

Because the relative risk reduction makes no assumptions about patients' susceptibility to an outcome (in this case death) it can easily be generalised to different groups of patients. Numbers needed to treat, however, can also be related to groups of patients different from those for which they were first calculated. All that is needed is to divide the published number needed to treat by a decimal fraction that relates your patients' susceptibility to the outcome of interest to that of the patients in the trial.¹

There is currently a lot of support for basing purchasing as well as other health care decisions on evidence and the NHS research and development strategy is putting considerable effort into developing the NHS's evidence base. The paper by Fahey *et al* suggests that purchasers may also need a programme of skills development to ensure that when charged with basing decisions on evidence they know how to make sense of that evidence. This entails three separate but interrelated steps: systematically examining the trustworthiness of its conclusions; assessing whether its results are important; and considering its applicability to the local population.

These various measures of a treatment's benefits of course say nothing about costs, central to any

purchaser's considerations. Another problem is that the benefits are not measured in a way that facilitates comparison across programmes. If we look more closely at mammography and cardiac rehabilitation the focus in each case is on deaths prevented, taking no account of the age at death or of the quality of the life years gained. It is for reasons such as these that some health economists have criticised the current drive to clinical effectiveness in the United Kingdom. (In theory it means that purchasers, by investing more resources in services of proved benefit, might divert resources from services that could yield greater improvement in their population's health.)

Valid and thoughtful cost-utility analysis, by using measures such as QALYs, will certainly be vital for evidence based purchasing. There are few purchasing problems, however, which can at the moment be analysed in this way. For that reason, measures such as numbers needed to treat and absolute risk reduction are best seen as simple "half way technologies" that can help busy people trying to make the best use of evidence in their decisions.

¹ Cook RJ, Sackett DL. The number needed to treat: a clinically useful measure of treatment effect. *BMJ* 1995;310:452-4.

Attitudes of consultant physicians to the Calman proposals: a questionnaire survey

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Abstract

Objective—To determine the views of a large and representative group of consultant physicians on the Calman proposals, in which acute general medical services will change from being primarily consultant led to consultant provided.

Design—Postal questionnaires.

Subjects—All 236 consultant physicians in acute hospitals in North West and South West Thames regions.

Results—Replies were received from 179 (76%). One hundred and thirty seven (77%) indicated that they would not resume emergency residential duties, and 126 (71%) indicated that they would probably withdraw from general medical duties under these circumstances. One hundred and twenty six (70%) and 137 (77%) had not inserted a central venous line or temporary pacemaker, respectively, within the previous five years. Of 157 answering a question on the impact of the Calman proposals on the quality of patient services, 125 considered that it would be detrimental, and only 18 (11%) thought that it would be beneficial.

Conclusion—Most consultant physicians are not prepared to resume emergency duties and could not do so without retraining in practical procedures. There is widespread antagonism to the Calman proposals, and most physicians consider that their impact on the quality of patient services will be detrimental.

Introduction

The Calman report proposes radical changes to the training of junior medical staff that will fundamentally alter the delivery of acute hospital services from being primarily consultant led to consultant provided.^{1,2} A reduction in middle grade junior staff will be accompanied by an increase in the number of consultants,

who will participate directly in emergency care. These changes have been made explicit in a recent paper from the Committee of Postgraduate Medical Deans (COPMED) and the United Kingdom Conference of Postgraduate Deans, which states that "involvement of the consultants in the provision of emergency care will need to be extended and formalised into their job plans."³

The impact on consultants in acute specialities will be profound,⁴ especially for physicians in acute general medicine, because of the need for 24 hour cover. Yet there has been surprisingly little reaction from consultant physicians themselves. The Royal College of Physicians and the BMA have both given qualified support to the proposals but have made no attempt to ascertain the views of those colleagues who are most directly affected. We therefore sent a questionnaire on behalf of the North West Thames Diabetes and Endocrinology Specialist Group to a large and representative group of consultant physicians to elicit their views on these issues.

Subjects and methods

A confidential questionnaire was sent in March 1995 to all 236 consultant physicians in North West Thames and South West Thames regions whose junior staff participated in emergency intake duties. They worked at five teaching hospitals and 25 district general hospitals. We received 179 (76%) replies, and the response rates from teaching hospital and district general hospital consultants were 82% (54/66) and 74% (125/170) respectively. The respondents comprised 154 men and 25 women, and their median age was 45-50 years. The largest speciality groups were diabetes/endocrinology (35), geriatrics (34), gastroenterology (29), respiratory medicine (27), and cardiology (22).

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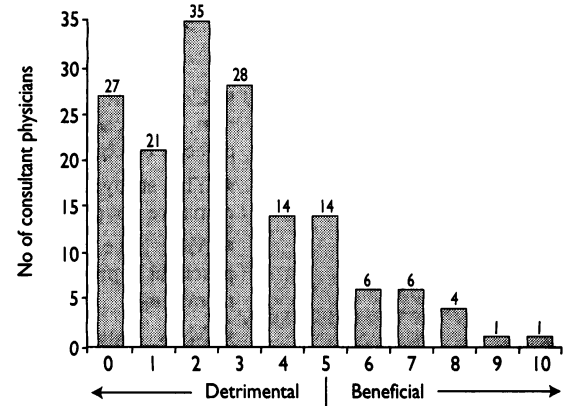
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Results

The attitude of consultants to regular residential emergency duties—One hundred and thirty seven (77%) consultants indicated that they were not prepared to return to regular residential emergency duties, and only two (1%) replied “yes” to this question (table I). Ninety one (51%) indicated that they would contemplate withdrawal from acute general medicine duties if asked to resume residential cover, and a further 65 (36%) indicated that they would “possibly” or “probably” do so. Thirty (17%) indicated that they would retire from the NHS altogether under these circumstances, and a further 96 (54%) indicated that they would “probably” or “possibly” do so.

Recent experience of various practical procedures—Only 21 (12%) and 19 (11%) consultants—predominantly cardiologists—had inserted a central venous line or temporary pacemaker within the previous year (table II). One hundred and twenty six (70%) and 137 (77%), respectively, had not done so in the previous five years. This latter group was asked whether they would undergo training to “relearn” these procedures (table I): 64 (47%) replied “no” and only 24 (18%) gave an unequivocal “yes.”

Views on the impact on quality of patient services—Consultants were asked, what impact will full implementation of the Calman proposals have on the quality of patient services at your hospital? and to indicate their answer on a scale of 0 (detrimental) to 10 (beneficial) with a score of 5 indicating a neutral effect (figure). Of the 157 who answered this question, 125 (80%) gave a score of below 5, signifying a detrimental impact, and 83 (53%) gave a score of 2 or less, implying that this would be profound. Only 18 (11%) gave a score of 6 or more, indicating benefit. The mean score was 2.7; and those of district general and teaching



Views of consultant physicians on impact of Calman proposals on quality of patient services at their hospitals. Consultants were asked to indicate their answer on a scale of 0 (detrimental) to 10 (beneficial) with a score of 5 indicating no effect

hospital consultants were virtually identical (2.8 and 2.6). The means of colleagues aged either more or less than 45 years were similar (2.3 and 2.6). The means for each speciality were broadly similar—namely, 1.6 (gastroenterology), 2.5 (cardiology), 2.7 (respiratory medicine), 2.8 (diabetes/endocrinology), and 3.3 (geriatrics).

Views on the likelihood of full implementation of the Calman proposals—Sixty (34%) colleagues considered that full implementation would never occur, and only seven (4%) responded with an unequivocal “yes” (table I).

Other comments on the Calman proposals—Respondents were asked, have you any other comments to make on the Calman proposals in general, and their potential impact on your clinical services in particular? One hundred and twenty respondents gave answers ranging in length from a single word to several paragraphs. We have summarised their responses by listing points made by 12 or more colleagues in table III.

Discussion

We undertook this study to ascertain the views of a large and representative sample of physicians on the Calman proposals. It has given many colleagues their first opportunity to express an opinion on these vital issues, and the impressive 76% response to a single mailshot of an intrusive questionnaire testifies to their interest and concern.

Several firm conclusions may be drawn. Firstly, nearly all consultant physicians currently in post are not prepared to return to residential emergency duties. Some emphasised this with comments such as “absolutely not” and “under no circumstances whatsoever.” It remains to be seen whether consultants appointed in the future will be any more willing to undertake residential duties.

Secondly, most colleagues have no recent experience of important practical procedures and could not resume first hand emergency duties without specific retraining. Several also doubted whether they could withstand the long hours and sleep deprivation. Junior staff were thought to provide more stamina and a higher standard of practical skill than would most middle aged consultants.

Thirdly, many consultants felt that full implementation of the Calman proposals was unlikely to occur. This may explain the passive attitude of some colleagues to these issues. The need for an enormous and possibly unrealistic expansion in consultant numbers, the lack of additional funding, and the inability to maintain a supply of suitable trainees were given as reasons for their scepticism.

TABLE I—Questions and responses on Calman proposals from 179 consultant physicians. Figures are numbers (percentage)

Question	No	Possibly	Probably	Yes
If you were asked to return to regular residential emergency duties, would you be prepared to do so?	137 (77)	29 (16)	9 (5)	2 (1)
If you were asked to return to regular residential emergency duties, would you contemplate withdrawal from acute general medical duties?	19 (11)	30 (17)	35 (20)	91 (51)
If you were required to return to regular residential emergency duties would you retire from the NHS altogether?	51 (29)	66 (37)	30 (17)	30 (17)
If you have not inserted a temporary pacemaker within the past five years, are you prepared to undergo training to “relearn” this and other practical procedures?	64 (47)	42 (31)	6 (4)	24 (18)
Do you think that full implementation of the Calman proposals, leading to a consultant provided service, will ever occur?	60 (34)	80 (45)	31 (17)	7 (4)

TABLE II—Number of years which have elapsed since consultants performed various practical procedures

Question	<1	1-5	5-10	10-15	15-20	20-25	25-30	Never
How many years have elapsed since you last inserted a central venous line?	21	31	26	31	32	14	1	22
How many years have elapsed since you last inserted a temporary pacemaker?	19	23	32	35	22	13	2	33
How many years have elapsed since you were regularly in charge of a cardiac arrest team?	7	20	36	32	41	27	6	8

TABLE III—Synopsis of other points made by respondents about Calman proposals and their impact on clinical services

Synopsis points	No of respondents
Enormous (unrealistic?) consultant expansion required to make up for the shortfall in junior staff	22
Little or no prospect of obtaining sufficient funding for this consultant expansion	19
Emergency duties will markedly decrease input into outpatient clinics and other specialist work	18
Emergency duties will markedly decrease input into management, teaching, and other duties	16
Consultants may not possess the stamina to undertake regular residential emergency duties	12
Acute medicine will become an unattractive career choice, leading to recruitment problems	12

Key messages

- Under the Calman proposals it is envisaged that acute medical services will be provided directly by consultants
- This study shows that most consultant physicians are not prepared to do this
- Most have not recently performed important practical procedures and would require retraining
- Most consider that the impact of the proposals on the quality of patient services will be detrimental

Fourthly, and most importantly, nearly all consultants thought that the proposals would have a detrimental effect on the quality of patient care at their hospital. This clear consensus view emerged equally strongly from teaching and district general hospital consultants and from colleagues in all specialities. This is in sharp contrast to the expressed aims of the Calman

proposals, which are intended to improve patient care, but is nevertheless the informed opinion of a large and representative group of senior clinicians who are actively concerned in day to day patient care and are well placed to assess their potential impact.

These results emphasise the widespread concern and deep antagonism of most consultant physicians towards the Calman proposals. We would be very interested to know whether these views are shared by other groups of colleagues, particularly by those in the training grades.

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- 1 Calman K. *Hospital doctors: training for the future. The report of the working group on specialist medical training.* London: Health Publications Unit, 1993.
- 2 Calman K. *Hospital Doctors: training for the future. Implementation of the report.* London: Department of Health, 1994. (Circular PL/CMO (94)5.)
- 3 Committee of Postgraduate Medical Deans (COPMED) and the UK Conference of Postgraduate Deans. *SHO training; tackling the issues, raising the standards.* January, 1995.
- 4 Charlton BG Service implications of the Calman report. *BMJ* 1993;307:339-40.

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Randomised controlled trial assessing effectiveness of health education leaflets in reducing incidence of sunburn

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Exposure to the sun and severe sunburn are associated with an increased risk of malignant melanoma.¹ Health education leaflets are often part of primary prevention strategies which aim to modify high risk behaviour related to the sun.² This study aims to assess the effectiveness of a health education leaflet in reducing sunburn.

Subjects, methods, and results

The study population comprised holidaymakers travelling on Air UK Leisure flights from Manchester airport during August 1993. The unit of randomisation was the flight. Flights were stratified into long haul (North America and Jamaica) and short haul (Europe) and randomly allocated to the intervention or control arm. Before boarding, the health education authority leaflet *If You Worship The Sun, Don't Sacrifice Your Skin* was placed in seat pockets on flights in the intervention arm but not in the control arm. Cabin crew distributed questionnaires to passengers on Air UK Leisure return flights to Manchester. A history of sunburn was elicited by the question "Did you suffer from any sunburn during your recent holiday?" and, if so, whether this was associated with one or more of: redness of the skin, blistering of the skin, pain for less than a day, pain for more than a day. Adults completed the questionnaire for children. The study endpoint, severe sunburn, was defined as any episode of sunburn which was either painful for more than a day or resulted in blistering. Randomisation by group was undertaken to reduce contamination between the study arms. A clustering parameter was calculated for the study endpoint. Brier's adjusted χ^2 was used for baseline comparisons,³ and 95% confidence intervals were constructed for the difference in proportions

using methods appropriate to group randomised trials.⁴

Sixteen long haul and 62 short haul flights were randomised to the intervention arm and 15 long haul and 62 short haul flights to the control arm; 21 611 questionnaires were distributed and 14 956 (69%) returned. A total of 2483 questionnaires completed by passengers who had not departed from Manchester airport during the study period and 88 inconsistent or illegible questionnaires were excluded from the analysis, leaving 12 385 evaluable questionnaires. The clustering parameter was 0.02. The study had a power of 90% to show a 5% difference between the two groups at the 5% two sided significance level. There was no significant difference between the two groups in the distribution of baseline characteristics or the proportion reporting severe sunburn (see table).

Baseline characteristics and incidence of severe sunburn in intervention and control groups. Values are numbers (percentages) of subjects unless stated otherwise

	Intervention (n=6276)	Control (n=6109)
Age group (years):		
Median	32	33
Range	0-97	1-88
Sex:		
Male	2885 (46.0)	2777 (45.5)
Female	3273 (52.1)	3233 (52.9)
Not recorded	118 (1.9)	99 (1.6)
Duration of holiday:		
0-7 days	841 (13.4)	1058 (17.3)
8-21 days	5435 (86.6)	5051 (82.7)
Hair colour:		
Blonde	2152 (34.3)	2065 (33.8)
Red	230 (3.7)	271 (4.4)
Brown/black	3699 (58.9)	3566 (58.4)
Other	107 (1.7)	97 (1.6)
Not known	88 (1.4)	110 (1.8)
Skin colour:		
Fair, never tans	160 (2.5)	185 (3.0)
Fair, gets a pale tan	2161 (34.4)	2066 (33.8)
White skin, tans easily	3114 (49.6)	3057 (50.0)
Mediterranean	593 (9.5)	580 (9.5)
Brown	151 (2.4)	136 (2.2)
Black	37 (0.6)	17 (0.3)
Other	31 (0.5)	26 (0.6)
Not known	29 (0.5)	32 (0.5)
Incidence of severe sunburn:*†		
All flights	1013 (16.1)	1053 (17.2)
Short haul	717 (16.3)	793 (17.1)
Long haul	296 (15.7)	260 (17.7)

* χ^2 (1 degree of freedom):

†95% Confidence interval for difference in proportion:

All flights 0.731 (P=0.392); -0.014 to 0.036

Short haul 0.276 (P=0.6); -0.022 to 0.038

Long haul 1.288 (P=0.256); -0.014 to 0.052.