

**THE HEALTH RESEARCH BOARD**  
**AN BORD TAIGHDE SLÁINTE**

**The Travellers' Health Status Study**

**Vital Statistics of Travelling People, 1987**

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In the census accommodation status was divided into seven categories. For vital events, because of small numbers, these seven categories have been reduced to two: housed and unhoused. The housed categories for the vital statistics report are local authority house, other house and chalet. The unhoused categories are the three types of caravan accommodation and 'other'. 'Other' consists primarily of huts, tents and barrel wagons.

#### Measures of Vital Events

Three measures of fertility have been used in this report. Crude birth rate is the most basic and is the number of live births per annum divided by the total number of persons in a given population. It does not take account of the proportion of the population in the child bearing ages. General fertility rate is a more refined measure of fertility and is calculated by dividing the number of live births per annum by the number of women aged 15 to 49 (inclusive) in a given population. The third measure of fertility is the total fertility rate, which is the average number of children a woman would have during her reproductive period if current age specific fertility rates applied throughout her reproductive period. It is derived from the seven 5-year age specific fertility rates for the ages 15 to 49. For 18 mothers age was not available and in these cases mother's age has been assigned in the same proportions as the distribution of the ages of those mothers whose ages were known.

A standardised mortality ratio is a method of comparing the mortality experience of one community with that of another, taking account of age and sex differences in the two populations. It is obtained by dividing the number of observed deaths in a population by the number of expected deaths and multiplying by 100. In this report standardised mortality ratios for male and female Travellers have been calculated separately, as is standard practice and the denominator standard populations are the male and female populations of Ireland as recorded in the 1986 Census of Population<sup>7</sup>. For each sex the numerator standards are the 1987 registered births and deaths for Ireland<sup>8</sup>. An additional detailed age and sex breakdown of causes of death was provided by the Central Statistics Office. Standardised mortality ratios have been calculated using the following age bands: 0-1 year, 1-4 years, 5-14 years and 10-year age bands upwards. A population with the same mortality as the standard population would have a standardised mortality ratio of 100. A standardised mortality ratio of 200 or 500 therefore represents a two-fold or five-fold increase in mortality respectively.

Confidence intervals for standardised mortality ratios have been calculated using the method of Morris and Gardner<sup>9</sup>. The standardised mortality ratio is statistically significant at the 5% level if the 95% confidence interval does not include 100, which is the ratio in the standard population. The confidence intervals for the various rates quoted have been derived from the standard error of the difference between the rates. The 95% confidence interval for any rate is the rate  $\pm 1.96$  times the standard error of the difference between the rate and the standard rate. Similarly, the difference between the rates is statistically significant at the 5% level if the 95% confidence interval does not include the standard rate.

The life expectancies for Travellers have been calculated using the abridged life table method of Greville<sup>10</sup>. It was not possible to use an unabridged life table for Travellers as the total number of deaths was too low. The life expectancies for Ireland for 1987 have also been calculated based on 1987 registered deaths using the method of Greville.

## RESULTS

There are two principal components to this report: a report on Traveller fertility and a report on Traveller mortality. The Traveller fertility data are based on the 554 live births to Traveller women notified by CCSTs to the study director. The Traveller mortality data is based on the 84 deaths and 11 stillbirths of Travellers notified by CCSTs to the study director.

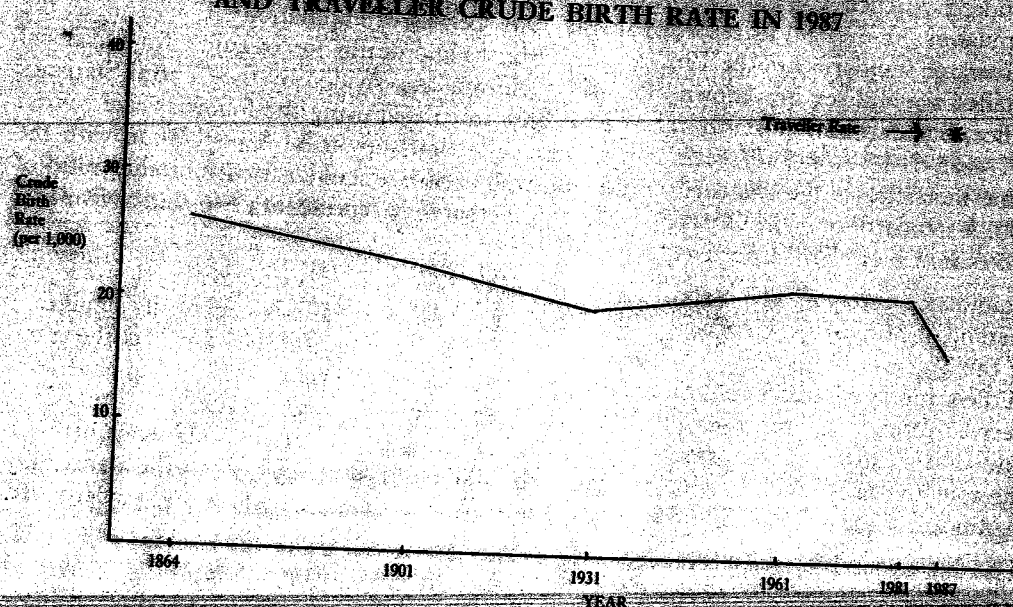
### Denominator Data

A brief review is necessary of the 1986 Census of Travelling People as this forms the denominator for many of the rates calculated in this report. The age-sex breakdown of Travellers by accommodation status, in more detail than was published in the census, is given in Appendix 5. Details of sex are missing in 0.9% of cases and for calculations in this report the missing sexes have been assigned equally to males and females, reflecting the sex ratio in the census as a whole.

### Fertility

Of the 554 live births, 303 were male and 251 were female, giving a sex ratio of 1.2 males to 1 female. The national ratio is 1.06 males to 1 female. For Travellers the crude birth rate in 1987 was 34.9 per 1,000, over double the national figure of 16.6 per 1,000, which is the highest in the European community<sup>1</sup>. The crude birth rate for Travellers in 1987 was higher than the national crude birth rate has ever been since records began in 1864.

FIGURE 1  
IRISH CRUDE BIRTH RATES (PER 1,000) SINCE 1864  
AND TRAVELLER CRUDE BIRTH RATE IN 1987



Sources: 1) Report on Vital Statistics, Department of Health, Dublin, 1988;  
2) Vital Statistics: Yearly Summary 1987, Department of Health, Dublin, 1988



(Figure 1). For Travellers in 1987 the general fertility rate was 164.2 per 1,000, compared to 70.1 per 1,000 for the settled community. The total fertility rate for Travellers in 1987 was 5.3 and for settled women 2.3.

These three measures of fertility are given for Travellers (housed and unhoused) and the national population for 1987 in Table 1. Traveller fertility is much higher than that of the settled population. Within the Traveller community fertility is considerably higher in unhoused Travellers, particularly in younger age groups. Age specific fertility rates for Travellers and settled women are given in Table 2. Among teenage Traveller women fertility is seven times higher in unhoused Travellers. In Travellers in their 20's it is two and a half times higher in unhoused Travellers and twice as high in unhoused Travellers in their 30's.

TABLE 1  
MEASURES OF FERTILITY FOR TRAVELLERS AND IRELAND, 1987

	Ireland	Travellers		
		Total (95% confidence interval)	Housed (95% confidence interval)	Unhoused (95% confidence interval)
Crude Birth Rate (per 1,000)	16.6	34.9 (32.9 to 36.9)	18.4 (15.7 to 21.1)	53.6 (50.7 to 56.5)
General Fertility Rate (per 1,000 women age 15-49)	70.1	164.2 (155.5 to 172.9)	84.4 (72.7 to 96.1)	261.0 (248.1 to 273.9)
Total Fertility Rate (age 15-49)	2.3	5.3	3.2	7.6

Source: See Text

TABLE 2  
AGE SPECIFIC FERTILITY RATES (PER 1,000 WOMEN)  
FOR TRAVELLERS AND IRELAND, 1987

Age	National Population	All Travellers	Housed Travellers	Unhoused Travellers
15-19	16.0	78.9	23.7	162.3
20-24	74.9	246.9	131.1	331.7
25-29	146.8	274.7	160.0	386.7
30-34	133.8	250.0	173.5	346.8
35-39	69.1	148.0	94.0	210.9
40-44	20.8	53.1	48.5	62.5
45-49	1.2	11.1	7.9	18.9

Source: See Text

The age breakdown by accommodation status of births to Traveller women in 1987 is given in Appendix 6.

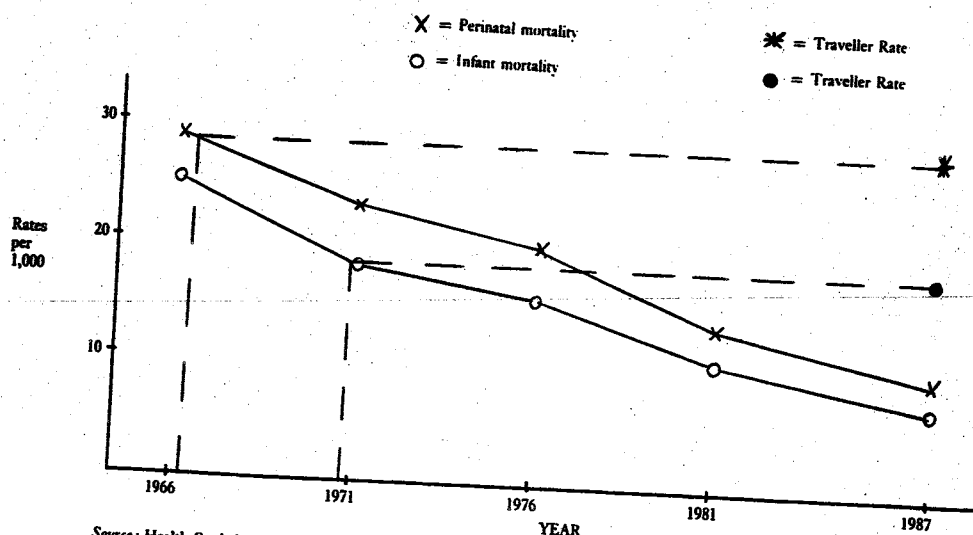
### Marriage

Of the 554 Traveller babies born in 1987, 19 (3.4%) were outside marriage, which is considerably lower than the national figure of 10.8%<sup>8</sup>. The average age at marriage for the Traveller women who gave birth in 1987 was 19 years.

### Mortality

There were 84 Traveller deaths in 1987 and 11 stillbirths. Of the 84 deaths 46 occurred to males and 38 to females. Using the population of Ireland as the standard population the directly standardised mortality rate for male Travellers is 21 per 1,000 compared to 20 per 1,000 for female Travellers. Of the 84 deaths 66 were due to natural causes and 18 due to accidents. The age-sex breakdown for Traveller deaths in 1987 is given in Appendix 7 and the causes are listed in Appendix 8.

FIGURE 2  
INFANT AND PERINATAL MORTALITY RATES IN IRELAND SINCE  
1966 AND TRAVELLER RATES IN 1987



Source: Health Statistics 1987. Department of Health, Dublin, 1987. See Text.

### Mortality in Early Life

The stillbirth rate for Travellers in 1987 was 19.5 per 1,000 total births, compared to the national figure of 6.9 in 1987 (provisional figure supplied by the Department of Health). The perinatal mortality rate for Travellers in 1987 was 28.3 per 1,000 total births, made up of 11 stillbirths and 5 early neonatal deaths, compared to the national figure of 9.9 (provisional figure supplied by the Department of Health). The infant mortality rate for Travellers in 1987 was 18.1 per 1,000 live births, compared to the national figure of

7.48. These mortality figures in early life are summarised in Table 3. In Figure 2 the rate of decline in infant and perinatal mortality in Ireland since 1966 is shown. Infant mortality for Travellers was as high in 1987 as the national rate in 1971 and perinatal mortality for Travellers in 1987 was as high as the national rate in 1966. The numbers of Traveller deaths in these age categories were too low to compare different accommodation status for mortality.

TABLE 3  
MORTALITY IN EARLY LIFE FOR TRAVELLERS AND IRELAND, 1987

	<i>Ireland</i>	<i>Travellers</i> (95% confidence interval)
Stillbirth Rate (per 1,000 total births)	6.9	19.5 (12.6 to 26.4)
Perinatal Mortality Rate (per 1,000 total births)	9.9	28.3 (20.0 to 36.6)
Infant Mortality Rate (per 1,000 live births)	7.4	18.1 (10.9 to 25.3)

Source: See Text

#### Standardised Mortality Ratios

Standardised mortality ratios for Travellers for various causes of death are given in Table 4, and the listings of observed and expected deaths from which they are calculated are given in Table 5. For all causes except congenital anomalies female Travellers fare worse than males when compared with the settled population. Male Travellers have over twice the risk of dying in a given year than settled males whereas for female Travellers the risk is increased more than threefold. The standardised mortality ratio for accidents is over twice the ratio for natural causes in both sexes. The highest standardised mortality ratios for natural causes are for metabolic defects and congenital anomalies in male children, metabolic defects in female children and genitourinary and respiratory diseases in females. However, standardised mortality ratios are raised for all the major causes of death in both sexes.

#### Housing and Mortality

Mortality ratios for housed and unhoused Travellers are shown in Table 6. Of the 84 deaths 46 occurred in housed Travellers and 38 in unhoused Travellers. However, housed Travellers are considerably older on average than unhoused Travellers and the standardised mortality ratio for unhoused Travellers, which takes account of the age difference, is higher than that for housed Travellers, for both males and females. Accidental death is much more likely to occur in unhoused Travellers of both sexes. There were no accidental deaths in housed females. Indeed, when accidental deaths are excluded the standardised mortality ratio for natural causes is the same in housed and unhoused Travellers. Mortality from natural causes is 20% higher in female Travellers who are unhoused but in males it is 20% higher in those that are housed. The number of unhoused Travellers who died was too small to determine meaningful differential rates for those living on serviced or unserviced sites.

TABLE 4  
STANDARDISED MORTALITY RATIOS (SMRs) FOR TRAVELLERS, 1987  
(Standard Population is Ireland)

Cause of Death (ICD 9th Revision)	<i>Irish Males</i> SMR	<i>Traveller Males</i> SMR	95% Confidence Interval
All Causes (ICD 001-999)	100	222	163 to 296
Natural Causes (ICD 001-799)	100	192	133 to 269
Accidents (ICD 800-999)	100	397	205 to 694
Cancer (ICD 140-208)	100	117	38 to 274
Metabolic 0-14 years (ICD 270-279)	100	1,250	32 to 6,965
Cardiovascular (ICD 390-459)	100	168	89 to 286
Respiratory (ICD 460-519)	100	233	63 to 595
Genitourinary (ICD 580-629)	100	417	11 to 2,322
Congenital Anomalies 0-14 years (ICD 740-759)	100	727	198 to 1,862
	<i>Irish Females</i> SMR	<i>Traveller Females</i> SMR	95% Confidence Interval
All Causes (ICD 001-999)	100	307	217 to 421
Natural Causes (ICD 001-799)	100	280	192 to 396
Accidents (ICD 800-999)	100	612	225 to 1,333
Cancer (ICD 140-208)	100	242	105 to 478
Metabolic 0-14 years (ICD 270-279)	100	2,000	51 to 11,143
Cardiovascular (ICD 390-459)	100	217	99 to 412
Respiratory (ICD 460-519)	100	720	329 to 1,367
Genitourinary (ICD 580-629)	100	1,000	121 to 3,612
Congenital Anomalies 0-14 years (ICD 740-759)	100	000	0 to 586
	<i>Irish Population</i> SMR	<i>All Travellers</i> SMR	95% Confidence Interval
All Causes (ICD 001-999)	100	254	202 to 314
Natural Causes (ICD 001-799)	100	227	175 to 289
Accidents (ICD 800-999)	100	450	267 to 711
Cancer (ICD 140-208)	100	172	92 to 294
Metabolic 0-14 years (ICD 270-279)	100	1,538	186 to 5,557
Cardiovascular (ICD 390-459)	100	185	116 to 280
Respiratory (ICD 460-519)	100	438	233 to 748
Genitourinary (ICD 580-629)	100	682	141 to 1,993
Congenital Anomalies 0-14 years (ICD 740-759)	100	255	92 to 868

Statistically significant (5% level) results in heavier type

TABLE 5  
OBSERVED, EXPECTED AND EXCESS TRAVELLER DEATHS  
FOR SELECTED CAUSES, 1987

<i>Cause of Death</i> (ICD 9th Revision)	<i>Observed</i> <i>Traveller Deaths</i>	<i>Expected</i> <i>Traveller Deaths</i>	<i>Excess</i> <i>Traveller Deaths</i>
<b>Males</b>			
All Causes (ICD 001-999)	46	20.71	25.29
Natural Causes (ICD 001-799)	34	17.69	16.31
Accidents (ICD 800-999)	12	3.02	8.98
Cancer (ICD 140-208)	5	4.26	0.74
Metabolic 0-14 years (ICD 270-279)	1	0.08	0.92
Cardiovascular (ICD 390-459)	13	7.76	5.24
Respiratory (ICD 460-519)	4	1.72	2.28
Genitourinary (ICD 580-629)	1	0.24	0.76
Congenital Anomalies 0-14 years (ICD 740-759)	4	0.55	3.45
<b>Females</b>			
All Causes (ICD 001-999)	38	12.39	25.61
Natural Causes (ICD 001-799)	32	11.41	20.59
Accidents (ICD 800-999)	6	0.98	5.02
Cancer (ICD 140-208)	8	3.30	4.70
Metabolic 0-14 years (ICD 270-279)	1	0.05	0.95
Cardiovascular (ICD 390-459)	9	4.15	4.85
Respiratory (ICD 460-519)	9	1.25	7.75
Genitourinary (ICD 580-629)	2	0.20	1.80
Congenital Anomalies 0-14 years (ICD 740-759)	0	0.63	-0.63
<b>All Travellers</b>			
All Causes (ICD 001-999)	84	33.10	50.90
Natural Causes (ICD 001-799)	66	29.10	36.90
Accidents (ICD 800-999)	18	4.00	14.00
Cancer (ICD 140-208)	13	7.56	5.44
Metabolic 0-14 years (ICD 270-279)	2	0.13	1.87
Cardiovascular (ICD 390-459)	22	11.91	10.09
Respiratory (ICD 460-519)	13	2.97	10.03
Genitourinary (ICD 580-629)	3	0.44	2.56
Congenital Anomalies 0-14 years (ICD 740-759)	4	1.18	2.82



## TRAVELLERS' VITAL STATISTICS 1987

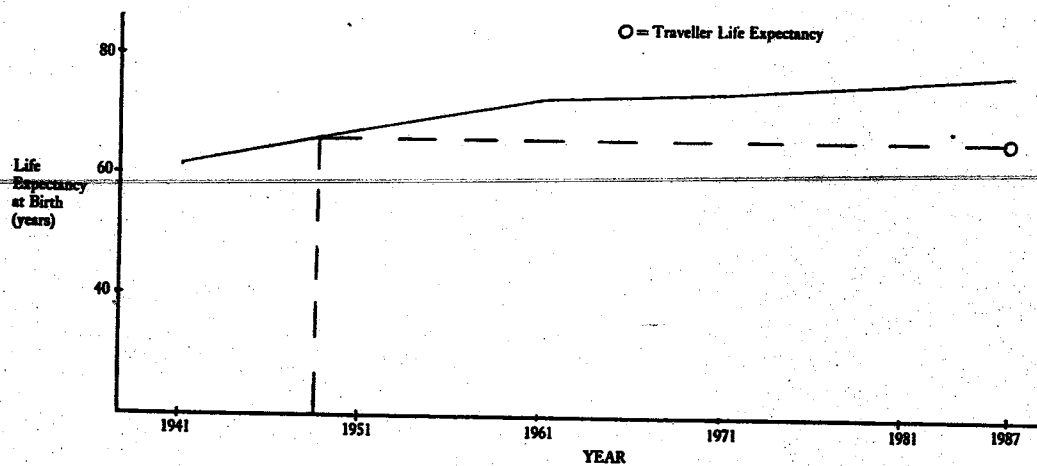
TABLE 6  
STANDARDISED MORTALITY RATIOS (SMRs) FOR TRAVELLERS,  
HOUSED AND UNHOUSED, 1987  
(Standard Population is Ireland)

MALES			
	<i>Irish SMR</i>	<i>SMR Housed Travellers (95% confidence interval)</i>	<i>SMR Unhoused Travellers (95% confidence interval)</i>
All Causes (ICD 001-999)	100	201 (131 to 294)	258 (157 to 398)
Natural Causes (ICD 001-799)	100	204 (129 to 306)	172 (86 to 308)
Accidents (ICD 800-999)	100	181 (37 to 528)	662 (303 to 1,256)
FEMALES			
	<i>Irish SMR</i>	<i>SMR Housed Travellers (95% confidence interval)</i>	<i>SMR Unhoused Travellers (95% confidence interval)</i>
All Causes (ICD 001-999)	100	245 (150 to 379)	425 (252 to 671)
Natural Causes (ICD 001-799)	100	264 (161 to 407)	314 (162 to 549)
Accidents (ICD 800-999)	100	000 (0 to 659)	1,429 (524 to 3,109)
ALL TRAVELLERS			
	<i>Irish SMR</i>	<i>SMR Housed Travellers (95% confidence interval)</i>	<i>SMR Unhoused Travellers (95% confidence interval)</i>
All Causes (ICD 001-999)	100	218 (160 to 291)	317 (224 to 435)
Natural Causes (ICD 001-799)	100	228 (165 to 307)	225 (143 to 338)
Accidents (ICD 800-999)	100	135 (28 to 395)	843 (472 to 1,390)

## Life Expectancy

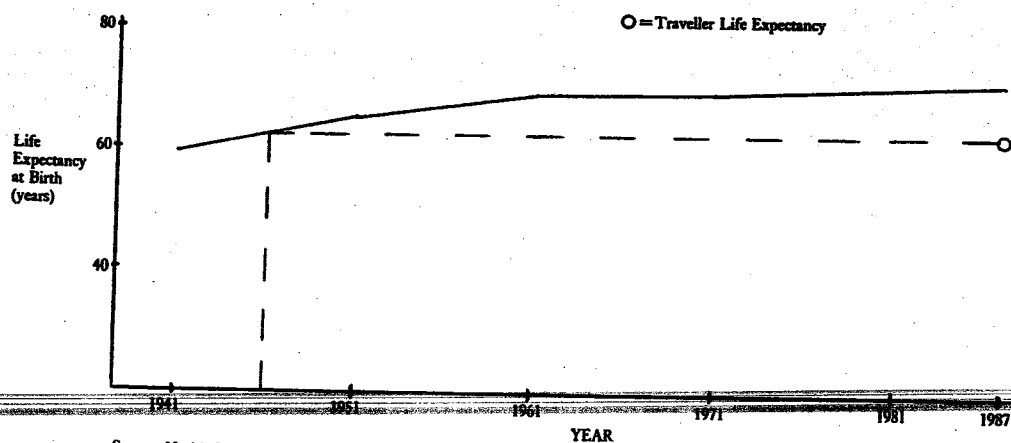
Life expectancy at various ages for Travellers and the Irish population is given in Table 7. At birth male Travellers can expect to live 9.9 years less than settled males whereas life expectancy at birth is 11.9 years less for female Travellers than settled females. The wide differentials persist in both sexes up to age 65, being more marked at all ages in female Travellers. The increase in life expectancy at birth since 1941 for Irish males and females is illustrated in Figures 3 and 4 respectively. Travellers are only now reaching the life expectancy that settled Irish people achieved in the 1940's.

**FIGURE 3**  
**IRISH MALE LIFE EXPECTANCY AT BIRTH SINCE 1941**  
**AND MALE TRAVELLER LIFE EXPECTANCY AT BIRTH IN 1987**



Source: Health Statistics 1987. Department of Health, Dublin, 1987. See Text.

**FIGURE 4**  
**IRISH FEMALE LIFE EXPECTANCY AT BIRTH SINCE 1941**  
**AND FEMALE TRAVELLER LIFE EXPECTANCY AT BIRTH IN 1987**



Source: Health Statistics 1987. Department of Health, Dublin, 1987. See Text.

TABLE 7  
LIFE EXPECTANCY AT VARIOUS AGES FOR TRAVELLERS  
AND THE IRISH POPULATION, 1987

MALES			
<i>Age</i>	<i>Life Expectancy (Years)</i>		<i>Traveller Deficit (Years)</i>
	Travellers	Ireland	
0	61.7	71.6	9.9
15	48.9	57.4	8.5
45	21.3	28.8	7.5
65	10.1	13.1	3.0

FEMALES			
<i>Age</i>	<i>Life Expectancy (Years)</i>		<i>Traveller Deficit (Years)</i>
	Travellers	Ireland	
0	65.3	77.2	11.9
15	52.1	62.9	10.8
45	25.1	33.6	8.5
65	10.4	16.4	6.0

Source: See Text

## DISCUSSION

Mortality of Travellers on a national level has never been measured. It was recognised that the Travelling community is not homogenous and that large variations within the Traveller population might be discovered. An important differentiating factor between Travellers that might have a bearing on health is accommodation status. In the census seven accommodation types were recorded. For the purposes of the vital statistics report these aggregate to two; housed and unhoused. The THSS census of Travellers was carried out in November because this is regarded as the month of least Traveller movement. It is also a month when proportionally more Travellers will be classified as housed than most other months.

### Denominator Data

The vital events which form the numerators for all rates in this report occurred throughout 1987. As November is regarded as the month of least Traveller mobility and maximum occupancy of houses there would have been proportionally more Travellers housed in November 1986 (the base for denominators) than the average for 1987 (the base for numerators). Thus, the vital rates for housed Travellers may be artificially low and for unhoused Travellers artificially high. One would need monthly recordings of accommodation status of all Travellers to determine the factor by which the rates would need to be adjusted.

Accommodation status recorded at the census and during the births and deaths in 1987 refers to accommodation status at a point in time. It was not feasible to take into account the individual's lifetime accommodation history. It is possible that an impending life event (giving birth or dying) for a Traveller could be preceded by a change of accommodation status. Travellers with chronic ill health might be housed immediately prior to death whereas young Traveller couples often leave housing around the time of the birth of their first child. The above mentioned caveats have to be taken into account when interpreting the accommodation related differences in fertility and mortality rates.

A feature which was noted in the Census report was digit preference, whereby the number of persons recorded as being aged 30, 40, 50, 60, 70 and 80 years of age was considerably greater than the number claiming to be aged one year more or less than these ages. However, age standardised mortality rates in this report are based on 10-year age bands, e.g. 25 to 34 years, so this unreliability has been adjusted for.

#### Census Results

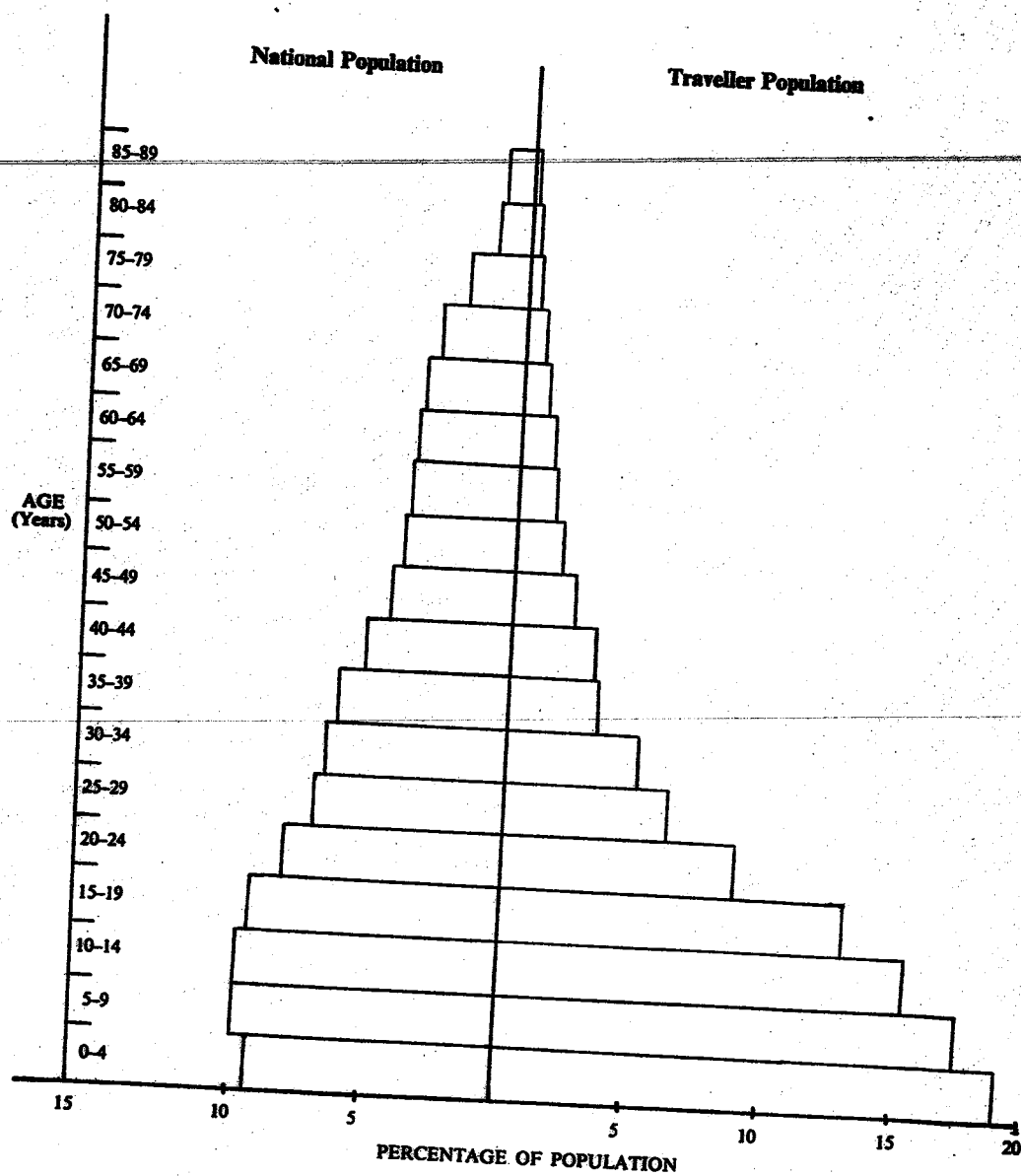
The age pyramid of the Traveller population is similar to that of a developing country: many children with relatively few in the older age groups (Figure 5). This age structure has been ascribed to excess mortality, a factor which has been confirmed in this study. However, there are other potential reasons for such an age structure. The definition of Traveller is subjective and for any given individual can change over time. There may be a tendency for individuals to cease identifying themselves as Travellers as they get older if they are housed, which would lead to an age structure of the type seen in the census. Early and frequent reproduction, together with falling infant mortality, could also account, in the short term, for the age structure in the census. Finally, net migration of Travellers could also partly explain the age pyramid.

#### Fertility

A striking feature of the report is the very high rates for all indices of fertility. It has not been possible to make a valid comparison of Traveller fertility in 1987 with previous years. At the Census of 1960 average Traveller family size was between six and seven<sup>2</sup>. However, it is not stated if this was completed or incompleting family size but as the information was obtained at census it is most likely to have been incompleting family size. From the census of Travellers carried out by the Economic and Social Research Institute<sup>12</sup> in 1981 it is possible to calculate average incompleting family size in 5-year age cohorts. For women aged 15 to 19 it averaged 0.7 children, rising to 9.9 in women aged 45 to 49. This indirect evidence, compared with the total fertility rate to age 49 of 5.3 in the present report, would suggest that Traveller fertility is declining. Early age at marriage is undoubtedly a major factor in these high rates. Other issues such as pregnancy spacing and contraceptive use are being studied in the cohort of women who gave birth in 1987 and will be considered in a third report.

The higher rates in unhoused Travellers could represent a real difference in reproductive behaviour. However, there is a belief that many Traveller couples begin their married life 'on the road', which would artificially boost all unhoused fertility rates. The age related differences in housed and unhoused fertility rates would support this belief.

FIGURE 5  
AGE STRUCTURE OF NATIONAL AND TRAVELLER  
POPULATIONS, 1986





### Mortality

Travellers begin to experience excess mortality even before birth (Table 3). It is not possible to discern a pattern with regard to stillbirths from 11 cases, but a detailed examination of other factors related to pregnancy will appear in a third report.

Travellers of all ages have very high mortality rates compared to the Irish population. It is not possible to make comparisons with different socio-economic groups within the settled population as such information is not yet available. In the Inequalities in Health (Black) report in the UK in 1980<sup>13</sup> social class V males had a standardised mortality ratio for all causes of death of just over 150, whereas social class V females had a standardised mortality ratio of just under 140. These differentials are considerably less than the ratios of 222 and 307 for male and female Travellers respectively.

If similar social class gradients in mortality apply in Ireland then Traveller mortality is likely to be considerably greater than that of the poorest settled groups. The standardised mortality ratio for adult social class V males in the Black report was 200 from accidents, where the steepest cause specific social class gradient lay. The very high standardised mortality ratio for accidents found with regard to Traveller females in the present report was not found for social class V females in the Black report.

In interpreting the importance of the standardised mortality ratios given in Table 4 three factors have to be taken into account: the magnitude of the ratio, the confidence interval and hence statistical significance and the excess deaths. For this reason it may be helpful to examine Tables 4 and 5 simultaneously. From Table 4 it can be seen that the highest standardised mortality ratios in both sexes are for metabolic diseases in children, with a ratio taking both sexes together of 1,538. However, the excess deaths are only 1.87 per annum. For cardiovascular diseases the ratio is much less (185) but the excess deaths are 10.09 per annum.

Because of two characteristics of the Traveller way of life, the high proportions who are unhoused and the practice of marrying close blood relations, it is possible to argue that some of these high ratios are more important than others in terms of identifying causes of mortality and suggesting remedies. The very high standardised mortality ratios for accidents in unhoused Travellers (Table 6) offers scope for preventive action of an educational nature. The very high ratios for metabolic disorders and congenital problems in Traveller children are partly explained by the practice of Travellers marrying within their own community. The implications for the Travelling community of these findings are potentially great and the findings will have to be made available and discussed extensively throughout the Travelling community before recommendations that have a chance of being implemented can be made. There is no obvious explanation for the higher ratios in female Travellers for practically all causes of death.

### Housing and Mortality

Reference has already been made to the difficulties in interpreting mortality by accommodation status in Travellers. With regard to accidental death rates there is unequivocal evidence that unhoused Travellers are at great risk, both males and, more particularly, females.

The interpretation of the data with regard to natural cause mortality is more difficult. Two factors could artificially alter mortality by housing status. The fact that the Census was carried out in November whereas the deaths took place throughout the year would lower rates for housed Travellers. On the other hand an influx of Travellers to housing prior to death, particularly from a chronic cause, would raise rates for housed Travellers. The level of housing history that would need to be taken to quantify these potential confounders was beyond the scope of this report.

#### Life Expectancy

It can be noted from Table 7 that female Travellers have greater life expectancy at all ages than male Travellers. However, from Tables 4 and 6 it can be seen that female Travellers have higher standardised mortality ratios than male Travellers for virtually all causes of death. The reason for this apparent discrepancy is that the standardised mortality ratios given in Tables 4 and 6 have been calculated by comparing male and female Travellers with settled people of the same sex, whereas the life expectancy figures are calculated using only Traveller mortality data. When the notion of comparison with the settled population is introduced by examining the Traveller deficit female Travellers again fare comparatively worse than male Travellers.

#### CONCLUSION

The rates and ratios presented in this report are calculated on the vital events of one year only. However, so great are the differences between Travellers and the settled population that it is likely that they represent real differences between Travellers and the settled community and statistical analysis confirms this.

The picture which emerges of the Travelling people in 1987 from this report is of a group who marry at a very young age and have many children. From before birth to old age they have high mortality rates, particularly from accidents, metabolic and congenital problems but also from the other major causes of death. Female Travellers have especially high mortality compared to settled women. Those members of the Travelling community who do not live in houses, approximately 50%, have even higher mortality ratios than housed Travellers, especially females and particularly from accidents.

The widely believed increased mortality and high fertility of Travellers have been confirmed and quantified in this study. The success of the efforts which are being made and will have to be made by statutory and voluntary agencies and the Travelling community to improve Traveller health can best be measured by another study in five to ten years.

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## GLOSSARY

**Age specific fertility rate (5 year):** Total births to women in a specific 5-year age cohort per 1,000 women in that age cohort.

**Area Medical Officer:** Doctor employed by health board in the public health service.

**Cohort:** Group of identifiable persons under study.

**Community Care Area:** Health board administrative area; each has approximately 100,000 people.

**Confidence interval (95%):** Since this study only examined Traveller vital events for a one year period, with fairly small numbers, it is important to gain some idea of what the situation might be if a much larger period had been examined with a larger sample size. The 95% confidence interval can be broadly interpreted as a range of values within which we can be 95% sure the result would be. This relates to the notion of statistical significance. A statistically significant difference is one unlikely to be due to chance. This can be gauged by whether the confidence interval overlaps the standard (in this study National) figure.

**Congenital anomaly:** Defect or disorder present from birth.

**Crude birth rate:** Number of babies born per annum per 1,000 persons in the population.

**Denominator:** Number below the line in a fraction.

**Director of Community Care/Medical Officer of Health:** Medical doctor who is in administrative charge of community care area.

**First domiciliary post-natal visit:** The first visit to the home of a newborn baby carried out by a public health nurse.

**General fertility rate:** Number of babies born per annum divided by total number of women aged 15 to 49 inclusive in the population.