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Nurse Telephone Triage in out of Hours Primary Care: A Pilot Study

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## Nurse telephone triage in out of hours primary care: a pilot study

South Wiltshire Out of Hours Project (SWOOP) Group

See editorial by Hallam and pp 182, 187, 190, 193, 199

South Wiltshire Out of Hours Project (SWOOP) Group Members of the group are listed at the end of this report.

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The "crisis" in out of hours primary care<sup>1,2</sup> and availability of new development funding<sup>3</sup> have prompted new service arrangements, primarily general practice cooperatives and primary care emergency centres. Nurse telephone triage is an adjunct to cooperatives and primary care emergency centres in which trained nurses receive, assess, and manage calls by giving advice or by referral to the general practitioner or ambulance service.<sup>4</sup> These services are established elsewhere but are an innovation in the United Kingdom. This paper reports a pilot study of a United Kingdom based nurse telephone triage service.

### Subjects, methods, and results

The pilot was run in two practices in Salisbury (combined practice population 10 000) as 18 four hour sessions—14 in the evenings and four at weekends. Incoming calls to the practice were diverted to an experienced practice nurse, who was aided by the Telephone Advice System, a computer based primary care call management system.<sup>5</sup> A printed summary of each assessment provided by the Telephone Advice System was faxed to the general practitioner. Callers received follow up questionnaires asking about their satisfaction with the service.

No logistic problems were encountered. Overall, 56 calls were received from 54 callers. There were no deaths, no hospital admissions, and no ambulance calls relating to any of the calls. Twenty one calls (38%; 95% confidence interval 25% to 51%) were handled by the nurse alone (table 1). Of the 35 calls referred to a doctor,

**Table 1** Handling of 56 calls received by telephone triage nurse

	No (%) of calls
<b>Handling of initial telephone calls by triage nurse</b>	
Nurse assessment and advice only	21 (38)
Referral to general practitioner with interim advice from nurse	22 (39)
Referral to general practitioner with no interim advice	13 (23)
Total	56 (100)
<b>Handling of calls referred to general practitioner</b>	
Advice only	12 (34)
Consultation at out of hours surgery	6 (17)
Home visit	17 (49)
Total	35 (100)

the nurse provided interim advice in 22 (39%; 27% to 53%). Two callers called twice about the same episode of illness. Both were dealt with by the nurse alone. Twenty two calls concerned children aged under 16, six being under 1 year. Practice policy dictated that these patients should automatically be referred to the doctor. Overall, 17 of 22 children were referred to the doctor.

No triage decision was changed by the general practitioner because of the faxed record. In 12 of the 35 referred calls the general practitioner gave telephone advice only. In five cases the patient had received the same advice from the nurse. In the first nine sessions the nurse managed seven of 29 calls alone (24%; 10% to 44%). In the second nine sessions this proportion increased to 14 of 27 (52%; 32% to 71% ( $\chi^2$  test for difference in proportions=4.58;  $P=0.03$ ,  $df=1$ )). This difference could not be explained by differences in the urgency of calls.

A postal follow up questionnaire was sent to 44 callers. The remaining 10 callers were excluded from receiving a questionnaire because they were acutely mentally ill, or distressed, or elderly and frail, or under 16 years of age, or were merely requesting a routine appointment. Replies were received from 30 (68%) of callers. Twenty six respondents (87%; 69% to 96%) were satisfied or highly satisfied with the advice they received from the nurse. The remainder failed to complete this question. Nineteen respondents had spoken to the nurse only and were asked whether they would prefer to have spoken directly to a doctor. Fourteen (74%; 49% to 91%) said "no."

## Comment

Nurse telephone triage was feasible in this setting, and most patients found the service acceptable. But what benefits does the service bring? The answer is likely to be both a reduction in general practitioners' workload and an economic gain. Over one third of calls in this study were handled by the nurse alone, and in the second half of the study this proportion increased to half. A message handling service alone would have referred many calls to the general practitioner unnecessarily. In such circumstances a cooperative currently employing two or more general practitioners on call might find it possible to replace one of the doctors with a telephone triage nurse.

We are conducting a randomised controlled trial of nurse telephone triage in a larger population over one year. This will permit better judgment of the safety and cost implications of the widespread institution of nurse telephone triage within the United Kingdom.

Members of the South Wiltshire Out of Hours Project (SWOOP) Group were: Mrs Val Lattimer, Dr Steve George, and Mrs Eileen Thomas (Wessex Institute for Health Research and Development, University of Southampton); Dr Helen Smith, Dr Michael Moore, and Mrs Felicity Thompson (Wessex Primary Care Research Network); and Professor Alan Gasper (School of Nursing, University of Southampton).

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Conflict of interest: None.

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# Changing the pattern out of hours: a survey of general practice cooperatives

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Since early 1995 substantial changes have been taking place in general medical services provided out of hours. A package of revisions to terms and conditions have been agreed, including reimbursing night visits uniformly wherever they occur, permitting transfer of responsibility to another principal, and providing a development fund.<sup>1</sup> The number of out of hours cooperatives registered with the National Association of General Practice Co-operatives rose from six in 1990 to 124 in October 1996. Cooperatives are "non-profit making organisations entirely owned, and medically staffed by, the general practitioner principals of the area in which they operate."<sup>2</sup> We surveyed registered cooperatives to investigate the extent of change and likely future directions.

## Methods and results

In May 1996 a postal questionnaire was devised after an initial telephone survey of 20 cooperatives and sent to all 98 organisations then registered with the national association. Sixty seven responses (68%) were received after two reminders. There was a slight bias towards smaller and newer cooperatives. Respondents repre-

sented 5476 general practitioners covering 11 462 500 patients.

Fifty two (78%) cooperatives were established during 1995-6 and 19 (28%) had been operational for under three months. General practitioner membership in each ranged from 20 to 256 (mean 82; median 67), most cooperatives (47; 70%) having under 100 members. Sixty one cooperatives (91%) reported support from out of hours development funds in 1995-6. The average received was £108 399 (range £10 000 to £400 000).

Home visits were provided by all cooperatives, 63 out of 64 (98%) offering telephone advice and 62 of 64 (97%) offering base consultations also. Table 1 gives the proportion of calls estimated as dealt with by home and base visits or telephone advice. Five cooperatives (8%) reported over half of calls as resulting in a base consultation. Fifty three (83%) estimated that under half resulted in a home visit.

Of all 67 respondents, 61 (91%) employed non-medical managers, administrators, and drivers whereas only 19 (28%) reported employing nurses or nurse practitioners. Thirty eight cooperatives (57%) reported measuring service quality but only 23 (34%) had agreed quality monitoring standards with their

See editorial by Hallam and pp 182, 187, 190, 193, 198

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