

Hotspots Critical Care Evaluation

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Date: 31st May 2006

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Acknowledgements

The research team would like to thank the Workforce Development Directorate of Hampshire and the Isle of Wight for funding this project, allowing us access to the Expert Panel and for providing us with valuable information and advice throughout the evaluation.

We would like to thank the Education Leads at PHT and SUHT for providing crucial background information for this evaluation as well as ongoing practical support and advice. Special thanks to Isabella Lally at SUHT for all her help, which included, amongst many other things, assistance with the piloting and design of questionnaires and the administration of self-rated skills assessments. Similarly, to Jackie McBride, at PHT, for her assistance during the early part of this evaluation.

Within the University of Southampton's School of Nursing and Midwifery, thanks to Chris McLean regarding his provision of course information and for sharing findings from internal programme evaluations. We are very grateful to all representatives within both Trusts who spared time to provide us with performance indicator data and gave us advice concerning its usefulness or application. Within SUHT, thanks to the HR department for providing us with contact details of staff and assisting us with staff retention information.

Finally, the research team is very grateful to all the participants of this research, who took time out of their busy schedules to assist us with data collection. We enjoyed working with you and thank you for your contributions.

Executive Summary

This report evaluates a series of critical care education interventions for nurses which took place within Southampton University Hospital Trust (SUHT) and Portsmouth Hospital Trust (PHT) in 2004 and 2005. These interventions were funded by the Hotspots project and commissioned by the Hampshire and Isle of Wight Workforce Development Directorate (WDD). As part of the ongoing commitment to incorporate evidence into practice, the WDD commissioned an independent impact evaluation of these interventions. This evaluation was undertaken collaboratively by the Health Care Innovation Unit (HCIU) and the School of Management at the University of Southampton.

Prior to the empirical work, the researchers undertook a review of literature relating to critical care training, learning transfer and evaluation. Critical care literature points to the fact that policy drivers and the increasing acuity of patients on wards have necessitated enhanced skill levels amongst ward nurses, which are not provided by pre-registration training in its current form. Post registration training is varied and results in a lack of standardisation of nursing competencies ('post code competencies') (Scholes et al, 1999). Post registration education can also be characterised by a theory-practice gap resulting from the separation of nursing education provision from service provision. The literature suggests a number of potential benefits which could result from enhanced critical care skills amongst ward staff. These include better patient care, earlier detection and intervention in instances of deterioration and improved interdisciplinary team working. To investigate this fully, long term evaluation is called for which goes beyond comments on teaching received and begins to investigate lasting impacts on practitioners and patients.

The literature on learning transfer identifies a need for further research to identify how learning is passed from an individual and integrated on an organisational level. Whilst a significant amount of money is spent on training interventions, this aspect is not generally given enough attention. However, it is suggested that lack of relevance has a detrimental effect on learning transfer; if skills cannot easily be implemented into the participant's job role, learning will be lost. Conversely, two factors which foster learning transfer are identified as social support and opportunity to use new skills.

By using an adapted version of Kirkpatrick's (Kirkpatrick 1994) evaluation framework, the research employed a mainly *post hoc* methodology of questionnaire, semi-structured interviews and collection of Performance Indicator (PI) data. Software packages were used to analyse the interview and questionnaire data.

The findings of this research are multiple and relate to the impact of training on the individual and their organisation. Because of the varied nature of the interventions on offer, it is difficult to generalise findings, however, a number of important issues arose:

Selection of staff for Hotspots training

Processes to assess individual and organisational needs prior to training differed across the range of interventions and appeared limited in relation to interventions designed specifically for the Hotspots project. It was possible to identify selection criteria used by managers within SUHT; however lack of time and availability of course outcomes often hampered the process of staff selection. Procedures for selection of staff to interventions at PHT were less defined. Whilst a good match between staff member and training was achieved in some instances, participants of the 2005 *Fast Track Programme* often cited a mismatch between participant need and training content.

Satisfaction with Hotspots Training

Similarly, satisfaction with content and structure of training received varied according to Trust, intervention and job role of participant. Dissatisfaction expressed by some respondents regarding the relevance of training was linked to problems of staff selection. Evidence from PHT's *Fast Track* cohorts suggests that an 'off-the-peg' approach to training is less beneficial than interventions which are structured and delivered to meet local need, such as SUHT's *Acuity Programme*.

Learning Outcomes

A number of positive learning outcomes were identified by respondents from both sites including confidence, assessment skills, interprofessional team working skills, early detection and intervention and improved knowledge/understanding. In many cases, respondents were able to give examples of how these learning outcomes had impacted their nursing practice.

Integration of Learning

The level of organisational support individuals received to aid the transfer of learning into the organisation varied according to Trust, intervention and job role of the participant. Some examples of excellent support were cited as well as instances where participants felt they had received little help to integrate learning. This was also linked to issues of selection; where staff had undertaken training perceived to be irrelevant to their job role, support to integrate learning was likely to be very low.

Organisational benefit/Return on Investment

A sufficient understanding of potential measurement criteria to assess impact and/or return on investment is not yet apparent. A number of the specified PIs yielded data that was incomplete, inconsistent and difficult to correlate with changes in staff skills levels. Whilst it is acknowledged that such criteria are

difficult to establish, some more thought ought to go into developing a suitable framework, which should also link into the needs assessment process for staff before training. In cases where numbers of trained staff remain relatively low, suitable indicators are likely to be ward or individual centred as opposed to Trust wide.

Recommendations

Lastly, the report produces a series of recommendations relating to the findings outlined above. An enhanced process, and built in time, for selecting staff to attend training interventions is recommended, which should be based on learning outcomes and matched to individual and organisational need. It is suggested that training works best when tailored and delivered according to local need and that time should be built into training to enable participants to achieve necessary competencies before returning to their work roles. Enhanced support for staff to implement learning into the workplace is recommended, in terms of improved availability of mentors, assessors and reserved time to dedicate to practising new skills. A 'learning contract' attached to the attendance of training, would help define roles that participants could be expected to take up on their return to the workplace (such as a teaching role to further disseminate learning). Managers would be further supported in addressing the development needs of individuals and the organisation if appropriate Key Performance Indicators are established prior to the development of training. Performance Indicators should be meaningful and measurable at an operational level.

1 Introduction

As part of its ongoing review of care provision in the region, the Hampshire and loW Workforce Development Directorate (WDD) identified various “Hot Spots” in need of urgent attention. The concept of ‘Hot Spots’ emerged from work to establish NHS Professionals, in which areas of service provision with high agency staff cost were identified. One of the areas identified was the provision of Critical Care services, which for the Hot Spots Project encompasses high dependency units, medical wards, medical assessment units, accident and emergency departments and theatre services.

As a result of this, the WDD established an Advisory Group of local experts and commissioned a series of educational interventions to develop the capability and skills of existing NHS staff. The first of these interventions was delivered in January – June 2004. This Report is based on the original 2004 cohort together with a second cohort that started the intervention in January 2005. Data was used from two Trusts, Southampton University Hospital Trust (SUHT) and Portsmouth Hospital Trust (PHT). The authors are grateful to both these Trusts for their cooperation and support in collecting data for this project.

The Report is structured in the following way. In section 2, the relevant literature relating to both critical care nursing and evaluation of training interventions is reviewed. The findings of this review are used to inform the research objectives. Section 3 describes the approach used to collect the data, which is then analysed in Section 4. Section 5 makes a number of recommendations for future interventions of this type.

1.1 Policy Background and Workforce Developments

With the development of medical technology and treatments, it is generally acknowledged that population trends indicate a rise in the average age of the population. An ageing population, with an associated rise in co-morbidity, places unprecedented demand on health services, both in terms of intensive care environments and ward based care.

As a result of government recognition of the under-investment in critical care, there has been an on-going modernisation programme within the critical care setting, launched in July 2000 with the publication of ‘Comprehensive critical care: A review of adult critical care services’ (DoH 2000; Williams et al 2003). With the NHS Agenda for Change, the Department of Health (DoH) has called for responsive staffing and organisation of critical care within hospital settings. There is a drive to reduce costs and deliver patient care in the most effective manner. Nurses are encouraged to take on extended roles, with the development of new

posts including Nurse Practitioners and Clinical Nurse Specialist. Along with this, the European Working Time Directive (The Working Time (Amendment) Regulations, 2003) will continue to reduce the number of hours junior doctors are able to work.

At same time, the region's hospital Trusts are under intense financial pressure and recruitment and retention of staff continue to be a problem. In the face of these pressures, many NHS organisations entered into role redesign initiatives with a significant investment in order to address some of these problems. By addressing gaps in skills, better management of staff resources, and general effectiveness, most of the organisations aim to achieve a better financial status and a more effective delivery of care (Hyde et al 2005).

In the following section, we explore some of the underlying factors which have been identified as particularly pertinent to critical care provision, together with a review of relevant training intervention literature.

2 Literature Review

This section of the report highlights some of the key issues regarding critical care nursing, learning transfer and evaluation. In compiling this chapter, we have drawn on literature from three sources:

- research papers published in journals,
- the “grey literature” such as policy documents,
- publications deposited on electronic media such as the Internet.

The majority of the literature reviewed is peer reviewed articles, many of which can be accessed through the use of electronic databases. We have restricted our review of nursing and critical care skills to the literature that is relevant to a UK audience. The reason to retain a national focus is the likely difference of other health care settings compared to the UK.

The literature discussing learning and skills transfer and evaluation is taken from both U.S. and UK sources, as there are clear similarities in regards to supporting factors for learning and skills transfer and in reference to potential challenges that such transfer may pose.

This chapter is divided into two sections: the first section will briefly discuss topics that are currently of importance within the arena of critical care nursing, whilst the second section looks at learning transfer and evaluation.

This is not an exhaustive overview but is intended to indicate issues currently considered important by those working in these fields, which will help to

illuminate and inform issues arising from this evaluation of Hotspots educational initiatives.

2.1 Critical Care Nursing

Context of the review

In 1999, the DoH commissioned a review of adult critical care services. The findings and recommendations made by the review team are summarised in 'A Review of Adult Critical Care Services (2000)'. The guidance in this report is being used by NHS managers to shape critical care services within their organisations.

The report calls for a move away from the traditional notion of critical care services provided solely within the confines of Intensive Care Units (ICUs) or High Dependency Units (HDUs) towards a situation where 'critical care services within NHS Trusts should form part of a comprehensive acute care pathway that integrates pre-hospital care prior to admission and primary and community care following discharge.' Care should be delivered according to the need of each individual patient, as opposed to depending on where the patient is situated within the hospital. Wherever they are located in the hospital, patients should have access to skilled critical care nursing (either to care for them directly or to advise on and oversee their care).

This has far reaching ramifications on the recruitment, training and retention of staff. The review highlights the need for the design of training packages which enhance skills and competencies across traditional professional boundaries. A framework of education is called for which delivers competency based critical care training for ward staff as well as more advanced skills for staff operating in appropriate areas. Staff should be encouraged to take advantage of training and development throughout their careers and all disincentives should be removed from the training system.

The review also calls for the formation of Outreach teams (multidisciplinary teams led by a qualified critical care clinician, trained in aspects of care and effective ways of skills sharing) to avert admissions to ITU, enable discharge and to share critical care skills with staff in wards. Another role of Outreach is to use information gathered from the ward/community to improve critical care services for patients and relatives.

In line with this call for up-skilling of staff across traditional professional boundaries, is the workforce redesign called for by the NHS Agenda for Change. This calls for the extension of traditional nursing roles and development of senior nursing roles such as clinical nurse specialist and nurse practitioner, in a drive to reduce costs and deliver patient care more effectively.

The demand for staff who are equipped with all the skills necessary to care for at risk or deteriorating patients, impacts upon nursing training at pre and post registration levels.

Shortfall in provision

The literature identifies shortfalls in the level of critical care nursing skills amongst newly qualified nurses, which need to be rectified to meet the greater acuity of patients on the wards (Glen 2004). The United Kingdom Central Council for Nursing, Midwifery and Health Visiting Report 'Fitness for Practice', (UKCC, 1999) identified a need for core professional competencies, which currently have to be defined by each educational institution. However, Walker (2001) points out that a barrier to nurses securing competencies in practice can be a lack of availability of assessors, who must be highly qualified staff with enough knowledge and experience in high care to be able to judge students on their performance and provide a positive learning environment.

Nursing competencies

Disparity between nursing competencies at post qualifying level is also highlighted in the literature. Glen (2004) reflects on the situation of 'post code competencies' (Scholes et al, 1999), whereby, because of the many different formats of post-qualifying education (for example part-time learning, work based learning, distance learning), staff who have undertaken training in acute or critical care nursing at different institutions and in different formats come out with varying levels of skills and knowledge.

"Theory vs Practice" gaps

A picture is also painted of institutions that provide nursing education being, at times, out of step with the reality of nursing care within hospitals. This can result in nurses being trained in skills which are not easily implemented into practice. 'The result, however, is that nurses are trained to do a job that did not exist in the past, does not exist in the present and may never exist in the future' (Glen, 2004). The separation of nurse trainers from service delivery can also result in tutors losing touch with new developments and technology. Walker (2001) suggests that a way to overcome this is for tutors to spend time on secondment to hospital Trusts in the role of 'lecturer-practitioner'.

Walker (2001) also points to the need for intensive care nurses to have their training regularly updated, due to continual developments in care in this arena. She also points out that because of the differences between ICUs and skills mix from one hospital to another, courses that are tailored to local need and include an in-house placement may be the most effective. She also suggests that ward based staff may benefit from spending time in ICU to learn critical care skills.

Benefits to Patients

An augmentation in critical care nursing skills amongst nursing staff is likely to be beneficial to patients. Lack of knowledge, failure to appreciate clinical urgency

and failure to seek advice were identified as key factors contributing to suboptimal care of adult emergency patients (McQuillan et al 1998). More recently, Ball (2002) also found that at busy times, lower knowledge and experience of nurses could be associated with the potential for adverse patient outcomes, for example because of a failure to appreciate early signs of deterioration. Intuitively, therefore, training which fills knowledge gaps, equips students with enhanced assessment skills and alerts practitioners to early signs of deterioration should improve patient outcomes. A number of studies have shown benefits to patients resulting from the work of Outreach teams. Priestley et al (2004) pointed to improving mortality, Bellomo et al (2004) to reduced cardiac arrest incidence and Ball et al (2003), showed some improvements in survival rates post-ITU discharge and reductions in readmissions to critical care.

Adam (2004) suggests that a cultural change may result on wards due to the wider acquisition of critical care skills by ward nurses. A culture of early detection and prevention exists within critical care areas, which traditionally has not been prevalent on wards. A transfer of this style of working to ward areas is likely to be beneficial to patients. O'Riordan et al (2003) found that improved clinical competence in terms of improved assessment skills, specific nursing interventions and awareness of early changes in patients was one of the most positive effects of the course for staff.

The changing role of nurses

Adam (2004) identifies excellent communication and good inter-disciplinary team working as being characteristic of staff within critical care areas. This style of working would also be advantageous to general ward areas and may result from the up-skilling of ward staff with critical care skills. Respondents to the evaluation conducted by O'Riordan et al (2003), stated that they had improved confidence in their interpersonal skills, making them more assertive with doctors when trying to get patients seen and more likely to challenge the practice of other team members.

Need for long term evaluation

Reliable data is needed on which hospital managers can base decisions about the shape of critical care services. The DoH states that the NHS should be 'a service underpinned by good information that will ensure the delivery of an effective service in terms of outcomes for patients, will support clinical governance and will enable critical care services to move from being reactive to being proactive with a firm evidence base' (DoH 2000). Wider literature (Ball, 2002, O'Riordan et al, 2003, Butler-Williams et al, 2005) calls for, and provides some examples of, evaluations of critical care courses for ward nurses. Ball (2002) suggests that long term evaluation of education interventions is necessary because of the large amount of resources that are invested. This may be in the form of qualitative data focusing on knowledge retention 6 months after the intervention or a review of admissions to critical care from the wards, possibly using the criteria provided by McQuillan et al (1998) (failure of organisation, lack

of knowledge, failure to appreciate clinical urgency, lack of supervision and failure to take advice). O'Riordan et al (2003) analysed end of course evaluations to judge the short-term impact and questionnaires to judge the longer term impact of a 5 day critical skills course for ward nurses. The questionnaire, however, yielded a low response rate (10 respondents), which made it difficult to draw conclusions on the longer term impact of this intervention. Butler-Williams et al (2005) used a self-rated confidence assessment to compare participants' confidence levels to perform certain tasks before a one day High Dependency Nursing Skills course and their confidence at the end of the day. This method only evaluated the short term impact of the intervention, although a longer term follow-up is planned.

2.2 Learning Transfer and Evaluation

Context

This section reviews the literature which addresses the efficacy of training interventions. Whilst it is not restricted to the NHS, or specifically healthcare interventions, the scope of the review has been restricted to relevant comparators.

Learning Transfer

A recent paper by Clarke (2002) summarised that a considerable amount of research has been undertaken, suggesting that the transfer of training beyond individual knowledge and attitude is highly contestable. Curry et al (2005) support this claim by suggesting that only 10-13% of learning is actually transferred and Tennant & Field (2004) raise the question if CPD is worth the expenditure, considering the lack of research to assess the impact of training. Adding to this lack of knowledge and evidence on organisational knowledge integration through training efforts is the suggestion that human service organisations in the public sector paid little attention to the transfer of training (i.e. skills, knowledge, experiences etc.) (Clarke 2002). At the same time, it is suggested that most of the research undertaken in regards to the transfer of training has been conducted within the US private sector (ibid.). Arguably, the practices associated with development and learning integration are different in the private business domain to those within the public sector.

Application and integration of new skills

Other authors corroborate the claim that development programmes often do not result in the application of new skills, knowledge, or learned behaviour on the job. In most cases the learning takes place on an individual level and does not tend to extend beyond this (Phillips & Phillips 2001) and therefore it can be questioned whether training endeavours have any tangible outcome at an organisational level (Olsen 1998). Furze & Pearcey (1999) reflect this by emphasising that in nurse training most evaluation is based on the nurses' perceived learning without any particularly objective measures at hand to corroborate these perceptions.

One of the reasons suggested within the literature is that training interventions usually fail to be connected to real-life situations in organisations (Sirianni & Frey 2001). This would indicate that the majority of training undertaken is neither integrated appropriately into the overall goals of the organisation, nor planned sufficiently to have a considerable impact on an organisational level (Mabey and Thomson 2000, Mabey 2002). Tennant & Field (2004) argue that commissioning patterns have been influenced predominantly by 'tradition' rather than by objective analyses of service requirements.

For skill transfer in particular, the relevance of the learned skill to the work environment is essential for effective transfer of the learning and the skill into practice. Lauder et al (1999) assume that if the learned knowledge or skill does not match individuals' schemata or concepts, new knowledge and skills can not be appropriately integrated into an individual's way of thinking; thus transfer of knowledge or skills is unlikely to occur.

Discussion

Two significant questions that arise from our analysis of the evaluation of training literature are: How do we know that an organisational development or training programme is effective and what impact does it have on organisational performance?

First of all, it appears to be unclear as to what can be considered a successful training intervention and it is likely that the perception of success differs greatly among different stakeholders of the development intervention (Mabey and Thomson 2000). There seems to be a universal inability to find an unambiguous – quantifiable – measure that suggests success factors. In regards to training/skill transfer, success may be defined as the "*ability to apply knowledge gained in one situation to bear in another situation*" or that the process of transfer is likely to result in "*the performance of a new skill or the same skill in an unfamiliar context*" (Lauder et al 1999).

Often success is also defined by meeting particular performance standards. The NHS was one of the first public sector organisations to adopt performance management tools in the 1980s. One of the reasons cited for the introduction of performance measures as a useful tool to monitor effectiveness and efficiency was the lack of external competition (Radnor & McGuire 2004). However, the literature is predominantly sceptical about the use of performance measures. Whilst government agencies see such targets as a useful monitoring tool, health care professionals themselves are often less convinced. Information overload and added bureaucracy are often cited as problems associated with too many performance measures (Radnor and McGuire 2004). In addition, a fundamental problem is the irrelevance of measures or the inaccuracy and lack of uniformity of data collected that is supposed to respond to those measures (Wait & Nolte 2005). This is often complicated by the inaccuracy of the indicators for

measurements (Givan 2005). This is not a UK-only phenomenon. Studies have shown that performance measures and indicators in health care are problematic across the world and the problem of irrelevant target indicators that are based on data availability are unsuccessful in achieving change or guiding towards good practice (Wait & Nolte 2005).

However, this scepticism on how to measure and define success (Kellogg Foundation 2002) is only one possible reason for the lack of information and knowledge available to assess the impact and effectiveness of training and development interventions.

A related problem associated with answering the questions of success, impact, and effectiveness of development interventions is the lack and disparity of evaluation of training programmes. There is a significant gap in the literature of investigations of issues surrounding development programmes – most significantly within the health care sector (Hardacre & Keep 2003). One issue that often limits the effectiveness of evaluations is the *ad hoc* provision of those development programmes mentioned previously. It is argued that effective evaluation needs to be part of an overall development strategy that includes a front-end analysis of why a particular development is commissioned or undertaken (Phillips & Phillips 2001). In addition, little research evaluates beyond individual learning, whereby only a small proportion of evaluation programmes assess long-term impact¹ and/or business impact of development interventions (ibid., Kellogg Foundation 2002). Therefore, short-term outcomes are much more frequently investigated, whereby those evaluations are still limited by lack of resources assigned to evaluation, and knowledge about how to evaluate training interventions. Tennant & Field (2004) argue that little CPD with nurses is evaluated beyond the “comfort factors”, i.e. the satisfaction of the training participants with teaching and other factors that relate little to the impact of the specific training on service provision.

Besides the rather frustrating lack of evidence of concrete factors that either determine success and effectiveness of development interventions, or define ways of measuring and evaluating training programmes, there appears to be less ambiguity about factors that potentially support training transfer.

It has been outlined previously that there is a lack of evidence concerning the transfer of learning into an organisational realm. However, the literature suggests that learning transfer in general can be enhanced by considering some of the conditions in which this takes place. Two of the more frequently cited factors influencing learning transfer are *social support* and *opportunity to use* the newly acquired learning (Clarke 2002, Day 2000, Olsen 1998). It is argued that the context of the learning, as well as the ability to support the application of this

¹ There is no univocal agreement as to what constitutes long-term evaluation. However, it is suggested that organisational impact can only be measured within the time period of 7-10 years after the initial training, assuming that it is a continuous process.

new learning is pivotal in the transfer process. Close supervision and frequency of follow-up post-programme are associated with more successful training transfer (Clarke 2002, Tach 2002). More specifically, mentoring, coaching, and action learning concepts have been seen as having a significant impact on aiding the transfer of training. A study with child welfare workers (Curry et al 2005) clearly showed that supervisory support is positively associated with the transfer of knowledge and skills.

These concepts are closely related to feedback, which is an essential component in driving the transfer of training (Oslen 1998, McGill & Slocum 1994).

The context of such support also leads to a logical questioning of whether development should be located around the individual or within the context of a team. The recognition of the impact of effective team working is growing in the health related literature. A major study in the NHS by Borrill et al (2000) highlighted the impact of teams on measurable outcomes such as mortality, job satisfaction and stress levels amongst staff. The evidence clearly indicates that effective team work was not only related to improvements in these outcomes, but also led to improved decision making and innovative capabilities within teams. The role of team based working has also been identified as an effective way to deliver organisation strategy, deliver improvements in products and services as well as embedding how organisations learn and improve (West 2002). This clearly supports the notion that learning is not happening in isolation; the often perceived lack of learning transfer in nurse training was inherent in the fact that the impact of group learning was ignored as an important aspect for transferring skill in nurse training (Lauder et al 2004).

In summary, it can be argued that while there is a significant lack of evidence that points towards the usefulness and effectiveness of training interventions, a good deal of faith seems to be placed in such programmes, assuming that they are delivering some form of benefit for an organisation. In addition, the literature suggests some factors that may enhance learning transfer onto the job beyond individual learning, even though evaluation studies are rare and seldom longitudinal. Thus, an ongoing investment into evaluation will – hopefully – add to the evidence. This report will add to the evidence by focusing on a particular study, evaluating short to medium term impact of a critical care skills programme, in order to drive the further development of theory and practice regarding the usefulness and effectiveness of development interventions.

2.3 Literature Review Summary

In this section we have considered two complementary strands of relevant literature – critical care nursing and evaluation of learning interventions. The critical care literature identified at least six relevant issues:-

- *Shortfall in provision*
- *Nursing competencies*
- *“Theory vs Practice” gaps*
- *Benefits to Patients*
- *The changing roles of nurses*
- *Need for long term evaluation*

The learning and transfer literature revealed a paucity of robust evaluation measures, at both the individual and organisational level. Yet, notwithstanding the absence of outcome evidence, there is ample evidence that such interventions continue to be used. In 2005 the WDD received £123 million from the Hampshire and Isle of Wight Strategic Health Authority for staffing and training requirements (Hampshire & IoW 2005). The WDD recognised the importance of a performance-indicator-driven approach, and we have noted views within the literature concerning the limitations and challenges offered by such an approach. Other issues raised looked at the environment needed for successful learning transfer, the lack of evaluations beyond individual experiences of a training intervention, and the challenges associated with measuring success of training interventions. This has encouraged us to shape our methodology and analysis to place greater emphasis on these aspects by adopting an approach which more explicitly acknowledges these issues (Phillips and Phillips 2001).

3 Methodology

3.1 Evaluation Framework and Evaluation Plan

While it was argued above that there is not one specified or well-developed theory for the evaluation of training and development interventions, a generic framework is available that was designed for the evaluation of development interventions more generally. Kirkpatrick’s (1994) framework for the evaluation of training programmes is widely used and accepted as an appropriate tool to investigate learning (Phillips & Phillips 2001). This tool has been utilised in various studies on training transfer. For examples of the use of Kirkpatrick’s framework please see Olsen (1998) or Mitchell (2001).

Kirkpatrick's framework, however, did not incorporate the evaluation of return on investment (ROI) of training interventions and was only marginally concerned with the organisational impact development interventions may have. These factors became a dominant concern within the recent past for organisations – particularly within the private sector – due to economic and financial pressures. In order to address this issue, Phillips & Phillips (2001) modified the original framework to incorporate ROI.

1. Reaction and satisfaction of participants
2. Learning
3. Application and implementation in the workplace
4. Business impact (organisational benefits)
5. ROI

These criteria can be viewed as levels, whereby not all training would necessarily be evaluated to Level 5. Phillips & Phillips (2001) suggest that a majority of evaluations do not go beyond Level 2 or 3, whereby only 5% of evaluations attempt to analyse Level 5. At each level, reflection is also necessary on the ways in which the training programme might be re-evaluated in the light of results obtained. In designing and undertaking the evaluation presented here, the research team worked with the commissioners and on-site partners at the two research sites to ensure that no duplication of data gathering took place and that time consumption for the participants was kept at a minimum. It has to be noted and emphasised that the research maintained sufficient detachment from the commissioners to ensure a rigorous evaluation. Whilst some data originated from the course providers, especially to provide Level 1 data, no further interaction with the course providers took place; thus objectivity was maintained. This research used Phillips & Phillips' modified version of Kirkpatrick's framework to organise data collection and analysis.

It was outlined previously that good and robust evaluation needs to be integrated into a needs assessment in order to know what was evaluated and how success can be defined. In order to address this issue, the research team included a sixth level that precedes Level 1. For this level pre-course data could be gathered and needs could be identified. The framework we used in order to address the concerns of the commissioners is described in the following paragraphs. The framework also incorporates and acknowledges the literature on learning transfer and evaluation.

Pre-Level 1 Data Collection

The data gathered within this level includes a focus group with members of the Expert Panel – originally set up when the Hotspots programme launched – to discuss reasons behind the commissioning of the training intervention. Data was sought that provided insights into the Key Performance Indicators (KPI) that built the basis for the original proposal.

In addition, open-ended interviews took place with the education leads in both Trusts. Issues explored during these interviews included the suitability of the KPIs, selection processes for participants and general background information necessary for the evaluation.

The research team also aimed to collect baseline data for critical care competencies in the form of a participant self-assessment. SUHT had developed a comprehensive competency framework that participants were required to complete. PHT did not have such a framework, but was willing and supportive to adapt PHT Trust competencies as a self assessment tool. The aim was to re-assess participants at various time-points throughout the evaluation.

Other data collected focused on the motivation and expectations of participants and nominating managers. Their respective perspectives regarding the selection processes were also sought.

Level 1 Data Collection – Reaction and Satisfaction of Participant

This level of data collection looked at course internal feedback forms to gather user perception on enjoyment, perceived usefulness, perceived difficulty, etc. (Warr & Bunce 1995). Where available, this data was provided by the education provider. Data was supplemented through the collection of data from the participants in form of questionnaires and interviews as part of the external evaluation.

Level 2 Data Collection – Learning

Data collected at this level focused on the perceived learning that took place from the perspective of nominating managers and participants. The sources for this data are questionnaires and semi-structured interviews.

Level 3 Data Collection – Application and Implementation into the workplace of skills learned

At this level the data was taken from questionnaires and interviews. Narrative data that emerged through semi-structured interviews with participants and managers described factors which were conducive to or barriers against the implementation of newly acquired knowledge. The questionnaire data aims to supplement the findings from the narrative accounts.

Level 4 Data Collection – Business Benefits and Impacts

This level collected data that responded to the various KPIs set by the expert panel. The analysis for this level is an application of “objective”, more quantitative, measures. Complementary data was gathered through the perspectives of the interviewees.

Level 5 Data Collection – ROI

Quantification of benefits identified in Level 4 including an evaluation of course costs.

3.2 Case Study

The research investigated four cohorts of staff spread across two research sites. Two cohorts were based at Southampton University Hospital Trust (SUHT) and two were based at Portsmouth Hospital Trust (PHT). Each site consisted of a cohort that undertook Hotspots funded training in 2004; the second cohort at each research site took part in Hotspots funded training in 2005. The reason to include the 2004 cohorts was to investigate change and maintenance of change in practice over time.

Existing Training Programmes (SUHT)

In 2004 the Hotspots money allocated to SUHT was predominantly spent on sending staff on existing training programmes that would sit comfortably within the remit of the Hotspots project. Funded places refer to the amount of money set aside for each individual programme and in analysing the data we have assumed that places were filled.

In 2004, 38 places were funded to attend a one day course on recognising and acting on signs of acutely deteriorating patients, *Alert*. 14 places were funded for staff to attend Advanced Life Support courses (*ALS/PALS/EPLS*) delivered by the resuscitation council and lasting up to 3 days. Some of the funding was used to provide two opportunities for staff to attend a course on *History Taking and Physical Assessment*, which in total made up 31 of the funded project places. Some of the funding was used to contract training to the University of Southampton. Courses delivered by the University consisted of a five day taught element that was complemented by 100 hours of practice time. The three courses were *Introduction/Advances in Pain Management* with 12 funded places, *Care of the Patient with Acute Health Needs* made up 5 funded places, and *Care of the Critically Ill Adult* represented 5 funded places.

Training Programmes Designed for Hotspots (SUHT)

The remainder of the Hotspots money was used to fund a SUHT-specific project that was aimed at addressing a need to enhance acute care skills of gynaecology staff. A four week secondment programme was designed and 20 places were funded for staff to be seconded to the High Dependency Unit (HDU). Unfortunately, the project was suspended due to HDU, which is only a very small unit, lacking the capacity to host a cohort of external students.

In 2005, 120 places were made available for the *Acute Care Skills Foundation Programme*. The course was a one day intervention, designed to ensure that newly qualified staff are able to undertake basic assessment and implement

simple interventions when caring for acutely ill patients. Content of study days and learning outcomes focused on the SUHT Acute care competency levels 1 and 2 for breathing, circulation and hydration and elements of communication and documentation.

The second intervention funded consisted of 12 places for F and G Grade nurses to attend an *Acuity Programme* delivered partially by the University of Southampton. This programme was chosen as it addressed skills that were identified by SUHT prior to course commencement as needing development within their staff. The programme was developed collaboratively between SUHT and the programme deliverer to ensure that the programme matched SUHT's requirements. Originally 20 places were made available, but short notice of the programme and other constraints only allowed for 12 staff to attend this programme. The programme included a taught element (*Clinical Assessment and Decision Making; Care of the Patient with Acute Health Needs*), practice time with a clinical skills facilitator, and shadowing opportunities with the Outreach Team and within HDU.

Some of the money was used to fund half-day Clinical Skills Workshop. Those workshops were designed to address skills in the area of *Care of Central Lines, Basic Respiratory, Inotrope Workshops, and Basic ECG*.

Existing Training Programmes (PHT)

In PHT the Hotspots funding for 2004 was also used to fund existing training programmes that mapped onto the Hotspots remit. Three places were made available to staff to study a *BSc in Autonomous Health Care Practice* at Portsmouth University. The course combined three months of teaching with supernumerary time in practice.

12 places were funded to attend a five day course on *Advanced Practice for Medical Admissions. Acute Medical Emergencies* was a two-day course that was funded for 16 places.

A *pre-operative assessment* module lasting three days was originally anticipated to be partially financed by Hotspot money (backfill only). Whilst this programme was included in the original data provided by the commissioners, data emerging later suggested that no Hotspots money was used for this programme.

Training Programmes Designed for Hotspots (PHT)

Lastly, in 2004 a specific *Fast Track Programme* was designed and commissioned using Hotspots funding. The programme had 28 attendees in 2004. The programme was a combination of three University of Southampton modules, *Clinical Assessment and Decision Making, History Taking and Physical Assessment, and Care of the Critically Ill Adult*. The programme was delivered through formal teaching, independent study days, and practice sessions. The evaluation of this programme states: "These modules were deemed to provide

essential foundational knowledge and skills caring for patients with deteriorating and critical illness. There are complimentary and overlapping areas of knowledge embedded in these modules; the Trust requested an integrated approach to the delivery of the content, but this was not possible given the timescales. Students were given additional support for their learning in the form of 10 study days, which were in addition to the scheduled taught days.” In addition, the practice sessions were designed to be facilitated by a clinical facilitator who would be available two days per week for the duration of the programme. The rationale was to work towards the competencies for Critical Illness and History Taking and Clinical Assessment set by the Trust.

In 2005, PHT used the Hotspots fund to send 20 people on the *Fast Track Programme*. The content of the programme did not change, but a more integrated approach to delivery was adopted. This change was a response to feedback from the first cohort that went through the programme. The provider and PHT collaboratively rethought the programme to provide the best fit. In 2005 similar content from all three units was presented together in order to structure the training intervention thematically, interlinking content from all three modules.

Unit excluded from evaluation (PHT)

An additional course that was funded by remaining Hotspots money was a unit related to employees working within a critical care setting. This unit was not evaluated, as its start date was in January 2006, too late to include in the study.

SUHT 2004	Number of Funded Places²
Alert	38
ALS/PALS/EPLS	14
History Taking & Physical Assessment (x2)	31
Introduction/Advances Pain Management	12
Care of the Patient with Acute Health Needs	5
Care of the Critically Ill Adult	5
HDU Secondments	20
SUHT 2005	
Acute Care Skills Foundation Programme	120
Acuity Programme	12
PHT 2004	
BSc Autonomous Health Care Practice	3
Advanced Practice for Medical Admissions	12
Acute Medical Emergencies	16
Fast Track Programme	28
Pre-Operative Assessment Module	15
PHT 2005	
Fast Track Programme	20

Table 1: Evaluated interventions

² Numbers are based on data provided by the WDD.

3.3 Data

The data collection was informed by the evaluation plan set out previously. A multi-method approach was adopted to gain a broad overview of the issues surrounding the Hotspots training programmes. This approach included the use of self-assessment tools, questionnaires, and interviews. To supplement this broader understanding more detailed and focused approaches were used.

The research team designed a questionnaire that was sent out to all staff that received training as part of the 2004 Hotspots funding across both sites (Appendix 1). The questionnaire integrated issues identified by wider literature (O’Riordan et al, 2003) as well as questions specific to this evaluation. It aimed to elicit information on appropriateness of the training, its relevance to the individuals’ job roles, the specific learning outcomes for each individual, examples of learning applied, and the frequency of this application. The questionnaire was piloted and altered according to the findings. Altogether 116 questionnaires were sent out. The response rate was 49% after three reminders were sent. Of the 57 questionnaires returned, 29 were returned by SUHT staff and 28 from PHT. A pigeon hole system is used for the delivery of post to staff on wards, which could be problematic if staff were deployed on different wards or did not check their mail regularly. The response rate was also affected by the late addition of a course which was not in the original remit of the project. The research team sent additional questionnaires to participants on the second *History Taking and Physical Assessment* module, which was not included in the original list of Hotspots funded courses.

The data set for the 2004 cohort in both Portsmouth and Southampton was complemented by interviewing a small sample of course attendees from each site. Furthermore, managers from each site were recruited for interviewing to gain an additional perspective. The interviewees were selected based on a theoretical sampling frame with the aim to get a proportional spread across courses funded by the Hotspots initiative. Recruitment took place via telephone – which was often difficult considering the nature of the participants’ work. Once an interview date was agreed, a confirmation letter was sent. Due to various cancellations at the point of interview without prior notice, a further confirmation telephone call was made to the participant to ensure efficient use of the researchers’ time.

Scope of the interviews (2004 cohort)

In total 32 interviews were undertaken for the 2004 cohorts, 11 participants and 5 managers at each site. The lower number of managers was due to various participants having the same line manager. In SUHT one member of staff attending the *APLS* course was interviewed. Three staff participating in the *History Taking and Physical Assessment* course and three staff from the HDU Secondments were interviewed. Two further staff who attended *Care of the*

Patient with Acute Health needs and two staff who participated in *Advances in Pain Management* were interviewed.

In PHT the distribution was as follows; six staff from the *Fast Track Programme*, three attending *Advance Practice for Medical Admissions*, and two from *Autonomous Health Care Practice* agreed to answer questions about the training they had undergone.

Scope of the Interviews (2005 cohort)

The data set for the 2005 cohort is based on semi-structured interviews with nearly all participants and a selection of managers from PHT and SUHT. It was felt that the more recent engagement with the course, the significantly lower number of participants and the similarities of the interventions in 2005 made this approach more appropriate to answer the research questions.

At SUHT nine of the twelve participants were interviewed and four managers. In addition to these interviews, the research team distributed a questionnaire to the participants of *Acute Care Skills Foundation Programme*. The sample size was $n=103$. The response rate was 16.5% with one postcard reminder. The cohort was included at a later stage as full information about this training programme was not available at an earlier stage of the process.

In PHT the number of staff who participated in the interviews was 16 out of the 20 course attendees. The research team also interviewed an additional 5 managers.

The 2005 cohort was also asked to complete a competency-based self-assessment tool for critical care skills. The collection of this data at SUHT was coordinated by a training facilitator. Three time points of data collection were anticipated, but response rates declined consistently over the time points. PHT did not have such a competency-based framework, but after negotiations agreed to implement a self-assessment tool based on in-house competencies. Two postal reminders were sent to the participants in addition to one telephone reminder. However, the response rate was extremely low.

The time commitments of participants and the delay in establishing baseline competencies resulted in insufficient numbers of completed self-assessments at both sites. Thus the data could not be used to reach any meaningful conclusions.

The quantitative data analysis was aided by SNAP, computer software designed to help in the design and analysis of questionnaires. Data input of the questionnaires was validated by inter-coder reliability checks on 49% of the questionnaires. These were randomly selected by SNAP. The verification error rate was 0.11%. The interviews undertaken were digitally recorded and subsequently transcribed, excluding non-verbal and non-lexical components.

The duration of the interviews ranged from 25 minutes to over an hour. The qualitative data analysis was undertaken with *NVivo* (QSR Trademark), a software package designed to code textual data. The software is used to ease the process of coding the data by allowing cut-and-paste type actions, while assigning the data snippets to appropriate categories. For an example of the use of the software see Lingard et al (2002). A variety of categories have been established, some inductively, others deductively during analysis. The categories are based to a large extent on the evaluation plan and the interview questions. However, as common in qualitative data analysis numerous categories emerged from the data (e.g. Silverman 2005).

4 Results

4.1 Pre-Level 1 Data

The first level of analysis was pre-course data, looking at the needs assessment and the motivation for the participants to join the development intervention. In addition, the interviews elicited information regarding the expectation of the programme from both a manager and participant perspective.

4.2 Needs analysis

This level of analysis aimed to identify how staff were selected for Hotspots training, based on a needs analysis, both of the individual's development need and the need of the organisation.

Initial discussions with the education leads at PHT and SUHT revealed the following concerning the selection processes used:

PHT

In 2003/4 short timescales affected the way in which staff were selected to attend the *Fast Track Programme*. An advert was used to invite senior nurses to put people forward. In the first year, people who had already done the *Care of the Critically Ill Adult* module were excluded from joining the programme. These tended to be the more senior/experienced nurses. Retrospectively this was viewed as a mistake because more junior nurses coped less well with the programme.

In 2005, the *Care of the Critically Ill Adult* module still formed part of the training programme but senior nurses were allowed to enrol onto the *Fast Track Programme* and opt out of this part. People who were 'ready' for the training were

targeted through Practice Development Nurses. The aims and scope of the training were considered but no formal skills assessment was carried out.

SUHT

The skills assessment framework was not in place for the SUHT 2004 cohort, with the exception of HDU Secondments. Staff completed a pre-course skills assessment before attending the secondments and repeated it afterwards. Unfortunately, due to the small numbers of staff completing the full secondment, we are unable to draw conclusions from the limited data available. It also appears that a pre-skills assessment was completed by staff attending the *M&K History Taking and Physical Assessment module*; however, this data was unavailable.

In 2005, aims and scope of the *Acuity Programme* were considered. It was felt that general surgery and general medicine should be targeted, so staff were mainly recruited from these areas. It was the responsibility of managers to identify people with the flair and enthusiasm to join the programme, which would lead them to become teachers in following years. In tandem with this, a Competency Skills Framework was developed at SUHT to lay out 'agreed competencies and associated skills acquisition in relation to caring for the acutely ill patient, in line with agreed patient classification'. This tool was designed to assist managers in workforce planning, enabling them to take stock of skills mix requirements and identify training or recruitment needs. Education leads undertook skills profiling work with ward managers within surgery, medical, cancer care, trauma and orthopaedics and gynaecology. However, this process does not appear to have fed directly into selection of staff to the Hotspots programme, which may at least partly be attributable to time restraints discussed later in the report. However, on an individual basis, candidates embarking upon the *Acuity Programme* were asked to use the tool as a framework for self-assessment, by which to judge their learning as they progressed through the course.

4.2.1 Questionnaire data

The questionnaire data revealed that overall 84.2% of the respondents were selected by their managers to attend Hotspots training. In both research sites (PHT 89.3%, SUHT 79.3%) this was the predominant form of allocating the available training places to staff. The questionnaire responses did not reveal the criteria applied by managers in reaching those decisions.

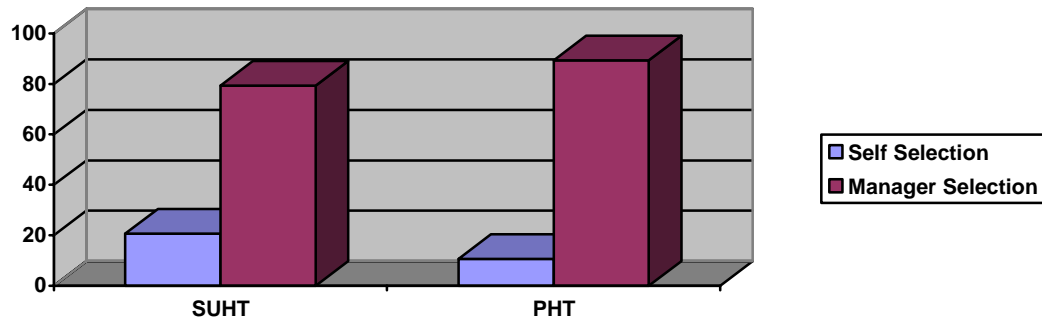


Figure 1: Method of selection to training by Trust (%)

Participants were also asked to identify reasons for attending the training course once they were selected. A wide variety of reasons were cited by questionnaire respondents and responses differ, at times, greatly between Trusts. However the most commonly cited reason for attending the programme in both Trusts was to gain skills that are relevant for the current job role. Overall 22.8% of respondents named this as a reason to attend the training. The second most referred to reason for attending the training was professional or career development. 21.1% of respondents saw this as their main motivation to attend the training. In both cases the larger proportion of those responses came from PHT with 28.6% attending the training to gain role-relevant skills compared to 17.2% at SUHT and 25% seeing this course as part of their professional development compared to 17.2% at SUHT.

A stark difference in response was also in regards to improving skills in recognising and caring for critically ill patients. In SUHT 20.7% of the respondents saw this as a reason to take part in the training programme. In PHT only 7.1% felt that this was a contributing factor in their motivation.

Other areas that participants felt motivated them to attend this programme were to refresh and enhance skills, gain particular assessment skills, or to gain credits for a degree pathway. 7% of participants took up the course out of interest or because they identified this course as relevant. Interestingly, only 5.3% of the respondents attended the course to gain more confidence, even though improved confidence was seen as a major Key Performance Indicator of the success of this investment.

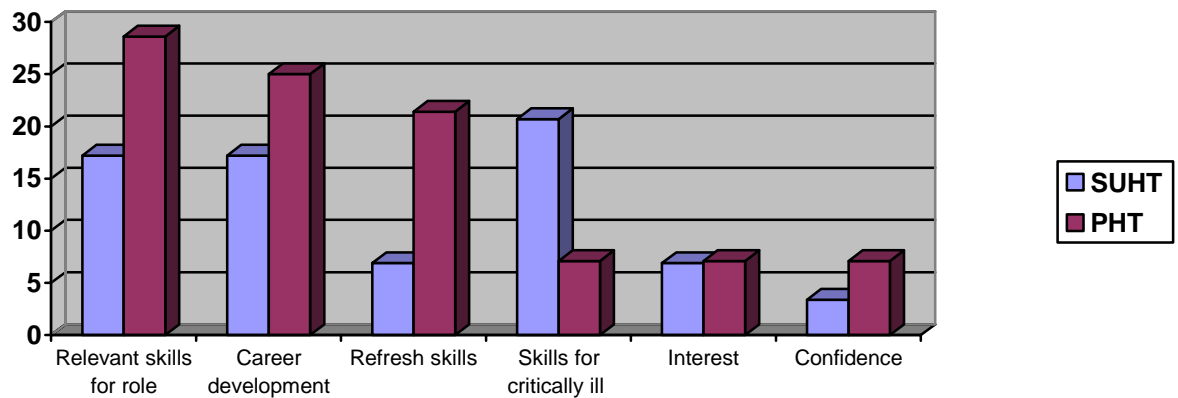


Figure 2: Motivation to attend training by Trust (%)

Some of these findings are reflected and explored further by the findings from the interview.

4.2.2 Interview data

Four main themes emerged from interview data; motivation, course information, short notice given and selection of staff. Each is dealt with in the following sections.

4.2.2.1 Motivation for attending intervention

Staff were asked about their motivation to attend training and what their expectations of it had been. Managers were asked why they had chosen a particular member of staff to attend and again, what they expected them to gain from the training. Although the interview guide included separate questions about motivation and expectations, respondents tended to answer the two questions in a very similar way, therefore these two questions were coded together. In this section we received broadly similar comments from staff and managers in both Portsmouth and Southampton. Where any particular differences emerge they are highlighted in the commentary. The most frequent responses from both research sites are discussed below.

Motivated/Encouraged by Manager

Encouragement by a manager was the highest motivating factor given by staff for attending Hotspots training. These staff were approached by their manager or training lead and advised/asked to attend. Just over half of the staff in PHT and just over a third of staff at SUHT stated that they were motivated by their manager in this way.

Incidence of motivation through managerial intervention was particularly high amongst staff attending the *Fast Track Programmes* in Portsmouth and the *Acuity Programme* in Southampton. Most staff could give reasons as to why they had been selected for training. The reasons they had been given by their managers included; they were at the right point in their career, they were senior enough to disseminate skills back to the ward or they needed new skills to deal with increasing acuity of patients.

However, for some there was a feeling of being chosen (often with short notice) for no other reason than to fill course places. Whilst some comments like this did arise from both SUHT and PHT, they were most prevalent amongst the PHT 2005 cohort.

“Er basically my manager said we need two people to go on this course, you’re one of them.” PHT 2005 Staff, Interview 10

Gain/refresh acute care skills

As could be expected, staff and managers alike felt that participants would gain or refresh skills to deal with acutely ill patients and be better equipped to spot early signs of deterioration as a result of Hotspots interventions. Four respondents expressed that they were aware of the increasing acuity of patients on wards. Of all groups, the SUHT 2005 Acuity cohort were most motivated by the desire to gain acute care skills with seven out of the nine staff interviewed giving it as one of the motivating factors.

Disseminating Skills to Ward

Staff and managers also identified the importance of staff members not only learning these skills personally, but being able to share them with colleagues on return to their workplace. This was a particular concern for managers who frequently mentioned the need for staff to share their knowledge with junior members of staff. This is most strong amongst managers of the 2005 cohorts. Three out of five of PHT 2005 managers and all SUHT 2005 managers stated that they required their staff to disseminate their learning. A number of SUHT 2005 managers spoke of the need in the current climate for a greater accountability to make sure that skills are implemented into the workplace, more so than has happened in the past.

“Probably because I was aware that the clinical issues we had on the ward that perhaps the junior staff needed support, education and training and I felt if she had undertaken the course then she could actually bring that back to the ward. Anybody going on any course now would have to sign an agreement that they will bring something back. I think previously what happened is that people would attend courses and keep the information to themselves and the wards never benefited. So that is something they now have to do and there is a teaching programme.” SUHT 2005 Manager, Interview 3

As suggested through the initial interview with the education lead at SUHT, it was clear that this desire for staff to disseminate information fed into selection of more senior staff for a number of Hotspots interventions at SUHT e.g. F&G grades were chosen to attend SUHT's HDU Secondments and the *Acuity Programme*.

"...so we looked at focussing on there, starting with F and G grades and then going down to C grades.

Q: So the decision then was made to kind of start at the top. Why was that decision made?

A: Because I felt at the time I didn't want the senior staff who were supposed to be leading the shift if the patient was deteriorating, they should be able to assess that patient and not having the skills, but having lesser qualified staff having the skills, when that person is in charge needs to know how to allocate the staff, and where to move patients and they need to be able to co-ordinate that and if they weren't about what they were looking for and how they were assessing and I just felt that they should know, really if they were going to be in charge, how to provide that care." SUHT 2004 Manager, Interview 3 (discussing HDU Secondments)

Change/develop role

Another important motivating factor for participants and managers was to equip participants for change and/or develop their role.

A number of staff from both Portsmouth and Southampton spoke about the desire to undertake training which would enable them to apply for other posts or get a promotion. A good example of this is the *Autonomous Health Care Practice* training which was funded in Portsmouth in 2004. This training was undertaken with the express purpose of qualifying A&E staff to become emergency nurse practitioners. Other members of staff did not have particular positions in mind but felt that Hotspots would enable them to complement their development portfolio and prepare them for a change if an opportunity arose.

"I had sort of envisaged that if I was going to get a specialist nurse post, I had thought, well, in two or three years time, running my own clinic, and then maybe being able to actually being able to assess these people, but in a clinic setting, or a routine admission setting. I don't know whether I really thought about how it would help me with the acutely unwell patient." SUHT 2004 Staff, Interview 2

Two nurses in the Southampton 2005 cohort were working on wards that were about to be closed down and they were given the chance to attend the *Acuity Programme* to help them take up roles elsewhere in the hospital.

Some staff from both PHT and SUHT also spoke about training equipping them for developments within their current role, for example an increasing number of acute patients being cared for in their area or the development of an assessment or pre-clerking role.

“Really looking ahead to our service as it is now really, we’ve been aware for a long time that our service was going to develop, we were going to start doing angioplasty intervention and really potential for much more acutely, not necessarily unwell patients, but patients who are generally more acute. So really just thinking forward and to that really and so getting that knowledge, underpinning that, ready for that to happen.” PHT 2004 Staff, Interview 9

The HDU Secondments which ran in SUHT in 2004 were created solely to equip gynaecology nurses with skills to deal with the increasing acuity levels of patients on their wards.

Improve and Complement knowledge

Widening knowledge and improving understanding in order to enhance job performance was mentioned by participants and their managers as a motivating factor.

“Deepening and building on their current knowledge basis, enabling them to deal with acutely ill medical patients and supporting their colleagues to do that, and giving them greater understanding of what they’re actually dealing with.” PHT 2004 Manager, Interview 1

A number of staff from 2005 cohorts in both Southampton and Portsmouth displayed enthusiasm and motivation to fill gaps in knowledge and to improve their awareness of theory behind nursing practice. They were also keen to consolidate and refresh existing knowledge, which they felt would increase their confidence in their own skills.

Staff’s individual personal academic development

A number of staff expressed that they had been keen to attend training as it would provide credits for their degree pathway or would develop them personally. This represented one staff member in PHT 2004, five in PHT 2005, and one in SUHT 2004 and two in SUHT 2005. Some of these staff also commented that it would benefit their ward as well as them personally.

“It was a course that would fit in with the work that we did, and it would give me credits towards a degree.” SUHT 2004 Staff, Interview 7

Only two managers, of the PHT 2005 cohort, explicitly acknowledged that they selected staff to assist them with their personal development as well as to benefit the ward.

To develop confidence

Both staff and managers hoped that Hotspots training would provide attendees with increased confidence, for example in caring for patients, interacting with other staff and trusting in their own knowledge. This was mentioned by small numbers of people across all groups interviewed.

"I hoped it would build their confidence in caring for more complex patients really, because they do tend to get this nice basic little knowledge from our orientation programme, but they need to enhance that really with more theoretical knowledge." PHT 2004 Manager, Interview 4

4.2.2.2 Course information

Lack of course information was identified as a problem by some groups interviewed. This was identified most often by PHT 2005 staff, SUHT 2004 staff, SUHT 2005 staff and SUHT 2005 managers.

PHT

One quarter of staff interviewed from the PHT 2005 staff cohort stated that they had not received enough information before the course started to have any clear expectations of what would be involved in the *Fast Track Programme*. Staff stated that they would have liked to have received information on course content and outcomes as well as assessment criteria.

"Q: So did you have any expectations at all before the training started?"

A: No not really.

Q: So you just sort of went in not quite sure!

A: And caught up later

Q: Would you like to have had any more information? What would have been useful to have?

A: I would have liked more information on the courses involved and what the outcomes of the courses were and what the assessment criteria were.....So just course expectations really." PHT 2005 Staff, Interview 16

This was less commented on by PHT 2005 managers, but one remarked that she was still to find out how many credits her staff member would receive as a result of attending the *Fast Track Programme* and that lack of this kind of information was unhelpful when trying to plan staff development. Because the *Fast Track Programme* was made up of three existing Southampton University modules,

some managers were aware of the individual modules and therefore had a level of prior knowledge on which to base expectations and selection of staff.

SUHT

Lack of information was a problem for some staff amongst the SUHT 2004 cohort, with four out of the eleven interviewed saying that they needed more or better information about the intervention they were to undertake. This was a particular issue for staff who attended the gynaecology HDU Secondments. All three staff interviewed about this intervention described how lack of clear information on course outcomes and expectations contributed to the failure of the intervention.

“there needs to be more structure in as much as who is expecting what from who. When I went over there, there didn’t seem to be any...” SUHT 2004 Staff, Interview 4

Gynaecology staff were unsure as to what they were expected to learn from their secondments and HDU nurses were ill equipped to receive/teach seconded staff, which eventually led to the secondments being cancelled.

Two SUHT 2004 managers stated that they would have liked to receive more information about the intervention that their staff members were due to attend in advance. This would have made it easier to specify what could be expected from staff members who had attended training and how the knowledge could be implemented back on to the ward.

Almost half of SUHT 2005 staff interviewed about the *Acuity Programme* (4 out of 9) stated that they would have liked to receive more information about the programme before they started it. Information that these staff would have valued included, reading lists, course dates, course outlines and expectations.

“I do think perhaps we could have been given more notice of the course and perhaps greater guidelines as to what was expected on the course and what we need to be doing on the course.” SUHT 2005 Staff, Interview 5

Three quarters of SUHT 2005 Managers stated that more information ahead of time would have made it easier for them to plan staffing cover arrangements, help them to understand what new skills would be brought back to the ward and to plan more strategically who to send in the first place.

“So, if I’d have had more information earlier, I would have been able to, you know, plan a bit more strategically about who could have gone.” SUHT 2005 Manager, Interview 4

In contrast, there were a few respondents who commented that they had received course information and that they had found it useful. (2 x PHT 2004

staff, 1 x PHT 2005 manager, 4 x SUHT 2004 staff, 1 x SUHT 2004 manager and 2 x SUHT 2005 staff.)

"We got the course prospective and the information on the assignments to complete, so the assignments I think from that point of view which would be most of us on the course said the same thing, 'that was the daunting part'. The rest of it, the actual synopsis of the course was really interesting and very relevant to what I was going to do on the ward." SUHT 2005 Staff, Interview 6

4.2.2.3 Short notice

Associated with the lack of advance course information was a lack of advance notice that the education interventions would be taking place. This was most commented on by the 2005 cohorts in Portsmouth and Southampton.

PHT

Some staff from the PHT 2005 cohort commented that they had very little notice in advance of the commencement of the *Fast Track Programme*. Whilst this was an inconvenience for staff, short notice created considerable difficulties for managers who were trying to arrange rotas to cover study days etc. Three out of five PHT 2005 managers spoke about difficulties that they experienced in this regard.

"I think we had about a month to sort it out and then it was here's your list of study days which is about 2 or 3 a week which is awful if you're trying to run a ward and then they change it on a weekly basis as well so it's not brilliant."

PHT 2005 Manager, Interview 2

SUHT

Approximately one third of staff in the 2005 *Acuity Programme* commented that it was very short notice between hearing about the course and starting it, one joining when the programme had already commenced. These staff members would have liked more time to plan cover for the ward and to prepare for their studies.

Three out of the four SUHT 2005 managers also spoke about difficulties created by lack of notice about the *Acuity Programme*. As in PHT they experienced problems with staff rota arrangements. Two managers also said that the late notice affected the way that they selected staff to attend. With little notice one pressing concern was who could be released rather than who was necessarily the most appropriate.

"At the time it was actually could you release those people from the ward to go, not whether it was necessarily appropriate but could you actually release a senior person to attend the course because it was very short notice." SUHT 2005 Manager, Interview 1

This manager identified that future interventions would benefit from greater notice to enable better selection of staff at a strategic level.

“So forward planning, greater time to plan and you know, so we knew that when we did our training needs analysis that this was something we could really consider.” SUHT 2005 Manager Interview 4

4.2.2.4 Selection of Staff

The selection of staff raised considerable concern throughout the study. Factors such as the short notice or the lack of prior information caused apprehension during the selection process.

PHT

Not many respondents from the 2004 cohorts spoke about selection of staff, suggesting that this was not a big issue during the first round of hotspots funded projects. The exception was staff who had attended and managers who had selected staff for the *Autonomous Health Care Practice* training. This is a year long and highly valued training for A&E staff to become emergency nurse practitioners, for which nurses are interviewed as part of the selection process. It is often something that staff build into their development plans, deciding ahead of time that they would like to aim for this training, as it requires the achievement of relevant skills before attending. Staff and managers reported that this process works well and is essential to ensure that the right person is selected for the training.

“We have a selection process where we interview, it's quite a stringent interview, we don't just pluck anybody from, and say 'oh yes, you've been a staff nurse for five years, we'll send you off and do your training'. We have to go through an interview process. We have to be selective. They have to be the right people.” PHT Manager 2004, Interview 3, Manager of nurse attending Autonomous Health Care Practitioner training.

This is in stark contrast to the PHT 2005 cohort. Almost half (7/16) of staff who attended the Fast Track 2005 Programme questioned the way in which staff were selected to attend. There was a strong feeling in many cases that poor selection of staff had led to people taking part in the programme who would not be able to use the skills they had learned back in practice. Particularly strong was the feeling that ward staff would not be able to use history taking or assessment skills. An example of the many comments received is shown below:

“It would be better assessment of staff before they attend...I mean there were a lot of nurse practitioners who were on the course and we all thought it was brilliant and it was what we needed. But there were a lot of ward staff who said I am never going to use these skills.” PHT 2005 Staff, Interview 11

"I think a lot of the people on the course wondered why they were on it and what they were going to get out of it." PHT 2005 Staff, Interview 4

As with their staff, managers of the PHT 2005 cohort were also very concerned with the selection of staff for the *Fast Track Programme*. Four out of five of them talked about this in some length. Managers were clear about their favoured way to select staff for training, which would involve matching the right training to the right member of staff and having notice to think about it ahead of time.

"A lot of people do courses or want to do courses that are of no relevance to what they are clinically doing (I don't let them they don't do it) but I think you need to judge the individuals before you send them on a course. You have to judge the person as I mentioned earlier.....I couldn't just pick anybody and say 'you need to do that', you also need to know that they will be committed to finish it and be able to comply with what's required of them as well as them putting skills into practice." PHT 2005 Manager Interview 5

In a number of cases managers reported that they selected staff by considering their current job role, previous experience and how capable staff would be of disseminating skills back to junior staff.

Some managers spoke about difficulties they faced in choosing appropriate staff to send. These included difficulties in finding people due to skills mix and staffing shortages, being told that places needed filling even though the manager did not judge the training to be appropriate to the ward area and short notice.

"Don't make people go on it. Ask them and get volunteers. It was just purely the way it was given to us which I think put people onto the back foot. Don't make people do the Hotspots and certainly keep it for the senior people. I don't think Decision Making or Physical Assessment is particularly relevant to some of the lower band 5 D grades." PHT 2005 Manager Interview 4

SUHT

Respondents at SUHT also frequently spoke about issues relating to selection of staff, however, they exhibited much lower levels of dissatisfaction with processes used or available.

Three out of the five 2004 managers interviewed spoke about how they had selected staff members for training according to criteria such as level of seniority, ability to disseminate information, interest exhibited and service need.

Amongst the 2005 Staff cohort some staff stated that although they had enjoyed the *Acuity Programme* and found it relevant, it would have been better to send people other than ward managers. Ward managers are not clinically active all the time, and it is hard for them to make time away from the demands of their role.

These staff recommended that F grade staff would be ideal for the *Acuity Programme*.

“Don’t send more managers. I think, although I was very happy to go and lucky to be given the time and I had learned things and it was useful and I enjoyed it, they should pick nursing staff that are much more clinical than I am and as much as I would like to be, I am not clinical, as I’ve told you, I’m not clinical all the time. I think that they should be picking on nursing staff that are much, much more clinical and that would be anything, probably my F grade would be good, F grades clinical on the ward, they would be good. Or senior staff nurses, because they’re actually doing it day in and day out.” SUHT 2005 Staff, Interview 2

One nurse stated that people had been very well picked:

“The people that were on the course, had been hand picked more or less to do it. I think that decision making process then, the course was geared up very well for the people who were on it. I don’t really think there was anything particularly lacking any of it, to be honest.” SUHT 2005 Staff, Interview 6

Amongst SUHT 2005 managers, two reflected on the correct grade at which to send staff on this kind of intervention. One manager felt that F grade staff were at the perfect stage in their development for this type of training as opposed to G grades who have already taken up more senior roles with accompanying responsibilities. One manager felt that either F or G grades were suitable because of their reliability and ability to influence change:

“either of the, you know, the two highest bands F and G at the time, which is, you know, sister level or charge nurse, and I felt that they would be able to, you know, a) these grades stay, um and, you know, the retention is much, much higher than a, than a um band 5 or staff nurse. Um, not only do they stay, but they actually lead a team and can actually, um, influence change.” SUHT 2005 Manager Interview 4

The other two managers focused on the importance of getting a fit between staff and intervention so that they would be able to usefully implement what they learned back on the ward and share skills with others. They identified that in the current financial climate, proof of the tangible benefits of sending staff on training needs to be demonstrated in a way which was not called for in the past.

“Before, people would just go on study days that may have no relevance to the work they do and you would think why I am sending this person when it’s pointless. So now we have become a little bit stricter in that they have to justify why they want to go on this program and what they are going to do with it at the end and what they will bring back to the directorate that has paid and supported them to go. Which I don’t think is a bad thing. We do have to look at the appropriateness of course for people to go on.” SUHT 2005 Manager Interview 1

Another manager speaking about the selection of staff to education interventions identified the importance of having enough information on which to base the selection process:

"I think awareness of the course in the first place because as soon as you see what the course involves you can see the relevance to an acute environment. It was just I didn't know until I had already been put on the course. So just more information so that you are more aware and can pick the relevant people to go on the right courses. Rather than just putting people in courses for the sheer hell of it." SUHT 2005 Manager Interview 3

In this context, the short notice period and lack of advance information in some cases for the Fast Track 2005 programme and the SUHT *Acuity Programme* can be seen as a serious issue.

4.3 Level 1 Data – Reaction and Satisfaction of Participants

This level of data collection gathered user perception on enjoyment, perceived usefulness, perceived difficulty, etc. (Warr & Bunce 1995). We first present data drawn from the end-of-course evaluation and then consider verbal feedback extracted from the interviews. The data is evaluated on a cohort-by-cohort basis.

4.3.1 Course evaluation data

We requested course evaluation data from all course providers, including from the School of Nursing and Midwifery and external providers. The following course evaluation data was received:

PHT 2004

2004 Fast Track Programme

Source: PHT/University of Southampton evaluation

The *Care of the Critically Ill Adult* Module was well evaluated, with students generally saying they found the sessions interesting and informative. Students were felt to have engaged well with the *Clinical Assessment and Decision Making* course, in comparison to other cohorts and undertook the preparatory work prior to the sessions. Strong peer support was a strength of the group. Pressures faced in relation to the assessment of other modules affected students' commitment during sessions close to these deadlines. The *History Taking and Physical Assessment* module was generally evaluated well. The pressure of completing the assignment for *Clinical Assessment and Decision Making* was cited by both students and module leaders as affecting student performance. Module leaders were concerned with the 48% referral rates for the OSCE, which is significantly more than for other cohorts. The assessment load put on these students was probably the most significant factor influencing this outcome.

PHT 2005

2005 Fast Track Programme

Source: PHT/University of Southampton evaluation

The programme was generally evaluated positively with mean scores as follows (5=Very Good, 1=Very Poor)

Overall learning experience	4.2
Overall quality of teaching	4.3
Overall programme rating	4.2

General concerns focussed on the following: too much material was covered, 'mixing up' of modules led to some confusion over learning outcomes and assessment requirements, mixed views over the appropriateness of studying the full range of physical assessment skills within the programme; many students felt that only some of these skills were relevant to their practice.

SUHT 2004

Course evaluation data was received for the *Care of the Patient with Acute Health Needs*, key scores were:

(5=Very Good, 1=Very Poor)

Overall learning experience	3.5
Overall quality of teaching	3.9
Overall programme rating	3.4

General comments received from the module leader regarding the *Care of the Critically Ill Adult* module stated that:

Quality of the module content was rated as good to very good. Students generally commented that the module had stimulated learning and that theory was relevant and related to practice. Teaching was rated as good to very good and students noted their own ability to contribute to the sessions. A small number of students who were working in critical care environments felt that some of the module content was inappropriate to personal needs as they had already covered the material through in-service training. Others found the content challenging.

We also received evaluation forms from students who completed the *Introduction to/Advances in Pain Management*; however, unfortunately these questionnaires had not been collated so no overall conclusions could be drawn.

SUHT 2005

Acuity Programme

Source: SUHT/University of Southampton evaluation

The taught element of the programme was positively evaluated overall with mean scores as follows

(5=Very Good, 1=Very Poor)

Overall learning experience	4.8
Overall quality of teaching	4.7
Overall programme rating	4.9

Students identified some areas in which the course could be improved including: more notice of the course needed, more use of simulation techniques, ensuring baseline completion of Trust competencies at the start of the programme and minor revision to level/timing of some sessions

Acute Care Skills Foundation Programme

Source: Evaluation Questionnaire

Respondents to the *Acute Care Skills Foundation Programme* questionnaire rated the day very highly with 100% of respondents classing it as Very Good or Good. 71% of respondents felt that the Foundation Programme came at the right stage in their career, 4 respondents (24%) felt that they attended the Programme too early in their career so that they did not have sufficient experience to fully benefit from the programme's content.

4.3.2 Interview Data

This section of the interview examined the satisfaction of participants and their managers concerning course content, organisation and delivery. In the discussion below, the most important themes to emerge from the semi-structured interviews are highlighted and, where appropriate, are supplemented with findings from the 2004 questionnaire.

4.3.2.1 Content Relevance

In the semi-structured interviews, some clear differences emerged between the views of the PHT and SUHT cohorts, in relation to the perceived relevance of Hotspots training.

This difference is, however, not reflected in the questionnaire data. Respondents from both research sites recalled the programme to be either very relevant (overall 71.9%) or quite relevant (overall 24.6%), with no significant differences

amongst the cohorts. Only one respondent felt that the training received was neither relevant nor irrelevant.

The views expressed on content relevance during interview are discussed below and are separated out by site/year:

PHT

Most comments relating to the relevance of training came from staff who had attended the *Fast Track Programme* in either 2004 or 2005.

Candidates who attended the *Fast Track Programme* in 2004 and 2005 had diverse views about the level of relevance of the Programme. In their narratives, respondents defined training as relevant if it dealt with the correct speciality for their job role, if it was aimed at the right level, i.e. not too advanced or too basic and if the skills learned could be implemented on their ward. Because of the modular nature of the *Fast Track Programme* respondents viewed it as a combination of three parts, each with its own degree of appropriateness to them and their job role. A number of patterns emerged regarding the individual modules:

Views on Relevance of Care of the Critically Ill Adult

The *Care of the Critically Ill Adult* (CoCIA) was almost universally seen as a useful and highly relevant module by participants and managers alike.

"I mean the Care of the Critically Ill Adult is something that I use everyday anyway. Um, that's, that's, I think all of our nurses should have done that course or should be doing that course. I think it's really important, really relevant to the work we do here. Um, so definitely, I'd definitely recommend that one."

PHT 2005 Staff, Interview 2

A number of staff in the 2005 cohort had already completed the CoCIA module previously. (Such staff were excluded from the 2004 cohort). However, generally staff tended to view the chance to repeat the module as a welcome revision and felt it took the pressure of the workload of the *Fast Track Programme* as they did not have to repeat the exam.

Views on Relevance of Clinical Assessment and Decision Making

The *Clinical Assessment and Decision Making* Module was generally acknowledge to be a theoretical and academic discipline which many of the cohort did not enjoy. However, a number stated that once they got back into practice and had chance to reflect on what they learned, it did actually assist their decision making, even if only in a limited way. They found that the module enabled them to think through their decision making process and highlight any areas of pre-conception or bias.

“So in hindsight, I probably appreciate it more than I did when I was doing it, because at the time it just seemed very ‘wordy’, and not easily related to practice at the time, but now I know it is.” PHT 2004 Staff Interview 4

However, another group of staff found it much harder to see the relevance of this module. They appeared frustrated and disinterested by the theoretical nature of the subject matter. They often contrasted the practical decisions they must make on a daily basis with the abstract theories of decision making:

“You don’t sit there and think right, I’m putting the oxygen on because, you see, I’m putting oxygen on because the person can’t breathe...hold on let’s just go through your past experiences” PHT 2005 Staff Interview 14

Views on Relevance of History Taking and Physical Assessment

Similarly the *History Taking and Physical Assessment* module also elicited a variety of judgements as to its relevance, but for different reasons. It is clear that students found this course stimulating and interesting and learned many new practical skills. The question of its relevance arose because many staff had not been able to implement skills learned into practice.

The ward based nursing staff interviewed are not generally required to undertake patient histories or physical assessments. These are usually carried out by junior doctors or nurse practitioners. Whilst for some nurses on relevant wards there is a potential for their role to develop to use some of these skills, for many there is no room for them to be implemented under current working arrangements. Therefore, participant and manager views as to the relevance of this module reflect the participant’s job role and the likelihood that they will implement the skills learned. Respondents identified that this module would be useful in the Intensive Care (ITU), Medical Assessment Unit (MAU) or Surgical Assessment Unit (SAU) environments or for nurse practitioners, but is less applicable to ward nurses under current working arrangements.

“I mean for somewhere like MAU, the assessment unit or the surgical assessment unit, yes it would have been fantastic...our nurse practitioners do the assessments so its something...they would be appropriate to go on. But for ward based staff, a lot of them were saying it wasn’t relevant.” PHT 2005 Staff Interview 11

There was tangible frustration amongst some staff that they had been put through a demanding module that they knew they would not be able to implement on the ward.

“That was a waste of time really.....it’s just a shame really because I really enjoyed that, I think I probably really enjoyed that part of the course but I don’t think it’s going to be used. And then a year or so down the line, it’s, you might as

well not have done it because you're just going to forget it all." PHT 2005 Staff Interview 7

Some respondents suggested in order to avoid problems of inappropriate training it would be a good idea to pick and choose the most relevant modules for each ward area rather than adopting the 'one size fits all' approach.

"But you should be able to pick what module would be useful to your area." PHT 2005 Staff Interview 7

"I would have been quite happy just to do the critical care part. The other two parts were not specifically for me." PHT 2005 Staff Interview 10

A number of managers also expressed doubts about the usefulness of the HTPA element of the course to their staff. One spoke quite strongly about the waste of time and resources involved in putting staff through inappropriate training, echoing the thoughts of some staff that it would be better to book modules individually rather than putting together a 3-in-1 programme.

"If I'm quite honest, it would have been better if we had just booked individual courses" PHT 2005 Manager Interview 4

A manager of the 2004 cohort suggested that instead of the combination of three modules it may have been better for staff to spend time in ITU.

"Well, I think (they) really focussed on putting these three courses, three modules together for the Hotspots and while for us (ITU) I think it was fine, for out there on the wards, perhaps not so. I don't think they have the exposure to the type of patient that we have, to meet the needs and I think what would have been better is that perhaps, some of those people out there on the Hotspots course, could have come in here to get a bit of experience" PHT 2004 Manager, Interview 4

On the other hand, for staff who do have the opportunity to take patient histories or perform assessments as part of their role, this module was highly valued and reported to have impacted on practice.

"Especially the physical assessment; I found that really helpful" PHT 2004 Staff Interview 1

"The physical assessment module has enhanced my practice" PHT 2005 Staff Interview 1

Comments concerning relevance, or otherwise of particular parts of the *Fast Track Programme*, related to comments outlined in the preceding section concerning the need, in some instances, for a more careful selection of staff to

educational interventions. A number of staff pointed out that ensuring that people will be able to implement skills learned would represent a better use of resources.

"If they're going to send you on a history taking and physical assessment type of course, again, make sure that the person you're sending on it is going to be able to use those skills afterwards." PHT 2005 Staff Interview 10

"I'd probably say, to get the best from the staff after they've attended it um, be more specific who you send on the course, I think, yeah and then you'll, you'll you know, you'll get the most cost effective you know way of dealing with it." PHT 2005 Staff Interview 10

SUHT

Relevance of the intervention

Staff who attended training in 2004 expressed varying views on levels of relevance. Staff who attended the *Advanced Life Support* and *Advances in Pain Management* courses reported that module content was completely in line with their requirements.

"I think it was all relevant. Yes, it was good. They are good days. You come out really refreshed and trying out all sorts of stuff that you had kind of forgotten about. And relevant as well." SUHT 2004 Staff Interview 1 (Advanced Life Support Training).

The manager of the above staff member also echoed her sentiments on the appropriateness of this education intervention, stating that it was of great relevance to the A&E environment.

Two staff, who attended different interventions, reported that they had not found their course content relevant. In the case of one nurse who was Hotspots funded to undertake the University of Southampton's *Care of the Patient with Acute Health Needs*, this was because the content of the module was too basic and covered only what she already knew. She also felt that the course description and outcomes were misleading.

"It was the guidelines to what we read the course was about was misleading and it wasn't what we thought....what the course was teaching us is what we were already implementing on a daily basis" 2004 SUHT Staff Interview 11

One ward nurse from SUHT who was funded to attend a M&K *History Taking and Physical Assessment* course, stated, in a similar way to many of the PHT cohort, that the module's content was not relevant to her job role. She recommended that in her environment the most appropriate critical skills training comes in the form of the *Care of the Critically Ill Adult* module and the *Alert* course.

"I do not see in my setting that a course like that would be necessarily beneficial to everybody. You know, I think perhaps things like the Alert course and the Care of the Critically Ill, would be more appropriate I feel." SUHT 2004 Staff Interview 2

On the other hand, SUHT 2005 staff who took part in the *Acuity Programme* were very satisfied with course content and relevancy.

"This has been completely, 100% relevant to what we're doing, so we've got more enthusiasm from that..." SUHT 2005 Staff Interview 3

"It was all done really well, I think all parts of the course, content, it was nothing really that you know sometimes you go to a study session don't you and think, 'what am I doing here?'. But there was none, there wasn't any that made me feel like that." SUHT 2005 Staff Interview 7

All the 2005 managers interviewed echoed their staff's views on the appropriateness of programme content. Managers also commented that a relevant and interesting subject matter had resulted in staff exhibiting increased enthusiasm and a willingness to implement and disseminate learning.

"People that were participating in this programme were clearly really riveted by what they were learning and were sharing it with their, um, colleagues in the department." SUHT 2005 Manager Interview 4

"The training is very relevant to her and something she can bring back to the ward" SUHT 2005 Manager Interview 3

4.3.2.2 Workload and Timescales

Many comments were received regarding the intensity of the workload and the timescales of the longer Hotspots interventions, which involved completing a number of modules, assignments and assessments. Key difficulties identified by respondents were the intensity/concentrated nature of the course, timescale and workload pressures.

PHT

Intensity

Just under a third of staff in this cohort commented on the intensity of the *Fast Track Programme*. The course was structured such that there was some overlap of modules, so that students sometimes struggled to manage workload from more than one module at once, for example to revise for exams and write essays at the same time.

"it seemed very rushed as well, whether that was just because we had one course... running straight after the other one. We were trying to revise for the

Care of the Critically Ill exams while we were trying to do the Clinical (Decision) Making and then we had to try to write that essay, say while we were doing the Physical Assessment..." PHT 2004 Staff Interview 8

Two of the PHT 2004 managers also commented that their staff had found the workload heavy going.

In 2005 it seems that the elements of the programme were spaced out more so that there was some time between the end of one module and the beginning of the next. However, many participants commented on the intensity of the course and the difficulties of combining the demands of study, work and family life.

Timescale and workload pressures

Some staff commented that they had needed to complete a lot of extra practice for the *History Taking and Physical Assessment* module, in their own time. A number also commented that assignments were due very close together and that the OSCE for the *Physical Assessment* and the exam for the *Care of the Critically Ill Adult* were within approximately 10 days of each other.

"I thought it could have been better organised. We seemed to have OSCEs and an assignment due in round about the same time and the re-takes of the OSCEs were due in the same time another essay was due in. I don't know whether they could reschedule it so that you could have an essay at the beginning after one course has finished and then do another one at the end so that you're not trying to get 2 in within a month of each other." PHT 2005 Staff Interview 6

A smaller number of staff stated that the timescales and workloads were acceptable and that they were able to pace themselves to meet all necessary deadlines.

"As long as you prioritise and focus on each thing as it comes then it's not that bad. It was hard because of working full time as well but I think the way they were organised wasn't that bad." PHT 2005 Staff Interview 13

Those who had previously taken the *Care of the Critically Ill Adult* module acknowledged that not having to retake this exam had made their workload easier.

SUHT

Timescale and workload pressures

Few staff or managers from the SUHT 2004 cohort commented on workload or timescales, reflecting the fact that in this year Hotspots was used to fund mainly short courses. However, all of the SUHT 2005 staff Acuity cohort spoke about the difficulties they faced in combining the workload from the programme with their normal working duties and their home lives.

"I found it quite overwhelming at times" SUHT 2005 Staff Interview 2

"In terms of maybe timescales and the assessment load was quite hard work, especially I've got a family, so it was very hard work. I had two weeks to give both essays in and on top of the heavy workload at work as well." SUHT 2005 Staff Interview 7

A number stated that they would have benefited from extra study days to enable them to work on assessments and do some extra reading, but they acknowledged that this would be hard to accommodate within the demands of their busy roles.

"I couldn't sit there and say I've already had a study day, I'll roster another study day in order to then do my work, because that wasn't feasible at the time" SUHT 2005 Staff Interview 9

Just under half of the cohort commented that although the original arrangement of one study day every one or two weeks worked well, the course had begun to drag with the introduction of extra days such as clinical skills facilitation and secondments with Outreach.

"The university taught days were perfect. It was, you know, one or two weeks in between each one, it was perfect. What hasn't flowed as well are the Clinical Skills days which are dragged out through the summer and now we've got practice facilitators, you know, we were never informed that this was going to go on". SUHT 2005 Staff Interview 2

In this context, it is also interesting to note that one staff member from the PHT 2004 *Fast Track Programme* and two staff from the SUHT 2005 *Acuity Programme* mentioned that they were also undertaking other training courses at the time they were involved with Hotspots. This obviously added to their workload and stress levels.

"I think I'm juggling too many balls at the moment, but that's probably because I'm not just doing that, I'm also doing a leadership programme" SUHT 2005 Staff Interview 4

4.3.2.3 Course Level

PHT

Just over a third of the PHT 2005 staff cohort commented that parts of the *Fast Track Programme* were pitched at too junior a level for those attending. This was attributed to the fact that in the previous year, junior staff did attend whereas in

2005 year most attendees were at F or G grade. Particular bugbears were the sessions on referrals and effective transfers.

"There was a session on um, phone calls to doctors, um, on how to hand a patient over. And I just, the whole group was like, why are we doing this, this is what we know how to do, um, and I think the whole group was frustrated by that" PHT 2005 Staff Interview 2

In terms of the academic level, some staff from the 2004 and 2005 Fast Track cohorts expressed that they felt nervous about writing assignments at Level 3. However, in the end, although they may have found it challenging, they felt they had succeeded in meeting the level. A number also commented that they had received useful support from their teachers in this respect.

"I've never done an assignment to a degree level before...only to diploma levels so, I found that quite hard, but once I was into it, it was fine. That, that wasn't a problem really. And the teachers were very supportive; they were really good like that." PHT 2005 Staff Interview 12

Two managers of the PHT 2005 cohort reflected on the academic level of training offered by university providers. They commented that the study skills required to work at level 3 can be a deterrent and/or a barrier for some nurses.

"A lot of it is the study skills really, a lot of it is assumption that people can study at level 3, there are a significant number of nurses who haven't done it and I don't think between the organisation and the university we have got it right yet. I still think it's that that puts people off and they struggle with it.....and I suppose going back to that other question about selection, I know one nurse did turn it down because of the assignments." PHT 2005 Manager Interview 1

SUHT

The theme of academic study at Level 3 was picked up by one nurse in the SUHT 2004 cohort (*Care of Patient with Acute Health Needs*), who felt that there was not enough support for students without the necessary study skills.

"I had not long since done the diploma about three years ago, so I had some idea of how to meet the learning outcomes, but definitely there were other people on the course who had not done that kind of study before and I felt their needs were not met. When we had the last day presentation it was obvious that they had misunderstood how to meet their learning outcomes." SUHT 2004 Staff Interview 7

Two of the SUHT 2005 staff cohort also mentioned that they had been daunted by or struggled with study at academic level 3.

"I think that was the one thing that was in the back of everyone's mind, because quite a few of us hadn't done any sort of level 3 studies, so it was a bit of a challenge I suppose" SUHT 2005 Staff Interview 4.

One SUHT 2005 manager questioned the need to work at academic level 3, suggesting that candidates should be given a choice as to whether or not they want to study at that level.

"I would question the academic side of it, if they are already working at level 3 if they've already got those credits and they don't need them and whether that would make it easier for some of the individuals and for people in the future who may want to undertake the course" SUHT 2005 Manager Interview 2

Those who attended the *Acuity Programme* were generally happy with the level of the course content. There was some mention of a neurology session which was too in-depth and a couple of sessions, such as a nutritional update, which were too basic. However, they stressed that they had chance to feed back these concerns in their course evaluation.

4.3.2.4 Course Structure

In respect of course structure, once again clear differences emerged between the views of the Portsmouth and Southampton cohorts, reflecting the different types of interventions running on the two sites.

Comments on course structure were made by staff attending both the *Fast Track* and *Acuity Programmes*.

PHT

In 2004, the *Fast Track Programme* was structured as 3 modules which ran separately, but with periods of overlap, so that one module started before the previous module had completely finished. This did not raise many comments from attendees other than workload pressures, which have been outlined above. One member of staff did mention that in terms of the order in which the modules ran, it would have been better to run CoCIA and HTPA consecutively, as these two fitted well together, rather than putting CADM in the middle of them, which is the way the course was arranged. This theme was reiterated by a number of staff in the 2005 cohort.

In 2005, in an attempt to resolve those issues and to achieve greater integration, the programme was restructured. Rather than running the three modules consecutively, the modules were more intermingled with each other, with similar topics from each separate module being presented together.

Two staff stated that they preferred this arrangement:

“So I think they’d obviously learned from last year, um, and made it better this year” PHT 2005 Staff Interview 14

However the majority of comments related to difficulties created by the intermingled course structure. It was often stated that the course structure was somewhat muddled, with it being difficult to work out which session was related to which module. This made essay writing and revising for the specific modules more complicated.

“it was so difficult keeping your notes organised. Um, your work organised and everything else, with it all jumbled in together” PHT 2005 Staff Interview 3

Staff who had previously completed the CoCIA module could not tell in advance which sections related to that module; therefore they sat in on some sessions which they would have preferred to miss.

A number commented that there was a lack of integration and flow between the various sessions and that some lecturers did not appear to know that students were attending any more training than their particular module. This resulted in duplication in some material, with the same subject matter being repeated, but from the point of view of the different courses. One student explained:

“...a lot of the sessions like, like we did a session on the heart in the morning for the Critically Ill (Adult) one. The afternoon we did it for the um, Physical Assessment course. And it was more or less the same thing” PHT Staff 2005 Interview 2

When looked at in a positive light, this was seen as a way to reinforce students’ learning. When looked at less positively, repetition of material was viewed as a waste of time.

This led a small number to suggest that it may have been better to leave the modules separate. One staff member did reflect on the fact that it would be difficult to further integrate without losing the three separate module approach altogether. However, one 2005 manager did comment that whilst greater integration had been achieved in 2005, more work was probably needed:

“It got better the second time round. The first time round it was very much the 3 modules, you know, a lesson on this module, a lesson on that module. The second time around they did try and link it together more. I do think that we could, if they were going to run it again, they could have gone one more step to integration..” PHT 2005 Manager Interview 1

SUHT

The *Acuity Programme* was also based on the content of two existing Southampton University modules (CADM and Care of the Patient with Acute Health Needs). Material was presented according to a systems approach and within that various aspects were considered, for example:

“...on some sessions we’d have a morning on say, renal physiology and then in the afternoon we’d have a scenario about a patient and it had a renal content in it, so we had to think about what we’d learned in the morning and go back to what this patient could have and what we were looking out for.” SUHT 2005 Staff Interview 1

Generally, staff were impressed with course structure and the way the two modules were linked together.

“They did systems approach, so we addressed each system. Our tutor, Chris McLean, basically designed it around the system, so yes, it was perfect.” SUHT 2005 Staff Interview 3

“The Decision Making with the Acute Care? Good combination.” SUHT 2005 Staff Interview 6

4.3.2.5 Lecturers/Teaching

PHT

Teaching was in the main positively evaluated by those attending Hotspots interventions in 2004. Teaching on the *Autonomous Health Care Practice* and *Advance Practice for Medical Admissions* courses was valued very highly. Students were impressed by supportive tutors, up-to-date and enthusiastic teaching.

“Yes, very good. It wasn’t one of those courses where you sit down and get given all this information, you kind of fall asleep within five minutes. He was so passionate about what he teaches and his past experiences in the medical profession, that he was really cool actually” PHT 2004 Staff Interview 7

Five out of the sixteen staff interviewed in 2005 made mention of teaching support. Two staff found their lecturers supportive, especially with regard to preparation for assignments and assessments. There were some negative comments amongst the 2005 and 2004 *Fast Track* cohorts in relation to: attitude of assessors, lack of current knowledge and lack of enthusiasm.

SUHT

Comments on teaching were at a low level amongst SUHT cohorts. The two comments received from SUHT 2004 staff were positive, as were those from the SUHT 2005 group.

4.4 Level 2 Data – Learning

In this section, we collected data from three sources:

- Self-rated skills assessments
- Staff and manager interviews
- Questionnaire data

As outlined previously, due to low response rates, conclusions could not be drawn from the self-rated skills assessments. Findings from interview and questionnaire data are discussed below.

4.4.1 Interview and Questionnaire data

A number of very positive responses were given in the interviews regarding the learning and skills with which students had been equipped as a result of their training. Effects on their practice were also discussed. The most common learning outcomes identified by interviewees were; confidence, assessment skills, interprofessional team working skills, noticing early signs of deterioration (and acting on them) and more knowledge/understanding. At a lower level, respondents also identified that the course refreshed existing skills, improved decision making and increased levels of autonomy amongst participants.

The 2004 questionnaire data confirmed those findings, showing that nearly 90% of all respondents felt that they are more confident within their role, with an equal spread of responses between the two Trusts. Confidence increase was not only related to feeling better equipped to perform within their role, but participants also noticed an increase in confidence related to their ability to make care-related decisions. 85.9% of respondents felt that the training interventions allowed them to make decisions regarding a patient's care more confidently. This supports the previous finding that participants felt more secure about performing in their role and is reflected, although not as strongly, in the interview data.

The questionnaires also confirmed that participants felt an improvement in assessment skills. 84.2% of respondents noticed that the course had provided them with additional assessment skills that aided in recognising symptoms of deterioration.

Whilst team working skills were not explicitly assessed by the questionnaire, it indicates improvements in performance when working with colleagues. 84.2% of

respondents, for example, felt that the training provision helped in communicating better with team members in an interprofessional team. One may assume that improved communication indicates an increase in team working skills, as communication is a vital part of team work. Besides the communication improvements within interprofessional teams, participants also noticed an improvement in communicating with patients and their families; 68.4% noted an improvement, whereby 3.5% did not feel that the training contributed to improving their communication with patients and their families.

Noticing earlier signs of deterioration also featured dominantly in the questionnaire data. Overall 87.7% of respondents felt that they have improved their skills in this area as a direct result of the training they received.

Other areas that were highlighted as successful learning by the questionnaire were the increase in skills for caring for acutely ill patients, the more effective dissemination of learning to colleagues, the initiation of simple treatments, and more efficient referrals. 84.2% felt they improved their nursing skills, whereas the remaining 15.8% felt that the training had neither a positive nor a negative impact upon their skill levels. 87.7% of respondents felt that the training has provided them with skills that could be shared with colleagues. 72% felt that the training intervention allowed them to initiate simple treatments in order to prevent further deterioration. A similar improvement was also reflected by 84.2% of the participants who felt that the training has improved their skills of making timely referrals. Most of the improvements in skills could be related to overall improvement in confidence that went alongside the improvements in skills and knowledge.

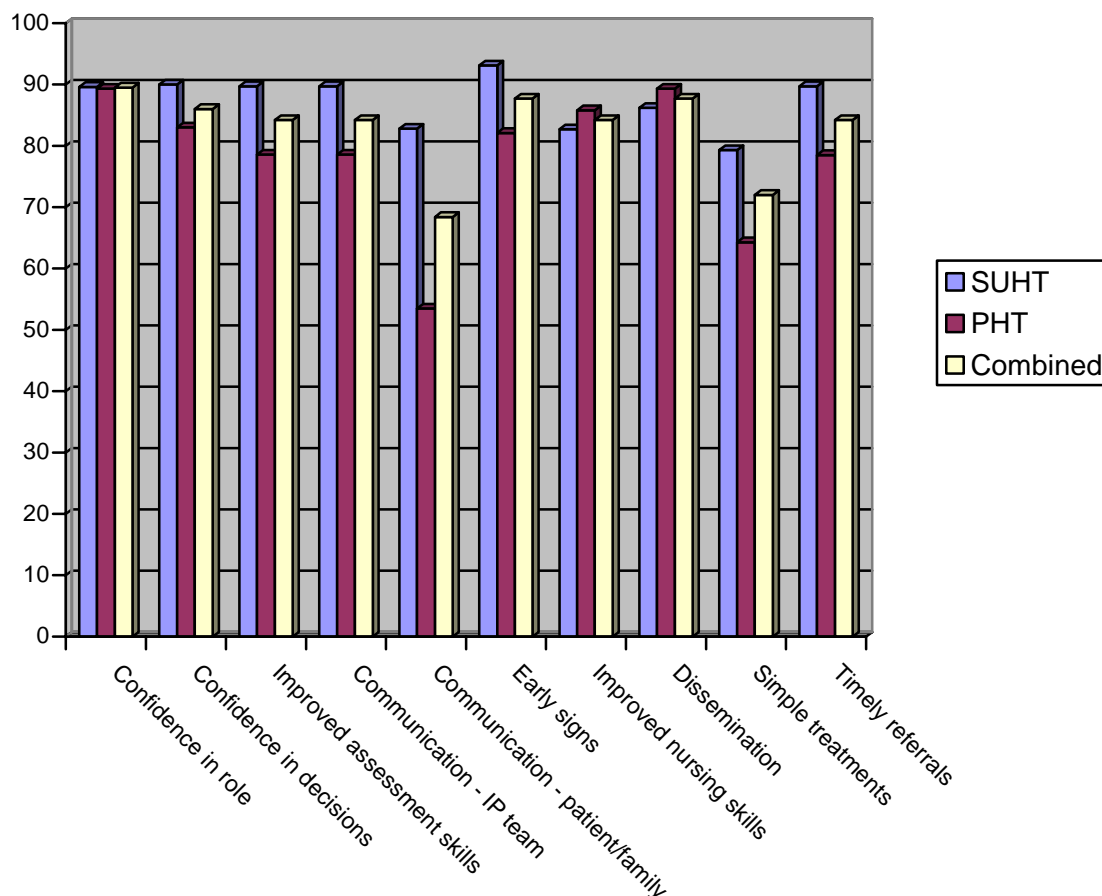


Figure 3 Achieved Learning (%)³

Similarly, attendees of the *Acute Care Skills Foundation Programme* evaluated their learning very positively. In this questionnaire, 88% agreed strongly/slightly that they had improved knowledge and skills to care for sick and deteriorating patients as a result of the course. 100% agreed strongly/slightly that since the course they had been able to recognise early symptoms of deterioration in a patient, that they had used simple interventions to stabilise or improve a patient and that they had promptly secured expert help for a deteriorating patient. 94% agreed strongly/slightly that they had been able to undertake a sound, thorough baseline assessment since attending the training.

Below is more detailed representation of the perceived learning that took place, based on the interview data.

³ Data represents sum of agree strongly/slightly

4.4.1.1 Confidence

PHT

Seven out of the eleven staff interviewed from the PHT 2004 cohort commented that their confidence had been positively affected by the training they received (this represented each of the training interventions as well). Staff cited improvements in confidence in the following areas: dealing with patients, trouble shooting and identifying problems, approaching (or standing up to) doctors and other interdisciplinary team members and advising junior staff. One member of staff stated that she had always experienced a lack of confidence, but that her training (*Autonomous Health Care Practice*) had reversed this and given her a new authority, along with her new role:

“Definitely, because my confidence has always been a problem anyway, but since I’ve done this course, at first I didn’t think I could do it, because there is so much hard work to do, but definitely, I’ve more confidence, when I speak to people I’ve got authority which is quite nice. It has helped a lot.” PHT 2004 Staff Interview 6

One staff member stated that her confidence was high already, so had not necessarily been affected by the intervention.

Managers of this cohort (4 managers of *Fast Track* students and one manager of *Autonomous Health Care Practice* student), all commented on the improved confidence of their staff members.

In four out of the five cases managers also commented that this increase in confidence had led to staff taking a more pro-active role in patient care by being willing to negotiate with doctors and put forward their own views/make decisions.

“I think it is a lot of the confidence, whereas I think before they might have stood back slightly, I think now they are more into working with the doctors and the sick patients and will actually give their reasons and will have the knowledge to back up their reasons, so that they can be a better practitioner.” PHT 2004 Manager Interview 2 (*Fast Track*)

“You really see people blossom into these really confident sort of people that are making really quite complex decisions and that’s one of the biggest things you’ll find. People that have gone through the course, it’s their confidence and their professionalism and they’re changing their practice.” PHT 2004 Manager Interview 3 (*Autonomous Health Care Practice*)

Just under three quarters of the PHT 2005 *Fast Track* cohort (11/16), expressed that they felt more confident to deal with critically ill patients as a result of the Hotspots programme. Increased knowledge and skills that they had acquired allowed them to feel more in control and confident in their own abilities.

"I think I'm just more confident in my ability to be able to manage somebody that's unwell." PHT 2005 Staff Interview 9

Nurses linked this increase in confidence to particular improvements in their nursing practice, including:

Acting more quickly as a result of greater self belief:

"It's just having confidence in your knowledge and your understanding to be able to act quicker than you possibly would have done before. It takes away the hesitancy." PHT 2005 Staff Interview 13

A calmer, more systematic and potentially safer approach to deteriorating patients:

"And before it would be sort of panic, panic, panic. But actually you're saying ok, he's going downhill. Gathering the information (right) and being able to articulate that to the right people (OK) and I think that's just come out of confidence. Where I'd be sort of thinking, oh my God (Yes), he's going off, what do I do?" PHT 2005 Staff Interview 15

The ability to approach and negotiate with doctors to get the best patient care:

"I think it's made me a little more confident in challenging other people and challenging doctors and not being afraid to you know, say what I think, as opposed to, you know, just being the nurse in the background" PHT 2005 Staff Interview 10

Others claimed an increase in confidence to advise junior staff and deal with patients' relatives.

Some interviewees gave examples of situations in which they have acted more confidently as a result of their training, such as giving oxygen to someone with Chronic Obstructive Pulmonary Disease (COPD).

A number of the managers of this cohort re-iterated the views of their staff. Managers reported an increase in self-belief making staff more willing to deal with more complex patients, take on more responsibility, teach others or become more assertive.

SUHT

There was a lower proportion of staff mentioning an increase in confidence amongst the SUHT 2004 cohort. Just over half of the 2005 cohort commented that they felt more confident as a result of the *Acuity Programme*. As with the Portsmouth cohort, the chance to refresh existing knowledge and gain new skills gave the nurses a stronger sense of self-belief and confidence in their own actions.

"A lot of what we did on the course, we had a basic knowledge of and obviously with the input from the course, the knowledge level has increased which gives you more confidence..." SUHT 2005 Staff Interview 8

Areas in which staff found this particularly beneficial were in obtaining doctors' attention for patients and in teaching and supporting junior colleagues.

"I think for me personally, what I'd expected to come out with is a lot of confidence to know what I'm talking about to staff, so that has really, so I've taken on a bigger role in the lead of the acute care on the wards." SUHT 2005 Staff Interview 7

All of the SUHT 2005 managers felt that their staff had grown in confidence as a result of their training. Managers perceived that staff were more confident and competent to deal with acute patients, taking the lead where perhaps they would not have done so previously. An increased confidence to approach medical staff was also commented on:

"What has come across to me quite strongly is, is their confidence in seeking senior support from the clinicians – medical staff, is their ability to articulate what the need is, in a way that a medic would not dismiss." SUHT 2005 Manager Interview 4

4.4.1.2 Assessment Skills

Many staff who attended Hotspots interventions felt that they had come away with improved assessment skills. Comments were similar across both sites.

PHT

9 out of the 11 staff who attended interventions in 2004 commented on their improved assessment skills; this represented all those who attended the *Fast Track Programme* (6 interviewees), both who attended *Autonomous Health Care Practice* and one who attended *Advance Practice for Medical Admissions*.

A number of respondents explained that they were now more skilled in the use of a range of assessment tools/procedures and were now able to understand the significance of their findings. Examples given were ability to interpret ECGs, blood gases, respiratory rate, urine output and spotting the signs of liver disease in patients' faces/eyes. Some of these nurses stressed how their training had equipped them to carry out a role similar to that of a junior doctor:

"It's just the assessment side, being able to put your hands on a patient and do those physical assessments in particular feeling for organ size and everything and really taking our knowledge which is essentially a nursing knowledge at whatever level and throwing it in as if we are kind of doctors really and taking it to

the next level from a medical practitioner's point of view and really it opened my eyes to things...a better appreciation of what I was doing and why I was doing things." PHT 2004 Staff Interview 7 (*Advanced Practice for Medical Admissions*)

One PHT 2004 manager (*Fast Track*) re-iterated the improved assessment skills of her staff member. Where previously this staff member had been under skilled in assessment she had now improved enormously, demonstrating the ability to look at all aspects of a patient's condition and history as opposed to being 'monitor fixated'.

Just over half of the PHT 2005 staff cohort (9/16) spoke about enhanced assessment skills. As with the previous year's cohort, specific examples of skills used in practice were cited. These included respiratory sounds and examining patients' hands.

Respondents spoke of adopting a more systematic and holistic approach to the assessment of patients by using the A,B,C,D (etc) technique.

"And it has also reinforced the systematic approach to problem solving so you are less likely to miss stuff and cover every angle. Some of it is really very useful." PHT 2005 Staff Interview 13

"My approach is a lot different; I'm more systematic in my approach to someone that's acutely ill." PHT 2005 Staff Interview 3

Two 2005 managers also felt that their staff were exhibiting improved assessment skills, one giving an example of her staff member responding to the findings of her assessment by challenging a doctor and ensuring the appropriate treatment for her patient.

SUHT

Eight out of the eleven staff interviewed from the 2004 cohort felt that they had improved assessment skills. Examples of skills in use were, respiratory assessment (chest crackles), monitoring of urine output and significance of blood pressure. A number of staff explained that they now had enhanced understanding of the significance of these changes and now looked at a patient more holistically. A couple of nurses felt that this had helped them move from recognising that something was not quite right to a more specific knowledge which could then be conveyed to doctors.

"I think I look more holistically now than I did before and I have more of a proper answer rather than say 'I have this feeling', I can give the doctor an answer and say 'look this is what I've found'." SUHT 2004 Staff Interview 9

One staff member gave an example of picking up that a patient was not fit for surgery due to her enhanced skills.

All staff who attended the *Acuity Programme* in 2005 commented that their assessment skills were improved as a result. Nurses often stated that they were using newly acquired chest assessment skills, interpretation of ECGs and blood gasses.

“A: I’ve never been taught how to do chest auscultation before, listening to chests, I’ve never been taught that. That’s not been part of my role as a nurse, so now I’ve walked away with a completely new skill.”

Q: Is that something you are able to put into practice here?

A: Definitely, I did it this morning.” SUHT 2005 Staff Interview 3

As with the PHT 2005 cohort, SUHT staff commented on the more systematic and holistic approach they now adopted (following the ABCD approach). A number also commented that they were able to collect more information and go to the doctor with a clearer idea of the patient’s problems. This systematic approach has also helped staff to prioritise between patients and to decide which ones need the most urgent attention. It has also made some staff feel calmer and more in control.

“It’s just reminded me that no matter how bad the whole scene is, you know, step back and go through methodically before you do anything. Don’t jump to conclusions.” SUHT 2005 Staff Interview 2

4.4.1.3 Interprofessional Working

It was clear that staff and managers felt that skills and knowledge gained through Hotspots training were having positive effects on interdisciplinary team working. This was mentioned more often by the Portsmouth cohorts, but types of comments made were very similar across both sites. Numbers of staff commenting on the effects on interprofessional working are shown below:

PHT 2004 staff:	8/11	SUHT 2004 Staff:	6/11
PHT 2004 Managers:	3/5	SUHT 2004 Managers:	0
PHT 2005 staff:	12/16	SUHT 2005 Staff:	4/9
PHT 2005 Managers:	1/5	SUHT 2005 Managers:	2/4

The following effects on Interprofessional team working were noted:

Improved referrals: Nurses report obtaining more positive reactions from doctors as a result of improved ability to present them with relevant, concise and clear facts about a patient:

"It was great because there was one incident actually, not long after the course. We had a patient on the ward who, as a nurse, I could intuitively tell was going off. A nurse can know all of this, but without that detailed knowledge of how to explain it, it can sometimes be difficult for the doctors to take you seriously. So it was great because I was able to go round and say look, I have listened to his chest, explained what was going on.....and able to present it in a way that the doctors are used to presenting it to each other and it was superb and they were instantly down there with the patient whereas before there could have been a bit of a battle to say: Come and see this patient." SUHT 2004 Staff Interview 3 (History Taking and Physical Assessment)

More discussion with doctors: in terms of discussing patients' care, advising junior doctors and challenging decisions with which they disagree.

"And you can kind of speak to the doctors on more of a level as well" PHT 2005 Staff Interview 5

"So I find there's more dialogue between the doctors and myself, which has stemmed directly from this course." PHT 2005 Staff Interview 16

Supporting doctors: A smaller number of respondents felt that Hotspots nurses were now able to relieve some of the doctors' workload by performing a certain amount of assessments and tests themselves. This could positively effect patient throughput and help towards the reduction of doctors' hours.

"But everything's there and they can just come along and go, ok, ECGs done, bloods have been done. Excellent, what bloods have you done, well done etc, you know. I've done the donkey work and they're sort of like, OK let's start treatment..." PHT 2005 Staff Interview 14

4.4.1.4 Notice early signs of deterioration and act

A high proportion of staff attending training in Portsmouth stated that, as a result of Hotspots training, they detect signs of deterioration earlier and act to avert them quicker. A lower percentage of the Southampton cohorts also made similar comments:

PHT 2004 staff:	8/11	SUHT 2004 Staff:	4/11
PHT 2004 Managers:	1/5	SUHT 2004 Managers:	0
PHT 2005 staff:	10/16	SUHT 2005 Staff:	2/9
PHT 2005 Managers:	1/5	SUHT 2005 Managers:	1/4

Armed with an improved understanding of the significance of early signs of deterioration, staff reported that they are now able to identify and act upon these signs at an earlier stage, thus preventing further deterioration.

"I think I act much faster because I'm much more aware of things. It's almost like being able to see what's happening, so you act on the earlier cues, whereas I think we all had a tendency to go, 'I think I'll just check again' and then all of a sudden the urine output has dropped off or something which should be one of the later signs. So I think you just act earlier on observations." PHT 2005 Staff Interview 13

Especially in Portsmouth, respondents were able to give numerous examples of serious conditions which had been spotted at an early stage as a result of enhanced skills. Examples included a ruptured aortic aneurysm and spinal cord compression.

Staff were clear that this has made their patient care safer and some spoke about passing this knowledge on to other members of staff on their ward. One member of the PHT 2005 Staff cohort reported that wider dissemination of Hotspots knowledge has had a very positive effect on her ward area:

"I think pretty much every patient has had every problem dealt with straight away and um, and sorted out, and they're all quite well in there at the moment, touch wood. Um and I think that's the level of education showing that we need everybody doing it on here because of the level, the nature of the surgery." PHT 2005 Staff Interview 2

4.4.1.5 More knowledge, understanding

The following comments were made in relation to nurses obtaining a wider knowledge base and enhanced understanding as a result of Hotspots training.

PHT 2004 staff:	4/11	SUHT 2004 Staff:	1/11
PHT 2004 Managers:	1/5	SUHT 2004 Managers:	0
PHT 2005 staff:	5/16	SUHT 2005 Staff:	2/9
PHT 2005 Managers:	1/5	SUHT 2005 Managers:	3/4

Respondents spoke about participants' knowledge bases being expanded and any gaps in theory being filled. This gave them improved understanding of the body, disease processes and why they carry out certain nursing procedures. This was sometimes contrasted with a partial understanding before the course:

"I think she just has the knowledge to back it up now, whereas before maybe she would perform a task but not really know what was behind it, whereas now she is more informed in that." PHT 2005, Manager Interview 2

As mentioned in the previous section, this knowledge acted to build participants' confidence to talk with doctors, teach colleagues and deal with acutely ill patients.

“..there were so many light bulb moments on the course, when you go ‘right, now I really get that’, so it’s made me a lot more confident in feeling I fully understand things and being able to discuss them with the team of doctors or make referrals to people.” PHT 2005 Staff Interview 4

4.4.1.6 Other observations cited as evidence of learning

Three other lessons or outcomes achieved through Hotspots training were also cited, although in general by a smaller number of respondents. 11 respondents felt that Hotspots training had acted as a ‘refresher’ rather than imparting new knowledge, for example in the case of experienced A&E nurses who were funded to undertake refresher *Advanced Life Support* courses. A small number of comments also related to participants’ improved ability to take decisions (9) and act more autonomously (6).

4.5 Level 3 Data – Application and Implementation in the workplace

As outlined in the previous section, when respondents were asked to talk about skills and learning they had acquired through Hotspots training, they also talked about the effects of this learning on their practice. For many respondents, a skill was not ‘completely’ learned until it had been implemented in practice and the nurse was completely confident to use it without supervision. In line with this, a series of ‘Competency statements’ were attached to a number of Hotspots courses. Candidates were required to perform the skills listed on the statements in front of an assessor before being deemed competent to exercise the skill in practice.

One nurse explained it like this:

“There’s a lot of skills that I need to develop and practice. Um, so it was sort of like just the key in the door really the course...just to give you the basics of the skills, um, and I need to go and work now and practice and start recognising problems...” PHT 2005 Staff Interview 2

It emerged that in some cases, particularly for Portsmouth’s *Fast Track Programme* (2004 and 2005), parts of what had been taught on the course were being lost due to lack of opportunity to implement skills into practice. As discussed in the sections on ‘Relevance’ (4.3.2.1) and ‘Selection of Staff’, (4.2.2.4) this was particularly the case for skills acquired in the *History Taking and Physical Assessment* module.

In order to examine this in more detail, this section will look at mechanisms which worked positively to help staff bed-in and apply knowledge and will then go on to

look at barriers to the full integration of learning. Because there are some marked differences across the sites, Portsmouth and Southampton cohorts will be discussed separately.

Before looking at these differences in detail, the differences in regards to learning implementation are also reflected in the questionnaire data collected from the 2004 PHT and SUHT cohorts. Whilst most respondents were able to provide evidence of the implementation of skills by citing examples of improved patient assessment and patient treatment⁴, some differences emerged when looking at the exposure to critically ill patients.

It was established earlier in the Report that questionnaire respondents from both cohorts (SUHT 2004 and PHT 2004) found the course relevant to their practice. Considering that learning in this study was seen as the application of skills, one may expect that relevance of skills learning reflects the need to use those skills frequently. When asked about the frequency of using the newly acquired skills, 75% of PHT 2004 staff were required to use the skills daily; in SUHT, however, this number was considerably lower with only 44.8% using the new skills daily. 21.4% of staff used the new skills weekly at PHT which is similar to the responses from SUHT. The remaining staff (3.6%) were using those skills on a monthly basis. This number is significantly larger in SUHT, whereby 17.2% of respondents only use those skills monthly, with the remaining 17.2% using learned skills less frequently. One may argue that the lack of use indicates a lack of relevance of the taught skills, which is, however, not reflected in the data.

In order to ensure consistency, a similar question was built into the questionnaire to corroborate the participants' answers. When asked about the frequency of exposure to patients that show symptoms of a critically ill patient, 67.9% of PHT staff are exposed to patients requiring critical care daily. In SUHT only 34.5% felt that they are exposed to critically ill patients on daily basis. 21.4% of PHT staff said they were exposed to this type of patient on a weekly basis; 24.1% of SUHT staff made this assessment about exposure to situations involving critically ill patients. However, the remaining staff (10.3%) stated that they have a less frequent exposure to critically ill patients, i.e. monthly or even less. In SUHT this number is nearly four times as big, with 41.2% of staff feeling that they are exposed to this type of patient monthly or less frequently.

It is apparent that there is a discrepancy between the perception of how often skills are used and how many situations involving critically ill patients are presented to staff – this discrepancy is consistent across SUHT and PHT. However, of more interest is the difference between SUHT and PHT in regards to the frequency of using those skills and being exposed to patients who are critically ill. This Report is in no position to comment on the reasons for this

⁴ The nature of the question allowed for any examples participants felt best represented their learning. Thus, the coding resulted in a large number of different examples that were difficult to distil into broader, meaningful categories.

difference, but it raises the question of why nurses in SUHT considered the training relevant, if in fact they are not exposed to situations that require the skills.

4.5.1 Conducive factors in PHT

In Portsmouth, staff and managers interviewed reported a number of mechanisms which had been used to successfully implement and bed-in learning acquired during Hotspots training. These are listed below:

4.5.1.1 Relevant skills for current job role

It was clear that one of the most effective ways for skills to be implemented into practice is when the skills learned fit easily in to a nurse's everyday job role and serve to enhance normal practice. As discussed in an earlier section, this was generally the case for the content of the *Care of the Critically Ill Adult* module.

"I think care of the critically ill is very useful for staff out on the wards." PHT 2004 Manager Interview 4

"We have lots of liver disease and cancers but our patients do have the potential, we have 30 beds and I would say at least 15 of those at any time have the potential to go off, so I think it does slot in nicely purely for the fact that you are more aware of that fact so you are aware of the use of your knowledge and skill constantly. I think it is a very good ward for those skills." PHT 2005 Staff Interview 13

To sign competencies off for this module was not regarded as a difficulty because there was a ready availability of senior staff who had themselves gone through this course and were able to act as assessors.

4.5.1.2 Teaching role/teaching sessions

This was identified as an important way for students to consolidate their learning by transferring it on to other members of their department. This also served to enhance skills levels in general. This way of bedding-in and transferring knowledge was mentioned by 2/11 PHT 2004 Staff cohort, 4/5 PHT 2004 Managers, 12/16 PHT 2005 Staff and all of the PHT 2005 Managers. Some staff performed an informal teaching role, for example mentoring student nurses or advising junior colleagues, whilst others had adopted a more formal teaching role as a result of the education intervention.

“..so she actually comes in on a teaching role to work with junior staff looking at all the skills that she’s developed and teaching the other staff on the ward, she’s also taken on, because of the new competencies...she’s actually mentoring people through the competencies and using that.” PHT 2005 Manager Interview 2

4.5.1.3 Time with Assessors

When staff were able to spend time with assessors and/or mentors they valued this time very highly. Time spent with assessors allows people to sign off their competency statements which permits them to fully implement skills in practice.

“She was very helpful because she had just done the History Taking part of the course ...as she was able to assess me” PHT 2004 Cohort Interview 1

Access to assessors appeared easiest for those situated on A&E, on Intensive Care or those operating as Nurse Practitioners. Three A&E nurses interviewed all had access to a number of assessors and mentors and described themselves as ‘exceptionally well supported’. Difficulties experienced by some staff in accessing assessors will be discussed later.

The data gathered through the questionnaires supports this finding. The questionnaire explored if participants were satisfied with the support they received. 78.6% of the PHT staff surveyed were satisfied. For the remaining staff the questionnaire allowed for comments on what type of support they would have liked to enable them to implement more of the newly acquired skills. 17.9% of staff that were dissatisfied with the support provision mentioned more time with a mentor as the support that would have aided them in implementing the new skills. The remaining staff did not provide specific comments of required support.

4.5.1.4 Time spent with Outreach or on secondment

Although this factor was mentioned by relatively few respondents, the opportunity to spend time with Outreach or on secondment to other departments was a way for nurses to bed-in the skills they may not use routinely as part of their roles and achieve related competencies.

4.5.1.5 Change in job role/Expand role

A number of respondents stated that they had changed role as a result/partly as a result of their Hotspots training to a role which allowed them to implement all the skills they had used. Others stated that they were expected to take on more complex patients or more responsibility, which was echoed by their managers as a way for staff to implement learning.

“Well, I think it is just encouraging them really to take the plunge and look after patients who have more complex needs than the patients they had previously cared for.” PHT 2004 Manager Interview 4

In some areas, such as the MAU, there was talk of plans to develop specific areas (e.g. ‘trolleyed’ areas, observation bays or surgical high care) where staff would be able to spend more time with patients and implement their *History Taking and Physical Assessment* skills. Staff expected that their training would equip them for this practice.

4.5.1.6 Supernumerary time

The two staff who attended the *Autonomous Health Care Practice* training were supernumerary for the duration of their training. This opportunity was highly valued as it allowed students to spend time on wards, observing and learning, whilst released from nursing duties (‘not being included in the numbers’). This meant by the end of their training period they were ready to take on the role of Emergency Nurse Practitioner, without needing further time to ‘bed-in’ skills.

“They’re full time students, they’re not counted in the numbers, so we’ve got the luxury of being able to let them do that, and then a year later we have a safe practitioner that can then practise. So it’s worth putting the work in, the commitment to get the rewards in the end.” PHT 2004 Manager Interview 3

4.5.2 Barriers in PHT

Respondents identified a number of barriers to the application of their learning in the workplace. Five important factors emerged relating to finance, job roles, achieving competencies, skills facilitation, and supportive environments. In the following section, these responses from PHT are elaborated.

4.5.2.1 Current Financial situation

This was identified as a major barrier to the successful application and implementation of learning by the following respondents:

3/11 PHT 2004 Staff	5/5 PHT 2004 Managers,
7/16 PHT 2005 Staff	3/5 PHT 2005 Managers

Respondents identified that financial pressures had resulted in staff shortages and a huge pressure of work on the reduced workforce. Increased pressure of work meant that staff had less time to practice new skills, assessors had less time to spare to help staff with new skills, staff were less likely to be released to

spend time in other departments and there was less funding available for training overall.

"I think what I would like is to be able to achieve my competencies with less of a work load. Just more time, you know in an ideal world, I would be doing a lot more physical examination if I had the time in the day to do it. Everyone is facing the same situation; the workload is more there are staff issues and bed issues."

PHT 2005 Staff Interview 4

Whilst acknowledging the pressure the Trust is under, a number of respondents did suggest, however, that if full use is not made of skills acquired in Hotspots training, this would be a waste of money in itself.

"That is very much on hold until such time as we sort out our staffing problems, our bed situation, we do have a very bad bed situation at the moment, so everything like that is on hold....So it's very up in the air at the moment. But that is there in future, so when we're settled I can then say 'right, this is what I need to do, otherwise you have wasted all this money sending me on this Hotspot programme'." PHT 2004 Staff Interview 11

The questionnaire data presents a different aspect. Over 40% of 2004 PHT staff acknowledged that they got allocated study time to undertake the training. Furthermore, the questionnaire enquired about the overall satisfaction with the support received (including time) with a mean score of 4.18 (out of 5), indicating that staff felt generally well supported. However, we believe that this satisfaction stems from the support individuals have received from their managers. The above discussion, however, needs to be placed within the context of the organisation as a whole. The lack of staff results in a lack of time to practice, rather than time to study. Thus the dissatisfaction drawn from the interviews refers to the lack of time available to implement and apply new skills and therefore does not express a direct dissatisfaction with managers, but the organisational situation.

4.5.2.2 Job role not conducive: would need to change practice to implement

As already touched on in previous sections of the Report, a significant proportion of respondents, mainly amongst the 2005 cohort, reflected upon the difficulty of implementing into their current roles the skills learned in the *History Taking and Physical Assessment* module.

1/11 PHT 2004 staff

2/5 PHT 2004 Managers

12/16 PHT 2005 Staff

4/5 PHT 2005 Managers

This is due to the organisation of patient care on busy general wards, where nurses have a case load of patients and cannot give the individual attention necessary to undertake patient histories or assessments. In this situation, doctors undertake these functions.

"I'm not sure the physical assessment module is as useful to the staff out on the wards, because I don't believe they have the time to spend on the patient....out there they'll have whole case load and they couldn't possibly go around and spend that time making the assessment." PHT 2004 Manager Interview 4

A number of managers reflected on the fact that practice would have to be changed significantly in order for ward nurses to use these extended skills. This represents a major barrier to their application and led some to question the necessity for this level of knowledge and reflect upon the theory-practice gap.

"I'm keen for people to use it whenever they can use it but I think nursing being what it is and what it has been you almost have to break the mould and develop something new.." PHT Manager 2005 Interview 2

"It is almost like the educational system and the nursing system aren't co-operating together. One is going at one speed and the other is going at the other speed and nothing is very integrated. We're educating people for education's sake and it doesn't implement itself into practice very well." PHT 2005 Manager Interview 2

"I'm quite blinkered in my views, it doesn't hurt to have knowledge but sometimes there is too much but we only need to know certain amounts to get what we need to be done." PHT 2005 Manager Interview 4

Linked to this, a number of respondents (especially managers) commented that they had not received any guidance from the Trust on how skills were to be implemented onto wards, or outcomes measured leaving some feeling at a loss as to how to proceed.

4.5.2.3 Difficulty of achieving competencies

A number of staff stated that although they were keen to use the skills they had learned in HTPA and that these were relevant to their area of practice, difficulties in achieving the attached competencies and gaining practice was preventing them from doing so.

"Once you gain a new skill, you then have to find someone who's competent to assess you and then you have to produce a portfolio of work to say you're competent in doing so...and that applies with almost everything. But it's very

hard, once you've done the exam and you come back to your workplace, to get the experience up" PHT 2005 Staff Interview 11

Respondents stated that it was sometimes difficult to find colleagues who were qualified in these skills to assess them and if qualified people were available, it was not always possible for them to make the time.

In many cases, it was left completely up to the individual who had undertaken the course to find assessors and arrange practice sessions in their own time.

"I have a feeling that it is down to me, because it's sort of, you know, part of my development" PHT 2005 Staff Interview 3

"Um, I mean I'm sure I could work with the Outreach service, but that would be in my own time." PHT 2005 Staff Interview 9

Some staff from the 2004 cohort suggested that assessors were supposed to have come to check up on the cohort, but that in fact, nothing had been forthcoming.

"When we left the course, they originally said there would be someone who would come round and they would arrange it and they would check our competency, but we never actually saw anybody....I think it was basically forgotten about really." PHT 2004 Staff Interview 2

Difficulties and lack of guidance around completion of competencies left some staff and managers feeling frustrated and confused, especially when they were keen to get on and implement *History Taking and Physical Assessment* skills.

"I think that is going to have the most bearing on my job when I manage to figure out what I'm meant to do with the competencies and when I am deemed competent" PHT 2005 Staff Interview 1

"You just don't feel that you've ever got the support of people above. Um and I know that unless you've got that support and somebody wanting you to keep, use that skill, then you're basically flogging a dead horse." PHT Staff 2005 cohort Interview 7

This lack of clarity around completion of competencies may in part be due to the fact that the original PHT course facilitator, who was in charge of overseeing Fast Track students, left post whilst the first cohort was running. There was a sense that this left a gap for students, who no longer had a clear idea of who they should turn to for advice or guidance.

4.5.3 SUHT

In Southampton, the picture emerged somewhat differently. Unlike many of the PHT 2005 cohort, *Acuity Programme* students did not express frustration regarding course competencies/practising skills. This may be because as part of the *Acuity Programme* students spent time with Clinical Skills Facilitators whose role it was to oversee the bedding-in and implementation of skills into practice. They also had time scheduled in to spend in HDU. This cohort also had a liaison person whose job it was to oversee the cohort and follow up on their progress.

The questionnaire data corroborates those findings by providing a mean score of 4.34 (out of 5) of overall satisfaction with the support received by management, and a mean of 4.07 about the satisfaction with support provided by team members. The latter score was insignificantly higher in PHT with a mean score of 4.15. The data needs to be seen to refer to managers and teams close to the participants. The data does not reflect the general support provided by the organisation.

Nevertheless staff did comment on some barriers they had experienced to the implementation of learning into practice, these will be discussed below, after a reflection on the mechanisms found useful in this regard.

4.5.3.1 Clinical Skills Facilitators

Respondents identified that spending time with the clinical skills facilitator had been helpful in a number of ways, such as looking at competencies, dealing with queries, helping to reflect on practice and on a busy ward, sometimes just as an extra pair of hands.

"She said it has been very good for them to actually come and work with them in practice and to consolidate some of the stuff they had learnt in class." SUHT 2005 Manager Interview 2

Unfortunately though, all staff expressed that it was difficult to commit time to spend with the clinical skills facilitator, due to the many competing demands on their time. Another problem was that on a day when a practice session was scheduled in, there were not always the 'right' kinds of patient on the ward (i.e. ones that allow them to practice their acute care skills). Therefore a number of staff stated that they had found the time spent in HDU particularly useful because they had been away from the demands of their role and assured of the availability of critically ill patients!

"I did spend a morning with him on HDU, which was good because it took me away from the ward, and actually that was very beneficial and I'm going to do another one of those actually, because I've got to make up some in the next few weeks. But I just found it difficult for him (Clinical Skills Facilitator) on the ward

too, just because sometimes as your role of managing, you're not just there, you know, you're also trying to juggle a lot of balls too in order to, you know, you're trying to think about what is going on later in the day, and get staff on breaks, teaching and all of those sorts of things, and it can just be very frustrating at times." SUHT 2005 Staff Interview 9

4.5.3.2 Positive and supportive environment

The most commonly mentioned support mechanism, which enabled people to put into practice what they had learned during their training, was a manager who supported them in implementing whatever changes/initiatives they felt to be necessary on their return to the ward.

"I think within the Directorate we're very good at trying to turn over what we've learned so we have our own practice development nurse, link nurse, we have an education facilitator and so they take things back from courses and encourage people to put it into practise. Quite an open culture in the Directorate that if people do have an idea there should be ways they can bring it up and get involved, so I think on a Directorate basis we're very good at people coming back especially those who are you know, an independent person but perhaps they've got motivation, and come back and say, 'I've learned this and would like to do this'" SUHT 2004 Manager Interview 4

"I think from a management point of view, just being given the free rein to instigate any changes I wanted to" SUHT 2005 Staff Interview 6

This could include developing a teaching programme, for example by making sure MEWS is being implemented properly.

Smaller numbers of staff mentioned that they had valued time spent with Outreach or that they had been supported/given the opportunity to work with poorly patients.

"the Outreach Team, we have the Outreach Team here, who we've worked with us very closely on our course, and they all know us very well, so I found great support from them" SUHT 2005 Staff Interview 3

4.5.4 Barriers in SUHT

4.5.4.1 Current Financial Situation

As in PHT, some staff and managers at SUHT acknowledged that current financial restraints acted as a barrier to the full implementation of learning acquired during training. This was at least partly due to their heavy workloads reducing the time they have to transfer skills to colleagues, thus embedding learning into wider practice.

“They invested that much in me and I’ve got that much experience, I should be allowed to oversee my ward, supervise, co-ordinate so I could put myself where I needed to be or allow somebody to learn something or teach something or organise something, instead of having to take Having to look after ten patients because there are only three of us trained” SUHT 2005, Staff Interview 2

A number stated for the above reason that they would prefer to be in a supernumerary role, which would enable them to carry out staff training and supervision without having to be counted as part of the numbers.

“And there are arguments, if you're there you can be in numbers and you're saving agency money, but in the long term you're paying one agency shift money, but the input you're giving to your junior staff could be far more valuable than sending them on four study days and it would be a lot cheaper.” SUHT 2005, Staff Interview 4

A small number also commented that due to financial restraints the budget is not available to get enough cover to allow people to spend time on study days or secondments.

“And it’s difficult, because again I think again there is an element of maybe, like I said before, about more investment, but then that’s not there at this moment in time because they are struggling to achieve that financial balance. So I think there is one hand where they’ve actually supported us in order for us to do the course, which I think all of us appreciate. I just think it was difficult to try and um maintain the study days, and try and look at, but then that’s also because again, I think we’re all nurses and feel we will always be pulled to the clinical area too, and that’s just, I find, if I’m on a study day and I know the ward is short, I know where I would rather be, and that’s just because that’s how I am. I don’t know, it’s difficult. I think the fact that mainly, you know, by supporting people to do the course” SUHT 2005 Staff Interview 9

Similar to PHT, the questionnaire data provided a different perspective in that 41.4% of staff received time off work as study leave. The mean score for overall satisfaction with the support received through management was even higher than PHT with a value of 4.34. As mentioned previously, this refers to the satisfaction of staff with their direct managers and teams, rather than organisational arrangements and procedures.

4.5.4.2 Lack of Organisational Support

Some respondents expressed that whilst they felt supported by their ward and direct management, they felt less supported by the organisation as a whole. Again this resulted partly from the current financial climate, which sometimes gave respondents the feeling that each directorate/ward was struggling on in isolation, rather than pulling together as an organisation.

“So I do feel very supported as far as the unit is concerned. As for the bigger picture, I’m not quite so sure, I’m not sure what’s going on and what exists there, because I haven’t had to reach far out of my unit.” SUHT 2005 Staff Interview 8

“I don’t think (it’s) the Trust itself that supports the staff, I don’t think it’s the Trust as a whole it is down to the individual area they are working in, otherwise you are spreading the staff too thin and staff have a responsibility in their own area that they are working in. I don’t think many areas get that opportunity to cross, to disseminate information across directorate because each directorate is so inward focused especially with the turmoil the Trust is in. So I think the directorates are tending to be keeping their staff in one area and keep the information in one area and there is not much opportunity to discuss anything with other directorates. So maybe something like action learning sets following on from this to bring an issue that arose what you did about it and what other people did about it.” SUHT 2005 Manager Interview 1

A small number of respondents suggested that any chance to come together across directorates may help to counteract this feeling of isolation, by sharing good practice and trying to find solutions to shared problems.

4.6 Level 4 Data – Business Benefit

In this section, we reflect on the business benefits arising from the training interventions. A business benefit, in the context of health care, is usually defined as one which contributes to financial or other savings or improvements to organisational operations. Many of the learning outcomes discussed in the previous section could be seen as business benefits, such as having practitioners who are more confident, knowledgeable and equipped with improved skills for the

care of the critically ill. Respondents often identified their learning as a business benefit in itself:

“Um, benefits for the organisation. I think that they’ve got, they’ve got somebody who’s got a, a broader knowledge base. And somebody who’s more efficient when they’re at work um, so that I’m not particularly calling doctors all the time when you know, I’m concerned about a patient. I think I’ve got confidence now to look after them and alert somebody if need be. And that’s what they’ve gained from me.” PHT 2005 staff Interview 10

Managers and staff across both sites raised 4 issues as having a significant impact; improvements in care, reduction in waiting times, better use of doctors’ time, and staff satisfaction. Each of these is discussed below in more detail. In addition, the use of Key Performance Indicators (KPIs) was perceived by the WDD as a way in which business benefits might be monitored and assessed. As a consequence, we also consider these in this section of the Report.

4.6.1 Better/safer patient care

Skilled staff are able to provide better standards of care for patients in terms of spotting deterioration early, keeping them healthier and shortening their stay in hospital. This is obviously beneficial to the patient, but also has a positive financial implication for the Trust.

“Well, patient care. Just so that their care is the best that we can manage, and to help eliminate any potential problems and get them well and discharged home, so if we are able to do that and we are able to assess them more regularly, then their stay in hospital is obviously not going to be quite as long because we are aware of it all, and then they can get more patients in, I suppose!” SUHT 2004 Staff Interview 4

“Patient care is better. As I say we are the only place in the country where they don’t go to ITU they come back to the ward and that enables us to provide the patients with continuity of care and without these courses and people developing their skills this wouldn’t happen so the fact that we are actually saving an ITU bed and giving the patient continuity of care and not delaying their stay in hospital so there is financial benefit and patient care benefit.” PHT 2005 Manager Interview 5

4.6.2 Reduction of Waiting Times/speed up patient throughput

Staff from A&E and MAU/SAU stated that equipping nurses with assessment and history taking skills should significantly reduce patient waiting time and improve continuity of care. This is important in light of government 4 hour wait targets. Staff who undertook Autonomous Health Care Practice training were very clear

that the introduction of Emergency Nurse Practitioners had had a proven effect on waiting times and that this ensured continuance of funding for this course. For staff in MAU, there was more a feeling that this should be the result once skills were being used and implemented fully.

“Basically, benefits, one of the main benefits really is, is reduction of waiting time for minor injuries patients. Many years ago before nurse practitioners worked here it used to be just basically down to the doctors who saw patients and we could have patients waiting for many hours to be seen by doctors and since they’ve started having nurse practitioners in the department those waiting times have gone down quite dramatically. So that’s one of the roles that obviously we have played a big part in.” PHT 2004 cohort Staff Interview 10 (A&E)

“I think if they can arrange it properly so the skills can be used competently, then, well, it will help the doctors really. I know they are going to have to go and check what we have done ourselves, but they can already be starting to think along the lines of treatment, so we can be prepared for what the doctors are going to want when they see the patient, so that should speed things up a bit.” PHT 2004 Staff Interview 2 (MAU)

4.6.3 Reduction of Doctors’ Hours

It was also suggested that nurses with enhanced skills are able to reduce doctors’ workloads, thus contributing to the reduction of their working week, in line with government guidelines.

“Um, and the doctors take, mainly on the whole are quite supported by, by the thought that you’re willing to say right let’s get a solution, let’s make a plan of action now (right) Um, obviously with their reduced hours they all sort of want to be home by five o’clock. So that if they can prevent the problem from happening, it means that they get home on time. But it means the patient also gets a better quality of care as well.” PHT 2005 Staff Interview 2

4.6.4 Staff Satisfaction

Staff satisfaction was perceived to be improved on two levels. Some managers identified that trainees themselves were more satisfied as a result of training – they felt ‘invested in’ and more enthusiastic. Other managers felt that the real improvement in staff morale was to be seen amongst junior staff and newly qualified nurses who were receiving enhanced support and teaching from colleagues who had gone through Hotspots training. In some cases this was reported to have had an effect on lowering staff sickness rates.

"I think now she is able to support more staff, then if the staff are happier then they are less likely to go sick, staff that don't feel supported and that can't look after this type of patient or who are worried about looking after this type of patient are far more likely to go off sick, so that is a bonus." PHT 2005 Manager Interview 5

"Obviously you've got better trained staff and the morale of the staff, if you can get the staff going on regular, not every week, but a regular education programme and at IPR can flag up the things they are interested in and if it's relevant to the department, they can go on it. Morale, our sickness rate has gone right down, so it improves sickness." SUHT 2004 Manager Interview 1

4.6.5 Key Performance Indicators

Prior to the commencement of the research, the Expert Panel that was convened by the WDD agreed a number of key performance indicators.

The key performance indicators identified by the Expert Panel for 2004 were:

- Increase in the number of nurses with critical care skills that can be released to work within ITU and HDU areas;
- To raise the skills levels of nurses within ITU and HDU;
- Enhancing the skills of staff in ward areas reducing the need to move patients to HDU areas;
- Reduction in spend on agency nursing in relation to the above three areas.

In 2005, the Expert Panel revised the original indicators and added to the previous list.

- Increase in clinical skills;
- Increase in staff confidence in relation to care and management of those with critical illness;
- Increase in MEWs scoring;
- Numbers of patients being admitted to ITU/HDU;
- Appropriateness of admission to ITU/HDU;
- Number of patients nursed outside ITU/HDU that would otherwise have been admitted;
- Number of complaints;
- Retention of staff involved in project;
- Spend on agency nursing;
- Satisfaction of participants with education provision;
- Decrease in adverse event reporting.

The research team validated the relevance of the key performance indicators by discussing them with a number of practitioners and the Expert Panel. It was highlighted that some of the KPIs identified were – at the time of feedback – seen as less relevant, or that the measurement of those criteria would pose considerable challenges. This is not unusual, in the light of the passage of time and consequent shift in priorities.

The above presentation of the findings of the evaluation shows that there is a clear indication that an increase in clinical skills was perceived through the Hotspots intervention. There are also indications that the confidence levels of staff have risen as a result of the training programmes.

The increase in MEWS scores can only be commented on for SUHT, as PHT is not collecting this data. However, even though SUHT is collecting MEWS data, the data is not complete due to the way in which activation is measured. In addition, various questions have to be asked about what data regarding MEWS activation is able to convey. Considering the size of SUHT, the number of staff trained, and the variation in courses funded by Hotspots, it is questionable if any increase or decrease in MEWS activation is necessarily related to the training interventions. One may argue that there is no “critical mass” of staff on the wards in order to make confident assumptions about the correlation between Hotspots training and changes in MEWS scoring. A related issue is the meaning of increases or decreases in MEWS. It is difficult to confidently assume that an increase in MEWS necessarily means more or less skilled staff, as it is also dependent on the demography of the patients, the severity of illnesses at any one point in time, or staff trained to use MEWS on a ward at any one time. The latter issue may explain raises in MEWS scores, as MEWS was first piloted and then later rolled out across the hospital. Looking at the MEWS data, Figure 1 shows that from July 2004 MEWS activation across Directorates is generally on a slow increase or stable. The reason for this may be that MEWS was rolled out across the hospital at that time. Figures 4 and 5 show that it is difficult to make any meaningful inferences from the data provided.

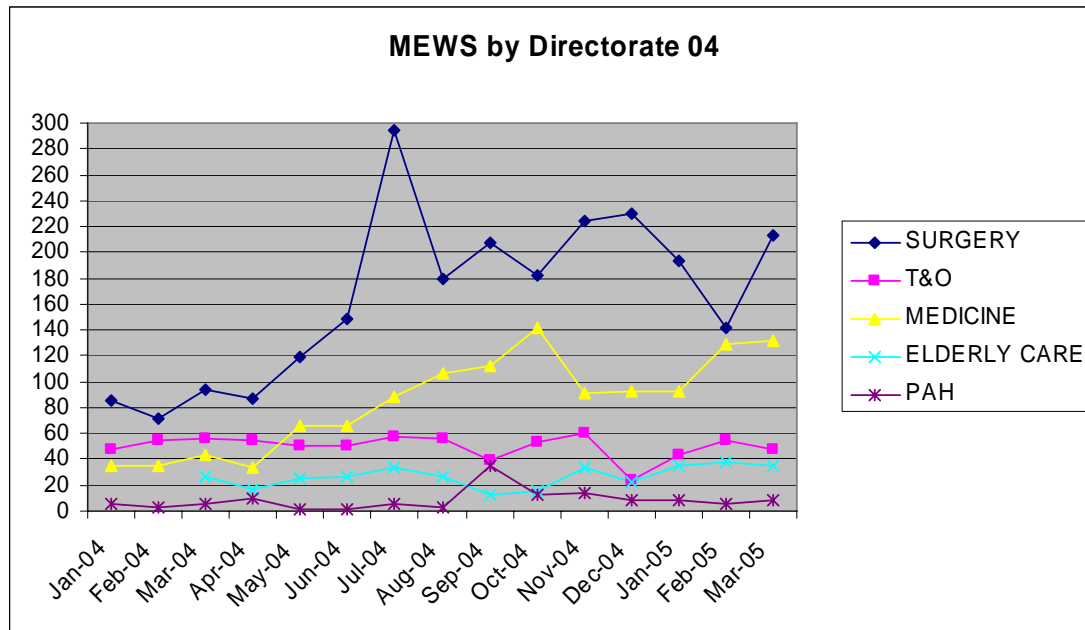


Figure 4 MEWS by Directorate 04

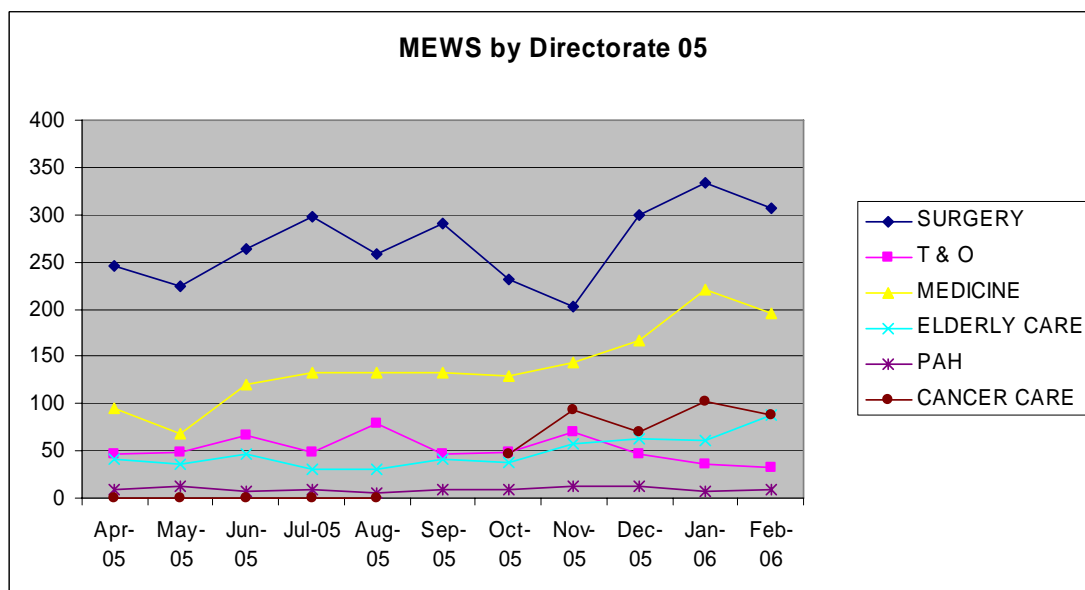


Figure 5 MEWS by Directorate 05

Similar problems were identified when analysing ITU admission data. The research team felt that it would be inappropriate to identify any correlation between changes in admission numbers and the training received by staff as part of Hotspots. Reservations, such as patient demography, general level of disease or illness, and other factors prevent any meaningful interpretation of the data.

Whilst data about ITU admissions is available, answering questions regarding the appropriateness of admissions is even more difficult to address. The Expert Panel agreed that this KPI is challenging. Judgement on appropriateness has to be made on a case by case basis, as, generally, no generic criteria exist considering the breadth of illnesses and disease that can lead to admissions. Secondly, who makes the judgement about the appropriateness of an admission is also an issue that was taken into consideration. Lastly, in order to make such a judgement, one would have to rely on care plans and reports. Often this data is available, but at times it may be incomplete, fragmented, or missing; thus making such a judgement impossible.

The number of patients nursed outside ITU or HDU was also seen as a questionable indicator for effectiveness of the training programme. Similar questions arise concerning how to establish correct numbers, how those numbers reflect the general patient demography at that time and how that would correlate with the staff trained; all of which are difficult to determine precisely and make this measure inappropriate for the current evaluation.

Number of complaints and decrease in adverse event reporting were also KPIs not weighted highly by the Expert Panel and other practitioners prior to the commencement of the evaluation. The measures were believed to raise more questions than they would answer, and measuring such outcomes was not anticipated to provide any meaningful information that could be identified as resulting specifically from the Hotspots intervention.

On the other hand, retention of staff and agency spend were areas that were seen as potentially providing some interesting insights.

The following data on the retention of staff is not complete, but provides an indication of where people have moved to, if they have moved positions.

4.6.5.1 PHT

Retention/movement of staff from 2004 *Fast Track Programme*:

28 people commenced the *Fast Track Programme* in 2004. At the time of our study, the status of the cohort was as follows: 3 (11%) did not complete due to sickness/other reasons, 3 (11%) had left the Trust, 1 member of staff was on maternity leave and 21 staff (75%) were still working within the Trust and were available for follow-up. Of these, 11 staff (52% of those still at hospital, 39% of original cohort) had changed ward. 3 staff had moved into SAU (2 in a Nurse Practitioner role), 2 had moved into Cardiology Step Down, 2 to the Cardiac Care Unit, 2 to ICU, 1 to F4 and 1 to A&E.

Retention/movement of staff from 2005 *Fast Track Programme*

20 nurses started the *Fast Track Programme* in 2005. At the time of our study, all of these were still working within the Trust and were available for follow-up. Contact made through the recruitment process revealed that 5 staff (25%) had changed ward. 2 had moved to G6, from other wards on G Level, 1 had moved to E2 (from E3), 1 had moved to SAU as a night practitioner (from E2) and 1 had moved to Rheumatology from D Level (due to health reasons).

It is more difficult to draw reliable data on staff retention from questionnaire returns, but in 2004, of the 45 questionnaires which were sent to staff who had taken interventions other than the *Fast Track Programme*, 4 (9%) were returned stating that the member of staff had left the Trust or was not known at that address. However, it is important to note that we are unable to judge from the remainder of no-replies whether staff had moved wards, left the Trust or chosen not to fill in the questionnaire.

4.6.5.2 SUHT

Retention/movement of staff from 2005 *Acuity Programme*

12 people commenced the *Acuity Programme*. Of these, 1 student did not complete the course, 1 was on long term sick leave and 1 was on maternity leave. 9 staff (75%) were still working within the Trust and were available for follow-up. Of these 3 had moved wards (moves to D3m, D5 and D7).

In terms of questionnaire returns, 6 questionnaires (7%) were returned due to member of staff having left Trust or being unknown at that address. 16 (15%) of the questionnaires sent to staff who had completed the more recent *Acute Care Skills Foundation Programme* were returned because staff had left the Trust.

Agency spend (Figures 6 and 7) for both Trusts were analysed. The report shows the figures for spend between June 2003 and December 2004 for PHT and December 2005 for SUHT. Inconsistencies existed within the data, not just between the two sites, but also within each site, in the way the data is presented. The most appropriate way to summarise the data was by Directorate. In addition, the researchers only analysed data that was relevant to the wards /Directorates that had sent staff to any Hotspots-related training programme. It was initially believed that up-skilling staff may reduce agency costs. A clear reduction in agency spend can be observed, but it may be due to other reasons, namely the restructuring of the way agency staff are sourced. In addition, a general decrease in expenditure can be observed at both research sites. After discussions with the Expert Panel, it was agreed that any changes in agency staff have to be understood within this context. Therefore, whilst the data is not

meaningless, it is difficult to explain seasonal peaks or other fluctuations as an immediate result of the Hotspots funding.

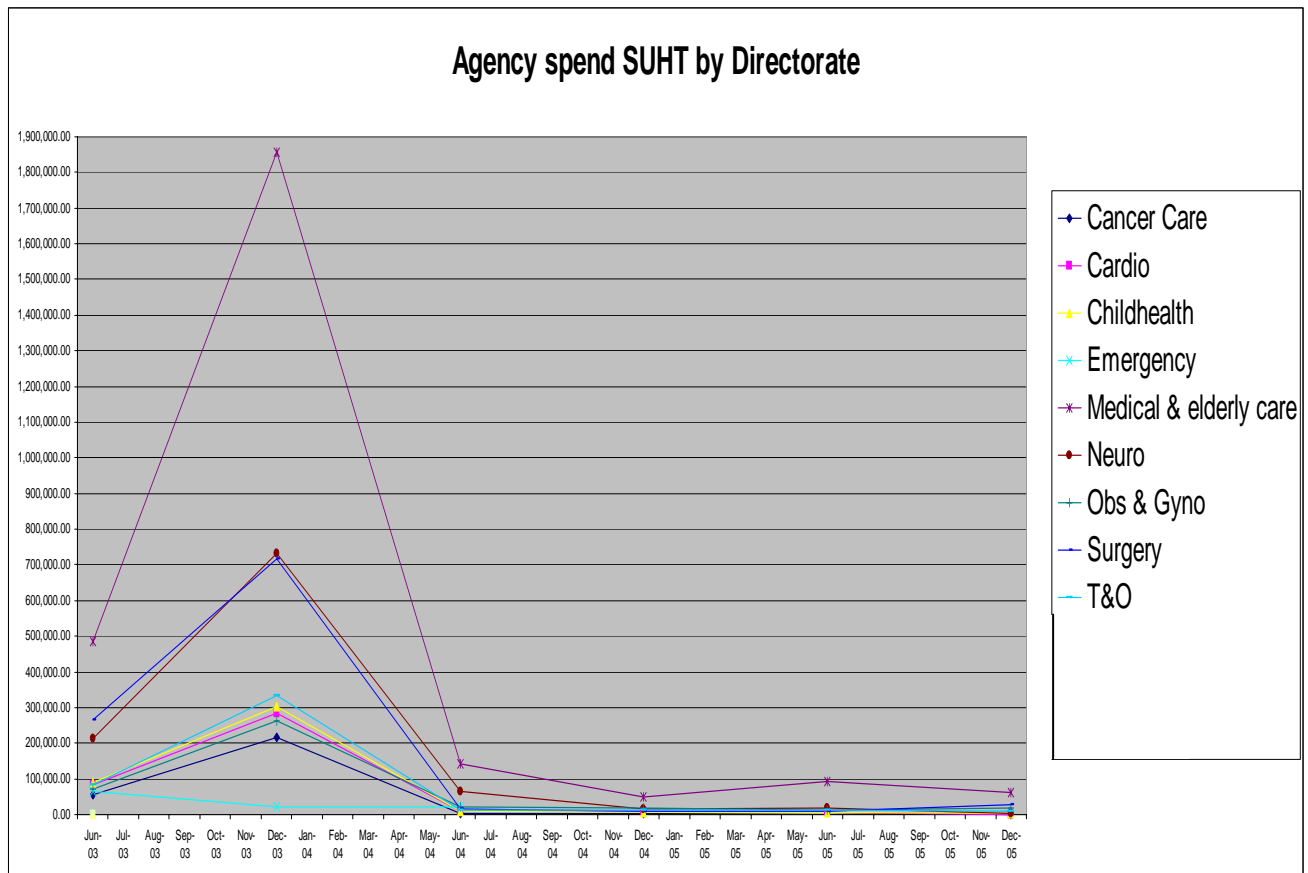


Figure 6 Agency spend SUHT by Directorate

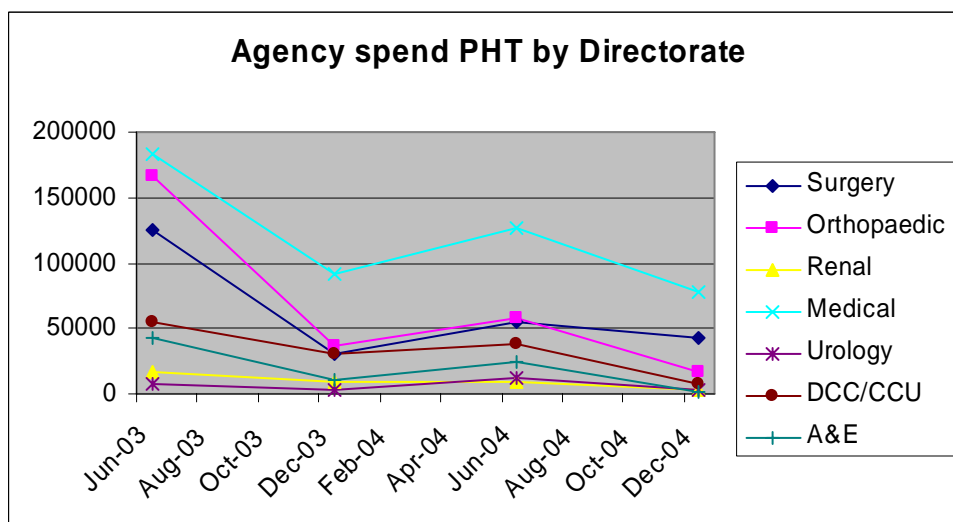


Figure 7 Agency spend PHT by Directorate

In terms of the KPI relating to satisfaction of participants with education provision, the previous sections have indicated that participants were generally satisfied with the courses they attended, with specific aspects mentioned earlier in the Report.

4.7 Level 5 Data - Return on Investment

This level of analysis aimed to explore the value for money of the training course. It was anticipated that the research would be able to comment on the financial gains resultant from the training interventions associated with the Hotspots initiative. This evaluation aimed at providing indications about the impact of the training initiatives – rather than just participant satisfaction.

The financial information provided to the research team for 2003/4 clearly showed the investment into Hotspots training by Trust. This information is further broken down into cost per course and the activity associated with this course (i.e. money spent on backfill or course). Overall, for the 2003/4 cohorts across Hampshire £389,927.00 was spent; more specifically, SUHT received £96,627.00 and PHT received £150,440 for Hotspots related training provision. The remainder of the money was provided to other Trusts.

In 2004/05, SUHT was allocated £29,200 to fund a foundation day in acute care needs and clinical skills workshops for 120 staff. The funding did not include salary support for these initiatives. Due to the time it took to set up and develop these programmes they were not delivered until 2005/2006; the funding was carried forward from 2004/2005 to 2005/06.

Similarly, in 2004/05 SUHT was allocated £35,000 to support the *Acuity Programme* by providing salary support for 12 students. The programme commenced in February 2005 and continued well into 2005/06. Consequently, the Trust received only £4,500 in 2004/05 and the remainder in 2005/06.

PHT, on the other hand agreed to run the *Fast Track* programme for 20 students, the salary support for this (£34,800) and the costs to the University (£63,200) totalled £98,000 of which the majority was delivered and paid for in 2004/05 (£66,000); the remainder was delivered and paid for in 2005/06. In addition, Hot Spots Funding supported a further 12 students from PHT attending “off the shelf” modules in 2005/06 costing an extra £9,310.

Overall the Hotspots funding has been a substantial investment over the last two financial years. Unfortunately, it is always difficult to assign, in the short term, specific outcomes to training interventions that occur over a long period of time. Furthermore, some financial savings, such as reduced agency spend, cannot solely be attributed to these training interventions, as other structural changes

occurred influencing such changes. Furthermore, in order to assess the financial return of training, clear outcome measures need to exist. As outlined under the previous level of analysis, some of the provided outcome measures were not suitable for such an analysis and the research team was not able to establish more appropriate ones in the timeframe of this evaluation. The establishment of such outcome measures might be a beneficial piece of further work to be carried out in the future.

An additional issue is the number of staff that took part in the Hotspots training programmes. In the context of the large number of nurses employed by SUHT and PHT, the return on investment attached to this relatively small number of Hotspots trained staff is unlikely to have the desired impact at this stage.

Consequently, the research team was not able to establish specific measures by which to comment on the return of investment in financial terms. However, findings presented in earlier sections of this Report, highlighting aspects such as staff having increased skills and confidence, give strong indications that the investment in training is returned in form of staff who feel better equipped to undertake their roles.

5 Discussion

The findings presented above point to a number of interesting issues regarding the impact of the Hotspots-funded training initiatives. In the following section, we make 8 recommendations for Trusts engaged in similar learning interventions. We note that, whilst programmes were aimed at similar staff groups and skills gaps, differences amongst the Trusts emerged in terms of the implementation of new learning.

5.1 Selection of Staff

One issue that arose from the findings was related to the selection of staff and the impact this selection has on learning and organisational impact. The literature presented in this report suggested that it is vital to relate training to work requirements, operationally and strategically. Criticism emerging from the literature is that often staff selection is not appropriately considered, which in turn then results in inadequate learning transfer. Furthermore, this is worsened if the strategic assumptions about organisational needs are ignored (Phillips & Phillips 2001). The findings above show that this is recognised by staff and managers alike.

Recommendation 1:

A clear set of selection criteria and a more rigorous recruitment process should be established for substantial training interventions prior to the intervention to ensure the highest impact operationally and strategically.

5.2 Planning for Training Interventions

One area of concern that was equally perceived to be difficult in both Trusts was the amount of time available to select staff. The literature clearly identified that often recruitment for training interventions is dealt with on an *ad hoc* basis. Time constraints, as presented in this evaluation, can have a detrimental impact on the success of training. The fit between staff and training is essential and choosing appropriate staff is only possible if enough time is available to evaluate current needs of staff and the needs of the organisation. The challenge of staff selection could be avoided if more time and planning went into pre-course preparation. This is partially the responsibility of the commissioning bodies, which could make information about available funding accessible at the earliest opportunity.

Recommendation 2:

Sufficient time and a clear set of criteria should be in place to enable organisations to plan staff selection for training interventions according to operational and strategic needs. This time should be build into the commissioning process.

5.3 Perceived relevance of Training Intervention

Training relevance appeared to have been problematic for some of the courses provided through the Hotspots programme. The literature presented above clearly argues that in skill-based training in particular, relevance between training and working situation are vital contributors to successful skills transfer (Lauder et al 1999).

Related to the lack of relevance perceived by some of the interviewees, the analysis above showed that there are clear differences between the Trusts in regard to the structure of the courses. Perceived relevance was related to the way the content of the training programme addressed local needs. The literature supports this finding by arguing that training relevant to local needs is most effective. By opting for particular units or designing a course in collaboration with the provider, relevance of the content to practice can be assured.

This evaluation highlights the need for providers and commissioners to work together closely. Collaborative curriculum design should be built in at an early

stage in any new commissioning process to ensure the drivers for the education intervention align with local needs. Extending existing collaborations would focus the curriculum development on areas that are in need of development. The research team suggests that fewer, more focused commissions may help raise the overall standard of training and development and could be a responsible approach to developing skills for better service delivery in a challenging financial climate.

Also, academic accreditation may not always need to be the overarching concern, but providers and commissioners need to engage in dialogue about how training and development may be accounted for. Accreditation of work-based learning, for example, may provide a more suitable measure of increased skill levels.

Recommendation 3:

Courses should be designed in conjunction with providers, basing curriculum on local need.

For this evaluation study local need was defined based on an expert panel interpreting national priorities. Whilst the research team is not in a position to comment directly on the suitability of the expert panel as an advisory mechanism, the research team feels that there is a need to embed some process that provides continuous advice on local needs.

Recommendation 4:

Define and embed a continuous and sustainable process that is able to advise on local needs and aid in the collaborative design of training interventions.

5.4 Application of relevant learned skills

The effectiveness of locally grounded training programmes is further enhanced, according to the literature, if it is supported by placements in which relevant skills can be applied. Whilst training participants were situated in practice, opportunity to practice and build capacity to use new skills was often lacking.

The use of skills facilitators and competency assessment transpired as a useful tool to aid the processes of applying new skills. Often, however, access to resources, such as skills facilitators, was limited. The literature is clear on this (e.g. Day 2000) by arguing that the provision of a mentor greatly enhances skills and learning transfer. Glen (2004) recognises the lack of assessors as a major contributor to failed impact of training, especially if assessors are not aware of the differences of skills levels attained by staff (post code competencies). Furthermore, a generally supportive infrastructure is seen as greatly enhancing learning and skill transfer.

An additional benefit was seen by the participants if they entered a teaching role or some other form of formal acknowledgement of their new skills that allowed them to use and practice those skills frequently. A “learning contract” ought to be attached to training interventions that builds in mechanisms for successful training transfer.

Recommendation 5:

In order to facilitate effective skill and learning transfer, organisations should provide a post-training framework, which assists staff in attaining and applying the competencies that are anticipated outcomes of training programmes.

5.5 Time to implement learning

Effective skills and learning transfer depends significantly on the opportunities available to practice new skills and learning. Providing time and general support structures are pivotal for training to impact positively on service delivery. One good practice example was the allocation of supernumerary time to staff. In this way, staff were fully competent and ready to work with the new skills.

Unfortunately, this was only available to a small number of staff. Generally, the data presented a more dissatisfied picture. Time constraints were particularly mentioned in relation to the financial constraints in which NHS organisations are currently operating. The literature reflects such commitment to practice time as vital. Besides the provision of general support as a necessary situational factor for successful skills transfer, opportunity to use newly learned skills has been cited as a pivotal aspect in learning and skills transfer.

Recommendation 6:

Opportunities to achieve and demonstrate competencies should be built into training programmes, such as supernumerary time.

5.6 Criteria of Success

One of the areas that caused considerable concern in both Trusts was the evaluation of the success of the training interventions. The challenge of evaluating the success of interventions is to link perceived improvements to objective measures of improved service delivery. It was outlined in the literature that the evaluation of objective success criteria is somewhat difficult and the literature acknowledges that most (nurse) training evaluation does not go beyond individual accounts. Unfortunately, only a limited number of objective and meaningful measures were available to the research team.

The commissioners were keen to evaluate the Hotspots expenditure based on a set of key performance indicators, which were acknowledged as problematic. For example, after discussion with experts, it was agreed that some KPIs provided were often difficult to measure, sometimes because no data was available. For others, the data was fragmented or incomplete and therefore of little value to make any meaningful inferences. The Hotspots programme was based on a front-end analysis of needs which, according to the literature is a vital part to assess success meaningfully; however, the measures attached to this analysis were insufficiently relevant. The problematic nature of KPIs was outlined in the literature as a general problem of performance management within the public sector.

In order to assess training and development interventions effectively, more suitable measures are needed. A balance has to be struck between strategically defined measures and measures that can be accurately and meaningfully obtained at an organisational level. The literature identifies that traditional, accounting-based, measures are often insufficient to assess performance (Ghalayini & Noble 1996) appropriately. Such measures often lack specificity and relevance to operational activities (ibid.). In order to assess long-term effectiveness of training, indicators such as absenteeism and local productivity should be used to determine behavioural change that can be linked to planned training interventions (Facteau et al 1995). Effective performance indicators need to be simple and foster improvement rather than provide solely monitoring data. Time taken to perform a task has been identified as a potentially useful measure to assess improved performance on an operational level (Ghalayini & Noble 1996). This evaluation has shown that local measures, such as staff retention, were seen as useful indicators of training effectiveness.

The research team suggests that a process needs to be in place that allows the translation of strategic measures of performance into meaningful and measurable performance indicators at an operational level.

Recommendation 7:

In order to assess the impact of training at an appropriate level, Key Performance Indicators should be established prior to the development of the training. These criteria should be relevant, measurable, and accessible through routine data.

The research team appreciates the complexity associated with some of the recommendations. However, an overarching theme that may aid in achieving some of the changes required to further enhance effective staff development is a universally accepted competency framework. Whilst both research sites have a competency framework in place, the use of this framework at either research site for the purpose of assessing training need and defining success criteria was limited. It can be argued that a standardised competency framework would support appropriate staff selection to training by providing a set of criteria against

which staff could be assessed. It is also suggested that a standardised competency framework would address strategic and operational needs, as it is likely to be built on national policy drivers, but interpreted within the context of local circumstances. A set of criteria against which organisational and individual training needs are assessed is suggested as a way to enhance training relevance and transfer. Finally, a standardised competency framework is likely to provide a sound foundation for defining clearer measures of success.

Recommendation 8:

The development of a standardised competency framework is likely to aid in the process of enhancing effective training and development.

If training is integrated with overall performance measures and targets, it is likely that they will have a greater impact. The DoH also emphasises that it is necessary to provide more robust evaluations that aid in clinical decision making.

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Appendices

Appendix A – 2004 Questionnaire



Hotspots Critical Care Training Programme

1) How were you selected to attend this training/education programme?

Self selection ☐

Selected by manager ☐

2) Please briefly explain your reasons for attending this training/education programme

3) How relevant was the programme to your needs?

Very relevant

☐

Quite relevant

☐

Neither relevant nor irrelevant

☐

Not very relevant

☐

Completely irrelevant

☐

4a) Have you been involved in the care of an at-risk or acutely ill patient since your training/education?

Yes

☐

No

☐

4b) On average, how often have you been presented with a situation which has required you to use your new skills?

Daily

☐

Weekly

☐

Monthly

☐

Every few months

☐

Less frequently

☐

5a) How well do you feel that you were supported by management in undertaking this programme?

Very well supported

☐
↓

Please answer Q5b

Quite well supported

☐
↓

Neither supported nor unsupported

☐

Not very well supported

☐
↓

Please answer Q5c

Completely unsupported

☐
↓

5b) Please explain what support you received

5c) What kind of support would you have liked to receive?

6a) How well did you feel that you were supported by other team members in undertaking this programme?

Very well supported

☐
↓

Please answer Q6b

Quite well supported

☐
↓

Neither supported nor unsupported

☐

Not very well supported

☐
↓

Please answer Q6c

Completely unsupported

☐
↓

6b) Please explain what support you received

6c) What kind of support would you have liked to receive?

7a) Apart from course work or course assessment, did your manager assess the progress you were making as a result of the training/education? (e.g. appraisal, competency statement etc)?

Yes ☐ No ☐

7b) If yes, please give details:

8) In terms of your normal working practice how often would you say that you use skills that you learned in this training/education?

Daily	Weekly	Monthly	Every few months	Less frequently
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9) Please indicate how far you agree or disagree with each of the following statements.
(Please tick one box for each statement.)

As a result of this training/education:

	Agree Strongly	Agree Slightly	neither agree nor disagree	Disagree Slightly	Disagree Strongly
<i>I recognise early signs and symptoms of patient deterioration</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I am more sensitive to the needs of at-risk/acutely ill patients</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I feel more confident in my nursing practice</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I communicate better with multi-professional team members</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I have more confidence to make decisions relating to patient care</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I communicate better with patients and their families</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I have improved nursing skills to care for at-risk/acutely ill patients</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>I disseminate information that I have learned on this course to other members of my team</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you agree (strongly or slightly) with the following statements, please give, where possible, one or two examples of when your training has helped you to do this.

	Agree Strongly	Agree Slightly	neither agree nor disagree	Disagree Slightly	Disagree Strongly
<i>I have improved patient assessment skills which enable me to recognise symptoms of deviation from normal physiological parameters</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please give one or two examples:

Agree Strongly	Agree Slightly	neither agree nor disagree	Disagree Slightly	Disagree Strongly
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Where appropriate, I initiate simple treatments to prevent patient deterioration

Please give one or two examples:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Agree Strongly	Agree Slightly	neither agree nor disagree	Disagree Slightly	Disagree Strongly
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I am able to make timely referrals to professional colleagues

Please give one or two examples:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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10) Please give details of any other ways in which you feel the training you received has helped you in your job.

Thank you for your time
Your results will be treated in confidence and will help us to evaluate the Hotspots project.

Appendix B – Acute Care Skills Foundation Programme Questionnaire

Acute Care Skills Foundation Programme

Hotspots Survey

- Q1 Overall, how would you rate the Acute Care Skills Foundation Programme? (Please tick one box)**
- Very good* ☐
- Quite good* ☐
- Neither good nor poor* ☐
- Quite poor* ☐
- Very poor* ☐
- Q2 How often have you been involved in the care of at-risk or acutely ill patients since the Foundation Programme? (Please tick one box)**
- Daily* ☐
- Weekly* ☐
- Monthly* ☐
- Every few months* ☐
- Less frequently* ☐
- Q3 How did the programme specifically help you to deal with this/these patient(s)?**
- Q4 Please indicate how strongly you agree with the following statements: 'Since attending the Foundation Programme, I can think of examples of times when I have...'. (please tick one answer for each statement)**
- | | <i>Agree strongly</i> | <i>Agree slightly</i> | <i>Neither agree nor disagree</i> | <i>Disagree slightly</i> | <i>Disagree strongly</i> |
|---|--------------------------|--------------------------|-----------------------------------|--------------------------|--------------------------|
| Recognised early signs of deterioration in a patient | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Undertaken a sound, thorough baseline assessment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Used simple interventions to stabilise or improve a patient | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Promptly secured expert help for a deteriorating patient | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Q5** 'As a result of this course, I have improved knowledge and skills to care for sick and deteriorating patients'
- Agree strongly ☐
- Agree slightly ☐
- Neither agree nor disagree ☐
- Disagree slightly..... ☐
- Disagree strongly ☐
- Q6** Which aspects of the programme have most positively affected your ability to care for acutely ill patients?
- Q7** Please comment here on any aspects of the course which you found less useful in terms of your nursing practice and care for acutely ill patients.
- Q8a** Having completed the Foundation Programme, do you feel there are any areas in which your skill needs haven't been sufficiently addressed?
- Yes..... ☐ Go to Q8b
- No..... ☐ Go to Q9
- Q8** Please give details of those areas in which you feel more training could have been provided
- Q9** In terms of your work experience, would you say that the Foundation Programme came:
- Too early in my career (I didn't have enough experience to get the most out of the FP)..... ☐
- At the right time in my career (I had the right amount of experience to make the most of the FP)..... ☐
- Too late in my career (The FP went over what I already knew) ☐

Southampton University thank SUHT for their input and acknowledge this questionnaire has been adapted and added to, from their previous work.

Appendix C – Interview Guide Participants 2004

1. I would like to start off by asking you to think back to (2003) 2004, at the time before you went on your training. Could you tell me a bit about your job at that time?
2. What was your motivation to attend this training programme?
3. What were your expectations of the training programme?
4. Were those expectations met?
5. Could you give me examples of any particular skills that the course improved or equipped you with?
6. How has this training impacted on the way you care for at-risk or deteriorating patients?
7. What mechanisms did your manager put in place to enable you to apply your new skills/knowledge?
8. What kinds of support did you receive from other colleagues?
9. And what kinds of support mechanisms exist within your organisation to enable you to apply your new learning and skills?
10. What have been the benefits of you undertaking this course for the organisation? What new contribution are you able to make?
11. What were the challenges or difficulties for the organisation in sending you on this course?
12. Could you tell me about the job that you are doing now?
13. And finally, if you could give one piece of advice to the organisation, to enable them to get the best from staff who have attended this training, what would it be?

Appendix D – Interview Guide Managers 2004

1. I would like to start off by asking you to tell me a bit about the (name) ward (for example number of beds, types of patient, number of staff).
 - a. What is your role on the ward?
2. And thinking now about the (name) training programme, what did you know about the course before (name) went on it?
3. What led you to select this person for the course?
 - a. Were there any particular knowledge or skills this person was lacking?
4. What were your expectations of the course for the individual?
5. To what extent have these issues been addressed by the programme?
6. What are, in your opinion, the two or three major differences in the individual since undertaking the programme?
 - a. Were there any issues that haven't been addressed?
7. What mechanisms do you feel you *were able to* put in place to enable the participant to apply their new skills/knowledge?
8. What are the ways in which you plan to support the further development of the individual?
9. We understand that there are restrictions in terms of time and resources. In an ideal world, what is the best way for a manager to enable staff to apply new knowledge/skills?
10. What does the organisation do to support you and the individual to apply this new learning and skills?
 - a. What would you like to see the organisation offer in terms of support?
11. From an organisational point of view, what are some of the positive outcomes of sending this individual on the development programme?
 - a. Now that the participant has been on the programme, what sort of activities do you feel s/he is better equipped to undertake?
12. Again from an organisational point of view, what were the difficulties or challenges of sending this person on the development programme?
13. In what ways do you measure the benefits of this training intervention?
14. And finally, from your perspective, if you could give one piece of advice to the organisation to enable them to get the best from staff who have attended this training, what would it be?

Appendix E – Participant Interview Guide 2005

1. Could you start off by telling me a bit about the ward you work on and the kinds of patients you deal with?
2. Now I would like to ask you to think back to the start of this year, at the time before you went on your training. Could you tell me a bit about your job at that time?
3. What was your motivation to attend this training programme?
4. What were your expectations of the training programme?
5. Were those expectations met?
6. I'd like to focus now on the various components, or modules of the course in a bit more detail. Could you describe how the course was structured and tell me a bit about each of the modules?
7. How did you feel about the course timescales and assessment load?
8. I'd now like to move on to talk about how relevant the course was for your day to day nursing practice. Could you give me examples of any particular skills that the course improved or equipped you with?
9. How has this training impacted on the way you care for at-risk or deteriorating patients? (If necessary, prompt on: *Assessment skills; Actions when noticing signs of change or deterioration; Communication/referral skills; Confidence in own ability*)
10. What mechanisms did your manager put in place to enable you to apply your new skills/knowledge?
11. What kinds of support did you receive from other colleagues?
12. And what kinds of support mechanisms exist within your organisation to enable you to apply your new learning and skills?
13. What have been the benefits of you undertaking this course for the organisation? What new contribution are you able to make?
14. What were the challenges or difficulties for the organisation in sending you on this course?
15. Could you tell me about the job that you are doing now?
16. If you could give one piece of advice to the organisation, to enable them to get the best from staff who have attended this training, what would it be?
17. Would you recommend this training course to a colleague?

Appendix F – Manager Interview Guide 2005

1. To start off, could you tell me a bit about your role here and your management relationship with(staff name)?
2. And thinking now about the (name) training programme, what did you know about the course before (name) went on it?
3. What led you to select this person for the course?
4. Were there any particular knowledge or skills this person was lacking?
5. What made you willing to commit them to such a long training intervention?
6. What were your expectations of the course for the individual?
7. To what extent have these issues been addressed by the programme?
8. What are, in your opinion, the two or three major differences in the individual since undertaking the programme?
- 9b. IF NOT ALREADY COVERED: Would you say you are able to allocate more responsibility to this staff member since the training?
10. What mechanisms do you feel you *were able to* put in place to enable the participant to apply their new skills/knowledge?
11. What are the ways in which you plan to support the further development of the individual?
12. We understand that there are restrictions in terms of time and resources. In an ideal world, what is the best way for a manager to enable staff to apply new knowledge/skills?
13. What does the organisation do to support you and the individual to apply this new learning and skills?
14. From an organisational point of view, what are some of the positive outcomes of sending this individual on the development programme?
- 15 IF NOT ALREADY COVERED: One of the WDD's aims in funding the Hotspots Project was to bring about an improvement in staff retention rates. Would you say that this training will have/or is having an effect on staff retention?
- 16 Again from an organisational point of view, what were the difficulties or challenges of sending this person on the development programme?
- 17a. Thinking generally about the various training courses that your staff go on – how do you, as a manager, judge whether a particular training programme has been successful?
- 17b. And thinking specifically about the Hotspots Programme, how do you measure the benefits of this intervention?
18. And finally, from your perspective, if you could give one piece of advice to the organisation to enable them to get the best from staff who have attended this training, what would it be?
19. Would you recommend this training to another member of your staff?

Authors

Professor Debra Humphris

In January 2003 Debra was appointed Professor of Health Care Development and Director of the new Faculty wide Healthcare Education Innovation Unit'

Debra took up post as Director of the New Generation Project in the Faculty of Medicine, Health and Biological Sciences, University of Southampton in November 2000. This exciting and ambitious project was identified as one of the Department of Health funded '*leading edge sites*' for taking forward Common Learning in January 2002. The wider work of the project also embraces the longer-term questions about the future health and social care workforce.

Debra began her career in nursing and has worked extensively in education, research and development, including the UKCC Higher Level Practice Project, the introduction of Clinical Audit in the South Thames Region of the NHS, the Assisting Clinical Effectiveness Programme (ACE), and the development and leadership of the Knowledge Management for Health (KMfH) Programme in the R&D Directorate, NHS Executive, South East Region.

Dr Con Connell

Connell's interests in the management of healthcare extend back for more than a decade, and embrace both quantitative and qualitative modelling. Earlier published work includes examinations of the involvement of stakeholders in the provision of geriatric healthcare in the community, the application of decision support models for management of acute care wards, and the management of physiotherapy assistants in acute and community settings. Most recently, his work has been directed towards the nature of knowledge, and in particular an examination of the ways in which knowledge flows might be modelled in an acute setting. He has many years experience teaching management development programmes, in the public and private sector.

Dr Edgar Meyer

After having worked in Health Care, Edgar completed a BA (Hons) in Management and Health Studies at the University of Lincoln. He joined the School of Management at the University of Southampton in 2000 to research a PhD in Knowledge Management. Parts of his research were located within a Health Care context, examining how knowledge flows within acute settings. Edgar has also taught on various undergraduate and postgraduate programmes in the School of Management. Edgar is now working at the HCIU where he is the academic lead for the Centre for Excellence in Teaching and Learning for Interprofessional Learning across the Public Sector (CETL:IPPS).

Amanda Lees

After having worked as a researcher within the commercial and public sectors, Amanda was employed as a qualitative researcher at Oxford University working on a study investigating parental views on vaccine research. She joined the University of Southampton in 2005, as research assistant to the Hotspots Evaluation.