OCCASIONAL PAPER 35

Preventive Care of the Elderly: A Review of Current Developments

Edited by
R. C. TAYLOR and E. G. BUCKLEY

Published by
The Royal College of General Practitioners

Journal of The Royal College of General Practitioners

The British Journal of General Practice

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OCCASIONAL PAPER 35

Preventive Care of the Elderly: A Review of Current Developments

Papers from the National Workshop on the Role of the Primary Care Team in Screening and Case Finding of Elderly Patients, National Health Study Centre, Harrogate, March 1986

Edited by

R. C. TAYLOR BA, PhD
Research Sociologist,
MRC Medical Sociology Unit, Glasgow

and

E. G. BUCKLEY FRCP(Ed), FRCGP
General Practitioner, Livingston
Editor, Journal of the Royal College of General Practitioners

Published by
The Royal College of General Practitioners
London

March 1987

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Preface

THE publication of these papers, and the workshop on which they are based, was made possible by a grant from the Chief Scientist's Office of the Department of Health and Social Security.

The proposal for a National Workshop on the Role of the Primary Care Team in Screening/Case finding of Elderly Patients came from the Elderly Research Liaison Group, under the chairmanship of Mr Scott Whyte. The workshop was held at the National Health Service Study Centre in Harrogate from 21 to 23 March 1986. There were about 45 participants, including general practitioners, community nurses, health visitors, geriatricians and health service researchers—all actively engaged in designing, operating or evaluating various forms of screening/case finding of elderly patients.

In organizing the National Workshop we were greatly assisted by Ms Sue Moylan and Miss Irene Wears of the Office of the Chief Scientist and by Tony Towler and his staff at the NHS Study Centre. Preparation of papers for publication has been our responsibility. It has involved a good deal of excision and compression—particularly of the descriptions of the schemes—and we hope that our versions retain all the essential details of the originals.

R. C. TAYLOR
E. G. BUCKLEY
Editors

Introduction

THE aim of these papers, and of the National Workshop from which they have been drawn, is to review recent developments in the role of the primary care team in the screening or case finding of elderly patients.

It has been customary to distinguish between these activities according to their primary focus, screening traditionally being concerned with the detection of conditions hidden from the patient, case finding with needs experienced by the patient but hidden from the doctor. This distinction has become blurred and the terms are used interchangeably to refer to the identification of elderly patients who are experiencing problems which curtail their normal functioning.

The case for review

There are at least three reasons why a review of these activities is timely. First, they received their original stimulus from a number of pioneering studies conducted in the late 1950s and early 1960s (Anderson and Cowan, 1955; Williamson, 1964). These studies identified high levels of unreported illness in older people living at home. By the mid and late 1970s a different picture began to emerge. Studies conducted in many different parts of the country reported that the vast majority of detected illnesses were either known to the doctor or of minor significance to the elderly patient (Williams, 1975; Freedman et al., 1978; Tulloch and Moore, 1979). Moreover, there was little evidence for the earlier reports of older people underconsulting their doctors (Williams, 1974). It would appear that the minority who do not consult represent a health élite (Ebrahim et al., 1984). These findings suggest that there may have been an important secular change in the attitudes, behaviour and health status of the elderly. It is important that current practice takes account of this change.

Secondly, over the last twenty years the focus of geriatric preventive care has changed from the detection of disease to the assessment of function. This shift in focus has been gradual. From an early focus on the detection of pathological diseases and/or their precursors, attention has moved to the detection of unreported or poorly reported conditions and, more recently, to the detection of functional loss. There is now an emerging consensus for a more holistic approach, incorporating the assessment of physical and social functioning.

A good deal of research effort has gone into developing and testing instruments for assessing function and Fillenbaum (1982) has reviewed the voluminous literature on approaches to multidimensional assessment of the health of older people. However, it should be noted that the standardized protocols and rating scales which have been developed and validated have usually been employed in surveys of need rather than in the sustained provision of care. There appears to be a reluctance in the United Kingdom to adopt standardized assessment procedures in primary health care. In the USA schemes do exist whereby standardized assessments lead directly to the allocation of resources and the provision of care (Duke OARS, 1978). Compared with the body of knowledge and consensus on *what* is to be assessed, there is still a lack of empirically based knowledge and consensus on *who* should be assessed, *how* they are to be identified, and *by whom*? The papers in this *Occasional Paper* deal with these important questions.

Thirdly, the case for review is strengthened by consideration of the economic constraints which need to be applied in all health care systems when the number and percentage of older people is increasing and when resources are scarce. In Britain, Europe and the USA health practitioners and planners are looking for effective and efficient procedures for distinguishing between those elderly who require comprehensive assessment/intervention and those who do not. Within the last year there have been comprehensive reviews of screening and case-finding procedures in Europe (Barker, 1986) and the USA (Havens, 1986). There is considerable international interest in this field and it is important that current British developments are made available and become part of international discussions on the care of the elderly.

The National Workshop

The National Workshop reviewed current British developments in two ways, through commissioned background papers and through presentation and discussion of a number of innovatory schemes.

The six background papers were prepared by national experts on screening and case finding in elderly populations. They cover a wide range of issues: the design and testing of screening instruments, strategies of intervention, the role of different members of the primary care team, and opportunities in routine consultation and forms of evaluation. Collectively they provide an up-to-date review of problems and progress.

The National Workshop also made available information on 20 case-finding/screening schemes currently being planned or at experimental or operational stages. They varied in their aims, scope, and number and type of people involved. A brief résumé of each can be found in Appendix 1. For this *Occasional Paper*, 10 of the 20 schemes have been selected to provide a representative picture of British developments. They are as varied as the sample from which they have been drawn, but they do share one characteristic. Indeed, as the workshop progressed, it became apparent that comprehensive functional assessment was the chief prerequisite for preventive care and the schemes differed only in the way in which they attempted to achieve it.

The different routes to comprehensive functional assessment can be shown diagrammatically (Figure 1).

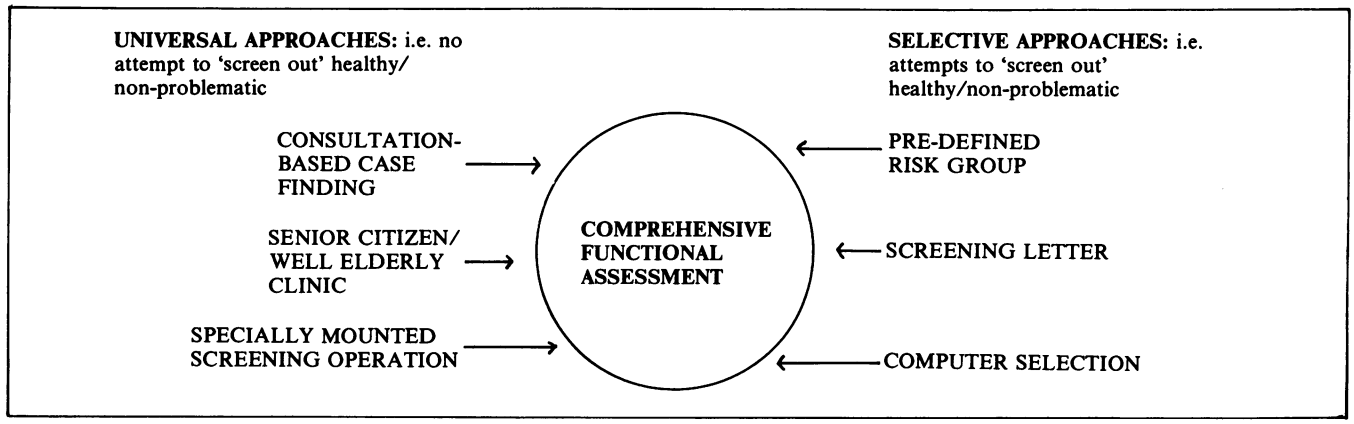

Figure 1. Screening and case finding: alternative approaches to comprehensive/functional assessment.

Approaches to assessment

A major distinction can be made between a universal approach which attempts to assess all elderly people and a selective one which focuses on those presumed to be in greatest need.

The selective approach

Figure 1 shows three variants of the selective approach. The first, based on the predefined risk group (for example, those who live alone, the widowed or those with no children), is exemplified by Butler's screening experiment in Cumbria (page 7). The second, based on the use of the screening letter devised by Barber and colleagues (1980) is exemplified by the schemes operated by Porter in Edinburgh (page 22) and Cameron in Leeds (page 9). The third example of a selective approach is provided by Berrey's attempt to use a practice-based computer to identify those elderly whose circumstances have changed or who have experienced some potentially disruptive event (page 5).

All these selective approaches involve a two-stage strategy: the first to exclude or 'screen out' those with no obvious medical or functional loss, the second to identify 'cases' among the remainder. A major aim of this approach is to reduce to manageable proportions the number of patients who require full assessment, and the schemes tend to be judged on these grounds. However, the schemes should also be judged by the extent to which patients with problems are excluded from further assessment and conversely the extent to which patients without significant problems are included for assessment, that is the sensitivity and specificity of the selection procedure. A detailed discussion of these issues can be found in the paper by Taylor and Ford (page 30).

The universal approach

In the universal approaches shown on the left of Figure 1, the most obvious difference is between those which are integrated into routine practice and those which involve a specially mounted exercise. The most dramatic example of the latter is provided by the 'task force' orientation of the Newcastle Care Team for the Elderly (page 19). However, a specially mounted exercise can also operate by postal questionnaire, as in the Harwich Elderly Assessment Project (page 16), and by the use of trained volunteers, as in the Winchester and Gloucestershire projects (pages 11 and 4). Jones also reports on a similar exercise whereby a domiciliary occupational therapist is used to assess the elderly in their own homes (page 13). This account is particularly interesting because of the lessons learned from initial failure.

The Bicester Seniors' Clinic described by Tulloch (page 24) stands somewhere in between these specially mounted screening and case-finding exercises. It is of interest because of the high level of integrated teamwork which has apparently been achieved.

There were no examples of consultation-based case finding available to the National Workshop. This is unfortunate because it represents the closest integration of case finding with routine practice. Freer discusses the possibilities of such 'opportunistic' case finding and illustrates how it might be achieved in the course of a normal consultation (page 26).

Appropriate uses

It was apparent at the workshop, as it will be to the reader, that each of these approaches to preventive care of the elderly has its advantages and disadvantages. All have to be properly evaluated, and it is gratifying to note that an evaluative component was normally included. It will also be apparent that each approach has to be assessed in relation to local circumstances. The seniors' clinic described by Tulloch stands a better chance of success in a small Oxfordshire town than in a large metropolitan practice and the 'task force' orientation developed in Newcastle would probably be inappropriate in Oxfordshire. If Berrey's computerized approach is shown to be successful in his Edinburgh practice, it is likely that it will be suitable only for practices which have sophisticated information processing systems and primary care team members interested and competent to operate them.

Finally, it is important to emphasize that the different approaches are not mutually exclusive; indeed the most promising future developments will probably be multi-tiered, containing elements fom a number of the schemes described here. Some workshop participants clearly intended to borrow from the Edinburgh 'birthday card'

approach, and there was also considerable interest in the more widespread use of volunteers, and in Freer's opportunistic case finding backed up by a screening letter to non-consulters. It is hoped that these and other ideas will commend themselves to readers, and that this *Occasional Paper* will stimulate yet further experimentation and evaluation.

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The use of trained volunteers in a screening programme: an evaluative study

Dr D. L. Beales MRCP, MRCGP
General Practitioner, Cirencester

PHOENIX House Surgery has a population of 7300 patients within a 7-mile radius of Cirencester, of whom 500 are over the age of 75. The practice has five principals who operate small personal lists complemented by clinical sessions at the Cirencester Memorial and Querns Hospitals, which include inpatient responsibility in geriatric medicine. Up till now the health visitor has been fully occupied with her work in child care and has not carried out any preventive work with the elderly.

Aim

We wished to develop a preventive approach to the elderly within the practice and in February 1986 set up a programme to evaluate the use of trained lay volunteers to detect patients over the age of 75 at risk of medical and social breakdown. The aim was to reduce the amount of time spent by members of the primary care team in 'social visiting'.

The volunteers

The volunteers use the Winchester Disability questionnaire, which consists of 5-point rating scales for the following activities: walking, dressing/undressing, washing, bathing, eating, sleeping, toileting, hearing and sight (page 12). There are similar rating scales for overall health anxiety/depression/confusion, companionship, support and home conditions. The questionnaire takes on average 30 minutes to complete.

The volunteers receive a 5-week training, which covers the aims of the scheme and role of the volunteers, the format of the questionnaire and its completion, a review of local services for the elderly and of national benefits and entitlements, and an introduction to counselling skills. Meetings co-ordinated by the health visitor continued throughout the study period.

The evaluative study

In order to assess the effects of using volunteers the following study design has been adopted (Figure 1). Patients aged 75+ have been stratified by age and sex into three groups.

Group A: 200 controls—non-intervention by health visitor and volunteer.

Group B: 150 patients visited by a trained volunteer who helps them complete the questionnaire. If problems are identified a full assessment will be carried out by the health visitor or doctor and appropriate action taken. It is intended that the questionnaire will be repeated at 3-monthly intervals, but this may be amended to a 6-monthly review if the scoring indicates low risk.

Group C: 150 patients interviewed by the health visitor alone in her traditional health visiting role. The recommended policy for visiting the over 75s in the Cheltenham and District Health Authority suggests that "there will be an initial assessment made by the health visitor, unless it is known that the person is already receiving regular surveillance from the general practitioner or district nurse". Any needs that are highlighted by this visit should be dealt with appropriately. It is suggested that follow-up visits should then be made every 6 months.

Records of problems identified will be kept and an attempt will be made to monitor the interaction of volunteers and other members of the practice team. Services resulting from contact will be recorded as will outcome.

A longer account of this project will appear later this year in the *Practitioner*.

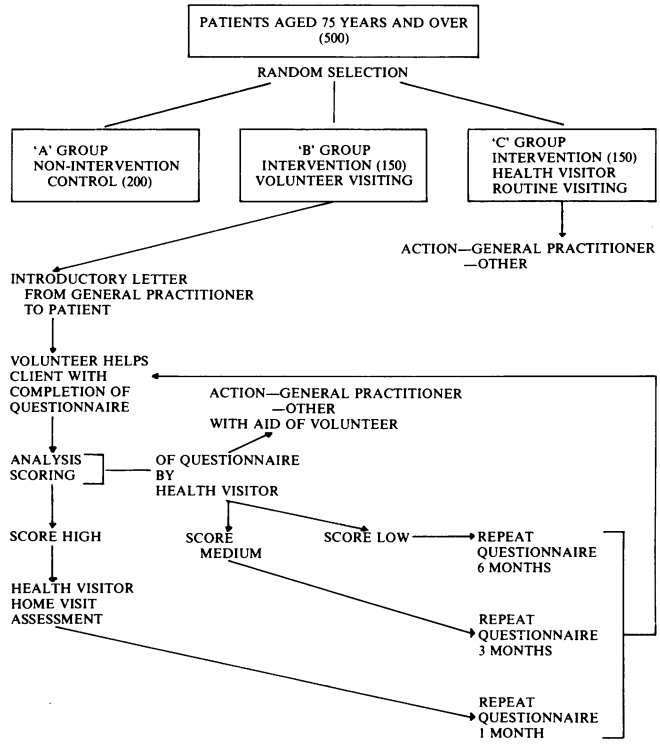

Figure 1. Phoenix House Elderly Research Project.

A computerized case-finding system: the Stockbridge Project

Dr. P. N. E. Berrey MB, ChB
General Practitioner, Edinburgh

IN common with most of the United Kingdom, the population served by the Stockbridge Health Centre in Edinburgh is showing an increase in the numbers of those aged 75 and over. Attempts at screening this population have proved disappointing. There appear to be several reasons for this. Full screening of selected patients using the medical model of history, examination and any appropriate investigations yielded a low pick-up rate for previously unknown major pathology. Moreover, health crises occurred quite soon after the initial screening examination in a number of cases, and the numbers of old people involved made frequent screening impossible for the whole elderly population. These crises often appeared to be the result of a combination of comparatively minor factors which together proved overwhelming. These risk factors, which include psychological or environmental problems, are so widespread amongst the elderly that seeking to identify and ameliorate them for the whole elderly population would require enormous resources. Indeed some factors, such as great age, social isolation or poor housing may not be susceptible to intervention.

It was felt that there was a need for a relatively cheap, regular and less crude mechanism which could select small numbers of high-risk patients for intensive intervention.

Aims of the project

The author set out to combine information from three main areas of risk, namely long-term risk factors, life events, and short-term risk indicators. After selection of the relatively small number of old patients in a general practice who achieved the greatest number of risk points each month, intervention would be undertaken by a health visitor who would report back to the general practitioner. Subsequently a multidisciplinary team meeting would discuss the measures appropriate for further action.

Another aim is to try to use information which is already available to the primary care team in a more efficient way without generating significant extra work. This efficiency, it is hoped, can be achieved by using a computer as part of the daily practice routine.

Resources

The scheme was designed so that it need involve no extra staff other than in the initial stages of computerization. The multidisciplinary team involves attached members of the primary care team, the area social worker, home help supervisor, occupational therapist, and the local day centre warden. A caring relative may also be invited to attend. The microcomputer in use is the Apricot 10xi, running the GPASS package. This system now covers more than 120 practices in Scotland, and with recent changes it will be available to run on very inexpensive IBM-compatible hardware.

Method

Master problem lists for all the elderly patients in the practice were prepared, and included in addition to medical problems, 'static' risk factors such as being housebound, living alone and dependence. Simultaneously, a system for updating the computer records, to include bereavement, discharge from hospital, and changed address was set up. Computerized prescriptions for all repeat medication were implemented, and consultation dates for all elderly patients were logged by reception staff prior to re-filing manual records.

A series of monthly audits has been started, selecting those patients aged over 65 with the greatest number of risk points. The computer is capable of identifying patients who are overdue for repeat prescriptions of important medication, and can identify those who are overdue for medical review. By combining this information with 'static' risk points, and recent life events, a search can be made for high-risk patients which may be completed in a few minutes, and easily repeated with minor variations. Although most of the information being searched is available to the team in manual form, such a search would be virtually impossible by manual methods.

A clinical trial has been set up to evaluate the system. Two matched groups of patients are being followed over a 3-year period. Group A patients are subject to computerized surveillance, while Group B are subject to the practice's normal methods of care. Outcome for both groups of patients will be measured in terms of acute and non-urgent hospital admissions, deaths and casualty department attendances. There will be a domiciliary assessment of deterioration at the end of the trial for both groups. A system of 'silent' markers is used to ensure that team members are unaware of a patient's group allocation. It is hoped that the project may also identify those risk factors which were of greatest importance retrospectively.

Current progress

Computerized case finding has been undertaken since January 1986, and the computer has functioned well. The

team concentrated initially on those patients with maximum risk points, and those selected appeared to have a very high-risk rating. When patients were re-selected on successive searches, a decision was taken in the light of each individual as to whether further intervention would be appropriate.

The system has proved sufficiently flexible to allow 'targeting' of particular types of high-risk patients. Recent examples include searches for patients known to have (a) incontinence, poor mobility, past falls and poor drug compliance, (b) more than five medical problems, five medications, recent discharge from hospital and poor compliance and (c) known to live alone, to have been recently bereaved, to be socially isolated and to have had no recent contact with the primary care team. The team is hoping to learn from this type of approach, to create a flexible working model which should be capable of evolving with the changing status of the elderly under its care.

Health visitors' use of risk criteria in an experimental screening project

Moira M. Butler SRN, SCM, HVDip.in.Soc.Rea.
Health Visitor, West Cumbria

THIS is an account of the second stage of a three part project concerned with the feasibility of health visitors becoming more involved in the assessment of elderly people. The first stage of the project was the development of a schedule for assessing the functional status of older people. It was found that the schedule was helpful to health visitors in focusing attention on the problems which were most likely to be present.

In the second stage of the project, a group of health visitors were evaluated in their use of the schedule for a trial period. I wished to see if health visitors could incorporate the use of the schedule into their normal workload, and also whether use of the schedule led to changes in the effectiveness and efficiency of health visiting with elderly people. Eight health visitors volunteered to take part in the experiment, which lasted just over 8 months. During the first 3 months information was collected about current practice to provide data for a before-and-after comparison. After this initial period the volunteers were divided, five forming the experimental group and the remaining three acting as a control group.

The experimental group selected clients according to the risk criteria laid down by Taylor and Ford (1983) and then visited them to conduct a multidimensional functional assessment using the developed schedule. Those found in need of attention were either referred or provided with the appropriate treatment, help, or advice. Patients referred to the experimental group from other agencies were also offered comprehensive functional assessment. Any client found to be at high risk was kept under regular surveillance.

Members of the control group continued with their normal practice and were merely required to record details of their visits, as in the 3-month pre-experiment period.

Interim results

In the first 3 months, the pre-experimental period, the eight health visitors made 162 visits. Most of these visits were a result of general practitioner referrals and there was little scope for a purely health visitor approach. There was a marked variation in the number of visits made, one health visitor completing five visits to the elderly, another completing 49 visits within the 3-month period. There was also a significant variation between the activities of the 'experimental' and 'control' health visitors. The control group visited fewer clients, made fewer referrals, and planned less action as a result of the visit. These differences between the control and experimental groups in the pre-experimental period were unfortunate, but probably accounted for by the fact that the experimental groups were introduced to the new assessment procedure towards the end of the 3 months.

During the subsequent 5-month period the volume of visiting for both groups remained similar. The average number of visits per month for the experimental group was 8–9 visits, compared with 2–6 visits for the control group.

The most important difference found in the practice of the experimental group as a result of the introduction of the schedule was the increase in the number of 'further actions' and referrals planned after visits had been made. This finding suggests that the use of the schedule revealed more problems than the health visitors had previously been identifying. After the introduction of the schedule, 76 per cent of visits resulted in 'further actions', compared with 34 per cent of visits before the intervention.

In the 5-month period, the experimental group assessed 73 new clients, 46 identified according to the Taylor and Ford criteria and 27 arising out of referrals from other health workers. All but three clients could be assigned to a risk group; indeed the majority fell into a number of groups. Overall, just over 1 in 2 of all risk group members were found to be at risk following comprehensive assessment, but the proportion of confirmed cases varied by risk group.

The numbers on which Table 1 is based are small, yet

Table 1. Percentage of clients found to be at risk, categorized by levels of risk groups as devised by Taylor and Ford (1983).

Risk groups by hypothesized level	*Number of clients assessed*	*Percentage found at risk*
High		
Very old	55	*51*
Moved house	10	*60*
Discharged hospital	7	*71*
Divorced/separated	1	–
Moderate		
Minimum income	27	*52*
Recently widowed	16	*62*
Living alone	36	*64*
Social class 5	27	*44*
Low		
Isolated	21	*71*
Single	8	–
Childless	20	*70*

there appears to be no ranking of 'high', 'moderate' and 'low' risk groups as suggested by Taylor and Ford.

Conclusions

Despite the fact that the experimental group spent a small proportion of their time with the elderly, an average of 0.92 hours per week, this represented a doubling of the time they had previously spent and was five times longer than that spent by the control group. Members of the experimental group were self-selected and were already doing more visits than members of the control group, but use of the risk group criteria and the comprehensive assessment form undoubtedly helped them make better use of their time. As a result of the short experiment both the assessment form and the risk group criteria are currently being modified.

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The modification and evaluation of a screening letter

Dr A. W. Cameron MRCGP, MPH, MFCM
General Practitioner, Leeds

Jennifer Wright MA, MPhil
Research Assistant

AS a prelude to a 2-year trial of case finding it was decided to test the screening letter devised by Barber and colleagues (1980) on a predominantly working class practice in the centre of Leeds.

The practice's computerized age/sex register was first 'cleaned' to identify all those born between 1908 and 1904 (all the 74–79 year olds). The 400 names produced were then circulated to the doctors in the practice to identify those old people known to be alive, dead or moved away. The doctors identified 182 elderly patients seen recently and eliminated 13 names of those who had died, been admitted to long-term hospital beds, or had moved away. A further check revealed four more who had died and a similar number who had moved out of the practice. After also excluding those known to be in institutional care, 354 names were left on the list for mailing. Of these, 208 (59 per cent) had been seen by one of the doctors in the previous 3 months. Only 67 (19 per cent) had not been seen in the previous year. The 354 elderly (238 women, 116 men) were sent Barber's list of nine questions, which required yes/no answers.

The response rate to the first mailing was encouragingly high. Within 1 month, 330 (93 per cent) questionnaires were returned, of which 323 were completed. Seven had not been completed because the old people concerned were either in hospital or an old people's home, or else were 'not known' at that address. A second mailing produced a further 12 questionnaires (two uncompleted). Overall, 344 out of the original 354 were returned, of which 335 were completed—an effective response rate of 95 per cent.

Analysis and follow-up

Analysis of the replies revealed that 80 per cent had given a 'yes' answer. This was almost identical to Barber's findings, but it seemed high if the technique was to be used regularly. The money spent on mailing the questionnaires might as well have been spent on visiting the remaining 20 per cent. Moreover, follow-up of some of the elderly revealed that they had not always understood the questions. It was felt, therefore, that although the replies had provided some useful information, and the technique had proved a successful method of contacting the elderly in the practice, the questions themselves were not sensitive enough to select those most at risk. Previous research on vulnerability had included not only disability in the elderly themselves but also the circumstances of their carers. For example, a number of studies had shown that the ability of an elderly person to stay in his or her house depended not only on the presence or absence of a carer, but also on the nature of the relationship between the elderly person and the carer, and the carer's proximity, employment and health status. It was felt that Barber's questionnaire did not give sufficient attention to these issues, and accordingly the following seven questions were generated:

1. Do you live alone?
2. If not alone, who do you live with?
   (a) husband/wife
   (b) children
   (c) other relatives
   (d) friend/s
3. Do you have a relative you can depend on for help?
4. How far away does this relative live?
   (a) same house
   (b) within 5 minutes
   (c) within 10 minutes
   (d) within 30 minutes
   (e) more than 1 hour away
5. Are you alone for long periods in the daytime?
6. Do you have difficulty with any of the following day-to-day tasks?
   (a) dressing/undressing
   (b) getting to the toilet
   (c) getting round the house safely
7. Any problems with your health which you still have to see about?

This second list of questions was then sent to a small sample of 80-year-olds drawn at random from the age/sex register. The comprehensibility and acceptability of the questionnaire were checked by follow-up visits by the health visitor, who also checked the accuracy of the answers. Unlike Barber's screening instrument, where any 'yes' answer was taken to indicate the need for a follow-up visit, risk on our revised list was assessed individually on the basis of each person's answers. For example, an old person who lived alone and had no close relative might merit assessment just as much as an old person who lived alone, had difficulty getting to the toilet, and whose nearest relative lived half an hour away.

Proposed two-year study

The research will test a two-stage case-finding programme. In the first year the computerized age/sex register will be used to identify all patients born between 1903 and 1894 (81–90 year olds), about 300. After checking with the doctors and medical records, 100 names will be selected of elderly people known, as far as possible, to be still alive and living in the practice area. These will be randomly and equally allocated to control and intervention groups. All 100 will be sent the seven screening questions and each one will be graded high or low risk according to the answers given. Neither the research worker, the health visitor visiting the patients in the study nor the doctors and other practice members will know into which category each old person has been placed.

Then, over a 3-month period, the health visitor will visit the 50 elderly in the intervention group as well as all the non-responders (likely to be very few according to the pilot study) and carry out a full assessment using the prepared questionnaire. After her visits the health visitor will check the medical records of the patients to see which symptoms were 'unknown' to the practice, make any referrals to practice members or to other services as necessary, and conduct follow-up visits where required. Six months after the initial visit the health visitor will make follow-up assessments using the same questionnaire on the intervention group and will also visit the control group to carry out a one-off assessment. Three months after the start of the project the process will be repeated with another 100 elderly aged between 81 and 90 selected at random from the practice age/sex register. One doctor will check the reliability of the health visitor's findings by visiting a random selection of the patients.

The second year of the study will be used to analyse the findings, refine the technique and develop a tested case-finding package that can be incorporated easily into the day-to-day working of the practice. Before the end of the 2-year period the 'package' will be tried out on elderly patients born in one year which has not already been used for the trial.

The validity and predictive value of the initial case-finding letter will be tested by comparing the circumstances, levels of unmet need, and significant events in the predicted high and low risk groups. The value of intervention will be tested by comparing the levels of unmet need at the beginning and end of the 6-month period in the intervention groups and also by comparing these levels at the end of the 6-month period in all the intervention and control groups.

The use of a disability rating questionnaire in a case-controlled screening surveillance programme

Dr G. I. Carpenter BSc, MRCP
Consultant in Geriatric Medicine, St Pauls Hospital, Winchester

G. D. Demopoulos BSc
Research Assistant, Winchester

THE objectives of the project, which began in 1984, are twofold:

1. To develop a cheaply and easily administered instrument which is a sensitive indicator of any deterioration in the health of elderly persons in the community
2. To test whether surveillance and early intervention will have any impact on the health of the elderly community.

The Winchester Disability Rating Scale, a validated questionnaire with 19 questions of which 16 are used to generate a score, forms the basis of the screening programme (Table 1). It is administered by volunteers enlisted from the local community.

The study population was sorted by age and sex then randomly allocated to experimental and control groups. Volunteers visited the whole population at the commencement of the study, and members of the experimental group at regular intervals thereafter. The questionnaires are returned to the research assistant who enters the data into the computer where the score is computed and displayed. If there is a change in score indicating deterioration, a referral is made to the general practitioner, who initiates further action. Client requests for aids or services are also normally routed through the general practitioner. All interventions are recorded.

At the end of the study, the whole study population will be questioned once more and the results analysed to identify any significant difference in patterns of disability, score, and use of resources between the two groups.

The target population

Two general practices in Andover agreed to take part in the study. Compiling a list of all people over 75 who lived in the town was complex and time consuming since the records were poorly organized and sometimes out of date with regard to deaths and changes of address.

It was considered important that interviewers should not be asked to visit someone unless the address had been checked. Information was therefore sought from the Registrar of Births, Marriages and Deaths for deaths, and from the Housing Department for changes of address. In spite of this, interviewers found some wrong addresses on visiting. In some cases they were able to discover the whereabouts of the person; in others, the whereabouts remained unknown. The age/sex register of patients from one practice was completed only as the last of the first interviews were completed.

The initial record check produced 699 patients. Of these, 97 had to be excluded (32 had died, 39 had moved into residential care or out of the area, and 26 could not be traced). This left 602 who were potentially traceable. Of these, 63 refused to take part in the study leaving questionnaires to be completed on 539.

The volunteers

An initial publicity meeting to which all local charities and voluntary groups were invited produced only a few volunteers. On reflection it was felt that the most likely people for this sort of work would be the unemployed, mothers with preschool-age children, and the retired. Recruiting therefore took a different course with the research assistant visiting personally a number of community groups, in particular 'mothers and toddlers' and church groups.

Thirty-six volunteers were successfully recruited and 60-minute training sessions were held for groups of up to 15 at a time.

Interviewing began in February 1985. All the interviewers have enjoyed the work and only five have dropped out to date. The old people also enjoy the visits, and positive feedback has been received from a very wide variety of sources.

The questionnaire

The questionnaire covers a number of descriptive factors including information on recent hospital admission, recent falls, and activities of daily living (ADL) (Table 1).

The time taken to administer the questionnaire is usually about 20 minutes: of all interviews to date, 40 per cent have been completed in under 15 minutes, 38 per cent in 16–30 minutes, 11 per cent in 31–45 minutes and 11 per cent have taken over 45 minutes.

Risk groups and surveillance

When all first interviews had been entered into the computer, the author and research assistant each reviewed 100 questionnaires and divided them into three 'risk' groups: those with no significant disability (score 15–20), those with some disability but whose lives were not significantly impaired (score 21–32), and those with

considerable disability (score ⩾33). Group 1 contained 317 cases (59 per cent), Group 2 contained 187 cases (35 per cent), and Group 3 contained 35 cases (6 per cent).

Experimental group members are now being visited on a regular basis: those in Group 1 on a 6-monthly cycle, those in Group 2 on a 3-monthly cycle. Those in Group 3 already receive a great deal of assistance and are well known to the primary health care teams and social services department. Some do not need visiting because of the high level of support they already receive, but the majority are visited 3-monthly.

Where a change in score of 5 or more is recorded in a subsequent interview a letter is sent to the general practitioner stating the score change and any principal finding. He will then review the case and initiate further action as necessary.

Discussion

The project has already proved to be a practical and effective way of collecting data on large numbers of elderly people living in their own homes at low cost.

No insurmountable difficulties have been encountered. Initial delay in interviewing was due to difficulties in compiling an accurate list of patients and establishing an effective interviewing pattern. The project should move smoothly through its course to completion in 1987/8. We do not expect to be able to evaluate the project before the end of the research period. However, it is already becoming apparent that it is likely to be in non-medical areas that the project is going to show a value for screening: there have been numerous requests for non-medical help.

Table 1. Winchester Disability Rating Scale

1.	MARITAL STATUS	Married	Divorced/Separated	Single	Widowed	Date:
2.	WHO DO YOU LIVE WITH?	Alone	Spouse	Son/Daughter	Other	
3.	HOSPITAL DURING THE LAST YEAR?		Yes	No		
4.	HOW MANY FALLS WITHIN THE LAST MONTH?					
5.	WALKING	Goes out independently	Housebound can manage stairs	Housebound cannot manage stairs	Roomfast	Chairfast or bedfast
6.	DRESSING/ UNDRESSING	Independent	Some difficulty	Manages with much difficulty	Manages with help	Cannot dress
7.	WASHING	Independent	Some difficulty	Manages with much difficulty	Manages with help	Cannot wash
8.	BATHING	Independent	Some difficulty	Manages with much difficulty	Manages with help	Cannot bath
9.	EATING	Normal	Limited diet	Liquids only	Manages with help	Eats hardly anything
10.	SLEEPING	Good nights	Interrupted nights	Little sleep at night	Awake at night asleep by day	Never asleep or always asleep
11.	TOILET	Independent	Commode at night	Commode day and night	Occasional accidents	Frequent accidents
12.	HEARING (with aid if worn)	Satisfactory	Slight impairment of hearing	Hard of hearing can lip read	Hard of hearing cannot lip read	Totally deaf
13.	SIGHT (with glasses if worn)	Satisfactory	Cannot read	Cannot watch television	Can hardly see	Blind
14.	HEALTH	Good	Good on the whole	Moderate	Poor	Very poor
15.	ANXIETY and/or DEPRESSION and/or CONFUSION	Normal	Occasional slight	Occasional moderate	Frequent moderate	Frequent severe
16.	COMPANIONSHIP	Good	Adequate	Little	Very little	None
17.	PRESENT HELP	None required	Some needed and provided	Much needed and provided	More required	Much more required
18.	CARER(s)	None required	Carer(s) have no problems	Carer(s) have some difficulty	Carer(s) under stress	Carer(s) cannot continue
19.	HOME CONDITIONS	Good	Adequate	Untidy or hazardous	Bad	Very bad

Scoring is from 1–5 for each response from questions 4–19. Questions 14 and 18 are weighted to give added importance to the higher scoring responses.

The use of an occupational therapist in a screening programme

Dr R. V. H. Jones MA, FRCGP
General Practitioner, Seaton, Devon
Senior Lecturer, Department of General Practice,
University of Exeter

MY partners and I practise in a small resort on the south coast. During the past 15 years the population has increased considerably, the majority of newcomers being people retiring to new estates of small bungalows built by private developers. The proportion of elderly people on our list has grown steadily. In January 1986, 66 per cent of our registered patients were under 65 years old, 17 per cent were 65–74, and 17 per cent were over 75. On my personal list, 22 per cent were over 75 years. Projections show that we can expect half our patients to be over retirement age by the early 1990s. Such a prospect demands new assessment of services needed and decisions about organizational changes within the practice and the primary health care team.

In order to provide facts on which to base our decisions we have for the past decade been collecting figures concerning the medical and functional states of the elderly patients registered with us. We have looked at the extent to which we are aware of their 'status' in the absence of an organized screening programme. We have also analysed the workload of the district nurses attached to the practice: who they visit, what they do, and how long it takes. Some of the results have been published elsewhere (Jones, 1976; Harris and Jones, 1977; Jones, 1981). This paper describes a 'functional survey' of patients aged over 80 years carried out within the practice with the help of an occupational therapist. It concludes with a résumé of the lessons we have learned.

Functional survey

The aims of the survey were to discover:

1. Whether an occupational therapist could provide rapid and effective functional assessment of old people at home
2. Whether she could subsequently make medical and social recommendations which if carried out would result in an improvement of functional ability
3. To what extent two general practitioners were aware of the functional ability of the very old people registered with them.

Method

The plan was for an occupational therapist to visit all persons aged over 80 years who were registered with two partners. On her visit she would complete an initial assessment and record the results on a card which also had space for a second assessment and a general practitioner assessment. Afterwards the practitioner concerned would fill in his 'assessment' of the same person from memory, without seeing either the person or the results obtained by the therapist. When all the available old people had been visited the therapist would make recommendations for action which would then be discussed with the practitioners. If the recommendations were agreed, appropriate action would be taken. In 9 months' time the therapist would re-assess those people for whom recommendations had been agreed.

Results

At the time of the survey there were 194 people aged over 80 years on the two partners' lists, out of a registered population of 4450. Of these, 176 were visited and assessed. The remaining 18 were not assessed because they had died, were temporarily absent, or had refused assessment. No appointment for interview was made. Of the patients assessed, 125 were seen on the first visit and 49 on the second. It was only necessary to make an appointment for two patients.

A total of 135 hours was needed to carry out the 176 initial assessments. This time included organizing the visits, travelling time, checking questionnaires, discussion with doctors and nurses, as well as time taken over assessments.

Eighty-eight recommendations were agreed for 59 patients. When re-assessment was carried out 9 months later, it was found that the recommendations had been acted upon and completed for 16 of these patients. The reasons why they had not been carried through for the remaining 43 patients were: they were still in process (9), the old person was unavailable (10), the old person refused (24).

The general practitioners' knowledge of the functional ability of their patients was high: only 6 of the 176 people were unknown to the doctors. Of the remaining 170, out of 1700 functional measures the doctors were aware of the person's ability and agreed with the occupational therapist in 1461 of them. The doctors were unaware of their patients' disability in 142 tests involving three areas: ability to bath themselves, ability to cut their own toenails, and ability to control their bladders.

The doctors and therapist recorded different results in 97 tests. Discussion showed that most of these differences

were due to different interpretations of the definitions used (e.g. mobility 'out of house'), although two patients presented problems to the therapist when she attempted to assess alertness. One was a demented patient who confabulated well. The other was an alert patient with a broad Irish accent and a quirky sense of humour.

Overall, we considered that the occupational therapist had proved capable of providing a rapid and effective functional assessment of old people at home, and could make subsequent recommendations which were appropriate and could be completed within 9 months. The doctors' knowledge of their patients was shown to be high in respect of their circumstances, their mobility and ability to communicate, but not so high regarding personal care and hygiene.

The results have been reported in greater detail elsewhere (Goble et al., 1979; Jones and Goble, 1981).

Follow-up

As a result of this and other exercises a card was produced to record the functional state of all elderly people in the practice on an annual basis. The objective was to ensure that no registered elderly person was unknown to the practice and that the 'functional' needs discovered would be serviced. Agreement was reached with the attached health visitor and nurses about the procedure to be followed.

This project failed, partly owing to lack of motivation but mainly to inefficient organization. With such large numbers of elderly people and professionals involved, it was essential that the system of completing the cards should be clear and obsessively adhered to, and that results should be recorded in such a way that 'defaulters' would be easy to identify. In the event cards accumulated in odd corners and the system ground slowly to a halt with all concerned becoming disillusioned.

We are now trying again, with a simpler card held with the patient's manual record (Figure 1). The fact that an assessment has been made on a patient during a calendar year is recorded on that patient's computer record. At the end of the year identification of those not assessed should be simple.

Lessons learned

In the course of the past 10 years we have tried to analyse the problems we have encountered and to identify the causes of our failure to mount a continuing effective programme of surveillance and assessment for the elderly. We have learnt some new lessons and relearned some old ones.

1. *The elderly population is mobile*
Movements occur temporarily and permanently to an extent that the location and number of elderly patients change considerably over periods of months rather than years. In the project described 17 out of 194 people 'moved' while the study was being prepared: 10 out of the 59 for whom recommendations had been agreed 'moved' during the 9 months the study lasted.

2. *The elderly have minds of their own*
Although only one person out of 194 refused to be assessed, 24 out of 59 refused recommendations which were judged appropriate by both the therapist and their own general practitioner.

3. *The elderly are subject to rapid changes in health status and functional ability*
Although in the study the practitioners were shown to be aware of potential risk factors in social and functional terms for all except six patients out of 176 (and in a previous study had been shown equally aware of their patients' clinical status), this knowledge did not of itself prevent falls, transient ischaemic attacks, cardiovascular accidents, or accidents with stoves and fires. This led the partners to question the usefulness of an at risk register as an aid to anticipatory care of the elderly in their practice.

4. *The difficulties of organizing a rolling programme are usually underestimated*
We have in the past failed through complex organization, multiple stages, and the involvement of too many people.

5. *It is essential to identify clearly the aims of the exercise and to structure the questionnaires/interviews solely to these aims*
A mistake we have made several times is to include items relating to a research programme in a survey assessing need for service action. In order to succeed as a rolling programme assessment must be as simple and rapid as possible and be consistent with the aims. In a 'service' context research material is superfluous. It lengthens the procedure and muddles the participants.

6. *Subject matter which is normally held in a clinical record/summary should not be duplicated*
The assessments we used originally contained diagnoses, significant procedures, regular medication. This information is normally available in each person's manual record. Confining the assessment to facts not normally held on the manual record (*viz* functional status, living conditions, financial considerations and allowances) speeded up the procedure without loss of information.

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FRONT

ELDERLY ALERT

D.O.B.

Name ....

Computer number .....

On regular medication?

Drug name	Dose	Date started

Lives with .....

BACK

Major life events

Professional responsibility

	Telephone
Nurse	.....
.....	.....
H.V.	.....
.....	.....
Social Worker	.....
.....	.....
Therapist	.....
.....	.....
GP	.....
Solicitor (Will)	.....

RVHJ/HH Feb86

MIDDLE

OK = by self or with available help
Help = more help needed and acceptable

	1987			1988			1989			1990			1991		
	OK	Help	For action (by)	OK	Help	For action (by)	OK	Help	For action (by)	OK	Help	For action (by)	OK	Help	For action (by)
Dressing															
Feeding															
Hygiene															
Hearing															
Sight															
Memory															
Company															
Cleaning															
"Shopping"															
Housing															
Finance															
Carer needs help?															

ACTIONS TAKEN	ACTIONS TAKEN	ACTIONS TAKEN	ACTIONS TAKEN	ACTIONS TAKEN
Date By whom What Date By whom What Date By whom What				

Figure 1. Card to record the functional state of the elderly.

Use of a postal questionnaire in screening for common problems

Penny Killingback SRN, RMN, HV
Health Visitor, Harwich Project

Colin Sanderson PhD
Senior Lecturer, Department of Community Health,
London School of Hygiene and Tropical Medicine

IN 1983 the District Medical Officer in the North East Essex Health District proposed the development of an assessment and information system for elderly patients. The Dovercourt Health Centre in Harwich was chosen because it serves almost the entire population (about 22 000) of a well defined geographical area. The proportion of elderly people (17 per cent are aged 65 or more) is slightly above the national average of 15 per cent. Apart from its 11 general practitioners, the health centre is already the source of a wide range of services, including health visiting, district nursing, chiropody, and a local authority dental department. Moreover, health centre staff expressed an interest in the project and agreed to share with the health authority the capital and running costs of the microcomputer which was at the heart of the system design.

In previous surveys of the elderly in the community (Williamson et al., 1964; Freedman et al., 1978; Vetter et al., 1984) much of the avoidable disability that was found was associated with problems with eyes, ears, teeth and feet, and it was decided to concentrate on these areas. It was also decided that the assessment would not, initially at any rate, be directed towards pre-defined risk groups but that the whole of the population in the chosen age group would be eligible.

Aims

The study was designed to throw light on the following questions:

Research questions

1. How valid is the postal questionnaire as a screening instrument?
2. How valid is the use of an interview/examination in detecting those who can be helped?
3. What benefits can be expected from such an assessment programme for different age groups?
4. Can the job be done by using a combination of health visitor and health visitor assistant, rather than health visitor only?

Planning questions

1. What is the prevalence of eye/ear/teeth/feet problems, remediable or otherwise, in Harwich?
2. What changes should there be in the balance of services provided?

Method

A microcomputer with two input terminals and two printers was installed in the health centre, and over a 6-month period all the patients in the practice were registered. The project team (one heath visitor and one health visitor assistant, full-time for 18 months) used the register as a sampling frame and also used the computer as a means of storing information on the elderly. Meanwhile, the doctors used the system for administration, medication and recall.

A screening letter, questionnaire, examination schedule, and set of criteria for referral were developed in collaboration with local consultant geriatricians, ophthalmologist, general practitioners, heads of the district dental and chiropody services, and the district hearing therapist. These were piloted to make sure that they were readable, understandable and usable. Answers were precoded, mostly to 'yes' or 'no'.

The study population was defined as all those aged between 70 and 80 (n=1683). Each week the computer produced a list of about 75 people who lived in a particular set of streets or area, based on their registered address. To allow the project to be evaluated, each list was divided into an intervention group and a control group: in 'odd' weeks (1, 3, 5 . . .) the people in the top half of the list were defined as the intervention group and the rest as controls; in 'even' weeks (2, 4, 6 . . .) the people in the bottom half of the list were the intervention group. Each week the computer produced letters addressed to each person in the intervention group.

Intervention group

For the intervention group, the procedure was as follows:

1. A letter was sent to each patient:
   (a) asking them about problems with their eyes, ears, teeth and feet, and whether these problems had affected their way of life.
   (b) asking them about whether they lived alone, had any help about the house, or were confined to their home or room through ill health.
   (c) suggesting a time when a member of the project team could visit them for a 'check-up', and giving them the choice of accepting the time offered, asking for an alternative time, or of saying that they did not wish to be visited.
2. A visit was made to those accepting, which involved:
   (a) administering a questionnaire covering problems with eyes, ears, teeth and feet
   (b) an examination involving use of reduced Snellen cards, a free-field spoken word test, an auroscopic ear inspection, an inspection of mouth and dentures, and an inspection of lower legs, feet and footwear
   (c) specific items of health education
   (d) where appropriate, advice to go to the family doctor, optician, dentist, hearing therapist, hearing aid technician or chiropodist; or providers of care notified directly by the assessors. Health problems that were not covered by the questionnaire/examination but which were obvious to the assessors might also be referred.
3. Nine months later, a follow-up letter was sent asking similar questions to those in the original letter about disabilities, but also asking about the use of health services.
4. A review of case notes and referral letters, giving recorded use of health care and referrals by the general practitioners during the 9-month period following the assessment visit.

Control group

For the control group, the procedure involved only the follow-up letter and the review of case notes (sections 3. and 4. above). Thus although patients were admitted to the control group at the same time as to the intervention group, and a record was kept of their referrals and attendances from that date, they were not directly approached by the study until the follow-up stage.

The health visitor and health visitor assistant did the same tasks, sharing the assessments and clerical work between them. The health visitor had overall responsibility for work schedules and data quality.

Interim results

Table 1 shows the allocation of the study population to the control and intervention groups, and Table 2 the replies received from the intervention group to when the letter was sent.

Table 1. Allocation of study population to control and intervention groups.

Study population	
In pilot study	24
Died/left before mailing	26
Allocated to control group	824
Allocated to intervention group	809
Total	1683

Table 2. Replies from intervention group to whom letter sent.

Intervention group	
Not eligible	35
No reply	70
Accepted visit	544
Refused visit	160
Total	809

The response rate for the initial letter from eligible members of the intervention group was 91 per cent. The rate of acceptance of the check-up was 70 per cent of those sent letters and eligible, and 77 per cent of those replying.

Table 3 shows that the most common source of problems, as perceived by the patients, were the feet. Eyes were almost as commonly mentioned, but the problems here were less likely to have been affecting daily activity. (Of the 704 eligible to reply, 61 did not answer any screening questions.)

Each visit lasted between half an hour and three quarters of an hour. The analysis of data from the visits, and of notifications and 'advice to see . . .' following the visits is as yet incomplete, but a few early results are given in Table 4. The majority of the cases where the patient was advised to see the general practitioner because of ear problems, and nearly all the general practitioner notifications for ear problems, were accounted for by wax in the ears. Worn dentures accounted for most of the cases where patients were advised to see the dentist.

Table 3. Screening questions.

Problem with?	*No problem*	*Yes, but little effect*[1]	*Yes, and effect*[2]	*No response*
Eyes	404	175	51	13
Ears	430	167	34	12
Teeth	504	82	37	20
Feet	388	135	112	8

[1]e.g. "Yes, but it makes little difference to my life".
[2]e.g. "Yes, and it stops me doing things I used to do" (e.g. going out, reading, watching television).

Table 4. Referral (selected items).

	Number interviewed (n=544)
Advised to see	
General practitioner (hearing)	193
Optician	91
Dentist	194
Notified	
General practitioner (hearing)	22
NHS hearing therapist	15
Chiropody	76
Advice about self-care	
Eardrops for wax	75

How valid was the question on ear problems in the screening letter as an indicator of probable suitability for referral or notification? Table 5 shows that for more than a quarter of those who considered themselves to have no problem with their ears, the assessors thought that they should see a doctor or hearing therapist. For those that *did* consider that they had a problem that affected their lives, this proportion rose to three quarters, but if those considering that they had no problem had not been examined, more than half the 'suitable-for-referral' cases would have been missed.

Discussion

Apart from the research and planning questions raised in the introduction, a number of points are worth discussing. One view is that 70–80 is the wrong age group. In older patients the 'yield' of cases with problems may be higher; in younger patients the proportion of problems that could be remedied may be lower. A balance must be struck, and it is hoped by examining the 70–74s and 75–80s separately, some light may be thrown on this.

Some believe that this work is unsuitable for health visitors, since they must work to a 'script' and may not be involved in following up what they find; moreover many health visitors consider that their work lies with mothers and babies, not the elderly. Against this, work of this kind does involve prevention and visits to people in their homes.

Although in this particular project a health visitor and health visitor assistant devoted themselves full time to the task of assessment, this need not be the case. The number of patients reaching the age of 70 during the year April 1984 to April 1985 was 203. If the 70–80s are screened every 5 years (at, say, 70, 75, and 80) and if the acceptance-of-visit rate of 67 per cent found in this study persists, this suggests that about 350 visits per year (say, 7–8 per week) would be necessary to maintain the screening system, once it was working steadily. At the current staffing levels of the Harwich Health Centre, this would be about two assessment visits per week per health visitor or assistant, which cannot be said to represent a massive shift in emphasis.

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Table 5. 'Screening' response and action taken in respect of ears.

	No problem	*Yes, but little effect*[1]	*Yes, and effect*[2]	*No response*
Total returns	426	167	34	16
Advised: see general practitioner	100	64	15	2
General practitioner notified	9	10	3	–
Hearing therapist notified	1	8	7	–

[1]e.g. "Yes, but it makes little difference to my life".
[2]e.g. "Yes, and it stops me doing things I used to do" (e.g. going out, reading, watching television).

The nursing care team: a task force approach

E Macleod RGN, NPN, HVCert
Health Visitor

P Mein RGN, SCM, HVCert
Health Visitor
Newcastle upon Tyne Community Nursing

THE care team consists of a group of community nurses whose remit is to assess the over 75-year-old population of Newcastle, within general practices and with the co-operation of the primary care teams. The team recommends a health care programme for each individual screened and this programme is then continued by the practice-attached district nurse and health visitor.

The idea of employing a group of nurses to look at the needs of the elderly was in response to the rising number of over-75s in Newcastle and in order to provide a structural pattern of visiting. Between 1961 and 1981 the pre-school population (0–4) decreased dramatically from 28 000 to 15 000. Over the same period the city's 75+ population rose from 13 000 to 17 000. These demographic shifts facilitated the reallocation of resources. Three team leaders were appointed in August 1984, and by December they were joined by seven staff nurses.

Selection of assessment area

Assessments began in an area of the city which had a high proportion of elderly, and where general practitioners and community nurses expressed an interest in the programme.

Ten practices have been assessed to date, contributing different resources to the assessment programme. For example, where no age/sex register has been available, the family practitioner committee has agreed to the care team compiling lists of names and addresses. Assessment location is also negotiable, depending on the preference of the primary care teams. In some practices assessments have taken place both in the surgery and patients' homes, in others all assessments take place in the home.

Originally all team members worked together within one practice. However, in order to increase efficiency, the team has now split into three subgroups, each with a team leader, and each assessing one practice at a time. It is hoped that by using this method, closer links with the primary care team will be made and district nurses and health visitors will become more involved at an earlier stage. The assessment programme will then proceed to other interested primary care teams and eventually operate city wide.

Setting up the programme

When an interested practice is selected for the assessment programme nurse managers meet the primary care team to discuss the type of work undertaken and the way in which the assessments are to be carried out (Figure 1).

It is very important to have the full co-operation and early involvement of the district nurses and health visitors, because once initial assessment of the practice population is complete, they are responsible for continuing the programme.

Before assessments begin, a further meeting is arranged between nurse managers, care team members, general practitioners, health visitors, district nurses, practice managers and receptionists. At this meeting baselines are established for blood pressure, haemoglobin and urinalysis. The letter to be sent to patients is also discussed as is the source of patients' names and addresses, namely from an age/sex register or from the family practitioner committee. Arrangements are also made for access to practice information and use of the surgery for assessment sessions.

Once the list of patients over 75 has been compiled they are checked by the primary care team for accuracy, and to identify those patients who are dead, housebound or have moved away. A letter is then sent inviting the patient to attend a clinic session or, where applicable, saying that a nurse will call to see them at home.

Assessment

Whenever possible the patients' notes are read prior to assessment (Figure 2) to give some background to the medical problems and identify any drugs they should be taking. Assessment takes approximately 45 minutes, using a pre-coded assessment form, currently of A4 size. The questions give a functional rather than a medical assessment of each patient.

An attempt was made to establish at risk criteria following earlier work by Taylor and Ford (1983). However, this was not very successful as those whom staff identified as at risk were often receiving services and coping adequately. By incorporating questions about

services within the present form, it is hoped that this problem will be overcome. Further analysis should enable the team to identify relevant risk clusters and patterns of support.

Blood pressure, urinalysis and a finger prick test for haemoglobin are recorded during the assessment session. Baselines vary between practices; for example, in the case of blood pressure the diastolic level at which the general practitioner recommends referral has varied between 100 and 120. Any medical problems encountered are referred to general practitioners. Immediate needs which require short-term nursing action are dealt with by the care team. Any problems that require further care are referred to the primary care team.

At the end of the assessment the A4 card is completed, the summary card is filed in the patient's notes, and an index card completed and filed by date of birth, to provide the district nurse and health visitor with their own 'age register'. At this point each patient is given a schedule for re-assessment based on discussion with the practitioners. If there are no problems, re-assessment takes place in 2-yearly intervals from the age of 78. If there are problems, early follow-up is arranged between 3 and 12 months. On completion of the assessment programme with a practice, results are compiled to establish a practice profile which is then presented at a meeting with the primary care team. Any problems are discussed, and plans for the assessment programme outlined.

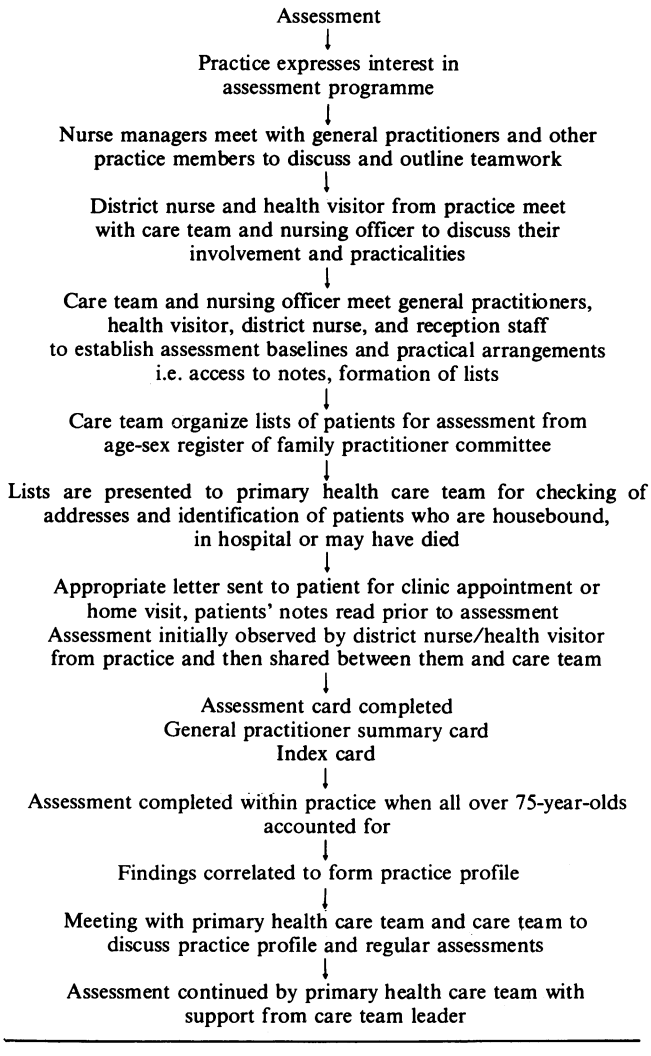

Figure 1. Care team operational plan.

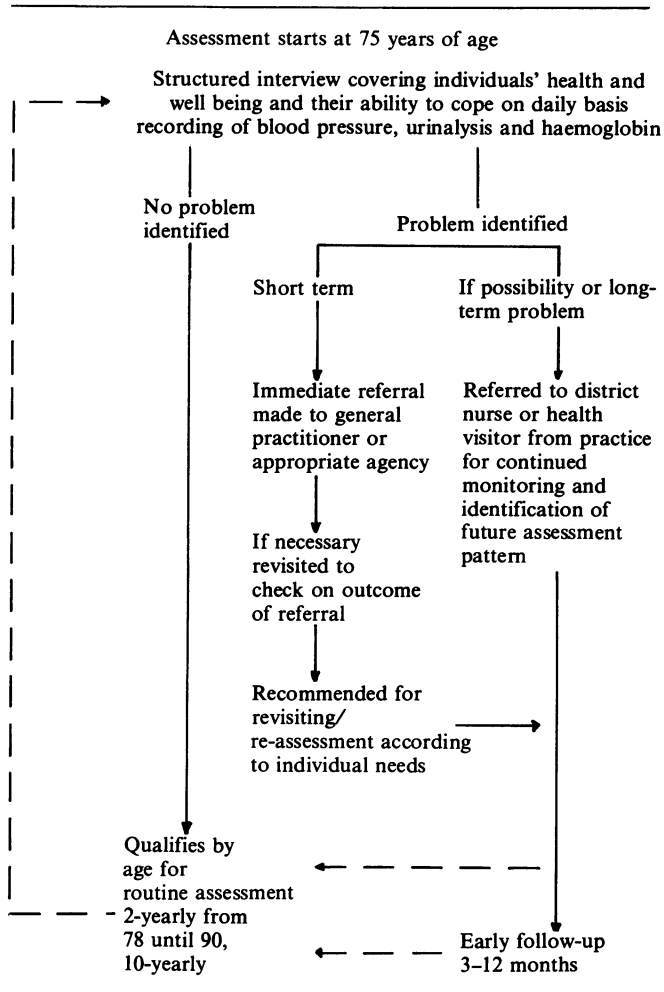

Figure 2. Assessment flow chart.

Regular assessments

Regular assessments and first-time assessment of patients reaching the age of 75 is continued by the district nurses and health visitors attached to the practice with support and advice from the care team leader. The nursing staff from the practice are involved from the outset of the assessment programme. Initially they observe interviews undertaken by the care team and then carry out assessments themselves while members of the care team are available to support them.

To date there have been some problems with maintaining regular assessments. Both staffing levels and existing workload affect the amount of district nurse and health visitor time available for assessments. This is one of the areas that requires closer evaluation.

Barber and colleagues (1980) used a postal questionnaire to identify and reduce the numbers requiring a full assessment visit. Following a small pilot study, this is currently being reviewed as a means of reducing the numbers requiring regular visits.

Evaluation

At the beginning of 1986 a research assistant was appointed to undertake the evaluation of the care team's work.

It is proposed that the evaluation will cover three main aspects of the assessment programme:

1. The acceptability of the assessment both to patients and professionals involved.
2. The effectiveness of the assessment programme in terms of medical, psychological and social outcomes.
3. The efficiency with which the assessment programme has been administered.

Multiple research techniques will be involved in the evaluation, but the details have yet to be decided.

Acknowledgements

This study is being conducted under the auspices of Newcastle Health Authority Community Nursing. Thanks are due to our colleagues from the care team and to Mrs J. Goulding, Mrs P. Pearson, Mr R. Mudie, and Mrs A. Robson for their help in the preparation of this article; also to Mrs M. M. Davidson and Mrs A. Armour for their encouragement and support.

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The Edinburgh Birthday Card Scheme

A. M. D. Porter BA, MPhil
Lecturer, University of Edinburgh

THE primary aim of the scheme is to establish the feasibility of introducing into everyday general practice and health visiting a system designed to identify the elderly at risk. It is also designed to monitor the response of the elderly to the screening letter, the needs identified and the resources used to meet those needs. It was hoped that it would be possible to monitor the effect of the scheme on the workload of general practitioners, health visitors, district nurses and social services. However, this was formally abandoned after a few months as the health visitors found the method of data collection to be unreliable and too time consuming.

The scheme was introduced into three group practices in Edinburgh in April 1985. These practices were self-selecting: the health visitors were interested, there was a practice age/sex register, and the doctors did not object.

Method

A key feature of the screening scheme was the decision to base the system on people's birthdays, and this led to the idea of sending a birthday card with the screening letter. It was hoped that the card would signify interest in the elderly person, that it would encourage people to return the screening letter, and that it would act as a reminder for elderly people that they were welcome to contact the health visitor at any time in the future.

The screening letter was a shortened and modified version of the screening letter used by Barber and colleagues (1980). Four of the original questions were omitted following advice that their inclusion did not lead to identification of people at risk, and three were re-worded to make them less ambiguous. The questions asked were:

- Do you need regular help with housework or shopping? Yes No
- Are you unable to leave your house for any reason? Yes No
- Are there any health problems you have not yet discussed with your doctor? Yes No
- Do you have any difficulty with your hearing that someone is not already helping you with? Yes No
- Do you have someone you can ask to help you if necessary? Yes No

Each month, the health visitor assistant checks through the practice age/sex register and picks out anyone having their 65th, 70th, 80th and 85th and over birthdays. The medical and health visitors' notes are checked and relevant information extracted onto the health visitor's screening record. A list of all potential patients for screening is given to the general practitioners for comment and approval. A few days before the patients' birthday, the health visitor signs the birthday card and sends it together with the screening letter and a stamped addressed envelope. Three weeks after sending the card, the health visitor checks that the letter has been returned. After discussion with a general practitioner, the health visitor visits everyone who does not return the screening letter and everyone whose reply indicates one or more items of need. If the old person is willing, the health visitor carries out a full assessment, using a modified version of Buckley and Runciman's (1985) assessment schedule. Referral to the general practitioner or to other agencies is made as appropriate and regular follow-up may be arranged with the health visitor or health visitor assistant. Note is made of needs for non-existent or for seriously restricted services. The needs of any carers are also noted. Information is routinely entered on the health visitor's records, and each month a summary of the information is entered on to a short audit record.

Meetings are held every 2 months or so with the health visitors, nursing officers, and representatives of other services to discuss progress and to agree any changes to the forms or to the organization of the scheme.

Interim assessment

Table 1 gives details of the response to the scheme in two of the three practices during the first 6 months of operation (April–September 1985). Of 235 people having birthdays at 65 or over, 158 were sent a birthday card and screening letter. Most of those not written to had either died or left the practice.

Of the 158 cards and letters sent out, 133 (84 per cent) were returned. Of these, 38 (29 per cent) indicated that they were in some kind of need. Twenty-two people did not reply. After discussion with patients' general practitioners, 39 assessments were carried out. A few people refused to be assessed.

Thirty-eight referrals were made, mainly to the patient's general practitioner, with the occupational therapist and chiropodist coming close behind. The Department of Health and Social Security, local housing department, optician, physiotherapist, local Aids Centre and transport for the disabled were also used.

Table 1. Results of first 6 months' experience in two practices.

	Practice A	*Practice B*	*Total*
Patients identified	86	149	258
Dead/off list	13	16	29
General practitioner said "No"	9	12	21
In long-stay care	5	8	13
Already being visited	2	11	13
Letters sent out	56	102	158
Letters returned	47	86	133
	(84%, n=56)	(84%, n=102)	
Well	29	66	95
Not well	18 } 27	20 } 33	38
Did not reply	9 }	13 }	22
	(48%, n=56)	(32%, n=102)	
Returned by Post Office	0	3	3
Assessments made	18	21	39
Referrals made	17	21	38
To be revisited	12	15	27

After almost a year of operation, all the health visitors involved, their nursing officers and the general practitioners were agreed that the scheme had been satisfactorily incorporated into their everyday work without needing extra staff or disrupting routine practice work. However, it must be acknowledged that one practice experienced severe difficulties after one of their health visitors left and was not replaced (hence their lack of monitoring data for Table 1).

Discussion

One of the most exciting aspects of the scheme has been the continuing and growing enthusiasm of the participating health visitors, who now feel that they are slowly but systematically getting to grips with 'the terrible unknown'. One of the great fears that probably stops many health visitors from tackling the needs of the elderly is that they will be swamped by a tidal wave. This has not been the experience of these three practices, and there is now talk of reducing the 5-year gap between birthday cards to 2 years. Enthusiasm for the scheme is also evident from the interest now being expressed by health visitors in other practices, and two more centres (with 12 000 and 16 000 patients) joined the scheme in January 1986. Their initial reaction has also been enthusiastic.

The response of the elderly themselves has been equally enthusiastic. The birthday card has been very popular, and many have added comments to the letters they return. For example:

> Thank you for the lovely birthday card. It was the only one I got. (*Woman aged 80*)

> I think this idea is excellent. I am happy to say that at this moment I do not require these fine services. I discussed it with my MP . . .

> Thank you for the lovely birthday card and thank you for your concern for my health. If I should need your help at any time I will contact you. (*Woman aged 65*)

Given that the scheme has not unleashed a vast amount of unmet need, the question must be asked: Is it worthwhile?

At this stage it is impossible to answer this question. Our feeling is that the material costs (approximately 50p per card and screening letter sent) and the costs in health visitors' time , are probably more than offset by the health visitors' feelings of reassurance. They feel that they now have a system for coping with unknown need and are reducing the number of unnecessary visits to the elderly. For their part, the elderly are having unmet needs tackled and know that they can contact the health visitor whenever they wish in the future. Certainly, a number of elderly have contacted the health visitors several months after receiving the birthday card.

Sensitivity and specificity

One other important question remains. Is the shortened/modified version of Barber's letter sensitive and specific? At present we do not know, though we do have plans to investigate this question in the near future. In the two practices in Edinburgh, the health visitors have had to visit between 30 per cent to 50 per cent of the elderly who were sent a letter. In Glasgow, the proportion was nearer 80 per cent. In the two Glasgow studies the response rate to the screening letter was 80 per cent. In Edinburgh, the response rate was 84 per cent. So the explanation for the difference must lie either in the health and well being of the two populations or in the sensitivity of the modified screening letter.

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Running a primary care geriatric clinic with the help of volunteers

A. J. Tulloch MD, FRCGP
General Practitioner, Bicester, Oxfordshire

THE system of care I employ in Bicester is based on the use of volunteers to collect health-related data on patients in a systematic fashion, while keeping extra work for the primary care team to a minimum. In this way priorities can be established and the best use made of resources.

The objectives of care are to ensure that these patients are able to live independently in their own homes for as long as possible so that they can pursue their interests and lead the best life possible in old age.

How the scheme works

The first step was to design forms to systematize the collection of information and scale the problems involved. Three recording charts are used. The first, originally designed and validated by Professor F. I. Caird at the University of Glasgow, consists of a series of ratings of the patients' socio-economic circumstances. The topics covered are: day-to-day support, illness support, accommodation, social contact, economic circumstances, recent bereavements, loneliness, accident risk and need for various services. For each topic, problem ratings are clearly indicated by a threshold line, e.g:

Social contact
Relatives, friends or neighbours seen:
1. daily
2. two or three times a week
3. weekly

.....
4. sporadically
5. rarely/never.

The use of the problem threshold line facilitates a quick scan of the chart and easy identification of problems.

The second chart consists of a simple health questionnaire to identify changes of function in the previous 12 months and those diseases specially likely to cause problems in old age. Functional changes are assessed by the question format: compared with 1/2 years ago is your ——— poorer/changed? This is asked in respect of sight, hearing, tiredness, weight, breathlessness, micturation, mobility, memory and concentration. Patients are also asked if they have any of 14 specified health problems.

The third chart was designed to bring together social, functional and health problems, but in addition to summarizing problems in all three areas it has four additional sections. The first consists of a simple measure of adaptation to whatever problems exist, a rating of good, fair or poor. The second records the names, addresses and telephone numbers of relatives and other supporters. The third consists of a simple risk index, running from 1 (minimal risk) to 6 (wholly dependent). The final section consists of a checklist for action and referral to other agencies.

In all, the design and implementation of these forms took more than 18 months to complete and occupied 180–200 hours.

The volunteers
Next, volunteers were employed to take patients lacking transport to the health centre. Four drivers volunteered but I have needed their services for only one patient in five.

The second type of volunteer was clearly going to have a key role in the programme and thus careful selection was vital — an intelligent type of person was required who had a sympathetic understanding of the problems of old age and the time and commitment for such work. An appreciation of the importance of confidentiality was also vital since patients sometimes discuss highly personal problems and sensitive issues. Some training in interview technique and the use of the charts described above was felt desirable and the need for care on sensitive issues such as financial circumstances was emphasized. The objectives of treatment were clearly defined and their achievement by problem identification described, account being taken of patient adaptation. The importance of establishing a caring relationship was emphasized so that the volunteer visitor could review the old person's day-to-day life and remaining ambitions. Only then could the person's needs be defined and managed to enable him to lead the best life possible. The role of the volunteer is thus vital in setting the tone of the programme as committed and sympathetic to the interests of old people.

The intention had been to recruit two women and a man — recently retired if possible — but a patient hearing of the scheme volunteered to do it alone, initially at any rate. Despite reservations about the use of a sole volunteer I accepted his offer with the intention of recruiting others later. However, he worked so conscientiously that after 8 months he had seen many more patients than I was able to follow up, but at this point he developed an illness which proved serious and he had to give up the work. It seemed insensitive to recruit anyone else during his terminal illness and the visiting programme was suspended for 18 months.

Some lessons learned from this first phase led to a replanning of the programme especially as the geriatric clinic (as it was then called) had functioned less smoothly than anticipated. Two patients only had expressed reservations and even they co-operated when the programme was explained to them. No problems with confidentiality were encountered and almost all the patients were enthusiastic about the work.

Two letters

In both phases of the programme a register of the elderly was compiled with the help of the practice's age/sex register. In the first phase we focused on patients aged 70 years or more together with known high-risk patients aged 65–74 years but this population was rather too great to be easily manageable. Since the clinic has restarted, we have concentrated on patients aged 75 years or older. Each is sent a letter explaining our plans and incorporating a health questionnaire (chart 2) which the patient is invited to complete and return to the doctor. It also informs the patient that a volunteer visitor will call to discuss certain health-related problems and is prepared to help with the health questionnaire *if the patient so wishes.* The patient is also advised to ask the visitor to produce an identification card — an authorization signed by the doctor and carrying a picture of the visitor, rather like a passport. Patients are of course given the option to refuse the visit but only one has ever done so — they are almost invariably flattered to find themselves the object of special attention. Patients are also advised that an appointment for the 'seniors clinic' (as it is now called) will be sent to them in approximately 2 weeks, and that transport will be provided if necessary.

A second letter is sent giving the date and time of an appointment. Patients are asked to bring their repeat prescription cards (if they possess them), any tablets or medicine they are currently taking and, in a separate bag, any other tablets, capsules or medicine from their drug cupboard which they are no longer taking.

The clinic

On arrival at the clinic patients are seen first by the nurse who assesses sight (Snellen test) and hearing (audiometer). Having consulted the entries on the health questionnaire and check list she then reviews the following:

1. Physical and mental status, checking particularly: general appearance, clothing, teeth, gait, mobility, motor function, presence of tremor, mentation, emotional disturbance, breathlessness and ankle swelling
2. Joint disorders
3. Conditions of the feet especially corns, sores or swelling
4. Blood pressure
5. Urine for protein or sugar
6. Weight
7. Mucosae.

She also records any other findings which she feels relevant.

The doctor then sees the patient and reviews the questionnaires and the nurse's report before doing any physical examination necessary — lack of time makes complete physical examination uncommon. Appropriate investigations are then ordered. The treatment is next reviewed to ensure that it remains appropriate, is not producing side effects and is being taken as advised. Out-of-date medication is discarded. Then the patient's adaptation to his or her problems is assessed and the need for disability aids, entitlements and other services (such as meals on wheels) or referral to other agencies (such as day centres) is considered. Finally, the patient is given a risk rating and the time of next review estimated.

Discussion

This programme attempts to meet the requirements in assessment of the elderly laid down by Buckley (1983). The use of volunteers for primary information gathering is, I believe, an innovation, certainly in the systematized form described, although the place of volunteers in geriatric care is already well established (Allibone, 1979; Green, 1984). Each initial interview takes on average 45 minutes although this may be reduced as the visitors become more experienced. At the seniors clinic doctor and nurse each devote 15–20 minutes to every patient and currently see three to four per week. We hope that at follow-up visits where we shall be more familiar with the patients' problems this joint review will take only 20–25 minutes. I also spend 15 minutes per week planning and organizing for the next clinic. Against this there is some reduction in home visiting — 15 to 30 minutes per week I estimate — and thus I do not spend more than an hour per week on assessment of these old patients.

The value of a programme of this sort has been questioned as there is little evidence that it leads to improvement in the health of the elderly. Freer (1985) has expressed these misgivings and recommended opportunistic case finding but I wonder how many family doctors have the time for full assessment of the elderly in the course of routine clinical care. Other doctors query whether this is the best use of a doctor's time believing that he should focus on disease management. Some too question the role of volunteers because of the increased risk of a breach of confidentiality as well as doubts about their commitment compared with professional workers.

These doubts cannot be lightly dismissed but I have encountered no such problems with my volunteer workers. Previous research work in the practice produced no evidence that this programme improved health status (Tulloch and Moore, 1979), which is scarcely surprising as there is no evidence to suggest that medical care improves health appreciably in the very old. This programme addresses the real pathology of old age: pain, disablement, loneliness, isolation, frustration, boredom, lack of purpose, loss of identity and value to society.

Acknowledgement

This paper was first published as part of a chapter entitled "Preventive care of the elderly in the community" in *The Medical Annual 1986* (p. 43–56). It is reproduced here by kind permission of the publisher, John Wright of Bristol.

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Detecting hidden needs in the elderly: screening or case finding

Dr Charles B. Freer MRCGP
Senior Lecturer, Department of Primary Medical Care, University of Southampton

Introduction

"PREVENTION is better than cure" has an enduring vote-catching appeal and since the public health campaign over tuberculosis over 30 years ago screening has been used widely to detect hidden disease in apparently healthy populations. Unfortunately, apart from a few important exceptions such as cervical cancer and hypertension, there is no convincing evidence for the effectiveness of screening (Knox, 1974; South East London Screening Study Group, 1977). This is particularly true of geriatric screening and with the growth of the elderly population and the consequent interest in their health, methods of screening become of more than academic interest.

Geriatric screening

Modern interest in geriatric screening dates from the Rutherglen experiment initiated in 1952 by Anderson and Cowan (1955). Since then, with a few exceptions (Evans et al., 1970; Irwin, 1971), studies have shown a high prevalence of unreported physical, social and psychological problems in screened elderly populations (Williamson et al., 1964; Townsend and Wedderburn, 1965; Thomas, 1968; Hodes, 1971; Williams et al., 1972; Svanborg et al., 1982). This early descriptive work led to studies of interventions arising from problems that had been detected and several reported a reduction in prevalence (Lowther et al., 1970; Pike, 1976; Barber and Wallis, 1978). Despite this, no clear health or economic benefits from geriatric screening have been demonstrated. This apparent failure justifies closer analysis.

First, however, it may be helpful to review the theoretical basis for secondary prevention in this age group and to clarify the meaning of some of the terms in common use.

Hidden needs of the elderly

There are two types of hidden needs. The first are those hidden from the patient, that is asymptomatic disease. These form the basis for many preventive activities, such as screening for hypertension or cervical carcinoma *in situ*. There is, however, another important group of needs which are hidden from the doctor but not from the patient. These are symptomatic but are either unreported or undetected. The elderly person may not think the problem legitimate or remediable, or may think it is only to be expected with old age. Problems may remain hidden because of communication difficulties due to factors such as hearing or memory loss or a confused mental state arising from acute illness.

Problems can also be undetected by the doctor because he, like the patient, attributes the symptoms to ageing (for example, hypothyroidism), or is misled by an atypical presentation (for example, painless myocardial infarction or fracture), or assumes that a new pathology can be explained by a long-standing problem (for example, carcinoma of the colon in a patient with chronic constipation). Preventive care for the elderly should be concerned with both asymptomatic and undetected health needs.

Case finding and screening

Traditional public health definitions are based on the natural history of disease with 'screening' used for diagnosis made at the asymptomatic stage and 'case finding' for identification of established but undeclared problems. In recent years these terms have also been used on the basis of how the preventive care is organized, with screening being doctor initiated and case finding meaning the detection of hidden problems during contacts initiated by patients for other reasons. This latter is sometimes described as opportunistic case finding. In many ways these differences are academic, since the early detection of both asymptomatic disease and undeclared health problems is important however they are defined, and both approaches have practical relevance. It is important, however, to be aware of the difference between them.

Problems with geriatric screening

Detailed criteria have been developed to evaluate the justification and efficacy of screening procedures (Wilson, 1966; Cohen et al., 1968). In essence these state that screening should be appealing, feasible and effective.

Despite the theoretical attraction of prevention, there is no evidence that this has led to widespread geriatric screening in Britain. Indeed one study in North West England revealed that only about 10 per cent of general practitioners attempted any form of screening for their older patients (Williams, 1983).

There are also serious doubts about the feasibility of routine geriatric screening. Barber and Wallis (1982) have estimated that to set up a full screening programme for patients aged over 75 years in a Glasgow practice of 4000 patients would require 18 hours of health visitor time per week for the first year and 11 hours per week for subsequent years. In the absence of evidence to challenge

this, or to suggest less expensive screening methods, it seems likely that regular screening of all patients in this age group is beyond the scope of existing NHS resources.

The case for geriatric screening is further weakened by the paucity of evidence for its effectiveness. Three randomized case control studies of socio-medical assessments and follow-up studies over 2 to 3 years have been published. Tulloch and Moore (1979) failed to demonstrate that geriatric screening had significant effects on the prevalence of socio-economic, functional and medical disorders affecting health although the study group increased their use of health and social services and the expected length of stay in hospital for any admission was reduced. Vetter and colleagues (1984) found no differences in physical disability, anxiety or depression but a significant reduction in mortality and an increased use of services in their urban study group (though these differences were not found in the rural study group). A recent Danish study found that geriatric screening resulted in less hospitalization but no reduction in the number of nursing home admissions, and a reduction in mortality but no difference in general practitioner contacts (Hendriksen et al., 1984).

Together these studies do not provide any solid support for additional surveillance of all older people, but to some extent the results may reflect the choice of well defined outcomes such as mortality, general practice attendance and hospital admissions to measure effectiveness. There are likely to be other less easily measured but desirable effects of screening such as patient satisfaction with check-ups and opportunities for improving communication between patients, their relatives and members of the primary health care team. These coincidental and unplanned-for outcomes are discussed in the Danish paper, and Tulloch and Moore also record their impression of improvement in patient morale and self-esteem as a result of the screening visit. Such factors are difficult to measure and cost but a health care system for the elderly should not only reflect cost-effectiveness but also the values of society and what it is prepared to pay for the well being of its older members.

Possibly there is a theoretical weakness in the expectations of geriatric screening. One of the accepted criteria for screening programmes—that there should be an asymptomatic or an early symptomatic stage—is difficult to satisfy with the elderly. Many of the problems experienced by 65 or 75 year olds are unlikely to be so clear-cut or well defined as, for example, hypertension or the early stages of cervical cancer. When health problems exist they are frequently multiple and difficult to distinguish from the ageing process, and their characteristics vary in severity, timing and sequence from person to person. It is possible that they have distinctive natural histories but there is virtually no information on this because of the dearth of cohort studies in this age group.

Having said this, one might imagine that comprehensive, universal and regular screening of the elderly would uncover significant problems and that if these were comprehensively dealt with there would probably be some improvement in the functional health status of the elderly as a whole and a reduction in their use of expensive resources such as hospital beds. However, if such an effect has not emerged after 30 years of activity in this field, it is most unlikely that geriatric screening on this scale will occur even in resource rich countries. For all of these reasons selective screening has some attractions.

Selective geriatric screening

The logistic problems of regular screening of all older patients might in part be relieved if criteria could be established to define a sub-population which would benefit most. Living alone, recent discharge from hospital, and recent bereavement are among a number of factors widely reported as conferring high risk. However, a detailed study has concluded that, given current knowledge, defining high-risk groups of the elderly cannot be done with sufficient accuracy for use in routine general practice (Taylor et al., 1983). One problem may be the validity and sensitivity of accepted risk factors; for example, though it is widely believed that living alone is a high risk factor, it may be that when people living alone begin to fail, the health or social services are involved quite quickly whereas the degree of support provided by relatives for old people living with families may mean that their level of immobility and dependency is very much greater when they do present. Indeed, contrary to established teaching and belief, living alone might in some cases be a lower risk factor than living with a supportive family.

Barber and colleagues (1980) have developed a postal questionnaire to determine which elderly patients in the community would benefit from a home visit and a more detailed assessment. Initially, only a 20 per cent reduction in workload was achieved but since then further work has suggested that this could be significantly improved upon (Taylor et al., 1983).

One must add a cautionary note. The use of risk factors and scores has undoubtedly been of great use in population studies but general practice is not synonymous with clinical epidemiology. It is clearly important for a family doctor to pay closer attention to a housebound 84-year-old widow than to a married and mobile 71-year-old; but since risk factors are based on probabilities estimated from large population studies doctors must still be prepared for the unexpected and be able to detect hidden problems in people of apparently low risk. The length of time a doctor has known a patient may also be significant.

The case for case finding

It is unlikely that any other doctors in the world have such regular contact with their elderly patients as do British general practitioners. Williams (1984) has reported that 90 per cent of those over 75 were seen at least once a year by their general practitioner or some other member of the primary health care team. A similar contact rate has been confirmed in the Aldermoor Health Centre, Southampton. This shows the potential for combining prevention with routine care rather than increasing the workload by introducing special screening clinics or visits, but like screening, while it has immediate and obvious appeal this approach also has potential problems.

It would, for instance, mean a major change in the way that most general practitioners work. While the limitations of consultation time are probably overstated, it is unreasonable to expect general practitioners to add 5 or 10 minutes to each appointment with elderly patients. To plan for this in a routine appointment system would in itself be additional workload. In addition, the elderly patient may be so anxious about his presenting problem that he may not be willing to discuss other topics at the same time. Moreover, the doctor should not appear to be attaching more importance to his own agenda than to the agenda of the patient. It is accepted that patients should not be overloaded with information during consultations and older people may have particular difficulty in dealing with several topics.

Another difficulty is that the 10 per cent or so of patients over 75 not seen in any one year might be missed. This problem of non-attenders is inherent in most screening programmes, where there is often the danger of missing high-risk patients, children with developmental delay or patients with carcinoma of the cervix. However, as far as the elderly are concerned, there is reassuring evidence that, in the main, non-attenders are fit and well (Ebrahim et al., Goldman, 1984; Williams, 1985).

Current directions

It appears that in future more attention will be paid to the development of opportunistic case finding than screening programmes; at the moment, however, this support is mainly theoretical and the immediate need is for the development of protocols to demonstrate the feasibility of case finding in everyday general practice.

Current interest in the preventive health care of the elderly has also stressed the need for a functional orientation in assessment and the active involvement of patient and relatives. However, it is all too easy to pay lip service to the functional approach. Most medical education, in contrast to, say nursing, is more likely to concentrate on the description of medical problems than assessment of their impact. For example, elderly patients visiting their doctor with arthritis are much more likely to have their level of pain and use of medication assessed than their ability to wash, move about the house freely, go shopping or attend church. In the same way many screening programmes have tended to concentrate on asymptomatic deviations from the norm or the existence of an abnormality rather than the impact these may have on the ability of the patient to function normally. Any assessment of older patients will reveal undetected abnormalities. However, discovering that someone living alone does not have a home help or has untreated corns is quite different from showing that there is resultant nutritional deficiency or difficulty with mobility. Too many studies have provided resources for identified problems and described the outcome as successful without having established that functional problems existed. Preventive strategies, whether research based or for routine clinical use, should be judged on whether they produce functional benefit or improve the quality of life in some way. To change the way in which doctors work, however, is likely to prove more difficult than many assume.

A number of functional and disability scales are available to assess older patients (Katz et al., 1963; Kane and Kane, 1981; Linn, 1982). Most are time consuming and the availability of briefer check-lists for functional status would be likely to encourage opportunistic case finding.

In recent years awareness of self-care has increased and patients have become more involved in the management of their illnesses. It is unrealistic to believe that doctors should bear all the responsibility for the detection of problems in their patients; if changes are to be achieved, patients and their carers must be better informed about health problems and the use of health and other services. As discussed above, a remediable problem can remain hidden simply because the patient thinks it not worth bringing to the doctor and doctors and other health professionals will have to work hard at diminishing this attitude (Freer, 1985) and explaining to older people and their relatives how to make the best use of health resources. The better informed the patient the greater the preventive potential of routine medical care.

Conclusion

Lack of evidence to support the widespread implementation of geriatric screening in primary care should not be allowed to diminish support and enthusiasm for the preventive and anticipatory care of older patients. Nor should preventive care be seen as something quite different from routine clinical care. The investigation and treatment of established illness continues to be a major component of a general practitioner's work but the importance of prevention in the episodic and long-term care of the elderly in general practice must not be underestimated.

At present it seems that routine consultations with the elderly should place more emphasis on functional ability while including the anticipation of possible problems. It is likely that most older people would welcome a regular, probably annual, 'check-up'. However, this does not need to be a detailed or structured assessment and doctors have to be aware of the very real iatrogenic risks of finding and treating unimportant abnormalities. In addition, detailed questioning about problems may unwittingly focus on hidden fears of the patient and so reinforce the negative side of ageing. Any medical intervention in the elderly poses the risk of medicalizing old age and it may be that what doctors do is less important than how they do it. Most elderly patients like to know that they have a good relationship with 'their doctor' and that he thinks that they are well and this argues for the development of brief, non-intrusive strategies for predicting functional problems during routine consultations.

Acknowledgements

This paper is based on two previous publications: "The contribution of the primary care doctor to the medical care of the elderly in the community", a report from the Kellogg International Scholarship Program on Health and Aging, University of Michigan and the Institute of Social Medicine, Copenhagen, 1983 and "Geriatric screening: a reappraisal of

preventive strategies in the care of the elderly" (*Journal of the Royal College of General Practitioners* **35**, 288–90). The opportunity to develop some of these ideas was made possible by the generosity of the Kellogg Foundation and the assistance of the other Kellogg scholars who were joint authors of the report: Dr Gert Almind, Denmark, Dr Muir Gray, UK, and Dr Gregg Warshaw, USA.

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Functional geriatric screening: a critical review of current developments

Rex Taylor BA, PhD and Graeme Ford MA
Research Sociologists, MRC Medical Sociology Unit, Glasgow

IT is widely believed that the elderly are reluctant to take their problems to the general practitioner, and when they do, that general practitioners are reluctant to go beyond the presenting complaint to assess overall functioning. These beliefs have acquired the status of self-evident truths and, despite some contradictory evidence (Ford and Taylor, 1983; Freer, 1985), they continue to provide the rationale for activities referred to as screening and case finding. It has been customary to distinguish between these two activities, and while the distinction as made by Freer above (p. 26) is unlikely to command universal approval, it does highlight the differences between the two different approaches to geriatric preventive care.

This paper is exclusively concerned with screening, that is with the systematic and practitioner-initiated approach to identifying those at risk. It begins with a critical appraisal of attempts to identify those at risk through pre-defined risk groups, goes on to examine four attempts to identify at-risk individuals by the use of screening instruments, and concludes by discussing the integration of screening with routine case finding.

The risk-group approach

Risk groups have been intuitively identified on the basis of two principles: structural disadvantage and the experience of threatening life events. Groups identified on the basis of some structural or inherent disadvantage include the very old (usually 80 and over), those who live alone, the socially isolated (variously defined), the childless, the single, the poor and the divorced/separated. Groups which have been defined on the basis of some threatening life event include those recently discharged from hospital, the widowed, the retired, or those having recently changed their address (Taylor et al., 1983).

It is widely assumed that the elderly falling into any of these groups are at greater risk than those who do not. However, the nature of risk has rarely been specified and risk can only be defined in relation to a specified end-point or outcome. In younger populations the outcome is invariably defined in terms of specific diseases or their precursors. In elderly populations the presence or absence of specific diseases is now considered to be less important than levels of physical, mental and social functioning. In this more holistic approach it is more difficult to arrive at consensual outcomes. Accordingly, the nature of the risk is rarely specified, and where it is, it ranges from fairly 'hard' outcomes like death and institutionalization, through various degrees of dependency to the probability that untreated problems might be found on comprehensive assessment. Formulations of the latter kind are increasingly common and they imply a two-stage procedure: the first identifying those who might benefit from comprehensive assessment, the second confirming 'caseness'. Unclear specification of the nature of risk is therefore a fundamental problem, but there are others of a more practical nature.

First, the groups vary considerably in size. The largest, comprising those who live alone, accounts for about 30 per cent of the non-institutionalized elderly population; the smallest, the divorced/separated, accounts for less than 5 per cent. Groups defined on the basis of some threatening life event are all fairly small. In the Aberdeen study (Taylor and Ford, 1983) the percentage of the non-institutionalized population experiencing various life events over the course of a year was as follows: change of address 7 per cent, discharge from hospital 6 per cent, death of a spouse 4 per cent, and retirement 3 per cent. The implications for screening are obvious. Even if half of all group members are defined as 'cases', the small size of many groups mean that they will account for only a minute proportion of all cases in the population.

Secondly, the groups vary considerably in the extent and nature of their disadvantage. Risk profiles developed in the Aberdeen study showed that it was only the very old and those recently discharged who were comprehensively disadvantaged (Taylor et al., 1983). Groups such as the single and the childless were disadvantaged only in terms of social support, the poor in terms of material resources, recent movers only in terms of their mental health, and so on. The profiles also revealed important compensation effects. In some groups disadvantage in one domain was compensated for by advantage in another. For example, while the poor were (by definition) disadvantaged in terms of material resources, they had more social support than their more affluent age peers. Similarly, while the single and childless were (again by definition) disadvantaged in terms of family support, they had more friends and confidants.

Thirdly, it will be obvious from the above that case-finding efficiency varies between groups, and that it is uniformly poor. In an assessment made on the Aberdeen data (Ford and Taylor, 1983) the proportion of cases (defined by scores in the lowest decile in six domains of functioning) accounted for by any one group never rose above 0.26. Generally, the smaller the group, the smaller the proportion of cases accounted for. Thus, despite the fact that around half of the divorced/separated were cases on most measures, they never accounted for more than 0.7 of all cases. With larger groups the ratios were

reversed. For example, only a third of those who lived alone were cases, yet they accounted for around half of all cases.

On the basis of such criticisms the authors have concluded that on present evidence the approach through pre-defined risk groups does not provide an efficient way of identifying the elderly at risk.

The individual approach

Many of the problems of the risk *group* approach are avoided when an attempt is made to identify high risk *individuals*. This is done by means of a screening instrument, such as the 9-item screening letter developed by Barber and colleagues (1980, 1981) at the Woodside Health Centre in Glasgow.

Woodside 9-item screening letter

In its present form the screening letter asks all elderly patients to answer 'yes' or 'no' to the following nine questions:

1. Do you live on your own?
2. Are you without a relative you could call on for help?
3. Do you depend on someone for help?
4. Are there many days when you are unable to have a hot meal?
5. Are you confined to your home through ill health?
6. Is there anything about your health causing you concern or difficulty?
7. Do you have difficulty with vision?
8. Do you have difficulty with hearing?
9. Have you been in hospital during the past year?

A patient answering 'yes' to any question (or failing to return the questionnaire) is defined as being at potential risk and requiring comprehensive assessment.

Barber has shown that the questionnaire is highly acceptable, 81 per cent completing and returning it without further prompting, and only 5 per cent refusing outright. The sensitivity and specificity of the nine items have also been assessed: 61 out of 64 patients with known problems and 13 out of 19 patients with no problems were correctly identified, producing an overall sensitivity of 0.95 and an overall specificity of 0.68. However, these results were obtained at the 'expense' of identifying 80 per cent of the population.

In their analysis of the performance of Barber's questions on a larger data set, Ford and Taylor (1983) have shown that this proportion can be reduced (Table 1). The left-hand column shows the cumulative proportion of the population answering 'yes' or at risk; the right-hand column shows the proportion of cases identified. The latter goes on rising at a higher rate than the former until the addition of those answering 'yes' to question 8. This point defines optimal case-finding efficiency. Thus, only four questions (numbers 6, 5, 3 and 8) succeed in identifying 0.83 of all cases at the expense of contacting/assessing only 0.37 of the population. This represents a considerable improvement on Barber's nine questions, almost halving the population to be visited with only a small reduction in efficiency.

Table 1. Cumulative gains in case finding.

Proportion of the population answering 'yes'	*Questions in order of inclusion*	*Proportion of cases identified*
.07	Worry about health (Q6)	.29
.13	Housebound (Q5)	.45
.20	Depend on help (Q3)	.60
.37	Poor hearing (Q8)	.83
.43	Recently discharged (Q9)	.88
.44	Poor vision (Q7)	.89
.48	Without relative (Q2)	.90
.61	Live alone (Q1)	.94

This testing of eight of the nine questions from the Woodside screening letter illustrates the empirical nature of the enterprise. Barber started with a list of questions based on clinical experience; this was undoubtedly a good starting point, but further progress can only be made empirically. Attempts are being made to assess amended versions of the Woodside screening letter in a number of British practices (pages 9 and 22), but most of the developmental work in functional geriatric screening is now taking place in the United States.

The Boston 10-item vulnerability index

The Boston Vulnerability Index was developed at the Hebrew Rehabilitation Centre in Boston, USA (Morris et al., 1984) and is based on a system for scoring responses to the following 10 questions:

1. Do you need help preparing meals?
2. Do you take out the garbage yourself?
3. Are you healthy enough to do the ordinary work around the house without help?
4. Are you healthy enough to walk up and down stairs without help?
5. Do you use a walker or 4-pronged cane at least some of the time?
6. Do you use a wheelchair at least some of the time?
7. Could you please tell me what year it is?
8. In the last month, how many days a week have you usually gone out of the house?
9. Are you able to dress yourself without help?
10. How much of the time does bad health, sickness or pain stop you from doing things you would like to be doing?

A person is defined as being 'functionally vulnerable' if he or she receives a score of more than 1 on questions 1–7, or a score of 1 on questions 1–7, and 1 or more on questions 8–10.

The index was tested on two sub-samples of elderly for whom full clinical assessments were available. On the first, it correctly predicted the clinical judgement in 87 per cent of cases and on the second, 85 per cent of cases. No information is available on the proportions of false positives. The authors conclude:

> "The items included in the HRCA Vulnerability Index are intuitively satisfying, representing a diversity of functionally relevant domains; (and) when scored approximately, successfully predict the overall inter-disciplinary team judgement concerning vulnerability."

While it is apparent that the index's primary purpose is to substitute for clinical judgement in decisions about resource allocation, it can also be used as a first stage screener. Used in this fashion in a sample of elderly aged 60 and over (n=2674), it identified 22 per cent as "functionally vulnerable".

The Wisconsin 8-item functional assessment screen

Development of the Wisconsin functional assessment screen, which is self-administered (Pannill and Fisk, 1985), began with a cull of the literature to identify consensual items. The resulting six items (questions 1–3, 5–7 below) were pooled to constitute a preliminary screener which was then applied retrospectively to 408 patients on whom full clinical assessments were available. Sensitivity was found to be unacceptably low and additional items (questions 4 and 8) were added. The amended questions are (with qualifying responses identified) as follows:

1. Who lives with you?
   No one
   Other
2. Is there someone who would help you if you were sick?
   No
3. Do you own your own house?
   No
4. Do you usually have enough to buy little extras or luxuries?
   No
5. What is your household income?
   under $5000
6. During the past 6 months how many days were you sick and unable to carry on normally?
   One or more
7. How much do your health problems stand in the way of you doing the things you want to do?
   Some
   A great deal
8. In the past 6 months have you had help with:
   (a) Shopping
   (b) Housework
   (c) Getting around
   (d) Bathing
   (e) Dressing
   (f) Going to bathroom
   (g) Meals

   (Yes to any of above)

The amended screener was tested prospectively by posting it to 78 patients attending the clinic over a 3-month period and for whom full comprehensive assessments were available. Fifty-eight patients (72 per cent) returned the questionnaire and their sensitivity and specificity were analysed using the comprehensive assessments as the 'gold standard'. The sensitivity of individual items ranged from .72 (social items, questions 1 and 2) to .88 (physical health, questions 6 and 7). The specificity of individual items ranged from .30 (economic items, questions 3–5) to .67 (ADL items, question 8). Overall, the 8-item screener had a sensitivity of .91 and an overall specificity of .64. The authors concluded that their questionnaire was acceptable to patients, fairly sensitive to functional abnormalities and a useful way of identifying patients who needed comprehensive functional assessment. However, they do acknowledge that it identifies an unacceptably high proportion (36 per cent) of false positives and it is likely that in a future version they will omit a number of items (e.g. questions 3, 4 and 5).

Duke University 5-item IADL screener

Development of the Duke University 5-item screener began at a WHO Expert Group on Multidimensional Assessment (Taylor and Barber, 1986) and is continuing at the Centre for the Study of Ageing and Human Development at Duke University. It is based on the much used and highly reliable OARS questionnaire (Duke, 1978) but since that takes around 45 minutes for a trained interviewer to administer, it was decided to extract a brief screener which could rapidly identify those elderly who merited a full assessment. Attention focused on those daily activities which it is necessary to be able to perform for independent living—hence *instrumental* activities of daily living (IADL). Final selection was by factor analysis, the five instrumental items with highest factor loadings being: ability to travel, shop, prepare meals, do housework and handle personal finances. The questions relating to these items are:

1. Can you get to places out of walking distance?
2. Can you go shopping?
3. Can you prepare your own meals?
4. Can you do your housework?
5. Can you handle you own money?

Since no clinical ratings were available, the validity of this 5-item screener was tested by examining the correlation between screen score and summary scores for mental and physical health. Correlations of .55 and .54 were achieved on initial testing and correlations of .51 and .48 on testing one year later. Moreover, the screener predicted death: those with a zero score on the screener having a death rate less than half of that found for the total group, those with a score of 5 on the screener having a death rate more than five times that of the group as a whole. Further development of the screener is proceeding along two lines: the addition of items to assess the presence of social and environmental problems and the testing of its cross-national viability.

Four salient issues

First, it will be obvious that measures of activities of daily living constitute a common core; indeed the Duke instrument consists entirely of these items. By comparison, it should be noted that only the Woodside screener has items dealing with specific health conditions (vision, hearing), and it is only the Boston screener which makes any attempt to assess cognitive functioning. Only two of the instruments, Woodside and Wisconsin, currently include measures of social support, although Fillenbaum (1985), who has reviewed existing assessment

tools and developed a brief screening instrument herself, notes that such an inclusion would be desirable in a future version of the Duke screener. The Wisconsin screener is the only one to include measures of income/financial sufficiency, but in a personal communication Dr F. C. Pannill has indicated that these items are likely to be removed from a subsequent version. Thus, it is for items measuring activities of daily living, mobility and the availability of social support that it is possible to detect an emerging consensus.

Secondly, it is clear that screener development is essentially an empirical activity. Individual items are selected, their validity tested and, depending on the results, revised selection is followed by further testing. The sequence is recognizable in the development of all four screeners but there are important differences. The nine items of the Woodside screener were selected on the basis of clinical judgement/*a priori* assumptions, those of the Wisconsin screener on the basis of a consensual list compiled by 20 geriatricians and those of the Duke screener on the basis of factor analysis of a large number of items from three different data sets. While there can be no doubt that clinical judgement is a good starting point, the properties of individual items can be rigorously assessed only by using some form of multivariate analysis. Different forms of validation have also been used. The Woodside and Wisconsin instruments were validated against clinical judgement, the Boston instrument against more comprehensive functional assessments, while validation of the Duke instrument has had to rely on correlations with present and future mental and physical health. Each form of validation has its strengths but if ultimate implementation is by clinicians, validation against clinical judgement is clearly advantageous.

Thirdly, it is obvious that the four instruments vary in sensitivity, specificity and in the proportions of populations screened. The Woodside and Wisconsin instruments have similar overall performances, as they both correctly identified over 90 per cent of all cases and around 60 per cent of all non-cases. However this validity was obtained only at the expense of submitting around 80 per cent of all patients for more comprehensive assessment. The Boston instrument has a similar sensitivity, correctly identifying 85 per cent of all cases, but it does so at the much reduced expense of submitting only 22 per cent of the population for more comprehensive assessment. On these figures the Boston instrument is seen to be the more efficient, but it is also apparent that there are 'trade-offs' in performance. Sensitivity can be increased to the point at which all cases are identified but invariably at the cost of including an increased proportion of false positives. Alternatively, false positives can be eliminated but invariably at the cost of reducing sensitivity.

Finally, it is clear that while all four instruments have a first-stage screening function, not all have this as their sole purpose. Indeed, the primary purpose of the Boston Vulnerability Index would seem to be as a criterion for resource allocation in the overall planning of geriatric services. The Duke instrument also lends itself to this more general planning purpose. By contrast, the Woodside and Wisconsin instruments are more practice oriented. Clearly, the performance of a screener has to be related to its primary purpose. If this is planning, lower sensitivities can be tolerated, if it is practice/clinical interests, high sensitivity is paramount. In the argot of the quantitative scientist, one needs two kinds of instrument: 'splitters' to discriminate between individuals for purposes of treatment and 'lumpers' to classify large numbers of people into a minimum number of categories for purposes of population estimates. 'Splitter' instruments need a high degree of precision in accordance with the individualistic treatment ethic, 'lumpers' require less precision because errors of classification are typically random and sufficiently infrequent to provide tolerable population estimates.

It is also necessary to relate form to purpose. If a screening instrument is to be used for resource allocation it is questionable whether the items should be aggregrated to arrive at an overall score. Most resources (aids, appliances, services) are handicap specific so that it is more important to know how subjects respond to individual items than to know their overall score. To the extent that the Boston Vulnerability Index is concerned primarily with resource allocation, responses to individual items are much more useful than overall scores. By contrast, the efficiency of the Woodside instrument, which is primarily a first-stage screener, might be improved if the items were aggregated to provide an overall score.

Discussion

Following Barber's pioneering work in Glasgow, most of the development of screening instruments is now taking place in the United States. It has become a specialized activity, involving fairly large data sets and employing relatively advanced analytic techniques. Despite this increased sophistication, a number of fundamental problems remain to be solved. Two are paramount. The first, concerning the relationship between screening and self-referral, is particularly important in Britain; the second, concerning the need to detect changes in functioning, applies equally to Britain and the USA.

In Britain any attempt to identify the elderly at risk through some form of screening instrument takes place in the context of a high level of self-referral: those aged 65–75 consult on average 4.8 times per year and those over 75, 6.5 times per year (OPCS, 1982). Of course, some old people rarely consult, but recent studies suggest that they constitute something of a health élite (Ebrahim et al., 1984; Abramson, 1987). In view of these generally high consultation rates, the use of a screening instrument can be justified only if it can be demonstrated that it reveals a substantial proportion of problem patients who are unknown to any member of the primary care team. In the plethora of information on the performance qualities, very little is available on the proportion of confirmed cases already known to practitioners. It is likely that the measures vary considerably in this aspect of performance and that it could be the most important single piece of information in assessing their practical utility. Indeed, if the measures show a generally low capacity for identifying new cases then questions must arise as to the overall usefulness of such an approach. One problem in assessing the effectiveness of such measures lies in the dual emphasis given by different exponents of screening.

One approach emphasizes the discovery and treatment

of underlying 'hidden' conditions. This tends to an atomistic viewpoint by taking problems one at a time. Within this perspective it is normal to claim that a large proportion of individuals have unidentified problems. Barber reported fairly high levels of unmet need, but it is doubtful whether these needs are either serious or open to effective intervention (Tulloch and Moore, 1979).

The other approach proceeds through a holistic assessment of the individual to arrive at a distinction between 'case' and 'non-case'. Its primary use is as a filtering device, either for entry into a system of assessment or for allocation of resources. Here the incidence of 'caseness' is generally low, closer to, or lower than the 22 per cent identified by the Boston measure. The issue of identifying new cases (or new problems) is rather different in each approach, and probably different instruments are required.

The second major problem is posed by the dynamic nature of health and functioning in later life. While comparatively little is known about this on a population basis, most practitioners are familiar with situations of fluctuating health and of rapid or slow decline. The only way in which any of the described screening instruments can detect such changes is by regular administration. However, frequency of administration is an unexplored issue; indeed, most screening instruments are described as if they were 'one-off' exercises. One exception, still at an experimental stage, is the scheme currently operating at the Stockbridge Health Centre in Edinburgh (page 5), where patients are to be reviewed at monthly meetings of the primary care team.

The Stockbridge experiment holds considerable promise, particularly if it can be combined with the Woodside type of screener. In such a comprehensive approach the first stage would involve the use of a blanket screening device to clear up unidentified problems in a hitherto unreviewed practice population. For the second stage it is doubtful whether repeated administration would be possible, both on logistic/financial grounds and in terms of patient acceptance. Accordingly, it is probably more practical to think in terms of the dynamic review and response which is being tried in Edinburgh. The further specification of such a scheme is highly desirable. There has already been a good deal of piecemeal development and attention should now be directed towards the development and evaluation of a comprehensive system. The overall aim of such a system would be integration of the kind of screening instrument described above with the case-finding opportunities which occur regularly in the day-to-day activities of the primary care team.

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Evaluation of geriatric screening: a review

Dr A. J. Tulloch MD, FRCGP
General Practitioner, Bicester, Oxfordshire

THE old axiom that prevention is better than cure has inspired many doctors to devise screening programmes which identify patients whose health is at special risk through unrecognized disease. Screening of the elderly for previously unidentified medical disorders almost invariably proved productive (Anderson and Cowan, 1955; Williamson et al., 1964; Dunn, 1971; Taylor et al., 1971; Williams et al., 1972) and only three such studies (out of 23) reported little unrecognized disease in old people (Evans et al., 1970; Irwin, 1970; Freedman et al., 1978).

However, geriatric screening has often tended to attract workers who are well intentioned, conscientious and committed but not always critical in their approach. Also studies usually reported cross-sectional once-and-for-all reviews of the health status of older people with no subsequent surveillance, patients presumably returning to conventional care. In addition, these studies rarely made any effort to look at the benefits to the patient of managing these previously unrecognized disorders. This is not to discount the value of many of these studies such as the pioneering Rutherglen experiment by Anderson and Cowan (1955) and the seminal study on unreported needs in old people by Williamson and colleagues in 1964. These have both had a profound influence on thinking in this field over the past 30 years but there is now a need to evaluate the effects of screening not only on health status but also on the functioning old people in society and their enjoyment of daily life in retirement.

Under-reporting of disease

Demand-led care is associated with the under-reporting of disease especially in patients over the age of 75. This may be due partly to the fact that older patients often suffer from several disorders simultaneously and reporting them all may prove embarrassing to the patient. Ford and Taylor (1985) examined these beliefs and drew attention to the error of equating disease with illness and unreported illness with under-consultation, which neglected the important distinction between the symptomatic and the asymptomatic. If a disease was neither painful nor disabling enough to affect day-to-day life it was unlikely to be reported to the doctor. Too often disease was being seen from the doctor's rather than the patient's point of view. They quoted Hannay (1979) as finding that the elderly were less likely to neglect their illnesses than younger adults, especially middle-aged females. They also looked at data on the elderly in Aberdeen, which showed no evidence of under-reporting of chronic disorders. They thus concluded that too much reliance was being placed on early studies of the under-reporting of illness the results of which may have been rendered obsolete by secular changes in the attitudes and behaviour of older patients. The combination of self-referral with multi-tiered screening for low-contact and high-risk groups was therefore recommended. Two recent studies, however, have suggested that low-contact elderly patients tend to be a low-risk group in whom disease detection might not be particularly fruitful (Ebrahim et al., 1984; Williams and Barley, 1985).

Taylor and colleagues (1983) have also reviewed the use of perceived risk factors as a means of identifying the more vulnerable elderly patients and have discussed their findings above (page 30). The effect of such factors on health, psychological status, activity, confidence, support and material considerations—that is, well being and enjoyment of life—was assessed and the results were as follows.

1. The patients at least additional risk were the isolated, the never married and to a lesser extent the childless.
2. Those patients whose risk was near the sample mean consisted of the recently widowed, those living alone, the poor and those in social class 5.
3. The high risk groups were the recently moved, the recently discharged, the divorced or separated and the very old.

This was a most interesting and thorough study but some of the findings conflicted with my own experience in 35 years of practice which led me to survey the results critically.

First the authors assert that lack of social support in the low risk groups did not render them more vulnerable in the other five domains. However since each of these groups had significantly more friends than usual, what they lacked was not social but family support. The interesting question then arises whether friends recognizing the lack of family support rallied round to give assistance or whether the patients themselves reacted to this problem by cultivating friendships as a compensation.

Also the definition of the 'isolated' group as those living alone and having no children or siblings living locally is suspect. To me the isolated are patients with a low level of contact with neighbours, friends and relations—in my experience a high-risk group especially when the patients are over 70 years of age.

One also wonders whether the results would have been the same with a group of patients aged over 70 or (even more so) 80 years rather than 60 years or more.

Finally, the practical significance of these findings is most uncertain as many old people have several such problems and the total effect is often more than the sum of the parts. Thus someone who is isolated (low risk) and poor (average risk) would almost certainly be a high-risk subject.

Effects of screening

The two earliest studies seeking to evaluate the benefits of geriatric screening were by Lowther and colleagues (1970) and Williams (1974). Both reviewed the effects of sociomedical assessments and came to similar conclusions. The first study, carried out by specialists 18–30 months after the initial screening, reported "real evidence of improvement in 53 per cent while 23 per cent were helped by earlier diagnosis". The comparable figures for the latter study, done in general practice 12 months after the original screening, were 50 per cent and 27 per cent. The conclusions, however, are highly subjective—Lowther asserts that 53 per cent were improved "applying strict criteria" (which are not defined) and that in 42 per cent with "even more strict criteria" (again undefined) "any improvement had definitely resulted from early diagnosis". Williams, who ends his article with a plea for controlled trials in this field, tacitly acknowledges the limited nature of his findings.

In the study by Tulloch and Moore (1979), in which 295 patients aged 70 years or more were randomized to study and control groups, the former were given a full sociomedical assessment and kept under surveillance for 2 years—the study period—while the latter were given conventional care on demand coupled with any continuing review already established. After 2 years both groups were independently assessed. At the end of the study period, 2.6 medical disorders per patient were identified, one of which was previously unrecognized on average. The systems most commonly involved were circulatory (22 per cent), musculoskeletal (18 per cent) and nervous system and sense organs (13 per cent). The conditions most infrequently identified by patient-initiated care were musculoskeletal and (to a lesser extent) in the nervous system.

Hospital outpatient referral and admission rates were not significantly increased in study group patients but they spent significantly fewer bed days in hospital and had significantly more referrals to other agencies (such as health visitors, chiropodists, social workers) than the control group.

Independent assessment at the end of the study period showed no significant difference between the prevalence of socio-economic, functional and medical problems in the two groups, although 30 per cent more control patients were dependent on others for help.

Thus, results suggested that this programme of intensive review made little impact on health status or risk rating, which is scarcely surprising as the prime object of the care of old people is the relief of pain and disability rather than the eradication of disease. In addition, changes in health status even when achieved are not always easy to define. In retrospect the benefits of this programme would have been more accurately projected if evaluation had taken greater account of the patients' well being and enjoyment of life as reflected not only by improvements in health but also in their day-to-day functioning in society and capacity to achieve their remaining ambitions. Focused sociomedical assessment was recommended to help identify and manage the fundamental pathology of old age—pain, disablement, emotional and social problems—in pursuit of these aims.

The postal questionnaire devised by Barber and colleagues (1980) has already been discussed (page 31) and forms the basis of screening programmes described above (page 35). It was effective in identifying 91 out of every 100 patients aged 70 years or more requiring sociomedical assessment and 94 out of every 100 in the lowest decile of health. Its use also reduced the workload of an assessment programme by 20 per cent.

Barber (1982) also reported a study of the effects on practice workload of introducing two part-time research health visitors (one full-time equivalent) into a practice in Glasgow for 11 months to do sociomedical screening and assessment. During this intervention period the work of the practice nurse and health visitors doubled while that of the doctor rose by 20 per cent. After the intervention period, however, the nurses' load fell somewhat, but remained well above what it had been in the pre-intervention period, while the doctor's fell to below what it had been before intervention. Sadly this additional load proved too much for the practice which ended the programme when the research health visitors were withdrawn.

Vetter and colleagues (1984) conducted a study to review the effects of using health visitors in two practices (urban and rural) to make a social and medical assessment in the course of one unsolicited visit to patients aged over 70 years or more. The urban health visitor provided significantly more services for the elderly disabled patients and significantly reduced their mortality but not their morbidity, although this may have been because the duration of the study—2 years—was too short to provide a measure of this. The quality of life was also improved somewhat but this change just failed to be statistically significant. The rural health visitor had no such effect despite referring more cases to the general practitioner—it is not clear why.

Another study of the effects of social and medical assessment in the elderly was done by Hendriksen and colleagues (1984). They undertook a 3-year randomized controlled trial in which 285 patients in a suburb of Copenhagen aged 75 years or more were given a social and medical assessment by a doctor and two nurses and visited thereafter 3-monthly for 3 years. In the study group there was a significant reduction in mortality, hospital admission (mainly of re-admissions) and bed days, the effect being particularly noticeable after 18 months. Benefits were thought to be due to regular visits by the same person, and to having one person co-ordinating medical and social support and providing advice on the telephone when required. Nearly all patients welcomed the service, which was rarely seen as intrusive. Patients were thought to be better motivated about health and more active and self-confident as a result of this system of care, which was seen as a practical way of helping elderly people who wished to remain in their own houses for as long as possible.

Another randomized controlled trial was reported by Rubenstein and colleagues (1984) in the USA on frail elderly patients. A team of physicians, nurses, social workers and a variety of health care workers assessed the medical, psychosocial and functional status of these patients in a hospital and estimated the benefits after 12 months. Study group patients had significantly lower mortality, were significantly less likely to have been discharged to a nursing home, and were significantly more likely to have improved functional status than the control group during the study period.

Conclusions

These reports suggest that conventional demand-orientated care of the elderly alone is no longer adequate. It must be supplemented by case finding, screening and some form of continuing surveillance which must not be intrusive. The bed rock of this approach must be good clinical care and the contribution of paramedical factors to health in old age must not be underestimated. The real pathology of old age is pain, disablement, social isolation, loneliness, frustration, boredom, lack of purpose, loss of identity, and the feeling that society is no longer interested in one.

Thus family doctors must be encouraged to adopt a case-finding approach in the course of routine clinical care of older people—that is, keeping an ear to the ground for *all* the factors affecting health in old age.

Screening is quintessentially a task for health visitors but the evidence is that all too often they focus their activities on the young (Strang et al., 1983). Until this attitude is changed doctors must shoulder this burden concentrating first on patients aged 75 years or more, although the contribution of trained volunteers, often younger pensioners, should not be underestimated (see pages 4 and 24–25).

Thus high-risk patients can be identified and invited to a special clinic (or visited at home if necessary) for review of medical, social, economic, functional and pychological problems affecting health and enjoyment of life (see page 25). Special attention should be paid to the need for changes in drug therapy, aids and entitlements. Consideration is given to the need for referral for other social or medical services such as nurse, home help, meals on wheels, day centre, and the burden of the carer is reviewed. Finally the opportunity should be taken to educate the patient on such topics as diet and activity. The family doctor should be in overall control co-ordinating the service and telephone advice should be readily available to older patients.

Medical students and trainee family doctors should be better trained in this type of approach to caring for the elderly.

Further research in this field is essential to evaluate pre-retirement programmes, the use of volunteers, the importance of good medical records, the need to relieve the increasing burden on carers and the development of more appropriate drug prescribing for the elderly. Most important of all is the need for a randomized controlled trial of the type of programme described above (page 25) to assess the benefits to the patient in terms of improved enjoyment of life over a period of not less than 3 years.

Difficulties must not be underestimated, however. The lack of a standardized method of data collection and outcome measurement, the excessive preoccupation of doctors with disease *per se* to the detriment of its social consequences, the failure to take account of the adaptive powers of old people and the tendency to underestimate the burden borne by carers are all likely to present problems to the conscientious research worker. Also when recommendations are made it is not always easy to know whether they have been acted on fully. Much remains to be done in this minefield of research work.

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Scope for intervention following case identification

Professor E. Idris Williams MD, FRCGP
Department of General Practice, University of Nottingham

FOR nearly a century studies have been carried out on old people in order to understand and highlight their problems. Most of the early reports concern poverty and like the pioneering work of Charles Booth (1897), the founder of the Salvation Army, were mainly concerned with social issues. Since the Second World War, however, both social and medical aspects have been investigated and a large literature now exists describing the social and physical state of old persons.

In some studies old people were examined for unreported need and the phenomenon is now well understood. Much of this work was undertaken in primary care and there are a number of well tried case-finding and screening procedures available for general practitioners. Less clearly described is what happens to those patients with identified need. Who deals with the problem: the case-finders themselves, or are the patients referred elsewhere and to what effect? How much use is made of carers and voluntary organizations? When health care workers carry out the screening do they also do the social assessment and attend to the social problems, therefore acting beyond their own field of responsibility and training? These are important issues.

Review of the literature

Most of the early screening studies revealed extensive problems amongst old people but relatively few listed the actions required to be taken for each patient. Cowan and Anderson (1952) in their study of 100 patients of over 55 years found that 22 per cent required treatment, 21 per cent physiotherapy, 20 per cent chiropody, 5 per cent welfare home admission, and 4 per cent hospital admission. Beaver (1969) found amongst 200 patients of over 60 that 31 per cent required a dentist, 18 per cent a chiropodist, and 19 per cent an optician. Of 200 patients drawn from general practice, Williamson and colleagues (1964) referred 20 per cent to outpatients, 47 per cent for chiropody, 38 per cent to health visitors, 3 per cent to district nurses, 24 per cent to social services, and 1.5 per cent for geriatric admission. Lowther and colleagues (1970) found amongst his 300 over 65-year-old patients that 36 per cent needed treatment, 29 per cent surgery follow-up, 18 per cent health visitor follow-up, and a small number (under 2 per cent) social services, outpatient referral, day hospital, chiropody and hospital admission. All these studies describe action possibilities but do not reveal what actually happened. The striking feature of these early medical surveys was the wide variation in the proportion needing the various services; for example, Goldberg (1970) found that 68 per cent were in need of chiropody, which contrasts sharply with only 2 per cent in Lowther's group. Similar wide variations are seen in studies mainly concerned with social needs. All the studies, however, have differences in design, age range and study populations and therefore it is difficult to draw general conclusions.

Williams and colleagues (1972), in a study of 297 patients aged over 75, described action taken as a result of intervention. This is shown in Table 1 and an analysis of the social services referrals in Table 2.

Table 1. Recommendations made after examination (n=297).

	Number of cases
No treatment	76
Treatment and surgery follow up	184
Immediate health visitor follow up	18
Outpatient referral	43
Geriatric referral	2
Social services	40
Chiropody	49
Physiotherapy	2
Hospital admission	0
Dentist	7
Optician	4
District nurse	3
X-ray examinations	3

Source: Williams E.I., Bennett F.M., Nixon J.V. et al. (1972) Sociomedical study of patients over 75 in general practice. *British Medical Journal* **2**, 445–8. Reproduced with permission of the Editor.

Table 2. Social services requirements (n=40).

	Number of cases
Rehousing	3
Home help	14
Luncheon club	3
Welfare home	2
Meals on wheels	11
Holiday relief	1
Blind register	3
Handicap centre	1
Day centre hospital	1
Additional heat	1

Source: Williams E.I., Bennett F.M., Nixon J.V. et al. (1972) Sociomedical study of patients over 75 in general practice. *British Medical Journal* **2**, 445–8. Reproduced with permission of the Editor.

Occasionally a patient was thought to require a service but refused to have this arranged. Follow-up by doctor could mean either a visit to the surgery or a home visit. Immediate health visitor follow-up was necessary on 18 occasions to discuss pressing family problems which were mainly of a social nature. Outpatient referrals were mainly to ear, nose and throat, ophthalmic and surgical clinics. More patients would have been referred for physiotherapy if this had been more readily available. In a follow-up study, Williams (1974) found that action had been taken and maintained in 140 cases but not in 22 cases. Of the 40 patients requiring some social services in the original study, all but three had received these. Freedman and colleagues (1978), in a large study of 605 over 65-year-old patients, provided information about the use of social services and the unmet desire for them (Table 3) and also described 17 patients (2.8 per cent) whom he referred to hospital (Table 4).

Table 3. Use of social services and the unmet desire for them.

	Percentage provided	*Percentage desired*
Chiropodist	*14.0*	*9.9*
Health visitor	*6.0*	*0.8*
Home help	*5.8*	*2.8*
District nurse	*5.3*	*0.3*
Meals on wheels	*1.7*	*1.7*
Social worker	*1.3*	*0.5*
Bath attendant	*1.2*	*0.7*
Luncheon club	*1.2*	*0.3*
Laundry	*0.3*	*0.0*

Source: Freedman G.R., Charlewood J.E. and Dodds P.A. (1978) Screening the aged in general practice. *Journal of the Royal College of General Practitioners* **28**, 421–5. Reproduced with permission of the Editor.

Table 4. Referrals to hospital.

Conditions	*Number of patients*
Carcinoma of breast	4
Varicose veins	2
Uterine carcinoma	1
Diabetes mellitus	1
Anaemia	1
Cataract	1
Choroid degeneration	1
Deafness	1
Myocardial ischaemia	1
Chronic bronchitis and TB	1
Inguinal hernia	1
Uterovaginal prolapse	1
Raised alkaline phosphatase	1

Source: Freedman G.R., Charlewood J.E. and Dodds P.A. (1978) Screening the aged in general practice *Journal of the Royal College of General Practitioners* **28**, 421–5. Reproduced with permission of the Editor.

Barber and Wallis (1978), analysing social needs of patients at a second assessment, described unmet needs at the first assessment where action was taken (Table 5).

Tulloch and Moore (1979) in a random controlled study of over 70-year-olds found that the rate of referral

Table 5. Analysis of social needs of patients at second assessment.

Need	*Unmet needs at first assessment*	*Needs where action taken*
Chiropody	21	19
Home help service	16	13
Meals on wheels	3	3
Contacts	14	10
Housing alterations	18	6
Nursing service	–	–
Supportive visiting	47	46
Other needs	22	12
Total	141	109

Source: Barber J.H. and Wallis J.B. (1978) The benefit to an elderly population of continuing geriatric assessment. *Journal of the Royal College of General Practitioners* **28**, 428–33. Reproduced with permission of the Editor.

and of admission to hospital of the study group patients were respectively 76 per cent and 55 per cent higher than in the control group. The use of physiotherapy, nursing and chiropody services was also significantly increased. Surveys of specific disabilities have occasionally been undertaken, sometimes with surprising results. For example, in a study of the prevalence of hearing impairment in the elderly living at home, when 253 patients aged over 70 were assessed for hearing impairment using strict criteria and careful measurement, 60 per cent of the study population was found to be deaf, 44 respondents accepted hospital referral and 18 to a social worker for the deaf. The proportion of deaf respondents who possessed hearing aids before the study was 22 per cent. Following the referrals the number of aids were more than doubled to 50 per cent of those who were deaf or 30 per cent of the whole sample (Herbst and Humphrey, 1981).

Discussion

Despite the dangers of drawing conclusions from a series of studies which are intrinsically non-comparable and which describe actions taken following screening in a very patchy and diffuse way, it is possible to make some general comments about what happens to patients who are screened. Possibilities for action after screening can be listed and an example is given in Table 6.

The medical actions are dependent on general practitioner, ancillary staff or hospital and the social requirements on either case study or service provision. The range and emphasis of these will depend very much on the person doing the screening. In general, a general practitioner will look for treatable illness, a social worker for social need, and a health visitor for overall care requirements. The number and type of referrals will also depend on the screener. The health visitor and social worker will refer to the general practitioner patients with medical problems, but general practitioners themselves may differ in the proportion of cases they refer to hospital or for investigation.

Apart from initiating treatment himself, the general practitioner screener is likely to pass on much of the

Table 6. Possibilities for action following geriatric screening.

General action list	
1. Nothing	7. Physiotherapy
2. Treatment and doctor follow-up	8. Hospital admission
3. Health visitor follow-up	9. Dentist
4. Outpatient referral	10. District nurse
5. Social services	11. Optician
6. Chiropody	12. X-ray examination

Social services possibilities	
1. Rehousing	8. Day centre
2. Home help	9. Additional heat
3. Luncheon club	10. Social casework
4. Welfare home	11. Laundry
5. Meals on wheels	12. Appliances
6. Holiday relief	13. Financial aid
7. Blind register	14. Mental health officer

Source: Williams E.I. (1975) A case for screening the elderly. *Update* **2**, 1275–82. Reproduced with permission of the Editor.

necessary action and follow-up to others. Referrals to hospital will encompass a wide range of specialties, mainly to outpatient clinics but sometimes for admission or domiciliary consultant visit. Within a practice there may be a system of referral to a partner who has a special interest or to the one with whom the patient is registered. Referral will also take place for nursing need and follow-up by health visitor if there is a need for health education or preventive work. The health visitor may be part of the screening process, but in any event patients with a wide range of problems will be referred to her. Many of these referrals are for social problems and will involve case study skills. In this sense health workers are involved in social matters, but unless joint screening occurs (which is rare), this is likely to be inevitable. Practice attachment of health visitors of course greatly facilitates these referrals. Other social problems may be referred directly to social services departments who will then take up further assessment and service provision. Whoever does the screening, referrals to district nurses and in these days, practice nurses, are very important. Referrals to a specific therapist, for example a physiotherapist, will depend on existing local provision. Undoubtedly screening increases the use of services and these will be used if they are available. There is also evidence to show that services are not carried out despite adequate referral. It therefore cannot be presumed that all unmet needs are satisfied after screening.

The amount of screening undertaken in the UK is not high. Williams (1983) showed in a study of general practitioners in the North West of England that only 10 per cent were undertaking geriatric screening and Woods and colleagues (1983) in Northern Ireland showed that only 14 per cent of the general practitioners they studied had carried out general geriatric screening over the previous 5 years. The different ways of screening and undertaking anticipatory care make it difficult to assess the wide range of action which can flow from preventive intervention.

Anecdotal accounts of screening initiatives in general practice point to a broad approach. The educational value, the fact that patients feel better, the introduction of a patient to a health visitor, practice staff, and how the system works are all spoken of frequently. How (1978) when undertaking screening, has taken into account his patients' involvement in society whether they go to church, belong to a club, and if they have friendly neighbours. Few studies have mentioned voluntary organizations yet it is likely that these are discussed. Undoubtedly, the carers of old people play a very important part in the follow-up of patients who have been screened and very often accompany them to the actual screening session.

Conclusion

No definitive statements can be made about what action takes place following screening of old persons, although a list of possibilities can be constructed. There is evidence, however, to suggest that:

1. Medical and social overlap occurs and that health workers do indeed become involved in social problems
2. Screening leads to referrals to other agencies but in variable amounts and proportions and this is probably dependent on the person who is doing the screening
3. The referral system is not totally reliable.

It is moreover likely that much goes on during the screening session which is not recorded and by using new audiovisual techniques it may be possible to research these further.

All this must be put in perspective. Formal screening is a minority activity in British general practice and probably elsewhere. New ideas of case finding as part of an opportunistic preventive activity during normal doctor patient contact is going to make formal assessment of the value of action taken as a result of screening more difficult to undertake.

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Health visitor involvement with the elderly

Karen A. Luker B. Nurs, PhD, SRN, HVCert, NDNCert
Lecturer, Department of Nursing, University of Manchester

THE increasing number of elderly people as a proportion of the population must appear daunting to the primary health care team and it would be quite understandable if health care professionals decided to operate a purely reactive service for elderly people who seek help for a particular problem (Barker, 1974). However, a reactive approach may result in an ineffective and inequitable service for the elderly (Williamson et al., 1964; Age Concern, 1977; Barber and Wallis, 1978).

Although about 75 per cent of elderly people consult a doctor at least once every year it is important to emphasize that the majority of the elderly are active and healthy. According to Barker (1974) consultations are not used for general assessment, review of medication or for education. Surveys of the elderly continue to show high levels of undetected morbidity, much of which is considered to be treatable. The primary health care team includes people in whom the elderly have confidence. It is clear, however, that there is a need for health care workers to develop more efficient ways of identifying old people who are at risk or in need (Taylor et al., 1983). Recognizing the needs of elderly people in itself is not enough. It is also important to find ways of identifying members of the team, informal carers or volunteer workers who can help.

Role of the nurse/health visitor

Traditionally district nurses have been involved in providing a reactive service for the elderly, whereas health visitors claim to be involved in searching out health needs and providing an anticipatory service. The emphasis in district nursing has been placed firmly on direct care and in health visiting on health promotion and eduction. This clear distinction is disappearing with district nurses proposing to become more involved in health education and the prevention of ill health. The district nurse training programme already reflects this development but it is questionable whether this new direction in training will work in the best interests of the elderly (Luker, 1986).

Community care

Current policy in community care aims to enable elderly people to remain in their own homes and so prevent or defer the need for long-term residential care. Health visitors have for many years held a brief for the so-called well elderly but they have in most cases failed to give this age group a high priority.

Recent government statistics (Central Statistical Office, 1985) show that only 13 per cent of clients visited by health visitors are 65 years or older. Despite increasing recognition that the health visiting service has not been meeting the needs of the elderly, the number of people visited has not increased significantly since 1976.

The age structure of the population is an important predictor of the type of work the health visitor undertakes but it is not the only factor involved. The attachment of health visitors to general practice, which may increase the number of referrals they receive, and local policy, which may lay down specific guidelines about the frequency of their visits to the under-5's, also influence the pattern of health visiting. However, it is contended that personal preference on the part of the health visitor is probably the most powerful variable in determining whether or not elderly people receive visits (Luker, 1979).

National statistics have their limitations and may not provide an adequate reflection of local practice. The community health statistics of 1984 for the North Western Regional Health Authority (1985) show considerable variations between districts in the numbers of elderly people visited. For example, in Central Manchester approximately 2 per cent of health visitor visits were to the elderly, which was the lowest in the region, whereas in Salford 23 per cent of visits were to the elderly, which was the highest in the region. Both of these districts are regarded as deprived inner city areas. Variations in the composition of the population may account for some of the variation. Central Manchester has approximately 9000 children under 5 years of age, whereas Salford has 15 000. Similarly, Central Manchester has approximately 17 000 people over the age of 65 years whereas Salford has 38 000 in this age group. Although Salford has a larger elderly population it also has a greater number of children under the age of 5, which one would expect to reduce visiting of the elderly, but this does not appear to be the case. However it is argued by practising health visitors that population distribution is of secondary importance to the number of health visitors per head of population. In this instance, Central Manchester has 0.31 and Salford 0.34 health visitors per 1000 head of population.

In the North Western Region, Trafford Health Authority has the highest number of health visitors: 0.40 per 1000 population or one health visitor to 2500 of the population. This is a very favourable ratio compared with the Department of Health's recommendation of one health visitor to 3000 population for health visitors attached to general practices. In Trafford approximately 13 000 children are under 5 years and 32 000 people are 65 years or over. Despite the large percentage of elderly people in Trafford only about 6 per cent of health visitor

visits are to this age group. By comparison, Salford's figure of 23 per cent is difficult to explain.

Opinions of health visitors

Few studies have been undertaken to discover the opinions of health visitors about visits to specific groups of clients. However, a small exploratory study by Luker (1978) sought the opinions of health visitors about visiting to the elderly. The policy in the study area at that time was to visit older people only on referral and most of the referrals were made by general practitioners. There appeared to be agreement that the elderly were an at-risk group who should receive some priority, but elderly people were not seen as part of their caseload in the same way as children were. When asked about the feasibility of a specialized health visiting service for the elderly, all the health visitors considered that it would be a depressing job and that it would be difficult to find health visitors willing to do it. If a system of visiting everyone over the age of 75 years on a regular basis were to be implemented, they envisaged that a considerable number of specialized health visitors would be needed, since visits to the elderly took much longer than visits to other age groups. A comment by one respondent: "You just can't get away" summed up the general view.

Dingwall (1977), in his study of health visitor training, commented that student health visitors did not like visiting the elderly because it took too long. He suggested that the reason why students could not bring the visit to an end was because there was no structure, and they were not in control of the interview; in other words, they "did not have an agenda", and so the client took over. From Luker's (1978) observations it was apparent that health visitors on routine surveillance visits did not work from a medical model but from a developmental model related to chronological age. It can be argued that since the developmental needs of the elderly have not been well defined or documented the care that they require is not known by health visitors and hence cannot be valued by them.

It is also interesting to note that when issues related to screening or case finding are discussed, health visitors and their managers are usually resistant to the notion of selective case finding, since they see this as putting the client through a test of eligibility, which does not fit with the ideals and concepts of health visitor training (CETHV, 1977).

Strategies for visiting the elderly

At a time of economic recession when there are increasing demands on the community nursing services it can be argued that health visitors are morally obliged to re-think their ideals and reformulate their goals. If they intend to make a realistic attempt to meet the health-related needs of older people, there are a number of strategies that could be employed. First, it is necessary to acknowledge that despite its potential merit in terms of primary prevention, it is both unrealistic and demoralizing to attempt a comprehensive programme aimed at reaching all the elderly people in a practice. Secondly, if it is acknowledged that health visitors do have a valuable service to offer older people, a two-stage programme involving an initial screening letter and follow-up visit where necessary, as advocated by Taylor et al. (1983), may be a realistic and economical way to reach those most in need. Thirdly, a selective case-finding approach is possible only if health visitors have some means of identifying the elderly in their area. Health visitors who are attached to general practices will need access to patients' notes or preferably an age/sex register. While the support of a general practitioner is an advantage in such a programme, lack of support is not a valid reason for not pursuing such a programme.

Need to re-think priorities

Health visitors are often reluctant to become involved in screening programmes because of the time involved in making visits. It is suggested that these visits need not take longer than visits to other groups if the health visitor structures them rather than letting the client control them. However, if resources in terms of manpower remain static and if health visitors do become more involved with the elderly, this may reduce their visits to other age groups. An increase in the involvement with the elderly will occur only if managers and practising health visitors are prepared to re-think their priorities. Positive discrimination towards visiting families with children under 5 years of age can be defended as a means of making the best use of limited resources and it would seem that there is little political commitment to increase resources in real terms to the community nursing services. Hence it is necessary to re-examine priorities if health visitors are to provide a service for the elderly.

In the context of the dichotomy between policy statements and health visiting practice, Orr (1982) comments that:

> "Policy statements and theoretical posturings have little authority if they are not practical or practicable. Not only is it naïve to suggest standardized solutions to problems, it is neither feasible nor desirable. The time is right for innovation and it is encouraging that health visitors are devising and developing strategies for the delivery of care which attempts to meet local need."

Conclusion

In conclusion, it has been demonstrated that rhetoric is not necessarily translated into practice and that health visitors have not significantly increased their involvement with the elderly since 1976. Within regions there are variations in the numbers of elderly people visited which cannot be explained solely in terms of numbers of health visitors or numbers of the elderly in the population. Whereas health visitors may not value visits to the elderly because they cannot work within their usual frame of reference, personal preference may be the most salient variable in determining whom they visit. While this accent on personal preference can be considered a weakness, it can paradoxically be seen as a potential strength. Flexibility in the work of health visitors enables innovative practice which is responsive to local need. The

challenge for the future is to provide health visitors with a sound theoretical basis for their work with older people in order to foster and develop new activity by them in this area of care.

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Prevention, screening and case finding: an overview

Dr J. Williamson FRCPE
President, British Geriatric Society, Formerly Professor of Geriatric Medicine, University of Edinburgh

WITH the great advances in medical technology since the Second World War, preventive medicine has tended to receive little more than lip service and any ideas of prevention in relation to old age were hardly thought of until the pioneering work of Marjory Warren made doctors and others rethink traditional teaching and attitudes. She demonstrated that old people would respond to treatment based soundly upon accurate diagnoses and that even such 'unfashionable' patients as elderly stroke victims could often be restored to useful degrees of independence by well planned rehabilitation programmes. This work challenged the highly negative attitude of unending irrecoverable loss and dependency then associated with old age and the elderly.

A personal view

I became involved in geriatric medicine in 1958 after a brief but exciting career as a consultant in chest medicine, which ended only with the eclipse of tuberculosis as a major public health threat. Because of my interest in prevention and social factors in ill health I found myself drawn towards care of the elderly and soon became a single-handed consultant serving a population of about 300 000. Those were lonely days and survival depended on the conviction that one was bound to win in the end. The other 'survival factor' was the existence of a handful of dedicated enthusiasts who rallied to the banner in a remarkable manner.

My most powerful motivation was the sense of frustration caused by the fact that patients were being referred to us at such a late stage in their illness; often they had been bedridden for weeks or months and their families were often in despair. Worse still was the realization that many of these patients could almost certainly have been saved had earlier intervention been possible. For example, an 80-year-old man who had previously been able to find his way about the house and for short distances outside was rendered bedfast by a sharp attack of influenza. He was referred one year later for 'long-term care' and it took 4 months to restore him to a state where his tired old wife could cope with him. This state of affairs was totally unacceptable.

Under-reporting

It was this sense of frustration and outrage that prompted us to conduct a study to find out just how much unrecorded disability there was among the elderly. This was duly reported in *The Lancet* under the title "The elderly at home: their unreported needs" and it was actually Sir Theodore Fox, then editor of *The Lancet*, who chose the phrase "unreported needs" (Williamson et al., 1964).

In this study we showed that rather more than half the disabling conditions which afflicted these old people were unknown to their general practitioners. Needless to say the paper caused quite a stir, especially when it was misreported in the local press with banner headlines about doctors not being interested in older patients, and so on.

The study showed that there were two separate ranges of conditions—one which was well reported and the other not. Conditions affecting the heart, lungs and nervous system were in general well reported and practitioners knew about them in most instances. It seemed as though old patients and general practitioners shared the same view about these conditions, namely that the patient should inform the doctor who would reciprocate by being interested and effective in helping the patient. On the other hand, conditions associated with the bladder, joints, feet and mental disturbance (both dementia and depression) tended to be largely unknown to practitioners. In some cases patients with quite disabling arthritis of knees were actually attending their doctors for treatment of, say, a heart complaint, but had not thought it appropriate to mention the pain, stiffness and limitations imposed by the arthritis. Likewise old men with prostatism or old ladies with stress incontinence seemed prepared to accept their discomfort, humiliation and social limitation as being in some way inevitable and something they just had to put up with. It seemed that patients and practitioners had some kind of tacit understanding that they would not embarrass each other by raising such unattractive aspects of old age.

Reasons for under-reporting

It is interesting to speculate why reporting should be less complete in older people. Younger people of both sexes view illness and disability as a direct threat to employability and to the woman's essential roles as mother, household manager and wife. Thus economic and occupational drive propels them towards their general practitioner, whereas these pressures are either absent or much reduced in older, retired (and often widowed) persons. Younger people are also likely to have a better understanding of modern medicine and how to use the National Health Service while their elders may have had their attitudes formed in the pre-NHS era. Old people may also accept the negative stereotype of old age: disability is inevitable (unless it affects heart, lungs or nervous system!), doctors cannot do anything about it, and in any case, they are caught up with far more pressing matters.

Fear of the consequences of a diagnosis exists at all ages, but in old age there is the additional fear that they

will lose their independence if they go to see a doctor. In the past this was a very real fear since many would be told that they would no longer be able to live alone and would have to "go in somewhere". The record of the profession in preserving the autonomy of old people has not been good and old people, at least in previous decades, were often justified in fearing the consequences of declaring certain kinds of disabilities to their doctors.

This led to early attempts at case finding using health visitors who 'screened' patients at home who were later assessed by us in a consultative clinic. We reported follow-up of 300 consecutive patients dealt with in this fashion which suggested some benefit. The study was, however, uncontrolled and no firm conclusions can be drawn from it (Lowther et al., 1970).

Since then we have maintained an interest in this field and have been gratified to note that the previous fearful parade of late referrals is now greatly reduced and most primary care teams now seem to have a better understanding of the nature and urgency of need in old age.

Screening for loss of function

During these years we gradually moved from an interest in traditional 'medical screening', which usually meant a large number of laboratory examinations and investigations, towards a much more functionally orientated case-finding process. Thus we forsook to all intents and purposes the search for biochemical and other precursors of disease and looked instead for loss of, or disturbance of, function.

Now we teach that the search is for loss of function in four equally important areas:

1. Loss of physical function
2. Loss of mental function
3. Loss of social function, and
   (fundamentally important)
4. Loss of family function.

It seems increasingly clear to me that this is a field where insistence upon the evidence of strictly controlled studies is perhaps misplaced or overemphasized. For example, can anyone possibly dispute that it is better for doctors, nurses and therapists to know that an old lady has got progressive pain and stiffness with limited mobility due to osteoarthritis of her knees before she develops contractures rather than afterwards? Surely the whole basis of medical practice has been to discover progressive disabling conditions early, so that an attempt could be made to prevent irreversible complications or to delay their onset?

Likewise it is better to know of the old lady with dementia at a stage where her daughter is still managing to cope rather than when the daughter has "reached the end of her tether" and cannot or will not offer further support.

Who is to do the case finding?

The work of Buckley and Runciman (1985) showed what I had intuitively believed for a long time, namely that doctors are generally not good at (or happy in) case finding. They tend to be too specialized, their professional expectations are rarely satisfied by the apparently mundane nature of case finding and they are often so wedded to the traditional medical model of diagnosis (localize the lesion, identify its pathological nature) that they find themselves uneasy in 'functional' assessment.

Attitude and interest are more important than professional training and my present view is that any general trained nurse can readily undertake case finding provided she finds the task interesting and rewarding. We published a detailed study in which we showed that a young staff nurse could readily detect most of the major afflictions of old age (Milne et al., 1972).

It is obvious that health visitors must be the first choice for this task and where they have undertaken it they have been very effective but it is foolish to pretend that large numbers of health visitors are waiting in the wings for their chance to perform upon this stage. Most are understandably much more interested in patients at the other end of the life span (page 43–45) and that is what attracted them to their role in the first place.

Where should case finding be carried out?

I have no doubt at all that in the great majority of cases functional assessment should begin in the patient's home (although the process may be continued in other settings such as health centres).

It is, after all, how the patient functions in her own environment that counts, not how she fares in the doctor's surgery or outpatient department. It is also important to see the home environment—standard of hygiene, catering, hazards, and so on, when caring relatives can be given the chance to express their anxiety, for example about dangerous stairs, or burnt-out pots and pans. We have reported the amount of useful information that is readily obtainable at a home visit (Arcand and Williamson, 1981).

What is the scope of case finding?

If done by a nurse member of the primary care team, the process should be conducted on two levels:

1. Where she observes and acts
2. Where she observes and refers.

The first level concerns assessment by the nurse of any physical, social, mental or family problems, which she will deal with herself. The second level concerns physical problems which she identifies and then refers to others for action.

1(a) *Physical assessment*

Mobility
How far can the patient walk?
Does she use aids?
Can she manage stairs?
What is her gait like?
Is her footwear acceptable?

Postural stability
Ask the patient to rise from chair, walk, turn round, return to chair and sit down
Seek evidence of unsteadiness or falls
Assess heights of bed, chair and toilet for suitability
Take blood pressure with patient erect and supine.

1(b) *Social assessment*

Loneliness
How frequently is the patient visited by family, non-family, or statutory/voluntary services?

Membership of social groups
What is her involvement with church, lunch club, or recreations?

Attitudes to family
Satisfaction
Resentment
Guilt
Anger?

Patient's home
Recent relocation
Cleanliness, tidiness, odour
Heating/insulation in living-room, bedroom, bathroom
Diet (food in house—larder and fridge)
Cooking facilities (number of pots and pans in regular use)
Tobacco/alcohol (use or abuse)

1(c) *Mental assessment*

Tests of cognitive function

Assessment for depression
(These are described by Milne and colleagues, 1972.)

1(d) *Family assessment*

Identify principal carer (usually spouse, daughter or daughter-in-law)

Interview principal carer separately
(Level of satisfaction with present circumstances?)

Effect of caring for patient on other roles (as wife, mother, household manager and employed or self-employed person)

Fears, hopes and expectations for the future

Cost of caring
(e.g. travelling costs per week).

2. *'Observe and refer' items*

Cardiorespiratory
Cough, sputum, wheeze
Dyspnoea, arrhythmia, oedema, cyanosis

Locomotor
Walking and transferring
Pain, stiffness, swelling, weakness, tremor
Gait and footwear

Bladder
Frequency, nocturia, dysuria
Incontinence (ask separately about stress incontinence)
Prostatism

Bowel
Pattern of bowel function
Recent alteration in bowel habit
Increase in laxative use
Blood, mucus in stool

Postural disturbance
Falls, syncope, blackout, vertigo
Unsteady gait
Postural hypotension
Hazards in home

Vision
Reads newsprint
Recognizes faces across room
Examine spectacles
Last visit to optician?

Hearing
Simple functional classifications:
(a) No hearing problem noted during interview
(b) Occasional item had to be repeated
(c) Voice had to be raised, frequent repetition
(d) Great difficulty, voice greatly raised, written messages required, etc

Medication
Seek out prescribed and non-prescribed drugs
Does patient know what each is for and dosage?
Dates on containers

Who is to receive case finding?

Some enthusiasts have said that case finding should be offered annually to everyone over 65. This is not only impracticable but would represent a most inappropriate use of scarce resources and could jeopardize the health of some fit old people by making them see themselves as 'patients' rather than 'persons'.

I have suggested several danger groups:

- those who have been widowed, especially after a long, stressful illness
- those with known chronic disability especially stroke, arthropathy and Parkinsonism
- those recently discharged from hospital, especially those who have earned the mistaken label of 'social admission'
- those already possessing markers of special need, e.g. receiving meals-on-wheels, home help, etc

- those recently relocated, especially where the move was not elective but 'forced upon them'
- perhaps some 'repeat prescription' groups—psychotropics, hypnotics
- those at risk because of special local factors, e.g. residence in large housing estates with high rates of vandalism and disaffection among the young.

It may be that some of the postal questionnaires mentioned earlier could be used to identify patients in whom case finding would be warranted, in particular the 5-item screener from Duke University (1978) which contains the following five questions:

1. Can you get to places which are out of walking distance?
2. Can you go shopping?
3. Can you prepare your own meals?
4. Can you do your own housework?
5. Can you handle your own money?

It seems to me that this two-stage approach might offer significant advantages and economies.

Conclusion

Since the early 1960s when the 'unreported needs' paper was published, doctors and nurses have undoubtedly acquired a much better understanding of the nature of need in old age. It would be extremely disappointing to those of us in geriatric medicine if this were not so!

Case finding, however, to be successful must be based upon broad functional assessment by an interested and sensitive person.

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Summary and recommendations

THE discussion and debate which took place at the National Workshop made it clear that there is continuing widespread interest by nurses, health visitors and doctors in seeking ways to improve the health of older people living at home. The workshop took place at an important time in the development of primary care in the United Kingdom, coinciding as it did with the publication of the Government's paper *Primary Health Care—an Agenda for Discussion* (Secretaries of State, 1986) and the *Report of the Community Nursing Review* (DHSS, 1986). Demographic and social trends indicate that health care of the elderly should be a major consideration when decisions are made about the future of primary health care in this country.

The way in which potential participants in the workshop were identified may in itself be a pointer to the way in which developments in primary health care can be co-ordinated. In addition to participants who were known from their published work in this field, general practices with an interest in case finding in the elderly were identified from the database which is being created by the Royal College of General Practitioners. The database is small but expanding. It is held on computer and this permits the rapid identification of practices with any specified interest. This in turn allows practices with similar interests to make contact with each other and in this instance it enabled primary health care teams from different parts of the country to meet in Harrogate. There is a value to be gained from meetings between interested groups which is over and above the factual information which it is possible to report on such occasions.

Purpose of case finding

The variation between different approaches to case finding has been remarked upon in the introduction. This wide variation led to detailed questioning about individual schemes in the small discussion groups which were part of the workshop. It also led to questioning about the true purpose of case finding. Most of the participants were agreed that functional disability was the main focus of interest but considered that case finding included more than simple data collection about established functional deficits. It was felt that functional problems had to be seen in the context of the older person's wishes as well as needs. It was also recognized that the needs of carers should be appreciated and that more practical help should be made available to meet these needs.

Concepts of health and definitions of the purpose of case finding are of importance in themselves, but they are also important in determining how case-finding programmes should be evaluated. The first phase of research into case finding in the elderly is now complete and the pioneering studies referred to in this *Occasional Paper* have defined the health needs of older people in different places. The need now is to build on the early attempts which have been made to evaluate particular types of case finding.

Two important needs

We identified two distinct ways in which case finding can be encouraged, developed and evaluated. First, there is an immediate need for interested primary health care teams to be able to learn from other colleagues who are already active in this field. The *ad hoc* nature of the studies reported here demonstrates a lack of co-ordination in the planning and implementation of case finding. The workshop was the first opportunity for many of the participants to discuss their work with interested colleagues in a multidisciplinary gathering. Further meetings on a regional basis should be sponsored. Existing structures for the continuing education of health visitors, nurses and doctors tend to fragment teams into the different constituent professional groups. Active promotion of multidisciplinary meetings could be suggested by a relatively small amount of funding from central government.

Secondly we have identified a longer term need for a prospective multicentre study to be undertaken which will evaluate different approaches to case finding in the elderly. The timescale envisaged would be in the region of 5 years. Previous studies, including that by Tulloch and Moore (1979), found it difficult to reach valid conclusions after only 2 years. Periods of more than 5 years would be of diminishing value because of the high mortality rates in the age groups being studied.

Resources

One feature of the schemes presented in this report is that they are undertaken without additional resources. We feel it is important in looking forward to a multicentre study that this principle should continue. If case finding is to be implemented on a wide scale it must be achieved within the existing resources of time and manpower in primary health care. Funding will be necessary to help in the evaluation of schemes but not in carrying out the schemes themselves.

A pre-requisite for evaluating the schemes is an adequate information system. All the schemes reported here employ some form of structured record and resources may be required so that the record is in a form which is capable of analysis and valid for comparing with the results of other centres. Similarly, some help may be required in making it possible for information from different sources within the primary health care team to link both the potential benefits this would give in providing care and also in collecting data, particularly

from the point of view of evaluating the outcome of any intervention.

Conclusion

Participants in the workshop felt that it had been very successful but the true measure of its success will be the extent to which case finding in the elderly develops as a result of the ideas contained in the papers collected here.

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APPENDIX 1

Twenty schemes operating case finding/screening programmes

DESCRIPTIONS of 20 schemes currently operating in different parts of the country. They are listed geographically—from north to south—and for each scheme a contact person has been identified.

Portlethen Health Centre
Aberdeen AB1 4QL

Dr M. Milne

A medico-social assessment based on a half-hour examination at a screening clinic initially offered to patients 75+ but now extended. Low refusal rate (5 per cent) and discovery of hitherto undiscovered morbidity. No formal evaluation but patients and primary care team enthusiastic.

Three group practices
Edinburgh

Mike Porter
Department of General Practice, University of Edinburgh

A functional screening assessment based on a 4-item screening letter enclosed in birthday cards and sent to patients on their 65th, 70th, 75th, 80th and 85th birthdays. Those identified as in need subject to team discussion and, where appropriate, assessment and referral. No formal evaluation but birthday card idea very popular.

Stockbridge Health Centre
Edinburgh EH3 6HE

Dr P.N.E. Berrey

A computerized screening system based on a combination of static risk factors (e.g. living alone) with dynamic date-coded events (e.g. hospital discharge, change of address, medication, etc). Computerized audit to be conducted monthly to identify patients with highest risk scores for review by primary care team. System still at development stage.

Armagh Health Centre
Ulster

Dr J.S. Garvin

A scheme involving all members of the primary care team in weekly case discussion of a fixed number of 70+ patients. Those not currently known to be unproblematic visited by health visitor who uses checklist to assess risk/need. Little strain on workload but improvements desirable in tighter criteria for screening and common record card for all team members.

Selected areas of
West Cumbria

Moira M. Butler
West Cumbria Health Authority

An experimental screening and assessment scheme for health visitors. Risk group criteria used in screening but found to be inefficient. Successful development of comprehensive assessment schedule and use of schedule.

Community Nursing Care Team
Newcastle on Tyne

Mrs A. Armour
Newcastle General Hospital, NE4 6BE

The Care Team consists of three team leaders and seven staff nurses and is available to general practitioners throughout the area. Since its inception in 1984 six practices and 2882 patients over 75 have been assessed. Initially an attempt was made to use risk criteria but assessment is now done on all patients 75+. Assessments are functional rather than medical. Plans under discussion for ongoing screening and evaluation.

Stamfordham Road Health Centre
Newcastle on Tyne NE5 2LH

Dr S.J. Jachuck

A practice-based evaluation of the organization and performance of services for the elderly. The aims include (a) evaluation of general practitioner records as a base for surveillance programme (b) evaluation of different ways of co-ordinating records of primary care team including computer-based methods. Project funded by Joint Care Planning and staffing includes full-time researchers.

Meanwood Group Practice
Leeds LS6 4JN

Dr A.W. Cameron

Pilot study conducted in 1984 to test and improve on Barber's 9-item screening letter. Modifications made to include questions on carer. Improved screener used in main study, a controlled evaluation of a programme of health visitor assessment and surveillance. Overall sample size 190 (controls 92, intervention groups 98). Analysis proceeding.

Hunslett Health Centre
Leeds LS10 2PT

Mrs J. Hiscock,
District Nursing Sister

A small scale replication of Barber's 9-item screening letter in a deprived inner city area. Validation by comprehensive sociomedical assessment. Preliminary results only.

Community Health Services
Leeds LS9 2NG

Ms Carolyn Rich
East Leeds Clinic

Community group approach to health promotion for the elderly. Involves group work, clinical assessment for selected risk groups and health visiting 'at risk' population. Plans for random allocation of sample (n=400) to intervention and control groups, outcome measurement after 2 years.

South Lincolnshire Community
Nursing Division

Mrs Valerie Willocks
Sleaford, Lincolnshire NG34 7EB

A pilot study assessing Barber's 7-item screening letter on a sample of 120 patients aged 60+. Response rate of 75 per cent, 'positive' replies from 44 per cent. Comprehensive assessment of all positives. Conclusions point to need for more highly trained personnel.

Chatter's Group Practice
Cambridgeshire

Mrs Anna Martin
County Hospital, Doddington PE15 0UG

Attempts are currently being made to set up a comprehensive health visiting service for all 65+ patients, involving: a health profile card, an 'at risk' list, an 'age-well' club, and a clinic screening programme for 65, 70 and 75 year olds. Details not yet available.

Bicester Practice
Oxfordshire OX6 7AT

Dr A.J. Tulloch

A preventive care system based partly on the use of volunteers to collect systematic medicosocial information on all patients. 18 months spent on developing four data-recording charts: one completed by the patient, one covering significant problems and completed by the volunteer, one covering disability and completed by the practice nurse, and a final summary chart incorporating a risk index and completed by the general practitioner. Information available on time required for operating such a scheme.

Bedford Practice
Bedfordshire MK40 3NG

Dr Edwin Martin

All patients 80+ and 17 per cent of those 70+ were visited and assessed by practice health visitors. Previously unknown needs were identified in a third of the sample but staffing shortages have prevented any extension of the visiting. Plans to utilise a risk screening scheme currently under discussion.

Dovercourt Health Centre
Harwich

Mrs P. Killingback

The Harwich Elderly Assessment Project is based on the use of an amended version of Barber's screening letter. The first aim is to provide a profile of the population, the second is to evaluate the benefits of an assessment programme on the basis of a comparison of intervention and control groups. Preliminary results only.

Ascot Practice

Dr F. Buxton, 32 Bosman Drive, Windlesham, Surrey

A scheme employing a three-section questionnaire (socio-economic, disability and basic health) administered by volunteers to assess all 75+ patients in the practice. Details available on 'accuracy' of volunteers in designating 'at risk' cases, the extent to which those designated at risk were already being treated, the volume of referrals and other increases in workload.

Phoenix House Surgery
Cirencester GL7 1YX

Dr D.L. Beales

The study uses an intervention/control group to evaluate the use of volunteers in detecting 75+ patients at risk of medical and social breakdown. Two intervention groups are planned: group B 150 patients completing the Winchester Disability questionnaire (with the help of a volunteer) at 3-monthly intervals. Health visitor action as appropriate: group C, 150 patients interviewed by health visitor following a traditional health visiting role.

St Paul's Hospital
Winchester SO22 5AA

Dr G.I. Carpenter

The project aims to validate the Winchester Disability Rating Scale as a sensitive indicator of deterioration. It will be administered at 3-month intervals to an experimental group (n=350). Patients recording score changes of 5+ will be visited. The scale is administered by trained volunteers. Some validation work has been completed comparing the Winchester scale with Barber's screening letter and the CAPE Behaviour Rating Scale.

Seaton Practice
Devon EX12 2RY

Dr R.V.H. Jones

The practice engaged an occupational therapist to conduct a functional survey of all patients aged 80+. Assessments made by the therapist were compared with general practitioner ratings and discrepancies noted. A continuing follow-up by health visitor and nurses was tried and found unsuccessful. A number of lessons have been learned, most having a wide applicability.

South Lewisham Health Centre
London SE6

Ms Sue Phillips
Research Health Visitor

The project has three aims: the development of a functional assessment form, the identification of viable 'risk' criteria, and the evaluation of a pensioners' screening clinic. Details are not yet available.

The Royal College of General Practitioners

The Royal College of General Practitioners was founded in 1952, with this object:

"To encourage, foster, and maintain the highest possible standards in general medical practice and for that purpose to take or join with others in taking steps consistent with the charitable nature of that object which may assist towards the same."

Among its responsibilities under its Royal Charter the College is entitled to:

"Encourage the publication by general medical practitioners of research into medical or scientific subjects with a view to the improvement of general medical practice in any field and to undertake or assist others in undertaking such research.

Diffuse information on all matters affecting general medical practice and establish, print, publish, issue and circulate such papers, journals, magazines, books, periodicals, and publications and hold such meetings, conferences, seminars, and instructional courses as may assist the object of the College."

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Occasional Papers

Acknowledgement

The Honorary Editor thanks the Department of Health and Social Security for financial help in publishing this *Occasional Paper*.

SIR JAMES MACKENZIE, MD 1853—1925 GENERAL PRACTITIONER

Sir James Mackenzie was the doyen of general practitioners, certainly the greatest general practitioner of his day, and with a strong claim to being the greatest of all time. His practical experience in Burnley, his internationally important clinical research, and his great skill as a teacher have set an example to the whole profession.

The definitive biography of Mackenzie, written by Professor Alex Mair, has been out of print for some time, but it has now been republished by the Royal College of General Practitioners by photoreproduction, with the addition of a new chapter, which describes academic developments in general practice since Mackenzie's death.

Sir James Mackenzie, MD, General Practitioner can be obtained from the Central Sales Office, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU, price £12.50, including postage. Payment should be made with order and cheques made payable to RCGP Enterprises Ltd. Orders by Access and Visa are welcome (Tel: 01-581-3232).

WILLIAM PICKLES

William Pickles was one of the outstanding general practitioners of our time. His *Epidemiology in Country Practice*, first published in 1939, was reprinted by the College in 1972 but has not been available for some years. Similarly his biography *Will Pickles of Wensleydale* by Professor John Pemberton, who was both a friend and colleague, has also been out of print for some time.

The College has now republished both books simultaneously. *Epidemiology in Country Practice* is a classic example of original research in general practice and *Will Pickles of Wensleydale* is the definitive biography of Pickles written in a pleasing and easy-to-read style. These two books, which both separately and together contribute to the history of general practice, can be warmly recommended.

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BOOKING FOR MATERNITY CARE A COMPARISON OF TWO SYSTEMS

Occasional Paper 31

Do women care where their babies are delivered? Can the differences they experience in two different systems of care be measured?

Professor Michael Klein, from a Department of General Practice in Canada, and Ms Diana Elbourne, from the National Perinatal Epidemiology Unit in Oxford, used research material gathered in Oxford to carry out a detailed study of the views of mothers booked for delivery in a general practitioner unit and those booked for shared care in a specialist consultant unit. The findings are of considerable interest particularly in relation to women booked for general practitioner care.

Booking for Maternity Care—A Comparison of Two Systems, Occasional Paper 31, can be obtained from the Central Sales Office, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU, price £3.50, including postage. Payment should be made with order and cheques made payable to RCGP Enterprises Ltd. Orders by Access and Visa are welcome (Tel: 01-581-3232).

AN ATLAS OF BEDSIDE MICROSCOPY

Occasional Paper 32

Early diagnosis is one hallmark of success for the primary physician and miniaturization is making this possible in new and exciting ways. In *An Atlas of Bedside Microscopy* Dr Murray Longmore, a general practitioner in Ferring, West Sussex, describes new techniques developed while he was a trainee in which he achieved several significant diagnoses much earlier than he would otherwise have done using conventional laboratory services.

Occasional Paper 32 is the first Occasional Paper to be published by the College which makes extensive use of colour. This enables readers to study the slides as they appeared to the author and to judge for themselves how practical bedside microscopy can be.

An Atlas of Bedside Microscopy, Occasional Paper 32, is obtainable from the Central Sales Office, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU, price £8.50, including postage. Payment should be made with order and cheques made payable to RCGP Enterprises Ltd. Orders by Access and Visa are welcome (Tel: 01-581-3232).

Typeset and Printed by Vine & Gorfin Ltd, Exmouth, Devon
ISBN 85084 118 6