

Randomized controlled trial of general practitioner versus usual medical care in a suburban accident and emergency department using an informal triage system

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SUMMARY

We determined if care provided by general practitioners (GPs) to non-emergency patients, in a suburban accident and emergency (A&E) department using an informal triage system, differs significantly from care provided by usual A&E staff. One thousand eight hundred and seventy-eight patients participated. By comparison with usual A&E staff, GPs prescribed significantly more often (percentage relative difference [% RD] = 12 [95% confidence interval = 1–23]) and referred more patients to hospital (% RD = 21 [95% CI = 9–33]). This is the first study to report that sessional GPs working in an A&E department utilize similar or more resources than usual A&E staff. It emphasizes the need for the continued audit of initiatives that have been introduced into new settings.

Keywords: general practitioners; accident and emergency services; quality of care.

Introduction

MANY patients attend accident and emergency (A&E) departments with problems that are neither accidents nor emergencies and that could have been managed in the community by general practitioners (GPs). King's College Hospital, London, was the first centre to undertake an extensive evaluation of the role of sessional GPs in the A&E department.¹ It was found that GPs, in

comparison to usual A&E staff, safely utilized fewer hospital resources in the care of primary care attenders. These findings were confirmed by studies from St Mary's in London,² and St James's Hospital, Dublin.³ All three hospitals are large teaching centres, serve urban inner-city populations, and employ trained and dedicated nursing triage staff. The objective of this study was to evaluate the use of sessional GPs in a different setting — namely that of a small district general hospital that did not operate a formal triage system and that served a mixture of suburban and rural catchment populations.

Method

James Connolly Memorial Hospital (JCMH) is on the northern outskirts of Dublin city and has 336 beds serving a mixed rural and urban catchment population of 180 000. In 1996, the A&E department saw 25 047 new and 8213 repeat attenders. Medical staff during the study comprised one consultant, two registrars, and five senior house officers.

An unstructured receptionist-based triage system divides all non-ambulance patients into two categories: 'urgent' and 'non-urgent'. As in many other hospitals, the receptionists have received no formal training for this role and liaise informally with nursing staff regarding any specific patient problems. Staff do not consider this system to be ideal. However, for many smaller units such as JCMH, it is a pragmatic response to patient and staff needs. Audit performed prior to the study inception showed that 53% of all non-ambulance patients were categorized as non-urgent.

In March 1996, three local GPs were employed to work in the A&E department on a sessional basis. They were employed by the hospital and had no direct contact with the research team.

Study enrolment only occurred when both GPs and usual A&E staff were on duty together. The pragmatic method of randomization of patients to either GP or A&E staff was the same as in our previous study³ and was performed according to time of registration. Process data were collected from a review of written patient records.

Results

During March to September 1996, 1878 patients were enrolled in the study. There were no differences in age, sex, socio-economic status, registration with a GP, or type of presenting complaint between patients seen by a GP or usual A&E staff (data available from the authors). Table 1 gives details of the process of care for all patients. Process differences are expressed as the percentage relative difference (% RD). Positive differences reflect increased process usage by the usual A&E staff in comparison with GP staff. Negative differences reflect the reverse. By comparison with usual A&E staff, GPs significantly prescribed more often (% RD = 12 [95% CI = 1–23]) and referred more patients to hospital (% RD = 21 [95% CI = 9–33]).

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Table 1. Process of care for 1878 non-urgent patients seen by a GP or usual A&E staff.

Process measure	Number (%) managed by A&E staff (n = 1107)	Number (%) managed by GP (n = 771)	% relative difference (95% confidence interval)
Any investigation	746 (67.4)	551 (71.5)	-6 (-13 to 0)
Any blood investigation	156 (14.1)	104 (13.5)	4 (24 to -21)
Any X-ray	631 (57.0)	469 (60.8)	-7 (-15 to 1)
Any referral	147 (13.2)	121 (15.6)	-18 (-48 to 5)
Any prescription	478 (43.1)	372 (48.2)	-12 (-1 to -23)
Referral to hospital	458 (41.4)	385 (49.9)	-21 (-9 to -33)
Admission	40 (3.6)	31 (4.0)	-11 (-76 to 30)

Discussion

A key area of concern in the design of the research methodology was the selection of an appropriate randomization method. The basis of randomization — allocation to triage groups and time of registration — had operated successfully in the previous study³ and no implementation difficulties were encountered in this study either.

This is the first study to report that sessional GPs working in an A&E department utilize similar or more resources than usual A&E staff. We believe this finding could be attributable to a number of different reasons. The JCMH study is the first to include referrals from GPs in the study population; analysis with and without these patients produces similar results. Secondly, the GPs themselves involved in this study had less experience in principalship in general practice than those involved in previous studies (data available from the authors). Each GP working in JCMH provided committed and high-quality care to their patients. However, it may be that this group of GPs responded to some patient problems based more on their recent experience of hospital care rather than general practice. Finally, the lack of a physiologically-based triage system may have resulted in a balance of workload for the GPs that altered their usual management procedures. The increased use of hospital resources in the JCMH study may be a consequence of patients being inappropriately categorized as suitable for primary care management. This study emphasizes the need for the continued audit of initiatives that have been introduced into new settings.

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