Comparison of mortality in the elderly at home and in a welfare home

L. A. PIKE, M.B., B.S., F.R.C.G.P., D.Obst.R.C.O.G.
Handsworth, Birmingham 19

The welfare home for the elderly provides residential accommodation for men and women in the later years of their life when, for medicosocial or purely social reasons, they cannot continue in their own home.

With an ageing population and a shortage of beds in geriatric hospitals, many welfare homes are having to cope with men and women with mainly medical problems, and the situation in Birmingham has worsened considerably in the past few years. Coupled with this situation, a shortage of home helps, day centres for the elderly, and meals on wheels has made it difficult to provide adequate domiciliary support for senior citizens. Wherever possible, these domiciliary services should be provided early, before serious breakdown in home circumstances occurs, and the provision of screening clinics by general practitioners (Pike, 1969), and hospital, and local authority workers (Ferguson Anderson, 1967) can lead to the early detection of medical and social problems and their solution, thus preventing admission to a welfare home or geriatric hospital. Workers in welfare homes usually observe the loss of independence some time after the man or woman is admitted; lounges in the homes are occupied by residents sitting in the armchairs, only stirring to go to the dining room to eat their more than adequate meals. Does this loss of independence matter? Should the elderly be kept at home wherever possible, or should more welfare accommodation be provided?

Method

In 1964 a new home was opened by the City of Birmingham and a medical officer appointed. At that time 48 women and 14 men were admitted, mainly from the waiting list, but some patients were transferred from other homes, and the reason for admission at that time was mainly social. These men and women were matched by age and sex from those on the medical officer's National Health Service list. Random matching was accomplished by taking the first name from the practice age-sex register to match the particular age of the resident.

The mortality of the two groups has been recorded during six years. The medical record envelope of the matched practice patients was marked with an adhesive identifying tag to assist identification should removal from the area occur.

Results

In 1964 the average age of residents in the home was 84 for women and 83·5 years for men. The numbers by five-year age groups are shown in table I.

TABLE I
RESIDENTS BY AGE AND SEX ON ADMISSION IN 1964

Age	*Female*	*Male*
65–69	1	1
70–74	5	3
75–79	5	2
80–84	16	4
85–89	13	2
90–94	7	2
95+	1	—
TOTAL	48	14

Equivalent numbers were obtained from the age-sex register of the practice.

Table II shows the original number of females in the welfare home and in their own homes, and the number of survivors after six years. The expected number of survivors for these age groups is 20·6. The difference between the expected rate and the survivors in the welfare home is significant ($P < \cdot 05$).

Table III shows the original number of males in the welfare home and in their own home, and the number of survivors after six years. The expected number of males to survive in these

TABLE II
FEMALE SURVIVORS

Age of admission	*Total females*	*Welfare home survivors*	*Practice survivors*	*Expected survivors*
65–69	1	0	1	
70–74	5	2	4	
75–79	5	1	4	
80–84	16	7	10	
85–89	13	3	6	
90–94	7	0	1	
95+..	1	1	0	
TOTAL	48 (*100 per cent*)	14 (*29 per cent*)	26 (*54 per cent*)	21

age groups is 6·1, but the difference between the expected number and the actual male survivors is not significant. The numbers are too few to be significant.

TABLE III
MALE SURVIVORS

Age on admission	*Total males*	*Welfare home survivors*	*Practice survivors*	*Expected survivors*
65–69	1	0	1	
70–74	3	0	2	
75–79	2	1	2	
80–84	4	1	1	
85–89	3	0	0	
90–94	1	1	0	
TOTAL	14 (*100 per cent*)	3 (*21 per cent*)	6 (*43 per cent*)	6·1

The difference between the total male and female survivors outside the home and the welfare home survivors is significant ($P < \cdot 05$).

The cause of death of those who died after transfer to other homes or to geriatric hospitals has been sought and the cause of death of those who died in the welfare home or in their own homes was recorded. Most causes of death were not confirmed by post-mortem examination and so are clinical diagnoses with the inaccuracy which that implies. Causes of death are shown in table IV.

During the six-year period, three patients from the original population moved from the practice list but contact was maintained, two patients were admitted to welfare homes and one to a mental hospital.

Discussion

The limitations of this study are realized. On the whole, the welfare home populations are initially less able physically and mentally than the practice population, though many of

TABLE IV
CAUSES OF DEATH

	Male		*Female*	
	Welfare home	*Home*	*Welfare home*	*Home*
Cerebrovascular disease ..	4	4	17	9
Coronary artery disease ..	3	2	8	8
Congestive cardiac failure ..	2	2	1	2
Pneumonia-primary	0	0	4	1
Carcinoma	0	0	1	1
Renal failure	1	0	0	0
Pulmonary embolism ..	0	0	1	0
Unknown	1	0	2	1
TOTAL	11	8	34	22

the latter refused to be considered for welfare home admission, and in 1964 admissions to welfare homes were primarily social.

The medical reasons for admission include arthritis, nutritional problems, and mental deterioration which are not necessarily connected with the eventual cause of death. There was no great difference in the social classes of the two groups, and the welfare home is in the practice area, so that the environmental differences were those of modern hotel-like accommodation in the welfare home as opposed to old housing of the villa type in the practice. There were far more women than men in the study because of the better expectation of life of women, and hence the greater number of old women.

Why should mortality outside the welfare home be less than inside? The following factors may be relevant:

(1) Residents are, usually, less well physically and mentally on admission to the welfare home.
(2) The loss of independence in the home makes them less active physically and mentally
(3) Consequently they eat in excess of their calorie requirement and become obese. Obesity decreases the expectation of life (Agate, 1963).

If these factors are relevant then the medicosocial care of this section of the population involves the early detection of medical and social breakdown at the earliest opportunity, with the provision of adequate support to keep them at home. This will prevent admission to welfare homes and geriatric hospitals, and maintain their activity and independence. Admission to welfare homes should be accompanied by greater participation of occupational therapists and physiotherapists in the maintaining of activity and interest of the resident. This would allow the residents to cope with their day-to-day activities as near as possible to their own home conditions. There might be a place for assessment welfare homes where the local men and women over the age of 70 could be admitted for two-weekly periods for medical and social assessment and the consequent early detection of problems and the provision of suitable remedies

Summary

A six-year comparison of mortality in age-sex matched populations in a welfare home and in a general practice, shows longer survival in those outside the welfare home.

Acknowledgements

Thanks are due to Miss Mary Wall, Statistician, Birmingham Regional Hospital Board, for providing figures of expected rates of survival and statistical analysis.