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## Key findings

- In the Baseline Survey, 79% of hospitals reported using anaesthetic rooms as a default location to induce anaesthesia in elective patients in June 2021.
- In the Activity Survey, an anaesthetic room was used in 55% all cases and 65% of all general anaesthesia cases excluding obstetrics: including 70% of elective surgery and 56% of emergency surgery. A higher proportion of children (72%) were anaesthetised in the anaesthetic room compared to adults (64%).
- Where an anaesthetic room was used, 33% of cases were not monitored during transfer to the operating room.
- Anaesthetic rooms were used in 393 (63%) of 627 cases of perioperative cardiac arrest reported to the Seventh National Audit Project (NAP7) that occurred in a theatre suite.
- In 136 cardiac arrests, an anaesthetic room was used and the patient arrested before the start of surgery, accounting for 35% of cases where the anaesthetic room was used and 22% of all cases in the theatre suite.
- Of these 136 cardiac arrests, 63 (46%) happened in the anaesthetic room, 10 (7%) on transfer to the operating room and 56 (41%) after induction but before surgery has started.
- The NAP7 panel review commented on the inappropriate use of an anaesthetic room in 14 cases and in 3 that a lack of patient monitoring during transfer from the anaesthetic room to the operating room contributed to the cardiac arrest.
- The care before cardiac arrest in the 136 cases was judged to be less good than care in all NAP7 cases (good 33% vs 48%, good and poor 27% vs 21% and poor 15% vs 11%).
- The panel was more likely to judge anaesthesia care as a key cause of cardiac arrest in cases where an anaesthetic room was used (81%) compared with those where it was not used (64%) or the whole NAP7 data set (40%).

## What we already know

Anaesthetic rooms have historically been used in the UK, although worldwide most countries do not have them (Bromhead 2002). In 2006, Broom and colleagues reported that approximately 6% of UK hospitals did not have anaesthetic rooms built into their theatre suites (Broom 2006). In 2002, 90% of UK departments routinely used the anaesthetic room to induce anaesthesia (Bromhead 2002) and this had changed little by 2009, when a survey of UK district general hospitals reported that the anaesthetic room was the preferred location of induction of anaesthesia for elective surgery for 84% of departments and for emergency cases for 50% of departments (Obidey 2009).

There is a longstanding and continuing debate about the use of anaesthetic rooms in routine practice. One proposed benefit of anaesthetic rooms is the possibility of providing a calmer environment during induction, particularly for children. As long ago as 1989, Soni and Thomas reported no difference in subjective and objective indices of anxiety when patients were randomised to induction of anaesthesia in an anaesthetic room or operating room (Soni 1989). A second benefit is that anaesthetic rooms may help with theatre efficiency by providing extra capacity for anaesthetists to insert regional nerve blocks and lines while the operating room is being used, although this does not require induction of anaesthesia in the anaesthetic room. However, there are equally proposed disadvantages to inducing anaesthesia in anaesthetic rooms. First, duplication and standardisation of equipment increases cost. Second, if monitoring is not continuous between induction in the anaesthetic room and safe positioning in theatre this may compromise care (Obidey 2009) and flouts minimum monitoring standards (Klein 2021). Such a monitoring gap may risk delay in recognising the deteriorating patient (eg hypotension). The Fifth National Audit Project (NAP5) identified the 'gap' in the delivery of anaesthesia during patient transfer increased the risk of awareness during general anaesthesia with 50% of cases of awareness occurring following induction (Pandit 2014). Finally, management of critical incidents in the anaesthetic rooms

should also be considered. Anaesthetic rooms are smaller than operating rooms with the potential for overcrowding and may provide insufficient space in an emergency when help arrives. Communicating to other staff that a patient is deteriorating may be harder in an anaesthetic room and may even occasionally require sending a vital member of the team away to summon help ([Chapter 13 Reported cases summary](#)). In a recent high-profile case, the coroner stated (Cummings 2021):

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*The anaesthetic room was not large. Staff crowded in to assist. Space was further limited by the presence of a bed in the room... I find that there was chaos in the anaesthetic room.*

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It therefore merits consideration in NAP7 as to whether there was any evidence that use of an anaesthetic room had an impact on risk of cardiac arrest or its safe management.

## What we found

### Baseline Survey

In the NAP7 organisational Baseline Survey, eight (4%) of 197 UK anaesthetic departments did not have anaesthetic rooms available in their main theatre complex ([Chapter 9 Organisational survey](#)).

Before the COVID-19 pandemic, anaesthetic rooms were used as the default location for anaesthetic induction in adults in 86% of departments and in children in 84%. Overwhelmingly, this practice switched during the pandemic, with anaesthetic rooms being used in only 8% and 18% of departments for anaesthetising adults and children, respectively. In summer 2021 during the pandemic recovery phase, when the Baseline Survey was undertaken, the use of anaesthetic rooms had returned towards pre-COVID-19 levels, with 79% of departments reporting their preferential use for anaesthetising adults or children for elective surgery ([Chapter 9 Organisational survey](#)).

### Activity Survey

In the national Activity Survey, an anaesthetic room was used in 13,246 (55%) of 24,172 cases whether to induce anaesthesia or perform other procedures separate to the operating room (Table 32.1). In 4242 (33%) of the 12,842 cases in which the procedure was performed in the operating room, the patient was not monitored during transfer from the anaesthetic room ([Chapter 31 Monitoring and transfer](#)).

An anaesthetic room was used in 10,864 (65%) of 16,604 cases where induction of general anaesthesia was undertaken in the non-obstetric population (Figure 32.1). A higher proportion of elective anaesthesia was induced in anaesthetic rooms compared

**Table 32.1** Activity Survey: use of anaesthetic rooms and monitoring during transfer by NCEPOD categories (n=24,172). N/A, not available.

Anaesthetic room used?	Elective day case, n (%)	Elective inpatient stay	Expedited, n (%)	Urgent, n (%)	Immediate, n (%)	N/A or not recorded, n (%)	Total, n (%)
<b>Not used</b>	3136 (31)	1052 (25)	1169 (39)	1787 (48)	302 (70)	1821 (66)	9267 (38)
<b>Procedure in anaesthetic room</b>	224 (2)	47 (1)	52 (2)	63 (2)	4 (1)	14 (1)	404 (2)
<b>Yes (monitored during transfer)</b>	4102 (41)	1916 (46)	1221 (40)	1267 (34)	58 (14)	36 (1)	8600 (36)
<b>Yes (not monitored during transfer)</b>	2295 (23)	1040 (25)	491 (16)	384 (10)	18 (4)	14 (1)	4242 (18)
<b>N/A or not recorded</b>	288 (3)	101 (2)	95 (3)	245 (7)	47 (11)	883 (32)	1659 (7)
<b>Total</b>	10045 (100)	4156 (100)	3028 (100)	3746 (100)	429 (100)	2768 (100)	24172 (100)

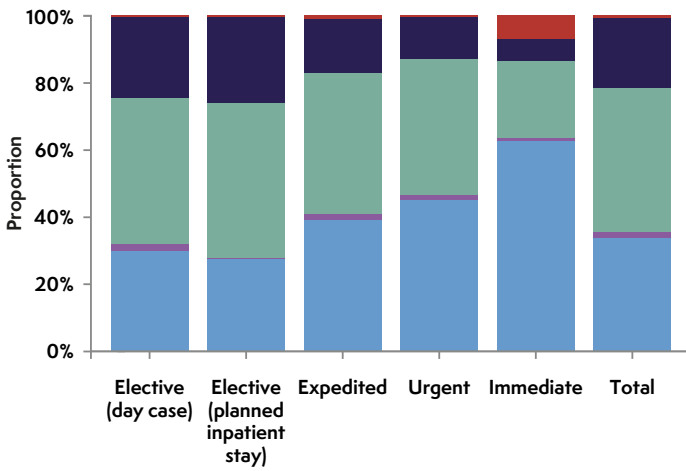


with emergency anaesthesia (70% vs 56%). During transfer to the operating room, 33% (3,451 of 10,609) of these unconscious patients were not monitored.

A higher proportion of children were anaesthetised in the anaesthetic room compared with adults (72% vs 64%) and they were less likely to be monitored during transfer to the operating room following induction of anaesthesia (61% vs 69%; Table 32.2).

Frequency of monitoring during transfer between anaesthetic room and operating theatre varied little whether the patient was conscious or anaesthetised, by National Confidential Enquiry into Patient Outcome and Death category or by age.

**Figure 32.1** Activity Survey: use of anaesthetic rooms as a proportion of all non-obstetric general anaesthesia cases (n=16,604). N/A, not available or not recorded. No [blue], Procedure in anaesthetic room [purple], Yes (monitored during transfer) [green], Yes (not monitored during transfer) [dark blue], N/A [red].



**Table 32.2** Activity Survey: use of anaesthetic rooms and transfer monitoring in children (≤ 18 years) and adults as a proportion of all non-obstetric general anaesthesia cases (n=16,604)

Anaesthetic room used?	Children	Adults
Not used	892 (28)	4744 (35)
Procedure in anaesthetic room	132 (4)	123 (1)
Yes (monitored during transfer)	1308 (41)	5850 (44)
Yes (not monitored during transfer)	849 (27)	2602 (19)
Not available or not recorded	15 (0)	89 (1)
<b>Total</b>	<b>3196 (100)</b>	<b>13,408 (100)</b>

### Perioperative cardiac arrest cases reported to NAP7

Overall, among 627 cases reported to NAP7 that took place in an operating suite, an anaesthetic room was used in 393 (63%). In 136 of these cases, the arrest occurred around induction of anaesthesia (63 cases, 46%), on transfer to the operating room (10, 7%) and after induction but before surgery started (56, 41%; Table 32.3). A similar distribution in these preoperative phases was observed for those cardiac arrests where an anaesthetic room was not used (Table 32.3).

Overall, these 136 cardiac arrests account for 35% of all 393 cardiac arrests in which anaesthetic rooms were used, 22% of 627 cardiac arrests occurring in the theatre suite and 15% of all 881 cardiac arrests.

In the 136 cardiac arrests where the anaesthetic room was used and the cardiac arrest happened before surgery started, the care before cardiac arrest was judged by the panel to be good in 45

(33%), good and poor in 37 (27%), poor in 20 (15%) and unclear in 34 (25%). This is a slightly lower rating than for all NAP7 cases (good 48%, good and poor 21%, poor 11%).

A total of 36 (26%) patients died: in 7 patients, death was thought to be an inexorable process, in 14 partially, and in 4 this was uncertain. Some 11 (8%) patients experienced severe harm and 89 (65%) moderate harm.

Anaesthesia was judged by the panel to be a key cause of cardiac arrest in 110 (81%) of cases, the patient in 105 (77%) and organisation in 17 (13%; Figure 32.2). In the whole NAP7 dataset, anaesthesia was a key cause in 40% of cases, the patient in 82% and organisation in 9%. Moreover, anaesthesia was judged to be the sole key cause in 24 (18%) cases and the patient in 14 (10%) of these cases. In the whole NAP7 dataset, anaesthesia was judged to be the sole key cause in 53 (6.0%) cases and the patient in 219 (25%).

The top three panel-agreed primary causes of death included isolated severe hypotension (31 cases, 23%), bradyarrhythmia (20 cases, 15%) and severe hypoxaemia (16 cases, 12%; Table 32.4).

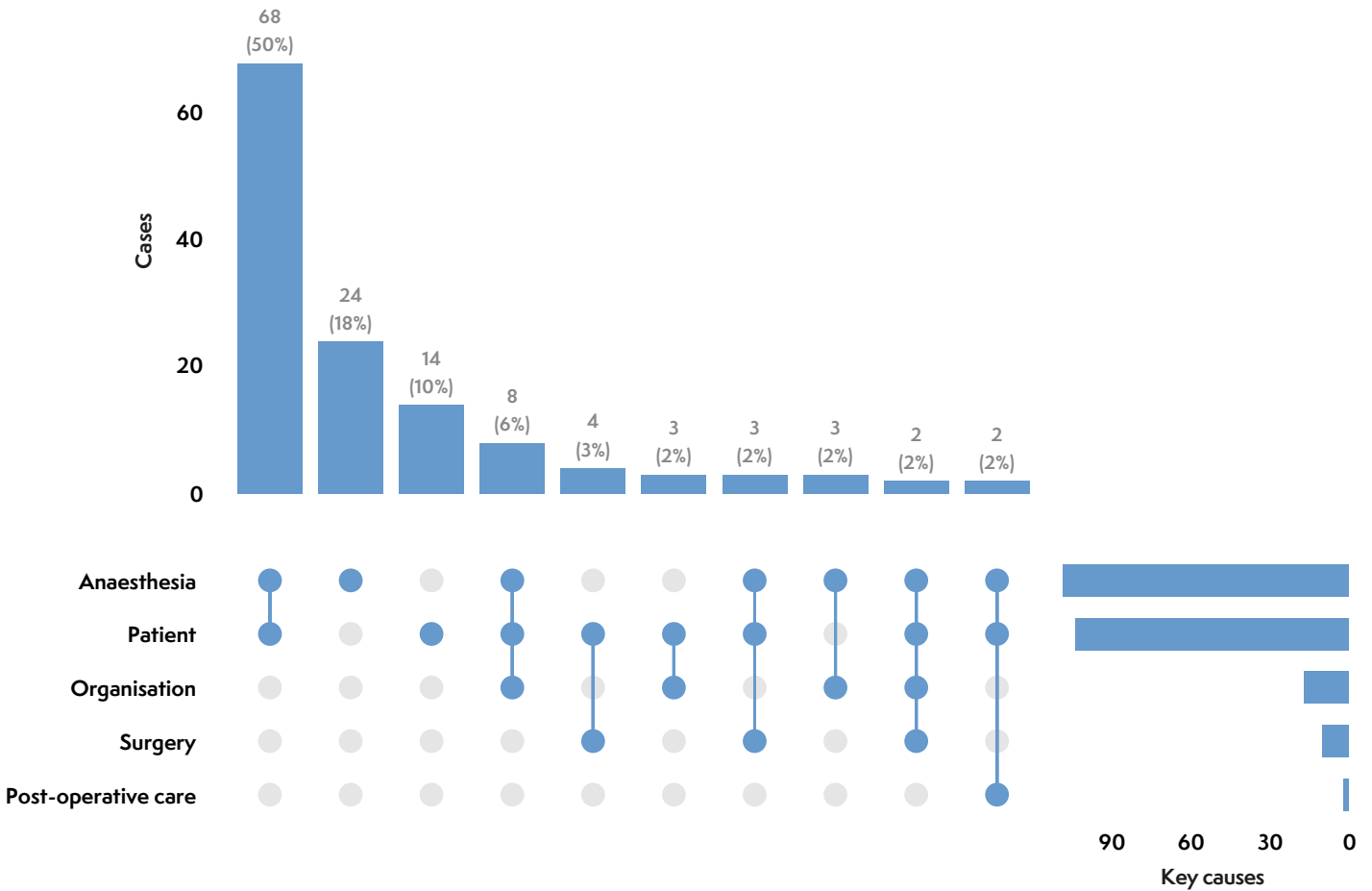
**Table 32.3** Timing of perioperative cardiac arrests that occurred before surgery, by use of anaesthetic room: anaesthetic room used (n=136, 54%) or not used (n=117, 46%).

Time of arrest	Anaesthetic room used, n (%)	Anaesthetic room not used, n (%)
Before induction	4 (3)	6 (5)
Induction	59 (43)	54 (46)
Transfer from anaesthetic room to theatre	10 (7)	N/A
After induction, before surgery	56 (41)	54 (46)
Uncertain	7	3

**Table 32.4** Top 10 panel-agreed primary causes of cardiac arrest in all events involving patients anaesthetised in the anaesthetic room who arrested before surgery (n=136)

Primary panel agreed cause of death	Cardiac arrests, n (%)
Isolated severe hypotension	31 (23)
Bradyarrhythmia	20 (15)
Severe hypoxaemia	16 (12)
Anaphylaxis	15 (11)
Drug error	12 (8.8)
Septic shock	12 (8.8)
Cardiac ischaemia	8 (5.9)
Tachyarrhythmia	8 (5.9)
Anaesthesia – induction	7 (5.1)
Major haemorrhage	5 (3.7)

**Figure 32.2** Panel-agreed key causes of cardiac arrest in all events involving patients anaesthetised in the anaesthetic room who arrested before surgery: more than one cause may be attributed. Unknown causes not included (n=136 cases). Top 10 combinations of causes are shown.



Comparing these 136 cases with all other perioperative cardiac arrests reports (n = 745) we observed an increase in the following patient groups:

- age over 66 years (57% vs 47%)
- ASA 1 or 2 (38% vs 25%)
- low Clinical Frailty Scale score (CFS 1–4; 61% vs 53%).

Outcome from these cardiac arrests was somewhat better than the whole dataset both in survival of the initial cardiac arrest (88% vs 75%) and survival to hospital discharge (54% vs 44%).

In the 136 cases, comments from the panel review of the ‘key word’ and ‘key lessons’ were analysed. Each case could have more than one learning point or comment:

- evidence of delay in starting cardiopulmonary resuscitation (CPR) – 7 cases
- lack of blood pressure recording for at least five minutes – 3 cases (one case the blood pressure was trending downwards in the anaesthetic room before transfer to theatre, 1 case there was no blood pressure recording following induction in the anaesthetic room until the patient arrived in the operating room, in 1 case hypotension was noted in the anaesthetic room but there was no blood pressure check before positioning for surgery)

- 15 minutes of untreated hypotension – 1 case
- inappropriate monitoring (eg lack of arterial line) in high-risk patients – 10 cases
- the anaesthetic room was noted to be an inappropriate location to induce anaesthesia because the patient was very high risk, comorbid or frail – 10 cases
- the anaesthetic room was noted to be an inappropriate location to induce anaesthesia because of the complexity of the case (eg complex airway case) – 4 cases
- solo anaesthetist and high-risk patient – 6 cases
- no additional help summoned – 4 cases.

An older patient presented with airway haemorrhage following recent major head and neck surgery. They were transferred to the anaesthetic room in a moribund state. Induction of anaesthesia took place in the anaesthetic room with surgeons present. Shortly after the patient was successfully intubated, they had a pulseless electrical activity (PEA) arrest and resuscitation was unsuccessful. The anaesthetist upon reflection felt that it would have been easier to manage the resuscitation in the operating room.

An older patient presented with septic shock and bowel ischemia and required an emergency laparotomy out of hours. The patient had a high estimated risk of death. Shortly after induction of general anaesthesia the patient had a cardiac arrest. The patient was initially successfully resuscitated but died later on the intensive care unit. The panel view was that this patient should have been anaesthetised in theatre.

### Cardiac arrests in the anaesthetic room

A total of 63 cardiac arrests occurred in the anaesthetic room (excluding those on transfer to the operating room), accounting for 7% of all 881 cardiac arrests and 10% of 627 cardiac arrests in the theatre suite.

Moderate harm was caused to 38 (60%) patients, severe harm to 7 (11%) patients and 18 (29%) patients died. Of the deaths, five were judged the result of an inexorable process and seven partially so.

Care before cardiac arrest care was judged good in 24 (38%), good and poor in 17 (27%), poor in 10 (16%), and unclear in 12 (19%).

The top three panel-agreed primary causes of cardiac arrest was isolated severe hypotension in 14 (22%) cases, severe hypoxaemia in 12 (19%) cases and bradyarrhythmia in 9 (14%) cases. Anaesthesia care was thought to be the key cause of arrest in 52 (83%) cases and patient in 49 (78%) cases. Anaesthesia was the sole cause of arrest in 13 (21%) of all anaesthetic room cases and patient in 7 (11%).

Comparing these 63 cases with other cardiac arrests reported at induction of anaesthesia (excluding post-induction, before surgery) but where anaesthetic rooms were not used, we observed an increase in the following (Table 32.5):

- ASA 1 or 2 (41% vs 22%)
- ASA 3 (37% vs 22%)
- not frail (CFS 1–4, 62% vs 54%)
- elective surgery (33% vs 19%)
- anaesthesia care as a key cause of cardiac arrest (83% vs 62%).

A young previously healthy patient was anaesthetised in the anaesthetic room for a fixation of long-bone fracture. The patient was tachycardic on arrival to the anaesthetic room and had a PEA cardiac arrest after induction of general anaesthesia. The patient was resuscitated with a short duration of CPR and blood administration. The panel judged that the patient had arrested as a result of previous major haemorrhage and untreated hypovolaemia.



A young previously healthy patient who had had airway bleeding was anaesthetised in the anaesthetic room for a re-look ear, nose and throat procedure. The patient was tachycardic before induction of anaesthesia, and shortly after induction they had a cardiac arrest because of underlying hypovolaemia. The patient was resuscitated with adrenaline and CPR with a good recovery.

### Cardiac arrests on transfer from anaesthetic room to operating room

Ten patients had a cardiac arrest on transfer to the operating room after being anaesthetised in the anaesthetic room. Eight patients experienced moderate harm and two patients died (one in whom this was not the result of an inexorable process and in one where this was uncertain).

The panel judged precardiac arrest care to be good in two cases, good and poor in three, poor in two and unclear in three.

The panel agreed key causes of cardiac arrest were anaesthesia care in ten cases and with patient factors also involved in eight cases. The top three causes of cardiac arrest on transfer were bradyarrhythmia (three cases), isolated severe hypotension (three cases) and drug error (two cases).

Although the numbers are small for formal comparison, it was noted that these patients were generally at lower risk than the rest of the cardiac arrest cohort: ASA 1–2 (5 of 10 patients vs 27% of other cardiac arrests), not frail (9 of 10 vs 54%), undergoing elective surgery (7 of 10 vs 27%) and surgery that was minor or intermediate (6 of 10 vs 38%).

### After induction, before surgery

There were 56 cardiac arrests in which an anaesthetic room was used and the event occurred after induction but before surgery started. There were a similar number of arrests (n = 54) occurring during this phase in arrests where an anaesthetic room was not used.

**Table 32.5** Summary of cardiac arrest key causes, patient demographics and surgery information during the preoperative phase: events occurring around induction of anaesthesia (including transfer) where an anaesthetic room was used ( $n=73$ ) and where it was not used ( $n=63$ ); events occurring in the post-induction phase before surgery where an anaesthetic room was used ( $n=56$ ), and where an anaesthetic room was not used ( $n=54$ ) and in all cardiac arrests reported to NAP7 ( $n=881$ )

	Anaesthetic room used, <i>n</i> (%)	Anaesthetic room not used, <i>n</i> (%)	All arrests, <i>n</i> (%)
<b>Induction (including transfer)</b>			
Patients	73	63	881
<b>Key cause of arrest:</b>			
Anaesthesia	62 (85)	39 (62)	351 (40)
Patient	57 (78)	59 (94)	719 (82)
<b>Top 3 primary causes of cardiac arrest</b>	Isolated severe hypotension 17	Major haemorrhage 16	Major haemorrhage 149 (17)
	Bradyarrhythmia 12	Septic shock 12	Bradyarrhythmia 83 (9)
	Severe hypoxaemia 12	Bradyarrhythmia 8	Cardiac ischaemia 64 (7)
<b>Age (years):</b>			
> 66	42 (58)	28 (44)	426 (48)
0–18	3 (4)	6 (10)	117 (13)
<b>ASA grade:</b>			
1–2	31 (42)	14 (22)	235 (27)
3	28 (38)	14 (22)	324 (37)
4–5	14 (19)	35 (56)	322 (37)
<b>Clinical Frailty Scale (CFS) score:</b>			
CFS 1–4	48 (66)	34 (54)	474 (54)
CFS 5–8	14 (19)	16 (25)	189 (21)
<b>Surgery:</b>			
Major or complex	35 (48)	30 (48)	511 (58)
Emergency	44 (60)	51 (81)	570 (65)
Elective	28 (38)	12 (19)	242 (27)
<b>Post-induction, before surgery</b>			
Patients	56	54	881
<b>Key cause of arrest:</b>			
Anaesthesia	43 (77)	36 (67)	351 (40)
Patient	41 (73)	46 (85)	719 (82)
<b>Top 3 primary causes of cardiac arrest</b>	Isolated severe hypotension 12	Major haemorrhage 10	Major haemorrhage 149 (17)
	Bradyarrhythmia 9	Anaphylaxis 8	Bradyarrhythmia 83 (9)
	Anaphylaxis 7	Bradyarrhythmia 8	Cardiac ischaemia 64 (7)
<b>Age (years):</b>			
> 66	35 (63)	30 (56)	426 (48)
0–18	5 (9)	2 (4)	117 (13)
<b>ASA grade:</b>			
1–2	17 (30)	18 (33)	235 (27)
3	25 (45)	12 (22)	324 (37)
4–5	14 (25)	24 (44)	322 (37)
<b>Clinical Frailty Scale (CFS) score:</b>			
CFS 1–4	33 (59)	30 (56)	474 (54)
CFS 5–8	14 (25)	14 (26)	189 (21)
<b>Surgery:</b>			
Major or complex	33 (59)	32 (59)	511 (58)
Emergency	37 (66)	36 (67)	570 (65)
Elective	18 (32)	14 (26)	242 (27)

One case that occurred following induction and before surgery started was excluded from this subanalysis as the precise events and use of the anaesthetic room were uncertain.

Some 3 (5.4%) patients experienced severe harm and 16 (29%) patients died. Of those that died, three deaths were part of an inexorable process and six partially so.

Care before cardiac arrest was judged by the panel to be good in 18 (32%), good and poor in 15 (27%), poor in 8 (14%) and uncertain in 15 (27%). The panel agreed that the key cause of cardiac arrest was anaesthesia care in 43 (77%) and patient factors in 41 (73%). The sole key cause of cardiac arrest was judged by the panel to be anaesthesia in 10 cases and solely the patient in 6 cases.

Comparing these 56 cardiac arrests after induction and before surgery in which an anaesthetic room was used with those events where an anaesthetic room was not used ( $n = 54$ ) there was no difference noted in low ASA classifications, frailty or urgency of surgery (Table 32.5). However, an increase in patients classed as ASA 3 (45% vs 22%) and a decrease in ASA 4 or 5 (25% vs 44%) was noted.

## Discussion

Anaesthetic rooms are still popular and are currently used predominantly as a default location in which to anaesthetise patients in the UK. The NAP7 Baseline Survey showed that approximately 80% of anaesthetic departments in the UK routinely used anaesthetic rooms to induce anaesthesia in adults and children undergoing elective surgery during summer 2021. A change in practice was observed during the COVID-19 pandemic, probably as a direct result of a change in the airway guidelines to accommodate for the presumed increased risk of transmission of SARS-CoV-2 to healthcare workers from aerosol generating procedures. In 2021, there was a 6% decrease in the use of anaesthetic rooms compared with before the pandemic. Whether this is an indication of a gradual shift to using operating rooms as the preferential location to induce anaesthesia is unknown. That only 4% of UK hospitals responding to the Baseline Survey reported that they did not have an anaesthetic room built into their theatre complex suggests little change in the last two decades (Broom 2006).

However, the NAP7 anaesthetic Activity Survey conducted over autumn and winter 2021/22 showed that anaesthetic rooms were used to induce general anaesthesia in elective patients to a lower degree than reported in the NAP7 Baseline Survey (70% vs 79%). While the overall use of anaesthetic rooms for all patients undergoing general anaesthesia was 65%, patients undergoing emergency surgery were more likely to be anaesthetised in the operating room compared with elective surgery (43% vs 29%). The preferential use of operating rooms to anaesthetise patients undergoing emergency surgery closely reflects the practice that was documented in a departmental survey of district general hospitals over 10 years ago (Obidey 2009).

Moreover, the NAP7 Activity Survey showed that during transfer to the operating room, one-third of anaesthetised patients were not monitored, thus not meeting current standards of practice (Klein 2021). The potential risks of not monitoring unconscious patients from the anaesthetic room to the operating room include delay in identification of clinical deterioration (Obidey 2009) and delayed CPR as a result. Indeed, the panel judged that the monitoring transfer gap because of lack of blood pressure monitoring directly contributed to cardiac arrest in three cases, and that CPR was delayed in at least seven cases.

We note an excess of young and healthy patients classed as ASA 1–2 undergoing elective surgery in the cohort of patients who had a cardiac arrest where an anaesthetic room was used and the event happened before surgery. The most common cause of cardiac arrest in this group was isolated severe hypotension, which differed from all cases of cardiac arrest, where haemorrhage was the most common cause. Bradycardia was also more common. The patients and the nature of the cardiac arrests may suggest elements of poor care leading up to cardiac arrest. This was reflected in panel judgements, with care before cardiac arrest and overall care judged to be good less often and poor more often in these cases compared with other NAP7 reports. Moreover, in the cohort of cases where an anaesthetic room was used the panel judged that anaesthesia care was a key cause of cardiac arrest more often than was the patient, whereas when the anaesthetic room was not used the opposite judgement was made.

The three most common primary causes of cardiac arrest identified in patients who arrested in the anaesthetic room or on transfer were isolated severe hypotension, bradyarrhythmias and severe hypoxaemia. These causes may be consistent with mechanisms related to anaesthesia care and interruption of monitoring, but may also indicate inappropriate anaesthesia of high-risk patients in the anaesthetic room. The review panel specifically commented on 14 high-risk cases where it was judged that an anaesthetic room may not have been an appropriate place to induce anaesthesia because of patient's clinical state or complexity of the case. There were several cases in which patients with a complex airway were anaesthetised and subsequently arrested in the anaesthetic room. In one of these cases, the surgeons were standing by ready to establish an emergency front of neck airway, and it is unlikely that this procedure, from both technical and human factor perspectives, would be best undertaken in the narrow confines of an anaesthetic room.

Inevitably, more research is needed to fully understand safety or risk associated with use of avoidance of anaesthetic rooms, but we have identified scope to further improve elements of anaesthesia care particularly by careful selection of which patients are suitable to be anaesthetised in the anaesthetic room (if one is used at all) and by the provision of continuous monitoring of anaesthetised patients from anaesthetic rooms to operating rooms (Klein 2021).

## Recommendations

### Institutional

- High-risk or deteriorating patients should be anaesthetised in theatre on the operating table.
- When an anaesthetic room is used, monitoring should match that in theatre and there should be no gap in anaesthetic monitoring and care during transfer to theatre.

### Individual

- Patients should not be transferred to the operating room after induction of anaesthesia without checking the blood pressure.
- If hypotension arises in the anaesthetic room, this should be treated and resolved before transfer of the patient to theatre, during which monitoring should continue.

### Research

- Further research is required on the use of anaesthetic rooms and the impact on patient care and safety.

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