Providing reviews of evidence to COPD patients: controlled prospective 12 month trial

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ABSTRACT

BACKGROUND
- Study aimed to evaluate a novel patient-held manual designed to reduce the evidence-practice gap in COPD (chronic obstructive pulmonary disease).
- Primary hypothesis: After 12 months COPD management will be more consistent with evidence for patients given the manual when compared with patients given a widely available COPD information leaflet.

METHODS - DESIGN
- Intervention manual contained summaries of research evidence. Manual was developed using current best practice for patient information materials and designed to cause discussion of evidence between patient and doctor.
- Controlled before-and-after study, using two similar but geographically separate regions of metropolitan Adelaide, South Australia.

METHODS - PARTICIPANTS
- People with moderate to severe COPD.
- Entering study: 249 participants.
- Completing study: 201 participants.

METHODS - MEASURES
- Main outcome: Indicator of evidence based COPD management made up of three components which were rates of influenza vaccination, bone density testing and pulmonary rehabilitation.
- Processes evaluation. Survey of behavioural steps leading to practice change.

RESULTS
- Main outcome: Analysis, by median split of socio-economic disadvantage, showed significant difference between study arms for only one component of the indicator of evidence based practice, enrolment in pulmonary rehabilitation and only in the most socio-economically disadvantaged stratum.
- Processes evaluation: For both socio-economic strata, more intervention than control participants reported remembering being given the information material, reading part or all, and finding it very or quite helpful. Other significant differences were restricted to the stratum of greatest socio-economic disadvantage: reading all of the material, learning from it, referring back, and talking to a doctor about a topic from the material.

- Over 90% of all participants who received the manual reported reading from it, 42% reported discussing topics with a doctor, but only 10% reported treatment change attributable to the manual.

CONCLUSIONS
- We have found that people with COPD will read an evidence manual developed using current best practice. However, the study demonstrated improvement for only one of the three components of an indicator of evidence-based disease management, for only the most socio-economically disadvantaged stratum of participants. Future interventions should be designed to better translate reading uptake into evidence-based disease management.
INTRODUCTION
Strategies to reduce the gap between research evidence and clinical practice have the potential to greatly improve health outcomes.¹ Most strategies to date have targeted health professionals only. They have improved practice to some extent but many have not been cost effective and results have been inconsistent from study to study.² There have been fewer studies of strategies which include patients.² In most of these studies the patient has not been informed about evidence; their role has been as delivery channel for reminders to the doctor. Patients are increasingly expected to participate in decision making and disease management, especially in chronic disease, therefore research is needed on strategies which provide patients with their own reviews of evidence and encourage them to discuss this evidence with their doctors. We conducted a study of patients with COPD who were give a manual which contained summaries of the evidence for treatments used in COPD and gave suggested opening questions for discussing this evidence with doctors. The manual was a relatively low-cost intervention, developed using current best practice regarding information presentation and terminology for patient information materials.⁴ The study assessed the impact of this manual on clinical decisions. Initial 3 month assessment showed little treatment change;⁵ but a longer period is probably required to demonstrate benefits, such as improved vaccination rates, from this type of intervention. We now report results at 12 months.

STUDY AIMS
The aim of this study was to show whether providing summaries of evidence to people who have COPD leads to improved application of that evidence in their medical care. Application of evidence was measured using three evidence-supported medical interventions for COPD: influenza vaccination,⁶ bone density testing,⁷ ⁸
and pulmonary rehabilitation.\(^9\)

The evaluation of the manual included an assessment of outcomes and a process evaluation. A survey of all participants was part of the process evaluation and is reported here.

**HYPOTHESIS**

The primary hypothesis to be tested was:

\[
\text{Compared with patients who have been given a conventional pamphlet, patients who have been given the COPD Evidence Manual will have increased self-reported rates for each of the following:}
\]

\begin{itemize}
  \item rate of influenza vaccination within the previous 15 months (allowing a 3 month delay in obtaining an annual vaccination)
  \item rate of bone density testing within the previous 42 months (allowing a 6 month delay in 3-yearly testing)
  \item enrolment in pulmonary rehabilitation after receiving the manual
\end{itemize}

While it was not primarily designed to increase patient mastery and knowledge of COPD, patient communication with the regular doctor, and patient satisfaction with provision of information, we wished to ascertain whether the manual improved these outcomes. Disease-related information can cause anxiety if provided insensitively and while checks and adjustments were made during preparation of the manual to avoid causing distress, we also wished to ensure that the manual did not increase anxiety.

The following additional outcome measures were therefore included:

- mastery of COPD, as measured by the Mastery domain of the Chronic Respiratory Questionnaire (CRQ)\(^{10}\)
- knowledge of COPD, as measured by a test adapted from Hermiz et al\(^{11}\)
- communication with usual doctor, as measured by the Communication and Comfort and the Rapport subscales of the Medical Interview Satisfaction Scale (MISS)\(^{12}\) (slightly modified to exclude questions inapplicable in COPD)
- satisfaction with disease related information, as measured using the question “I have enough information about my lung condition” and the response options scale from the MISS
- anxiety, as measured by the Short-form Spielberger State Anxiety Inventory\(^{13}\)

**METHODS**

**The intervention manual**

The study trialled a manual for patients which summarised Cochrane Reviews of evidence about COPD treatments, and provided additional background topics.\(^4\) To
encourage discussion of evidence with doctors, a tip or a suggested question that a patient could ask their doctor accompanied each summary. Questions were used, rather than overt requests to consider evidence, in keeping with usual patient behaviour in consultations. The manual used very plain language, lay terminology, small page size and large print, question-and-answer format, and illustrations of people with COPD engaging in activities of daily living as well as in clinical settings. Research-based recommendations on the design of patient information materials were used as a guide to design of the manual, though we noted that these recommendations were based on measures of patient satisfaction rather than health outcomes or behaviours.

Of a total of 22 reviews, 16 were based on Cochrane reviews with others based on Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines or comprehensive reviews from journals.

Recruitment
Patients with moderate to severe COPD were sought (according to GOLD criteria). Patients were excluded if they also had lung cancer, dementia or other major, currently unstable illness, and if the patient or carer didn’t have at least a basic ability to read English.

Potential participants were identified through in-patient admission for COPD and at respiratory outpatient clinics at 3 teaching hospitals in Adelaide, South Australia. Invitations, signed by the patient’s doctor, were mailed to patients after discharge, or handed to the patient by the doctor at clinic. A reminder was sent if there was no response after 3 weeks. Recruitment continued progressively from 04/03/2003 to 05/03/2005.
**Allocation and blinding**
Contamination of the control group, both patient to patient and via a doctor, was likely with this intervention. A controlled before-and-after design was therefore adopted, using patients from two geographically separate areas of metropolitan Adelaide, South Australia. The two areas appeared demographically similar and each was served by a large public hospital providing a similar range of services with occasional exchange of medical staff. Control participants received a simple, single sheet fold-out pamphlet containing information about COPD in keeping with usual practice.

Because of the nature of the intervention and allocation, interviewers could not be blinded but they were trained to administer questionnaires, record answers, and give the information materials in a consistent way. Participants were blind to their intervention/control status because study explanation stated that different types of information were being tested and that each participant would receive one type at first, and the other at the end of the study.

**Data collection and delivery of intervention**
Data was collected by interviewer administration, and the intervention manual and control pamphlet were handed to participants at the end of baseline data collection. Participants’ general practitioners (GPs) received prior information about the trial through local general practice organisations. In addition, intervention participants were given an order form which they could hand to their GP so that the GP could order a free copy of the manual.

**Baseline comparisons**
Baseline comparison between groups was made using the outcome measures (given below) and additional demographic and disease-related variables which were
potentially associated with use of the manual: gender, use of oxygen therapy (as indicator of severity of COPD), smoking status, age, years of formal education, Index of Relative Socio-Economic Disadvantage for postcode, living alone, overall score for the Medical Interview Satisfaction Scale, and dyspnoea, fatigue and emotional function domains of the CRQ.

**Sample size**
As shown in Table 1, the calculated minimum sample size was 98 participants per arm. To allow for some loss of participants and other possible factors (eg. adjustment for any group differences) our recruitment target was 120 per arm.

**Process measures**
The hypothesised link between provision of the manual and improved COPD management implied a series of causal steps including: reading by the patient, discussion at a consultation, and treatment change. Steps are shown in Figure 1. At 12 months, participants were asked a series of closed survey questions to assess each of these steps.

**Analysis and imputation**
Baseline demographic and clinical comparisons were made using the chi-square test for dichotomous variables, or Fisher’s exact test if numbers in any cells were less than 5, and Student’s t test for continuous variables.

For all outcomes except enrolment in pulmonary rehabilitation, change scores to 12 months were analysed using analysis-of-covariance, with adjustment for baseline score, to remove the effect of regression to the mean. Poisson modelling was used to compare proportions attending pulmonary rehabilitation. If any baseline difference was found, adjustment by propensity scoring was planned. The conventional 0.05 probability level for statistical significance was used throughout. Missing interviews
were excluded from analysis. Missing data elements (needed only for the Medical Interview Satisfaction Scale which contained 5.1% missing data) were imputed by expectation-minimisation imputation and used SPSS 12 For Windows software. Data were otherwise analysed using Stata 8.2 software.

RESULTS

Participant flow
Numbers of participants at each stage of the trial are shown in Figure 2

Baseline comparisons
Table 2 shows baseline demographic and clinical comparisons. Intervention and control groups were similar, apart from measures of socio-economic disadvantage, previous attendance at pulmonary rehabilitation and living alone. A propensity score was therefore created for each participant by including all baseline measures in a logistic regression with the grouping variable as the dependent variable. This score was included in analysis-of-covariance models for outcomes to adjust for baseline differences. Propensity score means were 0.75 for intervention participants and 0.24 for control participants. Socio-economic disadvantage appeared to be an effect modifier therefore subsequent outcomes analyses were done using median split of this variable, which had the effect of reducing the power of the study.

Outcomes
Outcome measures at 12 months are shown in Table 3. One of the three components of the primary outcome measure, enrolment for pulmonary rehabilitation, showed significant change for the most socioeconomically disadvantaged stratum. There was a non-significant trend in the same direction for pulmonary rehabilitation in the most socioeconomically advantaged stratum. There were no other significant differences and few trends in favour of either group for primary and secondary outcomes.
**Processes**

Process survey results are shown in Table 4. For both socio-economic strata, significantly more intervention than control participants reported that they remembered receiving the information material, read part or all of it and found it very or quite helpful. Other significant differences were restricted to the stratum with greatest socio-economic disadvantage. More intervention participants in this stratum reported that they read all of the material, learned from it, referred back after first reading and talked to a doctor about a topic from the material. For all other comparisons, non-significant trends showed greater completion of process steps by intervention participants.

Figure 3 shows an examination of process steps for the complete intervention group only. Over 90% of participants who received the manual reported reading at least some of it. Forty two percent reported talking to their doctor about a topic from the manual but only 10% reported that this led to treatment change.

**DISCUSSION**

**Findings**

The study did not find that providing summaries of evidence to people with COPD led to improved application of evidence in their medical care. However, the study did find that a patient-held manual containing summaries of evidence, which was developed using current best practice, was more likely than a conventional pamphlet to be remembered, read and considered helpful by people with COPD. People with greatest socio-economic disadvantage reported greatest use of the manual. Interestingly, about half of the people who read the manual subsequently discussed a related topic with their doctor but very few reported treatment change attributable to the manual. This suggests that that either these discussions were not
patient requests for treatment change, or if they were, that doctors did not make the treatment changes requested by patients.

**Comparison with findings of other studies**

A comprehensive review found a lack of other studies on the effects of patient-held evidence summaries on clinical decisions in chronic disease.\(^{22}\) However, there have been outcome and process evaluations of other kinds of information materials for people with chronic disease,\(^{22}\) and of evidence based information for other target audiences.\(^{23}\) Best practice development methods do not appear to have been used for most of these materials and they had little success in influencing the behaviour of target audiences and their doctors. An exception is a guidebook for people with irritable bowel syndrome, developed using current best practice, and found to reduce primary care consultations and perceived symptom severity.\(^{24}\)

**Limitations**

Some design limitations of our study may have meant that some positive outcomes were not detected.

Only three aspects of COPD management were measured for the primary outcome. Other, unmeasured changes, may have been prompted by the manual. The duration of the trial may have been insufficient to demonstrate change because only a few of the evidence summaries would be relevant to any one participant over a 12-month period. Higher than expected baseline rates among people who volunteered for the study for components of the measure of best practice had the effect of reducing the power of the study. The need to stratify analyses and to include propensity scores to adjust for unforseen baseline differences further reduced power.
The control pamphlet was included to control for the attention effects of giving information materials and for any positive effects from introductory disease-related information which was included in the manual, along with the evidence information which was being trialled. However, the control pamphlet could have weakened the apparent effectiveness of the manual. The pamphlet contained some advice on dealing with exacerbations, stopping smoking, influenza vaccination, pulmonary rehabilitation, and home oxygen, even though research support for this advice was not provided. Ensuring control for non-specific aspects of the trial intervention may have meant that effects which would be seen in clinical practice were not demonstrated in the trial. Though it was freely available in treatment settings, 83% of control participants said that they had not previously seen this pamphlet. The control condition did not therefore accurately reflect usual practice.

Non-blinded interviewers could have influenced the results in spite of standardising of methods, though greater blinding is difficult with this type of study.

Practice nurses and respiratory nurses have a growing role in behaviour change for self-management of chronic disease. By focussing on the doctor and patient as key figures in decision-making, the trial may not have accounted for the potential of nurses to increase patient participation in evidence-based decision making.

**Future work**

This study has shown that summaries of evidence, developed according to current best practice, are read by patients, including those with high socio-economic disadvantage. However, if these evidence summaries are to be used in decision making, they must not only be read but they must lead to behaviour change for patients and doctors.
More needs to be known about what actually happens in the consultation to improve our understanding of how the informed patient might influence the doctor’s decision-making as a basis for future interventions. Recent advice\textsuperscript{26,27} proposes that behavioural interventions should be guided by theory and research relating to the operation of the intervention so that weak links in the causal chain can be identified and strengthened.\textsuperscript{28} Our study showed the doctor patient consultation to be a weak link for interventions such as the COPD manual. In recent studies involving recordings of general practice consultations, most decisions were doctor-led rather than shared or patient led.\textsuperscript{29,30} Research is now being conducted into doctors’ and patients’ perceptions of obstacles and facilitators to an increased role for patients,\textsuperscript{31,32} and into doctor-targeted and patient-targeted interventions to increase patient participation in medical decisions.\textsuperscript{33,34} Studies such as these can be used to inform the design of future interventions which not only provide summaries of evidence to patients but facilitate their participation in decision-making and trigger treatment change.
ETHICS COMMITTEE APPROVALS
Ethical approval for all components of this evaluation was obtained from the committees of The Queen Elizabeth Hospital, the Flinders Medical Centre, the Repatriation General Hospital and the Commonwealth Department of Veterans Affairs. General practitioner organisations for the areas covered by these hospitals also approved the study.

COMPETING INTERESTS
PF is a member of Advisory Boards for COPD with ALTANA Pharma and Boehringer Ingelheim/Pfizer, member of the Global Education Council for COPD with ALTANA Pharma, and committee member of the International COPD Coalition (sponsored by Novartis, Pfizer, Altana Pharma, Boehringer Ingelheim, GlaxoSmithKline and AstraZenca). Other authors declare no competing interests.

FUNDING
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INTERVENTION MANUAL
A copy of the manual used in the trial is available on request from the corresponding author.

Reference List


6. Poole PJ; Chacko E; Wood-Baker RWB; and Cates CJ. Influenza vaccine for patients with chronic obstructive pulmonary disease. Cochrane Database of Systematic Reviews. 2, 2006


Figure 1 Causal steps linking delivery of manual to patient with evidence based care of COPD and study outcomes

Sampling frame:
Patients discharged from or attending clinic at participating hospitals, who potentially met study criteria. Estimated at 1,400

Invitations issued = 711
Declined = 107
Joined study = 249
No reply = 355
Baseline data = 249

Intervention arm = 125
Control arm = 124

Lost from study = 25
(Withdraw = 12
Died = 8
Uncontactable = 6)

Lost from study = 23
(Withdraw = 10
Died = 10
Uncontactable = 3)

Completed to 12 months = 100
Completed to 12 months = 101
Figure 2. Numbers of participants at stages of study

Figure 3. Completion of causal process steps for the manual
Table 1. Components of primary outcome measure

<table>
<thead>
<tr>
<th>Component</th>
<th>Estimated initial rate/ target rate (%)</th>
<th>Sample size required*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza vaccination current (within last 15 months)</td>
<td>80/95</td>
<td>88</td>
</tr>
<tr>
<td>Bone density monitored (within last 42 months)</td>
<td>10/30</td>
<td>71</td>
</tr>
<tr>
<td>Participation in pulmonary rehabilitation</td>
<td>25/45</td>
<td>98</td>
</tr>
</tbody>
</table>

* Design was non-randomised but baseline differences between groups were not expected and standard sample size calculations were used. Table shows minimum sample size per arm for changes in proportion for components of the primary outcome measure with alpha set at 0.05 and power 80% (with continuity correction).
Table 2. Baseline comparisons between intervention and control groups

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Intervention group n=125</th>
<th>Control group n=124</th>
<th>Significance</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Proportion (%) male</td>
<td>69/125 (55)</td>
<td>65/124 (52)</td>
<td>0.66</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>ii. Proportion (%) on oxygen at baseline</td>
<td>43/125 (34)</td>
<td>31/124 (25)</td>
<td>0.12</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>iii. Proportion (%) smoker at baseline</td>
<td>23/125 (18)</td>
<td>29/124 (23)</td>
<td>0.38</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>iv. Mean age</td>
<td>73.6</td>
<td>73.1</td>
<td>0.64</td>
<td>t</td>
</tr>
<tr>
<td>v. Mean years of formal education</td>
<td>10</td>
<td>10</td>
<td>0.18</td>
<td>t</td>
</tr>
<tr>
<td>vi. Mean index of socioeconomic disadvantage for postcode</td>
<td>1002.41</td>
<td>938.85</td>
<td>&lt;0.001</td>
<td>t</td>
</tr>
<tr>
<td>vii. % Living alone*</td>
<td>23/100 (23)</td>
<td>45/101 (45)</td>
<td>0.001</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td><strong>Additional clinical baseline comparisons:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>viii. Mean MISS score (possible range 1 to 7)</td>
<td>5.0</td>
<td>5.2</td>
<td>0.07</td>
<td>t</td>
</tr>
<tr>
<td>ix a. Mean CRQ dyspnea (possible range 1 to 7)</td>
<td>3.2</td>
<td>3.1</td>
<td>0.50</td>
<td>t</td>
</tr>
<tr>
<td>ix b. Mean CRQ fatigue (possible range 1 to 7)</td>
<td>3.5</td>
<td>3.6</td>
<td>0.70</td>
<td>t</td>
</tr>
<tr>
<td>ix c. Mean CRQ emotional function (possible range 1 to 7)</td>
<td>4.8</td>
<td>4.8</td>
<td>0.83</td>
<td>t</td>
</tr>
<tr>
<td><strong>Outcome measures:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a. Proportion (%) current flu vaccination</td>
<td>110/125 (88)</td>
<td>108/124 (87)</td>
<td>0.83</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>1b. Proportion (%) bone density test in last 3 1/2 yrs</td>
<td>39/125 (31)</td>
<td>39/124 (31)</td>
<td>0.97</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>1 c. Proportion (%) ever attended pulmonary rehabilitation*</td>
<td>19/100 (19)</td>
<td>3/101 (3)</td>
<td>&lt;0.001</td>
<td>Fisher’s exact</td>
</tr>
<tr>
<td>2. Mean CRQ mastery (possible range 1 to 7)</td>
<td>4.9</td>
<td>5.0</td>
<td>0.91</td>
<td>t</td>
</tr>
<tr>
<td>3. Mean knowledge (possible range 0 to 16)</td>
<td>12</td>
<td>11</td>
<td>0.10</td>
<td>t</td>
</tr>
<tr>
<td>4a. Mean MISS communication and comfort (possible range 1 to 7)</td>
<td>5.0</td>
<td>5.2</td>
<td>0.19</td>
<td>t</td>
</tr>
<tr>
<td>4b. Mean MISS rapport (possible range 1 to 7)</td>
<td>5.3</td>
<td>5.5</td>
<td>0.20</td>
<td>t</td>
</tr>
<tr>
<td>5. Mean &quot;Enough information&quot; score (possible range 1 to 7)</td>
<td>4</td>
<td>4</td>
<td>0.72</td>
<td>t</td>
</tr>
<tr>
<td>6. Mean state anxiety score (possible range 20 to 80)</td>
<td>32.2</td>
<td>32.1</td>
<td>0.97</td>
<td>t</td>
</tr>
</tbody>
</table>

* Data available only for participants who completed to 12 months
Table 3. Outcome change scores at 12 months by socioeconomic disadvantage median split

<table>
<thead>
<tr>
<th>Group:</th>
<th>Intervention</th>
<th>Control</th>
<th>Significance level for comparison of interventions and control groups*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Socioeconomic disadvantage level:</td>
<td>Socioeconomic disadvantage level:</td>
<td>Socioeconomic disadvantage level:</td>
</tr>
<tr>
<td></td>
<td>Higher n=22</td>
<td>Lower n=78</td>
<td>Higher n=72</td>
</tr>
<tr>
<td>1 a.</td>
<td>Flu vaccination rate (%)</td>
<td>+7</td>
<td>+7</td>
</tr>
<tr>
<td>1 b.</td>
<td>Bone density test within 3 yrs, rate (%)</td>
<td>+6</td>
<td>+16</td>
</tr>
<tr>
<td>1 c.</td>
<td>Pulmonary rehabilitation rate (%)</td>
<td>+18</td>
<td>+12</td>
</tr>
<tr>
<td>8.</td>
<td>CRQ mastery (mean)</td>
<td>-0.1</td>
<td>0</td>
</tr>
<tr>
<td>9.</td>
<td>Knowledge (mean)</td>
<td>0</td>
<td>+1</td>
</tr>
<tr>
<td>10.</td>
<td>Enough information (mean)</td>
<td>+1</td>
<td>+1</td>
</tr>
<tr>
<td>11.</td>
<td>MISS rapport (mean)</td>
<td>-0.1</td>
<td>-0.1</td>
</tr>
<tr>
<td>12.</td>
<td>MISS Communication &amp; comfort (mean)</td>
<td>-0.2</td>
<td>0</td>
</tr>
<tr>
<td>13.</td>
<td>Anxiety (mean)</td>
<td>+2.0</td>
<td>+2.2</td>
</tr>
</tbody>
</table>

*Using Analysis-of-covariance on change score, controlled for baseline measure and propensity score, except for pulmonary rehabilitation rate (1c) which was analysed using Poisson modelling with robust errors, adjusted for baseline rate.
Table 4. Process survey results

<table>
<thead>
<tr>
<th>Measure:</th>
<th>intervention socioeconomic disadvantage level:</th>
<th>Control socioeconomic disadvantage level:</th>
<th>Significance level for comparison of interventions and control groups*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher n=22</td>
<td>Lower n=78</td>
<td>Higher n=72</td>
</tr>
<tr>
<td></td>
<td>Higher n=72</td>
<td>Lower n=29</td>
<td></td>
</tr>
<tr>
<td>Remember receiving</td>
<td>22(100)</td>
<td>71(91)</td>
<td>53(74)</td>
</tr>
<tr>
<td>Read part or all</td>
<td>20(91)</td>
<td>71(91)</td>
<td>46(64)</td>
</tr>
<tr>
<td>Read all</td>
<td>18(82)</td>
<td>51(65)</td>
<td>38(53)</td>
</tr>
<tr>
<td>Learned something</td>
<td>15(68)</td>
<td>42(54)</td>
<td>27(37)</td>
</tr>
<tr>
<td>Referred back</td>
<td>13(59)</td>
<td>38(49)</td>
<td>14(19)</td>
</tr>
<tr>
<td>Very or quite helpful</td>
<td>19(86)</td>
<td>62(79)</td>
<td>34(47)</td>
</tr>
<tr>
<td>Talked to doctor</td>
<td>8(36)</td>
<td>34(44)</td>
<td>11(15)</td>
</tr>
<tr>
<td>Treatment changed</td>
<td>2(9)</td>
<td>8(10)</td>
<td>2(3)</td>
</tr>
</tbody>
</table>

* Chi square or, if numbers were small, § Fisher’s exact test