Management confidence and decisions to refer to hospital of GP registrars and their trainers working out-of-hours

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SUMMARY

Background. There is concern about the educational impact and possible stress on registrars of new out-of-hours co-operatives.

Aim. To compare the confidence in managing out-of-hours problems of registrars in traditional on-call rotas and co-operatives with that of their trainers. To determine how frequently registrars discussed problems out-of-hours with their trainers, and to compare the referral pattern of registrars with their trainers out-of-hours.

Method. Analysis of log diaries of out-of-hours experiences kept by registrars and trainers over two, two-month periods in winter and summer.

Results. Thirty registrars (out of a possible 51) and 34 (out of a possible 52) trainers took part in the winter, and 18 registrars and 29 trainers in the summer. Registrars were confident in their management of problems, and their confidence increased over the year (59% versus 72% difference = 12%, 95% CI = 6% to 20% for very confident). Registrars varied in their discussion of problems with trainers. When ‘a little worried’ they discussed their management 30 out of 53 times (57%); if ‘very confident’, 36 out of 576 times (6%). Registrars during the summer segment of the study referred more frequently to hospital than trainers (20% versus 10% difference = 10%, 95% CI = 3% to 17%). Registrars in traditional rotas recorded a slightly higher but statistically insignificant level of confidence in their management of problems than those registrars in cooperatives.

Conclusions. While many registrars are confident in their work and are using their trainer for information appropriately, some are not. Registrars may be referring to hospital at a much higher rate than their trainers. More research is required to confirm this and further explore these findings.

Keywords: registrars; out-of-hours work; referral; confidence; management skills.

Introduction

In south-east Scotland, in the autumn of 1996, concerns were raised about the possible educational impact on registrars of new general practice out-of-hours cooperatives. There were concerns that registrars might find themselves under pressure and forced to make clinical management decisions with which they were unhappy. Given that there was little information existing about the out-of-hours experience of registrars in general, it was decided to investigate the out-of-hours experience of registrars and to compare this with their trainers.

This paper describes some of the findings of this study, with particular reference to registrars’ confidence in handling problems out-of-hours and their decisions to refer patients to hospital. The aims of the study were to determine how confident the registrars were in managing out-of-hours problems and if their confidence improved with experience, how frequently registrars discussed problems with their trainers and if this was related to their confidence in handling problems, whether registrars on traditional on-call rotas were more or less confident than those in cooperatives in managing out-of-hours problems, and if there were differences in the pattern of referral to hospital by registrars and trainers for out-of-hours problems.

Method

All registrars in training in 1996 in south-east Scotland, together with their trainers, were asked to volunteer to record all out-of-hours contacts over two, two-month periods during the winter and summer of 1996 to 1997. This was intended to represent one period when registrars were relatively inexperienced and another period just prior to finishing their training year. They recorded this on a form designed for the purpose, which had been piloted by 12 registrars and trainers (Appendix 1: please contact author for details). They were asked to record their name, type of service (traditional on-call, cooperative, deputising), type of session (weekend, day, evening, overnight), type of contact (passed on to another doctor for completion [mainly cooperatives], telephone advice, seen at surgery/primary care centre [PCC], visited at home), age of the patient, the problem, whether they made a referral to hospital, their confidence in their management, and any discussion of the case with another doctor before their management decision. Completed forms were returned to the author.

Statistical analysis

In order to allow for the multilevel nature of the data, confidence limits and significance tests were carried out after aggregating the data on individual patients to doctor level to give summary statistics in the form of percentages, which were then subjected to parametric statistical analysis. Thus, registrars and their trainers were compared by using paired $t$-tests on the percentages of very confident consultations and of patients referred, while registrars in summer and winter were similarly compared by using two-sample $t$-tests. Pearson’s correlation was used to assess the significance of the association between the percentage of very confident consultations and the percentage discussed with trainers.

Results

During the winter part of the survey, 30 registrars (out of a possible 51) and 34 (out of a possible 52) trainers volunteered to take part, of whom 17 were from practices using traditional on-call services and 45 were from practices that use cooperatives. During the summer part of the survey, 18 registrars and 29 trainers took part. Several traditional on-call practices had by then joined cooperatives and, therefore, the numbers from traditional practices were reduced to six. One trainer/registrar pair worked jointly in the deputising service. A total of 5576 patient contacts were recorded.
Reasons given for non-participation were: ‘leaving soon anyway’, ‘too busy on-call to complete’, ‘sickness of registrar/trainer’. Some registrars felt they had enough to do with summative assessment and the college examination and chose to opt out of a study that was not compulsory. One said he thought the survey was ‘part of the culture of surveillance that now operated in the registrar year’. Several mentioned that their data was incomplete because they were so busy they could not record it all. I contacted most of the registrars and trainers who did not participate. Most of those were working in cooperatives, otherwise there were no obvious demographic differences between participants and non-participants.

Variations in workload

There was marked variation in workload. Trainers reported seeing more patients during the collection period than did registrars (average = 56 contacts versus 43 contacts per two-month period). The range of contacts for registrars was three to 112, and the range for trainers was 15 to 150. There was no difference in the types of problems seen by registrars and trainers.

How confident were registrars and trainers?

Participants were asked to record for each contact how confident they were about their management of that case. They were given a choice of four defined responses. Table 1 shows the confidence of registrars and trainers in both segments of the study.

How often did registrars discuss cases with their trainer?

Twenty-four registrars discussed problems with their trainers during the winter segment, with one registrar discussing 21 out of 44 (48%) of his calls. In contrast, five registrars in the summer segment discussed problems with their trainers, the highest discussing six out of 48 (13%) of his calls. The frequency with which they did so appears to be related to their confidence in management. In encounters where registrars in the winter segment reported that they were ‘a little worried’ about a case, they discussed their management 30 out of 53 (57%) times before concluding the case. If they reported ‘very confident’, they discussed their management 36 out of 576 (6%) times. There was a significant negative correlation between the percentage of consultations discussed and the percentage reported as ‘very confident’ (r = 0.39, P<0.05).

Table 1. Confidence of registrars and trainers in both segments of the study.

<table>
<thead>
<tr>
<th>Confidence</th>
<th>Registrars (%)</th>
<th>Trainers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very worried</td>
<td>0 (0%)</td>
<td>4 (&lt;1%)</td>
</tr>
<tr>
<td>A little worried</td>
<td>53 (4%)</td>
<td>60 (3%)</td>
</tr>
<tr>
<td>Quite confident</td>
<td>464 (38%)</td>
<td>481 (23%)</td>
</tr>
<tr>
<td>Very confident</td>
<td>718 (58%)</td>
<td>1525 (74%)</td>
</tr>
<tr>
<td>No data</td>
<td>61</td>
<td>126</td>
</tr>
<tr>
<td>Total</td>
<td>1296</td>
<td>2196</td>
</tr>
<tr>
<td>Summer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very worried</td>
<td>1 (0%)</td>
<td>9 (&lt;1%)</td>
</tr>
<tr>
<td>A little worried</td>
<td>31 (4%)</td>
<td>21 (3%)</td>
</tr>
<tr>
<td>Quite confident</td>
<td>199 (28%)</td>
<td>339 (23%)</td>
</tr>
<tr>
<td>Very confident</td>
<td>491 (68%)</td>
<td>915 (73%)</td>
</tr>
<tr>
<td>No data</td>
<td>33</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>755</td>
<td>1329</td>
</tr>
</tbody>
</table>

The difference between registrars and trainers is most marked for the ‘very confident’ reply but was only significant in the winter segment. For the winter data the aggregated means were 58% versus 74% difference = 16%, 95% CI = 1% to 31%, P<0.05. Registrars significantly increased in their expressed confidence over the year (aggregated means 59% versus 72% difference = 12%, 95% CI = 6% to 20%, P<0.01 for ‘very confident’). There was no correlation between call type (telephone, centre, or visit) and confidence.

Discussion

Methodology

There were several problems with the data collection, which means that caution should be adopted with interpretation. All registrars whose trainers were invited to take part in the study. While the response from trainers was gratifying in both segments of the study (65% in winter and 56% in summer), the response of registrars was more disappointing (59% and 35% respectively). It is well recognised that it is difficult to get registrars to keep any sort of log. Although this raises the possibility of bias, with perhaps the more thorough or interested trainees taking part, there were no obvious differences between those taking part and those choosing not to. The responders largely belonged to the same sort of spread of practices: town, city centre, deprived, or affluent. It could be argued that those who gave up the survey because they found that they did not have time to complete the form (because they were so busy) might well have been more stressed than doctors who did complete the form. This may possibly have had implications for the interpretation of the results of the ‘confidence’ question.

Cooperatives were new to the area at the time of the winter segment of the study. As a result of this, registrars received less experience than they might otherwise have. Trainers were wary about exposing their registrars to unfamiliar experiences.

Some doctors said that they did not always record every encounter, particularly if they were busy. One cooperative allowed the author to check their data with the study data for three doctors who gave their permission. These showed a high level of correlation. Nevertheless, it is likely that the survey underestimates the workload of at least some of the doctors taking part.

There is little research that examines the out-of-hours experience of registrars. Most published material is in the form of personal audits of individual registrars and refers to non-emergency work. These papers seem to suggest that registrars and the partners in their practices see different types of patients, with registrars seeing more acute problems and partners seeing more elderly patients and more chronic problems. Because of the nature of out-of-hours work, this difference is not seen in this study. Other studies have shown that registrars see fewer patients by day than...
their partners, and, in this study, this pattern was found over the four-month survey period out-of-hours.

In this study, registrars were generally either quite or very confident in their management of problems. Less than 5% of contacts resulted in the registrar feeling worried. Registrars' confidence in their management increased significantly between winter and summer segments. Trainers were generally more confident than registrars. There was no significant difference in levels of confidence between registrars in traditional on-call rotas and their counterparts in cooperatives.

Longhurst and her colleagues found that, when asked about their general experience of out-of-hours work, 17.5% of the registrars surveyed had low confidence in their handling of telephone consultations. This is contrary to the findings of this study, which showed very few instances when registrars were worried about their management.

Many registrars in this study seemed to discuss the management of cases with which they were worried with their trainer. However, it is of some concern that, in 23 cases out of 53 in which the registrars were a little worried with their management, they did not discuss the problem. It would be interesting to discover why this might have been and is an area worthy of further research.

Research from England and Wales suggests that general practitioners in general refer about 13% of all cases they see (day and night) to hospital. This statistic refers to the total workload in their management increased significantly between winter and summer segments. Trainers were generally more confident than registrars. There was no significant difference in levels of confidence between registrars in traditional on-call rotas and their counterparts in cooperatives.

During the summer segment, this study observed a referral rate of 10% for trainers and 20% for registrars. The Edinburgh Deputising Service (HealthCall) quotes a rate of 10% (Cowan J: personal communication, 1997). It is perhaps not surprising that registrars refer more to hospital, as they are relatively inexperienced and may therefore ‘play safe’. The fact that registrars were referring twice as many patients as their trainers during the last few months of their training is worrying. Given the dramatic increase in hospital admissions in recent years and calls to reduce this, some consideration needs to be given to confirm the findings of this study and to explore reasons for the higher referral rate of registrars out-of-hours.

**Conclusion**

Registrars in south-east Scotland seem to be confident in their work and are usually using their trainer for advice when worried. However, registrars may be referring to hospital at a much higher rate than their trainers, and this possibility needs to be studied further. Some registrars are not seeking help when worried about their management. The reasons for this need to be identified.

### Table 2. Percentage referral rates of registrars and trainers over both segments of survey aggregated to doctor level.

<table>
<thead>
<tr>
<th></th>
<th>Summer</th>
<th>Winter</th>
<th>CI for difference</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registrar</td>
<td>19.7%</td>
<td>14.6%</td>
<td>-5% to +10%</td>
<td>Not significant</td>
</tr>
<tr>
<td>Trainer</td>
<td>9.6%</td>
<td>11.8%</td>
<td>-2% to +4%</td>
<td>Not significant</td>
</tr>
<tr>
<td>CI for difference</td>
<td>3% to 17%</td>
<td>-2% to 8%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>P-value</td>
<td>&lt;0.01</td>
<td>Not significant</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### References


### Acknowledgements

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