A SOCIAL AND MEDICAL SURVEY OF THE EXTREME
ELDERLY IN A MIXED TOWN AND COUNTRY PRACTICE IN
NORTHERN IRELAND

by

M. S. GLENN, M.B., M.R.C.G.P.

Ballymoney Health Centre

BALLYMONEY is a market town of approximately six thousand inhabitants situated near the north coast of Northern Ireland. A purpose-built health centre serves the needs of 12,800 patients in the town and the surrounding area. Two practices share the facilities with other health care workers.

The practice studied had 9,180 patients and there were three full-time principals and one trainee assistant. In addition there were two health visitors and two district nurses attached. For the past fourteen years all patients in the practice reaching the age of sixty-five years have been offered an opportunity for an examination of their state of health and social needs. This work is undertaken by health visitors and district nurses and referrals are made to the general practitioner or to social services as necessary. This work and other aspects of the programme of care of the elderly have been reported by Burns. The present study set out to obtain information about the extreme elderly — a group not previously studied in detail.

METHOD

The study population was found using the age-sex register. Only those patients living at home were studied — those in residential accommodation and those temporarily or permanently in hospital were excluded. Initially it was intended to study all those whose ages were recorded as eighty-five years or over. However, in some cases the patients did not agree with the date of birth recorded on their records and so ultimately all patients recorded as aged eighty-three years and over were studied. There were forty-three patients in the group — fifteen male and twenty-eight female.

Each patient was visited at home and assessed. The results of the assessment were recorded on a questionnaire and later analysed by computer. The codes for recording health problems were taken from the RCGP/CPCS Classification of Morbidity for the National Morbidity Survey 1970-1971. The drugs being used were coded using the prescription analysis therapeutic classification prepared by the Pharmaceutical Section of the Northern Ireland Health and Social Services Board, November 1975.

The questionnaire was formulated to obtain information in five main areas of interest:-

1. Supervision by relatives and medical and nursing staff.
2. Active health problems and drug treatment.
3. Physical capacity.
4. Orientation.
5. Behaviour.
Physical capacity was assessed by considering eleven aspects of daily living relating to mobility and the ability to attend to personal hygiene. A score of 1 was awarded if the patient could accomplish the task unaided and a score of 2 if help was required. The scores were added and interpreted as follows:

| Score Range          | Handicap Description     |
|----------------------|--------------------------|
| Less than 14         | No significant handicap  |
| Between 15 and 19    | Moderate handicap        |
| 20 or above          | Severe handicap          |

Orientation was assessed by asking seven simple questions such as name, age, address and the name of the prime minister. A score of 1 was awarded for a correct answer and a score of 2 for an incorrect one. The scores were added and interpreted as follows:

| Score Range | Interpretation     |
|-------------|--------------------|
| 7 or 8      | Mentally clear     |
| 9 to 11     | Moderate confusion |
| 12 to 14    | Severe confusion   |

In assessing behaviour relatives were asked if the patient was noisy, disruptive, wandering, demanding or depressed. The frequency of these problems was considered. A score of 1 was given if they never occurred, a score of 2 if they occurred occasionally (2 days or fewer out of 5) and a score of 3 if they occurred frequently (3 days or more out of 5). When added the sum of the scores was interpreted as follows:

| Score Range | Interpretation          |
|-------------|-------------------------|
| 5 to 6      | Good behaviour          |
| 9 to 11     | Occasionally troublesome|
| 12 to 15    | Frequently troublesome  |

The questions in the areas of orientation and behaviour were based on the work of Wilkinson and Graham-White.4

RESULTS

In the study by Burns1 of the same practice in 1969 there were 18 patients aged 85 years and over. In 1982 there were 30 over 85 years, 415 aged 75 to 84 and 723 in the age group 65 to 74 years. Of the 43 patients aged 83 years and over (15 men and 28 women) living in private homes — 63 per cent were living with younger relatives. One man and 10 women were in residential accommodation. The one man and six women living alone were regularly visited by relatives. Most were seen daily.

Forty per cent of the study population were on the general practitioner’s “chronic visiting list” and were seen weekly or monthly. The majority of those visited regularly by the general practitioner were also visited regularly by the district nurse (Table I).

Multiple disease conditions were common and 86 per cent had at least two active clinical problems. The problem mentioned by most patients was osteoarthritis. Other common problems were chronic bronchitis, peripheral vascular disease, congestive heart failure and dementia. The high level of drug use was disappointing — 90 per cent of patients were receiving drugs (Table II). The most frequently prescribed drugs are shown in Table III.
Table I

Regular visiting by members of the primary care team
(The figures in parentheses are percentages)

|                  | District nurse | General practitioner | Health visitor |
|------------------|----------------|----------------------|----------------|
| None             | 27 (63)        | 26 (60)              | 37 (86)        |
| Once a month     | 4 (9)          | 14 (33)              | 6 (14)         |
| Once a week      | 7 (16)         | 3 (7)                | 0              |
| More frequently  | 5 (12)         | 0                    | 0              |

Table II

Patients receiving regular drug treatment

| Number of drugs | 0  | 1  | 2  | 3  | 4  | 5 or more |
|-----------------|----|----|----|----|----|------------|
| Number of patients | 4  | 4  | 8  | 14 | 4  | 9          |

Table III

Principal types of drugs being taken regularly

| Type of drug            | Number | Percent |
|-------------------------|--------|---------|
| Diuretics               | 22     | 51      |
| Cardiac (e.g. digoxin, G.T.N.) | 18  | 41      |
| Non-steroidal anti-inflammatory | 9   | 21      |
| Analgesics              | 8      | 18      |
| Laxatives               | 7      | 16      |
| Vitamins                | 7      | 16      |
| Peripheral vasodilators | 6     | 14      |
| Hypnotics               | 6      | 14      |

Seven out of 43 patients had moderate or severe physical handicap, 12 had mild handicap and 24 had no significant handicap. Those with poor physical capacity were usually living with younger relatives. Those with defects of orientation (8 were mildly confused and 4 moderately or severely confused) lived with younger relatives as did the three whose behaviour was occasionally troublesome and the one who was frequently troublesome.

DISCUSSION

The oldest age groups in our community are very important as it is estimated that the increase in population aged 85 years and over between 1976 and 1996 will be 42 per cent. The population aged 60-69 years will decrease in the same period.

A high level of family support was found. This has obvious implications for the correct administration of medicines and the early reporting of new episodes of illness and contrasts markedly with that seen in four urban areas of England and reported by Abrams.
The morbidity observed corresponds well with that seen in previous studies. Polypharmacy is a most difficult problem and there are about 4000 admissions to geriatric units annually because of adverse drug reactions and of course many other drug related problems are dealt with in other hospital departments and at home. Although only 14 per cent suffered heart failure 51 per cent were taking diuretics. Williamson and Chopin’s study also found that diuretics were the most frequently prescribed drugs although not those which gave rise to the greatest number of adverse reactions. Thirty-five per cent were taking digoxin but the need for maintenance digoxin in patients in sinus rhythm had been questioned by Johnston and McDevitt. The low level of usage of hypnotics and sedatives is gratifying.

The moderate/severe physical handicap group contained almost all who scored badly on orientation. Detailed comparisons and analysis of the data showed no association between physical capacity and behaviour or between orientation and behaviour. Forty-two per cent of patients had a full score on physical capacity, orientation and behaviour. Although the number of patients scoring badly on orientation and behaviour was small (12 per cent) this still represents a formidable problem for family and attendants. Were it not for the high level of family support, institutional care would be the only alternative.

**SUMMARY**

A survey of all the patients aged 83 years and over attached to a general practice in Ballymoney, Northern Ireland was carried out. Forty-three patients lived at home and only 16 per cent lived alone. Regular visiting by both relatives and the health care team occurred. Although 56 per cent had no physical handicap and 72 per cent had no defect of orientation 91 per cent were receiving prescribed drugs. Family ties are strong in this community but the small number of handicapped and confused people caused a considerable strain. The need for constant review of prescribing and vigilance for adverse drug reactions is emphasised.

**REFERENCES**

1. Burns C. Geriatric care in general practice: a medico-social survey of 391 patients undertaken by health visitors. *J Roy Coll Gen Pract* 1969; 18: 287-296.
2. Burns C. A programme of care for the elderly. *Ulster Med J* 1975; 44: 159-165.
3. Morbidity Statistics from General Practice. Second National Study 1970-71, by Royal College of General Practitioners, Office of Population Censuses and Surveys and Department of Health and Social Security. *Studies in Medical and Population Subjects No 26*. London: HMSO 1974.
4. Wilkinson IM, Graham-White J. Psychogeriatric dependency rating scales (PGDRS). A method of assessment for use by nurses. *Brit J Psychiat* 1980; 137: 558-565.
5. Government actuary. *Variant population projections 1974-2011*. London: HMSO 1976.
6. Abrams M. *Beyond three-score and ten*. London: Age Concern 1978.
7. Williamson J, Chopin JM. Adverse reactions to prescribed drugs in the elderly: a multicentre investigation. *Age and Ageing* 1980; 9: 73-80.
8. Johnston GD, McDevitt DG. Is maintenance digoxin necessary in patients in sinus rhythm? *Lancet* 1979; 1: 567-570.

I would like to thank my trainer Dr. C. Burns and the staff of the Health Centre for continuous help and encouragement. Mr. Colin Todd and Mr. David Atherley of the Computer Services Department, The New University of Ulster helped in the analysis of the data.