

Critical Care Outreach – a valuable resource?

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Abstract

Background

Critical Care Outreach Services were recommended by the Department of Health in the United Kingdom in 2000. Despite being an established service research studies have not explicitly demonstrated its efficacy.

Aim

To explore the impact of Critical Care Outreach Services from the perspective of hospital ward staff to inform service improvement potential.

Design

A pilot formative process evaluation was used to meet the study aims, including the development of a self-completion questionnaire.

Methods

The exploratory questionnaire was distributed to a purposive sample of clinical staff (health care assistants, nurses, therapists, and doctors) on two medical and two surgical wards to establish the value of Critical Care Outreach Services from the perspective of ward staff.

Results

The questionnaire was distributed to 195 staff members, 58 replied (30%). Descriptive analysis of quantitative data and content analysis of free text responses demonstrated that staff knew how and when to use the service, that it was highly valued by all members of the multidisciplinary team, and that Critical Care Outreach Services were perceived to have diverse responsibilities. Service improvement suggestions included increased staffing and longer hours of operation.

Conclusion

Despite the lack of quality research supporting the efficacy of Critical Care Outreach Services in previous research studies the results of this project support the findings of previous evaluations that the value of the service lies in the support offered to ward staff and in the quality of care provided to patients.

Relevance to Clinical Practice

Due to the size of this evaluation it was impossible to draw any generalisable conclusions. However, results clearly indicate that value is placed in the support that the Critical Care Outreach Service provides to ward staff.

Keywords: Critical Care without walls/outreach, Outreach services, Evaluation studies

Introduction

Critical Care Outreach Services (CCOS) were developed in England following seminal work by McQuillan et al. (1998). This research demonstrated suboptimal care resulted in unexpected Intensive Care Unit (ICU) admission and increased patient mortality. Since then CCOS with differing titles but similar goals have been developed in secondary care throughout the globe.

Government policy outlined three objectives for CCOS: reduced admissions to critical care areas, expedited discharges from ICU, and education of staff to enable effective recognition and management of deteriorating patients (DH, 2000). The National Outreach Forum (NOrF) (2014) and the Intensive Care Society (ICS) (2002) added audit and evaluation to the original three objectives. No recommendations, however, were made to the form that these services should take.

Despite the implementation of these guidelines suboptimal care of the acutely ill and deteriorating patient remains a significant issue (National Confidential Enquiry into Patient Outcome and Death [NCEPOD], 2015, 2012, 2005). As a member of a CCOS team providing services from 07.30 to 20.00, seven days/week (at the time of writing) it was considered prudent to evaluate the CCOS in a National Health Service (NHS) District General Hospital both to meet national requirements (NOrF, 2014), and to facilitate decision making regarding future investment in the service.

Background

An exploratory literature review was undertaken to gain insight into the evidence evaluating CCOS, and to identify a data collection tool. It was clear that specific assessment of the efficacy of CCOS has been hampered by the heterogeneity of models in use throughout the world e.g. Medical Emergency Teams, Rapid Response teams, Critical Care Outreach, and Patient at Risk Teams (Pattison and Eastham, 2011; McDonnell et al., 2007; Pederby et al., 2007). Therefore, the term CCOS, is used to include all models of outreach provision. Unfortunately, systematic literature reviews identified that the lack of quality research pertaining to the effectiveness of CCOS made some of the findings unreliable (McNeill and Bryden, 2013; McGaughey et al., 2007; Esmonde et al., 2006).

The literature review revealed key themes against which CCOS effectiveness were measured: frequency of cardio-pulmonary resuscitation (CPR) prior to ICU admission, mortality rates, the impact of CCOS on intensive care services, and ward staff perceptions of CCOS. The findings from the research in all areas was inconclusive, however, a discrepancy was noted between quantitative and qualitative studies; qualitative data and service evaluations generally concluded that CCOS were highly valued within hospitals (Hutchings et al. 2009; Chellal, Higgs and Scholes, 2006; Plowright et al., 2006; Valentine and Skirton, 2006; Richardson, Burnand, Colley and Coulter, 2004).

Quantitative studies revealed contradictory findings; e.g. regarding the frequency of patients receiving CPR prior to ICU admission after CCOS introduction: three studies found statistically significant reduction in CPR rates (Laurens and Dwyer, 2011; Harrison, Gao, Welch and Rowan, 2010, and Gao et al. 2007), however Iranian research found no reduction in the incidence of CPR after CCOS introduction (Jeddian et al. 2016), and a large Australian study failed to find a statistically significant reduction in the incidence of cardiac arrests, deaths, and unplanned admissions to ICU following the introduction of Medical Emergency Teams (METs) (Hillman et al., 2005). Hillman et al. (2005), however, did find an increase in the number of Do Not Attempt Cardio-Pulmonary Resuscitation (DNACPR) orders put in place in the hospitals where CCOS had been introduced (at 8% of calls in the intervention hospitals compared to a DNACPR order being instigated at 3% of calls in the control hospitals). This finding was confirmed by Chen, Flabouris, Bellomo, Hillman and Fifner (2008), who noted that CCOS were more likely to initiate DNACPR orders on deteriorating patients than ward teams. Research by Bannard-Smith et al. (2016) and Pederby et al. (2007) also recognised the role of CCOS in implementing DNACPR and treatment limitation decisions.

Examination of mortality figures also provided conflicting results: statistically significant reduction in mortality after the introduction of CCOS was identified by some researchers (Laurens and Dwyer, 2011 (9.9 to 7.5 per 1000 admissions), Priestly et al., 2004; Pittard, 2003), but not others (Jeddian et al., 2016 (4.74% before introduction of CCOS and 3.53% after); Gao et al., 2007; Hillman et al., 2005). Tobin and Santamaria (2012) discovered that mortality rates reduced by 0.14% after CCOS had been in place for over two years, thereby highlighting a possible limitation with earlier research that evaluated services soon after their introduction.

One aim of CCOS was to increase capacity in ICUs by reducing admissions and facilitating discharges, however, it has not been proven that either of these objectives have been met. Hillman et al. (2005) found an insignificant reduction in ICU admissions after CCOS introduction (5.86 per 1000 hospital admissions before and 5.31 per 1000 hospital admissions after introduction. Jeddian et al. (2016) also failed to identify a significant reduction in ICU admissions after CCOS introduction. Pittard (2003), however, noted a significant reduction in emergency admissions to ICU from wards where CCOS had been introduced. Laurens and Dwyer (2011) discovered that ICU admission decreased significantly (22.4 to 17.6 per 1000 admissions) following CCOS introduction. Furthermore, it has been suggested that CCOS may increase ICU admissions as more unwell ward patients are identified and their care escalated (Hutchings et al., 2009). This supposition was confirmed by a significant increase in ICU admissions after the introduction of CCOS (2.47% to 4.15%) in one study (Simmes, Schoonhoven, Mintjes, Fikkers and van der Hoeven, 2012).

The impact of CCOS on patient outcome following ICU discharge has also been explored, again with inconsistent results. Several studies identified reduced readmission rates (Harrison et al., 2010; Ball et al., 2003; Pittard, 2003), improved survival to hospital discharge (Harrison et al., 2010; Ball et al., 2003), and reduced hospital length of stay (Harrison et al., 2010) with CCOS input. While, Gao et al. (2007) could not establish any improvement to post-ICU outcomes following the introduction of CCOS, and two studies were unable to demonstrate reduced readmission rates to

ICU following the introduction of CCOS (Elliott, Worrall-Carter and Page, 2014; Leary and Ridley, 2003).

Contrary to these findings, qualitative research has yielded very different results. Studies evaluating ward staff perception of CCOS found favourable results (Chellal et al, 2006; Plowright et al., 2006; Valentine and Skirton, 2006; Richardson et al., 2004), leading to recommendations for the implementation of 24-hour/day, 7-day/week services (Valentine and Skirton, 2006; Richardson et al., 2004). Rowan et al. (2007) also identified this discrepancy between the findings of quantitative and qualitative studies. A search of literature databases (Medline and CINAHL) failed to identify more recent studies evaluating staff perceptions of CCOS, indicating a need for a contemporary evaluation of CCOS.

In summary, there is a paucity of quality current evidence to support use of CCOS in clinical practice. The recommendation for more randomized controlled trials to establish the efficacy of CCOS is problematic given that 73% of English hospitals surveyed had a CCOS in place (McDonnell et al., 2007). The evaluation of established services offers an alternative method of measuring its success. No established evaluation tool was identified from the literature search.

Study

Aim

To explore the impact of CCOS from the perspective of hospital ward staff to identify potential areas for service improvement.

Design

A researcher developed questionnaire was used to collect the necessary data for this pilot formative process evaluation. This design was deemed appropriate as the evaluation was of an ongoing service with the goal of examining how the service was delivered, and if it was meeting its intended goals (Stufflebeam and Coryn, 2014).

Methods

A framework provided by Stufflebeam and Coryn (2014) was used: “delineating, obtaining, reporting and applying descriptive and judgmental information” (p.14). Delineating involved identifying stakeholders, obtaining site approval and access. Obtaining information included the questionnaire development and distribution, and data collection and analysis. Finally, a data report was disseminated to the key stakeholders (managers, CCO team, and ward staff).

Participants

A non-random, purposive sample was selected from two general medical and two general surgical wards in an English district general NHS hospital. All clinical staff (HCA's, nurses, doctors, and therapists) were provided with a questionnaire (Table 1). Non-clinical staff were excluded. The National Research Ethics Service (2013)

recognised that non-random sampling is appropriate for evaluation studies, and targeting appropriate staff groups is acceptable when performing a pilot study (Bowling, 2014).

Questionnaire design

No service evaluation questionnaire was identified from the literature review, which led to the development of a self-completion questionnaire based on questions derived from the literature review, and the DH (2000) objectives for CCOS. Anonymous demographic data were collected, along with: awareness about how to contact a member of the CCO team, opinions on a 24-hour service, and what the respondents perceived the role of CCO to be. Participants were provided with free-text boxes to encourage them to express their opinion about the impact of CCOS on their clinical practice and patient care. Similar questions regarding satisfaction with the service were asked using a Likert-format scale to enable verification of internal consistency. Staff were asked why they called CCOS for, if they were aware of/or had participated in training provided by the team, if they had ever had any negative experiences of CCOS, and if there were any service improvement suggestions.

The questionnaire development process took it through four drafts to its final version. The first draft was presented to the CCOS team for comment and suggestions, and then to a focus group of nurses, student nurses, and healthcare assistants (HCAs) (assist nurses with the personal care of patients). Finally, a small test-retest study was carried out on ICU, where there was evidence of good correlation between the two tests for all questions (Table 2).

Reliability and validity were considered during the questionnaire design process. The use of a variety of question and answer types (tick boxes, free text boxes, Likert-format scales, and yes/no answers) were used to obtain a greater depth of information and improve the validity of the study (Gallhofer and Saris, 2014). Internal consistency reliability was addressed by using different question types to measure the same variable e.g. open answer and Likert-format scales. Face and content validity were tested by presenting the questionnaire to the CCOS team and a small focus group. Further use of the questionnaire will provide more data on its reliability and validity.

Ethical Considerations

The Research and Development department in the hospital Trust approved this service evaluation and stated that ethical approval was not required. The staff were provided with a participant information letter in their questionnaire pack assuring the anonymity of their replies. The anonymous demographic data requested were professional group, specialty, and gender. ~~there was no way to identify individuals from the questionnaires.~~

Data Collection

Questionnaires were distributed to 195 staff members between 4th November and 31st December 2016, 58 (30%) responded (Table 1). They were placed in the ward

staff rooms, doctors' offices, or delivered by hand (see appendix for the questions included in the questionnaire).

To establish validity of the questionnaire findings the answers to the question relating to reasons for referral to ICU were triangulated against anonymised data obtained from the CCOS computer database of the sample wards over an eight-week period (Table 3).

Analysis

Content analysis (Drisko and Maschi, 2015) was undertaken of the free text responses to identify common themes among the answers for each question. Descriptive statistics were used to present the findings of the evaluation as the small numbers involved precluded the use of inferential statistical analysis.

Results

To explore the role of CCO staff were asked what their perception of CCO was, if they thought it improved their clinical practice, and if they believed it benefitted patients. Responses to the first question were grouped into seven categories: 'advice and support', 'specialist skills', 'care provision', 'communication and collaboration', 'ICU follow-up', 'response to NEWS' (National Early Warning Score) (Royal College of Physicians, 2012), and 'education'.

The 'advice and support' provided by CCOS was reported most frequently by respondents (48%, n.28). In the 'specialist skills' category staff recognised the value of CCOS undertaking practical tasks such as: taking arterial blood gases, tracheostomy care, formulating management plans, and carrying out patient assessments, these were also described as "*advanced nursing interventions*" (Senior nurse manager).

'Care provision' included staff stating that CCOS ensured that correct treatment was being given, helped other professionals, provided direct patient care, identified deteriorating patients, and prevented admission to ICU.

"They look at the best possible outcome for a patient and decide/help decide on a long-term health plan for them. They are not just about the here and now treatment." (HCA).

'Communication and collaboration' focused on the expectation that CCO would act as a liaison with the anaesthetic team or other members of the multi-disciplinary team, ensuring the patient was cared for in the right environment, providing critical care "*without walls*" (HCA).

Regarding 'follow-up' nine (16%) of staff recognised follow-up after ICU discharge as a role of CCOS, only one person was aware of the follow-up clinic run by Outreach staff.

Assessing patients with a high NEWS was noted as a key role of CCOS by six people (10%).

Despite only 6 (10%) of staff recognising education as a role of CCOS most respondents (74%, n43, mainly nurses and HCA's) felt that the 'support and education' provided by the CCO team enabled them to deliver better care.

"Definitely enhances practice for all staff involved.... I myself have gained greater knowledge and education when caring for the critical patient, input from the service is explained including risks and implication, and the support and advice given by this service has given me confidence to implement care to the patient." (Band 5 Staff Nurse).

Responses to the question "Do you think that CCO benefits patients?" fell into three categories: 'patient care', 'blurred boundaries', and 'authority and skill'. Patient care included a wide range of factors from monitoring to patient reassurance.

"I have no doubt at all that outreach services have saved lives and added more quality to patient care and improved outcome of patients." (Associate Specialist Doctor)

The 'blurred boundaries' category was revealed as staff reported calling CCO when medical staff were not available, to co-ordinate care between nurses and doctors, and being asked to ensure patient safety. 'Authority and skill' was expressed by one Band 5 Staff Nurse as the CCO staff having more "clout" with medical staff when voicing concern for patients.

"Patients benefit greatly from this service as the team can look at the patient care from all angles, not just medical or surgical, and can challenge treatment advised by highlighting risks/concerns of considered treatments and interact positively with doctors to benefit the patient and ensure safety and correct treatment." (Band 5 Staff Nurse)

This evaluation revealed that doctors were more likely than other staff groups to call for advice regarding non-invasive ventilation (NIV) therapy: 73% (n8) of doctors compared to 19% (n6) of nurses/therapists.

Overall this study demonstrated that staff were very satisfied with the service provided by the CCO team. An overall satisfaction score of the service was obtained using a Likert-format scale, the mean score out of 10 (most satisfied) was 9.26.

Discussion

This evaluation identified that the service met the three principle objectives of CCO set out by the Department of Health (2000), and that the team provided a wide range of services and skills within the hospital.

Most respondents (84%, n49) thought that the service it should be available 24-hours/day in answer to a tick-box question. Staff were also asked for service improvement suggestions: increased staffing and/or provision of a 24-hour/day service

was documented by 23 respondents (59%) which is in keeping with national guidance regarding the provision of CCOS (DH, 2005; NCEPOD, 2005; NOrF, 2014), and the findings of previous studies (Richardson et al., 2004; Valentine and Skirton, 2006). Education was considered an area where improvements could be made for six respondents (10%), including improved advertising, and more education for the junior doctors. Other suggestions included extending the team to include HCA's, and having separate CCO team members to cover surgery and medicine.

The findings also replicated the conclusions of other studies regarding the varied responsibilities CCOS (Chellal et al., 2006; and Valentine and Skirton, 2006). The 'blurred boundaries' aspect of CCOS working between medicine and nursing was also mentioned by Carmel and Baker-McClearn, (2011), when it was noted that CCOS were viewed as an extension of the medical team. The 'authority and skill' provided by CCOS was noted by Chellal et al. (2006), and by Valentine and Skirton (2006), in that the opinions of CCO were given more credibility by the medical teams than the ward nurses.

In this evaluation ward staff service users perceived the CCOS to be beneficial to themselves and their patients. Plowright (2006), drew the same conclusions following investigation of the opinion of staff on the CCOS provided across a critical care network. Staff identified CCOS as being a link between ICU and the wards, this role was also documented by Valentine and Skirton (2006) and Chellal et al. (2006).

The finding that medical staff were more likely to call for NIV advice was unexpected. This may be because the CCOS provides training for NIV that is predominantly attended by nurses, making them less likely to require help regarding this piece of equipment. Furthermore, it is the doctors who are called on to make setting adjustments and if they have not been trained may call CCO for advice.

Some discrepancies were noted between the triangulated data and the survey results (Table 2) e.g. the database indicated that discussion with family occurred on 38% of initial visits, but was only cited as a reason for referral by nine (16%) respondents, however it was mentioned in the qualitative data gathered regarding how CCOS benefits patients:

"They are also another health professional who is able to communicate with family members." (HCA)

"...most probably communicate more with the patient and this reassures the patient especially early after surgery." (Core Trainee, Doctor)

This difference regarding discussions with family were comparable with an observational study of the role of nurses in a MET that noted discussion with patients or relatives occurred on 40% of patient reviews (Toppole et al., 2015). Discussions with patients or family members is not considered to be a reason for referral to CCO, however, it is a key duty once involved with a patient. This could explain why it was only cited as a reason for referral by nine (16%) respondents but was mentioned in the qualitative data gathered regarding how CCOS benefits patients.

A greater discrepancy was seen with DNACPR/treatment limitation decisions, seven (12%) respondents reported this as a reason for calling CCO but according to the database, accounted for no referrals. This may be explained by the fact that CCOS visits were requested to assist in decision making but that if the initial visit ended in a DNACPR and limitation of treatment decisions the patient may not have been entered onto the database. The involvement of CCOS in DNACPR and treatment limitation decisions has been recognised in the literature (Hillman et al., 2005; Pederby et al., 2007; Chen et al., 2008; Topple et al., 2015; Bannard-Smith, 2016). Research into this specific area by Pattison, O’Gara, and Wigmore (2015) identified that 29% of emergency referrals to CCOS resulted in limitation of treatment decisions or the instigation of end of life care. Chellal et al. (2006) and Hutchings et al. (2009) identified ward teams’ expectation that CCOS would instigate DNACPR orders and introduce limitations of treatment as a negative outcome of CCOS. They postulated that this practice could deskill junior medical staff. Pattison and Eastham (2011) also noted that lack of experience among junior doctors led to registrars relying more heavily on CCOS to manage sick ward patients.

Limitations

The low response rate is a recognized limitation of questionnaires (Collis and Hussey, 2009). However, the response rate was in keeping with other studies: Valentine and Skirton (2006) achieved a 33% response rate. The lowest response rate was from consultants, otherwise non-response was evenly spread across the other staff groups. This homogeneity of non-respondents can provide assurance that the people who did respond were representative of the sample group (Brophy et al., 2008).

Efforts were made to reduce bias: self-administered questionnaires to reduce investigator bias as the participants recorded their own answers, at their own pace, and in privacy (Edwards, 2010). The possibility of “acquiescence response set” bias (Bowling, 2005, p.400) (where respondents agree with the questions regardless of what is asked) was reduced by including different question and answer styles. The potential for “social desirability bias” (Bowling, 2005, p. 402), where participants provide the answers that they believe present them at their best, was offset by assuring anonymity. The fact that there were some negative comments was reassuring evidence that at least some respondents felt secure enough to provide inimical feedback. The use of an internal evaluator can also be a source of bias (Slattery et al., 2011), however it is accepted practice in process evaluations (Brophy et al., 2008), and has the advantage of the evaluator being familiar with the organisation and service being evaluated (Squirrell, 2012).

Conclusion

This pilot evaluation demonstrated that CCOS are a valuable resource for staff in an English NHS hospital. All three DH (2000) objectives were identified by ward staff indicating that the service provided at the study hospital is meeting the required goals. The diversity of the role identified in previous studies was replicated in this project and supports the notion that CCOS have evolved beyond the original three objectives of preventing ICU admissions, facilitating discharges from ICU, and educating ward staff. The evaluation indicated that most respondents supported increased investment in the service to extend the hours of cover.

What is known about this topic:

- Robust quantitative evidence to support the use of CCOS is lacking.
- The literature search identified that qualitative studies suggests that CCOS are valuable in supporting staff to care for critically ill and deteriorating patients on the ward, although there is a lack current evaluation studies.

What this paper adds:

- The development of a data collection tool to evaluate CCOS.
- Current service evaluation data of CCOS.
- Evidence to support previous findings: CCOS are perceived to provide a valuable service to ward staff and patients.
- Evidence to support a business case proposal for extending CCOS to cover 24 hours/day in line with national guidance.

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Table 1: Demographic data of respondents

Participants	Invited	Responded	%
Male	45	7	16
Female	150	51	34
HCA	69	16	23
Nurses (Band 5)	61	22	36
Nurses (Band 6)	4	1	25
Nurses (Band 7)	4	2	50
Nurses (Band 8)	2	1	50
Clinical Nurse Specialist	2	1	50
Doctor (Foundation Year 1 and 2)	18	2	11
Doctor (Core/Specialist trainee)	15	8	53
Doctor (Consultant)	11	1	9
Physiotherapist	5	3	60
Other	4	1	25
Total	195	58	30

Table 2: Qualitative responses from the test-retest exercise

ID	What do you perceive the role of the Outreach team to be?	Do you feel that the Outreach service enhances your clinical practice?	Do you think that the Outreach service benefits patients?
T1, P1	<i>“To review and treat deteriorating patients, to escalating [sic.] patients to ICU or aiding in prevention of patients being admitted to ICU.”</i>	<i>“Yes, if the staff members looking after the patient remain and help the CCO. They assist with training and in emergency situations such as cardiac arrest.”</i>	<i>“Yes, as they can help to prevent patients being escalated to ICU, by treating their condition effectively”</i>
T2, P1	<i>“To assist with deteriorating patients on the ward and implement any treatment to help prevent escalation to ICU, to review patients who have left ICU and been transferred to the ward.”</i>	<i>“Yes, they help support ward based staff and educate them.”</i>	<i>“Yes, if it prevents escalation of care and can provide treatment to patients.”</i>
T1, P2	<i>“Care for critically ill patient on ward to aim to prevent admission to ICU.”</i>	<i>“Yes, if the staff members are available and willing to learn from CCO nurse.”</i>	<i>“Yes, as they receive care from an experienced critical care nurse.”</i>
T2, P2	<i>“Prevent admissions to ICU by providing early intervention on the ward. Offer advice to staff and junior doctors.”</i>	<i>“I feel more confident when discharging patients knowing they will be seen by outreach”</i>	<i>“yes”</i>
T1, P3	<i>“Ensuring deteriorating patients are receiving the appropriate care and escalating their care when required. Ensuring recently discharged patients remain well enough to remain on the ward. Providing invaluable knowledge on the wards in emergency situations.”</i>	<i>“Yes, especially in emergency/cardiac arrest situations on the wards. Speaking from experience when I was an unexperienced newly qualified nurse I felt very supported.”</i>	<i>“Yes, prevents admissions to higher level of care. Reassures recently discharged patients and staff caring for them. Benefits previous ICU patients when seen in clinics.”</i>
T2, P3	<i>“Following up patients discharged from ICU. Assessing critically ill/deteriorating ward patients. Follow-up clinic, teaching.”</i>	<i>“Not so much on ICU however it is reassuring knowing patients will be well looked after by CCO.”</i>	<i>“Yes, they are able to concentrate on one patient who may be deteriorating advising essential care when ward nurses may feel out their depth.”</i>

T1 = test, T2 = re-test, P = participant

Table 3: Triangulation of data

Reasons Referred	Questionnaires % (n)	Database % (n)
High NEWS	79% (46)	77% (20)
Medication advice	21% (12)	19% (19)
Policy advice	2% (1)	0%
Emergency care	64% (37)	4% (1)
Care planning	12% (7)	0%
Concern for the patient	71% (41)	27% (7)
End of life care	7% (4)	0%
DNACPR/limitation of treatment decision making	12% (7)	0%
Discussion with family	16% (9)	38% (10)
Liaison between ward and ICU	36% (21)	23% (6)
Someone told you to	22% (13)	0%
Want admission to ICU/HDU	43% (25)	0%
Arterial blood gas	41% (24)	69% (18)
Nasogastric tube insertion	5% (3)	0%
Urinary catheter insertion	2% (1)	12% (3)
Peripheral venous cannulation	12% (7)	12% (3)
Central Line (CVC) and Peripherally Inserted Central Line (PICC) advice	22% (13)	4% (1)
Tracheostomy care	38% (22)	4% (1)
Non-invasive ventilation	31% (18)	19% (5)