

Screening the elderly in general practice

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SUMMARY. All the 855 patients over the age of 65 in one general practice were reviewed. Those under care were excluded (316—37 per cent), and the rest were offered a screening examination in the practice. In all, 335 were examined and several had been previously screened. The yield of conditions found is reported and the advantage of the work in general practice discussed.

Introduction

Population screening is a topic for continuing discussion (*Lancet*, 1975) and has been the subject of a recent book (Hart, 1975). Sackett and Holland (1975) believe that total population screening is hard to justify for any condition, save phenylketonuria, and that screening can be classified in two ways:

- (1) Screening to prevent disease,
- (2) Screening to treat disease.

A third aim, which is an extension of the second and is often forgotten, is screening for conditions which cannot be prevented or cured, but which can be alleviated or improved. For example, the middle-aged and the elderly may have the quality of life improved as a result of simple tests of vision and hearing.

Aim

My aim in this study was to demonstrate that the three objectives above are reasonably attainable in National Health Service general practice and to assess the value of screening the elderly by repeated screening tests.

Method

All the patients in the practice over the age of 65, with the exception of those already under care at home, in hospital, or in welfare homes, were invited to attend the practice centre for a medical and social screening examination. Those who accepted the invitation were sent an appointment to attend a morning clinic, ten patients being seen at each clinic, and in addition each patient was sent a questionnaire to complete and a form for a chest x-ray at the local mass radiography centre. All the patients were asked to bring a urine sample when attending for the examination. The questionnaire asked details of any complaints the patient might have in the respiratory, cardiovascular, alimentary, and urinary tracts, and asked about hearing, eyesight, sleep, smoking, and alcohol intake. It also asked whether the patient had a problem to discuss when he/she came.

On arrival the patient's record was attached to the questionnaire and a recording sheet completed. The organisation and responsibilities of the practice team were:

<i>Reception staff</i>	Documentation,
<i>Practice sister</i>	Urinalysis, weight, height, hearing tests when applicable ('Keeler' audio tester),
<i>Doctor</i>	Blood pressure, lung function, auriscope, ophthalmoscope, review of questionnaire, mental health. Further examination as indicated from the findings,
<i>Health visitor</i>	Social assessment, reinforcement of doctor's advice when necessary, review of chiropody, home help, and other social services,
<i>Technician</i>	Haematology and biochemical profile.

The patient was informed that one week after the examination he would be notified of the findings and advised about any further action that needed to be taken by himself or the practice team.

TABLE 1
REACTIONS OF PATIENTS TO OFFER OF SCREENING (PERCENTAGES IN BRACKETS)

Age and sex	Total	A Screened	B Known	A & B Total	C Refused	D Unknown	C & D Total
65-M	115 (100)	52 (45.2)	23 (20.0)	75 (65.2)	4 (3.5)	36 (31.3)	40 (34.8)
69 F	172 (100)	84 (48.8)	38 (22.1)	122 (70.9)	11 (6.4)	39 (22.7)	50 (29.1)
70-M	81 (100)	38 (46.9)	20 (24.7)	58 (71.6)	—	23 (28.4)	23 (28.4)
74 F	140 (100)	49 (35.0)	55 (39.3)	104 (74.3)	4 (2.9)	32 (22.8)	36 (25.7)
75-M	40 (100)	19 (47.5)	10 (25.0)	29 (72.5)	1 (2.5)	10 (25.0)	11 (27.5)
79 F	105 (100)	42 (40.0)	42 (40.0)	84 (84.0)	12 (11.4)	9 (8.6)	21 (20.0)
80+M	53 (100)	16 (30.2)	28 (52.8)	44 (83.0)	3 (5.7)	6 (11.3)	9 (17.0)
F	149 (100)	35 (23.5)	100 (67.1)	135 (90.6)	14 (9.4)	—	14 (9.4)
Totals	855 (100)	335 (39.2)	316 (37.0)	651 (76.2)	49 (5.7)	155 (18.1)	204 (23.8)

Results

In the practice of 6,975 patients there were 855 (12.3 per cent) over the age of 65. Of these 316 (37 per cent) were already known to the doctor and were receiving treatment, were under investigation, or were in hospital or welfare homes; 70 of these were in a single welfare home for the elderly for which I was the doctor.

Forty-nine patients (5.7 per cent) refused the examination and 155 (18.1 per cent) did not reply to the invitation to attend, or the invitation was returned marked "gone away". Thus 335 (39.2 per cent) accepted and were examined.

Table 1 shows the practice population over the age of 65 analysed by sex and five-year age groups with the proportion of each category screened, already known, refused, and unknown.

Of those screened 138 had been screened on a previous occasion, two years before this examination. Four categories of patient in this group were identified.

- (1) Those with a definite problem at the first test,
- (2) Those with a problem identified at first test and predicted to cause trouble later,
- (3) Those with an abnormality not expected to produce a problem,
- (4) Those with no abnormalities.

(1) *Definite problems*

Any conditions likely to make life difficult for the patient were classified as definite problems. Thus deafness requiring a hearing aid or ear syringing, mental illness, anaemia (less than 10.9 grams/100 ml), the need for chiropody, arthritis, temporal arteritis, severe obesity (>25 per cent above average weight), skin diseases, visual defects, and social problems were classified in this way.

(2) *Predicted problems*

Any condition considered to affect the quality of life of the patient in the foreseeable future was classified as an anticipated problem. Moderate obesity (>15 per cent but below 25 per cent above average weight), slight cardiac enlargement on x-ray, slight anaemia (between 10.9 and 11.9 grams/100 ml) tremor, haemorrhoids, some social needs, and need for eye refraction were placed in this category.

(3) *Other abnormalities*

Other abnormalities discovered which were not likely to affect the quality of life in the foreseeable future were placed in the third category of 'abnormality but no anticipated problem.' Deafness in one ear, hyperuricaemia, and some lung pathology, i.e. calcified glands or chronic bronchitis and skin diseases were placed in this category.

The number of patients in each category at first test and screened for a second time are shown in table 2.

TABLE 2
FIRST TEST ABNORMALITIES

<i>Type of problem</i>	<i>Number</i>	<i>%</i>
Definite problem	60	(43.2)
Predicted problem	45	(32.6)
Abnormality but no anticipated problem	7	(5.1)
No abnormality	26	(18.8)
Total	138	(100)

(4) Patients' problems

Half the patients (50 per cent) had a problem to discuss, the commonest being pain or weakness in joints, secondly, eye problems, and thirdly gastrointestinal problems such as indigestion or constipation.

The outcomes of the problems by the second examination are shown in table 3.

TABLE 3
OUTCOME BY SECOND TEST (PERCENTAGES IN BRACKETS)

	<i>Number</i>	<i>Cured</i>	<i>Ameliorated</i>	<i>Unchanged</i>
Definite problem	60 (100)	17 (28.3)	29 (48.3)	14 (23.3)
Anticipated problem	45 (100)	12 (26.6)	18 (40.0)	15 (33.3)
Abnormality but no problem anticipated	7 (100)	1 (14.3)	2 (28.6)	4 (57.1)
No abnormality	26 (100)	—	—	—

By the second examination new abnormalities had developed and the number and category of these abnormalities are shown in table 4.

TABLE 4
NEW ABNORMALITIES AT SECOND TEST (PERCENTAGES IN BRACKETS)

Definite problem	42 (30.4)
Anticipated problem	13 (9.4)
Abnormality but problem not anticipated	2 (1.5)

For example, at the first test four hearing aids were provided, but a further six were provided after the second examination. Five social problems were identified at the first test, but a further five had occurred by the second test. These were either problems of isolation, which we endeavoured to solve by the provision of social facilities or mobilising relatives or friends, or problems of rehousing, which we took up with the appropriate housing department. One case of anaemia was present at the first test, but four cases were diagnosed at the second test.

On comparing biochemical abnormalities at first and second tests, in 138 patients there were 123 abnormalities at first test and 94 abnormalities at the second test. There was often, of course, more than one abnormality in a single patient.

Clinical diagnoses were made from the biochemical results in seven patients at the first test, two with diabetes, one with anaemia, one with temporal arteritis, two with renal disease, and one with myxoedema. In six out of the seven clinical diagnoses, a haemoglobin estimation, erythrocyte sedimentation rate, and urinalysis would have been adequate as screening tests by detect the illness. These tests, which are clinical side-room procedures, if positive, indicate the need for further laboratory investigations. The cost of a biochemical profile (Whitehead, 1975, personal communication) in the laboratory carrying out the profile and supplying the technician to attend the practice centre is estimated as £2.90 per patient.

Screening of the over-65 population has been carried out in this practice (the Birchfield Study Practice) since 1968. One possible assessment of the effect of screening is the subsequent consultation rates. If screening has been effective it should be possible to demonstrate a reduction in the consultation rate for our practice compared with practices which do not screen their elderly patients. This practice is one of many taking part in the National Morbidity Study and

table 5 compares consultation rates per 1,000 patients for the 65–74-year olds and for those aged 75 and over, males and females, in this practice with other practices in the National Morbidity Study in 1970–71. The population structure in this practice and the total study population are comparable.

TABLE 5
CONSULTATION RATES PER 1000 PATIENTS IN THE BIRCHFIELD PRACTICE AND THE NATIONAL MORBIDITY STUDY PRACTICES, BY SEX AND AGE

Age group	<i>Birchfield study practice</i>		<i>National morbidity study practices</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
65–74	652·9	589·0	652·8	659·2
75+	561·3	612·6	694·6	684·5

This shows that for both sexes over 74 and for women between 65 and 74 years old our consultation rate is lower than the mean of the other practices.

Discussion

General practice can provide economical ways of screening the elderly, in particular those patients who have not contacted their doctor for some time, and who may have unreported illness or social problems. These problems, if left undetected, may lead to medical or social breakdown compelling admission to welfare homes or hospital. Retirement brings its own problems and may initiate or exacerbate medicosocial breakdown.

The definition of “elderly” in screening in general practice should be 65 upwards particularly if prevention as well as treatment is the aim. Though Williams *et al.* (1972) suggests most real medical and social need occurs after the age of 75, in this survey, the abnormalities were distributed throughout the age and sex categories.

Ageing cannot, of course, be prevented, but anticipation and prevention of social breakdown by providing services such as home help, meals on wheels, bathing attendants, and social centres can be accomplished. Five of our patients were provided with such services after the interview by the health visitor.

Presymptomatic diagnosis or secondary prevention was a prime aim for this screening clinic. It has been suggested that conditions discovered are not amenable to treatment in this age group and that patients will not agree to treatment (Thompson, 1975). In addition it has been said that low acceptance rates make such screening clinics of little value.

The acceptability of the clinic by the patients can be judged by the low refusal rate, 5·7 per cent and the 18 per cent who were untraceable. However, 37 per cent were not re-examined because they were already known to the doctor. The effectiveness of this screening exercise may be measured in studying those patients who were re-examined after two years. Twenty eight per cent of those with a definite problem, i.e. one already affecting the quality of life, were cured after two years, 48 per cent relieved, while 23 per cent remained unchanged. Similar results were obtained for predicted problems (i.e. those likely to affect the quality of life, if untreated). However, 30 per cent of this retested population had developed new definite problems by the second test and 9·4 per cent had developed an anticipated problem. It seems that such screening cannot be “once for all”. Many of the discovered abnormalities were remedied by the practice team.

A small number (6·9 per cent) were referred to the hospital service, which cannot be said to put a strain on the specialist services. More important is the quality and effectiveness of the help provided after referral. For example, most hearing aids provided through the National Health Service are quite unsuitable and often remain in the sideboard drawer after prescription. Of all patients 14·3 per cent were still at work, most of them in the age group 65–70, which seems highly desirable and good for their morale.

The biochemical results revealed many abnormalities and few recognisable diseases at such a cost to the health services that it suggests the need for simple laboratory tests as an initial

screening, with further investigation only if necessary. The reassurance of a normal result is important, however, and the possibility that diseases are being overlooked by the doctor in the present state of knowledge cannot be excluded. It may be that different biochemical standards should be used for the ageing population, and this point is being further studied using data from this study.

Another consideration which cannot be easily quantified is the patient's recognition that an interest is being taken in his welfare, and the opportunity that such a screening clinic gives for minor medical problems, which are major personal problems to the patient, to be ventilated and solved. The screening clinic is also an opportunity for health education by general practitioners. Capitation fees in general practice include an extra payment for the patients aged 65 and over, and imply an extra element of care for this age group; a screening clinic can be one form.

The general practitioner can limit his horizon to the needs of his own practice and not be overwhelmed by the total geriatric problem. He now has adequate secretarial help, professional assistance from nurses, health visitors, and support from laboratory and consultant staff. Geriatric screening is practical and possible and patients will accept it.

At present, most general practitioners lack enthusiasm and it may be that a demonstrable reduction in workload, as measured by the reduced consultation rates for the elderly in the practice as compared with practices taking part in the National Morbidity Study, could be an incentive to other general practitioners to organise geriatric screening clinics in their practices.

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SWEDEN'S NO-FAULT PATIENT-INJURY INSURANCE

Sweden has introduced a nationwide no-fault patient-injury compensation plan. The plan was introduced not because malpractice costs were high, but because so few injured patients received compensation through the tort liability system. With certain exceptions, compensation is provided for loss that occurs as a result of injury related to hospitalisation or medical care.

The insurance plan has completed 12 months of operation. Its total cost is less than 50 cents per citizen, and it is financed from general tax revenue. Sweden's experience can be projected to a population the size of the United States and the results compared with United States malpractice liability figures. Such a comparison indicates a total number of awards greater than that of the United States, but a lower average amount per award.

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