Doctor's assistants—do we need them?

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Abstract

Objective—To investigate the potential for the doctor's assistant role within an accident and emergency (A&E) department in relation to consultant workload.

Methods—A time and motion evaluation of the activities of four A&E consultants before and after a doctor's assistant was established as a team member within our department. A review of the literature was undertaken to allow comparisons with the American model of the physician assistant within the emergency department.

Results—The initial evaluation indicated that over 20% of the consultant's time could have been saved if an assistant were available to perform a variety of non-medical tasks. The restudy performed once the assistant was in post indicated less time was spent by the doctors in "medical" clerical duties (6.7% *v* 11.5% time), telephone use (5.6% *v* 7.7%), and venepuncture/cannula insertion (0.4% *v* 2.1%), and more time was spent on consultation over cases (15.3% *v* 11.3%) and supervision of other staff (9.3% *v* 4.1%). These five areas changed significantly ($p=0.005$ by paired *t* test).

Conclusions—The doctor's assistant may have a role in reprofiling the workload of senior doctors in A&E departments in the UK. They may also have a role in reducing the pressure on junior doctors, though this effect was not evaluated.

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Keywords: doctor's assistant; workload

The medical manpower difficulties currently being experienced by accident and emergency (A&E) departments across the country have been of concern for some years. The problem is now exacerbated by the reduction in junior doctors' hours brought about by the New

Deal¹ and the mandate from the Royal College of Surgeons that A&E experience is no longer a requirement for basic surgical training. Many departments also experience difficulty in senior staffing with insufficient trainees to take up new posts and a recognition of the increased demand on consultants' time as their commitment to clinical work and training increases. These factors are leading to increasing pressures on already understaffed departments.

It is recognised that a significant proportion of hospital doctors' time is spent on duties that could be completed equally well by non-medical personnel²⁻³; a study of the workload of a group of A&E senior house officers suggested 18.5% of time was spent on such tasks.⁴ In an attempt to evaluate this problem the Greenhalgh report in 1994 explored a selection of options for distributing junior doctors' workload among other health professionals.⁵ Although its conclusion lay in the concept of shared responsibility for a variety of tasks between doctors and nurses, it also considered the physician assistant model—a clinical support worker trained to perform a variety of duties. This role is well established in America where over 27 000 physician assistants are currently registered as being in practice.⁶ These allied health professionals undergo a two to four year training program and work under the auspices of doctors performing delegated duties in the patients' management. Their role has developed into a respected and essential part of patient care in many specialties including emergency medicine.⁷⁻⁸

The medical system in the UK is far from the American model in terms of physician assistants performing doctors' tasks, but there is a need to consider whether training non-medics in duties that do not require a doctor's attention will help alleviate the pressures on staff in A&E departments. This study aims to evaluate the role of such a clinical support worker in a British A&E department.

Methods

In November 1995 a doctor's assistant for the A&E department of Leeds General Infirmary was appointed. During January and February 1996 analysis was made of the working patterns of the senior medical staff in an attempt to establish potential activities for the assistant to perform. A member of the clinical audit department conducted a "time and motion" study of the four consultants for four clinical sessions each—a total of 64 hours. The shifts covered were 0900-1300 and 1300-1700. A total of 60 activities were identified and regrouped to form 12 categories (see table 1). The consultants were chosen in order to

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Table 1 Time spent in activities

Activity	Mean time/shift before assistant (nearest min)	% Time	Mean time/shift after assistant (nearest min)	% Time
See new patients	69	28.7	60	25.2
Administration	39	16.2	37	15.2
*Clerical/doctor	28	11.5	16	6.7
Consultation with other departments/staff	27	11.3	37	15.3
*Telephone calls	19	7.7	13	5.6
Breaks	13	5.4	15	6.2
Supervision	10	4.1	22	9.3
*Bloods/intravenous cannulas	5	2.1	1	0.4
Teaching	5	2.0	3	1.3
Clerical/non-doctor	4	1.6	5	2.1
Fetching	2	0.8	8	3.1
Miscellaneous	21	8.6	23	9.6
Total	242	100	240	100

* Tasks consultants were undertaking which assistant could perform.

ensure consistency in personnel for the second arm of the study.

Once in post the assistant underwent six weeks of apprenticeship training under the guidance of the consultants; he learnt core skills including basic life support, phlebotomy, intravenous cannulation, and acquired a working knowledge of the department. For the tasks needing specific training he was required to perform 20 of each procedure under medical supervision and obtain the doctor's signature on satisfactory completion. At a later date he acquired suturing skills and attended the health care assistants training programme as well as the phase 2 paramedic training course. He had regular appraisal sessions with the consultants in order to outline achievements, establish goals, and discuss any areas of difficulty encountered in his work. His work is indemnified by the employing trust.

The re-evaluation was carried out in February 1997–15 months after the assistant had taken up post. During this phase the consultants were encouraged to utilise the assistant's skills wherever possible, although he was available to assist other doctors on duty concurrently. The activities of the same consultants were recorded, again for four clinical sessions each during the daytime shifts (0900–1300 and 1300–1700) and categorised as before. The results were analysed by the paired *t* test using estimated variances.

Results

The initial study highlighted some activities which our doctor's assistant might undertake in the course of his work. These include phlebotomy, insertion of intravenous cannulas, clerical work (such as filling in forms, searching for results), "fetching and carrying" (for example looking for *x* rays and equipment), and the making and receiving of telephone calls (including paging people and making referrals to some specialties). The first study indicated that over 20% of the consultant's time could be spent in other activities if our trained assistant were available to perform these duties (indicated by an asterisk in table 1). This translates to 96 minutes of a standard eight hour day.

In respect of these activities in the second arm of the study, the consultants spent less time in "clerical, doctor" (16 *v* 28 min) telephone calls (13 *v* 19 min), and on venepuncture/phlebotomy (1 *v* 5 min). They also spent more time in consultation with colleagues (37 *v* 27 min) and supervision (22 *v* 10 min). These differences were significant ($p=0.005$ by paired *t* test). Paradoxically they spent less time seeing new patients (60 *v* 69 min), and "fetching" also rose (8 *v* 2 min).

Discussion

This study demonstrated how the introduction of a doctor's assistant to the A&E department redistributed consultants' clinical workload and working pattern. We found statistically significant beneficial changes to clerical work, telephone use, venepuncture/cannulation, consultation over cases and senior house officer supervision. As a result, consultants were able

to become more "attending" in their role, and actually spent less time seeing new patients. Their availability was probably reflected in the increase in "fetching" which usually meant finding items relevant to the case in hand.

Our work concentrated on the effect of one post on the work of four consultants. The presence of only one assistant, who is responsible for helping a number of doctors, makes it difficult to analyse his full potential in terms of time redistributed to other activities for each doctor. The methodology, however, does reflect the "real time" situation that we had at the time of the study.

We recognise that the results may not be a true reflection of the consultants activities because of the "Hawthorne effect", that is studying a pattern will in itself lead to a degree of change. This highlights one of the difficulties in quantitatively assessing the benefits of a doctor's assistant.

The consultants were chosen as the subjects of the study to ensure consistency in medical staff. Although working a clinical shift at the time of the evaluation, a large proportion of time was spent on administration, teaching, and supervision (54 min per shift or 22.3% time). We might therefore expect different results if junior medical staff who spend the entire shift in clinical work were the subject of the study. We would anticipate that the introduction of more assistants might reduce the pressure on junior doctors and allow them more time to spend seeing new patients.

Manpower problems in A&E departments across the UK lead us to contemplate options for redistributing some aspects of patient care. In many hospitals there has been an expansion of the nursing role and the sharing of some tasks by medical and nursing staff to reduce doctors' workload and enhance professional development. The role of emergency nurse practitioners is the subject of ongoing attention, but the financial implications of employing these highly qualified nursing staff present a barrier to this becoming the short term solution to medical staffing problems. Physician assistants were introduced into the American health care system in the early 1960s to economically fill service gaps in primary care.⁶ Similarly, the introduction of a task orientated health care worker into UK A&E departments could be part of the solution to manpower problems. In America a physician assistant provides health care services to a patient under the direction of a doctor.⁷ Since the first physician assistant programme they have become an established part of the American health care system and in 1993 there were 27 403 registered physician assistants and 58 accredited training programmes.⁸ Physician assistants are usually offered liability cover by their employer but are able to obtain individual medical negligence cover if required.⁷ They are also required to be specifically trained in emergency medicine and take part in continuing medical education and quality assurance.⁹

Change of any nature often meets with considerable resistance and lessons can be learnt from the American model. When instituting a

new role it is essential to define the duties in conjunction with medical, nursing, and administrative staff and to consider the impact the post would have on other staff members and patients. There should be training appropriate to the role and involvement in a system of appraisal and quality assurance. Medical negligence cover should be dealt with on a local level as should remuneration; our doctor's assistant was paid on the MLSO (technicians) scale.

There are now a number of such assistants in our A&E department working on a rotational basis between 10 am and midnight seven days per week. They have come to be known as "clinical support workers" (CSWs). Interest in this concept has spread around a number of departments such that the trust has introduced the role to other areas of the hospital. A CSW salary scale has been devised that has helped to further establish the role within the trust.

On the basis of our experience and these results we would recommend that the role of CSWs be explored in other A&E departments.

The use of CSWs potentially frees senior doctors to adopt a role more suitable for their training and experience.

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- 1 Department of Health and Social Security. *The new deal*. London: DHSS, 1991.
- 2 Ferguson C, Shandall A, Griffith G. Out of hours workload of junior and senior house surgeons in a district general hospital. *Ann R Coll Surg Engl (Suppl)* 1994;76:53-6.
- 3 McKee M, Priest P, Ginzler M, *et al*. Which tasks performed by pre-registration house officers out of hours are appropriate? *Med Educ* 1992;26:51-7.
- 4 Tham KY, Richmond PW, Evans RJ. Senior house officers' work activity in an accident and emergency department. *J Accid Emerg Med* 1995;12:266-9.
- 5 Department of Health and Social Security. *The interface between junior doctors and nurses*. (Greenhalgh report.) London: DHSS, 1994.
- 6 Jones PE, Cawley JF. Physician assistants and health service reforms. *JAMA* 1994;271:1266-72.
- 7 Sturmann KM, Ehrenberg K, Salzberg MR. Physician assistants in emergency medicine. *Ann Emerg Med* 1990;19:304-8.
- 8 Hooker RS, McCaig L. Emergency department use of physician assistants and nurse practitioners: a national survey. *Am J Emerg Med* 1996;14:245-9.
- 9 American College of Emergency Physicians. Guidelines on the role of physician assistants in emergency departments. *Ann Emerg Med* 1997;29:571.