partnerships with the NHS Commissioning Board as it becomes, from next April, responsible (indirectly and directly) for the provision of most NHS services. NICE must also continue to innovate in the ways it presents its guidance and other products to its various stakeholders, so that its guidance and information services are available and accessible at the time they are required. And, finally, the Institute must continue to support the adoption of its guidance and standards so that patients and the public benefit from its work.

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Introducing physician assistants into an intensive care unit: process, problems, impact and recommendations

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ABSTRACT – The National Health Service (NHS) is facing substantial staffing challenges arising from reduced working hours, fewer trainees and more protected training of those trainees. Although increasing consultant-delivered care helps to meet these challenges, there remains a need to remodel the workforce. One component of the solution is physician assistants (PAs), who are professionals trained in patient assessment and care, working under the supervision of trained doctors. In October 2010, three PAs began working in the paediatric intensive care unit (PICU) at St George's Hospital, Tooting, which is a large tertiary hospital. This study used surveys and semi-structured interviews to explore the process and end results of this development. Initially, there was a large discrepancy between expectations and the capabilities of the PAs. Shortly after starting, there was friction arising from PAs being untrained in PICU activities, and the facts that they would take training opportunities from other staff and that their remuneration was disproportionate to their usefulness. At five months, all those interviewed stressed the positive impact of PAs on patient care and the running of the unit. Staff had found that the PAs had integrated well and there was little evidence of earlier frictions. When surveyed at 10 months, PAs were undertaking most PICU procedures, albeit with some supervision. The study shows that PAs can be a valuable addition to the medical workforce, but that predictable problems can mar their introduction. Solutions are suggested for other units intending to follow this model.

KEY WORDS: workforce, physician assistants, skill mix, multidisciplinary team, paediatrics

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Introduction

The National Health Service (NHS) is facing substantial challenges in altering its medical workforce, driven by factors including reduced trainee numbers, the European Working Time Directive, changes in demographics, expectations and patient flows.[1–5] Locally, there had been an approximately 10% annual increase in attendances to the emergency department and in admissions to wards and to the paediatric intensive care unit (PICU).[6] In PICU, there was concern that, at peak activity levels, at weekends and in the evenings, the workforce headcount and skill mix did not match the clinical need.

Four solutions were considered for PICU: increasing trainee numbers, clinical fellows from overseas, advanced nurse practitioners (ANPs) or physician assistants (PAs). With reducing trainee numbers and legal barriers to overseas training, increasing doctor numbers was not feasible.[7] Given that ANPs were being recruited elsewhere in the department, the Trust favoured the recruitment and training of three PAs in PICU.

Although well established in the USA, where there are approximately 70,000 PAs, with 750 working in paediatrics,[8] PAs are still rare in the UK. In December 2011, there were approximately 135 practising PAs in the UK, with 54 in training programmes.[9] Most PAs are in general practice, although they also work in neurosurgery, cardiology and other specialities. There are currently three PA programmes in the UK, based in Wolverhampton, Aberdeen and London. Courses last for two years and focus on basic medical science, practical skills and working within medical teams.[9,10]

Following recruitment, the PICU PAs started work in October 2010. After induction, there was a PA on duty each day from 8.30am to 9.00pm. Training was supplemented with a six-month teaching programme focusing on PICU clinical skills, knowledge and disease management.

To better understand how PAs can integrate into an established team, we decided to evaluate the process of their introduction.

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Methods

Setting

The study took place in a 10-bed general PICU with over 500 admissions a year, within a 70-bed paediatric unit in a tertiary hospital. Other staff included over 40 nurses, six consultants and 10 trainees.

Design and data collection

- Before introduction: two weeks before the PAs were due to start, all PICU staff were asked to complete an anonymous paper questionnaire examining current staff activities and the expected benefits and limitations of the PAs.
- Immediately post introduction: two weeks after the PAs had started on PICU, all staff were sent an anonymous questionnaire to gauge their initial reactions and issues.
- Five-months post introduction: semi-structured interviews were carried out with nurses, trainee medical staff and PICU consultants. The interviews explored areas including the PA role, the impact of PAs on patient care and unit dynamics, focusing particularly on problems that arose and their resolution.
- 10-months post introduction: a questionnaire was sent to the three PAs examining their maturing clinical role.

The protocol was discussed with the local research and ethics committee, but formal approval was not required.

Results

Before introduction

In total, 19 staff members responded to the anonymous paper questionnaire, including seven doctors, eight band 6+ nurses and four band 5 staff.

All respondents expected PAs to order tests, handle results and clinically assess patients, and 16 out of the 19 respondents thought they would be able to cannulate patients. Some respondents, predominantly nurses, expected that PAs would undertake tasks for which there were no training plans, with 11 out of 19 expecting them to intubate, and 14 out of 19 to insert central lines. In total, 10 out of 19 respondents thought that PAs would prescribe medication, which is currently legally impossible.[11,12]

Responses to questions about the potential impact of PAs and attendant problems were collated. Generally, staff identified positives such as 'the addition of PAs will ease stress' by 'reducing [staff] workload' and 'improving continuity of care for patients at handovers [and] out of hours'. The benefits of 'an interdisciplinary supportive role' were wished for by medical staff, espeically nurses.

Prospective areas of difficulty identified confusion over 'the PA role and its boundaries or lack there of', their 'lack of experience' and potential 'competition for training opportunities with junior doctors', leading to the 'perceived threat and even reluctance' of staff to accept the role of PAs in the unit.

Immediately post introduction

Tension within the unit was evident in the weeks following induction of the PAs. Only nine out of 50 permanent staff members completed the online survey, although off-record comments made by many staff to the researchers mirrored those within the survey.

Similar themes to those identified before PAs joined were brought out, with 'improvement at weekends and evenings [being] noticeable', that the PAs were 'hard workers [who were] keen and enthusiastic' but that 'confusion over their exact role' existed and 'rivalry for teaching opportunities' was a concern. An impression that PAs were 'overpaid for their experience' was highlighted, alongside a feeling the role was 'for [departmental] nurses to progress to'.

Staff did not know how to relate to PAs. Nursing staff were unimpressed that PAs did not help with nursing duties or drug administration, and some doctors diverted the PAs from clinical tasks toward clerical duties. Many commented on their enthusiasm and valued an extra pair of hands, but said that they were of little clinical use.

Five-months post introduction

Semi-structured interviews with three consultants, two trainees, three nurses and all three PAs explored the positive and negative attitudes identified around their introduction.

Without exception, it was felt that the PAs had 'met or even surpassed [people's] expectations' and the PAs themselves were '[of] benefit to the unit', 'appreciated' and 'valued'. Specific positives identified were 'increased continuity' and improved patient care, resulting from decreased 'paper-time' for the medical staff, defined as 'admission and discharge summaries'.

Negatives discussed included an initial lack of clarity on who or what the PAs were and how they should be utilised. 'Issues with what kind of patients' they should see and the 'sort of level of supervision required' were unresolved. Some were 'still not sure about [their] level of teaching [but] how they are going to fit into the team has been resolved'.

Some noted that, without an official governing body 'they are the doctors' responsibility which...is quite a big thing for [the doctors] to undertake'. Some felt that there was no clear benefit of PAs as opposed to more senior nurses or junior doctors. The apparent pay disparity between inexperienced PAs compared with senior nursing staff was again noted. '[For the] cost of employing them we could have had four nurses. [The unit] always feel short staffed and therefore why [this choice?]'.

Most felt that the PA role was still evolving, currently involving 'physicians duties; the majority if not all the jobs a doctor can do', 'supporting the medical team' and 'still learning where else [they/we] can be useful'. Nurses and trainee medics had anticipated threats to training opportunities, which had not materialised. The nurses felt there was little impact on their role. However, it was expressed that competing with trainees 'may be an issue…when they are more experienced'.

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Expectations of their final role differed significantly between those interviewed. The PAs all felt confident in their knowledge in relation to what was being asked of them, but other groups worried about their lack of broad-based medical knowledge and how this could limit their future role. Some felt 'they think they might know the answers or might be able to proceed and just need to be double checked'. In the future, they might do 'all paperwork and initial examinations but [not] fully care for patients' and one doctor stated they 'would currently be reluctant to [have a PA] assess a sick patient for admission from the ward'. One consultant felt 'that they should be able to do whatever [the unit needs] them to do', and 'the PAs are open minded, a blank sheet of paper so can be trained as you [need] them'.

10-months post introduction

The initial questionnaire looking at what skills the PAs expected to develop was resent to the three PAs to compare their actual activity with expectations. Most of their time was spent on direct clinical care, with 2–4 h per shift being spent at the bedside and the rest arranging investigations, in clerical tasks and attending ward meetings, such as the ward round.

The PAs were engaged in clinical assessment, note keeping, cannulation and phlebotomy. All three PAs had inserted central lines, although this was closely supervised. None had attempted chest drains. One PA, who had a nurse prescribing background, was prescribing and assisting nurses in drug administration. The other two were not able to prescribe and so asked the ward doctors to prescribe for the patients they had assessed.

Discussion

NHS staffing challenges are not new and will increasingly challenge healthcare planners at local and national levels.[7] The key issue is matching skill mix and demand with constrained finances, in the context of a 2–10-year time lag between an intervention and its effect. PAs are one of several solutions.

After 12 months, the PICU was mostly happy with the decision to incorporate PAs and they have become an indispensable part of the team. The PAs are mostly doing what was intended, although the lack of both prescribing rights and a recognised professional body might be increasingly limiting. This study also reports that their introduction could have been smoother.

Limitations of the study

Although the study is prospective, it compares expectations with perceived outcome rather than measuring actual activities undertaken. The study was unable to collect the opinions of all staff members, perhaps introducing non-response bias to the results. The findings are specific to one unit, although it is likely that some are generalisable.

Box 1. Suggested principles for other departments developing PA roles.

- Clear role description shared with all unit staff before introduction, with clear line of accountability.
- Role development plan to be in place before introduction, with regular standard appraisals.
- Identified educational supervisor and/or mentor.
- Look to boost training for all staff members, rather than only introducing teaching of the PAs.
- Graded pay banding in relation to experience and length of time on the unit.

Lessons learnt

A champion drove the introduction of PAs, but this individual had insufficient time to coordinate and run their induction and training programme. Despite the efforts of colleagues and other staff, coordination of their activity, training and education was suboptimal.

The role of the PAs and their programme were discussed widely and openly before their introduction within PICU, but there was a lack of clear and accessible information. Simple posters stating the purpose, capabilities and team role of PAs might have cleared up early misapprehensions.

Lastly, the initial pay banding of PAs was out of keeping with their contribution to the department, and was divisive, especially for the skilled and experienced nursing workforce on the department. A more appropriate approach would have been a one-year apprentice period, paid at band 6, moving to band 7 after 12 months.

Box 1 summarises the principles for other departments wanting to develop a role of PAs. Our suggestions are based on the results on our survey.

PAs in other settings

PAs are now an established and essential part of the medical workforce outside the UK, most notably in the USA. PA training began during the 1960s, in response to several demographic pressures and changes in public expectations.[13] During the early years of PA involvement in the USA, there were several professional conflicts between nurses and PAs, revolving around responsibilities, accountability and pay.[14]

Our study has shown that PAs can become part of an intensive care team in the UK. They are well established in the UK in general practice, and are now found in several inpatient and day case settings.

PAs are required to work alongside a doctor, making them well suited to close knit teams or outpatient settings. Because they do not rotate, they will become adapted over time to the needs and function of the team with whom they are working. At first glance, because of their short training, they might be expected to work less well in situations requiring rapid assessment of a wide range of clinical problems, such as the emergency department, but the same could be said of an inexperienced medical trainee. PAs could become practiced in the assessment needs of a

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particular group of patients and related care pathways, overcoming the limitations of their short training.

The inability of PAs to prescribe is a substantial hindrance to independent practice and shows no sign of resolution. However, modern healthcare requires large interdisciplinary teams, in which no individual is able to do everything. A prescriber is unlikely to be far from the PA, so that, with proper organisation, medicines can be prescribed to patients in a timely manner.

This study has shown that PAs can be a valuable addition to a medical team at reasonable cost. Predictable problems occurred during their introduction and these can potentially be avoided with better forward planning.

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