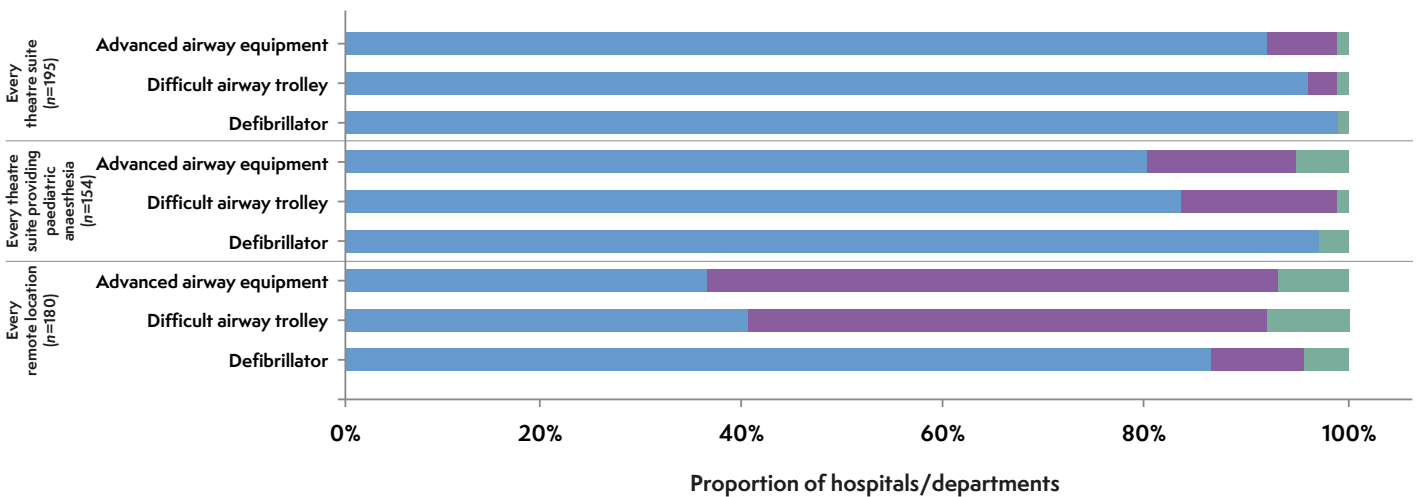
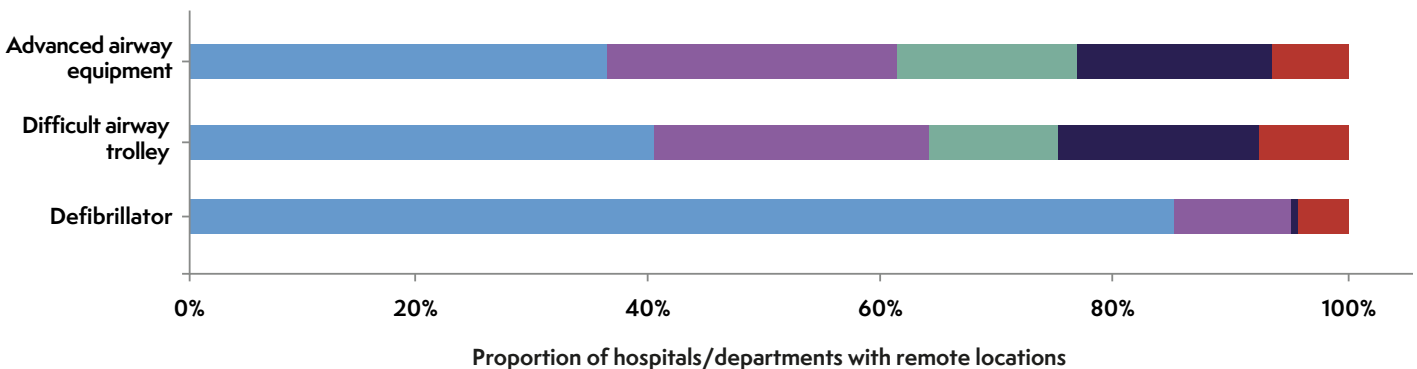


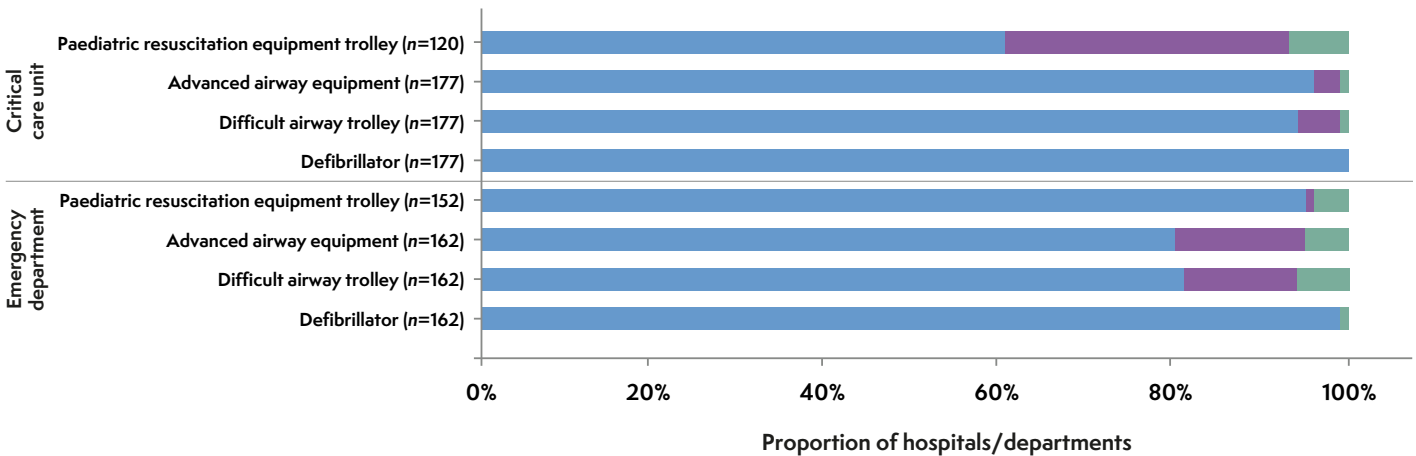
Figure 9.13 Access to emergency equipment in remote anaesthesia locations in those departments providing this service in remote locations ($n = 180$), reported as access in all remote locations, access in most (> 50%) remote locations, no access in most (> 50%) remote locations or no access in all remote locations. All 'yes' ■, Most (>50%) 'yes' ■, Most (>50%) 'no' ■, All 'no' ■, Don't know ■.



Only 5 (3%) of 177 hospitals with critical care units reported that advanced airway equipment was not available within their units and a difficult airway trolley was not available in 8 (5%) units (Figure 9.14). Of the 162 hospitals with an emergency department, 24 (15%) reported that their emergency departments did not have access to advanced airway equipment and 21 (13%) did not have access to a difficult airway trolley.



Figure 9.14 Access to emergency equipment in emergency departments ($n = 162$) and critical care units ($n = 177$) in hospitals, and access to a paediatric resuscitation equipment trolley in hospitals that treat children and have an emergency department ($n = 152$) or critical care unit (adult or paediatric) ($n = 120$). Yes ■, No ■, Don't Know ■.



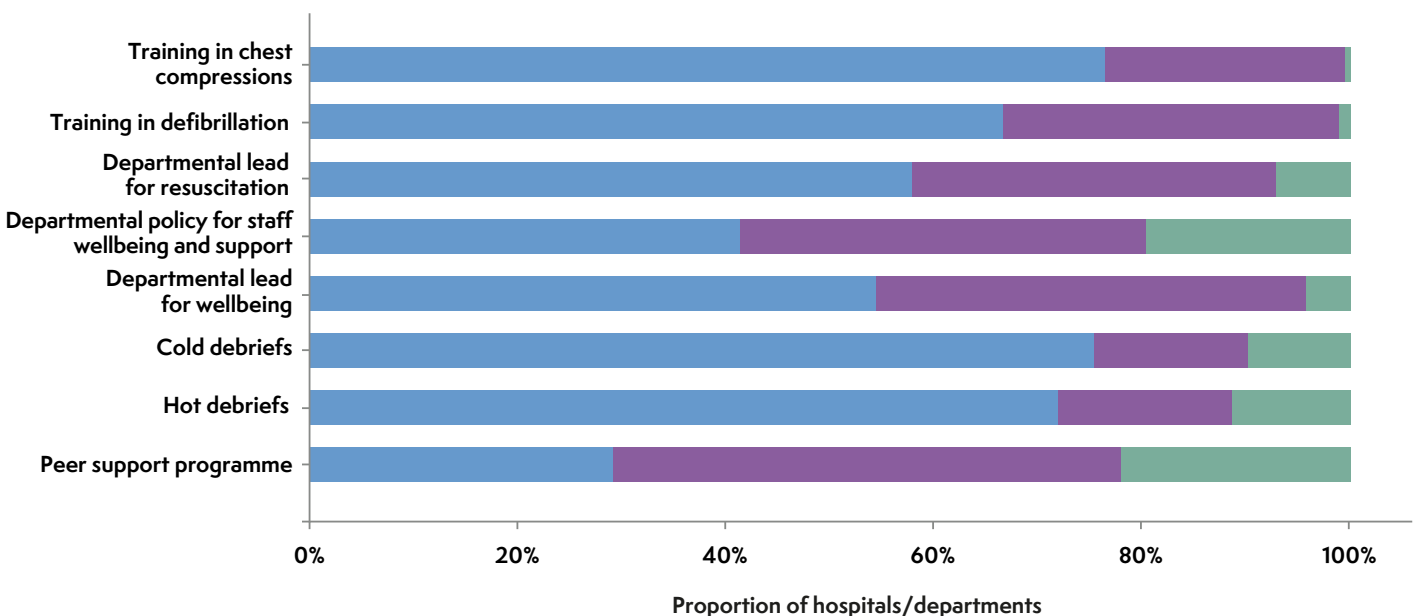
Of the 195 responding hospitals, 152 (78%) cared for children and had an emergency department and 120 (62%) cared for children and had access to paediatric or adult critical care services. In the 152 hospitals that cared for children and had an emergency department, a paediatric resuscitation equipment trolley was not available in 1 (1%) emergency department. In the 120 hospitals caring for children that had a critical care unit (adult or

paediatric), a paediatric resuscitation equipment trolley was not available in 39 (33%) critical care units (Figure 9.14).

Departmental policies and practices

A total of 113 (58%) of 195 responding departments had a departmental lead for resuscitation. Annual in-house training in chest compressions was provided in 149 (76%) in defibrillation in 130 (67%) departments (Figure 9.15).

Figure 9.15 Departmental organisation around annual updates in resuscitation, debriefing after significant events and departmental leads for resuscitation and wellbeing. Yes ■, No ■, Don't Know ■.



Access to a departmental policy for wellbeing and support was available in 81 (42%) departments and 106 (54%) had a departmental lead for wellbeing ([Chapter 17 Aftermath and learning](#)); 57 (29%) departments offered a peer support programme after a critical incident (Figure 9.15). The provision of some type of debrief session, whether held immediately or after a delayed event, was available in 154 (79%) of 195 responding departments. Other means of sharing information and learning within organisations such as intradepartmental and multidisciplinary reviews following a critical incident, including perioperative cardiac arrest, is shown in Figure 9.16 and how different anaesthetic departments collect data for review of such cases is shown in Figure 9.17.

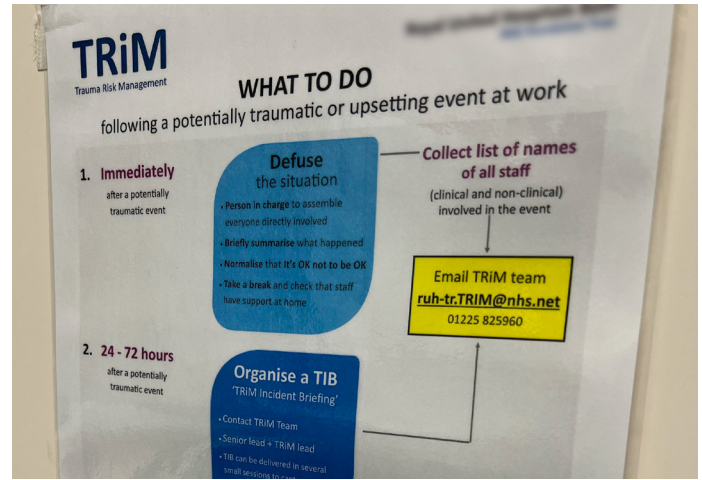


Figure 9.16 Access to departmental and inter-departmental multi-professional meetings for reviewing critical incidents such as a perioperative cardiac arrest. Yes ■, No ■, Don't Know ■.

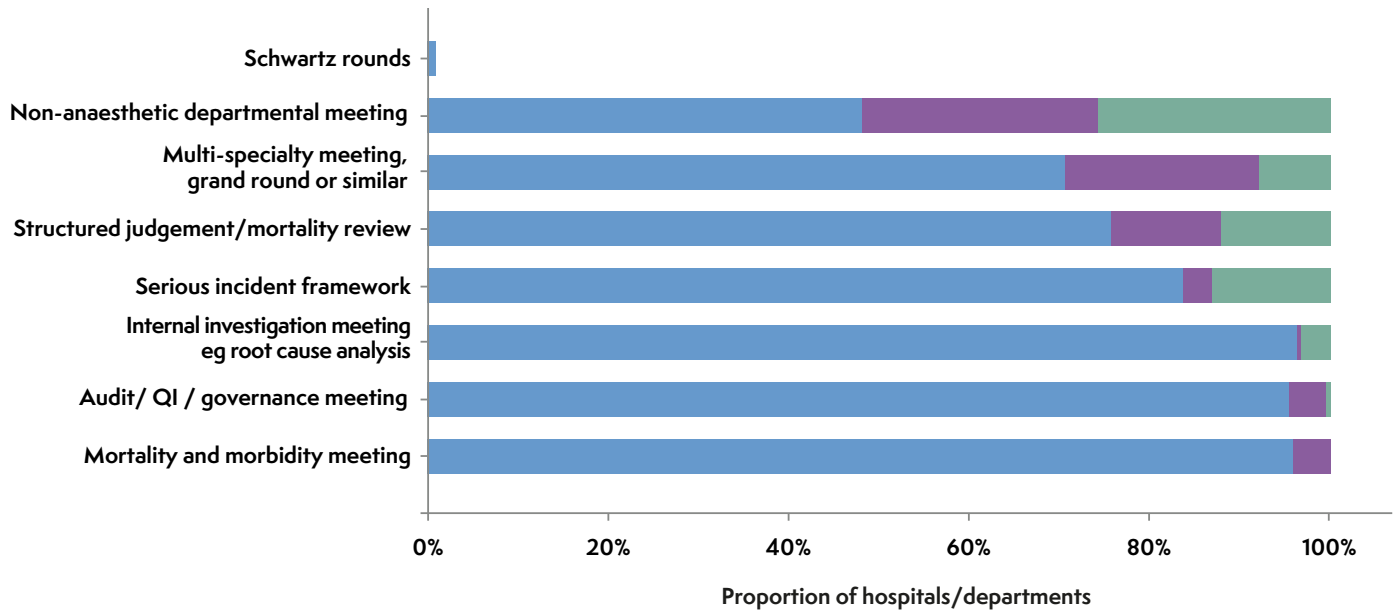
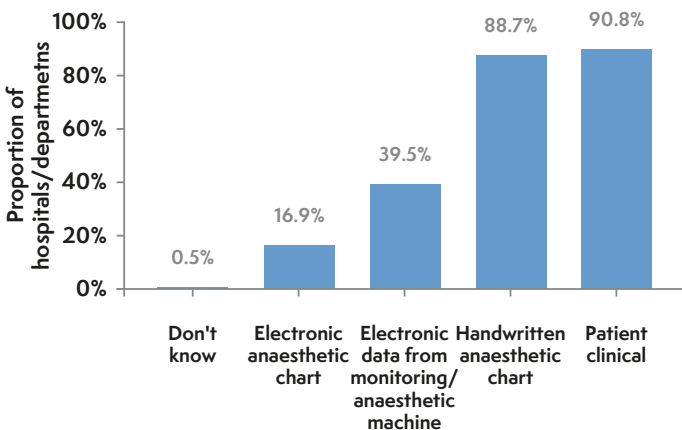


Figure 9.17 Modes of data/case collection for subsequent case review (n = 195)



Discussion

Anaesthetic departments provide a wide range of services in NHS hospitals that reflect the patient groups and specialties the hospital provides. Our Baseline Survey has identified variation and some deficiencies in institutional preparedness for managing emergencies, such as cardiac arrest in UK anaesthetic departments.

UK departments of anaesthesia vary in size with some spanning multiple sites and managed by the same anaesthetic department. The composition of the anaesthetic workforce varies between departments. All hospitals are staffed by consultants and SAS anaesthetists who work autonomously, and most by anaesthetic trainees and trust doctors who do not work autonomously but may work very remotely from supervising senior staff. We found 52 (26%) departments have anaesthesia associates, whether practicing or in training. According to the RCoA 2020 census, there were 173 qualified anaesthesia associates in the UK (RCoA 2020).

The geography of the location where anaesthesia may be undertaken within an organisation has safety implications for anaesthetists who may find themselves alone in a remote site, where help from colleagues may not be immediately available, especially out of hours. More than 90% of responding hospitals reported various subspecialties being undertaken away from the main theatre complex or anaesthetic department, most commonly diagnostic and interventional procedures in radiology, followed by cardiology. High-risk procedures are often performed in the radiology department and cardiac catheterisation laboratory, with the location posing a number of difficulties including a different environment and challenging patients who are critically ill and needing general anaesthesia (RCoA 2023b, RCR 2018; see also [Chapter 37 Cardiology procedures](#) and [Chapter 38 Neurosurgery, regional, remote locations and emergency department](#)). Obstetric care was in a remote location in 32% of hospitals with obstetric units and is a location of high activity, especially overnight.

The survey has shown that more than one method for summoning help may be used within the same organisation and methods varying widely across departments. Anaesthetists should be familiar with the processes for summoning help in every location where they may be called upon to provide anaesthesia. The standard method for summoning help to wards in cases of cardiac arrest is to dial '2222' (NPSA 2004); in operating room locations, our data suggest that in the majority of cases this number is not used (see also [Chapter 13 Cardiac arrest case reports summary](#)). One in five departments did not have an emergency bell within their main theatre complex. Approximately one in three departments used different procedures for calling for help in remote anaesthesia locations. GPAS recommends that departments providing perioperative care should incorporate an emergency call system that also includes an audible alarm (RCoA 2023a) but many departments appear not to meet this standard. In 1 in 10 departments there was no immediate access to emergency resuscitation guidelines in all anaesthesia locations, meaning it is likely anaesthetists must rely instead on memory or access via other methods (eg personal phones).

There was marked variation in the type of emergency surgical and medical services offered across hospitals, possibly the result of centralisation of services such as major trauma. Over 90% of the NHS hospital sites had access to adult critical care units (level 2 and/or level 3 care) and emergency departments were present in over 80%. Half of departments across the UK did not have 24-hour access to interventional radiology and two thirds did not have 24-hour access to primary percutaneous coronary intervention services. Compared with some European countries, ECMO/eCPR services were less common, with fewer than 1 in 10 hospitals having these services on site (Jorge-Perez 2023).

An important cause of perioperative cardiac arrest is complications of airway management, and this is reconfirmed in this report (see [Chapter 21 Airway and respiratory complications](#)). The RCoA recommends that at least one type of laryngoscope

should be readily/immediately available in all areas where emergency anaesthesia is undertaken and that patients receiving care in non-theatre locations should have the same standard of provision of anaesthetic equipment and personnel as in theatres (RCoA 2023b). The 2015 Difficult Airway Society (DAS) guidelines recommend that all anaesthetists should have immediate access to a videolaryngoscope and be skilled in using it (Frerk 2015) and other guidance has gone further recommending default use of videolaryngoscopy (Cook 2020, Chrimes 2022). In the UK, 7% of all hospitals did not have access to advanced airway equipment (in which we specified videolaryngoscopy) and 3% to a difficult airway trolley in every theatre suite where anaesthesia is provided. Moreover, half of the responding hospitals did not provide emergency airway equipment in all remote locations, although the emergency (15%) and critical care departments (3%) fared better. While access to a defibrillator was immediately available in all main theatre suites, the emergency department and in critical care units, around 1 in 10 hospitals reported a defibrillator was not immediately available in all remote locations.

The vast majority (84%) of UK hospitals provide children's services, including anaesthesia, but only 26 (3.8%) NHS hospitals in the UK have PICU services on site (PICANet 2022). Approximately 90% of the responding hospitals delivering paediatric anaesthesia did not have immediate access to a PICU. There is an overall shortage of level 3 and 2 critical care beds for children and approximately 30% of admissions to PICUs in England are transfers of critically ill children from another hospital (Morris 2022). This creates two problems: first, the need for stabilisation of critically ill children in hospitals without PICUs, mostly district general hospitals and, second, the increasing request to accommodate children on adult critical care units due to lack of PICU bed (ICS/PCCS 2021). It is recognised that anaesthesia and critical care staff may be anxious about looking after sick children as services have been increasingly centralised and the workforce deskilled (Morris 2022). In this survey, we demonstrate the wide range of personnel involved in the resuscitation of the critically ill child before retrieval or transfer to a specialist tertiary children's hospital. In three quarters of departments, support was delivered by anaesthetists without specialist paediatric interests or adult intensivists. Cardiac arrest in critically ill children awaiting transfer to a PICU was a special inclusion in NAP7 and is discussed in detail in [Chapter 27 Paediatrics](#). There already are recommendations to increase provision of paediatric level 2 beds especially in regions lacking such facilities and for adult and children's critical care services to provide outreach support (Morris 2022).

The RCoA (2023c) recommends that a standardised paediatric airway trolley and emergency equipment such as a defibrillator should be available in all the hospital locations in which paediatric airway management and anaesthesia takes place. Equipment should be standardised across all remote areas to match the main paediatric departmental facilities including emergency departments and critical care units (RCoA 2023c).

Of some concern, this survey has shown that a significant proportion of UK hospitals appear to be poorly equipped for emergencies in paediatric anaesthesia. One sixth of responding departments that anaesthetise children did not have access to advanced airway equipment and difficult airway trolleys in every operating room where paediatric anaesthesia takes place.

The RCUK's quality standards for annual resuscitation training updates are not being fully met, with only just over 75% of departments offering yearly updates in chest compressions and 67% in defibrillation. Only 58% of departments have a resuscitation lead, which is not consistent with RCoA GPAS standards (RCoA 2023d). The quality standards have been set to improve patient care and outcomes for patients who sustain a cardiac arrest in an acute care setting (RCUK 2020). Individual compliance with this standard is discussed further in [Chapter 10 Anaesthetists survey](#).

There is a clear need to learn from critical events and this requires access to case details and policies and personnel to manage debrief, education and psychological support. Such processes are required by GPAS standards (RCoA 2023d). This survey suggests only one in six departments have access to digital anaesthetic records and only two in five access to digital monitoring data after serious events. For high-quality review it is arguable that both might be needed. While there is reasonably good access to debrief and departments have multiple methods to access learning, this too appears variable. Institutional provision for and access to psychological support appears highly variable and is discussed further in [Chapter 17 Aftermath and learning](#).

Overall, the survey has shown the wide range of services provided in most hospitals, many of which are provided in remote locations. It has also shown the wide variation in provision of emergency equipment, methods of calling for help, access to emergency guidelines, process for review of critical events, provision of resuscitation training, with particular variation in provision to remote locations and paediatric care. While it is likely many hospitals are providing very good standards of organisational preparedness for anaesthetic emergencies including cardiac arrest the survey suggests this is not the case universally.

Recommendations

National

- Every department should have a resuscitation lead.
- Anaesthetic departments should be required to offer yearly updates on cardiopulmonary resuscitation (CPR) and defibrillation skills training for the resuscitation of adults.
- Anaesthetic departments should be required to offer yearly updates on CPR and defibrillation skills training for the resuscitation of children.

Departmental

- A standard procedure to effectively call for help, which includes an audible alarm, should be provided across all locations where anaesthesia takes place.
- Resuscitation equipment, that is age appropriate, should be standardised and available in every main and remote site where anaesthesia takes place, including advanced airway management equipment and a defibrillator.
- A standardised paediatric difficult airway trolley should be available in all locations where paediatric anaesthesia may take place.
- Every emergency department where anaesthesia takes place should have access to advanced airway management equipment (adults and children).
- All adult critical care units within hospitals where children may be cared for should have access to a paediatric difficult airway/resuscitation equipment trolley.

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