

# Out-of-hours work: the effect of setting up a general practitioner cooperative on GPs and their families

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## SUMMARY

*Since 1995 the number of general practitioner (GP) cooperatives set up to provide out-of-hours care has risen dramatically. This study demonstrates that the setting up of a cooperative in Chester is linked to an increase in the morale of the local GPs and their families.*

Keywords: out-of-hours; general practitioner cooperatives; stress.

## Introduction

OUT-OF-HOURS work is one of several factors causing stress in general practice; it also appears to cause considerable disruption to practitioners' families.<sup>1</sup> The search for a solution to this problem has intensified recently as the demand for out-of-hours primary medical care has increased.<sup>2,3</sup>

The preferred solution to the burden of out-of-hours work appears to be the setting up of out-of-hours cooperatives.<sup>4</sup> In early 1995, changes in GPs' terms and conditions and the availability of development funding resulted in an expansion in the number of cooperatives. Studies have examined levels of patient satisfaction with GP cooperatives,<sup>5</sup> and one study has looked at the stress levels of GPs before and after the formation of an out-of-hours primary care centre.<sup>6</sup> However, there has been little examination of whether cooperatives benefit GPs and their families. This study aimed to investigate whether the setting up of a cooperative in Chester is linked to an increase in the morale of local GPs and their families.

## Method

The study was questionnaire-based and took place in Chester. The population served by the cooperative is approximately 100 000 and is predominantly urban or suburban. At the start of the study there were 57 GP principals in the cooperative; this had risen to 59 by the end of the study. All the GPs in Chester joined the cooperative.

An initial qualitative study was carried out to determine the content of the questionnaire. Two focus groups were set up: one consisting of GPs and the other of their respective partners/spouses. The focus groups' discussions were recorded on an audio cassette and the recordings then transcribed for analysis. Analysis was performed by looking for commonly recurring themes. The following themes were found:

- Dislike of out-of-hours work,
- Damage to family life,

- Worry about safety when on call,
- Stress caused to the doctor and his or her partner/spouse, and
- Anger felt by the doctor when on call.

Each of these themes was then turned into a statement and given a Likert rating scale of 1 to 5 from 'strongly disagree' to 'strongly agree'. The questionnaire was sent to the GPs and their spouses/partners six weeks before the setting up of the cooperative and six months afterwards. Ten GPs and their spouses were involved in the earlier stages of the study. They were not sent questionnaires.

Because of the need for anonymity, the before and after groups were not formed into matched pairs. The data obtained from the Likert scale were ordinal, and were summarized by medians and interquartile ranges. The Mann-Whitney U test was used to compare scores before and after the introduction of the cooperative.

## Results

Before the cooperative was set up, 35 responses were received for the doctor's questionnaire (a response rate of 74%) and 31 for the spouse/partner's (response rate of at least 66%). When the questionnaire was sent again after the cooperative had been established, 42 GP responses (response rate 86%) and 31 spouse/partner responses (response rate at least 63%) were obtained. The exact number of spouses/partners was not known. It was assumed that the number of spouses/partners was less than or equal to the number of GPs.

The results are summarized in Table 1 with the scores on each Likert scale being represented by the median. An indication of the spread of scores is given by the lower and upper quartiles. The Likert scores before setting up the cooperative indicate a high degree of consensus on the negative aspects of out-of-hours work. Almost all median results were either 4 ('agree') or 5 ('strongly agree'), and the interquartile ranges show little departure from the median values. The only exception to this trend was the response from GPs to the question on safety concerns; here there seems to have been more variety of opinion, the median being 'neither agree nor disagree'. After formation of the cooperative, all the median values shifted down the Likert scale towards the 'strongly disagree' end.

For both the doctors' group and the spouse/partners' group, the Mann-Whitney U test indicated that these improvements were significant ( $P < 0.05$ ). Again, the exception was the GPs' fear for their own safety, where the suggested improvement was not statistically significant ( $P = 0.06$ ).

The comment section on the questionnaire provided qualitative support for these results. The most striking feature from the questionnaires returned after the cooperative began was an almost total absence of negative feedback from both the doctors and their spouses/partners.

## Discussion

The study had several limitations. One of these is that the questionnaire was an untested tool in such a study. This could raise doubts about its reliability and validity, despite it being derived

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**Table 1.** Changes in attitude before and after formation of the cooperative.

	Number of responses		Responses on Likert Scale <sup>a</sup>				MannWhitney P-value <sup>b</sup>		
	Before	After	Before		After				
			Lower Quartile	Median	Upper Quartile	Lower Quartile		Median	Upper Quartile
GP responses									
I dislike out-of-hours work	34	42	4	5	5	3	4	5	0.0058
Out-of-hours work damages family life	35	42	4	4	5	3	4	5	0.0057
I worry about my safety when I am on call	35	42	2	3	4	1.25	2	3	0.0569
I find out-of-hours work stressful	35	42	4	5	5	3	4	5	0.0001
I get angry when I am on call	35	42	4	4	5	2	3	4	0.0001
Spouse/partner responses									
I dislike my spouse/partner being on call	31	31	4	4	5	3	4	4	0.0029
My partner's out-of-hours work damages family life	31	31	4	4	5	2	3	4	0.0024
I worry about my partner's safety when he/she is on call	31	31	4	4	5	2	2	3.5	<0.0001
I find my partner being on call stressful	31	31	3	4	5	2	3	4	0.0020
My partner gets angry when he/she is on call	31	31	4	4	5	2	3	4	0.0001

<sup>a</sup>Likert scale: strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, strongly disagree = 1. <sup>b</sup>Mann-Whitney U test for difference between Likert scores before and after formation of the cooperative.

from qualitative data obtained from focus groups and piloted on a small group of GPs in Sunderland. Another limitation is that the study looks only at Chester; it would not be possible to generalize the findings to other areas. Chester had no alternative system for providing out-of-hours work, such as a deputizing service, and a control sample from another area was not used for comparison.

Despite these reservations, the authors believe that this study provides useful and encouraging information about the impact on GPs and their spouses/partners of setting up an out-of-hours cooperative. It suggests that out-of-hours work is viewed less negatively and has less effect on the lives of the participating GPs and their families once such a cooperative has been established.

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