

POPULATION PROJECTIONS

OF THE

ELDERLY

PLANNING UNIT

DEPARTMENT OF HEALTH

JUNE, 1979

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1. Introduction

This report provides estimates of the numbers of persons aged 65 years and over -

- (a) for the years 1976, 1981 and 1986;
- (b) by sex;
- (c) by two age groups, 65 to 74 and 75 years and over;
- (d) by health board area.

The estimates are given in detail in the Appendix attached to this report.

2. Method of Estimating

The basic information used was the number of people in each age group from 50 years upwards as disclosed by the 1971 population census. The numbers of persons in the age groups over 65 years by 1986 will be based primarily on this information. The actual census numbers will be affected by two major factors - mortality and migration.

3. Mortality

The study is concerned with all persons aged 50 years and over at the time of the 1971 census and it is required to estimate the numbers of these still alive in 1976, 1981 and 1986. In order to do this survivorship factors were used.

An examination was first made of the changes in life expectancy from 1961 to 1971. In general life expectancy for males aged 50 years and over showed a slight decline from 1961 to 1966 and again from 1966 to 1971. In the same periods life expectancy for females in the relevant age groups improved. On the basis of the available statistics it appears that the downward trend for male life expectancies and upward trend for female life expectancies have continued from 1971 to 1976.

The latest survivorship factors available are those based on Irish Life Tables 1970-72. The evidence to-date suggests that these tables understate male deaths at present and overstate female deaths. However, the present thrust in health education and preventive services should result in an improvement in life expectancy. In order to reflect this likely improvement it was assumed in the present study that the life expectancy for males would recover its 1971 level and remain at that level up to 1986 and that the improvement in female life expectancy, as observed between 1966 and 1971, would continue in each five year period up to 1986.

4. Migration

While mortality accounts for the principal changes in these age groups, significant changes can also be caused by movement of people into or out of an area. Middle-aged and elderly people do not have the same motivation to migrate as young adults but there is, nevertheless, some movement in these age groups, for example, Irish workers in England returning to live in Ireland on their pensions; a similar movement from Dublin to rural areas and a movement in the opposite direction of parents who move to Dublin when their children take up employment there.

In order to get some guidance on the size and direction of these movements, the position as revealed by the 1966 and 1971 censuses was studied.

Survivorship factors, as described above, were applied to the number of persons aged 50 years and over as given in the 1966 census. This gave a reasonably accurate estimate of the numbers who should be in the age groups from 55 years upwards by 1971, if mortality was the only factor affecting these numbers. A comparison between these estimates and the actual numbers as shown in the 1971 census gave a measure of the effects of migration in these age groups.

The main results thus obtained are set out in Table 1.

Table 1
Migration 1966 - 1971

	Age Groups (1971)							Total
	55-59	60-64	65-69	70-74	75-79	80-84	85+	
Males	-1043	- 395	2120	1880	-1032	- 35	-	1495
Females	-1218	-1050	710	4373	-1663	- 66	-	1086
Total	-2261	-1445	2830	6253	-2695	- 101	-	2581

Note: Negative figures denote emigration while positive figures denote immigration.

These figures indicate that there is overall net immigration in the age groups involved but there is net emigration in the age groups 55 to 64 and 75 to 84. The West and North-West are the areas with the highest inward migration of 1669 and 1213 respectively. The Midland and North-Eastern areas also experienced slight inward migration while there was net outward migration from the Eastern, Mid-Western, South-Eastern and Southern areas.

5. Assumptions on which the Projections were based.

The projections were based on the assumption that:-

- (a) the mortality rates as described in paragraph 3 would apply throughout the period; and
- (b) there would be net immigration of 3,000 males and 3,000 females aged 65 years and over in each five year period up to 1986.

Details of the rational of this latter assumption are given in the Appendix.

6. The Projections

Details of the projections are set out in the Appendix while Table 2 below summarises the results for 1986 by Health Board area.

Table 2Projected Elderly Population - 1986

Health Board Area	Persons Aged 65+		Persons Aged 75+	
	Projected Number	Increase over 1976 Figure	Projected Number	Increase Over 1976 Figure
Eastern	105,300	14,070	39,010	6,720
Midland	23,280	2,060	8,570	280
Mid-Western	35,260	2,560	13,480	1,000
North-Eastern	31,670	3,160	11,700	850
North-Western	30,010	1,430	11,690	580
South-Eastern	41,720	2,310	16,230	1,430
Southern	62,720	5,090	23,980	2,320
Western	48,200	3,130	18,310	340
Total	378,160	33,810	142,970	13,520

These figures indicate that there will be an increase of almost 34,000 in the numbers aged 65 years and over between 1976 and 1986 while the increase in the numbers aged 75 years and over may be in the order of 13,500 in the same period. The population aged 65 years and over will continue to increase in all areas up to 1986. The numbers in the Mid-Western, North-Western, Southern and Western areas are likely to decrease somewhat after 1986 but by the early 1990s they are still likely to be above their 1976 levels. The population aged 65 years and over in the Eastern, Midland, North-Eastern and South-Eastern areas are likely to continue to rise into the 1990s but the rate of increase will slow down.

7. Projection Based on Alternative Assumptions.

The figures given in paragraph 6 are based on the assumptions that life expectancy in the relevant age groups will improve up to 1986 and that there will be a small increase in net immigration, with some changes in its composition, in the same period. While it is reasonable to anticipate that these assumptions will be realised, it is possible that they will not. An alternative projection was therefore prepared, based on the assumption that life expectancy would remain at its 1971 level and that the migration pattern observed from 1966 to 1971 would continue in each five year period up to 1986. The results of this projection indicate a total of 371,500 people aged 65 years and over by 1986 and 137,200 aged 75 years and over by the same date. As could be expected, these figures are somewhat lower than the projections of 378,160 and 142,970 given in paragraph 6. The differences are quite small, however, and, when spread over the health boards, are unlikely to have any effect of consequence on planning services.

8. Other Projections and Estimates

In March, 1977 a paper was presented by Mr Keating of the Central Statistics Office to the Statistical Society of Ireland which set out population projections by age and sex for the country as a whole. The projections in the paper for 1986 were 370,100 for those aged 65 years and over and 136,500 for those aged 75 years and over. These projections are somewhat lower than the projections given in this report. This is due largely to the fact that Mr Keating assumed that the 1970-72 survivorship factors would remain constant up to 1986 while it has been assumed in this report that the factors for females will improve (see paragraph 3). Accordingly Mr Keating's projections for males are very close to the figures in this report while his projection for females are considerably lower. The two sets of projections are compared in Table 3 below.

Table 3Projected Elderly Population - 1986

	Mr Keating's Paper		This Report	
	65+	75+	65+	75+
Males	164,500	56,100	165,150	56,330
Females	205,600	80,400	213,010	86,640
Total	370,100	136,500	378,160	142,970

Population estimates by age are also available from the Labour Force Surveys 1975 and 1977 which were published by the Central Statistics Office. Estimates from the 1977 survey indicated that there were 330,700 people aged 65 years and over in the country in that year which is considerably less than the figure of 344,350 given in this report for 1976. The corresponding Labour Force Survey estimate for 1975 was 318,700. It was accepted by the Central Statistics Office that the 1975 survey appeared to have understated the numbers aged 65 years and over but it is now considered that this deficiency has been largely corrected in 1977 as a result of better coverage of institutions, many of which contain a high number of elderly residents. There is still a possibility, however, that the 1977 estimate understates the number of elderly. The estimates and projections set out in this report are somewhat higher than the two alternative sets of figures discussed above. It is possible, then, that the estimates and projections in this report are slightly too high. However, in view of the fact that the numbers of elderly are likely to continue to rise after 1986 the figures given in paragraph 6 above can be accepted as a reasonable basis on which to plan the provision of health services for the elderly.

9. Elderly Population Related to Total Population

Table 4 shows the elderly population as set out in the attached Appendix as a percentage of total population at the 1971 Census together with the estimated percentages for 1976, 1981 and 1986, based on the most recent population projections available.

Table 4Elderly Population as a percentage of Total Population

Health Board Area	1971		1976		1981		1986	
	65+	75+	65+	75+	65+	75+	65+	75+
Eastern	8.6	2.9	8.4	3.0	8.6	3.1	8.7	3.2
Midland	11.7	4.4	11.5	4.5	11.5	4.3	10.9	4.0
Mid-Western	11.7	4.2	11.4	4.3	11.2	4.1	10.5	4.0
North-Eastern	11.3	4.1	11.1	4.2	11.0	4.1	10.6	3.9
North-Western	14.9	5.7	15.6	6.1	16.6	6.1	16.5	6.4
South-Eastern	11.6	4.1	11.2	4.2	11.2	4.3	10.6	4.1
Southern	11.8	4.2	11.4	4.3	11.8	4.3	11.4	4.3
Western	14.2	5.5	14.5	5.8	15.1	5.5	14.4	5.5
Total	11.1	4.0	10.9	4.1	11.1	4.1	10.7	4.1

The proportion of elderly people to total population is likely to show a decrease by 1986. The percentage aged 65 years and over which was 11.1% in 1971 is now estimated to be about 10.9% and despite a return to 11.1% in 1981 is expected to fall to about 10.7% by 1986. This trend does not hold true for all areas, however, as the proportion of elderly people to total population is likely to increase in the North-Western and Eastern areas and remain more or less static in the Southern and Western areas.

The present imbalance in the age structure of the population in certain areas is likely to continue. For example, the proportion of the population aged 65 years and over is likely to be over 16% in the North-Western Health Board area by 1986 while it will be about 8.7% in the Eastern Health Board area. The proportion of people aged 75 years and over to total elderly population (people aged 65 and over) is likely to fall from 37.6% in 1976 to 36.6% by 1981 but by 1986 it is likely to rise again to about 37.8%. These percentage figures will not vary very much from area to area. The highest percentages by 1986 will be in the North-Western and South-Eastern areas at about 39% and the lowest in the Midland area at 36.8%.

APPENDIX

The population projections and estimates set out in this Appendix are based on the following assumptions:

1. That the mortality rates as described in paragraph 3 of the report will apply up to 1986; and
2. That there would be net immigration of 3,000 males and 3,000 females aged 65 years and over in each five year period up to 1986. The rationale of this assumption is given in the following paragraphs.

During the inter-censal period 1966-71 there was a small amount of net emigration in the 50-64 year age group. It was slightly higher in the Western areas than for the rest of the country. The general economic situation in this country has improved and while unemployment is high it is also high in Britain, the country to which most of our emigrants go. People are now less inclined to regard emigration as an inevitable solution to unemployment problems and social services for the unemployed have improved in recent years. For these reasons it was assumed that there would be no net emigration in the 50-64 year age group.

Internal migration has been largely confined to movements to and from Dublin and between neighbouring counties. In the context of Health Board areas much of the movement between counties ceases to be relevant. Movements to and from Dublin are likely to be negligible in the 50-64 year age group for a number of reasons -

- (i) there has been a substantial improvement recently in the agriculture sector;
- (ii) the recent recession hit the traditional industries in Dublin and the East harder than the more technologically oriented industries of the West;

(iii) it is official policy to attempt to remedy the population imbalance between Dublin and the West.

For these reasons it was assumed that there would be no internal migration of any consequence in the 50-64 year age group between now and 1986.

An analysis of the immigration trends for the over 65 years age group during the intercensal periods 1961-66 and 1966-71 suggests that immigration is taking place earlier (i.e. in the 65-69 year group rather than the 70-74 age group) and that women immigrants tend to be older than men. It was assumed in the study that these trends will continue and on the basis of the available evidence that 2,000 men and 1,000 women will immigrate in the 65-69 year age group while 1,000 men and 2,000 women will immigrate in the 70-74 year age group during each five year period up to 1986.

The apportionment of these immigrants to the various areas and the whole question of internal migration at retiring age is less certain. It has been suggested that many older people come from the provinces to Dublin (at retiring age) to live with their children. This is true but the Census evidence for the past two intercensal periods indicates that it is more than outweighed by the numbers who leave the Eastern area to live elsewhere. It seems that in particular Dublin suffers a net loss of males in the 65 years and over category and that there is considerable immigration (or migration) to the North-Western and Western Health Board areas by both sexes.

It was assumed that the pattern of change in the over 65 years age group in each Health Board area which appears to have been due to migration during the intercensal period 1966-71 will continue up to 1986.

The total affect of this assumption is that it assumes that there will be netimmigration of about 6,000 elderly people in each five year period up to 1986. This trend is in keeping with the evidence of the last two intercensal periods. From 1961 to 1966 there was an estimated net emigration of 3,270 people in these age groups while from 1966 to 1971 the position had changed to a net immigration of 2,580.

TABLE 1

MALES

HEALTH BOARD AREA	1971 (Census)		1976 (Estimate)		1981 (Projection)		1986 (Projection)	
	65+	75+	65+	75+	65+	75+	65+	75+
Eastern	32,613	9,740	35,020	10,840	37,410	11,870	39,380	12,720
Midland	10,431	3,760	10,590	3,800	10,980	3,650	11,250	3,780
Mid-Western	14,960	5,213	15,260	5,360	15,540	5,220	15,610	5,410
North-Eastern	13,333	4,571	13,550	4,730	14,210	4,700	14,520	4,840
North-Western	13,787	5,064	14,330	5,060	14,890	4,890	14,670	5,240
South-Eastern	17,726	5,940	18,190	6,170	18,490	6,310	18,480	6,510
Southern	25,059	8,621	26,230	8,940	27,290	8,850	27,510	9,460
Western	22,728	8,642	23,110	8,400	23,940	7,880	23,730	8,370
TOTAL	150,637	51,551	156,280	53,300	162,750	53,370	165,150	56,330

TABLE 2.

FEMALES

HEALTH BOARD AREA	1971 (Census)		1976 (Estimate)		1981 (Projection)		1986 (Projection)	
	65+	75+	65+	75+	65+	75+	65+	75+
Eastern	52,091	19,025	56,210	21,450	61,000	23,430	65,920	26,290
Midland	10,493	4,047	10,630	4,490	11,310	4,640	12,030	4,790
Mid-Western	16,498	6,192	17,440	7,120	18,610	7,360	19,650	8,070
North-Eastern	14,342	5,430	14,960	6,120	15,970	6,400	17,150	6,860
North-Western	14,032	5,570	14,250	6,050	14,960	6,140	15,340	6,450
South-Eastern	20,270	7,542	21,220	8,630	22,250	9,100	23,240	9,720
Southern	29,745	11,099	31,400	12,720	33,490	13,300	35,210	14,520
Western	21,711	8,626	21,960	9,570	23,400	9,490	24,470	9,940
TOTAL	179,182	67,531	188,070	76,150	200,990	79,860	213,010	86,640

TABLE 3

TOTAL (Males and Females)

HEALTH BOARD AREA	1971 (Census)		1976 (Estimate)		1981 (Projection)		1986 (Projection)	
	65+	75+	65+	75+	65+	75+	65+	75+
Eastern	84,704	28,765	91,230	32,290	98,410	35,300	105,300	39,010
Midland	20,924	7,807	21,220	8,290	22,290	8,290	23,280	8,570
Mid-Western	31,458	11,405	32,700	12,480	34,150	12,580	35,260	13,480
North-Eastern	27,675	10,001	28,510	10,850	30,180	11,100	31,670	11,700
North-Western	27,819	10,634	28,580	11,110	29,850	11,030	30,010	11,690
South-Eastern	37,996	13,482	39,410	14,800	40,740	15,410	41,720	16,230
Southern	54,804	19,720	57,630	21,660	60,780	22,150	62,720	23,980
Western	44,439	17,268	45,070	17,970	47,340	17,370	48,200	18,310
TOTAL	329,819	119,082	344,350	129,450	363,740	133,230	378,160	142,970