Elderly people's views of an annual screening assessment

I B MCINTOSH

K G POWER

SUMMARY. A survey was carried out in order to identify elderly patients' perceptions of their health status, their health worries and their opinions regarding health screening before and after the introduction of an annual screening programme. Pre- and post-assessment self report, structured questionnaires and standardized, objectively scored, functional and medical assessments were used. The cohort was an age and sex stratified, 20% sample of those aged 75 years and over (133 patients). Results showed that 96% of patients before the assessment and 98% of patients afterwards, considered the annual assessment useful. The domiciliary visit by the health visitors resulted in one third of those patients who perceived themselves to be in good health and three quarters of those who perceived themselves to be in poor health becoming less worried about their health. Only two patients became more worried. Half of those objectively assessed as being in the medium health risk group and 68% of those in the high health risk group became less worried about their health after screening. Despite the majority of patients having welcomed the assessment their visit resulted in false, and potentially harmful, reassurance for a considerable number of individuals objectively assessed as being at medium and high health risk. An adverse consequence of health screening in elderly people may be inappropriate reassurance for those objectively assessed to be at risk. However, screening procedures are a means to an end, not an end in themselves. The identification of those at high risk should see subsequent implementation of services, investigations and increased support to relieve suffering, so it may have been that patients felt less anxious because they were anticipating relief of their problems.

Keywords: geriatric assessment; patient health benefits; health status.

Introduction

SCREENING is often promoted without due consideration for its efficacy or feasibility.[1] Many believe that intensive screening of the elderly population is not scientifically justified.[2] Annual screening and domiciliary visits to individuals aged 75 years and over is now, however, a contractual requirement for general practitioners. Evidence considering the benefits of such a programme is equivocal[3,4] with the possibility of modest improvement in patient morale and self esteem[5] set against increased workload for primary health care teams.[6]

Many general practitioners have legitimate concerns about universal screening and have yet to be convinced of its effectiveness.[7] At present there is little evidence to suggest that elderly people welcome an annual intrusion into their privacy.[8] If a screening programme is to fulfil its potential, a system for monitoring outcome is needed.[9] Unless emotional and behavioural consequences are properly monitored, the true costs and benefits of screening will not be known, and whether screening should be provided at all will remain uncertain.[10]

Perkins has pointed to the vulnerability of elderly people's self concept of health if routine checks and home visits are mishandled.[11] Age alone does not adversely affect self perception of health status.[12] Marteau refers to the psychological costs of screening, with an increase in anxiety apparent even in general health screening, and the tendency for such psychological consequences to be neglected in practice.[13] The nature of the screening process may foster anxiety, with recipients wrongly identifying health impairments they do not have and those carrying out the screening seeking to bring change and obligation to patients who do not want them.[14]

False reassurance, failure to provide support, potential further investigation, added awareness of the individual's mortality, disturbance to individual health perception and global (overall) health image, can all add to the psychological distress engendered by the screening process in vulnerable elderly patients.[1,14] Screening does, however, appear to have modest benefits in reducing time in hospital and perhaps in improved morale and self esteem.[5] Screening also identifies complaints which elderly people tend not to report, for example, incontinence and mobility problems.[11]

Self rating of health status is closely related to personal attitude to health[15] and has been found to be a useful measure of objectively assessed global health. Self perceived health status has been found to be highly correlated with degree of restricted mobility, sensory impairment, overall functional capacity and also with morale and quality of the social support network.[16-18] Measures of people's health perceptions have been shown to produce data as robust in terms of reliability and reproducibility as physiological and other conventional medical measures.[19] Patients' health perceptions and patient satisfaction are also important indices of the impact of health service provision.[20]

Implicit in these observations is the possibility that community screening of elderly people may lead to altered self perceptions of health, such as increased health anxieties and a move to increased hypochondriasis and dependence on the National Health Service.[21] Alternatively, community screening of elderly people may lead to false reassurance and denial of objective health risk. At present the true impact of community screening on different groups of healthy and at risk elderly individuals is not known.

The aims of this investigation were to study the effect of health screening on levels of health concern and anxiety among elderly people, and the existence of congruence or otherwise between personal perceived health status in this group and objective health measurement assessments. Patient attitudes to, and satisfaction with, the home assessment were also assessed.

Method

Subjects

The cohort surveyed was a 20% sample of patients aged 75 years and over selected from the computerized age–sex register of one six-partner urban general practice of 11 500 patients. Patients

I B McIntosh, BA, MB, general practitioner, Stirling. K G Power, MA, MAppSci, PhD, clinical psychologist, Murray Royal Hospital and University of Stirling.

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were randomly selected to ensure a representative 20% proportional quota of men and women from each five year age band from 75 years upwards. It was considered that a 20% sample would provide data generalizable to the whole cohort. All patients who were randomly selected were included in the initial sample, apart from those who were incapable of compliance with the study owing to dementia or depression. Screening took place during the first year of the new contract over a six month period between 1990 and 1991 and involved a domiciliary visit by a health visitor. All health visitors had up to three years' experience in the use of standardized questionnaires to record provision of services to individual patients, and a similar amount of experience in the use of objective quantitative scoring protocols.

Measures

Prior to conducting the study various self report questionnaire methods were piloted among two groups of 25 patients each and compared with patient interviews for their validity, intelligibility and acceptability. Likert scales were discounted as patients experienced difficulty comprehending the dimensional constructs behind such measures. Patients best understood short questions with clear categoric responses and this was the format adopted.

In order to assess the patients' perceived value of the screening programme, their global health perception and admitted health worries, two, structured, self report questionnaires were completed before and after the screening. Patients were interviewed alone, without their carer. Patients were asked a series of questions by the health visitor before the formal health screening assessment. The health visitor read a question aloud and scored the reply. The first question asked how concerned they were about their health and the second asked how the patients felt. The third question asked if they considered themselves to be in good health, in poor health or in very poor health and the final question asked if they believed a yearly health visit by the care team would or would not be useful.

The health screening questionnaire consisted of three parts, the first two sections being completed by the health visitor at the domiciliary visit. Part one was a structured record of demographic details, social and health services provided, refused or discontinued, and current medication.[22] Part two included an objective assessment of 13 aspects related to activities of daily living and a mental status assessment. Part three was a 10-item systemic medical assessment performed independently by the doctor within a short time interval of health visitor appraisal (usually a few days). The objective assessments used a five-point scale with upper scores indicating greater degree of functional inadequacy and medical incapacity.

Functional and medical scores were added together to provide a cumulative at-risk score (the mental state questionnaire was completed but was not added to the summative score). Scores of between 0 and 10 were included in the low risk category, which meant that no medical intervention was required. Medium risk scores of 11 to 20 indicated that there were moderate functional and medical deficits which did not seriously affect daily living. High risk scores of 21 or more indicated that there was significant systems failure and functional incapacity that was adversely affecting activities of daily living. Independent validation of the functional and medical assessments shows that high at-risk scores are closely correlated with the possibility of the patient's death within six months.[23]

After the formal health screening and assessment, patients were asked two questions by the health visitor, one about whether the government-required visit made them feel worried and whether the government-inspired health visit was useful or not.

Results

Of the sample of 149 subjects, six refused to participate, four were in hospital, three had died and three had moved away. Of the remaining 133 subjects, 100 (75.2%) were women. The mean age of the sample was 82.3 years, range 75 to 97 years.

The questions relating to patients' self perception of their general health status asked before the formal health assessment screening revealed that a positive relationship existed between the different self-perceptions of health status (chi square = 66.41, 4 degrees of freedom (df) $P<0.01$) (Table 1). None of the patients thought he or she was in very poor health. Most of the sample (68.4%) believed themselves to be in good health. The more general concepts of good, poor or very poor health will be used here although the results apply equally to the self assessment of health as being well, not so good, or ill.

Of the 91 subjects believing themselves to be in good health, the majority (84.6%) were not at all worried about their health (Table 2). However, of the 42 subjects who believed themselves to be in poor health, the majority (85.7%) were worried. The majority of both those who believed themselves to be in good health and those in poor health believed that a yearly health visit by the practice care team would be useful (94.5% and 97.6%,

Table 1. Answers to the two questions relating to patients' self perceptions of their health status.

	No. of patients considering themselves in:			
Patients feeling:	Good health	Poor health	Very poor health	Total
Well	76	4	0	80
Not so good	15	36	0	51
Ill	0	2	0	2
Total	91	42	0	133

Table 2. Patients' subjective health status related to their health concerns, anticipation of the health visit, assessment of the health visit, and impact of the health visit.

	No. of patients considering themselves in:	
Patient responses	Good health	Poor health
How concerned are you about your health?		
Not at all worried	77	6
Worried	14	34
Very worried	0	2
Do you believe a health visit would be:		
Very useful	7	5
Useful	79	36
Waste of time	5	1
Do you think the government-inspired visit was:		
Very useful	9	1
Useful	81	39
Waste of time	1	2
Has the government-required visit made you feel:		
Less worried	32	33
Had no effect	58	8
More worried	1	1

respectively). In total 95.5% of patients anticipated that a yearly health screening visit would be useful.

Following the health screening assessment, the majority of both those who believed themselves to be in good health and those in poor health thought that the visit had been useful (98.9% and 95.2%, respectively), giving a figure of 97.7% overall.

A differential impact of the health visit on anxiety levels was found for those who believed themselves to be in good health compared with those who believed themselves to be in poor health $\chi^2 = 22.96$, 4 df, $P<0.01$). For those who believed themselves to be in good health, the visit had no effect on how the majority (63.7%) felt immediately afterwards. However, for those who believed themselves to be in poor health, the visit resulted in the majority of this group (78.6%) feeling less worried. Of the 133 subjects, in only two cases did the visit leave them feeling more worried.

With regard to objective health risk status, significant differences were found between the proportions of those who rated themselves as being in good or in poor health ($\chi^2 = 37.24$, 4 df, $P<0.01$) (Table 3). Of the 44 patients who were objectively assessed as having a low health risk, 95.5% regarded themselves as being in good health. Of the 52 who were objectively rated as having a medium health risk, 71.2% thought they were in good health while 28.8% thought they were in poor health. Of the 37 who were objectively rated as having a high health risk, 67.6% believed themselves to be in poor health while 32.4% regarded themselves as being in good health. Although there was a significant increase in the proportion of those who believed themselves to be in poor health as objective health risk increased ($\chi^2 = 37.24$, 4 df, $P<0.01$) this relationship did not hold for a substantial minority of cases.

A differential impact of the health visit was found with regard to objective health status ($\chi^2 = 18.58$, 4 df, $P<0.01$) (Table 3). For those 44 cases who were objectively assessed as having a low health risk, the visit had no effect on how the majority (75.0%) felt afterwards and 25.0% felt less worried. For the 52 who were objectively assessed as having a medium health risk, the visit resulted in 55.8% feeling less worried afterwards while for 42.3% it had no effect and only one individual became more worried. For the 37 who were objectively regarded as having a high health risk, the majority were less worried after the visit, while for 29.7% it had no effect, but one patient felt more worried.

Table 3. Objective health risk related to subjective health and perceived impact of health assessment following the visit.

	Objective health risk (no. of patients)[a]		
Patient responses	Low	Medium	High
Do you consider yourself to be in:			
Good health	42	37	12
Poor health	2	15	25
Has the government-required visit made you feel:			
Less worried	11	29	25
Had no effect	33	22	11
More worried	0	1	1

[a]Low risk score 0–10, indicating no medical intervention required; medium risk score 11–20, indicating moderate functional and medical deficits which do not seriously affect daily living; high risk score 21+, indicating significant systems failure and functional incapacity that adversely affect activities of daily living.

Discussion

The results of this study suggest both a beneficial and potentially negative consequence of health screening for elderly people. First, on the positive side, the majority of patients reported, both before and after screening, that they considered this a useful exercise. The proportion of patients believing health screening to be of value is similar to that found in a government market and opinion research (MORI) poll commissioned in 1991 (*Pulse* 28 September 1991). The present data produce little evidence to support the hypothesis that screening elderly people might be psychologically distressing for them. From a total of 133 subjects, only two reported increased health worries after completing the health screening programme.

The positive but weak association between self rated health status and objectively assessed health status found in the present study was similar to results produced in earlier research.[17,24–26] Disagreement tended to occur where there was an overestimation of favourable health status by individuals when in fact there was some degree of objectively assessed health risk. It might be argued that regardless of one's objectively assessed health status, it is beneficial to have a positive attitude towards health. While it may be adaptive not to be overly preoccupied with one's health, this can only be functional if such a judgement is not based on false reassurance. For approximately half of those objectively assessed as having a medium health risk, and two thirds of those who were objectively assessed as having a high health risk, the screening visit resulted in them being less worried about their health. This is an important finding, especially if such vulnerable patients interpret the screening process as giving them a 'clean bill of health'. Elderly people are much more likely to seek and use health services if their global perceptions of personal health status and self concept are poor.[27] The substantial numbers in the study who perceived themselves to be in good health when rated objectively as having a medium or high health risk scores must cause concern, especially when the high risk group has been shown to have a greater probability of dying in the next six months than people in the other two groups.[23] It is therefore important that the screening process itself does not provide further false reassurance for this group and thereby reduce the probability that appropriate medical advice is sought.

However, the important issue that requires more detailed assessment in future research is whether problems identified are or are not amenable to effective treatment. From the results of the present study it is unclear whether high risk individuals were being given false reassurance or whether they were merely being reassured that little further could be done to improve their situation. Indeed if the latter is true, it might be argued that the increased satisfaction and reduced anxiety generated by the screening procedure is beneficial in terms of acceptance of their circumstances.

According to Hart and Burke, the purpose of screening tests is to sort out apparently well persons who probably have a particular disease from those that do not.[28] However, screening procedures are a means to an end, not an end in themselves. Identification of those at high risk should see subsequent implementation of services, investigations and increased support to relieve suffering. Patients may therefore feel less worried after health screening because of anticipatory relief. Nevertheless, the new contract for general practitioners laid down what should be assessed but not how it was to be done or for what purpose. The present study did not indicate to patients at the initial assessment what extra services might be available, other than to expect another contractual visit in approximately one year.

The study has a number of limitations. It could be argued that the phrasing of some of the questions was biased. For example, terms such as 'government-required' and 'government-inspired'

might have potentially influenced the results in a positive or negative manner, depending on the political loyalties of the patients. One of the main problems in surveys of this nature is that respondents may be reluctant to express criticism regarding their health care and this may result in inflated levels of reported satisfaction.[29] Furthermore, in relation to anxiety reduction following health screening, when patients are presented with the opportunity of providing feedback in terms of whether they are less worried, the same, or more worried, some patients may have responded that they were less worried merely as an indication of their appreciation of the interest and time shown them. Future research should therefore include more comprehensive and detailed questions to clarify the multidimensional aspects of such issues and thereby minimize any potential confounding variables. However, if assessment measures are made too complex, an elderly population, which is less familiar with questionnaire surveys than younger age groups, may experience difficulties understanding the nature of the research. One must therefore find a balance between over-simplicity and over-complexity while attempting to ensure that the questions asked are valid and reliable.

The findings of the study may not be generalizable to the United Kingdom general practice elderly population as the assessment procedure used in this study extended considerably beyond contractual obligations. However, the demands on patient time and involvement might have been expected to be psychologically more distressing than interventions designed to meet minimal mandatory requirements. An assessment of the impact of the routine standardized procedure used by other general practitioners is required. Unlike future studies which might be conducted, the present study was able to record patients' attitudes and perceptions at the introduction of the new contract.

The research confirms other reports that elderly patients believe annual health screening to be useful.[11,30] However, general practitioners should be aware that annual health screening may have a detrimental effect in promoting false reassurance among those patients identified as having a high health risk.

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Address for correspondence

Dr I B McIntosh, Viewfield Medical Centre, 3 Viewfield Place, Stirling FK8 1NJ.