those with severe respiratory problems. This is suggestive, and a larger and more rigorous study might prove useful. The administration of oral polio vaccine may protect against severity of lower respiratory viral disease by means of an interference phenomenon. An immunization history was not recorded in this study, but might prove a valuable adjunct in a larger prospective study should one be contemplated. Since respiratory illness in the first year of life can carry serious sequelae, attempts to prevent exposure of the child to known risk factors should be made. As well as standard advice about breast-feeding and immunization, parents should be told to keep smoke away from their children.

I would like to thank nursing assistant Mavis Xaba and Sisters F. Shabalala and F. Shoba for their patience, dedication and skill. I am indebted to Dr L. Haynes for information on statistical methods, Professor Smythe for a discussion on ventilation, Ms T. Cocorozis for collation assistance, and Dr S. Higgs for a critical review of the manuscript. I thank Dr J. Morfopoulos, Medical Superintendent of Northdale Hospital, for permission to publish.

REFERENCES

Elderly persons in old-age homes
A medical, psychiatric and social investigation

L. TRICHARD, A. ZABOW, L. S. GILLIS

Summary
A survey of 100 consecutive admissions to homes for elderly Whites in Cape Town showed that an interplay of social, physical and psychiatric factors was responsible for most of the referrals, although psychiatric factors contributed to more than 50% of them. The largest proportion (37%) suffered from confusional states, 3.1% were diagnosed as having a senile organic condition and 25% showed moderate to severe depression. These old people were physically very frail; 53% had incapacitating muscular weakness or stiff and painful joints, 35% had a significant degree of deafness, 25% had a visual defect and 23% were incontinent. The findings indicate that old-age homes deal with a considerable amount of physical and mental ill health, and they are therefore an essential part of health services. The residents of old-age homes were much older than elderly people in the community, as well as being more socially isolated and very disadvantaged in terms of income and family and social support.

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Date received: 8 July 1981.
necessary) for persons over 60 years of age. Each person was interviewed within a week of admission and data were collected relating to their personal life and circumstances. A special enquiry was made into the reasons for admission as given by the aged person himself and the referring agent. The subjects were also tested for cognitive impairment by means of the Mental Status Questionnaire which is a simple 10-question enquiry for assessment of memory and orientation (Appendix I), and the presence and severity of depression was gauged by means of the Hamilton Rating Scale which is an accepted and valid indicator of depression. A physical examination with particular emphasis on determining the impairment caused by physical illness was carried out on each subject, and this factor was rated according to a specially devised Impairment Scale (Appendix II). A psychiatric diagnosis was made in each case according to the 9th revised edition of the International Classification of Diseases (ICD).

Findings

Age and sex

Fig. 1 shows that old-age homes deal predominantly with very old people (mean age 80) compared with the community from which they come (mean age 72) and those admitted to a psychogeriatric unit in the area (mean age 73). The age range in the modal age group was 80-95 years and 71% were over 75 years of age. There was only one person aged less than 65. There was a preponderance of women (78%) which reflects their longer life expectancy in this society and also, possibly, because old men tend to be cared for by their spouses if they are still alive. The proportion of elderly women in the community was lower (66%).

The psychiatric team considered that the psychiatric state by itself accounted for only about 4% of referrals, and these were all persons with progressive dementia without physical debility. However, psychiatric symptoms were contributory in 56% — in most of these the referring person had been aware of cognitive impairment if it existed, but depression, even of marked degree, was often missed. One person was clearly paranoid, but this was not mentioned in the referral letter. It will be noted that the opinion of the informants and the psychiatric team agreed closely for all categories, but that wherever psychiatric factors were involved the patient had a low degree of agreement with either. However, they agreed more frequently when physical or social factors were involved.

Previous psychiatric illness was frequent, 21% of residents having had psychiatric symptoms severe enough to have interfered with their functioning or to have required treatment. This figure agrees with that of Kay et al. of 18-24%. Depression was the most common illness mentioned.

Cognitive functioning

Twenty-five per cent had mild impairment, 22% moderate impairment and 15% severe impairment as measured by the Mental Status Questionnaire. The old-age home population is therefore much more intellectually impaired than the elderly in the community, of whom 88% had no cognitive deficit and only 2% showed severe impairment.

Persons with clinical signs of depression tended to have slightly lower Mental Status Questionnaire scores, but really low scores (≤4) only occurred when dementia complicated the depression. Several subjects who had been referred as being demented were shown, on testing on the Hamilton Rating Scale, to be only depressed. This is a well-known clinical experience which can lead to incorrect treatment and misplacement. A simple test for cognitive impairment such as that used in this investigation can be most useful in distinguishing the two conditions.

Psychiatric diagnosis

The diagnosis in terms of the criteria and the 9th classification of the ICD are shown in Table II. Three-quarters of the new admissions to old-age homes had a psychiatric condition, the most frequent being senile organic deterioration (45%). This was present in association with depressive symptoms in 14% of cases. Depression alone was diagnosed on clinical grounds in 6 cases, but was present in association with other lesions in 20% of admissions. This was supported by the findings on the Hamilton Rating Scale which showed that (using Mowbray's cut-off scores) 25% had

<table>
<thead>
<tr>
<th>TABLE I. REASONS FOR REFERRAL</th>
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<tbody>
<tr>
<td>As given by residents</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Physical condition</td>
</tr>
<tr>
<td>Psychiatric state</td>
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</table>

Fig. 1. Age of persons in old-age homes.
TABLE II. PSYCHIATRIC DIAGNOSIS

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>Not mentally ill</td>
<td>28</td>
</tr>
<tr>
<td>Senile organic conditions</td>
<td>31</td>
</tr>
<tr>
<td>Senile organic conditions with depression</td>
<td>14</td>
</tr>
<tr>
<td>Neurosis</td>
<td>15</td>
</tr>
<tr>
<td>Affective psychosis (depression)</td>
<td>6</td>
</tr>
<tr>
<td>Alcoholic psychosis (Korsakoff's)</td>
<td>2</td>
</tr>
<tr>
<td>Transient organic psychosis</td>
<td>5</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1</td>
</tr>
<tr>
<td>Paranoid states</td>
<td>1</td>
</tr>
<tr>
<td>Mild mental retardation</td>
<td>2</td>
</tr>
</tbody>
</table>

*In a few cases there was more than 1 diagnosis.

moderate to severe symptoms and 14% mild symptoms (6 persons were too confused or dysphoric to be tested). Neither age, sex nor the degree of physical incapacity had any statistical relationship to depression scores on the Hamilton Scale. Neurotic syndromes (mostly hypochondriasis and anxiety states) were present in 15%.

Physical incapacity

This was assessed by means of the Impairment Scale on the basis of the extent to which symptoms or incapacity interfered with daily life. 'Moderate/severe' means that the subject could only manage essential tasks, and 'mild' that he was coping for the most part. Only the most significant handicaps are listed in Table III. The findings are compared with those of a similar population living in the community. As might be expected from the advanced age of the population studied, there was a great deal of physical illness and incapacity.

TABLE III. MODERATE OR SEVERE PHYSICAL INCAPACITY (N = 100)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Old-age homes</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Pain</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Visual defect</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Hearing impairment</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td>Stiffness/weakness</td>
<td>57</td>
<td>13</td>
</tr>
<tr>
<td>Dyspnoea</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Incontinence</td>
<td>23</td>
<td>0</td>
</tr>
</tbody>
</table>

More than half of the residents showed significant stiffness and weakness of musculature, one-third had a moderate/severe degree of deafness, and nearly one-quarter (23%) suffered from incontinence. Note that visual and hearing difficulties, stiffness, weakness and incontinence were much more common in the old-age home group.

Psychosocial factors

Three-quarters of the sample (76%) had an income of less than R3 000 per annum, and many were paying almost 50% of their gross income in rent. With inflationary increases they found it financially impossible to manage on their own and since registered old-age homes are partially subsidised by the State this was a factor in admission.

Social isolation was very common and contact with friends, relatives and the community generally poor; 28% never or hardly ever saw family members, and a further 38% had only occasional visits. In sum, only 18% could be said to have reasonably good personal contacts of any sort, and many of the rest were exceedingly isolated. Many had outlived their friends and families, or physical incapacity had reduced their physical mobility. A good proportion, however, had simply been 'dumped', their relatives being frankly unwilling to do anything for them.

Discussion

This study has shown that residents of old-age homes in Cape Town are much older, sicker and more psychiatrically disturbed than elderly people in the community. The homes are taking responsibility for a considerable amount of physical and mental illness which might otherwise be the responsibility of the health authorities. In fact, many of these patients might equally well have been admitted to hospitals. Old-age homes therefore play an essential role in the health services for the elderly.

Referrals to most of the homes appeared to function smoothly but misplacements do occur, usually as a result of an inadequate assessment of the nature of the person's problems. Old-age homes are graded according to the type of care they give and pre-admission assessments by a medical practitioner and a social worker are required in all cases. However, we found that full information was not always available, particularly in respect of disturbed behaviour, the presence of depression or other psychiatric illness, and dementia. There was also frequent discrepancy between assessments of the medical practitioner, the social worker and the matron of the old-age home, and it was evident that more consultation should take place. As has been mentioned, simple tests exist which can be administered by non-specialized personnel (notably the Miniminal Test and the Mental Status Questionnaire for dementia, and the Hamilton Rating Scale for depression).

Lack of clarity on admission policies also gave rise to problems. For instance, some homes did not have the capacity for dealing with severe physical illness, and inappropriate admissions could have been avoided by a clear statement of the services available and the kinds of problems which they were equipped to deal with. In some cases there were other factors involved, such as family prejudices for or against a home, geographical factors, availability of resources, etc.

Our investigation made it plain that a variety of different types of institutions are necessary. In fact, most of the problems we came across could have been resolved had the individual been properly matched with the institution. For instance there is a great need for temporary homes to accommodate old people for a few weeks or months, say on discharge from hospital or if relatives are on holiday. Day-care facilities would also alleviate the burden on relatives in many instances and provide the interest and stimulation that is so lacking in most of the homes we visited. It would also make it possible for more old people to remain out of permanent institutional care. A group needing special accommodation are those with disturbed behaviour — the difficult to manage persons who are found in all old-age homes and cause marked problems. These old people commonly have a considerable degree of organic brain deterioration. The physically frail also need special provisions to ensure not only adequate nursing care but that they do not become isolated because of their loss of function, e.g. through lack of mobility or failing eyesight.

Lack of stimulation and personal concern were abiding problems and it is felt that much more could be done by involving relatives in a purposive way, and by providing interest and stimulation in the homes. The care of the elderly is not a matter just for professionals; much of what they need can be provided by relatives, friends and volunteers.

Lack of trained staff was a problem in many of the homes we visited. There is no substitute for sufficient qualified nursing
sisters, and these should have experience in geriatric care. They can be satisfactorily assisted by nursing assistants but these too require special instruction and supervision. The high prevalence of psychiatric illness makes psychiatric knowledge a matter of priority, but very few of the nurses we met had any training in this field. In spite of great devotion to their patients, lack of understanding of the manifestations of normal ageing and of signs of psychiatric illness, particularly those of depression, was very noticeable.

None of the above shortcomings are beyond solution, and it is our conviction that the single most practical step would be to establish a multidisciplinary geriatric assessment unit in each major centre of population. This could include both medical and psychiatric services, or it could be established as a separate unit, depending upon the circumstances; one such psychogeriatric unit has been functioning effectively in Cape Town for some years.9

These units are available for expert medical and psychiatric assessments and short-term treatments, for dealing with behavioural and psychiatric problems, and to serve as a base for a community service. They also maintain close and regular liaison with all the old-age homes in the area, and train professional and nursing staff. In a word, they form a co-ordinating centre and growth point for the entire field of gerontology.

We wish to express our appreciation to the South African Medical Research Council and the Cape Province Welfare Organization for the Aged for generous financial assistance, and to the Department of Health and Welfare. We also thank the boards of management and staff of the old-age homes visited for co-operation in our endeavours.

REFERENCES

Appendix I. Mental Status Questionnaire
1. ‘Where are we now?’
2. ‘Where is this place located?’
3. ‘What is the day of the month?’
4. ‘What month is it?’
5. ‘What year is it?’
6. ‘How old are you?’
7. ‘When is your birthday?’
8. ‘In what year were you born?’
9. ‘Who is the Prime Minister of South Africa?’
10. ‘Who was the Prime Minister before him?’

Score:
8 - 10 = Absent/mild chronic brain syndrome.
5 - 7 = Mild/moderate chronic brain syndrome.
2 - 4 = Moderate/severe chronic brain syndrome.
0 - 1 = Severe chronic brain syndrome.

Appendix II. Impairment Scale
The extent to which symptoms impair his/her ability to function in daily life. This is scored according to the following:

Pain
0 None
1 Mild
2 Moderate
3 Severe

Vision
0 Normal visual acuity with or without glasses
1 Needs very good light, large letters
2 Can distinguish fingers
3 Dark/light discrimination only/blind

Hearing
0 Normal with or without hearing aid
1 Raised voice needed with or without hearing aid
2 Loud shouting needed with or without hearing aid
3 Totally deaf

Incontinence
0 Nil
1 Very occasionally urine/faeces
2 Almost always urine/faeces
3 Never, or virtually never continent