

General Practice Observed

Evaluation of a patient education manual

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Summary and conclusions

A randomised controlled trial has shown that introducing a health education booklet describing the management of six common symptoms resulted in fewer consultations for the symptoms described by families receiving this booklet compared with a control group. A sample of the mothers in each group was subsequently followed up by an interview, at which a questionnaire was administered. This was designed to measure the mother's knowledge of the management of the symptoms described. The booklet did not lead to any increase in knowledge in the mothers receiving it. The questionnaire did, however, show that 76% of the mothers had consulted the booklet at some time in the year of the study and 28% had consulted it in the three months before interview. The important result was a fall in the new requests for care for the symptoms described in the booklet. This may be interpreted as indicating that what patients need to respond appropriately to common symptoms of illness is a simple reference manual rather than an educational programme designed to increase their knowledge about the management of illness.

Introduction

In children under the age of 16 years six common symptoms accounted for over half the new requests for medical care in a London group practice.¹ These symptoms were a stuffy or running nose, sore throat, cough, vomiting, diarrhoea, and minor trauma. As a result of this finding, the doctors in the practice wrote a simple 16-page booklet illustrated with cartoons describing how these symptoms can be managed at home and when it is appropriate to seek medical care.

The effect of the booklet on the number of new requests for care in the practice was tested by a randomised controlled trial. All the families in the practice with at least one child under the age of 5 years provided the sample. One half of these were sent a booklet (the study group) and the remainder were not contacted (the control group). The number of new requests for care, the place of consultation, and the symptoms presented were recorded for both groups for one year. The results showed that the study group demanded significantly fewer home visits compared with

the controls. They also requested fewer surgery consultations for five of the six symptoms described (for three symptoms the differences were statistically significant).²

It was therefore decided to study in more detail the effect of the booklet on the families receiving it. The hypothesis to be tested was that patients who received the booklet would, when interviewed three months after the end of the study, show better knowledge of the management of the symptoms described in the booklet than the control group.

Method

Of the 284 families in the original trial, 66 had moved from the practice when this study was launched. A further three families were excluded from follow-up on social grounds. A random sample from the remaining families yielded 51 families from the study group and 49 from the controls.

A questionnaire was designed to be administered if possible to the mother in each family, but failing this the father or responsible adult. The questions were worded to elicit what action she would take if the illnesses described in the booklet occurred in herself or in her oldest preschool child—for example, "What would you do if you (or your child) had a cough?" ". . . had a cold that lasted for more than a day?" ". . . had a sore throat that lasted for more than a day?" ". . . had been vomiting from time to time for more than a day?" and ". . . had diarrhoea for more than 12 hours?" The mother was then presented with a series of photographs of minor injuries and asked what action she would take. Questions were also asked about the contents of the family medicine cupboard and the practice's consulting hours, both of which had been described in the booklet. Finally, the last few questions were concerned with the response of the mother to the booklet and the way in which it had been used.

A pilot study of the questionnaire was done in families not included in the study and then, after some modification, administered to the study and control group in their own homes. All the interviews were conducted by one health visitor who was not associated with the practice. She did not know when she conducted her interviews whether the patients were in the study or control group until she had obtained answers to the last few questions. By this time, she had completed the questions designed to test the patient's knowledge and behaviour.

For analysis, all replies to the questions about the action the patient would take in response to the symptoms were divided into "doctor care" or "self-care." Doctor care included telephoning the doctor, all consultations with the general practitioner, and visits to a hospital casualty department. Self-care included consulting other members of the family or a pharmacist as well as self-medication or no care at all. The patients' replies to the questions were then compared with the action recommended in the booklet for different symptoms.

Results

The three families in each group found at the time of interview to have moved were replaced. Two families in the control group refused to co-operate with the interviews. The final sample therefore consisted of 51 families who had received the booklet and 47 control families.

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There was no significant difference between the two groups in terms of the mean age of mothers, the mean number of children per household, social class, or mothers' employment status. The mean age of the oldest preschool child in the study group, 3.6 years (SD 1.3), was lower than in the control group, 4.1 years (SD 2.8). Nine of the mothers in the study group and six in the control group had received medical training to at least "First Aid Certificate level."

The response of the mothers to the questions about symptoms in terms of what they would do for themselves and their oldest preschool child is compared with the management recommended in the booklet in table I. There was no significant difference between the study and control group for any of the symptoms for either the mother or the child using Fisher's exact test.

Table II shows the response to the questions analysed in terms of self-care or doctor care. There was no significant difference (by Chi-squared test) in the proportion of study and control groups selecting self-care or doctor care.

No significant difference was detected between the two groups in comparing the contents of their medicine cupboards nor in their knowledge of the consulting hours of the practice. In response to the final questions about the booklet, however, 76% of the study group claimed to have referred to the booklet at some time in the previous 15 months and 28% said they had used it in the three months before the interview.

To study the response of the mothers questioned about symptoms in respect of care for themselves as compared with their children, these data have been combined for both study and control groups in table III. For all the symptoms except vomiting, the mothers were more likely to seek care for their children than for themselves.

TABLE I—Comparison of management protocols recommended in the booklet, with responses to questionnaire for each symptom category

Symptom	Group	Mother Treatment recommended in booklet		Child Treatment recommended in booklet	
		Not mentioned	Mentioned	Not mentioned	Mentioned
Cut	Study	36	15	30	21
	control	29	18	25	22
Graze	Study	36	15	34	17
	control	33	14	29	18
Burn	Study	37	14	41	10
	control	33	14	34	13
Bruise	Study	10	41	7	44
	control	7	40	7	40
Cough	Study	0	51	15	36
	control	2	45	11	36
Runny nose	Study	18	33	5	46
	control	18	29	2	45
Sore throat	Study*	18	32	13	38
	control	20	26	10	37
Vomiting	Study	9	42	12*	39
	control	5	42	6	41
Diarrhoea	Study	22	29	16	34
	control	16	31	8	39
Total	Study	186	272	173	285
	control	163	259	132	291

* One no answer.

TABLE II—Mothers' choice of care in response to questionnaire

Symptom	Group	Mother		Child	
		Self-care	Doctor care	Self-care	Doctor care
Cut	Study	29	22	24	27
	control	25	22	22	25
Graze	Study	48	3	44	7
	control	44	3	41	6
Burn	Study	50	1	41	10
	control	46	1	37	10
Bruise	Study	48	3	44	7
	control	47	0	41	6
Cough	Study	49	2	46	5
	control	45	2	37	10
Runny nose	Study	51	0	46	5
	control	44	3	39	8
Sore throat	Study	46	4*	28	23
	control	38	8*	30	17
Vomiting	Study	28	23	24	27
	control	24	23	18	29
Diarrhoea	Study	41	10	29	21*
	control	31	16	20	27
Total	Study	390	68	326	132
	control	344	78	285	138

* One no answer.

TABLE III—Comparison of mothers' selection of modes of care for themselves and for their children

Symptom	Mother's choice of care	Mother's choice of care		Significance		
		For her child	For herself		McNamar's ^a test	p
			Self-care	Doctor care		
Cut	Self-care	45	1	2.21	0.026	
	Doctor care	9	43			
Graze	Self-care	84	1	2.00	0.045	
	Doctor care	8	5			
Burn	Self-care	77	1	4.69	<0.0001	
	Doctor care	21	1			
Bruise	Self-care	83	1	2.60	0.009	
	Doctor care	11	3			
Cough	Self-care	81	2	2.58	0.010	
	Doctor care	13	2			
Runny nose	Self-care	84	1	3.46	0.001	
	Doctor Care	11	2			
Sore throat	Self-care	63	3	5.74	<0.0001	
	3 NA Doctor care	30	9			
Vomiting	Self-care	31	11	1.69	0.11	
	Doctor care	21	36			
Diarrhoea	Self-care	46	3	3.97	<0.0001	
	1 NA Doctor care	25	23			

NA = No answer.

Discussion

In the original randomised controlled trial families receiving the booklet made significantly fewer requests for care for most of the symptoms described in the booklet than the families in the control group. It was therefore expected that the interview and questionnaire would show that the mothers who had received the booklet would be more likely to know how to cope with the symptoms described than the control mothers. The results do not support this hypothesis. There are several possible explanations.

The period between sending the booklets and the interviews was 15 months. In a study by Moldafski *et al.*,⁴ who provided an educational programme for asthmatics, the study group was found to have superior knowledge to the controls immediately after the programme, but there was no significant difference between them 16 months later. In our study there was no trend in the differences in consultation rates between study and control groups measured in the four quarters of the year after distribution, which suggests that the booklet had a sustained influence on behaviour. We cannot, however, prove that there was no deterioration in the knowledge over time. A more attractive hypothesis, however, is that there may be no direct correlation between knowledge as measured in a theoretical situation at interview and behaviour in fact.

A more disturbing possibility is that the booklet had a non-specific effect in deterring patients from consulting the doctor. The "introduction" to the booklet contained a sentence, "It is important that doctors are able to give as much time as possible to seriously ill patients. If other patients go to see the doctor unnecessarily, this may not always be possible." Darnell⁵ has differentiated between intent and effect in communications, pointing out that the subject may well learn something from an educational experience but that this something may not be what the teacher intended. In this study recipients of the booklet may have interpreted this as a rebuke for over-using the services rather than as an aid to help reduce their anxiety when faced with common symptoms of illness. The Canadian Cancer Society⁶ carried out an educational experiment based on the "seven danger signals." It later transpired that 75% of women and 81% of men delayed seeking medical care because of the fear of cancer induced by the programme. The same effect may have been induced by the booklet issued in this experiment, but fear of a doctor rather than of disease may have led to a reduction in new requests for care. Against this explanation is the fact that the fall in demand was specifically related to the symptoms described in the booklet and was not found in response to other symptoms.

An interesting finding in this study was the different response by the mothers interviewed to questions about symptoms

experienced by themselves as compared with their children. This was at variance with the findings in the original control trial, where the reduction in requests for care for the symptoms described in the booklet occurred in all age groups.

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Letter from . . . Chicago

Hyperactive judges

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These are busy times for our black-robed judges as they toil in their chambers, poring over dusty volumes and burning the midnight oil to solve the problems of a perplexing world. For they are being asked to define life and death and freedom; to uphold the rights of the prisoners and of the mentally ill; to enforce the separation of church and State in the classroom; to rule on the use of nuclear power; to regulate the undertakers and podiatrists; and to decide what to do about the Concorde. In a society dominated by special interest groups they must also make up for the timidity or hastiness of the legislators—and at times, indeed, they appear to be running the country. For increasingly it is the judges—not the elected representatives of the people—who decide who shall be terminated, compensated, reinstated, executed or resuscitated, vivisected or desegregated, dialysed, certified, or involuntarily medicated, mercy-killed, educated, or registered for induction into the army.

On the controversial issue of abortion the judges have also been exceedingly active in the past few years. In 1973, in a landmark decision, they ruled that the constitution guaranteed a woman's right to decide whether she wanted to go through with her pregnancy. Since that time they have periodically invalidated a great many anti-abortion laws variously requiring doctors to obtain special expensive licences; to choose the method most likely to save the fetus's life; to explain that after 22 weeks a fetus was alive; or to describe in lurid details the presumed appearance of the fetus. Some of these laws had made doctors criminally liable for aborting a fetus that could have lived outside the mother's womb. Others prohibited abortions outside hospitals; imposed waiting periods; required two doctors to be in attendance at all times; or restricted abortions to when the mother's life was in danger. Eventually most of these laws were ruled unconstitutional. This year, in June, however, the Supreme Court decided that neither the constitution nor the Medicaid law required the Government to

pay for welfare abortions. The five majority judges argued that the so-called Hyde Amendment (which limits Federal aid to cases of rape, incest, or extreme medical indications) placed no legal obstacle to women wanting an abortion but that this freedom of choice did not automatically entitle them to government funding, this being a matter for Congress to decide. Taking the opposite view, four dissenting judges thought that constitutional rights without money were of little help to the indigent. More outspoken critics declared that this was an exceedingly cruel ruling. But many others agreed that it was a reasonable compromise and that the court had done well in interfering no further and leaving the decision to the legislators.

On other issues, however, the judges are continually being drawn into controversies that perhaps should be left to the legislators to decide. Are medical interns students or workers? Are anaesthetists interfering with free trade? Can hospitals deny staff privileges to doctors, and can they require them to take out malpractice insurance? Can insurance companies and pharmacists make deals on prescription drug prices? Should doctors advertise and can States legally prohibit them from doing so? And now, as new forms of life stand ready to be spliced from the old, it was again the courts that had to decide whether Mr Chakrabarty could patent his own micro-organism without causing the world to be overrun by dangerous invisible monsters. The judges, again, wisely stayed away from the Frankenstein issue, saying that it was for Congress to decide whether man-made organisms were too dangerous to be created. Instead, they upheld the 1793 patent laws, ruling that man-made forms of life should have the same protection as other inventions and discoveries, the point being not whether they were alive, but whether they were the result of human ingenuity rather than occurring spontaneously.

Rights to privacy and secrecy

Disputes about rights of privacy and secrecy, some requiring the wisdom of a Solomon, are also increasingly being referred to the courts for adjudication. When the Government wanted to publish the names of doctors earning high incomes from