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Emergency on-call duty preparation and education for newly qualified physiotherapists: a national survey

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Abstract

Objective To evaluate current emergency on-call service preparation and education provision for newly qualified physiotherapists within the UK, including an audit of adherence to Standard 9 of the Association of Chartered Physiotherapists in Respiratory Care (ACPRC).
Design National postal questionnaire survey.
Main instrument Questionnaire including audit of adherence to ACPRC Standard 9.
Participants Random selection of 75 UK hospital trusts that had intensive care units detailed in the Directory of Critical Care. Telephone contact was made to identify the senior/superintendent respiratory physiotherapist responsible for the on-call physiotherapy service, to whom the questionnaire was addressed.
Results Seventy-two trusts responded, representing a range of respiratory service leads and managers responsible for on-call services. All respondents indicated provision of on-call preparation and education, although content, delivery methods and duration varied considerably. A wide variety of methods are currently used to assess newly qualified physiotherapists prior to undertaking on-call duties. Despite variations in on-call service provision, there is national adherence to ACPRC Standard 9 at the present time (92–100% adherence to Criteria 1–5). Adherence to Criteria 6, 7 and 8 occurs in fewer trusts (79%, 49% and 73%, respectively).
Conclusions This study indicated that there is a broad level of national adherence to ACPRC Standard 9, despite the fact that this is not a mandatory requirement. National inconsistencies in preparation duration, format and ongoing education were identified. Further guidance by the ACPRC and the Chartered Society of Physiotherapy is required to provide national consistency of on-call preparation and education.

Keywords: Physiotherapy; On-call; Preparation; Education

Introduction

The majority of newly qualified physiotherapists are contracted to undertake emergency physiotherapy on-call duties, without direct supervision by senior staff. Respiratory physiotherapy is an integral part of undergraduate physiotherapy education [1]. However, concerns regarding some physiotherapists' ability to deliver on-call respiratory physiotherapy have been voiced for some time [2–5]. Additionally, concerns exist relating to competency maintenance, resources required to meet service learning needs and training standardisation [4]. The Chartered Society of Physiotherapy (CSP) anticipates that concerns will continue to grow in the light of increasing patient, government and regulatory expectations [5].

On-call physiotherapy

For the purpose of this article, emergency on-call physiotherapy has been defined as the provision of respiratory/cardiorespiratory/cardiothoracic physiotherapy or combinations of respiratory and orthopaedic physiotherapy, out of normal working hours. Standard 9 of the Association of Chartered Physiotherapists in Respiratory Care (ACPRC) is

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entitled 'Emergency physiotherapy out of normal working hours' [6].

A literature review of CINAHL, MEDLINE, AMED and Science Direct databases (1990–2005) using keywords (physiotherapy, on-call, respiratory, education, induction and training) identified two relevant articles. Manual searches identified seven additional studies, highlighting a paucity of information in relation to on-call physiotherapy.

Although the ACPRC published the standards for respiratory care [6], at the time, no supplementary guidance was issued relating to preparation (on-call induction) and education (update training) provision to enable compliance with Standard 9.

To date, only two published surveys have audited on-call service provision in accordance with ACPRC Standard 9 [7,8]. Brown et al. [7] acknowledged considerable methodological flaws and recommended a re-audit of Standard 9 on a national scale. Dixon and Reeve's [8] small-scale criterion audit ($n = 18$) determined a baseline description of service provision, practice and adherence to ACPRC Standard 9 [6] within a single health region. Their criterion audit, solely benchmarked against ACPRC's Standard 9, indicated that there was broad agreement with Standard 9 within the region investigated, but compliance with individual criteria was inconsistent.

Harden et al. [9] published a national survey of respiratory on-call service delivery using a convenience sample of lead clinicians of trusts attending the on-call assessment launch conferences in 2002 ($n = 204/235$ respondents). Concerns highlighted by respondents included problems with on-call service management and support, chronic underfunding and increasing demands of various out-of-hours staffing commitments (e.g. respiratory and orthopaedic). Additionally, training was identified as a common cause for concern, particularly in relation to resources, insufficient time for appropriate training or lack of uptake of training offered. The service issue concerns have been partly addressed through the CSP information papers PA53 [5] and PA57 [10]. To date, no studies have evaluated the impact of or actual level of implementation of the CSP's emergency on-call working guidance [5,10].

Hewitt and Bradley [11] conducted a 5-month single-site study of out-of-hours physiotherapy services ($n = 211$ treatments reviewed). Primarily, differences of opinion relating to referral appropriateness existed between the actual physiotherapists and peer reviewers. Further research evaluating out-of-hours impact on long-term treatment outcome was recommended alongside teaching resources from the ACPRC to improve clinical reasoning and quality of service.

Four additional studies have been identified, which have explored on-call respiratory service provision internationally [12–15]. Large variations in service provision exist between international studies, and none of the studies report provision of on-call standards or methodological benchmarking criteria [12–15]. Reeve [15] surveyed senior physiotherapists from all New Zealand hospitals providing on-call and weekend respiratory services. Results ($n = 33$, 97.4% response rate) highlighted concerns regarding on-call service provision, including maintenance of competency, service provision, training and resource issues. On-call service concerns have been similarly highlighted with respect to the lack of formal assessment prior to undertaking on-call duties, lack of consistency in on-call induction (preparation) and update training (education) [8,9,15].

Aims

The aims of this study were three-fold:

- to evaluate current on-call service provision in the UK;
- to investigate adherence to ACPRC Standard 9 [6]; and
- to identify current approaches being utilised for respiratory on-call preparation and education.

Methodology

A national postal questionnaire-based survey encompassing an audit of ACPRC Standard 9 emergency duty adherence [6] was undertaken to identify current approaches being utilised for respiratory on-call preparation and continuing education.

Subject selection

All 241 UK hospital trusts that had intensive care units identified in the Directory of Critical Care [16] were assigned numbers from 1 to 241. An independent individual selected 75 numbers and corresponding trusts at random. Random selection of a manageable proportion of the population was undertaken, due to feasibility limitations of a Masters dissertation project investigated solely by the principal author (SG). Telephone contact was made to identify the senior/superintendent respiratory physiotherapist responsible for the on-call physiotherapy service, to whom the questionnaire was addressed.

Inclusion criteria

- All NHS hospitals in the UK providing emergency respiratory on-call services by senior and newly qualified physiotherapists.

Exclusion criteria

- Private hospitals in the UK (as not all private trusts employ newly qualified physiotherapists).
- Senior II or newly qualified physiotherapists (to eliminate personal experience and capture service provision).
- The pilot physiotherapy department.

Table 1
Questionnaire content[a]

Section number and content	Question outline (ACPRC Standard 9 criterion number)
1. Emergency duty protocol	1. Provision of protocol (1) 2. Type of protocol 3. Areas covered within emergency duty protocol (1) 4. Provision of emergency 'on-call' service
2. Induction programme before on-call duties (on-call preparation)	5. Stage of on-call participation (newly qualified) 6. Responsibility for induction training
3. Level of training (on-call preparation)	7. Induction training topics (3) 8. Quantity of training prior to first on-call 9. Formal programme to identify readiness for on-call (2) 10. Responsibility for assessment of newly qualified staff prior to on-call 11. Presence of formal competency framework prior to on-call duties
4. Ongoing training (on-call education)	12. Provision of ongoing training (4) 13. Frequency of on-call updates 14. Topics included in on-call update training
5. Types of support when on-call	15. Support mechanisms for on-call staff (5)
6. Documentation of service use	16. Existence of formal monitoring system for on-call service (6) 17. Aspects of on-call service monitored
7. Monitoring in accordance with local requirements	18. Service monitored with local requirements (7)
8. Evidence of follow-up of inappropriate use of service	19. Existence of mechanism to follow-up inappropriate use of on-call service (8)

ACPRC: Association of Chartered Physiotherapists in Respiratory Care.
[a] Questionnaire available from corresponding author.

Questionnaire

A purposely-designed questionnaire was devised by the principal author to address all three aims of the study. A systematic approach of formulating the ACPRC Standard 9 [6] benchmark into a series of questions was adopted. Specific questions were generated for all eight criteria of Standard 9. In addition, qualitative responses generated from Dixon and Reeve [8] were integrated. Further questions were devised to investigate compliance with Standard 9, enable evaluation of national on-call service provision in more detail, and identify current approaches for preparation, education and competency assessment (see Table 1).

A pilot study (individual completion of the questionnaire followed by a group interview to verify layout, presentation and content) was conducted at one National Health Service Trust, including 10 senior respiratory physiotherapists/superintendents (who were also on-call participants), to ensure questionnaire reliability and content validity. Adjustments to the questionnaire included revision of question order, layout and grammar.

Following a redraft, the final questionnaire was posted with individually addressed covering letters and self-addressed envelopes, and a 'return by' date was indicated. In each case, the covering letter detailed assurances of confidentiality and anonymity. Only the questionnaire envelopes were coded to facilitate follow-up of non-respondents. Reminder letters including a further copy of the questionnaire and the Interactive CSP website were utilised to enhance the response rate. However, this generated the interest of seven respiratory physiotherapists who requested participation and offered to complete the questionnaire. All ($n = 6$ returned) additional questionnaires were considered to be randomly generated from responses to a closed reminder, intended for those respondents selected at random in the study. The researcher did not actively seek these respondents and their questionnaires were not reviewed prior to inclusion.

Ethical considerations

The University of Central Lancashire granted ethical approval. At the time, local research ethics committee approval was not required for service evaluation.

Data analysis

Data generated solely from the first eight sections of the questionnaire, relating to on-call service education and preparation, have been reported in this article. Data generated from Section 9, regarding on-call competency perceptions, have been presented elsewhere [17]. Questions were pre-coded in order to facilitate data extrapolation to SPSS Version 12 [18]. Descriptive statistical methods have been used to present nominal data. The principal author only generated themes from qualitative responses to open-ended questions using thematic content analysis. No pre-existing themes were used.

Results

An overall response rate of 72 (88%) was achieved. All 72 respondents were from different UK hospital trusts.

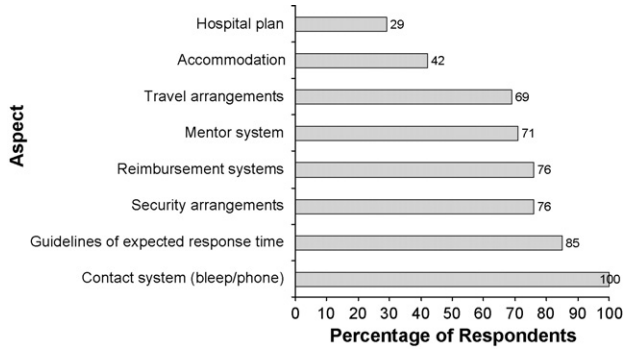

Fig. 1. Aspects covered in on-call protocol.

Emergency duty protocol

Seventy-one respondents (99%) indicated that emergency duty protocols were provided for on-call participants (Standard 9, Criterion 1). Fifty-seven percent of trusts (41/72) provided written protocols for all staff, 33% had departmental copies (24/72) and 10% (7/72) reported that a protocol was explained but not formally documented. Aspects covered within individual emergency duty protocols have been summarised in Fig. 1. Eighteen percent of respondents (13/72) reported that their emergency duty protocol provided details of all eight examples stated within Standard 9, Criterion 1. Twenty-six respondents provided additional features to those in Criterion 1, including call-out criteria/crib sheet, compulsory rest time agreements, sickness procedures and on-call competencies.

Fig. 2 presents the range of on-call services provided and emergency on-call service evaluation. A combined respiratory and orthopaedic on-call service was provided by 50% of trusts. Twenty-one percent of respondents categorised their services as 'other', although these were slight variations on the combined respiratory and orthopaedics services.

On-call preparation

All respondents indicated the provision of on-call induction programmes (Standard 9, Criterion 2). Details of when the respondents' trusts allow on-call participation and the grade of staff responsible for such training are given in Table 2. Ninety-three percent (67/72) indicated 'other' participatory stipulations including up to 5 days of training (28/67), numerical variations of a partially completed rotation/respiratory rotation (24/67), or staged participation with mentoring/competency achievement (7/67).

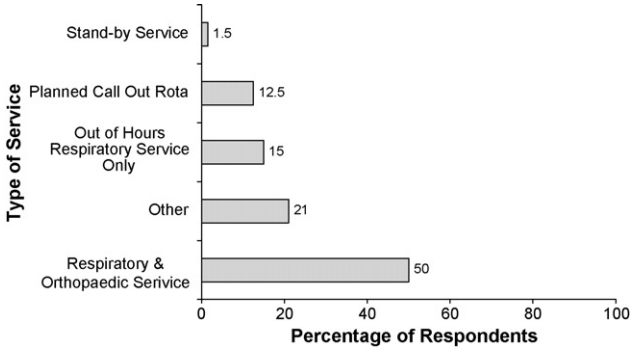

Fig. 2. Types of emergency on-call services provided.

Table 2
On-call preparation and education provisions

	Percentage of respondents (number agreed in parentheses)
On-call preparation	
Stage of participation ($n = 72$)	
Only after specialist induction training	53 (47)
After respiratory rotation	24 (17)
After one rotation	1 (1)
Other	8 (7)
Responsibility for providing on-call induction training ($n = 72$)	
Respiratory Senior I	83 (60)
Superintendent II/III/clinical specialist	57 (41)
Any Senior I with an interest in respiratory/on-call	40 (29)
Quantity of training prior to first on-call ($n = 72$)	
1 day	4 (3)
2 days	15 (11)
Hours	17 (12)
Other	64 (46)
Formal programme to identify ready for on-call duties ($n = 71$)	
Yes	69 (40)
No	31 (22)
Responsibility for assessment of staff prior to on-call ($n = 71$)	
Senior I responsible for on-call rota	82 (58)
Basic grade themselves	58 (41)
Competency achievement agreed and completed	61 (41)
Superintendent II/III/clinical specialist	49 (35)
Existence of a formal competency framework prior to on-call duties ($n = 72$)	
Yes	75 (54)
No	25 (18)
On-call education	
Frequency of update training ($n = 72$)	
Annually	39 (28)
Bi-annually	22 (16)
Monthly	10 (7)
Weekly	1 (1)
Other	28 (20)
Topics included in on-call update training ($n = 71$)	
Workshop teaching/demonstrations	90 (64)
Case studies	86 (61)
Policy update	66 (47)
Ward orientation update	37 (26)

Fig. 3 presents the range of topics included within on-call induction training programmes. All respondents indicated provision of on-call induction training, and 46% included all six specified examples for induction training stated within Standard 9, Criterion 3. Eighty-eight percent (63/72) of the respondents reported use of trust on-call competency frameworks, and 61% enforced completion prior to on-

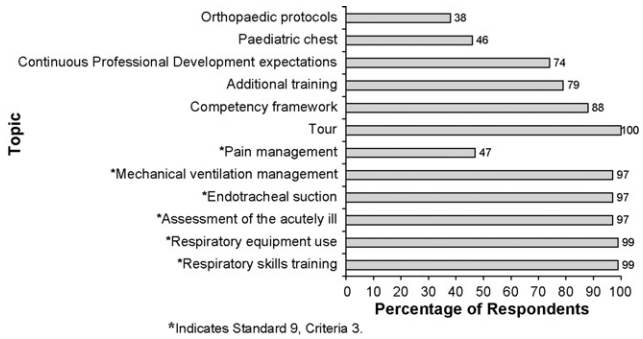

Fig. 3. Induction training topics.

call duties. Additional topics specified by 31 respondents included local speciality-specific training (burns and plastics, spinal injuries, non-invasive ventilation and induced sputum), orthopaedics or paediatric training, individualised training or competency-specific training, and acute life-threatening events recognition and treatment course training.

The amount of time prior to undertaking the first on-call duty varied considerably (Table 2). Subjective comments relating to the actual number of hours for induction training ranged from 1.5 to 30 hours. Sixty-four percent (46/72) of respondents provided specific details of the time allocation/provisions prior to undertaking on-call duties and how these were individualised to the trust and staff member.

On-call education

All respondents indicated the provision of ongoing training for on-call staff (Standard 9, Criterion 4). Details of the frequency of update training and update training topics are given in Table 2. Fig. 4 shows the range of ongoing training provision for existing on-call staff. Themes of additional qualitative responses for update training provision included 'hands-on' respiratory training, self-directed learning and flexible provision 'on an individual basis'.

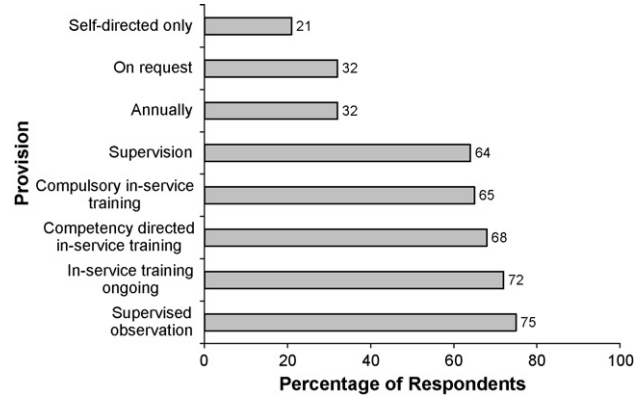

Fig. 4. Ongoing on-call training provisions.

Table 3
On-call service management

	Percentage of respondents (number agreed in parentheses)
Support mechanism for on-call staff ($n = 71$)	
Senior respiratory staff by telephone or in person	37 (26)
All senior respiratory staff by telephone	24 (17)
All senior staff by telephone	14 (10)
No formal support mechanism available	8 (6)
Other	17 (12)
Aspect monitored with respect to on-call service ($n = 72$)	
Appropriateness of call-outs	79 (57)
Referral source – profession, speciality	75 (54)
All call-outs	71 (51)
Adherence to emergency duty protocol	57 (41)
Formal annual/regular audit	54 (39)
Documentation standard	50 (36)
Response time of physiotherapist	28 (20)
Evaluation of on-call training	72 (51/71)

On-call service management

On-call support varied considerably but 92% (65/71) of respondents indicated the availability of some form of out-of-hours support (Standard 9, Criterion 5). Details of support mechanisms for on-call staff are given in Table 3. Themes generated from qualitative responses to 'other' on-call support mechanisms (12/71) included unpaid support, pool of mentors/buddies, and contact 'whoever comfortable with' or 'whoever is available'.

Seventy-nine percent (57/72) of respondents reported the existence of formal monitoring of their on-call service (Standard 9, Criterion 6). Forty-nine percent (34/69) monitor on-call services in accordance with local requirements (Standard 9, Criterion 7). Thematic analysis of 17 additional comments pertaining to aspects monitored formally included details relating to audits, changes to services, and standards achievement.

Seventy-three percent of services (52/71) monitor inappropriate referrals (Standard 9, Criterion 8). Thematic analysis identified inappropriate referral follow-up methods including formal procedures undertaken by senior/managers, informal liaison, audit or highlighted an absence of inappropriate calls.

Summary of Standard 9 emergency duty adherence

Fig. 5 presents the overall criterion audit results of Standard 9 adherence. Only three criteria (2, 3 and 4, entitled 'evidence of induction programmes', 'agreed level of training prior to on-call duties' and 'ongoing training', respectively) were fulfilled by 100% of respondents.

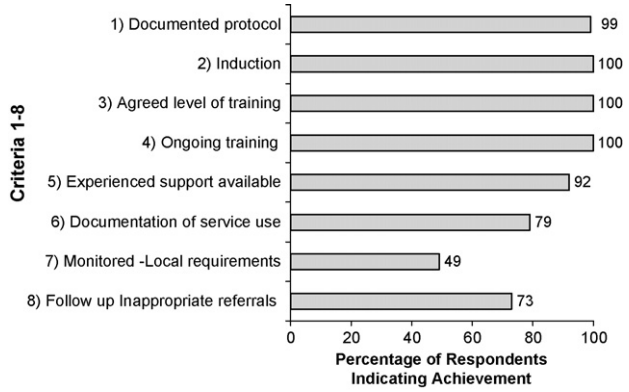

Fig. 5. Standard 9 benchmark of achievement: Criteria 1–8.

Discussion

The purpose of this survey was to evaluate current emergency on-call service provision and investigate adherence to ACPRC Standard 9 within the UK. The survey also evaluated postgraduate education and preparation in the absence of a national standardised approach.

The main findings indicated a high level of national adherence to ACPRC Standard 9. The results of this study mirrored those of Dixon and Reeve [8]. All of the trusts surveyed reported provision of on-call preparation and education activities, although content, delivery methods and duration varied considerably.

Provision of on-call services

All of the trusts surveyed provided an on-call respiratory physiotherapy service. This was consistent with previous studies in the UK [8,9], in which 100% and 97% of respondents provided a formal on-call service, respectively. Ninety-nine percent of the current survey's respondents indicated that evidence of an agreed emergency duty/on-call protocol exists in written format in 90% of trusts and 57% issued this to all staff. Differences in local service requirements and trust procedures may account for the wide variety of aspects included within individual trust's on-call protocol/policy. Awareness of ACPRC Standard 9 [6] and CSP information papers [5,10] may also be a factor.

On-call preparation

All trusts reported provision of an induction programme, which is consistent with the 100% of respondents reported previously [8]. A formal programme to identify readiness to undertake on-call duties was reported by 69% of respondents. Dixon and Reeve [8] stated that 77% (14/18) of services required all staff to attend a formal induction programme prior to participation in on-call duties. Harden et al. [9] reported that, in 2002, 16% of newly qualified physiotherapists and 23% of established staff did not undertake any form of assessment prior to commencing on-call duties. Seventy-five percent of respondents in this study reported the existence of formal on-call competency frameworks and 61% enforced completion prior to on-call duties. Alternative on-call duty prerequisites were similar to those reported elsewhere [8,9], including assessment during a respiratory rotation, after 3 months with ongoing competencies or peer/self-assessment.

On-call education

All of the trusts surveyed reported ongoing on-call training provision, mirroring the 100% of trusts reported by Dixon and Reeve [8] and 97% reported by Harden et al. [9]. There appears to be a shift in delivery methods from specified optional (11/18) or compulsory training (7/18) reported by Dixon and Reeve [8] towards a variety of supervised clinical observation (75%, 54/72), competency directed in-service training (68%, 49/72), supervision (64%, 46/72) or compulsory update training (59%, 43/72).

The content of both induction and ongoing on-call training programmes varied and should rightly reflect local speciality and staffing needs. Possible reasons for the wide variety in on-call preparation, education provision and on-call prerequisites include: the variability of undergraduate respiratory clinical placement experience; the time necessary for competency completion; local speciality service training/induction requirements; and variable allocations of staffing or training resources.

Ongoing work by the ACPRC has attempted to raise the profile and standardise on-call training. The national launch of the ACPRC 'on-course for on-call' in September 2005 aims to facilitate a consistent approach to on-call training [19] based on the ACPRC guidelines [6]. This standardised approach to training also aims to facilitate the ability to demonstrate continued professional development for Health Professions Council re-registration, and assist the maintenance of on-call competency [19]. However, further written guidance is required to provide implementation and local adaptation guidance to maintain national consistency in delivery, interpretation and implementation. Potential logistical issues (suitability/availability of training staff, finance and resources) may arise surrounding the implementation of a minimum standard of on-call preparation and education.

On-call service management

On-call services appeared to monitor the appropriateness of use within their trusts (99%), which mirrors the 83% of services reported by Dixon and Reeve [8]. Fewer respondents reported the ability to provide evidence of inappropriate follow-up (73%) or monitoring their service according to local requirements (49%). Under clinical governance agendas and service development, audit of appropriateness of use, response times and follow-up of inappropriate use may provide beneficial information and enable cost-effective, appropriate and efficient on-call service delivery. Such ser-

vice analysis/audit may prove to be useful in supporting continued on-call service funding bids, particularly in the light of recent 'Agenda for Change' implementation difficulties including departmental budget cuts/freezes and potential future staff and service reductions. Additionally, on-call preparation and education may become increasingly important for newly qualified physiotherapists, especially since 53% of physiotherapy graduates from 2005 were still unable to gain employment 6 months after qualification [20].

Research limitations and recommendations for further studies

This project did not intend to evaluate service user perceptions, student perceptions upon graduation or those newly qualified physiotherapists who are receiving on-call preparation or education. Nor does this study extend to those physiotherapists new to the trusts or completing a return-to-work programme. Potential prestige bias has been acknowledged due to the inclusion of self-selected respondents from Interactive CSP, where data obtained from these respondents may have been different to the population selected at random. The respondents addressed were checked to avoid trust duplication of the randomly selected population, but questionnaires were not analysed individually prior to inclusion. Reasons for non-response may have been due to questionnaire recipients' perceptions of their service being measured against ACPRC Standard 9.

Research triangulating results of this questionnaire could be undertaken with on-call physiotherapists within the same survey sample to further substantiate the current on-call provision. Additionally, further research focusing on student perceptions of expectations prior to on-call commitments, on-call competency standardisation, and the impact of the 'on-course for on-call' training package [19] is justified. The findings of this study support the rationale for the necessity of the profession to provide standardised and nationally consistent guidance for on-call preparation and education in line with evidence-based practice.

Conclusion

This study has investigated the current on-call service provision in the UK and explored the context of on-call preparation and education for newly qualified physiotherapists. A high level of national adherence to some aspects of ACPRC Standard 9 currently exists; however, widespread variations in the level and individual aspects covered within local inductions, on-call preparation/requirements and education were also evident.

Further guidance by the CSP and the ACPRC is required to provide national consistency of preparation and education to support newly qualified and existing physiotherapists undertaking on-call duties. The results obtained in this study should be considered a valuable insight into the current on-call service provision, and extending to the overview of preparation and education in the absence of national standardisation. Further guidance from the CSP and the ACPRC could facilitate national consistency of physiotherapy on-call preparation and education.

Key messages

- A high level of national adherence to some aspects of ACPRC Standard 9 currently exists. Specifically, all trusts surveyed currently offer on-call preparation and education for on-call staff, although content, delivery methods and duration vary considerably.
- A wide variety of non-standardised assessment strategies are currently being utilised. Results indicated that the existence of formal competency frameworks prior to on-call duties are utilised in 75% of trusts.
- Logistical issues exist surrounding potential implementation of a minimum standard of on-call preparation and education. Examples of implications include financial, resource and suitably trained/available staff to provide such training.
- Further guidance by the CSP and the ACPRC is required to provide national consistency of preparation and education prior to newly qualified physiotherapists undertaking on-call duties.

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Conflicts of interest: None.

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