General Practice Observed

Medical and Social Screening of Patients aged 70 to 72 by an Urban General Practice Health Team

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Summary

A medico-social survey of 259 elderly patients aged 70-72 was carried out by three doctors, a health visitor and a nurse in an urban general practice. Seven hundred and ninety diseases or disabilities were identified—an average of 3.2 per patient—of which 20.5% were unknown to the doctors. Using a simple check list for symptom inquiry, the health visitor or nurse missed very little of the physical or psychological disease. In some respects their symptom inquiry was more revealing than that of the doctors but they had difficulty in eliciting evidence of malnutrition, masked depression, and incipient dementia. Initial health screening of the elderly for unreported disease in general practice can easily be done by a health visitor with training in geriatric problems and the recognition of psychiatric illness.

Initial health screening can also be done by a nurse with community-nursing experience but she will require additional training in the techniques of social assessment. The doctor must examine those patients found to be suffering from alerting symptoms. A general practice of three or four doctors requires one health visitor for routine work and one additional health visitor or nurse for screening of the elderly. Unreported disease in the elderly indicates failure to make contact and failure to ask the right questions. Unknown disease may be due to inadequate records.

Introduction

There has been much interest in the use of nursing personnel in community geriatrics since Anderson and Cowan extended the work of health visitors to the aged.¹ Williamson *et al.* used health visitors in geriatric surveys and commented that they do well in screening old folk for physical disabilities but less well in detecting mental disorders.² Milne *et al.* reported favourably on the competence of a staff nurse as observer in a survey of patients over 62.³ Our paper reports on social, psychological, and physical disability in a sample of older patients and on the role of a health visitor and a nurse in screening. The practice in Glasgow, has three principals, an attached graduate doctor in

vocational training, an attached health visitor, a district (community) nurse, and a nurse with special responsibility for the elderly. There is a central surgery with secretarial and receptionist staff serving 7,000 patients, mainly of middle and working class. The health visitor and nurse have full access to the patients' N.H.S. record cards.

Methods

The sample selected for study contained all patients aged 70 to 72 inclusive and totalled 259 of whom 13 refused to be examined—a response rate of 95%. Two hundred and forty-six patients (91 men and 155 women) were examined. All, including the non-respondents, were first visited at their homes by the health visitor or nurse and subsequently examined by the doctors at the surgery; housebound subjects had to be seen at home. The nurse, who already had training and experience in community nursing, accompanied the health visitor on domiciliary visits until she had acquired techniques of social assessment and was skilled enough to manage on her own. The project required her full-time service for one year. A simple check list for social, psychological, and physical assessment was devised and the findings were recorded on Hollerith punch cards for manual sorting. The health visitor's or nurse's check list covered housing, diet, social factors, high risk categories, mobility, dependence, symptom inquiry, psychological state, and drug usage. She weighed the patient, measured blood pressure, obtained a venous blood sample for haemoglobin estimation, and tested urine for glucose and albumin. Her domiciliary assessment took about 30 minutes and the doctor's clinical examination took between 10 and 15 minutes.

Results

We were surprised that we recorded no inadequacy of housing, heating, or finance, and little unmet need for social help. Admittedly the practice is not typical of urban conditions as it is centred in a "desirable" district of high amenity where older houses are being modernized. Without the techniques of a skilled dietitian (which include identifying and weighing everything eaten) we found ourselves unable to assess the nutritional state of our patients. Malnutrition is suspected in persons living alone who also suffer mental impairment or restricted mobility but with our facilities could not be proved. The check lists used for social conditions and "at risk" factors, symptom inquiry, and psychological assessment are set out in tables I-III.

Patients in this age group proved remarkably mobile and independent. Two hundred and nineteen were fully mobile; 23 could get out, but with difficulty; three were mobile, but housebound; one was chairbound; and none was bedbound. Two hundred and thirty-five were independent, eight required help from their families, and three were dependent on home helps. None was in an institution.

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TABLE I—Check List for Social Conditions and "At Risk" Factors

Group	Male (91)	Female (155)	Both Sexes (246)
Inadequate social intercourse	4	6	10
Alone by day	2	15	17
Alone at night	8	43	51
Sight impaired	10	24	34
Hearing impaired	43	49	92
Weight excessive	26	64	90
Weight falling	5	17	22
Widowed in past two years ..	4	5	9
Chronic illness	40	72	112

TABLE II—Check List for Symptom Inquiry

Symptom	Male (91)	Female (155)	Both Sexes (246)
Breathlessness	39	76	115
Chest pain	17	24	41
Cough	32	33	65
Ankle swelling	9	46	55
Alimentary disturbance	23	66	89
Urinary disturbance	24	23	47
Falls	1	3	4
Blackouts	3	2	5
Strokes	4	1	5
Locomotor disturbance	10	13	23

TABLE III—Check List for Psychological Assessment

Assessment	Male (91)	Female (155)	Both Sexes (246)
Intellect impaired	2	1	3
Personality impaired	1	2	3
Memory impaired	13	12	25
Confabulation	1	0	1
Hallucination or delusion	7	11	18
Depression	0	2	2
Labile affect	12	43	55
Anxiety			

Of the 138 patients on drug therapy 111 were on essential drugs prescribed by the doctor and 53 were on non-essential drugs. The average number of essential drugs was two per patient and the average number of non-essential drugs was 1.5 per patient. Eighteen per cent. of those on drugs were unable to give an accurate account of their dosage schedule but when the quantity of each medicine was checked against the date on its container only 12.3% were apparently failing to take their drugs as prescribed (table IV). The main departure from the schedule was failure to persevere.

TABLE IV—Patients on Essential Drugs Prescribed by the Doctor

No. of Drugs per Patient per Day	Male (91)	Female (155)	Both Sexes (246)	Not taking Drugs as Prescribed
1	14	34	48	6
2	7	24	31	4
3	7	13	20	2
4	4	6	10	2
5	0	1	1	0
Total	32	78	110	14

Morbidity was assessed by the doctors, who also reviewed the health visitor's and nurse's assessment of psychological state and added the category of "neurotic" or "functional" illness. Multiple morbidity is the rule in the elderly and the sample of 246 patients was found to cover 790 disease entities—3.2 per patient. The pattern of morbidity differed little from that observed by other workers in patients over 65. Significant sex differences in the prevalence of some diseases are shown in tables V and VI.

Of the 790 diseases or disabilities identified 162 were "unknown" to the doctor before the survey (table VII). Ignor-

ance of the existence of disease could, of course, be due to poor record keeping. We therefore examined the adequacy of our N.H.S. records (E.C. 5/6 and E.C. 7/8 system) and arbitrarily classified them as adequate, inadequate, and vestigial. The definition of an "adequate" record is very subjective but might be described as one giving a reasonably accurate picture of the patient's state of health without recourse to further examination or investigation. We found considerably less disease in the group with vestigial records but most of it was "unknown" to the doctor.

TABLE V—Disabilities Commoner in Men Aged 70 to 72 and the Ratio of Men to Women Affected

Disability	Ratio	
	Male : Female	
Urinary disturbance	5	1
Chronic bronchitis	3.3	1
Duodenal ulcer	3	1
Peripheral vascular disease	2.5	1
Incipient dementia	2	1
Deafness	1.5	1

TABLE VI—Disabilities Commoner in Women Aged 70 to 72 and the Ratio of Women to Men Affected

Disability	Ratio	
	Female : Male	
Thyroid disturbance	8	1
Oesophageal disturbance	6	1
Diabetes	3	1
Valvular heart disease	2	1
Cholecystitis	2	1
Anxiety	2	1
Musculoskeletal disturbance	1.8	1
Varicose veins	1.7	1
Anaemia	1.6	1
Obesity	1.5	1

TABLE VII—Adequacy of N.H.S. Medical Records Compared with the Prevalence of Disease in the Sample and Disease "Unknown" to Doctor

	Adequate Records (165)	Inadequate Records (57)	Vestigial Records (24)	All Records (246)
Total number of diseases in sample	563	175	52	790
Number of unknown diseases discovered	53	67	42	162
Average number of diseases per patient	3.4	3.0	2.2	3.2
Average number of "unknown" diseases per patient	0.3	1.2	1.8	0.7
Percentage of morbidity unknown to doctor	10	40	70	20.5

The results of the survey were perhaps incommensurate with the effort expended since most of the unreported morbidity was trivial, but one case of pernicious anaemia was discovered, nine patients were referred to hospital, 20 were started on new therapy, and 47 required medical advice—mainly about diets. All our patients over 70 are now listed for annual visit by the health visitor or nurse, 62 of the patients are listed for six-monthly visits, 20 for three-monthly, six for two-monthly, and four for monthly visits depending on their at-risk classification as defined by Williamson—that is, 35% required more than an annual follow-up.⁴

Discussion

THE SAMPLE

Seventy to 72 is just below the mean age of the over-65s in our practice and provided a sample within our capabilities, old

enough to welcome medical attention and young enough to benefit from preventive geriatrics. Previous surveys have shown that the under-70s are relatively fit citizens and that most of the physical, mental, and social problems occur in the over-75s.⁵ The very small number of non-respondents illustrates the excellent access to patients' homes enjoyed by a general practice health team. Williamson, who sampled three practices, suffered from an initial refusal rate of 50%, which fell to under 20% as the project gained momentum.⁶ Milne *et al.* had a 22% and Akhtar a 19% refusal rate.^{7,8} Both authors noted that non-respondents differed little healthwise from the respondents and therefore do not seriously bias surveys. Of our 13 non-respondents seven were frequent attenders, three had been several times in the preceding four years, and one (reputedly in robust health) had never attended the surgery. Twice as many women as men refused to be seen.

SOCIAL PROBLEMS

Apart from restrictions of life imposed by degenerative disease, living alone emerged as the major social problem. Living alone, of course, does not necessarily mean being lonely. Forty-three women lived alone but only six of them complained of inadequate social intercourse—that is, one in seven was lonely. Eight men lived alone but four of them complained of lack of companionship—that is, one in two was lonely. In other words, though women living alone outnumbered men living alone by five to one, the prevalence of loneliness was no higher in women than in men. Older men, devoid of domestic skills, deprived by retirement of friends or of objective in life, are more vulnerable to bereavement than women. We were surprised to record no serious inadequacy of housing, heating, or finance, and little unmet need for social help. The 70- to 72-year-olds in our sample had already availed themselves of the social help they needed or were entitled to.

SYMPTOM INQUIRY

Elaborate check lists for symptom inquiry may be necessary for research projects but for routine screening in general practice they must be reduced to essentials. We tested the effectiveness of a concise symptom-inquiry check list in the hands of a health visitor and nurse for alerting the doctor to the possible presence of disease. We emphasize that the health visitor or nurse is not a diagnostician and should not be used as such, but she is a skilled and experienced medical observer. Her check list for cardiorespiratory disease used only four symptoms: breathlessness, chest pain, cough, and ankle swelling. One hundred and sixty-two subjects had one or more of these symptoms and this group was found by the doctor to contain all the patients with heart failure, chronic bronchitis, cardiac dysrhythmias, and all but one of those with myocardial ischaemia, as well as 28 of the 33 with cardiac murmurs.

The health visitor or nurse reported 89 patients with alimentary symptoms whereas the doctors diagnosed alimentary disturbance in only 44. The doctors, of course, were attempting a diagnosis, and interpretation of gastrointestinal symptoms is difficult with symptomatology outstripping diagnosis. Milne *et al.* commented that answers to questions on alimentary function were misleading in many people over 62; so much abdominal discomfort is "functional" and so much pathology symptomless.³ With hospital facilities Pridie found hiatus hernia in 30% of 500 subjects,⁹ with general practice facilities we made this diagnosis in only 4.4% of our patients.

Observer discrepancy was most apparent in urinary and genital assessment. The female team members found more urinary disturbance in women than did the male members; on the other hand, the doctors (male) found more urinary disturbance in men than did the health visitor or the nurse. Urinary disturbance was much commoner in men because of prostatism, which

affected 28.6% of male patients. Assessment of genital disturbance was even more difficult. Williamson *et al.* encountered much resentment from elderly women to rectal and vaginal examination;² we used these procedures only where indicated. 7.7% of men complained of genital afflictions (mainly hydroceles) and 13.5% of women (mainly pelvic floor deficiencies).

Psychiatric assessment was a joint effort by the team. Anxiety was the commonest disturbance, affecting two women for every man, and its recognition presented little difficulty to the health visitor or nurse. Likewise overt depression, affecting 18 subjects (7.3%) with an equal sex distribution, was not too difficult for them to recognize. Masked depression, however, with its protean disguises defeated not only the nursing personnel but the doctors on occasion as well. Much of the gastrointestinal symptoms already discussed may have been psychogenic.

In theory, dementia might be diagnosed on the basis of impaired intellect, personality, and memory, with disorientation and confabulation as supporting evidence. In practice, however, tests for intellectual competence are almost certain to be recognized as such by the subject and be resented. Personality deterioration defies definition or measurement and though it can be recognized by close associates a stranger is unlikely to detect it. Confabulation is almost pathognomonic of dementia but the health visitor and nurse did not find it an easy sign to elicit. This left impaired memory and disorientation as the only reliable and readily elicited evidences of dementia for routine screening by non-specialists. The omission of "disorientation" from our check list was a defect. If impaired memory can be accepted as evidence of dementia 10.2% of our patients were suffering from a degree of it. Williamson *et al.* considered that 14.6% of men and 13% of women over 65 have dementia.² Few observers would agree as to what degree of intellectual competence should be regarded as "normal" in old age, and observer discrepancies are so common even among trained psychiatrists that repeatable figures are perhaps unattainable. Player *et al.* reported psychiatric illness in 16.3% of persons over 65. In their series health visitors recognized all cases considered by the psychiatrist to have psychiatric disability of moderate degree and identified no false-positives. The authors comment that if health visitors are to be used for this type of screening they will require more intensive training.¹⁰ In retrospect our check list for the detection of dementia could have been improved by the addition of "disorientation" and by including standard questions disguised as conversation to elicit defects in memory for recent and remote events. We relied too much on the experience and ingenuity of the observer.

MISUSE OF DRUGS

Of our patients 12.3% were not taking their drugs as prescribed. Gibson and O'Hare reviewed 273 elderly patients for whom domiciliary consultant visits had been requested, finding that 10% of patients under good supervision and on less than four drugs were not taking medication as prescribed.¹¹ With supervised patients on four or more drugs misuse rose to 42%. Multiple morbidity is common in the elderly and some diseases require more than one drug. If every complaint was treated the result could be dangerous polypharmacy or regimens of self-defeating complexity. We had been guarding against this risk by insisting on the use of "repeat prescription cards" on which only authorized drugs are listed. In spite of this, 5% of our patients were taking four or more drugs and we could not reduce this figure after review.

MORBIDITY AND UNREPORTED ILLNESS

Multiple morbidity is the rule in the elderly. Each of our patients had on average 3.2 disease entities (3.4 per man and 3.1 per woman). This compares with Williamson *et al.*, who found 3.26

per man and 3.42 per woman in those over 65.² Half of the disability in their series was considered unknown to the doctor as compared with 20.5% in our series. Most of the disability in both series was slight or moderate but early diagnosis is good diagnosis and more likely to lead to arrest or cure, or to prevent the vicious circles of morbidity to which the elderly are prone. We were surprised at the low incidence (20.5%) of unknown disability in our 70- to 72-year-olds. The definition of "unknown" in this context is debatable. A doctor may be fully aware of a patient's obesity without recording it on his N.H.S. medical file, though no doubt he should.

By the age of 70 the ranks of the men have been thinned out by killing diseases and women outnumber men by three to two. Myocardial infarctions have taken their toll and heart disease is now equally distributed in the sexes, but 25% of the men have demonstrable peripheral vascular disease and another 25% have chronic bronchitis as compared with 9% and 7% respectively of the women. The most urgent need in prophylactic geriatrics is for more research into the pathology and prevention of degenerative disease.

HEALTH SCREENING

Community health screening of the elderly may be very time-consuming and expensive in money and personnel. MacLennan comments that a simplified technique is necessary for general practice conditions and that the initial screening could be done by a health visitor, who would detect patients in need of referral to the general practitioner or to a clinic for examination.¹² But Donald points out that there is only one health visitor for 3.6 general practitioners in Britain and were they all attached to general practice their time could be fully occupied with caring for the young (a statutory duty) leaving no time for the elderly.¹³ Indeed, Ness and Reekie conclude that screening of the elderly would require one additional whole-time health visitor or nurse per four general practitioners.¹⁴ This was also our experience:

the task was beyond the capability of three doctors and one health visitor but became practicable with the help of another full-time nurse. Andrews *et al.* argue that screening is necessary because of late reporting of illness by older people and this view cannot be challenged,¹⁵ but in our experience older people seldom conceal their illnesses deliberately and they are very willing to reveal their health problems to those they trust if given the opportunity. In other words, failure of self-reporting means failure to make contact with the elderly and failure to ask the right questions. The busy general practitioner has neither the time for routine visiting of the elderly nor the training for psychosocial investigation in depth and this work is far better done by a health visitor. She may be hard pressed for time and may require another nursing colleague but her very presence in a health team will reduce the reservoir of unreported illness, and if she is given a well thought-out check list which is not cumbersome very little morbidity will be missed.

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Around Europe

Clinical Medicine and Research in Germany

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Last year the British Council began sponsoring a series of visits to our European partners to learn more about their schemes of medical training and research to see whether interchange with Great Britain could be made easier. Dollery and Burn¹ described the first visit to France, and in December 1973 I made a trip to West Germany and spent two weeks visiting 24 institutions, interviewing 40 individuals from a medical student at Bonn to the Rector at Cologne and chatting to many others as I toured the universities, research institutes, and hospitals. My itinerary was arranged by the Cologne office

of the British Council with the advice of the German Research Society. Everywhere I was met with unfailing punctuality, courtesy, and hospitality. My ineptitude at German was more than compensated by the excellent English of my German hosts and by the skill of British Council staff as interpreters.

Medical Education

The pathway to a medical career is summarized in the table. Applications for a place in medical school are about as numerous in West Germany (population 60 m.) as in Great Britain (population 55 m.) but twice as many places are offered—6,400 in 27 medical schools. After a brief unhappy experience of unlimited entry to medical school, numbers were restricted and competition is stiff; the selection is made without interview through a central clearing house and is based largely on performance in the "Abitur"—the final examination at high