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INTRODUCTION

THE Executive Committee of the Continuous Mortality Investigation Bureau of the Institute of Actuaries and the Faculty of Actuaries has pleasure in presenting this, the fifteenth number of its reports. This number contains four reports, all of which relate to the PHI investigations.

The first two reports describe a methodology of analysing PHI experience using the multi-state model approach developed in *C.M.I.R.* **12** in 1991. The first report deals with the analysis of inception rates and the second, much longer, report deals with the analysis of claim terminations due to both deaths and recoveries. The reports analyse the following experiences:

Individual PHI, 1975-78, 1979-82, 1983-86, 1987-90
Group PHI, 1975-78, 1979-82, 1983-86

and compare the actual claims experience with that expected using the graduated rates for the Standard male lives experience on individual PHI policies, 1975-78, as presented in *C.M.I.R.* **12**. Our thanks go to Howard Waters and David Wilkie for their efforts in developing the methods of analysis and the preparation of the reports. It is the intention of the PHI Sub-Committee that the methods of analysis and style of presentation will form the basis of reports on subsequent experiences in future numbers of *C.M.I.R.* and also the results given to contributing offices derived from their own data.

The third report analyses the experience for individual PHI for the quadrennium 1983-86 using the traditional sickness rate or "Manchester Unity" approach. The fourth report analyses the experience for group PHI for 1979-82 and 1983-86 using the sickness rate approach. We are grateful to Raymond Hayward for the work put into these two papers. The PHI Sub-Committee are considering the future of this method of analysing experience and it is unlikely that future reports will contain such a level of detail. The intention is that reports on subsequent experiences will be based primarily on an analysis of claim inception and termination rates.

The Bureau is very conscious of the need to meet the requirements of its member offices and the actuarial profession for up-to-date PHI experience. Much work has been done and continues to be done. Indeed, at the time of writing, an analysis of individual 1991-94 data is about to commence. Although some data for this quadrennium remains outstanding, this forms a small proportion of expected total data, and it is hoped to publish some interim results during 1996. We are also seeking to obtain outstanding data for the group 1987-90 experience with a view to publishing results in the next twelve

months. I would like to stress that the timely publication of results cannot take place without the timely submission of data. This aspect has much improved recently, but there is room for further improvement and I would request that offices continue to submit data as soon as reasonably possible.

The Bureau would welcome any further contributors of data to the mortality, PHI or critical illness investigations and is currently in discussion with a number of offices in this regard. May I also remind you that while we encourage offices to submit data wherever possible, if offices are unable to do so they can still become members of the Bureau, and may request all-office results for individual years for any of the investigations as soon as they are available.

July, 1996

C G Kirkwood
Chairman, Executive Committee

CONTENTS

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CLAIM INCEPTION RATES UNDER PHI POLICIES, INDIVIDUAL 1975-90 AND GROUP 1975-86

1. INTRODUCTION

This report presents the results of analyses of PHI claim inception rates for the quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. With one exception, it covers both male and female lives and, for each sex, both individual and group policies. The exception is the latest quadrennium, 1987-90, where group data is not yet available. Analyses of some, but not all, of these experiences, using methodology different from that used in this report, have already appeared in CMI Reports. See *C.M.I.R.* **7**, **8**, **11** and **14**. A new mathematical model for the analysis of PHI data was presented in *C.M.I.R.* **12**. This model was parameterised using the males, individual policies, Standard experience data from 1975-78. The main purpose of this report is to use this model to analyse PHI claim inception rates for all available data sets from 1975 to 1990. Analyses of claim inception rates for more recent data sets using the methodology introduced in *C.M.I.R.* **12** will appear in future CMI Reports.

2. SUMMARIES OF THE ANALYSES

Tables 1.1, 1.2, 1.3 and 1.4 give brief summaries of the analyses of claim inceptions for each of the relevant quadrennia and for each of the five deferred periods, 1 week, 4 weeks, 13 weeks, 26 weeks and 52 weeks, separately for males and for females and for individual and for group policies. The methodology used to produce these summaries, together with more detailed summaries, are described in the following section.

The information given in each of Tables 1.1, 1.2, 1.3 and 1.4 is the value of each of the following statistics for each of the relevant quadrennia and each of the five deferred periods:

$100 \times A/E$	is the actual number of claim inceptions divided by the expected number, expressed as a percentage. This value is taken from the corresponding table among Tables 2.1 to 2.14.
$100 \times (A/E \pm 2 \times SD)$	is the value of A/E plus/minus twice the standard deviation of A/E, expressed as a percentage. The standard deviation of A/E can be shown to be approximately $100 \times \sqrt{V/E}$, where E is the total

expected number of claim inceptions and where V is the variance ratio to allow for duplicate policies in the data (see *C.M.I.R.***12**, Part C, Section 1.2). The values for V are different for each deferred period and are those used in *C.M.I.R.***12**, Part C, for the final graduations of the sickness intensity, σ_x. (The variance ratio for deferred period 52 weeks has been assumed to be the same as that for deferred period 26 weeks.) The values of $A/E \pm 2 \times SD$ are not shown if the total expected number of claim inceptions is small, in practice less than five. The value of $A/E - 2 \times SD$ is not shown if this value is negative.

Figures 1, 2, 3 and 4 show graphically the same information as Tables 1.1, 1.2, 1.3 and 1.4, respectively. These Figures are included to give a (crude) graphical indication of the trends in claim inception rates across the relevant quadrennia for each of these four experiences and also to indicate the general level of claim inception rates as compared to the graduation of the males, individual policies, Standard experience 1975-78 data.

3. METHODOLOGY AND MORE DETAILED SUMMARIES

Tables 2.1 to 2.14 show a comparison of actual against expected claim inceptions for Standard experience data, deferred periods 1, 4, 13, 26 and 52 weeks, for the following data sets:

Table 2.1: Males, individual policies, Standard experience 1975-78.
Table 2.2: Males, individual policies, Standard experience 1979-82.
Table 2.3: Males, individual policies, Standard experience 1983-86.
Table 2.4: Males, individual policies, Standard experience 1987-90.
Table 2.5: Females, individual policies, Standard experience 1975-78.
Table 2.6: Females, individual policies, Standard experience 1979-82.
Table 2.7: Females, individual policies, Standard experience 1983-86.
Table 2.8: Females, individual policies, Standard experience 1987-90.
Table 2.9: Males, group policies, Standard experience 1975-78.
Table 2.10: Males, group policies, Standard experience 1979-82.
Table 2.11: Males, group policies, Standard experience 1983-86.
Table 2.12: Females, group policies, Standard experience 1975-78.
Table 2.13: Females, group policies, Standard experience 1979-82.
Table 2.14: Females, group policies, Standard experience 1983-86.

The method used to analyse claim inceptions for these data sets is based on the Multiple State Model for PHI introduced in *C.M.I.R.* **12**. Part C of *C.M.I.R.* **12** sets out a methodology which was used to graduate the males, individual policies, Standard experience 1975-78 data and which could be used to analyse claim inceptions from other data sets. This methodology has been used in this report with some minor differences. The most important of these differences is in the treatment of "non-reported claims". In *C.M.I.R.* **12** (see, in particular, Part B, Section 3 and Part C, Section 3) it was assumed that some policyholders who suffered a sickness lasting longer than the deferred period, but who recovered within four weeks of the end of the deferred period, did not bother to make a claim even though they were entitled to do so. In *C.M.I.R.* **12** this problem was dealt with by estimating the number of "non-reported claims" and comparing the total of reported and non-reported claims with the expected number of claims, where the expected number of claims was calculated assuming that all policyholders entitled to make a claim would do so. In this report a different approach has been used. The expected number of claims has been reduced to allow for the possibility that not all potential claims are reported, and this reduced number of expected claims is compared with the number of claims actually reported.

The format of each of Tables 2.1 to 2.14 is the same. For each five year age group from age 20 to age 64 the following information is given:

AINC is the actual number of claim inceptions.

EINC is the expected number of claim inceptions, calculated at single ages and then summed to give a total for the five year age group. For a single year of age $x \rightarrow x-1$, EINC is calculated as follows:

$$\text{EINC} = \text{EH}_x \cdot \sigma_{x+\frac{1}{2}-d} \cdot \pi_{x+\frac{1}{2}-d,d} \cdot r^d(x+\tfrac{1}{2}-d)$$

where EH_x is the exposure (= time spent as healthy) at age x last birthday. This is calculated as in *C.M.I.R.* **12**, Part C, Section 4, except that no allowance has been made for time spent as sick but not claiming. The effect of ignoring this is to overstate the exposure by about 0.5%. Exposure for the 1987-90 quadrennial data was, however, calculated by an equivalent but more exact method which did *not involve "unadjusting" exposures for the* "Manchester Unity" sickness periods.

$\sigma_{x-\frac{1}{2}-d}$ is the sickness transition intensity at age $x+\frac{1}{2}-d$, where d is the deferred period. For deferred periods 1, 4, 13 and 26 weeks, this is the graduated intensity for the appropriate deferred period taken from *C.M.I.R.* **12**, Part C. For deferred period 52 weeks, data for which were not considered in *C.M.I.R.* **12**, the value of the sickness inception intensity has been taken to be $0.68926\sigma_x$, where σ_x is the graduated intensity for deferred period 26 weeks. The factor 0.68926 was chosen so that the ratio of actual to expected claims for the males, individual policies, Standard experience 1975-78 deferred period 52 weeks data was 100%.

$\pi_{x+\frac{1}{2}-d,d}$ is the probability that a life falling sick at age $x+\frac{1}{2}-d$ will remain sick until age $x+\frac{1}{2}$. This has been calculated using the graduated intensities for $\rho_{x,z}$ (with no "run-in" period) and $\nu_{x,z}$ in *C.M.I.R.* **12**.

$r^d(x+\frac{1}{2}-d)$ is the probability that a life who fell sick at age $x+\frac{1}{2}-d$, and who has remained sick until age $x+\frac{1}{2}$, will make a claim. See Calculation of Continuation Tables and Allowance for Non-Recorded Claims based on the PHI Experience 1975-78 in *C.M.I.R.* **13** (1993).

An important point to note is that AINC does not include any "non-reported" claims and EINC has been reduced (by the factor $r^d(x+\frac{1}{2}-d)$) to be consistent with this.

$100 \times A/E$ is $100 \times$ AINC/EINC. In cases where EINC is very small, in fact less than 0.04, a zero value is shown for $100 \times A/E$.

Z is $(AINC - EINC)/(V \times EINC)^{\frac{1}{2}}$, where V is the variance ratio to allow for duplicate policies in the data (see *C.M.I.R.* **12**, Part C, paragraph 1.2). The values for V are different for each deferred period and are those used in *C.M.I.R.* **12**, Part C, for the final graduations of the sickness intensity, σ_x. (The variance ratio for deferred period 52 weeks has been assumed to be the same as that for deferred period 26 weeks.) Thus, if the underlying basis for the actual inceptions is the same as that used to

calculate the expected inceptions, and provided EINC is not too small, the statistic Z has, approximately, a $N(0, 1)$ distribution. For age groups where EINC is less than 5, age groups have been aggregated as indicated by the arrows.

EINC* is calculated in the same way as EINC except that σ_x has been multiplied by the factor required to make the total expected number of claim inceptions equal to the total actual number. (This is the factor shown as a percentage at the foot of the $100 \times A/E$ column.)

$100 \times A/E^*$ is $100 \times AINC/EINC^*$

Z^* is the same as Z except that EINC is replaced by EINC*.

The following information is given at the foot of each table:

Total chi-squared this is the sum of the squares of the values of Z, or of Z^*, in the column above.

Degrees of freedom the figure at the foot of the column of values of Z is the number of (aggregated) age groups for which a value of Z is shown. For Z^* the number of degrees of freedom has been reduced by 1 since the expected number of claims has been scaled to be equal to the actual number in total. For Table 2.1e the number of degrees of freedom is the same for Z and Z^* because of the way in which σ_x has been chosen for deferred period 52 weeks.

Probability value this is the probability that a random variable with a χ^2 distribution with the number of degrees of freedom indicated would take a value larger than the "total chi-squared" value shown. So, for example, a probability value less than 0.05 indicates that the numbers of claim inceptions for the data being analysed are significantly different, at the 5% level, from the numbers expected on the basis of the males, individual policies, Standard experience 1975-78.

The EINC* and associated values are particularly interesting in cases where the experience being investigated is significantly different from the base experience, as indicated by the probability value at the foot of the column of Z values. In these cases the probability value at the foot of the column of Z^*

values gives a crude indication of whether a simple rescaling of the sickness intensity, σ_x, is likely to be sufficient to provide a reasonable match of expected to actual claim inceptions. For example, in Table 2.5c the probability value of 0.000 at the foot of the column of Z values indicates that the graduated intensities for σ_x, $\rho_{x,z}$ and $\nu_{x,z}$, based on males, individual policies, deferred period 13 weeks 1975-78, are not consistent with the data for females, individual policies, deferred period 13 weeks 1975-78. However, the high probability value of 0.515 indicates that multiplying σ_x by 2.115 would give graduated intensities which are consistent with the data being investigated. Low probability values below the columns of values of both Z and of Z^* indicate that a simple rescaling of σ_x by the factor required to make the total number of expected claim inceptions equal to the actual number does not produce graduated intensities consistent with the data. This could indicate that a different shape, rather than just a different level, for σ_x is required and/or that the graduations of $\rho_{x,z}$ and/or $\nu_{x,z}$ are inconsistent with the data. (Recall that the expected number of claim inceptions depends on these last two intensities through the factor $\pi_{x+\frac{1}{2}-d,d}$.)

4. COMMENTS

Where analyses of claim inceptions have been published previously for these data sets, it is reassuring to note the results in Tables 2.1 to 2.14 are broadly in line with the previous results. The broad conclusions from these analyses are:

i) the 1979-82 experience is generally lighter, in terms of claim inceptions, than that of 1975-78;
ii) the 1983-86 experience is generally heavier, in terms of claim inceptions, than that of 1979-82;
iii) the 1987-90 individual experience is generally heavier, in terms of claim inceptions, than that of 1983-86;
iv) the deterioration in experience since the 1979-82 quadrennium is most marked for the longest deferred periods, 26 and 52 weeks; and
v) the female experiences are generally heavier, in terms of claim inceptions, than the corresponding male experiences.

The changes in experience observed between quadrennia may, in part, reflect changes in the mix of business written for each deferred period and changes in the practice of contributing offices with regard to underwriting, claims handling, etc.

Care should also be taken before drawing conclusions from either the Tables or the Figures since in some cases the amount of data being analysed is very small, for example for group policies, 1983-86. An interesting point to note about the results in Table 2.1 is that the numbers of actual claim inceptions are in some cases significantly different from the expected numbers even though the experience being analysed is the experience used to produce the basis for comparison. Reasons for this apparent discrepancy are:

a) the difference in treatment of "non-reported claims" in this report compared with their treatment in *C.M.I.R.* **12**. See paragraph 3 above.
b) the simplified method used to calculate the exposure EH_x as explained in paragraph 3 above.
c) for this report the factor $\pi_{x-\frac{1}{2}-d,d}$ has been calculated by exact integration. For the graduations in *C.M.I.R.* **12** this factor was calculated by numerical integration.
d) for deferred period 26 weeks, data for ages 20-29 have been included in the analysis summarised in Table 2.1d but were excluded from the data used to graduate σ_x. See *C.M.I.R.* **12**, Part C, Section 5.

Table 1.1. Males, individual policies, Standard experience for the quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. Deferred periods 1, 4, 13, 26 and 52 weeks. Ratios of actual claim inceptions to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. Also shown are $100 \times A/E$ plus/minus two standard deviations.

Deferred Period	Quadrennium	$100 \times (A/E - 2 \times SD)$	$100 \times A/E$	$100 \times (A/E + 2 \times SD)$
1	1975-78	94.4	97.2	100.0
	1979-82	77.3	79.9	82.5
	1983-86	91.0	93.4	95.8
	1987-90	106.6	109.1	111.6
4	1975-78	95.5	101.7	107.9
	1979-82	67.3	72.7	78.1
	1983-86	65.3	70.1	74.9
	1987-90	76.7	81.3	85.9
13	1975-78	89.9	98.8	107.7
	1979-82	76.7	83.6	90.5
	1983-86	98.6	104.5	110.4
	1987-90	92.1	97.6	103.1
26	1975-78	83.2	94.8	106.4
	1979-82	68.0	77.4	86.8
	1983-86	107.7	116.3	124.9
	1987-90	129.3	137.3	145.3
52	1975-78	68.9	100.0	131.1
	1979-82	109.1	133.3	157.5
	1983-86	161.7	182.6	203.5
	1987-90	202.2	221.0	239.8

Table 1.2. Females, individual policies, Standard experience for the quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. Deferred periods 1, 4, 13, 26 and 52 weeks. Ratios of actual claim inceptions to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. Also shown are $100 \times A/E$ plus/minus two standard deviations.

Deferred Period	Quadrennium	$100 \times (A/E - 2 \times SD)$	$100 \times A/E$	$100 \times (A/E - 2 \times SD)$
1	1975-78	123.8	137.3	150.8
	1979-82	102.1	113.1	124.1
	1983-86	112.8	122.2	131.6
	1987-90	132.8	141.8	150.8
4	1975-78	141.0	165.7	190.4
	1979-82	139.4	159.8	180.2
	1983-86	128.8	144.8	160.8
	1987-90	151.4	164.6	177.8
13	1975-78	174.7	211.5	248.3
	1979-82	154.3	182.0	209.7
	1983-86	136.7	158.3	179.9
	1987-90	173.2	191.7	210.2
26	1975-78	224.2	273.9	323.6
	1979-82	144.4	184.0	223.6
	1983-86	235.0	268.1	301.2
	1987-90	321.4	350.3	379.2
52	1975-78	-	216.7	-
	1979-82	-	168.6	-
	1983-86	305.2	390.7	476.2
	1987-90	568.5	640.2	711.9

Table 1.3. Males, group policies, Standard experience for the quadrennia 1975-78, 1979-82 and 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Ratios of actual claim inceptions to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. Also shown are 100 × A/E plus/minus two standard deviations.

Deferred Period	Quadrennium	100 × (A/E − 2 × SD)	100 × A/E	100 × (A/E + 2 × SD)
1	1975-78	-	38.0	77.8
	1979-82	14.5	48.7	82.9
	1983-86	-	42.9	94.1
4	1975-78	71.2	104.0	136.8
	1979-82	31.2	64.5	97.8
	1983-86	29.3	66.0	102.7
13	1975-78	89.3	108.5	127.7
	1979-82	76.6	89.6	102.6
	1983-86	67.7	86.9	106.1
26	1975-78	90.9	104.8	118.7
	1979-82	102.0	111.1	120.2
	1983-86	130.3	148.2	166.1
52	1975-78	109.8	152.0	194.2
	1979-82	99.6	133.3	167.0
	1983-86	111.3	171.3	231.3

Table 1.4. Females, group policies, Standard experience for the quadrennia 1975-78, 1979-82 and 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Ratios of actual claim inceptions to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. Also shown are $100 \times A/E$ plus/minus two standard deviations.

Deferred Period	Quadrennium	$100 \times (A/E - 2 \times SD)$	$100 \times A/E$	$100 \times (A/E + 2 \times SD)$
1	1975-78	-	81.0	-
	1979-82	-	22.9	125.5
	1983-86	-	128.4	-
4	1975-78	241.9	344.4	446.9
	1979-82	17.4	116.1	214.8
	1983-86	-	95.4	209.1
13	1975-78	100.8	160.6	220.4
	1979-82	92.2	123.5	154.8
	1983-86	103.5	155.4	207.3
26	1975-78	85.1	124.1	163.1
	1979-82	89.9	112.4	134.9
	1983-86	150.5	195.9	241.3
52	1975-78	-	62.6	-
	1979-82	-	163.3	-
	1983-86	-	292.5	-

Figure 1. Males, individual policies, Standard experience for quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. Graphical presentation of Table 1.1

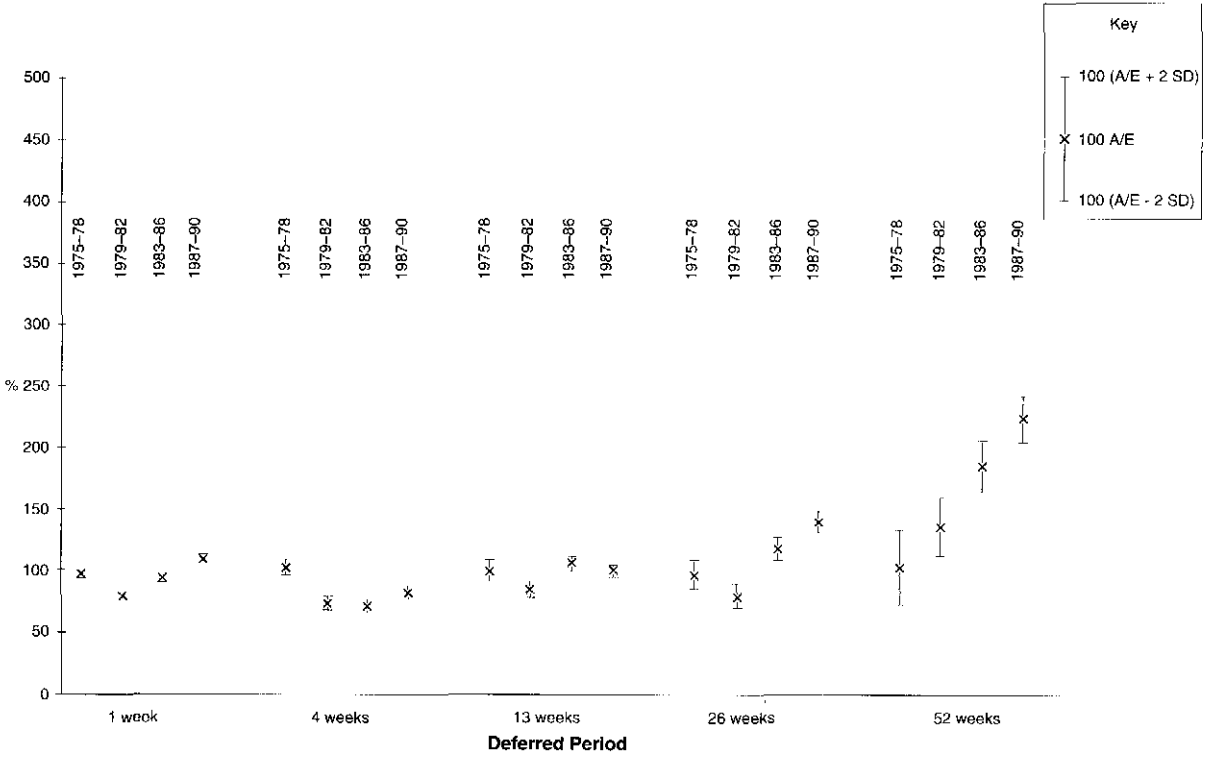

Figure 2. Females, individual policies, Standard experience for quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. Graphical presentation of Table 1.2

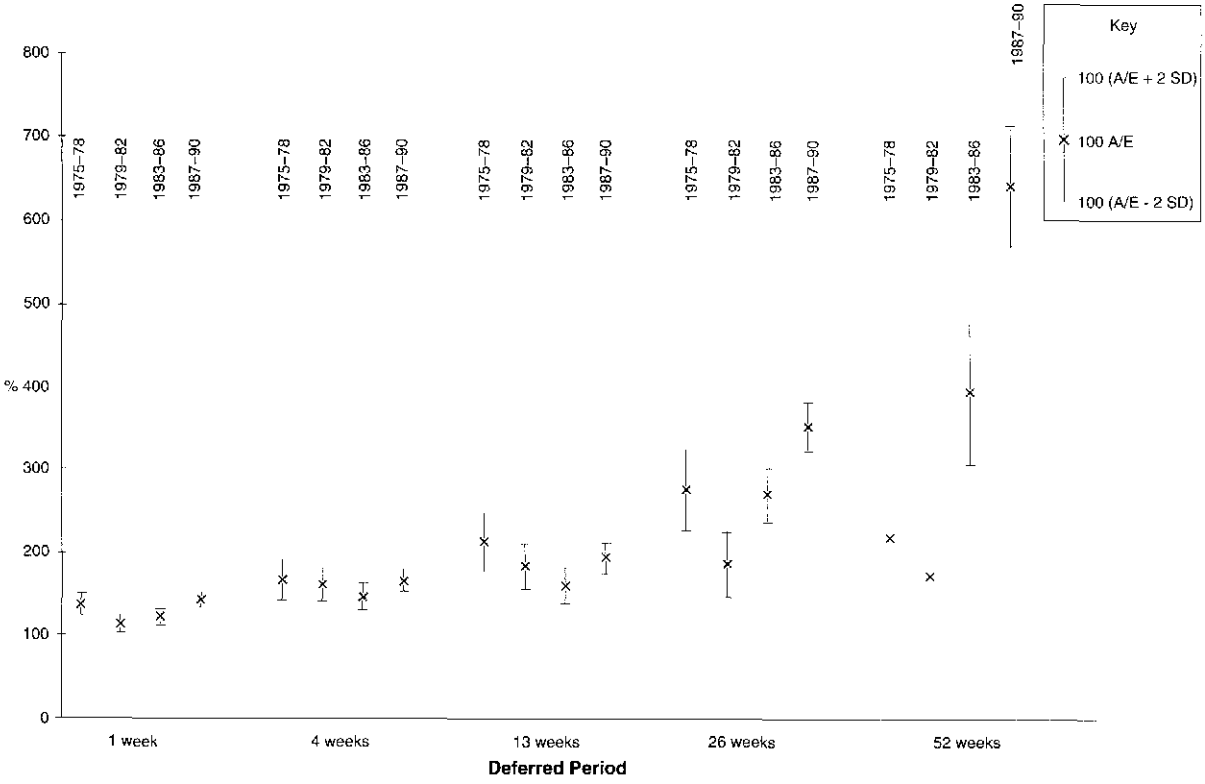

Figure 3. Males, group policies, Standard experience for quadrennia 1975-78, 1979-82 and 1983-86. Graphical presentation of Table 1.3

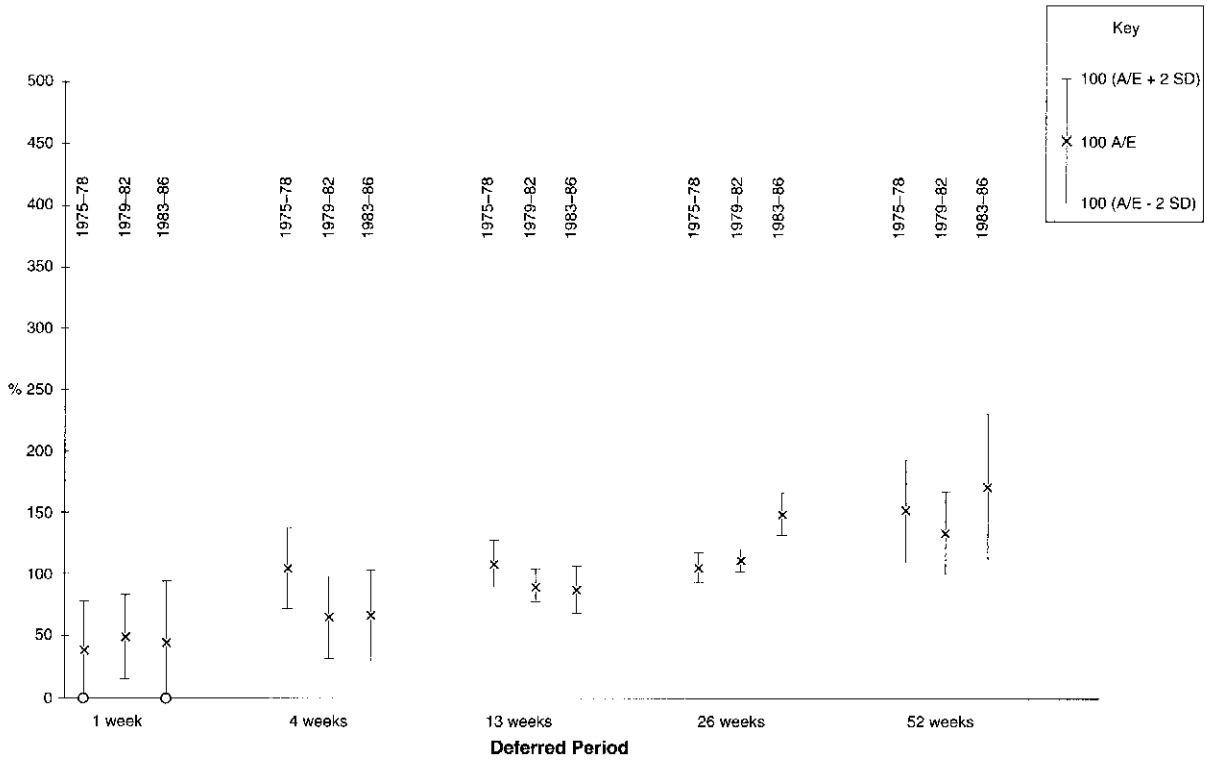

Figure 4. Females, group policies, Standard experience for quadrennia 1975-78, 1979-82 and 1983-86. Graphical presentation of Table 1.4

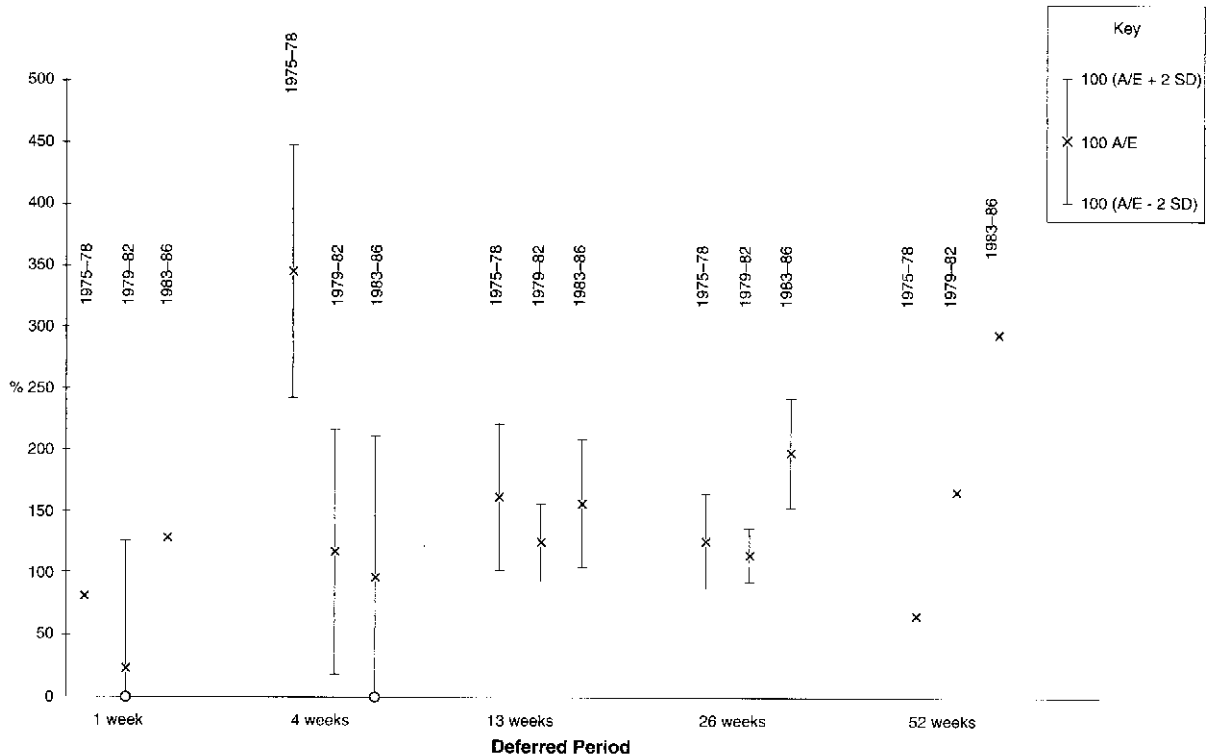

Table 2.1. Males, individual policies, Standard experience for the quadrennium 1975-78. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.1a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	163.5	144.8	112.9	1.024	140.9	116.1	1.261
25-29	1316.5	1254.6	104.9	1.154	1220.1	107.9	1.824
30-34	1539.5	1643.4	93.7	−1.693	1598.1	96.3	−0.969
35-39	1369.5	1321.6	103.6	0.871	1285.2	106.6	1.554
40-44	1289.5	1325.8	97.3	−0.658	1289.3	100.0	0.004
45-49	1509.0	1537.9	98.1	−0.487	1495.6	100.9	0.230
50-54	1609.5	1665.2	96.7	−0.902	1619.4	99.4	−0.162
55-59	1181.0	1355.0	87.2	−3.124	1317.7	89.6	−2.488
60-64	1096.0	1139.3	96.2	−0.848	1107.9	98.9	−0.237
20-64	11074.0	11387.7	97.2		11074.0	100.0	
Total chi-squared				18.0			14.6
Degrees of freedom				9			8
Probability value				0.036			0.067

Table 2.1b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	25.0	14.0	178.7	2.271	14.2	175.7	2.202
25-29	107.0	99.5	107.5	0.579	101.2	105.7	0.442
30-34	192.5	187.6	102.6	0.276	190.8	100.9	0.093
35-39	247.0	215.2	114.8	1.672	218.9	112.8	1.464
40-44	270.0	266.6	101.3	0.161	271.2	99.6	−0.056
45-49	305.0	304.5	100.2	0.020	309.8	98.5	−0.210
50-54	294.0	293.5	100.2	0.022	298.6	98.5	−0.205
55-59	210.5	224.9	93.6	−0.739	228.7	92.0	−0.931
60-64	125.5	140.5	89.3	−0.979	143.0	87.8	−1.127
20-64	1776.5	1746.4	101.7		1776.5	100.0	
Total chi-squared				9.9			9.4
Degrees of freedom				9			8
Probability value				0.359			0.308

Table 2.1c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	4.5	1.8	↓	↓	1.8	↓	↓
25-29	25.5	19.8	138.8	1.666	19.6	140.5	1.730
30-34	44.0	51.9	84.7	−1.019	51.3	85.8	−0.943
35-39	73.0	67.0	109.0	0.680	66.2	110.3	0.778
40-44	91.5	87.7	104.4	0.377	86.6	105.7	0.487
45-49	105.5	102.8	102.6	0.245	101.5	103.9	0.363
50-54	100.5	104.8	95.9	−0.391	103.5	97.1	−0.276
55-59	78.0	87.3	89.4	−0.917	86.2	90.5	−0.815
60-64	60.0	66.7	90.0	−0.754	65.8	91.1	−0.665
20-64	582.5	589.8	98.8		582.5	100.0	
Total chi-squared				6.0			6.0
Degrees of freedom				8			7
Probability value				0.643			0.535

Table 2.1d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	3.0	0.7	↓	↓	0.7	↓	↓
25-29	19.5	8.0	259.8	4.189	7.5	273.9	4.440
30-34	18.5	20.5	90.2	−0.396	19.5	95.1	−0.193
35-39	26.5	26.5	99.8	−0.007	25.2	105.3	0.236
40-44	37.5	38.7	96.8	−0.178	36.7	102.1	0.111
45-49	43.0	55.2	77.9	−1.464	52.4	82.1	−1.153
50-54	69.5	70.5	98.5	−0.109	66.9	103.9	0.284
55-59	75.0	80.1	93.6	−0.510	76.0	98.7	−0.101
60-64	60.5	71.9	84.2	−1.196	68.2	88.7	−0.828
20-64	353.0	372.2	94.8		353.0	100.0	
Total chi-squared				21.6			21.9
Degrees of freedom				8			7
Probability value				0.006			0.003

Table 2.1e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.0	0.0	↓	↓	0.0	ˇ	ˇ
25-29	1.0	0.3	↓	↓	0.3	ˇ	ˇ
30-34	2.0	1.5	↓	↓	1.5	ˇ	ˇ
35-39	2.0	3.1	↓	↓	3.1	ˇ	ˇ
40-44	3.5	5.8	87.9	−0.353	5.8	87.9	−0.353
45-49	10.5	9.7	108.7	0.242	9.7	108.7	0.242
50-54	11.5	12.4	92.7	−0.228	12.4	92.7	−0.228
55-59	12.5	11.6	107.9	0.239	11.6	107.9	0.239
60-64	8.0	7.6	105.9	0.145	7.6	105.9	0.145
20-64	52.0	52.0	100.0		52.0	100.0	
Total chi-squared				0.3			0.3
Degrees of freedom				4			4
Probability value				0.989			0.989

Table 2.2. Males, individual policies, Standard experience for the quadrennium 1979-82. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.2a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	114.0	183.9	62.0	−3.407	146.9	77.6	−1.795
25-29	1050.5	1273.5	82.5	−4.130	1017.4	103.3	0.687
30-34	1916.5	2197.6	87.2	−3.963	1755.6	109.2	2.538
35-39	1694.5	1985.6	85.3	−4.318	1586.2	106.8	1.796
40-44	1352.0	1631.2	82.9	−4.568	1303.1	103.8	0.895
45-49	1267.0	1566.1	80.9	−4.994	1251.1	101.3	0.297
50-54	1227.0	1751.5	70.1	−8.282	1399.2	87.7	−3.042
55-59	1324.5	1740.8	76.1	−6.594	1390.7	95.2	−1.173
60-64	783.0	1100.0	71.2	−6.317	878.8	89.1	−2.135
20-64	10729.0	13430.4	79.9		10729.0	100.0	
Total chi-squared				260.8			29.4
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.2b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	21.5	13.3	161.6	1.733	9.7	222.3	2.935
25-29	73.0	79.7	91.6	−0.578	57.9	126.1	1.530
30-34	139.5	219.5	63.6	−4.165	159.5	87.5	−1.222
35-39	222.5	290.3	76.6	−3.070	211.0	105.5	0.613
40-44	237.0	306.1	77.4	−3.046	222.4	106.6	0.754
45-49	287.0	360.9	79.5	−3.002	262.3	109.4	1.177
50-54	285.0	403.7	70.6	−4.558	293.4	97.1	−0.378
55-59	271.0	378.0	71.7	−4.247	274.7	98.6	−0.173
60-64	122.0	230.7	52.9	−5.521	167.6	72.8	−2.720
20-64	1658.5	2282.2	72.7		1658.5	100.0	
Total chi-squared				117.7			22.3
Degrees of freedom				9			8
Probability value				0.000			0.004

Table 2.2c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	4.5	3.0	↓	↓	2.5	↓	↓
25-29	36.0	23.5	152.9	2.519	19.6	182.9	3.608
30-34	74.5	79.9	93.3	−0.554	66.8	111.6	0.876
35-39	103.5	126.5	81.8	−1.887	105.7	97.9	−0.199
40-44	110.0	139.2	79.0	−2.287	116.4	94.5	−0.546
45-49	114.0	163.7	69.6	−3.592	136.9	83.3	−1.807
50-54	153.0	175.1	87.4	−1.542	146.4	104.5	0.507
55-59	139.5	160.7	86.8	−1.549	134.4	103.8	0.408
60-64	83.5	107.6	77.6	−2.144	89.9	92.9	−0.625
20-64	818.5	979.1	83.6		818.5	100.0	
Total chi-squared				37.7			18.2
Degrees of freedom				8			7
Probability value				0.000			0.011

Table 2.2d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.5	0.5	↓	↓	0.4	↓	↓
25-29	12.5	4.9	258.9	3.293	3.8	↓	↓
30-34	19.5	22.7	85.9	−0.598	17.6	153.9	2.242
35-39	31.5	43.5	72.3	−1.626	33.7	93.4	−0.339
40-44	42.0	56.8	74.0	−1.745	43.9	95.6	−0.261
45-49	51.0	83.2	61.3	−3.141	64.4	79.2	−1.486
50-54	74.5	114.8	64.9	−3.348	88.8	83.9	−1.356
55-59	125.0	134.2	93.1	−0.710	103.9	120.3	1.841
60-64	81.5	106.5	76.6	−2.155	82.4	98.9	−0.091
20-64	439.0	567.0	77.4		439.0	100.0	
Total chi-squared				43.1			12.7
Degrees of freedom				8			6
Probability value				0.000			0.049

Table 2.2e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	0.0	0.3	↓	↓	0.4	↓	↓
30-34	2.0	1.7	↓	↓	2.2	↓	↓
35-39	4.0	4.7	89.1	−0.251	6.3	66.9	−0.883
40-44	10.0	8.0	124.4	0.615	10.7	93.3	−0.195
45-49	12.5	13.6	91.6	−0.276	18.2	68.8	−1.187
50-54	19.5	20.2	96.5	−0.141	26.9	72.4	−1.276
55-59	48.5	22.9	212.1	4.777	30.5	159.2	2.911
60-64	18.5	14.8	124.9	0.854	19.7	93.7	−0.248
20-64	115.0	86.3	133.3		115.0	100.0	
Total chi-squared				24.1			12.4
Degrees of freedom				6			5
Probability value				0.001			0.030

Table 2.3. Males, individual policies, Standard experience for the quadrennium 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.3a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	125.0	178.1	70.2	−2.629	166.3	75.1	−2.118
25-29	1089.0	1159.6	93.9	−1.370	1083.2	100.5	0.117
30-34	2119.5	1984.5	106.8	2.003	1853.7	114.3	4.080
35-39	2830.5	2710.0	104.4	1.530	2531.3	111.8	3.929
40-44	2311.0	2183.2	105.9	1.808	2039.3	113.3	3.977
45-49	1848.0	1929.5	95.8	−1.227	1802.3	102.5	0.711
50-54	1561.0	1813.1	86.1	−3.912	1693.5	92.2	−2.128
55-59	1466.0	1946.7	75.3	−7.200	1818.4	80.6	−5.461
60-64	1019.5	1478.9	68.9	−7.895	1381.4	73.8	−6.435
20-64	14369.5	15383.6	93.4		14369.5	100.0	
Total chi-squared				149.4			128.7
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.3b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	29.0	20.9	138.7	1.364	14.7	197.9	2.891
25-29	81.0	88.1	92.0	−0.581	61.7	131.2	1.894
30-34	172.5	210.5	81.9	−2.022	147.5	116.9	1.586
35-39	280.0	384.2	72.9	−4.101	269.2	104.0	0.507
40-44	255.5	395.5	64.6	−5.430	277.1	92.2	−1.003
45-49	294.0	409.5	71.8	−4.405	287.0	102.4	0.319
50-54	336.0	471.1	71.3	−4.801	330.1	101.8	0.251
55-59	357.5	526.9	67.8	−5.694	369.2	96.8	−0.471
60-64	224.5	390.2	57.5	−6.471	273.4	82.1	−2.282
20-64	2030.0	2896.8	70.1		2030.0	100.0	
Total chi-squared				169.3			21.3
Degrees of freedom				9			8
Probability value				0.000			0.006

Table 2.3c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	11.0	3.2	↓	↓	3.4	↓	↓
25-29	46.0	24.9	202.3	5.022	26.1	193.7	4.699
30-34	83.5	76.1	109.7	0.783	79.5	105.0	0.414
35-39	158.5	169.1	93.7	−0.753	176.6	89.7	−1.261
40-44	217.0	199.9	108.6	1.119	208.8	103.9	0.525
45-49	202.5	213.1	95.0	−0.671	222.6	91.0	−1.245
50-54	293.5	235.6	124.6	3.485	246.1	119.2	2.791
55-59	253.5	237.1	106.9	0.982	247.7	102.3	0.340
60-64	119.5	166.8	71.7	−3.385	174.2	68.6	−3.832
20-64	1385.0	1325.9	104.5		1385.0	100.0	
Total chi-squared				52.7			48.3
Degrees of freedom				8			7
Probability value				0.000			0.000

Table 2.3d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.3	↓	↓	0.3	↓	↓
25-29	6.0	3.6	↓	↓	4.2	↓	↓
30-34	19.0	15.9	126.5	1.049	18.5	108.8	0.374
35-39	62.0	47.8	129.8	1.833	55.6	111.6	0.768
40-44	70.0	71.7	97.6	−0.182	83.4	83.9	−1.310
45-49	109.5	96.9	113.0	1.142	112.7	97.2	−0.267
50-54	162.5	135.4	120.0	2.075	157.5	103.2	0.356
55-59	245.0	171.0	143.3	5.042	198.9	123.2	2.912
60-64	120.0	140.1	85.7	−1.512	162.9	73.6	−2.997
20-64	794.0	682.6	116.3		794.0	100.0	
Total chi-squared				37.8			20.1
Degrees of freedom				7			6
Probability value				0.000			0.003

Table 2.3e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	3.0	0.3	↓	↓	0.5	↓	↓
30-34	2.0	1.5	↓	↓	2.7	↓	↓
35-39	5.0	5.2	142.1	0.995	9.5	77.8	−0.709
40-44	8.0	10.3	77.8	−0.636	18.8	42.6	−2.217
45-49	20.0	16.3	122.5	0.811	29.8	67.1	−1.600
50-54	38.5	25.4	151.5	2.311	46.4	82.9	−1.036
55-59	86.5	32.4	267.2	8.476	59.1	146.3	3.173
60-64	48.0	24.1	199.1	4.336	44.0	109.0	0.534
20-64	211.0	115.5	182.6		211.0	100.0	
Total chi-squared				98.0			19.4
Degrees of freedom				6			5
Probability value				0.000			0.002

Table 2.4. Males, individual policies, Standard experience for the quadrennium 1987-90. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.4a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	72.0	129.7	55.5	−3.349	141.6	50.9	−3.864
25-29	703.0	757.7	92.8	−1.313	827.0	85.0	−2.848
30-34	1830.0	1352.7	135.3	8.576	1476.4	124.0	6.082
35-39	2529.0	2120.9	119.2	5.856	2314.8	109.3	2.942
40-44	3157.0	2685.9	117.5	6.006	2931.5	107.7	2.752
45-49	2278.0	2063.1	110.4	3.127	2251.7	101.2	0.366
50-54	1973.0	1831.8	107.7	2.181	1999.2	98.7	−0.388
55-59	1774.0	1734.3	102.3	0.629	1892.9	93.7	−1.806
60-64	1172.0	1514.4	77.4	−5.815	1652.9	70.9	−7.816
20-64	15488.0	14190.5	109.1		15488.0	100.0	
Total chi-squared				205.6			140.9
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.4b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	66.0	35.5	186.1	3.957	28.8	229.0	5.342
25-29	124.0	138.2	89.7	−0.932	112.3	110.4	0.848
30-34	173.0	186.3	92.9	−0.753	151.5	114.2	1.351
35-39	304.0	318.1	95.6	−0.609	258.6	117.6	2.180
40-44	356.0	472.6	75.3	−4.137	384.2	92.7	−1.108
45-49	366.0	440.0	83.2	−2.722	357.7	102.3	0.340
50-54	380.0	480.6	79.1	−3.541	390.7	97.3	−0.417
55-59	456.0	560.0	81.4	−3.390	455.2	100.2	0.029
60-64	318.0	497.1	64.0	−6.199	404.1	78.7	−3.305
20-64	2543.0	3128.4	81.3		2543.0	100.0	
Total chi-squared				104.4			48.3
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.4c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	15.5	2.5	↓	↓	2.4	↓	↓
25-29	35.5	21.8	210.3	5.021	21.3	215.5	5.195
30-34	69.0	69.0	100.0	0.000	67.3	102.5	0.189
35-39	154.0	145.6	105.8	0.645	142.0	108.4	0.928
40-44	239.0	258.3	92.5	−1.109	252.0	94.8	−0.757
45-49	234.5	254.6	92.1	−1.166	248.4	94.4	−0.817
50-54	288.0	277.7	103.7	0.573	270.9	106.3	0.960
55-59	295.5	290.8	101.6	0.254	283.7	104.2	0.646
60-64	169.0	217.2	77.8	−3.023	211.9	79.8	−2.725
20-64	1500.0	1537.4	97.6		1500.0	100.0	
Total chi-squared				37.7			37.9
Degrees of freedom				8			7
Probability value				0.000			0.000

Table 2.4d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.2	↓	↓	0.3	↓	↓
25-29	8.0	2.8	↓	↓	3.8	↓	↓
30-34	27.0	12.7	222.9	4.338	17.5	162.3	2.577
35-39	53.0	37.0	143.4	2.350	50.8	104.4	0.280
40-44	120.0	89.1	134.6	2.913	122.4	98.0	−1.194
45-49	164.0	114.1	143.7	4.160	156.7	104.6	0.518
50-54	219.0	160.6	136.3	4.102	220.6	99.3	−0.097
55-59	312.0	201.9	154.5	6.902	277.3	112.5	1.857
60-64	184.0	173.0	106.3	0.744	237.6	77.4	−3.099
20-64	1087.0	791.5	137.3		1087.0	100.0	
Total chi-squared				115.1			20.1
Degrees of freedom				7			6
Probability value				0.000			0.003

Table 2.4e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	1.0	0.2	↓	↓	0.5	↓	↓
30-34	5.0	1.4	↓	↓	3.2	↓	↓
35-39	4.0	4.4	163.3	1.396	9.8	73.9	−0.855
40-44	37.0	11.9	310.8	6.480	26.3	140.7	1.858
45-49	37.0	18.8	196.5	3.730	41.6	88.9	−0.637
50-54	64.5	29.4	219.6	5.775	64.9	99.4	−0.044
55-59	103.5	41.9	247.0	8.477	92.6	111.8	1.010
60-64	64.0	34.9	183.5	4.394	77.1	83.1	−1.325
20-64	316.0	143.0	221.0		316.0	100.0	
Total chi-squared				182.4			7.4
Degrees of freedom				6			5
Probability value				0.000			0.195

Table 2.5. Females, individual policies, Standard experience for the quadrennium 1975-78. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.5a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	29.0	30.4	95.3	−0.172	41.8	69.4	−1.307
25-29	149.0	101.8	146.4	3.091	139.8	106.6	0.517
30-34	76.0	64.3	118.2	0.963	88.3	86.1	−0.864
35-39	107.0	57.0	187.8	4.378	78.2	136.8	2.149
40-44	71.0	47.7	148.9	2.232	65.5	108.5	0.453
45-49	92.0	57.7	159.3	2.979	79.3	116.1	0.945
50-54	108.0	76.1	142.0	2.420	104.4	103.4	0.232
55-59	39.5	50.0	78.9	−0.985	68.7	57.5	−2.329
60-64	14.5	14.6	99.1	−0.023	20.1	72.2	−0.824
20-64	686.0	499.7	137.3		686.0	100.0	
Total chi-squared				50.4			14.6
Degrees of freedom				9			8
Probability value				0.000			0.068

Table 2.5b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	6.0	3.3	↓	↓	5.5	108.5	0.155
25-29	20.0	11.2	179.2	2.329	18.5	108.1	0.268
30-34	31.0	13.0	237.6	3.834	21.6	143.4	1.557
35-39	31.5	15.8	199.8	3.058	26.1	120.6	0.813
40-44	26.0	17.3	150.5	1.620	28.6	90.9	−0.377
45-49	37.5	17.9	209.8	3.582	29.6	126.6	1.119
50-54	21.5	17.7	121.6	0.700	29.3	73.4	−1.112
55-59	7.5	9.9	62.0	−1.085	16.3	45.9	−1.688
60-64	1.0	3.8	↑	↑	6.4	15.7	−1.640
20-64	182.0	109.8	165.7		182.0	100.0	
Total chi-squared				46.6			11.3
Degrees of freedom				7			8
Probability value				0.000			0.183

Table 2.5c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.4	↓	↓	0.8	↓	↓
25-29	8.0	1.8	↓	↓	3.8	↓	↓
30-34	5.0	3.1	245.9	3.101	6.6	116.2	0.501
35-39	6.0	4.1	↓	↓	8.6	69.8	−0.819
40-44	8.0	5.2	150.7	1.428	11.1	72.3	−0.851
45-49	19.5	6.3	308.9	4.853	13.4	146.0	1.555
50-54	14.5	7.2	200.7	2.502	15.3	94.9	−0.186
55-59	9.0	4.9	↓	↓	10.4	88.8	−0.382
60-64	3.0	1.5	187.8	2.052	3.1	↑	↑
20-64	73.0	34.5	211.5		73.0	100.0	
Total chi-squared				45.7			4.2
Degrees of freedom				5			5
Probability value				0.000			0.515

Table 2.5d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.1	↓	↓	0.2	↓	↓
25-29	6.0	0.4	↓	↓	1.2	↓	↓
30-34	4.5	0.9	↓	↓	2.5	↓	↓
35-39	4.5	1.5	↓	↓	4.2	187.4	2.203
40-44	11.0	2.8	458.0	7.599	7.5	145.8	1.120
45-49	13.5	4.2	↓	↓	11.5	117.1	0.519
50-54	6.5	5.1	215.8	3.141	13.9	46.9	−1.761
55-59	7.0	3.8	↓	↓	10.5	66.4	−1.163
60-64	3.0	1.7	181.8	1.709	4.5	↑	↑
20-64	56.0	20.4	273.9		56.0	100.0	
Total chi-squared				70.5			10.8
Degrees of freedom				3			4
Probability value				0.000			0.029

Table 2.5e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	-	-
25-29	0.0	0.0	-	-	0.1	-	-
30-34	0.0	0.1	-	-	0.2	-	-
35-39	1.0	0.2	-	-	0.4	-	-
40-44	1.0	0.4	-	-	0.8	-	-
45-49	2.0	0.6	-	-	1.3	-	-
50-54	1.0	0.8	-	-	1.6	-	-
55-59	1.0	0.6	-	-	1.3	100.0	0.000
60-64	0.0	0.2	-	-	0.4	-	-
20-64	6.0	2.8	216.7		6.0	100.0	
Total chi-squared				-			0.0
Degrees of freedom				-			0
Probability value				-			-

Table 2.6. Females, individual policies, Standard experience for the quadrennium 1979-82 . Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.6a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	38.5	41.8	92.1	−0.336	47.3	81.5	−0.842
25-29	186.0	197.1	94.4	−0.522	222.9	83.4	−1.635
30-34	137.5	125.2	109.8	0.726	141.6	97.1	−0.230
35-39	131.5	94.6	139.0	2.509	107.0	122.9	1.566
40-44	138.0	77.8	177.3	4.508	88.0	156.8	3.520
45-49	80.0	60.3	132.8	1.680	68.2	117.4	0.947
50-54	76.0	71.8	105.9	0.330	81.2	93.6	−0.381
55-59	68.0	71.4	95.3	−0.265	80.8	84.2	−0.938
60-64	7.0	22.6	31.0	−2.167	25.5	27.4	−2.425
20-64	862.5	762.5	113.1		862.5	100.0	
Total chi-squared				35.2			26.1
Degrees of freedom				9			8
Probability value				0.000			0.001

Table 2.6b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	6.0	5.0	↓	↓	7.9	75.8	−0.525
25-29	19.0	15.5	122.5	0.785	24.7	76.9	−0.884
30-34	40.0	20.4	196.2	3.352	32.6	122.8	1.003
35-39	49.5	23.6	210.2	4.125	37.6	131.5	1.492
40-44	55.5	24.7	224.8	4.784	39.5	140.7	1.971
45-49	39.0	24.9	156.7	2.183	39.8	98.1	−0.094
50-54	30.0	23.7	126.7	1.001	37.8	79.3	−0.984
55-59	15.0	18.5	81.2	−0.624	29.5	50.8	−2.063
60-64	4.0	5.4	74.6	−0.454	8.6	46.7	−1.204
20-64	258.0	161.4	159.8		258.0	100.0	
Total chi-squared				58.1			14.9
Degrees of freedom				8			8
Probability value				0.000			0.062

Table 2.6c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	4.0	0.7	↓	↓	1.2	↓	↓
25-29	7.0	3.4	↓	↓	6.2	147.7	1.203
30-34	10.0	6.4	199.7	2.989	11.7	85.5	−0.458
35-39	13.0	8.6	151.3	1.391	15.6	83.1	−0.617
40-44	27.5	9.4	293.3	5.472	17.1	161.1	2.335
45-49	12.5	9.9	126.3	0.766	18.0	69.4	−1.200
50-54	20.5	9.9	206.3	3.098	18.1	113.3	0.525
55-59	14.5	9.4	130.2	0.995	17.1	84.7	−0.584
60-64	2.0	3.3	↑	↑	5.9	33.6	−1.496
20-64	111.0	61.0	182.0		111.0	100.0	
Total chi-squared				52.0			11.8
Degrees of freedom				6			7
Probability value				0.000			0.108

Table 2.6d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.1	↓	↓	0.1	↓	↓
25-29	1.0	0.6	↓	↓	1.1	↓	↓
30-34	3.0	1.5	↓	↓	2.8	↓	↓
35-39	6.0	2.6	↓	↓	4.8	112.5	0.333
40-44	14.0	4.0	272.8	4.567	7.3	191.8	2.210
45-49	8.0	6.1	131.3	0.688	11.2	71.4	−0.854
50-54	12.0	7.8	154.2	1.347	14.3	83.8	−0.546
55-59	11.0	7.3	159.6	1.628	13.4	86.8	−0.491
60-64	4.0	2.1	↑	↑	3.9	↑	↑
20-64	59.0	32.1	184.0		59.0	100.0	
Total chi-squared				25.8			6.3
Degrees of freedom				4			4
Probability value				0.000			0.180

Table 2.6e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	↓	↓
25-29	0.0	0.0	-	-	0.1	↓	↓
30-34	0.0	0.1	-	-	0.2	↓	↓
35-39	0.0	0.3	-	-	0.5	↓	↓
40-44	0.0	0.5	-	-	0.9	↓	↓
45-49	2.0	0.9	-	-	1.5	↓	↓
50-54	4.0	1.2	-	-	2.1	100.0	0.000
55-59	2.0	1.2	-	-	2.0	↑	↑
60-64	0.0	0.5	-	-	0.8	↑	↑
20-64	8.0	4.7	168.6		8.0	100.0	
Total chi-squared				-			0.0
Degrees of freedom				-			0
Probability value				-			-

Table 2.7. Females, individual policies, Standard experience for the quadrennium 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.7a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	41.0	51.4	79.7	−0.961	62.9	65.2	−1.822
25-29	222.0	209.4	106.0	0.574	256.0	86.7	−1.404
30-34	299.0	223.0	134.1	3.362	272.6	109.7	1.056
35-39	225.5	151.3	149.1	3.988	184.9	122.0	1.972
40-44	171.5	124.3	138.0	2.798	151.9	112.9	1.049
45-49	134.0	99.4	134.8	2.290	121.6	110.2	0.746
50-54	99.0	71.1	139.3	2.187	86.9	113.9	0.858
55-59	82.0	79.2	103.5	0.205	96.9	84.7	−0.997
60-64	5.0	37.1	13.5	−3.485	45.4	11.0	−3.962
20-64	1279.0	1046.4	122.2		1279.0	100.0	
Total chi-squared				58.5			29.4
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.7b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	14.0	10.8	129.2	0.742	15.7	89.2	−0.329
25-29	39.0	26.3	148.6	1.920	38.0	102.6	0.123
30-34	53.0	36.8	144.2	2.066	53.2	99.5	−0.026
35-39	71.0	45.6	155.9	2.909	66.0	107.6	0.478
40-44	85.5	42.0	203.6	5.180	60.8	140.6	2.442
45-49	55.5	35.8	155.1	2.544	51.8	107.1	0.396
50-54	26.0	31.7	82.0	−0.783	45.9	56.6	−2.269
55-59	32.5	25.0	129.9	1.154	36.2	89.7	−0.478
60-64	1.5	7.1	21.1	−1.622	10.3	14.6	−2.114
20-64	378.0	261.0	144.8		378.0	100.0	
Total chi-squared				54.8			16.3
Degrees of freedom				9			8
Probability value				0.000			0.038

Table 2.7c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.0	1.1	↓	↓	1.8	↓	↓
25-29	10.0	5.4	169.5	1.637	8.5	107.1	0.210
30-34	16.0	10.8	147.8	1.454	17.1	93.4	−0.254
35-39	27.0	16.3	165.4	2.444	25.8	104.5	0.212
40-44	33.0	17.6	187.5	3.393	27.9	118.4	0.899
45-49	30.5	16.1	189.1	3.309	25.5	119.5	0.910
50-54	22.5	14.6	154.0	1.910	23.1	97.3	−0.119
55-59	18.0	12.5	144.6	1.454	19.7	91.3	−0.356
60-64	1.0	6.0	16.6	−1.892	9.5	10.5	−2.555
20-64	159.0	100.4	158.3		159.0	100.0	
Total chi-squared				42.6			8.5
Degrees of freedom				8			7
Probability value				0.000			0.294

Table 2.7d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.1	↓	↓	0.3	↓	↓
25-29	2.0	0.8	↓	↓	2.2	↓	↓
30-34	9.0	2.2	↓	↓	6.0	130.4	0.786
35-39	12.0	4.1	317.0	5.207	11.0	108.9	0.264
40-44	21.0	5.9	355.9	5.538	15.8	132.7	1.160
45-49	22.5	8.4	267.9	4.335	22.5	99.9	−0.004
50-54	34.5	10.9	317.6	6.389	29.1	118.4	0.887
55-59	19.0	10.2	163.5	2.075	27.4	69.5	−1.423
60-64	3.0	3.3	↑	↑	8.7	34.4	−1.726
20-64	123.0	45.9	268.1		123.0	100.0	
Total chi-squared				121.7			7.8
Degrees of freedom				5			6
Probability value				0.000			0.251

Table 2.7e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	0.0	0.1	↓	↓	0.3	↓	↓
30-34	1.0	0.2	↓	↓	0.9	↓	↓
35-39	3.0	0.5	↓	↓	1.8	↓	↓
40-44	7.0	0.8	↓	↓	3.2	176.7	1.706
45-49	6.0	1.3	↓	↓	4.9	↓	↓
50-54	7.0	1.8	↓	↓	7.1	108.1	0.251
55-59	3.0	1.6	390.7	6.807	6.4	34.3	−1.733
60-64	0.0	0.6	↑	↑	2.4	↑	↑
20-64	27.0	6.9	390.7		27.0	100.0	
Total chi-squared				46.3			6.0
Degrees of freedom				1			2
Probability value				0.000			0.050

Table 2.8. Females, individual policies, Standard experience for the quadrennium 1987-90. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.8a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	65.0	78.7	82.6	−1.018	111.6	58.3	−2.913
25-29	199.0	208.0	95.7	−0.411	294.9	67.5	−3.692
30-34	216.0	180.6	119.6	1.743	256.1	84.4	−1.655
35-39	327.0	194.4	168.2	6.286	275.7	118.6	2.043
40-44	276.0	145.7	189.4	7.135	206.6	133.6	3.190
45-49	217.0	121.2	179.1	5.753	171.8	126.3	2.276
50-54	154.0	91.8	167.8	4.290	130.2	118.3	1.379
55-59	119.0	64.0	185.9	4.543	90.8	131.1	1.958
60-64	15.0	35.5	42.3	−2.273	50.3	29.8	−3.291
20-64	1588.0	1119.7	141.8		1588.0	100.0	
Total chi-squared				172.0			61.0
Degrees of freedom				9			8
Probability value				0.000			0.000

Table 2.8b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	40.0	28.1	142.5	1.736	46.2	86.6	−0.704
25-29	100.0	70.1	142.6	2.754	115.4	86.7	−1.106
30-34	89.0	44.7	198.9	5.105	73.6	120.9	1.381
35-39	105.0	54.5	192.6	5.275	89.7	117.0	1.244
40-44	91.0	62.0	146.8	2.844	102.0	89.2	−0.840
45-49	111.0	51.2	216.8	6.448	84.3	131.7	2.247
50-54	57.0	37.8	150.9	2.415	62.1	91.7	−0.504
55-59	38.0	30.2	125.9	1.098	49.7	76.5	−1.278
60-64	7.0	9.1	77.0	−0.534	15.0	46.8	−1.587
20-64	638.0	387.6	164.6		638.0	100.0	
Total chi-squared				121.5			15.3
Degrees of freedom				9			8
Probability value				0.000			0.053

Table 2.8c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	7.0	1.2	↓	↓	2.3	↓	↓
25-29	8.0	6.7	189.9	2.336	12.9	99.0	−0.035
30-34	35.5	14.0	254.1	5.326	26.8	132.5	1.557
35-39	51.0	20.8	244.6	6.105	40.0	127.6	1.612
40-44	56.0	28.0	200.0	4.891	53.7	104.3	0.290
45-49	42.5	24.3	175.1	3.421	46.5	91.3	−0.547
50-54	38.5	20.9	184.7	3.574	40.0	96.3	−0.216
55-59	22.5	15.8	142.2	1.553	30.3	74.2	−1.315
60-64	1.0	5.0	20.1	−1.648	9.5	10.5	−2.556
20-64	262.0	136.6	191.7		262.0	100.0	
Total chi-squared				124.6			13.7
Degrees of freedom				8			7
Probability value				0.000			0.057

Table 2.8d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.1	↓	↓	0.4	↓	↓
25-29	3.0	1.0	↓	↓	3.4	↓	↓
30-34	10.0	2.6	↓	↓	9.3	98.8	−0.040
35-39	23.0	5.0	410.4	8.190	17.6	130.9	1.155
40-44	25.5	8.4	302.5	5.238	29.5	86.4	−0.660
45-49	52.5	10.8	487.4	11.327	37.7	139.1	2.141
50-54	42.0	13.8	305.3	6.783	48.2	87.1	−0.795
55-59	51.0	14.0	297.3	7.560	49.1	104.0	0.248
60-64	4.0	4.5	↑	↑	15.8	25.4	−2.639
20-64	211.0	60.2	350.3		211.0	100.0	
Total chi-squared				326.0			14.0
Degrees of freedom				5			6
Probability value				0.000			0.029

Table 2.8e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	2.0	0.1	↓	↓	0.5	↓	↓
30-34	1.0	0.3	↓	↓	1.9	↓	↓
35-39	6.0	0.6	↓	↓	4.0	139.9	0.902
40-44	11.0	1.2	↓	↓	7.6	144.3	1.090
45-49	12.0	1.8	↓	↓	11.2	106.7	0.201
50-54	16.0	2.4	640.2	15.097	15.6	102.5	0.088
55-59	15.0	2.6	↑	↑	16.5	90.7	−0.336
60-64	0.0	0.9	↑	↑	5.6	0.0	−2.100
20-64	63.0	9.8	640.2		63.0	100.0	
Total chi-squared				227.9			6.6
Degrees of freedom				1			5
Probability value				0.000			0.254

Table 2.9. Males, group policies, Standard experience for the quadrennium 1975-78. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.9a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.3	↓	↓	0.1	↓	↓
25-29	0.0	2.9	↓	↓	1.1	↓	↓
30-34	5.0	5.5	57.0	−0.840	2.1	↓	↓
35-39	3.0	7.9	37.8	−1.158	3.0	126.2	0.435
40-44	1.0	10.3	9.7	−1.918	3.9	↓	↓
45-49	6.5	11.3	57.7	−0.937	4.3	91.5	−0.160
50-54	2.5	10.2	24.4	−1.598	3.9	↓	↓
55-59	2.0	5.6	42.4	−1.168	2.1	87.1	−0.233
60-64	2.0	3.9	↑	↑	1.5	↑	↑
20-64	22.0	57.9	38.0		22.0	100.0	
Total chi-squared				10.5			0.3
Degrees of freedom				6			2
Probability value				0.104			0.874

Table 2.9b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.9	↓	↓	1.0	↓	↓
25-29	2.0	4.0	↓	↓	4.1	39.3	−1.056
30-34	6.0	7.4	65.2	−0.942	7.7	78.1	−0.469
35-39	7.0	6.6	105.9	0.116	6.9	101.8	0.036
40-44	9.5	6.7	140.8	0.817	7.0	135.3	0.722
45-49	9.5	8.9	106.5	0.150	9.3	102.4	0.056
50-54	6.5	7.9	82.6	−0.376	8.2	79.4	−0.454
55-59	11.5	10.5	110.0	0.249	10.9	105.7	0.146
60-64	13.0	9.6	135.4	0.846	10.0	130.1	0.735
20-64	65.0	62.5	104.0		65.0	100.0	
Total chi-squared				2.5			2.6
Degrees of freedom				7			7
Probability value				0.926			0.917

Table 2.9c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	3.0	1.1	↓	↓	1.2	↓	↓
25-29	2.0	5.6	74.9	−0.600	6.0	69.0	−0.771
30-34	10.0	10.8	92.8	−0.217	11.7	85.5	−0.457
35-39	13.0	12.2	106.4	0.208	13.3	98.1	−0.065
40-44	13.0	15.2	85.7	−0.516	16.5	78.9	−0.790
45-49	22.5	18.0	125.0	0.979	19.5	115.1	0.619
50-54	25.5	21.3	119.6	0.837	23.1	110.2	0.453
55-59	22.0	23.3	94.3	−0.255	25.3	86.9	−0.610
60-64	27.0	19.7	137.4	1.532	21.3	126.6	1.135
20-64	*138.0*	*127.1*	*108.5*		*138.0*	*100.0*	
Total chi-squared				4.8			3.7
Degrees of freedom				8			7
Probability value				0.780			0.816

Table 2.9d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	1.1	↓	↓	1.1	↓	↓
25-29	7.0	4.7	120.2	0.435	5.0	114.8	0.325
30-34	7.0	9.6	72.9	−0.749	10.1	69.6	−0.861
35-39	10.0	12.3	81.1	−0.591	12.9	77.4	−0.723
40-44	16.5	19.2	85.7	−0.558	20.2	81.8	−0.727
45-49	34.5	30.2	114.2	0.694	31.7	109.0	0.450
50-54	51.5	48.1	107.0	0.435	50.4	102.2	0.138
55-59	68.0	66.7	102.0	0.146	69.8	97.4	−0.196
60-64	78.0	68.1	114.5	1.067	71.4	109.3	0.701
20-64	272.5	260.1	104.8		272.5	100.0	
Total chi-squared				3.2			2.6
Degrees of freedom				8			7
Probability value				0.918			0.916

Table 2.9e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	1.0	0.1	↓	↓	0.2	↓	↓
30-34	0.0	0.5	↓	↓	0.7	↓	↓
35-39	0.0	0.9	↓	↓	1.3	↓	↓
40-44	1.0	1.7	↓	↓	2.6	↓	↓
45-49	2.0	3.0	64.0	−0.802	4.6	42.1	−1.589
50-54	11.0	5.7	193.6	1.987	8.6	127.4	0.717
55-59	14.5	8.4	172.8	1.879	12.8	113.7	0.436
60-64	13.5	8.0	169.3	1.743	12.1	111.4	0.354
20-64	43.0	28.3	152.0		43.0	100.0	
Total chi-squared				11.2			3.4
Degrees of freedom				4			3
Probability value				0.025			0.340

Table 2.10. Males, group policies, Standard experience for the quadrennium 1979-82. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.10a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.5	↓	↓	0.2	↓	↓
25-29	1.0	2.7	↓	↓	1.3	↓	↓
30-34	0.0	7.6	9.3	−1.972	3.7	19.0	−1.227
35-39	3.0	9.6	31.1	−1.414	4.7	↓	↓
40-44	2.0	13.2	15.1	−2.038	6.4	45.0	−1.213
45-49	7.5	13.2	56.7	−1.042	6.4	116.5	0.276
50-54	10.5	14.9	70.4	−0.756	7.3	144.6	0.795
55-59	8.5	11.9	86.0	−0.373	5.8	176.7	1.427
60-64	5.5	4.3	↑	↑	2.1	↑	↑
20-64	38.0	78.1	48.7		38.0	100.0	
Total chi-squared				11.8			5.7
Degrees of freedom				6			4
Probability value				0.066			0.221

Table 2.10b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.0	0.5	↓	↓	0.3	↓	↓
25-29	1.0	2.0	↓	↓	1.3	↓	↓
30-34	7.0	6.3	101.3	0.030	4.1	157.0	1.053
35-39	3.0	7.7	38.8	−1.314	5.0	↓	↓
40-44	2.5	6.9	36.4	−1.284	4.4	58.4	−0.985
45-49	6.5	9.0	72.0	−0.650	5.8	111.6	0.215
50-54	5.0	8.8	56.9	−0.985	5.7	88.2	−0.216
55-59	8.0	10.8	73.9	−0.661	7.0	114.6	0.298
60-64	5.0	8.3	60.0	−0.891	5.4	93.0	−0.126
20-64	39.0	60.5	64.5		39.0	100.0	
Total chi-squared				6.0			2.3
Degrees of freedom				7			5
Probability value				0.540			0.810

Table 2.10c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	5.5	3.1	↓	↓	2.8	↓	↓
25-29	5.5	10.7	80.1	−0.680	9.5	89.5	−0.342
30-34	8.5	23.6	36.0	−2.877	21.2	40.2	−2.545
35-39	19.5	30.7	63.5	−1.871	27.5	70.9	−1.413
40-44	26.5	32.4	81.8	−0.959	29.0	91.3	−0.434
45-49	36.5	36.5	100.0	0.000	32.7	111.6	0.615
50-54	38.0	42.2	90.0	−0.603	37.8	100.4	0.024
55-59	57.5	49.5	116.1	1.045	44.4	129.6	1.821
60-64	49.0	46.4	105.6	0.351	41.6	117.9	1.065
20-64	246.5	275.2	89.6		246.5	100.0	
Total chi-squared				14.7			13.6
Degrees of freedom				8			7
Probability value				0.064			0.059

Table 2.10d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	4.0	2.7	↓	↓	3.0	↓	↓
25-29	20.0	10.0	189.5	2.838	11.1	170.6	2.359
30-34	32.0	21.6	148.0	1.987	24.0	133.2	1.450
35-39	25.0	32.6	76.7	−1.184	36.2	69.1	−1.658
40-44	42.5	42.0	101.1	0.066	46.7	91.0	−0.545
45-49	65.5	65.1	100.6	0.041	72.3	90.5	−0.717
50-54	95.0	100.6	94.4	−0.498	111.8	85.0	−1.413
55-59	190.0	159.8	118.9	2.129	177.5	107.0	0.836
60-64	201.0	173.2	116.0	1.881	192.4	104.5	0.552
20-64	675.0	607.6	111.1		675.0	100.0	
Total chi-squared				21.7			14.2
Degrees of freedom				8			7
Probability value				0.005			0.047

Table 2.10e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	0.0	0.2	↓	↓	0.3	↓	↓
30-34	0.0	0.7	↓	↓	0.9	↓	↓
35-39	2.0	1.5	↓	↓	2.0	↓	↓
40-44	2.0	2.4	↓	↓	3.3	61.6	−0.871
45-49	4.0	4.6	84.4	−0.427	6.1	65.1	−0.770
50-54	10.0	7.8	127.6	0.689	10.4	95.7	−0.123
55-59	24.0	12.8	187.3	2.784	17.1	140.5	1.492
60-64	17.0	14.1	120.2	0.678	18.8	90.2	−0.378
20-64	59.0	44.3	133.3		59.0	100.0	
Total chi-squared				8.9			3.7
Degrees of freedom				4			4
Probability value				0.065			0.443

Table 2.11. Males, group policies, Standard experience for the quadrennium 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.11a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.2	↓	↓	0.1	↓	↓
25-29	0.0	0.4	↓	↓	0.2	↓	↓
30-34	0.0	0.4	↓	↓	0.2	↓	↓
35-39	1.0	3.0	↓	↓	1.3	↓	↓
40-44	1.5	3.8	32.2	−1.250	1.6	↓	↓
45-49	1.5	6.9	21.7	−1.362	3.0	63.5	−0.605
50-54	3.0	6.3	47.5	−0.873	2.7	↓	↓
55-59	5.0	8.7	57.2	−0.835	3.7	126.4	0.515
60-64	3.0	5.2	57.2	−0.648	2.2	↑	↑
20-64	15.0	35.0	42.9		15.0	100.0	
Total chi-squared				5.3			0.6
Degrees of freedom				5			1
Probability value				0.381			0.427

Table 2.11b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	3.0	0.3	↓	↓	0.2	↓	↓
25-29	1.0	1.1	↓	↓	0.7	↓	↓
30-34	2.0	3.0	↓	↓	2.0	↓	↓
35-39	6.0	5.7	118.8	0.460	3.8	179.8	1.591
40-44	4.5	6.3	71.9	−0.543	4.1	↓	↓
45-49	3.5	6.5	54.0	−0.903	4.3	95.1	−0.111
50-54	2.0	8.5	23.7	−1.713	5.6	35.8	−1.170
55-59	6.5	11.1	58.7	−1.061	7.3	88.9	−0.233
60-64	4.5	7.6	59.3	−0.864	5.0	89.8	−0.176
20-64	33.0	50.0	66.0		33.0	100.0	
Total chi-squared				6.1			4.0
Degrees of freedom				6			4
Probability value				0.409			0.406

Table 2.11c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	2.0	1.0	↓	↓	0.9	↓	↓
25-29	5.0	3.3	↓	↓	2.9	↓	↓
30-34	9.0	7.6	133.4	1.069	6.6	153.5	1.597
35-39	17.0	15.9	107.1	0.262	13.8	123.3	0.799
40-44	9.0	18.8	47.9	−2.091	16.3	55.1	−1.679
45-49	15.0	18.7	80.0	−0.799	16.3	92.1	−0.294
50-54	21.0	20.2	104.1	0.172	17.5	119.8	0.768
55-59	17.0	19.8	85.6	−0.591	17.2	98.6	−0.055
60-64	15.0	21.2	70.9	−1.240	18.4	81.5	−0.732
20-64	110.0	126.6	86.9		110.0	100.0	
Total chi-squared				8.1			7.2
Degrees of freedom				7			6
Probability value				0.321			0.301

Table 2.11d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	3.0	0.5	↓	↓	0.8	↓	↓
25-29	7.0	2.0	↓	↓	3.0	↓	↓
30-34	5.0	4.1	225.3	2.881	6.1	152.0	1.456
35-39	16.0	8.4	190.5	2.336	12.4	128.5	0.897
40-44	18.0	12.0	150.2	1.548	17.8	101.3	0.050
45-49	21.0	17.5	120.2	0.753	25.9	81.1	−0.856
50-54	38.0	27.8	136.8	1.730	41.2	92.3	−0.438
55-59	51.0	42.0	121.5	1.241	62.2	82.0	−1.266
60-64	75.0	43.6	171.9	4.230	64.7	116.0	1.144
20-64	234.0	157.9	148.2		234.0	100.0	
Total chi-squared				39.1			6.8
Degrees of freedom				7			6
Probability value				0.000			0.343

Table 2.11e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	↓	↓
25-29	0.0	0.0	↓	↓	0.0	↓	↓
30-34	0.0	0.0	↓	↓	0.2	↓	↓
35-39	0.0	0.4	↓	↓	0.8	↓	↓
40-44	0.0	0.9	↓	↓	1.6	↓	↓
45-49	0.0	1.6	↓	↓	2.7	0.0	−2.059
50-54	5.0	2.8	84.3	−0.342	4.8	↓	↓
55-59	10.0	4.2	↓	↓	7.2	124.9	0.769
60-64	9.0	3.9	235.3	3.426	6.7	135.3	0.811
20-64	24.0	14.0	171.3		24.0	100.0	
Total chi-squared				11.9			5.5
Degrees of freedom				2			2
Probability value				0.003			0.064

Table 2.12. Females, group policies, Standard experience for quadrennium 1975-78. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.12a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.5	-	-	0.4	-	-
25-29	0.0	1.0	-	-	0.8	-	-
30-34	1.0	0.5	-	-	0.4	-	-
35-39	1.0	0.4	-	-	0.3	-	-
40-44	0.0	0.4	-	-	0.3	-	-
45-49	1.0	1.1	-	-	0.9	-	-
50-54	1.0	0.8	-	-	0.7	-	-
55-59	0.0	0.4	-	-	0.3	-	-
60-64	0.0	0.0	-	-	0.0	-	-
20-64	4.0	4.9	81.0		4.0	100.0	
Total chi-squared				-			-
Degrees of freedom				-			-
Probability value				-			-

Table 2.12b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.1	↓	↓	0.5	↓	↓
25-29	1.0	0.3	↓	↓	1.2	↓	↓
30-34	0.0	0.6	↓	↓	2.0	↓	↓
35-39	3.0	0.7	ˇ	ˇ	2.6	64.4	−0.684
40-44	8.0	1.1	ˇ	↓	3.8	↓	↓
45-49	4.0	1.0	↓	↓	3.6	162.4	1.309
50-54	4.0	1.1	↓	↓	4.0	ˇ	ˇ
55-59	2.0	1.2	344.4	4.766	4.2	71.4	−0.639
60-64	0.0	0.1	↑	↑	0.3	↑	↑
20-64	22.0	6.4	344.4		22.0	100.0	
Total chi-squared				22.7			2.6
Degrees of freedom				1			2
Probability value				0.000			0.274

Table 2.12c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	2.0	0.5	↓	↓	0.8	↓	↓
25-29	3.0	1.1	↓	↓	1.8	↓	↓
30-34	0.0	1.2	↓	↓	2.0	↓	↓
35-39	3.0	1.1	↓	↓	1.7	127.8	0.643
40-44	5.0	1.6	238.1	2.984	2.5	↓	↓
45-49	5.0	2.3	↓	↓	3.7	161.5	1.415
50-54	0.5	2.8	105.1	0.129	4.5	35.1	−1.755
55-59	2.0	2.0	↑	ˆ	3.2	↑	↑
60-64	0.5	0.5	ˆ	ˆ	0.8	↑	↑
20-64	21.0	13.1	160.6		21.0	100.0	
Total chi-squared				8.9			5.5
Degrees of freedom				2			2
Probability value				0.012			0.064

Table 2.12d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.8	↓	↓	1.0	⌄	↓
25-29	2.0	1.5	↓	↓	1.8	⌄	⌄
30-34	0.0	1.4	↓	↓	1.8	⌄	⌄
35-39	5.0	1.5	134.6	0.703	1.9	108.5	0.193
40-44	7.0	2.7	↓	↓	3.4	↓	↓
45-49	6.0	5.2	163.1	1.588	6.5	131.5	0.882
50-54	11.0	8.6	127.9	0.729	10.7	103.1	0.090
55-59	10.0	9.7	88.6	−0.340	12.0	71.5	−0.951
60-64	0.0	1.6	^	^	2.0	↑	↑
20-64	41.0	33.1	124.1		41.0	100.0	
Total chi-squared				3.7			1.7
Degrees of freedom				4			3
Probability value				0.454			0.631

Table 2.12e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	-	-
25-29	0.0	0.0	-	-	0.0	-	-
30-34	0.0	0.0	-	-	0.0	-	-
35-39	0.0	0.1	-	-	0.0	-	-
40-44	0.0	0.1	-	-	0.1	-	-
45-49	0.0	0.2	-	-	0.1	-	-
50-54	1.0	0.4	-	-	0.3	-	-
55-59	0.0	0.6	-	-	0.4	-	-
60-64	0.0	0.1	-	-	0.1	-	-
20-64	1.0	1.6	62.6		1.0	100.0	
Total chi-squared				-			-
Degrees of freedom				-			-
Probability value				-			-

Table 2.13. Females, group policies, Standard experience for quadrennium 1979-82. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.13a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	↓	↓	0.0	-	-
25-29	0.0	1.3	↓	↓	0.3	-	-
30-34	0.0	0.9	↓	↓	0.2	-	-
35-39	0.0	1.0	↓	↓	0.2	-	-
40-44	1.0	1.3	↓	↓	0.3	-	-
45-49	1.0	0.9	22.9	−1.504	0.2	-	-
50-54	0.0	2.2	↑	↑	0.5	-	-
55-59	0.0	1.1	↑	↑	0.3	-	-
60-64	0.0	0.0	↑	↑	0.0	-	-
20-64	2.0	8.7	22.9		2.0	100.0	
Total chi-squared				2.3			-
Degrees of freedom				1			-
Probability value				0.132			-

Table 2.13b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.2	↓	↓	0.2	↓	↓
25-29	1.0	0.3	↓	↓	0.3	↓	↓
30-34	0.0	0.8	↓	↓	0.9	↓	↓
35-39	1.0	1.0	↓	↓	1.1	↓	↓
40-44	1.0	1.0	↓	↓	1.2	↓	↓
45-49	3.0	1.5	↓	↓	1.7	100.0	0.000
50-54	0.0	0.8	116.1	0.326	1.0	↑	↑
55-59	2.0	1.1	↑	↑	1.3	↑	↑
60-64	0.0	0.2	↑	↑	0.2	↑	↑
20-64	8.0	6.9	116.1		8.0	100.0	
Total chi-squared				0.1			0.0
Degrees of freedom				1			0
Probability value				0.745			-

Table 2.13c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	5.0	2.2	↓	↓	2.7	↓	↓
25-29	7.0	4.4	182.2	1.950	5.4	147.4	1.251
30-34	7.0	4.6	↓	↓	5.6	124.1	0.529
35-39	7.0	5.1	145.1	1.296	6.3	111.5	0.267
40-44	7.0	5.5	127.2	0.590	6.8	103.0	0.071
45-49	6.0	6.9	86.8	−0.321	8.5	70.3	−0.804
50-54	12.0	8.2	146.9	1.240	10.1	118.9	0.555
55-59	7.0	8.5	73.1	−0.821	10.5	59.2	−1.386
60-64	1.0	2.5	↑	↑	3.1	↑	↑
20-64	59.0	47.8	123.5		59.0	100.0	
Total chi-squared				8.1			4.8
Degrees of freedom				6			6
Probability value				0.228			0.570

Table 2.13d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	3.0	2.3	↓	↓	2.6	ˇ	ˇ
25-29	3.0	4.3	90.4	−0.221	4.9	80.4	−0.477
30-34	2.0	4.7	↓	↓	5.3	37.5	−1.284
35-39	10.0	5.5	117.4	0.496	6.2	162.2	1.376
40-44	16.0	7.8	206.1	2.633	8.7	183.3	2.192
45-49	23.0	13.0	177.3	2.479	14.6	157.7	1.962
50-54	25.0	22.0	113.7	0.574	24.7	101.2	0.052
55-59	30.0	29.9	100.3	0.016	33.6	89.2	−0.556
60-64	0.0	10.1	0.0	−2.837	11.4	0.0	−3.008
20-64	112.0	99.6	112.4		112.0	100.0	
Total chi-squared				21.8			21.8
Degrees of freedom				7			7
Probability value				0.003			0.003

Table 2.13e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	↓	↓
25-29	0.0	0.1	-	-	0.1	↓	↓
30-34	0.0	0.1	-	-	0.2	↓	↓
35-39	0.0	0.1	-	-	0.2	↓	↓
40-44	0.0	0.2	-	-	0.4	↓	↓
45-49	1.0	0.4	-	-	0.7	↓	↓
50-54	1.0	0.8	-	-	1.3	↓	⌄
55-59	3.0	0.9	-	-	1.5	↓	⌄
60-64	0.0	0.4	-	-	0.6	100.0	0.000
20-64	5.0	3.1	163.3		5.0	100.0	
Total chi-squared				-			0.0
Degrees of freedom				-			0
Probability value				-			-

Table 2.14. Females, group policies, Standard experience for quadrennium 1983-86. Deferred periods 1, 4, 13, 26 and 52 weeks. Comparison of actual claim inceptions by quinquennial age group to those expected using the *C.M.I.R.* **12** model parameterised using the males, individual policies, Standard experience for 1975-78. See Section 3 for a full description of contents.

Table 2.14a: Deferred Period 1 Week

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	↓	↓
25-29	0.0	0.0	-	-	0.0	↓	↓
30-34	1.0	0.2	-	-	0.3	↓	↓
35-39	0.0	0.9	-	-	1.1	↓	↓
40-44	0.0	0.4	-	-	0.5	↓	↓
45-49	0.0	0.1	-	-	0.2	↓	↓
50-54	1.0	1.0	-	-	1.3	↓	↓
55-59	3.0	1.2	-	-	1.6	100.00	0.000
60-64	0.0	0.0	-	-	0.0	↑	↑
20-64	5.0	3.9	128.4		5.0	100.0	
Total chi-squared				-			0.0
Degrees of freedom				-			0
Probability value				-			-

Table 2.14b: Deferred Period 4 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.0	0.2	↓	↓	0.2	↓	↓
25-29	0.0	0.4	↓	↓	0.4	↓	↓
30-34	0.0	0.4	↓	↓	0.4	↓	↓
35-39	0.0	0.7	↓	↓	0.7	↓	↓
40-44	0.0	0.8	↓	↓	0.8	↓	↓
45-49	0.0	1.1	↓	↓	1.1	↓	↓
50-54	2.5	0.8	↓	↓	0.8	↓	↓
55-59	0.5	0.6	95.4	−0.081	0.6	↓	↓
60-64	1.0	0.1	↑	↑	0.1	100.0	0.000
20-64	5.0	5.2	95.4		5.0	100.0	
Total chi-squared				0.0			0.0
Degrees of freedom				1			0
Probability value				0.936			-

Table 2.14c: Deferred Period 13 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	1.0	0.8	↓	↓	1.3	↓	↓
25-29	1.0	1.4	↓	↓	2.1	↓	↓
30-34	1.0	1.5	↓	↓	2.3	51.9	−1.070
35-39	1.0	2.0	69.5	−0.677	3.2	↓	↓
40-44	8.0	2.6	↓	↓	4.1	124.1	0.600
45-49	5.0	2.5	254.8	3.232	3.8	↓	↓
50-54	6.0	2.8	↓	↓	4.4	133.8	0.895
55-59	3.0	2.9	153.4	1.260	4.6	↓	↓
60-64	1.0	0.8	↑	↑	1.2	69.7	−0.672
20-64	27.0	17.4	155.4		27.0	100.0	
Total chi-squared				12.5			2.8
Degrees of freedom				3			3
Probability value				0.006			0.430

Table 2.14d: Deferred Period 26 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	2.0	0.7	↓	↓	1.4	↓	↓
25-29	0.0	1.3	↓	↓	2.5	↓	↓
30-34	5.0	1.3	↓	↓	2.5	110.4	0.232
35-39	6.0	1.6	↓	↓	3.2	↓	↓
40-44	7.0	2.3	279.1	4.271	4.5	169.0	1.704
45-49	11.0	3.5	↓	↓	6.9	159.9	1.400
50-54	10.0	4.9	249.0	3.855	9.6	103.7	0.102
55-59	7.0	7.6	78.6	−0.568	14.8	40.1	−2.227
60-64	0.0	1.3	↑	↑	2.6	↑	↑
20-64	48.0	24.5	195.9		48.0	100.0	
Total chi-squared				33.4			9.9
Degrees of freedom				3			4
Probability value				0.000			0.042

Table 2.14e: Deferred Period 52 Weeks

AGE GROUP	AINC	EINC	100 × A/E	Z	EINC*	100 × A/E*	Z*
20-24	0.0	0.0	-	-	0.0	-	-
25-29	0.0	0.0	-	-	0.0	-	-
30-34	0.0	0.0	-	-	0.0	-	-
35-39	1.0	0.0	-	-	0.1	-	-
40-44	0.0	0.0	-	-	0.1	-	-
45-49	0.0	0.1	-	-	0.2	-	-
50-54	1.0	0.2	-	-	0.5	-	-
55-59	0.0	0.3	-	-	0.7	-	-
60-64	0.0	0.1	-	-	0.2	-	-
20-64	2.0	0.7	292.5		2.0	100.0	
Total chi-squared				-			-
Degrees of freedom				-			-
Probability value				-			-

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RECOVERY AND MORTALITY RATES OF THOSE CLAIMING UNDER PHI POLICIES, INDIVIDUAL 1975-90 AND GROUP 1975-86

1. INTRODUCTION

The methodology proposed by the PHI Sub-Committee in its report "The Analysis of Permanent Health Insurance Data" (*C.M.I.R.* **12**, 1991) requires that the intensities of recovery and mortality for those sick under a PHI policy are stated mathematical functions, varying by age and duration of sickness, and possibly different for each deferred period. Graduated rates of recovery and mortality were presented in Part B of that report. These rates were based on the experience in the quadrennium 1975-78, for claims under PHI individual policies, for the Standard male lives data. In this report these rates will be referred to as the SM1975-78 rates, and they will form the basis of comparison in what follows.

Data for recoveries and deaths among those claiming under PHI policies is available for the quadrennia 1975-78, 1979-82 and 1983-86, for both male and female lives, both for those insured under individual policies and for those included in the group experience, together with the quadrennium 1987-90 for the individual experience. The group experience is subdivided into 'group individual' policies, i.e. those where costing is done on an individual basis, and therefore full records of the in-force by age and sex are available, and those costed using 'group unit cost' methods, where information about the in-force is not available, though details of the individual claims are. This is the first report in which it has been possible to make use of the data provided by offices in respect of these group unit cost contracts.

In each case the data analysed is confined to the Standard experience. The categories of policy included in the Standard experience are described in the report: "Sickness Experience 1975-78 for Individual PHI Policies" (*C.M.I.R.* **7**, 1984). The main categories excluded are policies from outside the United Kingdom, and policies with an occupational rating or a known exclusion clause from a medical impairment.

The methodology used in this report is described in Section 2. Recoveries for the individual experience, for separate quadrennia, and then for the period 1975-90 as a whole are discussed in Sections 3 and 4, and recoveries for the group experience are discussed similarly, but only for the period 1975-86 as a whole, in Sections 5 and 6. Deaths are considered in the same way in Sections 7 to 10.

The overall results are summarised in Tables 11.1 and 11.2 and Figures 11.1 (a) to (d) and 11.2 (a) to (d) in Section 11 of the report. Readers should be warned, however, that the overall summary figures conceal important aspects of the experience, and they should not be used blindly.

Appendices A and B describe two aspects of the method of analysis. The tables in Appendix C show details of both recoveries and deaths, for both males and females, for the individual 1987-90 experience. Similar details for the other experiences are available on application to the CMI Bureau, who can make them available either on paper or on a computer disk.

2. METHODOLOGY

2.1 *Data accumulation*

For each experience, we are interested in analysing both the recovery rates and the mortality rates, in both cases among those claiming. Claims are subdivided by sex: male and female; and also by deferred period (DP): 1 week, 4 weeks, 13 weeks, 26 weeks and also 52 weeks, although there is rather little data in this last category. It is useful also to look at the data for all deferred periods combined. We refer to the experience for a given class of business, sex, period, deferred period and cause of decrement as a *tableau*. For example, in Section 2.7 we consider in detail the tableau for individual males, 1987-90, DP 1 week, recoveries, shown in Table C1.1 in Appendix C.

The data within a tableau is subdivided by age and by duration of sickness. Age is defined as age at commencement of the period of sickness. Ages are given as integral ages, but fall into two categories, 'age nearest' and 'age next'. Durations are available for the exact number of days of a claim, and are typically subdivided into weeks from the start of the claim, e.g. (for DP 1 week) 1-2 weeks, 2-3 weeks, 3-4 weeks, . . . up to 51 weeks-1 year, 1 year-2 years, . . . Note that a *week* in this context consists of 7 days, or 1/52.18 of a year. The data for a single tableau laid out in a rectangular table can therefore occupy a large number of columns (for ages) and a large number of rows (for durations). The data in most such tableaux is sparse and a suitable compression method is therefore necessary.

For presentation in this report ages are grouped as follows: 15-19, 20-24, 25-29, and regularly up to 60-64, then 65 and over. In practice the group for 15-19 includes data only for ages 18 and 19, and is always aggregated with the 20-24 age group. The data for ages 65 and over contains data only for age 65, and is always aggregated with the 60-64 age group.

The column for 'ages 20-24' contains data for ages 20 to 24 nearest and also ages 21 to 25 next (i.e. 20 to 24 last), and likewise for other age groups. Exposed

to risk and events are not split between two neighbouring cells. Since the expected number of events has been correctly calculated for each category of age for aggregation, this does not lead to any errors.

In this report the duration classifications used are 1-2 weeks, 2-3 weeks, 3-4 weeks, 4-8 weeks, 8-13 weeks, 13-17 weeks, 17-26 weeks, 26-30 weeks, 30-39 weeks, 39 weeks-1 year, 1-2 years, 2-5 years and 5-11 years. The very few events (recoveries or deaths) after 11 years duration have been ignored. It will be noted that these duration groupings are suitable for all deferred periods, when started at the correct point, and include also the four-week run-in period for deferred periods 4 weeks, 13 weeks and 26 weeks. They are not, however, quite the same as the usual *a/b* duration groups used for the analysis of sickness rates.

For each deferred period data exists in the records for claims with a duration lower than the deferred period. Such data is not necessarily an error; one week deferred data may include policies with a one-week franchise, i.e. claims lasting longer than one week have benefit paid from the start of sickness rather than starting one week after the start of sickness, so there may be exposure in the first week of sickness, though one would not expect any recoveries or deaths in the first week to be recorded; policies with a two-week deferred period are classified under DP 4 weeks, and any claims under these policies may be correctly recorded with durations of 2-4 weeks; and similarly for higher deferred periods. The quantity of such data is, however, quite small compared with the data that starts at the expected duration, and these 'premature durations' have been omitted.

In Part B of the report in *C.M.I.R.* **12**, the age range was taken as ages 20 to 64, so the totals shown in that report do not match exactly with those shown in this report. Premature durations in that report were, however, treated in the same way as has been done here.

2.2 *Calculation of expected numbers of events*

The objective of the investigations described in this report is to compare the actual number of recoveries or deaths for any tableau with those expected according to some standard comparison table, and in this report we use the recovery and mortality rates already referred to as the SM1975-78 rates. The basic data consists of the number of days 'exposed to risk' and the number of events (recoveries and deaths) for each *sub-cell* of the data. A sub-cell consists of the data for a single year of age and age classification (for example 'age 20 next' or 'age 31 nearest'), and a single short duration period (weeks for the first year and years thereafter). The 'exposed to risk' is calculated in days, counting

from the start of the period of investigation ('beginners') or the start of the period of claim ('new entrants'), to the occurrence of the event (recovery or death) or the expiry of the period of insurance ('expiries') or the end of the period of investigation ('enders'). It is thus a 'central' exposed to risk.

The expected number of events (recoveries or deaths) is calculated for each sub-cell by using the corresponding recovery or mortality rates, calculated from the formulae given in Part B of *C.M.I.R.* **12**, for the mid-point of that sub-cell, i.e. for age x for cases recorded as age x nearest, and for age $x - \frac{1}{2}$ for age x next, and for e.g. duration $z = 1.5$ weeks for the sub-cell 1-2 weeks. The lower recovery rates for the run-in period, the four weeks after the end of the deferred period, for DP4, DP13 and DP26 have been used.

All the data in sub-cells is accumulated into the cells described above, so that for each cell, and for each row total (i.e. all ages for a particular duration group), each column total (i.e. all durations for a particular age group), and a grand total (i.e. all ages and all durations), figures for exposed to risk, actual number of events and expected number of events are obtained. At this point some statistical analysis can begin.

2.3 *Statistical analysis*

The statistical analysis of a tableau is very similar to the analysis of a mortality experience subdivided by age, where the results are shown as a single column of cells, rather than a rectangular array.

It has been shown elsewhere (see e.g. Forfar, McCutcheon and Wilkie, 1988) that, if central exposures are used, the number of events is approximately Poisson distributed, with both mean and variance equal to the expected number of events. This is true for any cell, whether or not it is composed of the summation of a number of sub-cells. It assumes independence of events, in particular the absence of duplicates. Duplicates have already been eliminated from the claim records for the PHI experiences, as far as they can be identified; however, there is still some indication of possible 'over-dispersion' in some of the experiences. It is possible that there remain duplicate claims, for example for one insured from different offices, which the matching criteria used by the PHI Sub-Committee do not identify.

Given the actual number of events (recoveries or deaths) in any cell, A, and the expected number of events, E, it is natural to calculate the percentage ratio $100A/E$, and also the standardised difference $z = (A - E)/\sqrt{E}$. The sum of the squares of the zs is distributed as χ^2, with the number of degrees of freedom equal to the number of cells that have been accumulated, reduced by one for each constraint that may be imposed. In fact the difference is not calculated

simply as $(A - E)$ but with continuity adjustments to allow for the fact that the actual number of events is necessarily an integer, so in full $z = D/\sqrt{E}$, where:

$$D = \begin{cases} A - E - 0.5 & \text{if } 0.5 < A - E \\ 0.0 & \text{if } -0.5 \leq A - E \leq 0.5 \\ A - E + 0.5 & \text{if } A - E < -0.5, \end{cases}$$

that is, D is moved closer to zero by 0.5, but is not moved beyond zero.

In the tables in Appendix C, and in the comparable tables available from the CMI Bureau, these values are shown within each cell, namely A, E, $100A/E$, z. If $D = 0.0$ then z is shown as 0.0 if $A - E$ is positive and as -0.0 if $A - E$ is negative; if D is not zero, but z is small and close to zero, i.e between -0.005 and $+0.005$, it is shown as -0.00 or 0.00, as appropriate. The totals for rows and columns and the grand totals show values of A, E and $100A/E$ for the relevant total, together with the sum of the squares of the zs for the relevant row, column or tableau. The sum of the squares of the zs for the whole tableau is described as χ^2 and $p(\chi^2)$ is the probability of χ_n^2 exceeding the calculated χ^2, where χ_n^2 has a χ^2 distribution with n degrees of freedom.

All this is quite standard. But the χ^2 test relies on the assumption that the individual zs are approximately normally distributed, and for this to be the case it is desirable that the expected number of events in each cell is at least as great as some minimum number, k_{cell}, for which we have used the value 8. When the observations are sufficiently sparse, this means grouping cells in an appropriate way. For a table that consists of a single column, such as a typical mortality experience, a simple grouping algorithm has long been used by the CMI Bureau: the column is traversed first from top to bottom, and any cell with fewer than k_{cell} expected events is added to the next following cell; if the combined cell still has fewer than k_{cell} expected events, it in turn is combined with the cell below. Once the column has been traversed from top to bottom, it is traversed again from bottom to top, so that any cells with too few observations at the bottom of the table are moved upwards.

There are no single column tables in this report and for a two-way tableau the procedure is more complicated. Details are given in Appendix A. It is possible that individual discretion in how cells are grouped might on occasion produce a preferable result to the mechanical algorithm described therein, but it is convenient for computer purposes to use a computable method. It is possible also that alternative algorithms could produce results better than the one that has been used, though there is no indication in the investigations that it has proved unsatisfactory.

2.4 *Distribution of signs*

While a χ^2 test is usually satisfactory, it can sometimes give misleading results. The value may seem to be too high simply because of a 'rogue' result in a single cell of the table. Or it may seem to be too low when all, or nearly all, the deviations are of the same sign, but not of very high value. In order to counter these cases it is useful also to consider a non-parametric test of the distribution of the signs of the deviations.

The statistics used for the 'signs test' are the counts of the number of cells where the deviation, $A - E$, is positive or negative. If the observations are in accordance with those expected, then it would be reasonable to assume that positives and negatives would occur with equal frequency, i.e. $p(+) = p(-) = \frac{1}{2}$. The numbers of positives and negatives, $\#(+)$ and $\#(-)$, are binomially distributed. The signs test therefore tests whether the observed numbers of positives and negatives are more extreme than might be expected. For this, a 'two-tailed' test is appropriate. For example, if there is one positive cell out of 10 cells, $p(+/-)$ is the probability of there being zero or one positives plus the probability of there being zero or one negatives.

2.5 *The two-way runs test*

For a mortality investigation it is customary to use the non-parametric Wald-Wolfowitz runs test, which is equivalent to Steven's change-of-sign test, to test whether the signs of the deviations $(A - E)$ (or equivalently the signs of the zs) can be treated as randomly distributed. Since we are considering two-way tableaux, we have had to devise a two-way equivalent of the runs test, and this is described in Appendix B. This test investigates the relationship between adjacent cells, either in a horizontal or a vertical direction. The interpretation of 'adjacent' is explained in Appendix B. If the two adjacent cells have the same sign, the relationship is described as a *bond*, and if they have different signs it is described as a *break*. The distribution of the number of bonds and breaks in the tableau (which, because of grouping of cells, may no longer be rectangular, but irregular within the rectangular frame) is estimated by simulation. If the observations can be treated as conforming with those expected, the number of bonds will be sufficiently small. A suitable probability to calculate is therefore the probability that the number of bonds that might have been observed is greater than or equal to the number of bonds actually observed. A small probability is indicative of a lack of fit.

For each tableau the two-way runs test has been applied first using assumption (c) of Appendix B (that is, assuming that the given numbers of +s and −s are arranged at random), and allowing for the existence of *bridges* (see Appendix B for an explanation of these). If the number of bonds is too great

(equivalent to too few runs in the runs test) it is necessary to investigate the tableau specifically in order to see where the discrepancy lies. It may be that the number of events in one group of ages or one group of durations is unusually high or low, or there may be an excess or a deficit in some specific region.

2.6 *Adjusted expected*

If the overall level of recoveries or deaths is substantially different from that expected according to the standard of comparison, then it is likely that all the tests used, the χ^2 test, the signs test and the two-way runs test, will show that the fit is unsatisfactory. However, it is possible that a simple multiplicative adjustment to the expected would provide a satisfactory fit, and it is easy to test for this.

The adjusted expected, E^*, is calculated by multiplying each expected, E, by the same ratio r, where $r = \Sigma A/\Sigma E$, i.e. the overall ratio of actual to expected within the tableau.

Using the adjusted expected it is then possible to calculate new values of z and χ^2, and to carry out the χ^2 test, signs test and two-way runs test. However, different assumptions have been made about the two-way runs test: assumption (a) of Appendix B has been used, wherein each cell has an equal chance of containing a + or a −; bridges are still included. If the tableau fails any of these tests it is worthy of closer investigation. For the χ^2 test the number of degrees of freedom is reduced by one, to allow for the constraint that the total adjusted expected, ΣE^*, is made equal to the total actual, ΣA.

2.7 *Description of a specimen tableau*

We describe in detail the tableau for individual males, 1987-90, DP1 week, recoveries, shown in Table C1.1 in Appendix C. The results are summarised in the first column of Table 3.4.

The results for the tableau are in cells, arranged by age groups (in the columns) and duration groups (in the rows). Only non-zero columns and rows are shown. In this tableau the only row grouping that has taken place is that the data for 2-5 years and for 5-11 years have been grouped together to form a single row for 2-11 years, because the number of expected recoveries for 5-11 years is only 5.5, less than the value of k_{row} (= 15); however, when added to the number of expected recoveries for 2-5 years, which is 38.5, the total exceeds the value of k_{row}.

Many individual cells have an expected number of recoveries smaller than k_{cell} (= 8), and for certain purposes the data in such a cell has been added to that for a cell to the right or to the left. For example, for durations 3-4 weeks,

the cell for ages 18-24 has been included with the cell for ages 25-29 for the calculation of $100A/E$ and z; the same is true for the next two duration groups; for durations 13-17 weeks the data for the first two cells have been added to the third in the row. A cell where the data has remained in place is described as a 'non-zero' cell. The movement of data is indicated by right and left arrows ($\rightarrow$ and $\leftarrow$).

In each cell the items shown are:

- the actual number of recoveries, A, which is necessarily an integer;
- the expected number of recoveries, E, which is shown to one decimal place.

In each non-zero cell two extra items are shown. They are calculated including any data that has been added into the cell and they are:

- the ratio of actual to expected, shown as a percentage, $100A/E$;
- the standardised deviation, z, calculated as described in Section 2.3.

In the top left hand cell, for ages 18-24 for duration 1-2 weeks, there were 29 recoveries, whereas 35.4 were expected according to the SM1975-78 tables. The actual number of events was only 82% of the expected, so a value of $100A/E$ of 82 is shown, and a value of z of -0.99. If the absolute value of z is **2.0** or greater, it is shown in **bold**, as in three cells in the first row of the tableau.

In the row for 3-4 weeks, the first cell has been combined with the second. The original numbers of A and E are shown in each cell, but $100A/E$ is calculated from the totals for the two cells, i.e. $A = 6 + 25 = 31$, and $E = 5.5 + 36.8 = 42.3$. This gives $100A/E$ of 73%, and z of -1.66.

The last three cells for age group 18-24 show that there was no exposure at any duration over 39 weeks, so the recoveries are shown as 0 and the expected as 0.0 in each cell, with no arrow to indicate that data has been moved.

Row totals, column totals and a grand total are shown. In these cells the value of $100A/E$ is based on the totals for A and E for the row or column, not allowing for any individual cells whose data has been moved, and the place of z is taken by the sum of the squares of the zs, $\chi^2 = \Sigma z^2$, from the cells in which z has been retained. If no cells have contributed to Σz^2 in a column then a double arrow to the right or left is shown ($\rightarrow\rightarrow$ or $\leftarrow\leftarrow$).

In the bottom right hand cell in Table C1.1 it can be seen that there were 5,905 actual recoveries, as compared with 6,188.7 expected, giving a ratio of 95%. The sum of the squares of the zs was 357.85, and there were 75 non-zero cells, so 75 degrees of freedom. The chance of such a large value of χ^2 is virtually zero, so the value of p is shown as 0.0000.

In Table 3.4 the results are summarised. The values of the total A and E are shown in the first two lines of the first column of Table 3.4. These are followed by the values of $100A/E$ for each duration of sickness, i.e. the row totals from

Table C1.1, and then $100A/E$ for each of the age groups, i.e. the column totals from Table C1.1. Upwards arrows in the first section indicate, for example, that the data for 5-11 years has been added to that for 2-5 years, and upwards and downwards arrows in the second section similarly indicate grouping of age groups.

Any value of $100A/E$ in Table 3.4 and similar tables that is based on fewer than 30 events is shown in *italics*. This is the case in Table 3.4 for DP1 for all durations above 26 weeks, and for other entries in the table.

Further down Table 3.4, under the side heading 'Using E' are shown the value of $\chi^2 = \Sigma z^2$, which is 357.85 and the number of degrees of freedom, *df*, which is 75. Also shown is the probability of a value of χ^2 as high or higher than 357.85, $p(\chi^2)$, which is 0.0000.

In the next row in Table 3.4 are shown the number of positive and negative deviations, denoted #(+/−). For this tableau there were 14 positive and 61 negative deviations indicated as 14/61. Assuming that the signs of the deviations are independent and binomially distributed with a probability of one half each, then the probability of getting a result in either direction of 14/61 or more extreme is virtually zero, and this is shown as 0.0000 in the next line against $p(+/-)$.

The number of bonds and breaks in the two-way runs test is not shown in Table 3.4. Careful counting in Table C1.1 shows that there were 105 bonds and 24 breaks, allowing for four horizontal and five vertical bridges. 1,000 simulations were carried out, and none of them showed a number of bonds equal to or greater than 105, so $p(B)$ is shown as 0.000. Values of $p(B)$ are shown with three decimal places, indicating the number of simulations out of 1,000 that meet the criterion.

If any value of $p(\chi^2)$ or $p(+/-)$ is 0.10 or greater it is shown with two decimal places; if it is less than 0.10 it is shown with four decimal places; and if it is less than 0.05 it is shown in **bold**. Values of $p(B)$ that are less than 0.050 are also shown in **bold**.

The lower block in Table 3.4 shows the same statistics as already discussed, but adjusting the expected so that it exactly equals the number of actual events, by multiplying each of the expected numbers by about 0.95. This adjustment is relatively small and the numbers are not very different from those shown higher up. The number of degrees of freedom, *df*, is reduced by one, to allow for the constraint that the adjusted expected is made equal to the actual; the grouping of cells in this case means that the number of cells is also reduced by one to 74. The number of bonds is simulated this time under the assumption that the chances for each cell having a + or a − sign are equal (assumption (a) of Appendix B).

We can see that, although the overall experience is only about 5% 'lighter' than SM1975-78, the distribution across durations is very different. Each of the first two rows, durations 1-2 weeks and 2-3 weeks, shows actual exceeding expected, by 13% and 8% respectively. Above 13 weeks, the recoveries are around 50% of those expected, very much lighter. All the cells with positive deviations are in the first four rows of Table C1.1, durations below 8 weeks. It is clear that a simple multiplicative adjustment to the SM1975-78 tables would not represent the experience satisfactorily.

The variation of experience by duration of sickness is shown in the summary tables; it is more pronounced than the corresponding variation by age, which is also shown in the summary tables. This is also the reason for the final grouping of cells being across durations, rather than in the age columns. It turns out that the variation by age is fairly uniform for all the experiences considered, and it is therefore not discussed further in this report.

This type of analysis has been carried out for each tableau, but only the tableaux for individual 1987-90 have been shown in this report. Summaries of all the tableaux are shown in Tables 3.1 to 10.4, which are now discussed.

3. INDIVIDUAL MALES, RECOVERIES

3.1 *Individual males, 1975-78*

The experience for the quadrennium 1975-78 for males effecting individual PHI policies, taking the Standard subset of the data, is that on which the SM1975-78 recovery and mortality rates were based. We should therefore expect the experience to fit the expected rates appropriately, and indeed it does. Table 3.1 shows summaries for five deferred periods, DP1, DP4, DP13, DP26 and DP52, and also for all deferred periods combined. The data for DP52 was not investigated separately in the original graduation, but was included in the experience for all deferred periods combined. However, there is rather little experience, and few conclusions can be drawn from it.

In Table 3.1, for DP one week, it can be seen that there were 6,341 actual recoveries, as compared with 6,354.5 expected, giving a ratio of almost exactly 100%. The sum of the squares of the zs was 66.79, and there were 68 non-zero cells, so 68 degrees of freedom. Strictly, since the graduated rates were derived from this data, the number of degrees of freedom should be reduced for the tableaux for this experience, but it is more consistent with the other experiences discussed not to do this. The probability of a value of χ^2 as high or higher than 66.79, $p(\chi^2)$, is 0.52. Thus the value of χ^2 is not unusually high.

For this tableau there were 32 positive and 36 negative deviations indicated as 32/36; the probability of getting a result in either direction of 32/36 or more extreme is 0.72, as shown in the line against $p(+/-)$. Again, this probability indicates nothing unusual.

In the 1,000 simulations that were carried out 369 of them showed a number of bonds equal to or greater than the number observed, 56, so $p(B)$ is shown as 0.369. Again, there is nothing unusual.

The lower block in Table 3.1 shows the same statistics as already discussed, but adjusting the expected so that it exactly equals the number of actual events. In this case, since the actual and expected were already close together, the adjustment is small, and the numbers are very similar to those shown higher up.

Further columns in Table 3.1 show similar results for DP4, DP13 and DP26. The percentage ratios are 100, 97 and 96 respectively. One might wonder why these are not identically 100, but it should be remembered that the graduated rates were based, in the first place, on the data for all deferred periods combined, beyond the four week run-in period, that is excluding durations 4-8 weeks for DP4, 13-17 weeks for DP13 and 26-30 weeks for DP26; the data for the run-in periods for all these deferred periods combined were then used to construct the adjustments for the run-in rates. The actual and expected agreed overall, as can be seen from the final column of Table 3.1, but did not necessarily agree exactly for each deferred period separately. The statistics show that the graduated rates fit the data adequately. There are, however, some points to be observed.

First, the value of $p(\chi^2)$ for DP4 is 0.0672. Since this probability is less than 0.1, it is shown to four decimal places. It indicates that the value of χ^2 is rather on the large side, though not in excess of the 5% test level.

Within DP4 there were exactly 21 positive and 21 negative deviations; one cannot have a less extreme distribution than this, and the probability, $p(+/-)$ is therefore shown as 1.0, to one decimal place.

For DP52 there were only 9 actual recoveries, and an expected 12.0. Although the percentage ratio is 75, the value of χ^2 for the single cell into which the data collapses is only 0.51, with $p(\chi^2) = 0.48$, so, although the experience seems light, it is nothing exceptional. For this deferred period the one cell showed a negative deviation. It is not possible to have a less extreme value than this, so the value of $p(+/-)$ is shown as 1.0. With only one cell, the number of bonds and breaks for a two-way runs test is necessarily zero, so the value of $p(B)$ is also shown as 1.0.

When an adjusted E is calculated for DP52 the single cell now shows 9 actual and 9.0 expected, a ratio of 100. The deviation is necessarily zero, so χ^2 for the lower part of the table is zero. The number of degrees of freedom is also

reduced to zero, and $p(\chi^2)$ is 1.0. Rather than show these uninformative values all the entries are indicated by '-'. These 'degenerate' tableaux appear quite frequently in some of the other experiences considered.

Although the data in this experience is almost the same as that shown in Table B4 of Part B of the report in *C.M.I.R.* **12**, they have been laid out in a different way, being subdivided for each deferred period, and few of the cells agree identically.

3.2 *Individual males, 1979-82*

So far the emphasis has been on the presentation of results. We now turn to a new experience, that for individual males for the next quadrennium, 1979-82. Summary results are shown in Table 3.2.

The number of events is similar to that for the previous quadrennium, the total number of recoveries being 7,301, as against 8,215 in 1975-78. A great many of these recoveries occurred in the first few weeks for DP1. This appears to give a great weight to this part of the data, and indeed it does when only the overall percentage ratio is considered; but because the data is sub-divided into many cells, each cell gets its own due weight in the calculation of χ^2 and in the other tests.

The first point to note is that for DP1 the overall percentage ratio is 109. There were about 9% more recoveries than were expected using the SM1975-78 graduated rates. The value of χ^2 was 118.07, with 61 degrees of freedom, and $p(\chi^2)$ was 0.0000. The value of χ^2 is therefore very significantly high.

There were 43 positive deviations and only 18 negative. The probability of a value as extreme as this, $p(+/-)$, was 0.0019, again showing significantly extreme data.

The value of $p(B)$, however, was 0.576, showing that the distribution of positives and negatives across the tableau was not unusual.

Inspection of the detailed tableau (not shown in this report) shows that the high ratios apply to almost all age groups and almost all duration groups fairly uniformly. It is therefore a reasonable hypothesis that if we were to increase the graduated rates by 9% and make the total expected events equal to the total actual, a satisfactory fit might be obtained. That this is so is confirmed from the lower part of the first column of Table 3.2, which shows $p(\chi^2) = 0.13$, $p(+/-) = 0.80$ and $p(B) = 0.654$, all not exceptional, and confirming that a 9% increase in the recovery rates would provide a satisfactory fit for this deferred period.

For DP4 the overall percentage ratio is 102. For early durations, up to 17 weeks, the experience is reasonably close to 'par', but above 17 weeks the experience is erratic, with 26-30 weeks, 39 weeks-1 year and 1-2 years being

high ($100A/E = 152$, 144 and 150 respectively) and for 30-39 weeks being low ($100A/E = 59$). Within each of these durations there are cells with rather high values of z, giving a value of χ^2 of 65.87 with 39 degrees of freedom, so that $p(\chi^2) = 0.0046$. However, the overall number of pluses and minuses is quite reasonable, and the number of bonds is not excessive.

This is the sort of pattern where one might wonder whether all duplicates have been eliminated, since a high value of χ^2 with erratic deviations like this is typical of 'over-dispersion', which could be caused by the presence of duplicates.

For DP13 the overall percentage ratio is 96, showing that there were slightly fewer recoveries than expected, but again none of the probabilities either using the original or the adjusted expected shows anything unusual, except that $p(B)$ is low for both the unadjusted and the adjusted data (0.007 and 0.002 respectively).

For DP26 the overall percentage ratio is 77, and $p(\chi^2)$ is 0.0197, significant at a 2% probability level. However, the other probabilities are not significantly low, and using the adjusted expected they are all quite reasonable.

For DP52 the overall percentage ratio is 73, similar to that for the previous quadrennium, but the data by itself is too sparse to be significant.

For all deferred periods combined the overall percentage ratio is 105, and it might appear that an overall adjustment of 5% might fit the experienced data. The value of χ^2 for the adjusted expected is large (167.63 with 96 degrees of freedom, $p(\chi^2) = 0.0000$). Inspection of the detailed tableau showed that there were several individual cells with high absolute values of z: ages 30-34, 1-2 weeks ($z = 3.02$); ages 40-44, 4-8 weeks ($z = 2.93$); ages 40-44, 12-17 weeks ($z = -2.92$); ages 50-54, 2-5 years ($z = -2.63$); and ages 50 and over, 5-11 years ($z = 4.86$). However, these are scattered, and do not indicate any systematic pattern; the values of $p(+/-)$, 0.68, and $p(B)$, 0.295, confirm this. Thus an overall 5% adjustment would, in this case, seem to be satisfactory.

3.3 *Individual males, 1983-86*

The volume of data for individual males for the next quadrennium, 1983-86, shows an increase over that for the previous two, with 8,738 actual recoveries. The numbers of recoveries in DP13 and DP26 have increased particularly over the whole period, which assists in drawing conclusions about these deferred periods. The results are shown in Table 3.3.

For DP1 the overall percentage ratio is 101, showing almost the same level of recoveries as in 1975-78, and not so high as in 1979-82. The distribution of recoveries is, however, significantly different from that expected. Inspection of the detailed tableau shows that high recoveries are observed mainly in the first

three rows, durations 1-4 weeks. Beyond that the actual recoveries are almost consistently low.

The results on an adjusted basis are quite similar to those using the unadjusted basis, as can be seen from the lower part of the first column of Table 3.3. The value of χ^2 is much too high, there are 24 (22) positive and 51 (53) negative deviations, and these are concentrated with the positives lying almost all in the early duration groups.

The other three main duration groups also show recoveries that are 'light', with percentage ratios for DP4, DP13 and DP26 of 74, 67 and 59 respectively. The probabilities show that these are all significantly light.

Using the adjusted expected, the results of DP4 and DP13 are satisfactory, but for DP26 there is still an unusually high value of χ^2 (58.44 with 17 degrees of freedom, a probability of 0.0000). Inspection of the tableau using the adjusted expected (not shown) showed that this could be substantially accounted for by one cell, that for ages 50 and over, duration 2-11 years, which contributed 41.91 to the total of χ^2.

There is now enough data for DP52 to show four separate cells, in all of which the actual number of recoveries is light. The overall percentage ratio is 35, and the probabilities begin to indicate that the experience for this deferred period is significantly lighter than the graduated rates.

The results for all deferred periods combined, shown in the last column of Table 3.3, show more clearly the pattern that is developing. Recovery rates for duration 1-4 weeks are high, as they are also for durations beyond 5 years. Between 4 weeks and 5 years, however, the values of $100A/E$ range from 58 to 82, running uniformly down to a minimum at 30-39 weeks, and rising again with increasing duration. Inspection of the detailed tableau showed that a large part of the excess of recoveries at durations over 5 years occurs for high ages, particularly 55-59 (45 actual recoveries against 3.2 expected); the same is true for ages 60-65, 2-5 years (38 actual recoveries versus 5.6 expected). Inquiries of the contributing offices have shown that these are caused by cases which had expired at the end of the contract period but were erroneously coded as recoveries. It is too late now to correct the past data in detail, but the PHI Sub-Committee hopes that it will be possible to avoid this error for future experiences.

3.4 *Individual males, 1987-90*

Results for individual males for 1987-90 are summarised in Table 3.4 and shown in detail in Tables C1.1 to C1.6. The format of these tables is described in Section 2.7. The volume of data is again slightly increased over the previous quadrennium; although the number of actual recoveries is down from 8,738 to

8,548, the expected recoveries have increased from 9,697.6 to 10,375.1. The increase is proportionately greatest for longer deferred periods.

A pattern very similar to that for 1983-86 appears, but all the recoveries are at a rather lower level. The overall value of $100A/E$, for all durations and all deferred periods, is 82 (against 90 for 1983-86). The only durations in Table 3.4 to show an increase over the SM1975-78 rates are the shortest, 1-2 and 2-3 weeks (for DP1 only) and at the highest durations, above 2 years. The overall pattern of $100A/E$ is the same as for 1983-86, a steady decrease to a minimum, this time at 26-30 weeks (for all deferred periods combined), and rising thereafter. However, the general level is about 10 points lower than for the earlier quadrennium.

In particular DP1 shows $100A/E$ only 95 (*cf* 101 in 1983-86), DP4 shows 63 (*cf* 74%) while DP13 (66 as compared with 67 previously) and DP26 (56 as compared with 59) are very similar.

There is a little more data on this occasion for DP52, and the overall level of 64% of expected is falling more into line with the other experiences.

Almost all the values of χ^2 are high, even using the adjusted expected, but for all the separate deferred periods except DP1 the adjusted E produces a pattern of pluses and minuses that is generally not unusual.

The number of recoveries for DP13 and DP26 for durations 5-11 years is high. Although the number is particularly high at higher ages, which, as for 1983-86, has been caused by expiries being erroneously coded as recoveries, the excess recoveries appear to apply also at younger ages, which suggests that the originally graduated rates, which were based on quite sparse data, were rather low. Since there are some policies with benefits limited to 10 years, these could account for some of the excess recoveries, if expiries had also been erroneously coded as recoveries.

3.5 *Individual males, 1975-90*

It is of interest also to look at the results for all four quadrennia combined, i.e. the full 16 year period 1975-90. Since it has already been observed that the overall level of recovery in each of the quadrennia considered separately has been different, the figures for the full period cannot be taken as representative of any particular point, or of the current level. However, it is of interest when considering investigations with a smaller number of events (females, deaths, group data) to aggregate the quadrennia and the aggregate data for individual male recoveries can be used as some standard of comparison.

The results are shown in Table 3.5. The features that have been seen for the individual quadrennia appear again when all four quadrennia are combined. Recoveries in DP1 for the first two weeks of claim are higher than in the

SM1975-78 rates, and thereafter the recovery rates are lower, reaching a minimum at 30-39 weeks and rising thereafter. Recoveries for 5-11 years, especially for DP13 and DP26 are notably high, but this can probably be attributed to erroneous coding of expiries.

It is clear from the tables showing the results of the various tests applied that none of the investigations, even DP1, where the overall value of $100A/E$ is 101, satisfactorily corresponds with the comparison basis, and only DP4 could be considered to agree with the comparison basis using the adjusted expected.

4. INDIVIDUAL FEMALES, RECOVERIES

4.1 *Individual females, 1975-78*

The female experience for 1975-78 was not considered when the SM1975-78 rates were graduated. The volume of data overall is much smaller than for males, but not so small that some results cannot be drawn.

The results for individual females 1975-78 are shown in Table 4.1. There is rather little data beyond 26 weeks duration, even for DP26 as a whole (only 18 recoveries). The overall value of $100A/E$ for all durations and all deferred periods is 86. This results mainly from values of 89 for DP1, 80 for DP4 and 87 for DP13. The probabilities show that even these results are not significantly different from 100, using the unadjusted expected, and when the adjusted expected is used there are almost no unusual features.

The indication is that female recoveries are rather lighter than for males, but the results so far are not conclusive.

4.2 *Individual females, 1979-82*

The volume of data for individual females 1979-82 is higher than for 1975-78 (956 recoveries against 731 in the previous period). The results are shown in Table 4.2. The overall value of $100A/E$ is 94, some 8 points higher than for 1975-78. But note that the corresponding value for males for 1979-82 was 105, so the move for both sexes is in the same direction.

Most of the experiences for separate deferred periods show nothing unusual, all (except the trivially small DP52) showing recovery rates close to the SM1975-78 rates. The only significant difference is seen for DP13; although the overall value of $100A/E$ is 99, there is one cell, for all ages and all durations over 39 weeks, where the value of z is 2.99 (32 recoveries against 18.6 expected).

4.3 *Individual females, 1983-86*

The results for individual females 1983-86 are shown in Table 4.3. The overall value of $100A/E$ for all deferred periods and all durations for individual

females for 1983-86 is 83; compare this with the corresponding figure for males of 90. Again, females show lower recovery rates than males, and the movement is in the same direction. The volume of data has again increased over the previous quadrennium.

Recovery rates are relatively high for DP1, 1-3 weeks, and also for occasional cells at higher durations, though the data is very sparse. From 4 weeks durations to 26 weeks the male and female rates are very close, but the female experience lies a little above the male for durations above 26 weeks.

The only serious deviation is shown for DP26, where $p(\chi^2)$ for the unadjusted expected is 0.0115, with $100A/E$ of 57. However, this rises to 0.42 using the adjusted expected.

4.4 *Individual females, 1987-90*

The results for individual females for 1987-90 are shown in Table 4.4, with details in Tables C2.1 to C2.6. The volume of data is again substantially higher than in the previous quadrennium, with 1,720 recoveries against 1,356 previously. The overall value of $100A/E$ is 77, showing a reduction in recovery rates from 1983-86. This has occurred mostly in DP4, DP13 and DP26, with the overall levels of DP1 and DP52 being slightly higher than previously.

The overall pattern is quite similar to that for males for the same quadrennium (1987-90), but at a slightly lower level. Recoveries for the first two weeks of claim (1-3 weeks of sickness) are relatively high, and the ratios of actual to expected reduce to a minimum at about 26-30 weeks.

The statistical tests show that only DP1 ($100A/E = 92$) could be considered to adhere to the comparison rates, whereas using the adjusted E DP1, DP13 and DP26 could be represented by the adjusted rates. However the pattern for all durations combined is clearly different from SM1975-78.

4.5 *Individual females, 1975-90*

The volume of data for individual female recoveries for the complete period of four quadrennia, 1975-90, is considerable, except for DP52, with only 21 recoveries.

The results are shown in Table 4.5. The same patterns are seen as have been evident previously. Recovery rates for the first two weeks of claim (1-3 weeks of sickness) are relatively high, with $100A/E = 93$ and 97 for the two weeks respectively. Thereafter the ratios drop to a minimum at about 26-30 weeks, generally rising thereafter. The pattern is similar for each of the deferred periods individually, but the effect of the deferment means that the overall ratios for the different deferred periods decline with deferred period, being 92, 73, 72, 61 and 48 respectively.

The results for each deferred period are significantly different from expected, and even using the adjusted expected each of the deferred periods (except DP52) shows some test which is failed at a 5% level.

5. GROUP MALES, RECOVERIES

5.1 *Group males, 1975-78*

This is the first occasion on which the group recovery experience has been compared with a standard basis. Investigations, not shown in this report, indicated that the recovery rates for the individually costed group investigation and the unit cost group investigation were reasonably similar, for all the quadrennia investigated so far. Since the volume of data is in any case not large, these two experiences have been put together.

There is relatively little group data at DP1 and DP4, with rather more at DP13 and DP26. For 1975-78 there was very little data for DP52.

The results are summarised in Table 5.1. In aggregate there were 421 recoveries, with more than three quarters of these in DP13 and DP26. DP 4 and DP13 show ratios of $100A/E$ greater than 100 (102 and 111 respectively) while the other deferred periods show ratios well below 100 (59, 59 and 14 for the trivially small DP52). The weighted average is 74. Thus recoveries for group males in the base quadrennium 1975-78 were overall only about three quarters of those for individual business.

The pattern by duration is erratic, but for this period there seems to be some tendency for the middle durations (8 weeks to 26 weeks) to show relatively high recovery rates, and the more extreme durations to show lower ones. This pattern in fact persists in subsequent quadrennia.

5.2 *Group males, 1979-82*

The results for group males 1979-82 are shown in Table 5.2. There is a considerable increase in the number of actual recoveries, from 421 to 682, and a much bigger increase in the number of expected recoveries, from 565.7 to 1,314.8. The data is still concentrated in DP13 and DP26.

The overall value of $100A/E$ has dropped to 52. Note that for individual males the corresponding value for the same quadrennium rose to 105. Thus group males had recovery rates only about one half the level of individual males at this time.

A somewhat similar pattern for the separate periods is shown as in the previous quadrennium. DP4 and DP13 are relatively high, DP26 relatively low ($100A/E = 40$). DP1 and DP52 have relatively small experiences.

The statistical tests show that the experience does not conform with the SM1975-78 rates, but even using the adjusted expected the results for DP26 and all deferred periods combined are also far from conforming.

5.3 *Group males, 1983-86*

The results for group males for the next quadrennium, 1983-86, are shown in Table 5.3. The volume of data has again increased substantially. Although actual recoveries are up only a little, from 682 to 706, the expected number of recoveries has risen considerably, from 1,314.8 to 1,825.1. Consequently the overall value of $100A/E$ has dropped to 39, well below 50% of the ratio for individual males for the same quadrennium, which was 90.

Again it can be seen that the results of DP26 are low, those for DP13 are relatively high, with DP1 and DP4 at similar sorts of level to DP13 and DP52 at the same low level as DP26. This is not just a matter of different weightings of durations. The ratios for DP13 are higher than those for DP26 at all corresponding durations.

The statistical tests, as before, show that wherever the data is substantial the rates do not fit SM1975-78 or even, for DP26 and for all deferred periods combined, the adjusted version.

5.4 *Group males, 1975-86*

At the time of writing this report the data for the group experience for 1987-90 was not available, although the data for the individual experience was. Therefore the results for the three quadrennia for the 12 years from 1975 to 1986 have been aggregated; they are shown in Table 5.4.

The results are necessarily an average for those of the three previous quadrennia with recovery rates running just below one half of SM1975-78 in aggregate. However, the contrast that has already been seen for DP1, DP4 and DP13 (being relatively high), against DP26 and DP52, relatively low, is emphasised. The contrast is much greater than in the individual experience, though it exists there to some extent too.

6. GROUP FEMALES, RECOVERIES

6.1 *Group females, 1975-78*

The data for group females for the quadrennium 1975-78 is rather sparse. The results are shown in Table 6.1. There were only 92 recoveries in all; these are, however, 72% of those expected according to the SM1975-78 rates, a similar ratio to that for males ($100A/E = 74$). The data is too sparse for any specific conclusions to be drawn about the experience of the different deferred periods.

6.2 *Group females, 1979-82*

The data for group females 1979-82 is rather larger than for the previous quadrennium. Results are shown in Table 6.2. The overall ratio of $100A/E$ is 46, a little lower than the male ratio of 52. The same contrast as for males between a relatively high experience for deferred periods up to DP13 and a relatively low experience thereafter is beginning to emerge.

6.3 *Group females, 1983-86*

The data for group females for 1983-86 is bigger again, with 234 recoveries. The results are shown in Table 6.3. The overall ratio this time was 43%, somewhat higher than the male ratio of 39%. The data is very sparse except for DP13 and DP26, which show overall ratios similar to those for males ($100A/E = 66$ and 33 respectively), and values for individual durations that are at much the same level all the way down the column.

6.4 *Group females, 1975-86*

When all three quadrennia are added together, to give results for the whole period 1975-86, shown in Table 6.4, a pattern very similar to that for group males emerges. The overall ratio $100A/E$ for all deferred periods is 47, against the male figure of 49. DP13 and DP26 have quite similar ratios to the males (73 and 37 against 75 and 38). DP1, DP4 and DP52 remain too small to be conclusive, though the experience for DP52 seems to be very light with only four recoveries against an expected 20.6.

7. INDIVIDUAL MALES, DEATHS

7.1 *Individual males, 1975-78*

The results for deaths for individual males in the base quadrennium 1975-78 are shown in Table 7.1. This is the data on which the SM1975-78 death rates were constructed. All deferred periods were aggregated, so the overall value of $100A/E$ is necessarily 100, though the ratios for individual deferred periods are not all equal to 100.

In fact DP1 and DP4 are slightly light, with overall ratios of 92 and 90 respectively, and the other three deferred periods are slightly heavy, with ratios of 106, 125 and 103 respectively. However, the statistical tests show that the only deferred period out of line is DP26, where the rate is significantly high.

The pattern by duration is too erratic for any conclusions to be drawn.

7.2 *Individual males, 1979-82*

The results for individual males 1979-82 are shown in Table 7.2. The volume of data has increased slightly, with 267 deaths against 232 in the previous quadrennium. The overall ratio of actual to expected has reduced to 97%, though the individual deferred periods have moved variously up and down, in such a way that none shows results significantly different from the comparison basis. The pattern by duration remains fairly erratic.

7.3 *Individual males, 1983-86*

The results for individual males 1983-86 are shown in Table 7.3. The volume of data increased considerably in this quadrennium, to 375 actual deaths, and the ratio $100A/E$ drops to 77 overall. However, none of the deferred periods is significantly different from the comparison basis, except for the numbers of positive and negative deviations for DP1, DP13 and all DP combined, and using the adjusted expected all the deferred periods conform tidily.

7.4 *Individual males, 1987-90*

The results for individual males 1987-90 are shown in Table 7.4 with details in Tables C3.1 to C3.6. The volume of data increased yet again, to 470 actual deaths, from 375 in the previous quadrennium. The ratio of $100A/E$ dropped to 71, and similar ratios are seen for all deferred periods. The results for DP1 and for all deferred periods combined are now significantly different from the comparison basis, and this is true even using the adjusted expected.

7.5 *Individual males, 1975-90*

The data for individual males for all four quadrennia combined, 1975-90, is quite substantial. The results are shown in Table 7.5. The overall level of $100A/E$ is 81, and the results for different deferred periods are remarkably uniform, being 71, 84, 84, 85 and 84 respectively. There is not a great deal of difference between the levels of the separate deferred periods when considering individual durations, though the very shortest duration 1-2 weeks, for DP1 only, shows a low ratio of 39.

It would not be unreasonable to assume an overall level of 81% of SM1975-78 mortality for the entire period, although for all deferred periods combined $p(\chi^2)$ is 0.0158. However, the pattern of signs and bonds for all deferred periods for the adjusted expected is not unreasonable.

8. INDIVIDUAL FEMALES. DEATHS

8.1 *Individual females, 1975-78*

The results for the mortality experience of individual females for 1975-78 are shown in Table 8.1. There were only 19 actual deaths compared with 21.4 expected, combining all deferred periods, so none of the deferred periods can be broken into separate cells. Apart from noting that the overall level of $100A/E$ is 89 little can be said.

8.2 *Individual females, 1979-82*

When we move on to the experience of individual females for 1979-82, shown in Table 8.2, we see that the number of actual deaths remains at 19, although the expected number of deaths has risen to 31.1, and the value of $100A/E$ has fallen to 61. The data is too sparse for any further details to be observable.

8.3 *Individual females, 1983-86*

In the next quadrennium, 1983-86, the number of expected deaths for individual females almost doubles to 59.5, and the actual deaths rise to 28. This is shown in Table 8.3. The overall level of mortality is 47% of the comparison basis, a further drop as compared with the two previous quadrennia.

8.4 *Individual females, 1987-90*

For the last quadrennium, 1987-90, a summary is shown in Table 8.4. Only the results for all deferred periods combined are subdivided into cells, and these are shown in Table C4.6. The number of deaths for individual females has risen to 41, which is 41% of the expected. The experience for each separate deferred period is very low, and significantly different from the comparison basis.

8.5 *Individual females, 1975-90*

When all four quadrennia are aggregated to give combined data for 1975-90, shown in Table 8.5, the number of individual female deaths rises to 107, which is 51% of the expected of 211.3. This can be compared with the overall male level for the 16 years of 81%. From other mortality experiences one might expect female mortality to be about one half that of male. In this case it is a little more than one half, but probably not significantly so.

There is some evidence that the results of DP13 and DP26 are relatively high, and for the other deferred periods is rather low. One can also see that the experience for durations up to 39 weeks is lower than that beyond 39 weeks. However, noting that the male experience for all durations and all deferred

periods was remarkably uniform, one might suspect that these apparent features of the female experience were just due to chance fluctuations.

9. GROUP MALES, DEATHS

9.1 *Group males, 1975-78*

Although the number of recoveries in the group experience is much less than in the individual experience, the number of deaths, at least for 1975-78, is roughly the same. There were 223 deaths compared with an expected of 112.0, giving a ratio of $100A/E$ of 199, practically twice the mortality rates of the individual experience. The results are shown in Table 9.1.

These high mortality rates appear for most deferred periods and most durations. However, since this extremely high ratio is not continued in subsequent quadrennia, though the rates are still relatively high, one must wonder whether there is something peculiar in the data for this period, or whether data has been miscoded.

9.2 *Group males, 1979-82*

For group males 1979-82 there are more deaths than in the previous quadrennium, 313, but these are only 94% of the expected of 331.5. This was slightly lighter than the experience for individual males for the same quadrennium (for which $100A/E$ was 97). Almost all the data is concentrated in DP26, there being no deaths at all in DP1 and DP4. There is little difference between the experience of DP13, DP26 and DP52, and no obvious pattern by duration. The results are shown in Table 9.2.

9.3 *Group males, 1983-86*

The experience for group males 1983-86 is substantially higher than for the previous quadrennium, and the 601 deaths are 114% of the 525.7 expected, as shown in Table 9.3. This is substantially higher mortality than for individual males for the same period ($100A/E = 77$). Rates are above par for most deferred periods, and most durations, but no clear pattern emerges.

9.4 *Group males, 1975-86*

When the three quadrennia are aggregated to give data for the 12 years 1975-86 for group males the pattern is rather similar to that for the most recent quadrennium which had the largest amount of data. The results are shown in Table 9.4.

The overall level of mortality is 117% of expected, and all three deferred periods with significant quantities of data, DP13, DP26 and DP52, show

mortality rates above par. DP1 and DP4 are below par, but the quantity of data is trivial. Although the ratios for DP26 for 26-30 weeks and 30-39 weeks are below par (84 and 89 respectively) these results are not significant, as can be seen from the figures using adjusted expected, which show that using 117% of the SM1975-78 mortality rates gives a fairly satisfactory description of the experience.

It is interesting to note that the mortality rates of the group experience are very much heavier than that of the individual experience, but it must be remembered that there may well be a difference in the definition of 'sickness' in the two experiences, for example the difference between 'own occupation' and 'any occupation'. The results are consistent with the hypothesis that the group claims include persons who are more seriously sick than those making claims under individual policies.

10. GROUP FEMALES, DEATHS

10.1 *Group females, 1975-78*

The results for group females 1975-78 are shown in Table 10.1. There were 14 deaths compared with 15.2 expected, a ratio of 92%. All the actual deaths occurred in DP26.

10.2 *Group females, 1979-82*

There were considerably more deaths and expected deaths in 1979-82 for group females, with 48 against an expected 52.5, as shown in Table 10.2. Again DP26 provided the bulk of the data. The overall level of $100A/E$ was 91.

10.3 *Group females, 1983-86*

The volume of data for group females increased yet again in the next quadrennium, 1983-86. The results are shown in Table 10.3. The overall mortality ratio fell to 64% which is much lower than the figure for group males (114) but higher than that for individual females (47) for the same quadrennium.

10.4 *Group females, 1975-86*

When all three quadrennia are aggregated to give data for 1975-86, shown in Table 10.4, the number of deaths among group females rises above 100, to 125 with the bulk of these still being in DP26. The overall percentage mortality ratio was 75, which compares with 117 for group males and 51 for individual females over the longer period 1975-90.

Since all the deferred periods except DP26 are trivial nothing can be said about them. For DP26 there is slight evidence that the mortality rates in the earlier periods 26-39 weeks are lower than for later durations, but the difference is not significant; indeed the overall experience of DP26 of 76% of expected is not very significantly different from expected.

11. CONCLUSION

The values of $100A/E$ for each experience for all durations combined are put together in Tables 11.1 and 11.2, which cover each combination of individual and group, males and females, and recoveries and deaths. Values based on fewer than 100 events are shown in *italic*; ratios where the value of either $p(+/-)$ or $p(B)$ is less than 0.025 are shown in **bold**; if both conditions applied the value could be shown in ***bold italic***, but this does not occur in the tables. This suggests that with fewer than 100 events one cannot expect to identify more than a significant difference in levels and not a difference in pattern, relative to the chosen comparison basis.

Results for individual data for the first three quadrennia combined, 1975-86, are given to facilitate comparison with the group experience which is available only for the same period.

The overall ratios are also plotted in Figures 11.1 (a) to (d) and 11.2 (a) to (d), which correspond with Tables 11.1 (a) to (d) and 11.2 (a) to (d) and show, for each experience, for each deferred period and for each quadrennium, the overall value of $100A/E$ and the 'confidence interval' formed by taking the ratios $100(A - 2\sqrt{E})/E$ and $100(A + 2\sqrt{E})/E$. From these Figures one can quickly see, for example, that the confidence intervals for individual males recoveries, DP1, are quite tight, whereas for DP52 for the same experience they are quite wide. If the lower limit of the confidence interval is negative, a zero is shown; if the expected number of events is less than 5, no confidence interval limits are shown.

Table 3.1. Individual males, 1975-78, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	6,341	1,366	368	131	9	8,215
E	6,354.5	1,366.0	379.1	136.2	12.0	8,247.8
$100A/E$						
Durations:						
1-2 weeks	100	-	-	-	-	100
2-3 weeks	103	-	-	-	-	103
3-4 weeks	92	-	-	-	-	92
4-8 weeks	100	96	-	-	-	99
8-13 weeks	102	96	-	-	-	99
13-17 weeks	108	101	101	-	-	104
17-26 weeks	99	104	90	-	-	98
26-30 weeks	*115*	140	122	*127*	-	126
30-39 weeks	*78*	126	98	94	-	98
39 w - 1 yr	*68*	*101*	*85*	*104*	-	89
1-2 years	112	138	116	*86*	↓	119
2-11 years	↑	↑	*75*	*78*	*75*	74
Ages:						
18-24	98	*99*	↓	↓	↓	97
25-29	105	95	*80*	↓	↓	103
30-34	105	102	102	*110*	↓	104
35-39	98	97	97	↓	↓	99
40-44	97	96	100	115	↓	96
45-49	100	96	106	↓	↓	100
50-54	97	112	95	90	↓	99
55-59	95	93	101	*74*	*75*	95
60-65	103	116	*73*	↑	↑	103
All cells	100	100	97	96	*75*	100
Using E						
Σz^2	66.79	56.46	14.58	7.23	0.51	117.58
df	68	42	28	12	1	95
$p(\chi^2)$	0.52	0.0672	0.98	0.84	0.48	0.0581
#(+/−)	32/36	21/21	12/16	5/7	0/1	47/48
$p(+/-)$	0.72	1.0	0.57	0.77	1.0	1.0
$p(B)$	0.369	0.436	0.193	0.061	1.0	0.375
Using adjusted E						
Σz^2	66.91	56.46	14.77	6.62	-	117.92
df	67	41	27	10	-	94
$p(\chi^2)$	0.48	0.0546	0.97	0.76	-	**0.0482**
#(+/−)	32/36	21/21	13/15	5/6	-	47/48
$p(+/-)$	0.72	1.0	0.85	1.0	-	1.0
$p(B)$	0.409	0.500	0.144	0.082	-	0.451

Table 3.2. Individual males, 1979-82, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	5,380	1,225	516	158	22	7,301
E	4,952.1	1,203.8	536.2	205.5	30.3	6,928.0
$100A/E$						
Durations:						
1-2 weeks	107	-	-	-	-	107
2-3 weeks	110	-	-	-	-	*110*
3-4 weeks	101	-	-	-	-	101
4-8 weeks	109	102	-	-	-	106
8-13 weeks	108	93	-	-	-	100
13-17 weeks	128	100	89	-	-	104
17-26 weeks	129	116	87	-	-	104
26-30 weeks	*109*	152	97	*73*	-	106
30-39 weeks	128	*59*	69	65	-	75
39 w - 1 yr	*99*	144	102	95	-	107
1-2 years	*118*	150	148	74	*73*	113
2-5 years	*153*	*82*	120	82	↑	92
5-11 years	↑	↑	↑	^	↑	*163*
Ages:						
18-24	105	↓	↓	↓	↓	107
25-29	110	109	96	↓	↓	109
30-34	119	92	93	108	↓	112
35-39	108	88	83	*81*	↓	101
40-44	116	105	99	*83*	↓	110
45-49	99	96	91	*98*	*73*	98
50-54	106	113	118	*43*	↑	105
55-59	104	107	97	69	↑	102
60-65	110	123	*89*	^	↑	110
All cells	109	102	*96*	*77*	*73*	*105*
Using E						
Σz^2	118.07	65.87	44.31	31.04	2.03	196.39
df	*61*	39	34	17	1	97
$p(\chi^2)$	**0.0000**	**0.0046**	0.11	**0.0197**	0.15	**0.0000**
#(+/−)	43/18	22/17	14/20	5/12	0/1	59/38
$p(+/-)$	**0.0019**	0.52	0.39	0.14	1.0	**0.0417**
$p(B)$	*0.576*	*0.088*	**0.007**	0.188	1.0	0.559
Using adjusted E						
Σz^2	74.62	64.45	45.43	18.31	-	167.63
df	62	38	33	11	-	96
$p(\chi^2)$	0.13	**0.0047**	0.0734	0.0747	-	**0.0000**
#(+/−)	33/30	22/17	15/19	3/9	-	46/51
$p(-/-)$	0.80	0.52	0.61	0.15	-	0.68
$p(B)$	0.654	0.097	**0.002**	0.224	-	0.295

Table 3.3. Individual males, 1983-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	6,377	1,361	758	223	19	8,738
E	6,294.5	1,846.0	1,123.3	379.4	54.5	9,697.6
$100A/E$						
Durations:						
1-2 weeks	110	-	-	-	-	110
2-3 weeks	115	-	-	-	-	115
3-4 weeks	97	-	-	-	-	97
4-8 weeks	86	68	-	-	-	79
8-13 weeks	82	74	-	-	-	77
13-17 weeks	85	74	54	-	-	69
17-26 weeks	70	76	63	-	-	68
26-30 weeks	*68*	67	75	*47*	-	67
30-39 weeks	*46*	79	65	41	-	58
39 w - 1 yr	*88*	110	72	47	-	73
1-2 years	90	91	88	59	*16*	73
2-5 years	158	103	97	107	*61*	82
5-11 years	↑	↑	↑	↑	↑	218
Ages:						
18-24	91	100	*46*	↓	↓	88
25-29	100	73	70	↓	↓	94
30-34	106	70	58	*57*	↓	94
35-39	110	75	70	58	↓	96
40-44	104	79	68	59	↓	93
45-49	106	76	71	61	*37*	92
50-54	94	71	73	48	↓	82
55-59	88	65	62	52	*34*	78
60-65	103	80	68	*107*	↑	96
All cells	101	74	67	59	*35*	90
Using *E*						
Σz^2	203.74	162.42	148.32	113.34	23.45	763.17
df	75	53	47	24	4	103
$p(\chi^2)$	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0001**	**0.0000**
#(+/−)	24/51	11/42	2/45	1/23	0/4	22/81
$p(-/-)$	**0.0024**	**0.0000**	**0.0000**	**0.0000**	0.13	**0.0000**
$p(B)$	**0.000**	0.166	0.150	0.211	1.0	**0.000**
Using adjusted *E*						
Σz^2	199.69	47.50	41.72	58.44	-	746.55
df	74	46	42	17	-	102
$p(\chi^2)$	**0.0000**	0.41	0.48	**0.0000**	-	**0.0000**
#(−/−)	22/53	20/27	21/22	8/10	-	32/71
$p(+/-)$	**0.0004**	0.38	1.0	0.81	-	**0.0002**
$p(B)$	**0.000**	0.717	**0.012**	0.244	-	**0.000**

Table 3.4. Individual males, 1987-90, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	5,905	1,452	847	287	57	8,548
E	6,188.7	2,295.2	1,287.1	514.8	89.3	10,375.1
$100A/E$						
Durations:						
1-2 weeks	113	-	-	-	-	113
2-3 weeks	108	-	-	-	-	108
3-4 weeks	89	-	-	-	-	89
4-8 weeks	80	69	-	-	-	76
8-13 weeks	81	60	-	-	-	68
13-17 weeks	53	64	49	-	-	56
17-26 weeks	49	59	58	-	-	56
26-30 weeks	*52*	*39*	65	*33*	-	50
30-39 weeks	*44*	64	68	45	-	57
39 w - 1 yr	*52*	58	66	47	-	57
1-2 years	*23*	82	73	55	*34*	58
2-5 years	*50*	*49*	*108*	72	*106*	75
5-11 years	↑	↑	202	173	↑	177
Ages:						
18-24	89	84	*84*	↓	↓	85
25-29	99	57	70	↓	↓	84
30-34	117	60	65	*59*	↓	97
35-39	105	64	58	75	↓	89
40-44	102	73	73	61	*69*	90
45-49	96	68	72	50	*44*	83
50-54	90	59	69	54	*63*	78
55-59	72	51	47	49	*71*	63
60-65	88	70	72	*56*	↑	81
All cells	95	63	66	56	64	82
Using E						
Σz^2	357.85	339.20	221.50	129.37	26.53	1,044.45
df	75	60	48	31	7	106
$p(\chi^2)$	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0004**	**0.0000**
#(+/−)	14/61	3/57	4/44	2/29	1/6	21/85
$p(+/-)$	**0.0000**	**0.0000**	**0.0000**	**0.0000**	0.13	**0.0000**
$p(B)$	**0.000**	*0.059*	*0.057*	***0.004***	*0.691*	***0.000***
Using adjusted E						
Σz^2	363.35	64.34	100.22	44.37	17.49	886.64
df	73	50	45	22	3	104
$p(\chi^2)$	**0.0000**	0.0836	**0.0000**	**0.0032**	**0.0006**	**0.0000**
#(+/−)	20/54	25/26	23/23	9/14	1/3	34/71
$p(+/-)$	**0.0001**	1.0	1.0	0.40	0.62	**0.0004**
$p(B)$	**0.000**	0.379	**0.016**	0.225	0.504	**0.000**

Table 3.5. Individual males, 1975-90, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	24,003	5,404	2,489	799	107	32,802
E	23,789.8	6,711.1	3,325.6	1,235.9	186.1	35,248.5
$100A/E$						
Durations:						
1-2 weeks	107	-	-	-	-	107
2-3 weeks	109	-	-	-	-	109
3-4 weeks	95	-	-	-	-	95
4-8 weeks	93	81	-	-	-	89
8-13 weeks	92	77	-	-	-	84
13-17 weeks	88	80	64	-	-	77
17-26 weeks	79	81	68	-	-	74
26-30 weeks	78	79	80	56	-	75
30-39 weeks	64	77	70	53	-	65
39 w - 1 yr	72	92	76	61	-	74
1-2 years	73	108	94	63	36	79
2-5 years	98	67	98	76	88	79
5-11 years	↑	*99*	180	174	↑	180
Ages:						
18-24	96	97	66	↓	↓	93
25-29	104	75	79	92	↓	97
30-34	111	78	73	77	↓	101
35-39	106	78	70	77	*63*	95
40-44	104	85	78	67	*52*	96
45-49	100	82	79	63	*59*	92
50-54	96	83	81	53	*54*	90
55-59	89	72	65	55	60	82
60-65	101	88	74	78	↑	96
All cells	101	81	75	65	57	93
Using E						
Σz^2	378.19	327.79	309.75	244.22	52.42	1,703.83
df	95	75	59	40	10	111
$p(\chi^2)$	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
#(+/−)	29/66	13/62	11/48	7/33	1/9	26/85
$p(+/-)$	**0.0002**	**0.0000**	**0.0000**	**0.0000**	**0.0215**	**0.0000**
$p(B)$	**0.000**	**0.002**	**0.003**	**0.002**	0.402	**0.000**
Using adjusted E						
Σz^2	392.37	88.47	140.10	148.74	36.11	1,651.94
df	95	69	56	34	6	110
$p(\chi^2)$	**0.0000**	0.0572	**0.0000**	**0.0000**	**0.0000**	**0.0000**
#(+/−)	29/67	40/30	29/28	15/20	3/4	39/72
$p(+/-)$	**0.0001**	0.28	1.0	0.50	1.0	**0.0022**
$p(B)$	**0.000**	0.134	0.164	0.151	0.342	**0.000**

Table 4.1. Individual females, 1975-78, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	520	148	44	18	1	731
E	585.4	184.4	50.3	26.9	1.7	848.7
$100A/E$						
Durations:						
1-2 weeks	89	-	-	-	-	89
2-3 weeks	94	-	-	-	-	94
3-4 weeks	85	-	-	-	-	85
4-8 weeks	77	70	-	-	-	74
8-13 weeks	109	75	-	-	-	89
13-17 weeks	↑	*82*	↓	-	-	79
17-26 weeks	*79*	112	*75*	-	-	86
26-30 weeks	↑	↑	*109*	↓	-	↑
30 w - 1 yr	↑	↑	↑	*67*	-	108
1-11 years	↑	↑	↑	↑	*59*	*74*
Ages:						
18-24	↓	↓	↓	↓	↓	*97*
25-29	93	*56*	↓	↓	↓	85
30-34	*83*	*61*	↓	↓	↓	*75*
35-39	87	*81*	↓	↓	↓	88
40-44	88	*117*	*126*	*67*	↓	94
45-49	101	*86*	↓	↑	↓	93
50-54	84	*109*	*62*	↑	*59*	84
55-65	82	↑	↑	↑	↑	*80*
All cells	89	80	87	*67*	*59*	86
Using E						
Σz^2	23.83	20.43	3.73	2.63	0.02	57.42
df	30	14	3	1	1	46
$p(\chi^2)$	0.78	0.12	0.29	0.10	0.88	0.12
$\#(+/-)$	9/21	5/9	2/1	0/1	0/1	13/33
$p(+/-)$	**0.0428**	0.42	1.0	1.0	1.0	**0.0045**
$p(B)$	0.849	0.218	1.0	1.0	1.0	0.825
Using adjusted E						
Σz^2	18.49	14.94	3.22	-	-	44.90
df	28	10	2	-	-	43
$p(\chi^2)$	0.91	0.13	0.20	-	-	0.39
$\#(+/-)$	16/13	5/6	2/1	-	-	19/25
$p(+/-)$	0.71	1.0	1.0	-	-	0.45
$p(B)$	0.381	**0.027**	1.0	-	-	0.177

Table 4.2. Individual females, 1979-82, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	619	219	82	34	2	956
E	654.5	243.7	82.9	32.4	3.9	1,017.5
$100A/E$						
Durations:						
1-2 weeks	96	-	-	-	-	96
2-3 weeks	79	-	-	-	-	79
3-4 weeks	101	-	-	-	-	101
4-8 weeks	100	71	-	-	-	86
8-13 weeks	91	91	-	-	-	91
13-17 weeks	↑	*72*	*71*	-	-	74
17-26 weeks	*123*	132	*83*	-	-	106
26-30 weeks	↑	*148*	*75*	*123*	-	96
30-39 weeks	↑	↑	↑	↑	-	105
39 w - 1 yr	↑	↑	172	↑	-	175
1-2 years	↑	↑	↑	*85*	*51*	129
2-11 years	↑	↑	↑	↑	↑	107
Ages:						
18-24	133	↓	↓	↓	↓	112
25-29	102	*73*	↓	↓	↓	100
30-34	78	81	*109*	↓	↓	81
35-39	89	85	↓	↓	↓	88
40-44	96	93	121	*114*	↓	98
45-49	93	98	↓	↓	↓	93
50-54	121	*119*	*77*	*96*	*51*	116
55-65	91	*105*	↑	↑	↑	88
All cells	95	90	99	105	*51*	94
Using E						
Σz^2	37.45	17.31	12.91	3.90	0.53	52.95
df	32	17	5	3	1	52
$p(\chi^2)$	0.23	0.43	**0.0243**	0.27	0.47	0.44
#(+/−)	12/20	3/14	2/3	1/2	0/1	21/31
$p(+/-)$	0.22	**0.0127**	1.0	1.0	1.0	0.21
$p(B)$	0.558	0.149	1.0	0.652	1.0	0.075
Using adjusted E						
Σz^2	38.14	18.94	13.05	3.60	-	53.25
df	30	16	4	2	-	48
$p(\chi^2)$	0.15	0.27	**0.0110**	0.17	-	0.28
#(−/−)	15/16	6/11	2/3	1/2	-	26/23
$p(+/-)$	1.0	0.33	1.0	1.0	-	0.78
$p(B)$	0.936	0.186	1.0	0.760	-	0.350

Table 4.3. Individual females, 1983-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	888	307	110	45	6	1,356
E	978.6	401.5	154.4	78.5	13.6	1,626.7
$100A/E$						
Durations:						
1-2 weeks	95	-	-	-	-	95
2-3 weeks	105	-	-	-	-	105
3-4 weeks	67	-	-	-	-	67
4-8 weeks	78	78	-	-	-	78
8-13 weeks	85	69	-	-	-	75
13-17 weeks	*65*	77	*74*	-	-	73
17-26 weeks	*89*	81	55	-	-	67
26-30 weeks	↑	*103*	↑	↓	-	84
30-39 weeks	*140*	↑	*79*	*66*	-	78
39 w - 1 yr	↑	*74*	↑	↑	-	93
1-2 years	↑	↑	*104*	*47*	↓	62
2-11 years	↑	↑	↑	↑	*44*	94
Ages:						
18-24	94	*89*	↓	↓	↓	93
25-29	98	58	↓	↓	↓	88
30-34	94	96	*81*	↓	↓	91
35-39	87	78	*64*	*65*	↓	82
40-44	83	64	*72*	*62*	↓	73
45-49	97	84	*60*	↓	↓	87
50-54	93	*84*	*79*	*49*	*44*	78
55-65	76	*90*	↑	↑	↑	81
All cells	91	76	71	57	*44*	83
Using E						
Σz^2	57.49	38.34	16.83	16.46	3.72	121.62
df	42	25	12	6	1	68
$p(\chi^2)$	0.0560	**0.0429**	0.16	**0.0115**	0.0537	**0.0001**
#(−/−)	12/30	4/21	2/10	1/5	0/1	14/54
$p(+/-)$	**0.0079**	**0.0009**	**0.0386**	0.22	1.0	**0.0000**
$p(B)$	0.080	0.373	0.543	0.680	1.0	0.880
Using adjusted E						
Σz^2	50.05	18.77	6.00	2.81	-	88.77
df	37	18	8	3	-	*60*
$p(\chi^2)$	0.0745	0.41	0.65	0.42	-	**0.0093**
#(+/−)	16/22	9/10	3/6	1/3	-	26/35
$p(+/-)$	0.42	1.0	0.51	0.63	-	0.31
$p(B)$	0.276	0.267	0.525	0.873	-	**0.013**

Table 4.4. Individual females, 1987-90, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	1,013	474	155	66	12	1,720
E	1,096.1	741.5	255.1	128.2	24.8	2,245.6
$100A/E$						
Durations:						
1-2 weeks	91	-	-	-	-	91
2-3 weeks	101	-	-	-	-	101
3-4 weeks	79	-	-	-	-	79
4-8 weeks	90	57	-	-	-	71
8-13 weeks	99	76	-	-	-	81
13-17 weeks	*110*	76	81	-	-	82
17-26 weeks	*102*	43	49	-	-	52
26-30 weeks	↑	*47*	*38*	↓	-	*37*
30-39 weeks	*65*	*51*	*55*	*30*	-	45
39 w - 1 yr	↑	*102*	*81*	*71*	-	86
1-2 years	↑	*62*	*55*	*38*	*48*	49
2-11 years	↑	↑	*104*	*92*	↑	84
Ages:						
18-24	95	72	↓	↓	↓	84
25-29	97	59	*71*	↓	↓	78
30-34	91	48	*44*	*30*	↓	68
35-39	82	72	52	*67*	↓	74
40-44	98	63	65	*55*	↓	79
45-49	98	77	*71*	*74*	↓	84
50-54	102	76	*71*	*31*	*48*	80
55-59	88	*50*	*52*	↓	↑	67
60-65	*46*	↑	↑	*46*	↑	*68*
All cells	92	64	61	51	*48*	77
Using E						
Σz^2	48.56	126.33	53.34	37.66	6.08	230.09
df	41	37	20	10	1	84
$p(\chi^2)$	0.19	**0.0000**	**0.0001**	**0.0000**	**0.0137**	**0.0000**
#(+/−)	14/27	4/33	2/18	1/9	0/1	14/70
$p(+/-)$	0.0596	**0.0000**	**0.0004**	**0.0215**	1.0	**0.0000**
$p(B)$	0.518	0.882	0.132	0.672	1.0	**0.023**
Using adjusted E						
Σz^2	40.61	51.62	17.78	9.30	-	151.45
df	39	28	12	5	-	76
$p(\chi^2)$	0.40	**0.0042**	0.12	0.0976	-	**0.0000**
#(+/−)	20/20	11/18	5/8	4/2	-	36/41
$p(+/-)$	1.0	0.26	0.58	0.69	-	0.65
$p(B)$	0.624	0.455	0.413	0.776	-	**0.000**

Table 4.5. Individual females, 1975-90, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	3,040	1,148	391	163	21	4,763
E	3,314.7	1,571.0	542.6	266.1	44.0	5,738.5
$100A/E$						
Durations:						
1-2 weeks	93	-	-	-	-	93
2-3 weeks	97	-	-	-	-	97
3-4 weeks	81	-	-	-	-	81
4-8 weeks	86	67	-	-	-	76
8-13 weeks	96	*76*	-	-	-	82
13-17 weeks	87	76	75	-	-	78
17-26 weeks	93	71	57	-	-	68
26-30 weeks	↑	*71*	*60*	*52*	-	64
30-39 weeks	117	84	73	48	-	70
39 w - 1 yr	↑	*112*	*94*	*87*	-	*99*
1-2 years	*100*	78	84	44	*38*	63
2-5 years	↑	*68*	119	87	*63*	90
5-11 years	↑	↑	↑	↑	↑	99
Ages:						
18-24	108	70	*80*	↓	↓	91
25-29	96	61	94	↓	↓	86
30-34	87	64	62	*56*	↓	78
35-39	85	78	64	84	↓	81
40-44	92	72	83	*61*	*62*	82
45-49	97	83	71	74	↓	88
50-54	98	90	73	*33*	*37*	86
55-59	84	75	*57*	*66*	↑	75
60-65	*69*	↑	↑	↑	↑	85
All cells	92	73	72	61	*48*	83
Using E						
Σz^2	88.10	147.96	79.63	55.91	11.56	301.20
df	*57*	45	34	22	3	92
$p(\chi^2)$	**0.0051**	**0.0000**	**0.0000**	**0.0001**	**0.0090**	**0.0000**
$\#(+/-)$	16/41	7/38	8/26	3/19	0/3	13/79
$p(+/-)$	**0.0013**	**0.0000**	**0.0029**	**0.0009**	0.25	**0.0000**
$p(B)$	0.171	0.780	0.678	0.316	1.0	0.066
Using adjusted E						
Σz^2	71.56	48.18	50.78	33.69	-	169.81
df	55	37	26	15	-	89
$p(\chi^2)$	0.0660	0.10	**0.0025**	**0.0038**	-	**0.0000**
$\#(+/-)$	24/32	19/19	13/14	10/6	-	41/49
$p(+/-)$	0.35	1.0	1.0	0.45	-	0.46
$p(B)$	**0.011**	**0.029**	**0.021**	0.589	-	**0.005**

Table 5.1. Group males, 1975-78, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	21	60	153	184	3	421
E	35.7	59.1	137.3	312.8	20.8	565.7
$100A/E$						
Durations:						
1-4 weeks	*39*	-	-	-	-	*39*
4-8 weeks	*78*	*89*	-	-	-	*82*
8-13 weeks	↑	*120*	-	-	-	*109*
13-17 weeks	↑	*99*	*65*	-	-	78
17-26 weeks	↑	↑	125	-	-	121
26-30 weeks	↑	↑	128	*40*	-	66
30-39 weeks	↑	↑	↑	55	-	59
39 w - 1 yr	↑	↑	*129*	58	-	76
1-2 years	↑	↑	↑	73	*14*	71
2-11 years	↑	↑	↑	*59*	↑	*48*
Ages:						
18-29	↓	↓	*108*	↓	↓	128
30-34	↓	↓	↓	97	↓	86
35-39	↓	*92*	127	*70*	↓	85
40-44	↓	↓	↓	*79*	↓	75
45-49	↓	*83*	110	86	↓	90
50-54	↓	↓	*157*	51	↓	69
55-59	*59*	↓	*79*	*27*	*14*	43
60-65	↑	*129*	*89*	*39*	↑	70
All cells	*59*	102	111	59	*14*	74
Using E						
Σz^2	6.57	2.14	13.46	73.65	14.44	94.03
df	2	4	10	22	1	42
$p(\chi^2)$	**0.0375**	0.71	0.20	**0.0000**	**0.0001**	**0.0000**
#(+/−)	0/2	2/2	6/4	3/19	0/1	12/30
$p(+/-)$	0.50	1.0	0.75	**0.0009**	1.0	**0.0079**
$p(B)$	1.0	1.0	0.286	0.839	1.0	0.210
Using adjusted E						
Σz^2	-	2.10	11.15	35.83	-	75.42
df	-	3	11	14	-	32
$p(\chi^2)$	-	0.55	0.43	**0.0011**	-	**0.0000**
#(+/−)	-	2/2	6/6	7/8	-	16/17
$p(+/-)$	-	1.0	1.0	1.0	-	1.0
$p(B)$	-	1.0	0.626	0.109	-	0.447

Table 5.2. Group males, 1979-82, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	31	38	258	329	26	682
E	41.7	45.5	336.6	827.1	63.9	1,314.8
$100A/E$						
Durations:						
1-4 weeks	*77*	-	-	-	-	*77*
4-8 weeks	*70*	*64*	-	-	-	*60*
8-13 weeks	↑	↑	-	-	-	*69*
13-17 weeks	↑	*120*	93	-	-	93
17-26 weeks	↑	↑	61	-	-	63
26-30 weeks	↑	↑	*63*	*34*	-	44
30-39 weeks	↑	↑	79	33	-	41
39 w - 1 yr	↑	↑	*49*	42	-	43
1-2 years	↑	↑	113	50	*38*	60
2-11 years	↑	↑	↑	33	*45*	35
Ages:						
18-24	↓	↓	*80*	*141*	↓	105
25-29	↓	↓	*74*	*52*	↓	64
30-34	↓	↓	*84*	44	↓	56
35-39	↓	*72*	88	*40*	↓	54
40-44	↓	↓	94	39	*17*	56
45-49	*64*	↓	83	45	↓	57
50-54	*81*	*89*	76	47	*50*	55
55-59	↑	↑	*49*	32	↓	39
60-65	↑	↑	*68*	*16*	*50*	34
All cells	74	83	77	40	*41*	52
Using *E*						
Σz^2	2.12	3.74	49.47	315.06	20.67	346.83
df	3	3	26	36	4	61
$p(\chi^2)$	0.55	0.29	**0.0036**	**0.0000**	**0.0004**	**0.0000**
#(+/−)	0/3	1/2	6/20	1/35	0/4	6/55
$p(-/-)$	0.25	1.0	**0.0094**	**0.0000**	0.13	**0.0000**
$p(B)$	1.0	0.678	0.637	0.199	1.0	**0.005**
Using adjusted *E*						
Σz^2	-	0.00	29.64	60.34	-	104.56
df	-	1	21	24	-	41
$p(\chi^2)$	-	1.0	0.0995	**0.0001**	-	**0.0000**
#(+/−)	-	1/1	9/13	12/13	-	19/23
$p(+/-)$	-	1.0	0.52	1.0	-	0.64
$p(B)$	-	1.0	0.057	0.583	-	0.055

Table 5.3. Group males, 1983-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	15	29	236	401	25	706
E	24.0	37.5	394.4	1,281.5	87.5	1,825.1
$100A/E$						
Durations:						
1-8 weeks	*63*	↓	-	-	-	*55*
8-13 weeks	↑	*77*	-	-	-	*66*
13-17 weeks	↑	↑	66	-	-	66
17-26 weeks	↑	↑	57	-	-	58
26-30 weeks	↑	↑	*76*	26	-	37
30-39 weeks	↑	↑	*54*	29	-	32
39 w - 1 yr	↑	↑	*46*	35	-	37
1-2 years	↑	↑	*71*	31	*28*	34
2-5 years	↑	↑	*49*	33	*30*	32
5-11 years	↑	↑	↑	*50*	^	*59*
Ages:						
18-24	↓	↓	*97*	*90*	⌄	93
25-29	↓	↓	*67*	48	⌄	55
30-34	↓	↓	*68*	44	⌄	50
35-39	↓	*84*	72	39	⌄	49
40-44	↓	↓	78	38	*48*	47
45-49	↓	↓	55	32	⌄	39
50-54	*63*	↓	69	25	*31*	33
55-59	↑	*73*	*35*	21	*12*	26
60-65	↑	↑	*28*	21	^	24
All cells	*63*	*77*	60	31	*29*	39
Using E						
Σz^2	3.01	1.65	72.64	606.06	42.36	718.43
df	1	2	31	43	6	62
$p(\chi^2)$	0.0829	0.44	**0.0000**	**0.0000**	**0.0000**	**0.0000**
#(+/−)	0/1	0/2	2/29	1/42	0/6	3/59
$p(+/-)$	1.0	0.50	**0.0000**	**0.0000**	**0.0313**	**0.0000**
$p(B)$	1.0	1.0	0.732	0.129	1.0	0.341
Using adjusted E						
Σz^2	-	-	15.55	59.87	-	126.43
df	-	-	18	27	-	44
$p(\chi^2)$	-	-	0.62	**0.0003**	-	**0.0000**
#(+/−)	-	-	10/9	16/12	-	23/22
$p(-/-)$	-	-	1.0	0.57	-	1.0
$p(B)$	-	-	0.369	**0.003**	-	**0.026**

Table 5.4. Group males, 1975-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	67	127	647	914	54	1,809
E	101.4	142.1	868.2	2,421.5	172.3	3,705.5
$100A/E$						
Durations:						
1-2 weeks	*49*	-	-	-	-	*49*
2-4 weeks	*73*	-	-	-	-	*73*
4-8 weeks	*55*	72	-	-	-	67
8-13 weeks	*86*	85	-	-	-	84
13-17 weeks	↑	*113*	75	-	-	78
17-26 weeks	↑	113	71	-	-	72
26-30 weeks	↑	↑	84	31	-	44
30-39 weeks	↑	↑	70	34	-	39
39 w - 1 yr	↑	↑	65	41	-	44
1-2 years	↑	↑	106	43	30	48
2-5 years	↑	↑	*45*	36	*33*	35
5-11 years	↑	↑	↑	46	↑	*48*
Ages:						
18-24	↓	↓	84	114	↓	99
25-29	↓	↓	80	59	↓	68
30-34	↓	*80*	84	46	↓	58
35-39	*68*	*87*	84	44	*37*	56
40-44	↓	*78*	86	42	*34*	54
45-49	*57*	*77*	77	44	*47*	55
50-54	*56*	↓	84	36	*26*	47
55-59	*90*	103	48	26	*25*	33
60-65	↑	*111*	55	21	*19*	33
All cells	66	89	75	38	31	49
Using *E*						
Σz^2	16.35	6.55	103.08	982.52	77.16	1,098.49
df	8	11	46	46	11	81
$p(\chi^2)$	**0.0376**	0.83	**0.0000**	**0.0000**	**0.0000**	**0.0000**
#(+/−)	1/7	5/6	9/37	2/44	0/11	7/74
$p(-/-)$	0.0703	1.0	**0.0000**	**0.0000**	**0.0010**	**0.0000**
$p(B)$	0.122	0.475	0.056	**0.008**	1.0	**0.012**
Using adjusted *E*						
Σz^2	7.56	4.28	58.26	130.53	2.51	275.12
df	4	8	38	37	3	68
$p(\chi^2)$	0.11	0.83	**0.0188**	**0.0000**	0.47	**0.0000**
#(+/−)	2/3	4/5	20/19	19/19	2/2	39/30
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	0.34
$p(B)$	0.301	0.547	0.197	**0.004**	0.866	**0.000**

Table 6.1. Group females, 1975-78, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	4	15	28	45	0	92
E	6.1	27.7	25.1	67.7	1.6	128.2
$100A/E$						
Durations:						
1-17 weeks	↓	*54*	↓	-	-	*75*
17-30 weeks	↓	↑	*112*	↓	-	*70*
30-39 weeks	↓	↑	↑	*67*	-	*78*
39 w - 1 yr	*66*	↑	↑	↑	-	*83*
1-11 years	↑	↑	↑	*65*	*0*	*59*
Ages:						
18-39	↓	↓	↓	*60*	↓	*87*
40-44	↓	↓	↓	↓	↓	*56*
45-49	↓	↓	↓	*70*	↓	*65*
50-54	*66*	*54*	*112*	*67*	*0*	*71*
55-65	↑	↑	↑	↑	↑	*76*
All cells	*66*	*54*	*112*	66	*0*	72
Using E						
Σz^2	0.41	5.35	0.23	7.04	0.74	10.06
df	1	1	1	4	1	10
$p(\chi^2)$	0.52	**0.0207**	0.63	0.13	0.39	0.43
$\#(+/-)$	0/1	0/1	1/0	0/4	0/1	0/10
$p(+/-)$	1.0	1.0	1.0	0.13	1.0	**0.0020**
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	0.15	-	0.90
df	-	-	-	3	-	6
$p(\chi^2)$	-	-	-	0.99	-	0.99
$\#(+/-)$	-	-	-	1/3	-	4/3
$p(+/-)$	-	-	-	0.63	-	1.0
$p(B)$	-	-	-	0.872	-	0.649

Table 6.2. Group females, 1979-82, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	3	10	57	81	1	152
E	2.2	12.8	76.4	234.6	6.3	332.3
$100A/E$						
Durations:						
1-17 weeks	↓	↓	↓	-	-	*99*
17-26 weeks	↓	↓	*71*	-	-	*50*
26-30 weeks	↓	↓	*30*	*24*	-	*21*
30-39 weeks	↓	↓	↑	*10*	-	*14*
39 w - 1 yr	↓	↓	*115*	*42*	-	*41*
1-2 years	↓	↓	↑	45	↓	59
2-11 years	*139*	*78*	↑	*51*	*16*	*58*
Ages:						
18-24	↓	↓	↓	↓	↓	*45*
25-29	↓	↓	*34*	*48*	↓	*40*
30-34	↓	↓	↓	*45*	↓	*51*
35-39	↓	↓	*115*	*42*	↓	67
40-44	↓	↓	↓	*35*	↓	56
45-49	↓	↓	↓	*24*	↓	*30*
50-54	*139*	*78*	*92*	*39*	*16*	*53*
55-65	↑	↑	↑	*13*	↑	*18*
All cells	*139*	*78*	75	35	*16*	46
Using E						
Σz^2	0.05	0.42	*14.12*	*101.16*	*3.70*	*114.68*
df	1	1	5	19	1	26
$p(\chi^2)$	0.82	0.52	**0.0149**	**0.0000**	0.0545	**0.0000**
#(+/−)	1/0	0/1	2/3	0/19	0/1	1/25
$p(+/-)$	1.0	1.0	1.0	**0.0000**	1.0	**0.0000**
$p(B)$	1.0	1.0	0.510	1.0	1.0	0.337
Using adjusted E						
Σz^2	-	-	10.76	17.88	-	26.92
df	-	-	3	4	-	12
$p(\chi^2)$	-	-	**0.0131**	**0.0013**	-	**0.0079**
#(−/−)	-	-	2/2	3/2	-	6/7
$p(+/-)$	-	-	1.0	1.0	-	1.0
$p(B)$	-	-	0.885	0.690	-	0.283

Table 6.3. Group females, 1983-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	5	4	96	126	3	234
E	8.5	3.2	145.5	380.0	12.7	549.9
$100A/E$						
Durations:						
1-17 weeks	↓	↓	*67*	-	-	*72*
17-26 weeks	↓	↓	67	-	-	67
26-30 weeks	↓	↓	↑	*9*	-	*24*
30-39 weeks	↓	↓	*67*	*21*	-	32
39 w - 1 yr	↓	↓	↑	*39*	-	*37*
1-2 years	↓	↓	*61*	37	↓	38
2-11 years	*59*	*125*	↑	47	*24*	49
Ages:						
18-24	↓	↓	↓	*36*	↓	*46*
25-29	↓	↓	*54*	*54*	↓	*53*
30-34	↓	↓	*85*	*45*	↓	55
35-39	↓	↓	*68*	*25*	↓	*37*
40-44	↓	↓	*89*	*35*	↓	49
45-49	↓	↓	*86*	*36*	↓	45
50-54	*59*	*125*	*46*	*32*	*24*	32
55-65	↑	↑	↑	*17*	↑	*36*
All cells	*59*	*125*	66	33	*24*	43
Using *E*						
Σz^2	1.05	0.03	16.34	162.93	6.67	186.40
df	1	1	11	28	1	37
$p(\chi^2)$	0.31	0.87	0.13	**0.0000**	**0.0098**	**0.0000**
#(+/−)	0/1	1/0	1/10	0/28	0/1	2/35
$p(+/-)$	1.0	1.0	**0.0117**	**0.0000**	1.0	**0.0000**
$p(B)$	1.0	1.0	1.0	1.0	1.0	0.556
Using adjusted *E*						
Σz^2	-	-	3.33	15.00	-	31.82
df	-	-	7	9	-	19
$p(\chi^2)$	-	-	0.85	0.0910	-	**0.0327**
#(+/−)	-	-	5/3	5/5	-	9/11
$p(+/-)$	-	-	0.73	1.0	-	0.82
$p(B)$	-	-	0.840	0.056	-	0.771

Table 6.4. Group females, 1975-86, recoveries

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	12	29	181	252	4	478
E	16.7	43.7	247.0	682.3	20.6	1,010.4
$100A/E$						
Durations:						
1-13 weeks	*72*	*77*	-	-	-	71
13-17 weeks	^	*49*	86	-	-	87
17-26 weeks	^	↑	69	-	-	67
26-30 weeks	^	↑	*49*	*16*	-	*24*
30-39 weeks	^	↑	*79*	24	-	32
39 w - 1 yr	^	↑	*37*	44	-	44
1-2 years	^	↑	92	44	*19*	49
2-5 years	^	↑	↑	46	↑	47
5-11 years	^	↑	↑	↑	↑	*72*
Ages:						
18-24	⌄	↓	*53*	*46*	↓	*50*
25-29	⌄	↓	*46*	*51*	↓	50
30-34	⌄	↓	*79*	*49*	↓	57
35-39	⌄	↓	97	31	↓	49
40-44	⌄	*72*	109	39	↓	54
45-49	⌄	↓	*78*	36	↓	44
50-54	⌄	*62*	*62*	39	*19*	44
55-65	*72*	↑	*64*	*19*	↑	33
All cells	*72*	*66*	73	37	*19*	47
Using *E*						
Σz^2	1.07	4.85	28.73	267.55	12.62	307.07
df	1	3	21	35	1	53
$p(\chi^2)$	0.30	0.18	0.12	**0.0000**	**0.0004**	**0.0000**
#(+/−)	0/1	0/3	4/17	0/35	0/1	2/51
$p(-/-)$	1.0	0.25	**0.0072**	**0.0000**	1.0	**0.0000**
$p(B)$	1.0	1.0	0.913	1.0	1.0	1.0
Using adjusted *E*						
Σz^2	-	-	18.01	35.43	-	79.27
df	-	-	15	20	-	35
$p(\chi^2)$	-	-	0.26	**0.0179**	-	**0.0000**
#(+/−)	-	-	8/8	8/13	-	19/17
$p(+/-)$	-	-	1.0	0.38	-	0.87
$p(B)$	-	-	0.422	**0.002**	-	0.092

Table 7.1. Individual males, 1975-78, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	84	49	48	46	5	232
E	91.4	54.5	45.4	36.7	4.9	232.9
$100A/E$						
Durations:						
1-4 weeks	116	-	-	-	-	*114*
4-8 weeks	↑	*74*	-	-	-	*92*
8-13 weeks	*79*	↑	-	-	-	*88*
13-17 weeks	↑	*102*	↓	-	-	*124*
17-30 weeks	*71*	↑	*111*	↓	-	90
30-39 weeks	↑	↑	↑	↓	-	*113*
39 w - 1 yr	↑	*95*	↑	↓	-	*86*
1-2 years	*93*	↑	*98*	125	↓	108
2-11 years	↑	↑	↑	↑	*103*	96
Ages:						
18-39	↓	↓	↓	↓	↓	*87*
40-44	*65*	*75*	↓	↓	↓	*112*
45-49	↓	↓	*114*	↓	↓	112
50-54	*98*	*108*	↓	162	↓	97
55-59	*94*	↓	*100*	↓	*103*	102
60-65	*99*	*85*	↑	*88*	↑	93
All cells	92	90	106	125	*103*	100
Using E						
Σz^2	6.33	1.08	0.16	6.57	0.00	8.60
df	7	3	3	2	1	20
$p(\chi^2)$	0.50	0.78	0.98	**0.0375**	1.0	0.99
#(+/−)	1/6	1/2	2/1	1/1	1/0	11/9
$p(+/-)$	0.13	1.0	1.0	1.0	1.0	0.82
$p(B)$	0.713	1.0	0.635	1.0	1.0	0.801
Using adjusted E						
Σz^2	10.37	0.99	0.07	3.71	-	8.62
df	6	3	2	2	-	19
$p(\chi^2)$	0.11	0.80	0.97	0.16	-	0.98
#(+/−)	3/4	2/2	2/1	1/2	-	11/9
$p(-/-)$	1.0	1.0	1.0	1.0	-	0.82
$p(B)$	1.0	0.518	0.754	1.0	-	0.842

Table 7.2. Individual males, 1979-82, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	*70*	*58*	*70*	*59*	*10*	267
E	77.3	57.1	66.7	61.1	12.9	275.1
$100A/E$						
Durations:						
1-4 weeks	*58*	-	-	-	-	↓
4-8 weeks	↑	*75*	-	-	-	*58*
8-13 weeks	*108*	↑	-	-	-	*108*
13-17 weeks	↑	↑	↓	-	-	*69*
17-26 weeks	↑	*157*	115	-	-	121
26-30 weeks	↑	↑	↑	*81*	-	↑
30-39 weeks	*106*	↑	↑	↑	-	*126*
39 w - 1 yr	↑	↑	*83*	↑	-	*90*
1-2 years	↑	*84*	↑	*92*	↓	94
2-5 years	*97*	↑	*115*	*110*	*77*	89
5-11 years	↑	↑	↑	↑	↑	127
Ages:						
18-34	↓	↓	↓	↓	↓	*69*
35-39	↓	↓	↓	↓	↓	*59*
40-44	↓	*79*	*93*	↓	↓	*115*
45-49	*46*	↓	↓	*107*	↓	*79*
50-54	↓	*103*	*120*	↓	↓	118
55-59	123	*116*	*101*	92	*77*	106
60-65	*70*	↑	↑	↑	↑	83
All cells	91	102	105	97	*77*	97
Using *E*						
Σz^2	6.15	6.30	2.63	0.71	0.45	24.68
df	5	4	6	3	1	21
$p(\chi^2)$	0.29	0.18	0.85	0.87	0.50	0.26
#(+/−)	2/3	1/3	3/3	1/2	0/1	8/13
$p(+/-)$	1.0	0.63	1.0	1.0	1.0	0.38
$p(B)$	0.482	1.0	0.904	0.673	1.0	0.463
Using adjusted *E*						
Σz^2	9.79	6.15	2.35	0.70	-	25.53
df	3	3	5	2	-	20
$p(\chi^2)$	**0.0204**	0.10	0.80	0.71	-	0.18
#(+/−)	3/1	1/3	3/3	1/2	-	9/12
$p(+/-)$	0.63	0.63	1.0	1.0	-	0.66
$p(B)$	0.479	0.878	0.905	0.744	-	0.731

Table 7.3. Individual males, 1983-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	68	88	98	93	28	375
E	107.5	99.5	138.5	111.9	29.0	486.4
$100A/E$						
Durations:						
1-4 weeks	*59*	-	-	-	-	*53*
4-8 weeks	↑	↓	-	-	-	*67*
8-13 weeks	*69*	*82*	-	-	-	*73*
13-17 weeks	↑	↑	↓	-	-	*67*
17-26 weeks	*73*	*77*	*58*	-	-	68
26-30 weeks	↑	↑	*86*	*74*	-	*103*
30-39 weeks	↑	↑	^	↑	-	70
39 w - 1 yr	*56*	*84*	*77*	*97*	-	74
1-2 years	↑	↑	*71*	*75*	↓	81
2-5 years	*60*	*123*	*72*	*97*	*97*	84
5-11 years	↑	↑	^	*72*	↑	84
Ages:						
18-34	↓	↓	↓	↓	↓	*55*
35-39	↓	*46*	50	↓	↓	*55*
40-44	*40*	↓	*79*	*82*	↓	76
45-49	↓	*105*	*84*	↓	↓	80
50-54	*75*	*111*	*76*	93	↓	95
55-59	*53*	*90*	*72*	*78*	*97*	73
60-65	*84*	*78*	*63*	*72*	↑	78
All cells	63	88	71	83	*97*	77
Using *E*						
Σz^2	14.95	4.98	11.90	4.96	0.01	44.83
df	8	7	11	8	1	36
$p(\chi^2)$	0.0601	0.66	0.37	0.76	0.93	0.15
#(+/−)	0/8	2/5	0/11	1/7	0/1	4/32
$p(+/-)$	**0.0078**	0.45	**0.0010**	0.0703	1.0	**0.0000**
$p(B)$	1.0	0.715	1.0	0.613	1.0	0.739
Using adjusted *E*						
Σz^2	0.64	4.07	1.93	0.73	-	24.21
df	3	7	7	5	-	26
$p(\chi^2)$	0.89	0.77	0.96	0.98	-	0.56
#(+/−)	2/2	2/6	4/4	3/3	-	16/11
$p(+/-)$	1.0	0.29	1.0	1.0	-	0.44
$p(B)$	0.885	0.510	0.915	0.771	-	0.770

Table 7.4. Individual males, 1987-90, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	72	94	149	120	35	470
E	137.1	133.3	186.0	163.8	45.8	665.8
$100A/E$						
Durations:						
1-4 weeks	*30*	-	-	-	-	*13*
4-8 weeks	↑	↓	-	-	-	*50*
8-13 weeks	*32*	*69*	-	-	-	*57*
13-17 weeks	↑	↑	↓	-	-	*47*
17-26 weeks	*52*	*68*	84	-	-	74
26-30 weeks	↑	↑	↑	↓	-	*94*
30-39 weeks	*24*	*86*	*86*	*103*	-	81
39 w - 1 yr	↑	↑	*62*	*98*	-	76
1-2 years	*44*	*56*	96	*71*	*81*	73
2-5 years	110	*73*	84	*44*	*74*	68
5-11 years	↑	↑	*45*	*80*	↑	80
Ages:						
18-34	↓	↓	-	↓	↓	*69*
35-39	↓	*57*	*82*	↓	↓	*54*
40-44	*26*	↓	*67*	*61*	↓	66
45-49	*66*	*79*	*66*	*79*	↓	65
50-54	*44*	*63*	82	*73*	*47*	67
55-59	*62*	77	92	71	*108*	79
60-65	*59*	*69*	*81*	*87*	↑	74
All cells	53	71	80	73	76	71
Using E						
Σz^2	41.78	13.27	11.82	20.02	4.06	88.96
df	9	11	15	12	3	40
$p(\chi^2)$	**0.0000**	0.28	0.69	0.0667	0.25	**0.0000**
#(+/−)	1/8	0/11	3/12	3/9	1/2	4/36
$p(-/-)$	**0.0391**	**0.0010**	**0.0352**	0.15	1.0	**0.0000**
$p(B)$	1.0	1.0	0.729	0.131	1.0	0.660
Using adjusted E						
Σz^2	23.93	2.45	7.10	12.10	4.81	52.99
df	4	8	10	8	1	31
$p(\chi^2)$	**0.0001**	0.96	0.72	0.15	**0.0283**	**0.0082**
#(+/−)	1/4	3/6	6/5	5/4	1/1	14/18
$p(+/-)$	0.38	0.51	1.0	1.0	1.0	0.60
$p(B)$	0.305	0.906	0.505	0.533	1.0	0.498

Table 7.5. Individual males, 1975-90, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	294	289	365	318	78	1,344
E	413.3	344.4	436.7	373.4	92.5	1,660.3
$100A/E$						
Durations:						
1-2 weeks	*39*	-	-	-	-	*39*
2-3 weeks	*75*	-	-	-	-	*75*
3-4 weeks	*78*	-	-	-	-	*78*
4-8 weeks	76	*58*	-	-	-	67
8-13 weeks	*65*	89	-	-	-	78
13-17 weeks	*64*	*90*	61	-	-	70
17-26 weeks	69	74	93	-	-	82
26-30 weeks	↑	*98*	116	*106*	-	100
30-39 weeks	*65*	*96*	91	95	-	89
39 w - 1 yr	*61*	*96*	62	96	-	79
1-2 years	68	82	90	80	96	83
2-5 years	82	69	82	71	88	77
5-11 years	*111*	*132*	73	94	*57*	93
Ages:						
18-29	↓	↓	↓	↓	↓	*71*
30-34	*50*	*50*	*73*	↓	↓	71
35-39	*34*	*45*	*74*	*97*	↓	57
40-44	*45*	122	88	*81*	↓	84
45-49	*56*	87	75	97	*63*	78
50-54	90	89	87	87	*77*	87
55-59	75	94	90	76	98	84
60-65	78	68	82	88	↑	80
All cells	71	84	84	85	84	81
Using E						
Σz^2	67.35	28.71	26.97	25.23	4.13	132.85
df	33	26	32	24	6	65
$p(\chi^2)$	**0.0004**	0.32	0.72	0.39	0.66	**0.0000**
#(+/−)	5/28	6/20	5/27	8/16	1/5	13/52
$p(+/-)$	**0.0001**	0.0094	**0.0001**	0.15	0.22	**0.0000**
$p(B)$	0.777	0.840	0.818	0.143	0.834	0.462
Using adjusted E						
Σz^2	27.37	22.96	19.86	19.54	2.70	85.91
df	19	23	28	20	4	60
$p(\chi^2)$	0.0964	0.46	0.87	0.49	0.61	**0.0158**
#(+/−)	7/13	11/13	11/18	9/12	2/3	29/32
$p(+/-)$	0.26	0.84	0.26	0.66	1.0	0.80
$p(B)$	0.634	0.750	0.452	0.517	0.490	0.425

Table 8.1. Individual females, 1975-78, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	5	7	1	6	0	19
E	5.8	5.1	6.0	4.1	0.4	21.4
$100A/E$						
Durations:						
1 w - 11 yr	*86*	*138*	*17*	*147*	*0*	*89*
Ages:						
18-65	*86*	*138*	*17*	*147*	*0*	*89*
All cells	*86*	*138*	*17*	*147*	*0*	*89*
Using E						
Σz^2	0.02	0.41	3.37	0.50	0.00	0.16
df	1	1	1	1	1	1
$p(\chi^2)$	0.90	0.52	0.0662	0.48	1.0	0.69
$\#(+/-)$	0/1	1/0	0/1	1/0	0/1	0/1
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	1.0
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	-	-	-
df	-	-	-	-	-	-
$p(\chi^2)$	-	-	-	-	-	-
$\#(+/-)$	-	-	-	-	-	-
$p(-/-)$	-	-	-	-	-	-
$p(B)$	-	-	-	-	-	-

Table 8.2. Individual females, 1979-82, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	1	3	9	5	1	19
E	5.7	6.7	9.8	7.4	1.4	31.1
$100A/E$						
Durations:						
1-39 weeks	↓	↓	↓	↓	-	*33*
39 w -11 yr	*18*	*45*	*92*	*68*	*69*	*88*
Ages:						
18-65	*18*	*45*	*92*	*68*	*69*	*61*
All cells	*18*	*45*	*92*	*68*	*69*	*61*
Using E						
Σz^2	3.09	1.55	0.01	0.48	0.00	6.25
df	1	1	1	1	1	2
$p(\chi^2)$	0.0789	0.21	0.92	0.49	1.0	**0.0440**
#(+/−)	0/1	0/1	0/1	0/1	0/1	0/2
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	0.50
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	-	-	-
df	-	-	-	-	-	-
$p(\chi^2)$	-	-	-	-	-	-
#(+/−)	-	-	-	-	-	-
$p(+/-)$	-	-	-	-	-	-
$p(B)$	-	-	-	-	-	-

Table 8.3. Individual females, 1983-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	3	2	12	10	1	28
E	9.5	13.1	16.1	16.6	4.1	59.5
$100A/E$						
Durations:						
1-39 weeks	↓	↓	↓	↓	-	*38*
39 w - 2 yrs	*31*	*15*	*74*	*60*	*24*	67
2-11 years	↑	↑	↑	↑	↑	*42*
Ages:						
18-44	↓	↓	↓	↓	↓	*43*
45-65	*31*	*15*	*74*	*60*	*24*	*50*
All cells	*31*	*15*	*74*	*60*	*24*	*47*
Using E						
Σz^2	3.81	8.59	0.82	2.26	1.67	15.55
df	1	1	1	1	1	4
$p(\chi^2)$	0.0508	**0.0034**	0.36	0.13	0.20	**0.0037**
$\#(+/-)$	0/1	0/1	0/1	0/1	0/1	0/4
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	0.13
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	-	-	-
df	-	-	-	-	-	-
$p(\chi^2)$	-	-	-	-	-	-
$\#(+/-)$	-	-	-	-	-	-
$p(+/-)$	-	-	-	-	-	-
$p(B)$	-	-	-	-	-	-

Table 8.4. Individual females, 1987-90, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	1	10	11	17	2	41
E	10.3	25.9	25.8	28.7	8.6	99.3
$100A/E$						
Durations:						
1-30 weeks	↓	↓	↓	-	-	*10*
30 w - 1 yr	↓	↓	↓	↓	-	*75*
1-2 years	*10*	*39*	*43*	*59*	*23*	*62*
2-11 years	↑	↑	↑	↑	↑	*40*
Ages:						
18-39	↓	↓	↓	↓	↓	*51*
40-44	↓	↓	↓	↓	↓	*30*
45-49	↓	↓	↓	↓	↓	*65*
50-54	*10*	*39*	*43*	*59*	*23*	26
55-65	↑	↑	↑	↑	↑	*34*
All cells	*10*	*39*	*43*	*59*	*23*	41
Using E						
Σz^2	7.50	9.12	7.96	**4.40**	4.29	37.13
df	1	1	1	1	1	8
$p(\chi^2)$	**0.0062**	**0.0025**	**0.0048**	**0.0360**	**0.0383**	**0.0000**
$\#(+/-)$	0/1	0/1	0/1	0/1	0/1	0/8
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	**0.0078**
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	-	-	1.08
df	-	-	-	-	-	2
$p(\chi^2)$	-	-	-	-	-	0.58
$\#(+/-)$	-	-	-	-	-	1/2
$p(+/-)$	-	-	-	-	-	1.0
$p(B)$	-	-	-	-	-	0.733

Table 8.5. Individual females, 1975-90, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	10	22	33	38	4	107
E	31.3	50.8	57.8	56.8	14.5	211.3
$100A/E$						
Durations:						
1-8 weeks	*7*	*36*	-	-	-	*15*
8-13 weeks	↑	↑	-	-	-	*33*
13-17 weeks	*56*	*16*	↓	-	-	↑
17-30 weeks	↑	↑	*32*	↓	-	*32*
30-39 weeks	↑	↑	↑	↓	-	*35*
39 w - 1 yr	↑	*83*	*104*	*78*	-	*144*
1-2 years	↑	↑	↑	↑	↓	*64*
2-5 years	↑	↑	*48*	*49*	*28*	*48*
5-11 years	↑	↑	↑	↑	↑	*39*
Ages:						
18-34	↓	↓	↓	↓	↓	*38*
35-39	↓	*33*	↓	↓	↓	*77*
40-44	↓	↓	*64*	*77*	↓	*33*
45-49	*32*	*49*	↓	↓	*28*	*74*
50-54	↑	↑	*53*	*63*	↑	*36*
55-65	↑	↑	↑	↑	↑	*56*
All cells	*32*	*43*	57	67	*28*	51
Using E						
Σz^2	15.02	18.61	14.14	6.77	6.94	66.96
df	2	3	4	3	1	17
$p(\chi^2)$	**0.0005**	**0.0003**	**0.0069**	0.0798	**0.0084**	**0.0000**
#(+/−)	0/2	0/3	1/3	0/3	0/1	2/15
$p(+/-)$	0.50	0.25	0.62	0.25	1.0	**0.0023**
$p(B)$	1.0	1.0	1.0	1.0	1.0	0.438
Using adjusted E						
Σz^2	-	-	0.17	1.59	-	21.03
df	-	-	1	1	-	8
$p(\chi^2)$	-	-	0.68	0.21	-	**0.0071**
#(+/−)	-	-	1/1	1/1	-	4/5
$p(+/-)$	-	-	1.0	1.0	-	1.0
$p(B)$	-	-	1.0	1.0	-	**0.042**

Table 9.1. Group males, 1975-78, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	2	3	34	169	15	223
E	0.7	2.6	16.8	82.9	9.0	112.0
$100A/E$						
Durations:						
1-30 weeks	↓	↓	203	↓	-	*122*
30-39 weeks	↓	↓	↑	164	-	*154*
39 w - 1 yr	↓	↓	↑	↑	-	221
1-2 years	↓	↓	↑	254	↓	233
2-11 years	*289*	*116*	↑	211	*167*	217
Ages:						
18-49	↓	⌄	↓	223	⌄	186
50-54	↓	⌄	↓	203	⌄	203
55-59	*289*	*116*	203	123	*167*	156
60-65	↑	↑	↑	330	↑	282
All cells	*289*	*116*	203	204	*167*	199
Using *E*						
Σz^2	0.94	0.00	16.64	102.13	3.37	128.88
df	1	1	1	7	1	8
$p(\chi^2)$	0.33	1.0	**0.0000**	**0.0000**	0.0664	**0.0000**
#(+/−)	1/0	1/0	1/0	7/0	1/0	7/1
$p(+/-)$	1.0	1.0	1.0	**0.0156**	1.0	0.0703
$p(B)$	1.0	1.0	1.0	1.0	1.0	0.739
Using adjusted *E*						
Σz^2	-	-	0.00	23.42	-	19.30
df	-	-	1	12	-	13
$p(\chi^2)$	-	-	1.0	**0.0244**	-	0.11
#(+/−)	-	-	1/1	7/6	-	7/7
$p(+/-)$	-	-	1.0	1.0	-	1.0
$p(B)$	-	-	1.0	0.251	-	0.776

Table 9.2. Group males, 1979-82, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	0	39	245	29	313
E	1.1	2.4	41.9	256.0	30.0	331.5
$100A/E$						
Durations:						
1-30 weeks	↓	↓	*93*	*69*	-	*90*
30-39 weeks	↓	↓	↑	*54*	-	*55*
39 w - 1 yr	↓	↓	↑	94	-	87
1-2 years	↓	↓	*93*	108	↓	106
2-5 years	↓	↓	↑	101	*97*	96
5-11 years	*0*	*0*	↑	*122*	↑	*123*
Ages:						
18-39	↓	↓	↓	*94*	↓	*80*
40-44	↓	↓	↓	↓	↓	*114*
45-49	↓	↓	↓	108	↓	121
50-54	↓	↓	*102*	105	↓	100
55-59	*0*	*0*	↓	108	*97*	108
60-65	↑	↑	*83*	64	↑	60
All cells	*0*	*0*	93	96	*97*	94
Using *E*						
Σz^2	0.35	1.54	1.01	16.74	0.01	27.58
df	1	1	4	16	1	20
$p(\chi^2)$	0.56	0.21	0.91	0.40	0.93	0.12
#(+/−)	0/1	0/1	1/3	7/9	0/1	8/12
$p(-/-)$	1.0	1.0	0.63	0.80	1.0	0.50
$p(B)$	1.0	1.0	1.0	**0.033**	1.0	0.212
Using adjusted *E*						
Σz^2	-	-	0.00	17.10	-	21.77
df	-	-	2	15	-	17
$p(\chi^2)$	-	-	1.0	0.31	-	0.19
#(+/−)	-	-	1/2	7/9	-	9/9
$p(+/-)$	-	-	1.0	0.80	-	1.0
$p(B)$	-	-	1.0	0.067	-	0.116

Table 9.3. Group males, 1983-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	3	72	479	47	601
E	0.9	1.9	59.6	414.5	48.8	525.7
$100A/E$						
Durations:						
1-26 weeks	↓	↓	*116*	-	-	*83*
26-30 weeks	↓	↓	↑	*98*	-	*97*
30-39 weeks	↓	↓	↑	95	-	110
39 w - 1 yr	↓	↓	*112*	105	-	102
1-2 years	↓	↓	↑	122	*69*	116
2-5 years	↓	↓	*135*	127	114	132
5-11 years	*0*	*159*	↑	116	↑	103
Ages:						
18-34	↓	↓	↓	*93*	↓	*73*
35-39	↓	↓	↓	↓	↓	*126*
40-44	↓	↓	↓	127	↓	120
45-49	↓	↓	*54*	140	↓	128
50-54	↓	↓	↓	127	*98*	123
55-59	*0*	*159*	*170*	113	*95*	111
60-65	↑	↑	↑	100	↑	110
All cells	*0*	*159*	121	116	96	114
Using *E*						
Σz^2	0.19	0.20	2.61	29.18	1.92	33.26
df	1	1	4	23	3	27
$p(\chi^2)$	0.66	0.66	0.63	0.17	0.59	0.19
#(+/−)	0/1	1/0	4/0	17/6	2/1	21/6
$p(+/-)$	1.0	1.0	0.13	**0.0347**	1.0	**0.0059**
$p(B)$	1.0	1.0	1.0	0.259	0.666	0.306
Using adjusted *E*						
Σz^2	-	-	0.32	18.21	1.89	20.16
df	-	-	3	24	2	26
$p(\chi^2)$	-	-	0.96	0.79	0.39	0.78
#(+/−)	-	-	2/2	10/15	2/1	12/15
$p(+/-)$	-	-	1.0	0.42	1.0	0.70
$p(B)$	-	-	1.0	**0.013**	0.728	**0.031**

Table 9.4. Group males, 1975-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	2	6	145	893	91	1,137
E	2.7	6.9	118.3	753.4	87.8	969.1
$100A/E$						
Durations:						
1-17 weeks	↓	↓	↓	-	-	*126*
17-26 weeks	↓	↓	116	-	-	110
26-30 weeks	↓	↓	↑	84	-	84
30-39 weeks	↓	↓	123	89	-	97
39 w - 1 yr	↓	↓	↑	117	-	113
1-2 years	↓	↓	*118*	132	92	126
2-5 years	↓	↓	135	125	112	127
5-11 years	*73*	*87*	^	126	↑	115
Ages:						
18-29	↓	↓	↓	ˇ	↓	*67*
30-34	↓	↓	↓	*96*	↓	*85*
35-39	↓	↓	*59*	135	↓	117
40-44	↓	↓	↓	128	↓	128
45-49	↓	↓	131	143	*89*	136
50-54	ˇ	↓	*107*	130	*123*	125
55-59	*73*	*87*	144	112	109	115
60-65	^	↑	136	108	*87*	110
All cells	*73*	*87*	123	119	104	117
Using E						
Σz^2	0.02	0.02	10.98	70.68	1.52	74.64
df	1	1	9	30	6	34
$p(\chi^2)$	0.88	0.88	0.28	**0.0000**	0.96	**0.0001**
#(+/−)	0/1	0/1	7/2	19/11	4/2	24/10
$p(+/-)$	1.0	1.0	0.18	0.20	0.69	**0.0243**
$p(B)$	1.0	1.0	0.695	**0.000**	0.174	0.077
Using adjusted E						
Σz^2	-	-	11.70	38.90	1.39	43.13
df	-	-	10	30	5	34
$p(\chi^2)$	-	-	0.31	0.13	0.93	0.14
#(+/−)	-	-	5/6	15/16	3/3	17/18
$p(+/-)$	-	-	1.0	1.0	1.0	1.0
$p(B)$	-	-	0.868	**0.010**	0.676	**0.000**

Table 10.1. Group females, 1975-78, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	0	0	14	0	14
E	0.0	1.4	1.6	11.7	0.4	15.2
$100A/E$						
Durations:						
1 w - 5 yr	*0*	*0*	*0*	*120*	*0*	*92*
Ages:						
18-65	*0*	*0*	*0*	*120*	*0*	*92*
All cells	*0*	*0*	*0*	*120*	*0*	*92*
Using E						
Σz^2	0.00	0.59	0.80	0.29	0.00	0.03
df	1	1	1	1	1	1
$p(\chi^2)$	1.0	0.44	0.37	0.59	1.0	0.87
$\#(-/-)$	0/1	0/1	0/1	1/0	0/1	0/1
$p(+/-)$	1.0	1.0	1.0	1.0	1.0	1.0
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	-	-	-
df	-	-	-	-	-	-
$p(\chi^2)$	-	-	-	-	-	-
$\#(+/-)$	-	-	-	-	-	-
$p(+/-)$	-	-	-	-	-	-
$p(B)$	-	-	-	-	-	-

Table 10.2. Group females, 1979-82,deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	0	6	39	3	48
E	0.0	1.0	6.6	43.1	1.8	52.5
$100A/E$						
Durations:						
1 w - 1 yr	↓	↓	ˇ	*70*	-	*75*
1-2 years	↓	↓	ˇ	*102*	↓	*106*
2-11 years	*0*	*0*	*90*	↑	*168*	*97*
Ages:						
18-44	↓	↓	↓	ˇ	↓	*77*
45-49	↓	↓	↓	*82*	↓	↓
50-65	*0*	*0*	*90*	*100*	*168*	98
All cells	*0*	*0*	*90*	91	*168*	91
Using E						
Σz^2	0.00	0.25	0.00	1.13	0.29	1.01
df	1	1	1	3	1	3
$p(\chi^2)$	1.0	0.61	0.96	0.77	0.59	0.80
$\#(+/-)$	0/1	0/1	0/1	2/1	1/0	1/2
$p(-/-)$	1.0	1.0	1.0	1.0	1.0	1.0
$p(B)$	1.0	1.0	1.0	0.659	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	0.22	-	0.02
df	-	-	-	1	-	2
$p(\chi^2)$	-	-	-	0.64	-	0.99
$\#(-/-)$	-	-	-	1/1	-	1/2
$p(+/-)$	-	-	-	1.0	-	1.0
$p(B)$	-	-	-	1.0	-	0.740

Table 10.3. Group females, 1983-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	1	12	49	1	63
E	0.1	0.6	13.6	79.7	4.1	98.1
$100A/E$						
Durations:						
1 w - 1 yr	↓	↓	↓	*64*	-	*72*
1-2 years	↓	↓	↓	*70*	↓	*74*
2-11 years	*0*	*161*	*88*	*54*	*25*	*51*
Ages:						
18-39	↓	↓	↓	↓	↓	*22*
40-44	↓	↓	↓	*38*	↓	↓
45-49	↓	↓	↓	*79*	↓	*76*
50-54	*0*	*161*	*88*	*66*	*25*	*73*
55-65	↑	↑	↑	*72*	↑	*71*
All cells	*0*	*161*	*88*	62	*25*	64
Using E						
Σz^2	0.00	0.00	0.10	10.56	1.62	14.55
df	1	1	1	6	1	7
$p(\chi^2)$	1.0	1.0	0.76	0.10	0.20	**0.0422**
$\#(+/-)$	0/1	1/0	0/1	0/6	0/1	1/6
$p(-/-)$	1.0	1.0	1.0	**0.0313**	1.0	0.13
$p(B)$	1.0	1.0	1.0	1.0	1.0	1.0
Using adjusted E						
Σz^2	-	-	-	0.76	-	1.56
df	-	-	-	3	-	3
$p(\chi^2)$	-	-	-	0.86	-	0.67
$\#(+/-)$	-	-	-	1/3	-	2/2
$p(+/-)$	-	-	-	0.63	-	1.0
$p(B)$	-	-	-	0.872	-	0.536

Table 10.4. Group females, 1975-86, deaths

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
A	0	1	18	102	4	125
E	0.2	3.0	21.9	134.4	6.2	165.8
$100A/E$						
Durations:						
1-30 weeks	↓	↓	*82*	↓	-	*61*
30-39 weeks	↓	↓	↑	*56*	-	*63*
39 w - 1 yr	↓	↓	↑	*91*	-	*93*
1-2 years	↓	↓	↑	91	↓	89
2-5 years	↓	↓	↑	69	↓	69
5-11 years	*0*	*33*	↑	↑	*64*	*58*
Ages:						
18-34	↓	↓	↓	↓	↓	*44*
35-39	↓	↓	↓	*45*	↓	~
40-44	↓	↓	↓	*67*	↓	*52*
45-49	↓	↓	~	*78*	↓	*87*
50-54	*0*	*33*	*82*	*75*	*64*	80
55-65	↑	↑	^	*104*	↑	98
All cells	*0*	*33*	*82*	76	*64*	75
Using E						
Σz^2	0.00	0.78	0.54	13.80	0.48	20.77
df	1	1	1	10	1	14
$p(\chi^2)$	1.0	0.38	0.46	0.18	0.49	0.11
$\#(+/-)$	0/1	0/1	0/1	1/9	0/1	5/9
$p(+/-)$	1.0	1.0	1.0	**0.0215**	1.0	0.42
$p(B)$	1.0	1.0	1.0	0.605	1.0	0.919
Using adjusted E						
Σz^2	-	-	-	7.18	-	13.55
df	-	-	-	6	-	9
$p(\chi^2)$	-	-	-	0.30	-	0.14
$\#(+/-)$	-	-	-	4/3	-	7/3
$p(+/-)$	-	-	-	1.0	-	0.34
$p(B)$	-	-	-	0.794	-	0.589

Table 11.1. Values of $100A/E$, recoveries, all durations.

(a) Individual males.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	100	100	97	96	*75*	100
1979-82	109	102	**96**	77	*73*	105
1983-86	**101**	74	**67**	59	*35*	**90**
1987-90	**95**	63	**66**	56	*64*	**82**
1975-90	**101**	81	75	65	57	**93**
1975-86	**103**	89	81	71	*52*	**98**

(b) Individual females.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	89	80	*87*	*67*	*59*	86
1979-82	95	90	*99*	*105*	*51*	94
1983-86	91	76	71	*57*	*44*	**83**
1987-90	92	64	61	*51*	*48*	**77**
1975-90	**92**	73	**72**	61	*48*	**83**
1975-86	**91**	81	82	*70*	*47*	**87**

(c) Group males.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*59*	*102*	111	59	*14*	74
1979-82	*74*	*83*	77	40	*41*	52
1983-86	*63*	*77*	60	**31**	*29*	39
1975-86	*66*	89	75	**38**	*31*	**49**

(d) Group females.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*66*	*54*	*112*	*66*	*0*	*72*
1979-82	*139*	*78*	*75*	*35*	*16*	46
1983-86	*59*	*125*	*66*	33	*24*	43
1975-86	*72*	*66*	73	**37**	*19*	47

Note:
Italic if number of recoveries or deaths is less than 100.
Bold if either $p(+/-)$ or $p(B) < 0.025$ for adjusted E.

Table 11.2. Values of $100A/E$, deaths, all durations.

(a) Individual males.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*92*	*90*	*106*	*125*	*103*	100
1979-82	*91*	*102*	*105*	*97*	*77*	97
1983-86	*63*	*88*	*71*	*83*	*97*	77
1987-90	*53*	*71*	80	73	*76*	71
1975-90	71	84	84	85	*84*	81
1975-86	80	92	86	94	*92*	88

(b) Individual females.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*86*	*138*	*17*	*147*	*0*	*89*
1979-82	*18*	*45*	*92*	*68*	*69*	*61*
1983-86	*31*	*15*	*74*	*60*	*24*	*47*
1987-90	*10*	*39*	*43*	*59*	*23*	*41*
1975-90	*32*	*43*	*57*	*67*	*28*	51
1975-86	*43*	*48*	*69*	*75*	*33*	59

(c) Group males.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*289*	*116*	*203*	204	*167*	199
1979-82	*0*	*0*	*93*	96	*97*	94
1983-86	*0*	*159*	*121*	**116**	*96*	114
1975-86	*73*	*87*	123	**119**	*104*	**117**

(d) Group females.

	DP 1	DP 4	DP 13	DP 26	DP 52	All DP
1975-78	*0*	*0*	*0*	*120*	*0*	*92*
1979-82	*0*	*0*	*90*	*91*	*168*	*91*
1983-86	*0*	*161*	*88*	*62*	*25*	*64*
1975-86	*0*	*33*	*82*	*76*	*64*	75

Note:
Italic if number of recoveries or deaths is less than 100.
Bold if either $p(+/-)$ or $p(B) < 0.025$ for adjusted E.

Figure 11.1(a). Individual males, recoveries, quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. $100A/E$ and confidence intervals. Compare with Table 11.1(a).

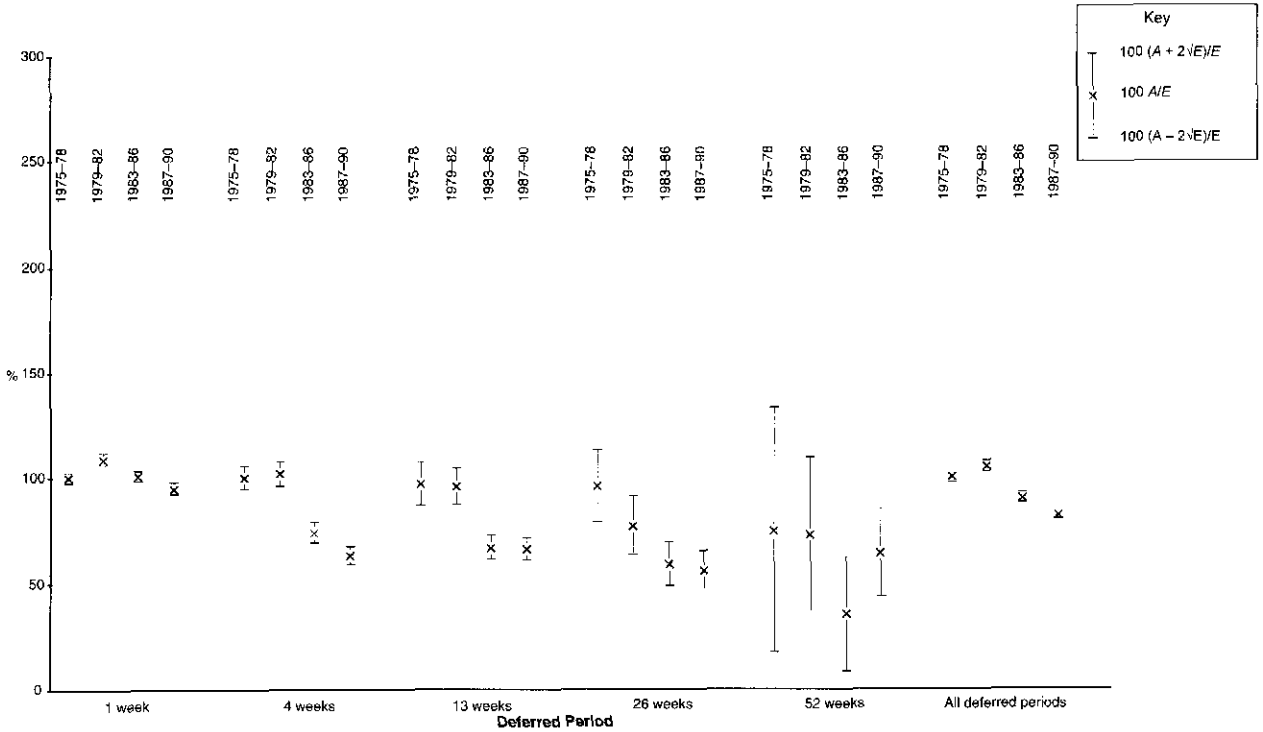


Figure 11.1(b). Individual females, recoveries, quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. $100A/E$ and confidence intervals. Compare with Table 11.1(b).

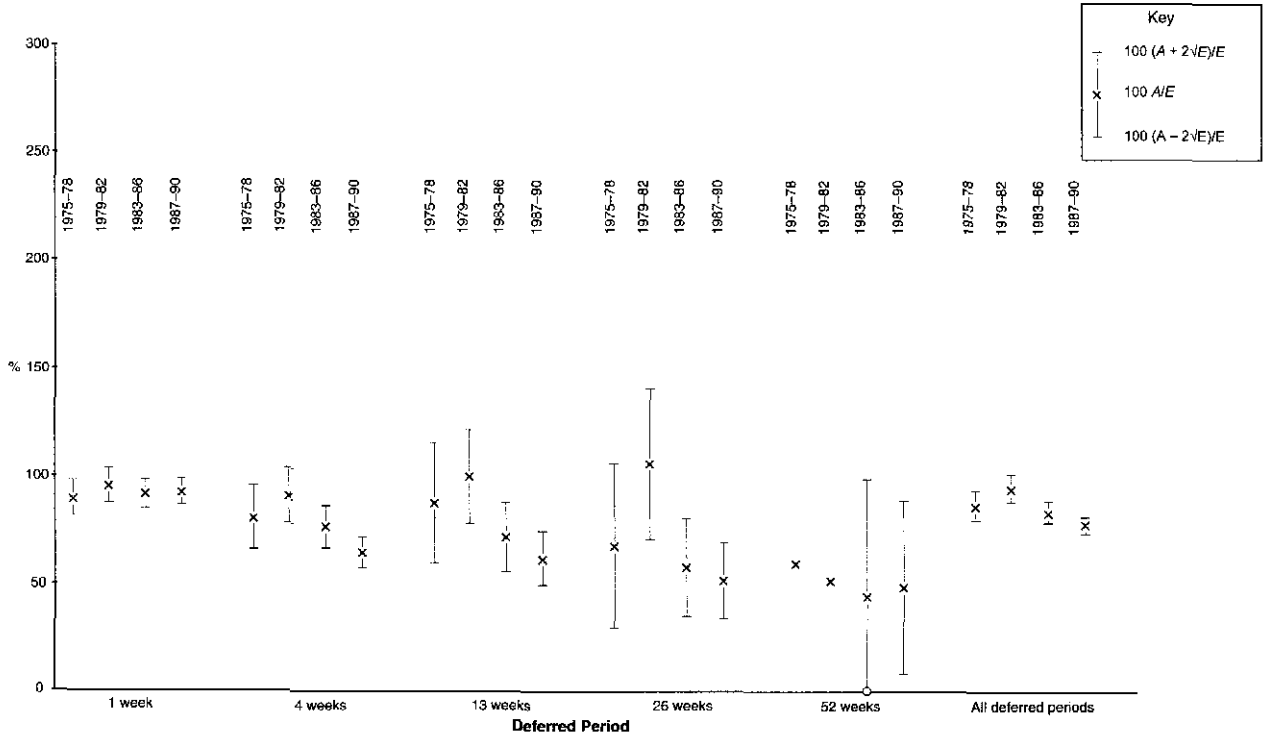


Figure 11.1(c). Group males, recoveries, quadrennia 1975-78, 1979-82 and 1983-86. $100A/E$ and confidence intervals. Compare with Table 11.1(c).

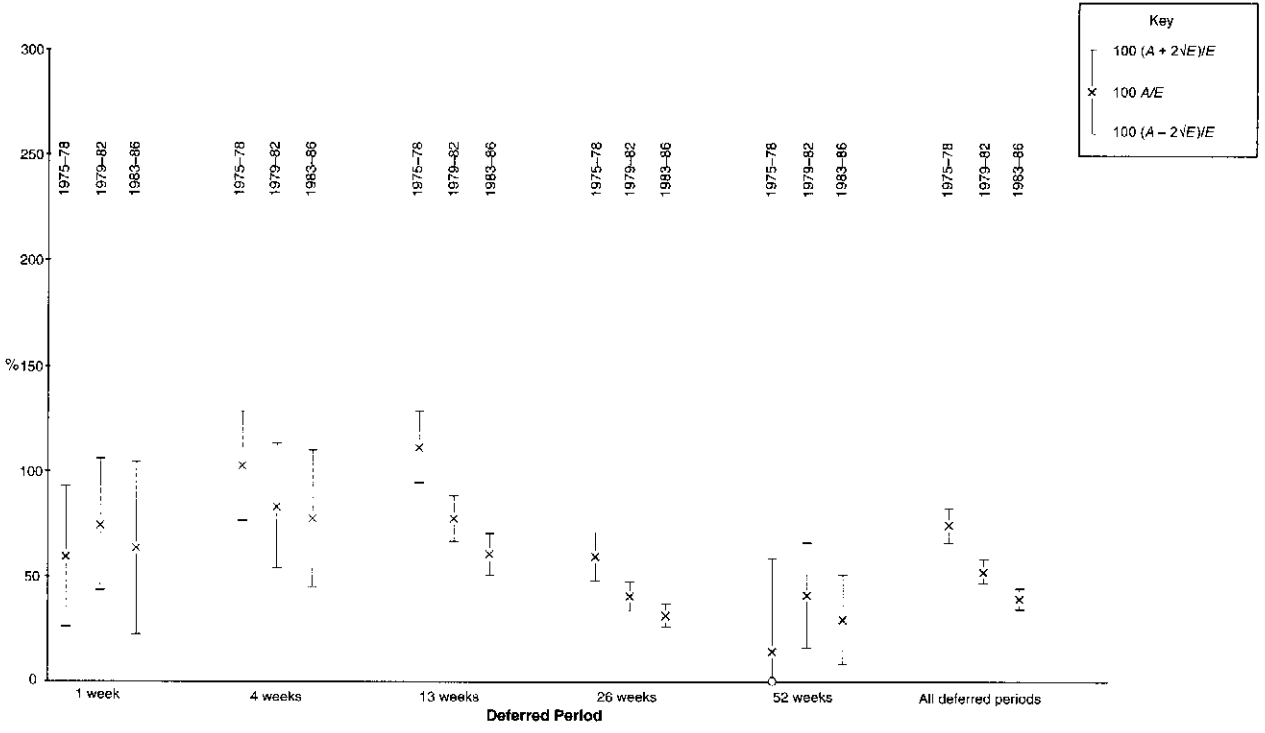


Figure 11.1(d). Group females, recoveries, quadrennia 1975-78, 1979-82 and 1983-86. $100A/E$ and confidence intervals. Compare with Table 11.1(d).

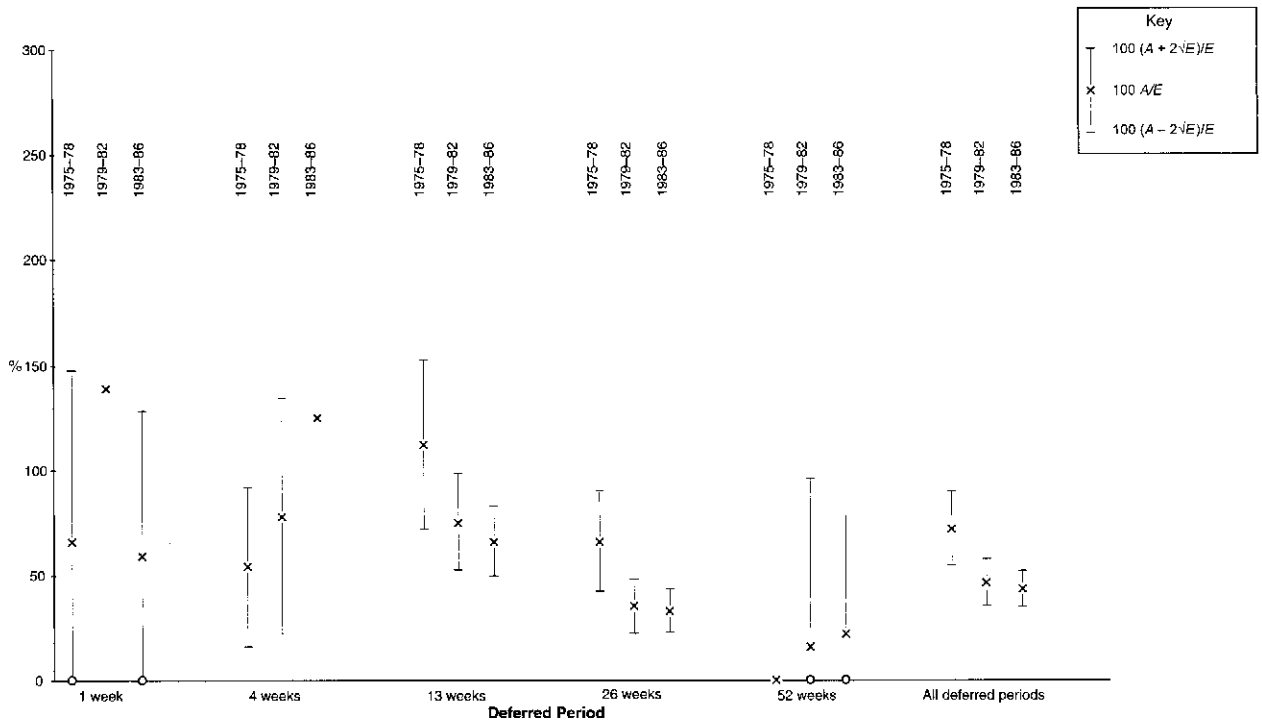


Figure 11.2(a). Individual males, deaths, quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. $100A/E$ and confidence intervals. Compare with Table 11.2(a).

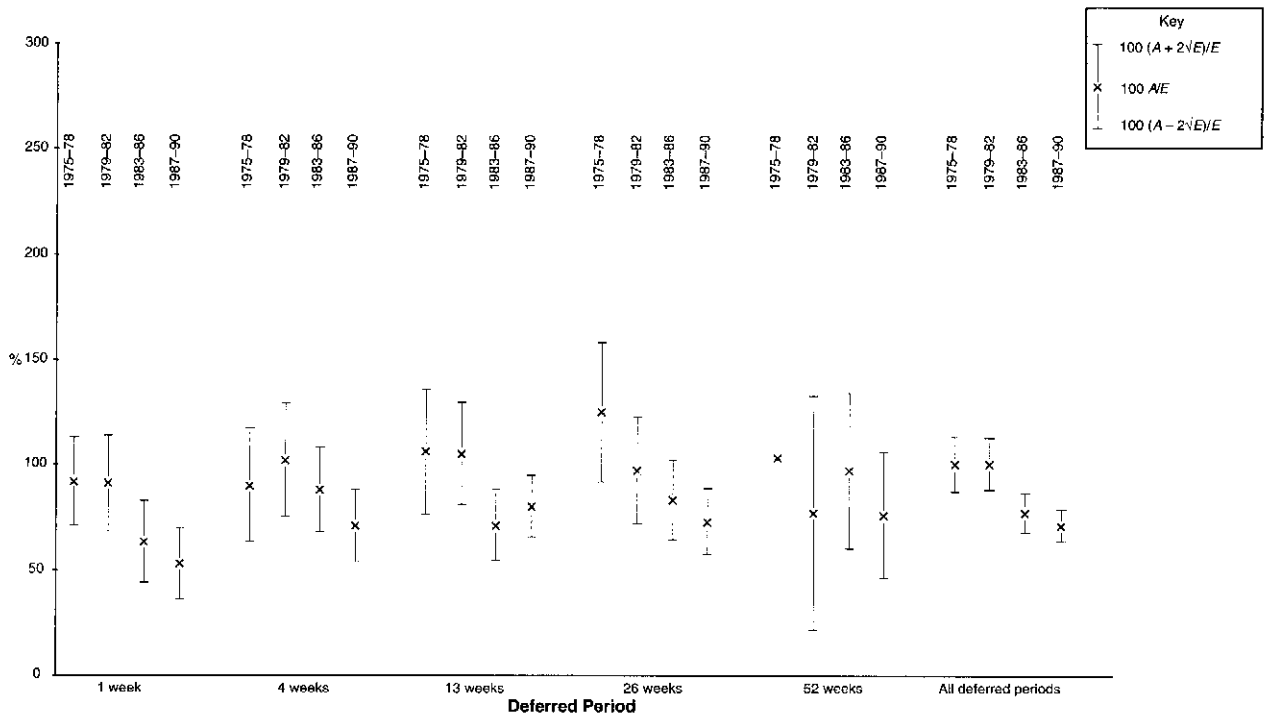


Figure 11.2(b). Individual females, deaths, quadrennia 1975-78, 1979-82, 1983-86 and 1987-90. $100A/E$ and confidence intervals. Compare with Table 11.2(b).

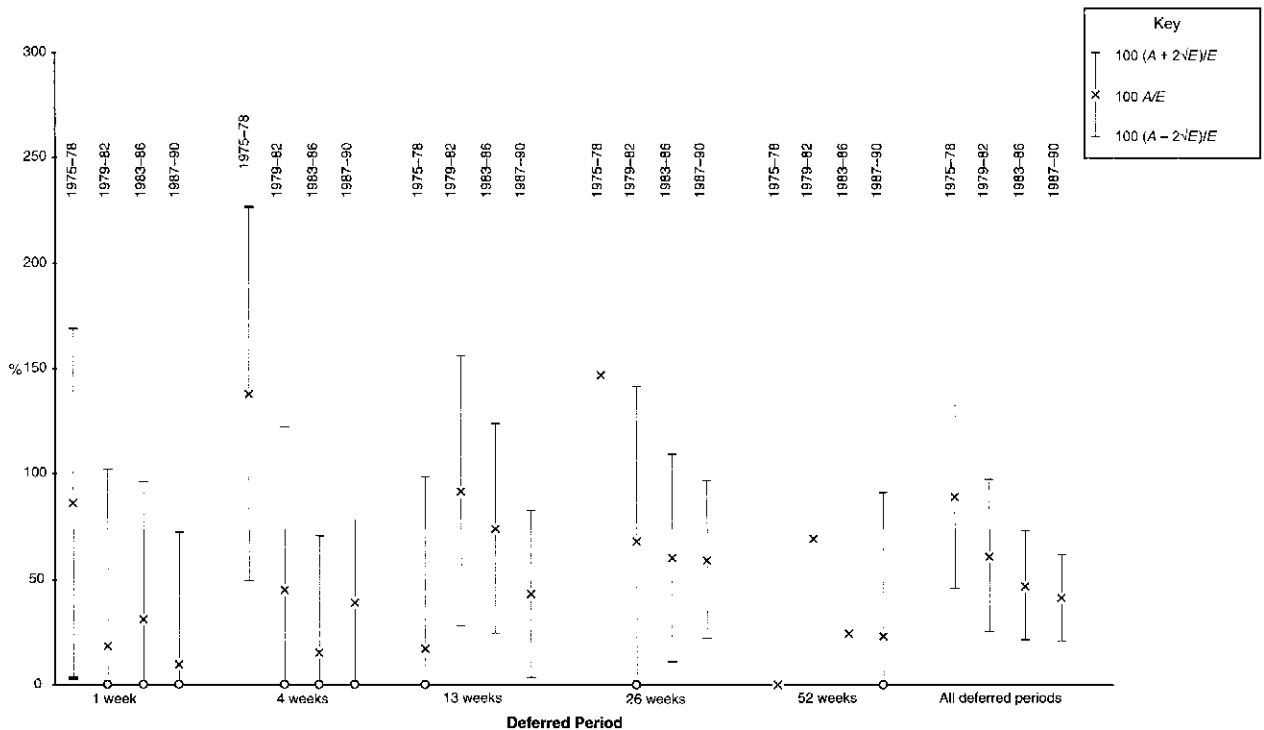


Figure 11.2(c). Group males, deaths, quadrennia 1975-78, 1979-82 and 1983-86. $100A/E$ and confidence intervals. Compare with Table 11.2(c).

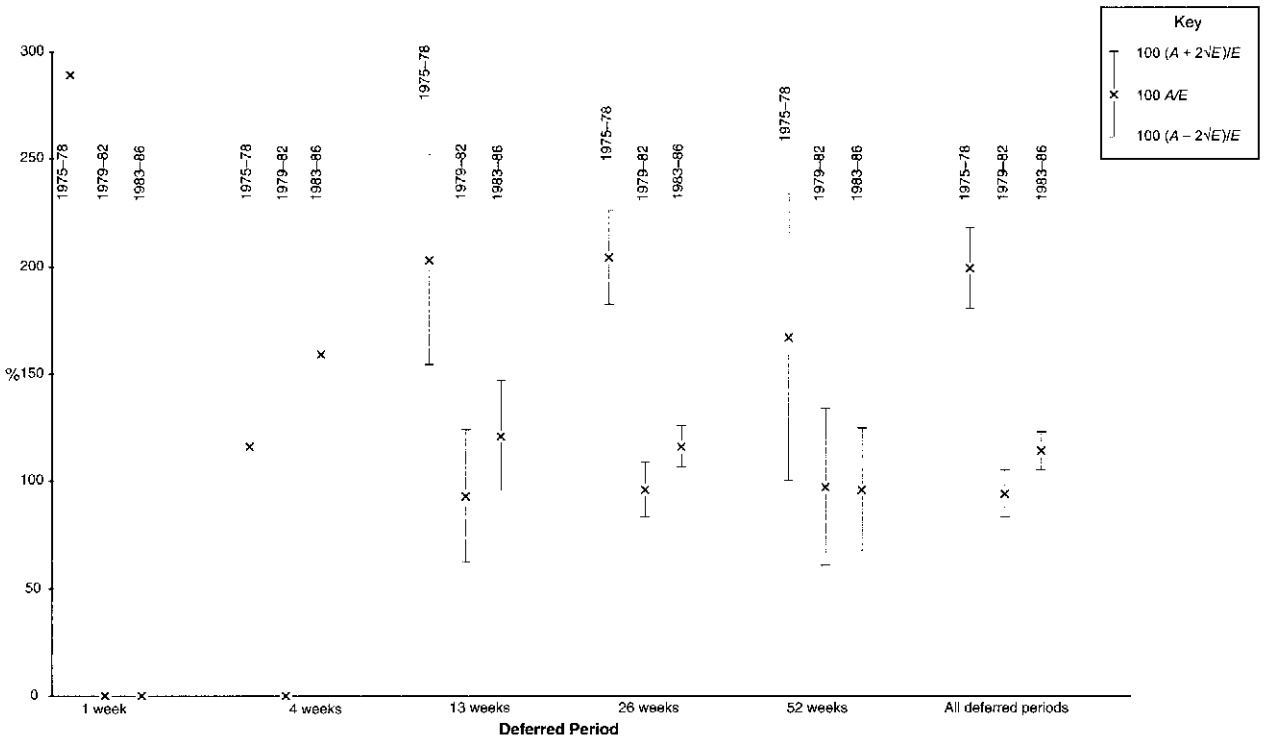
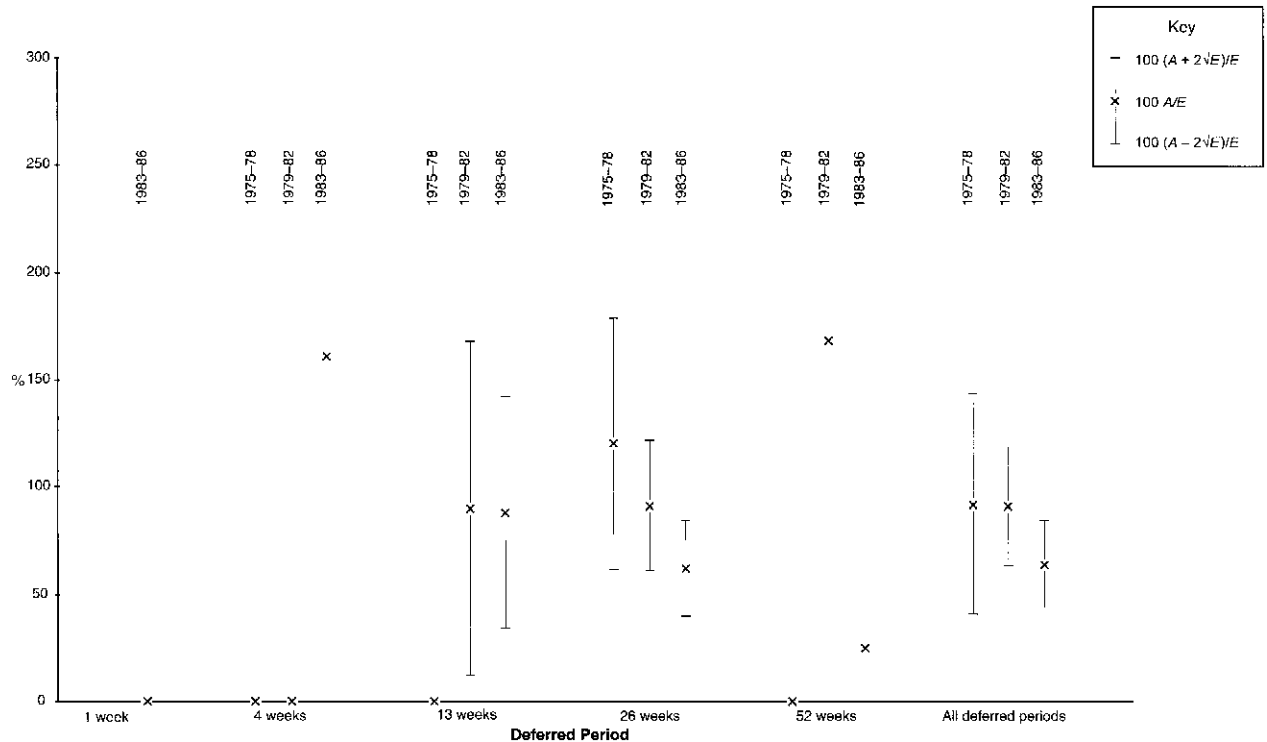


Figure 11.2(d). Group females, deaths, quadrennia 1975-78, 1979-82 and 1983-86. $100A/E$ and confidence intervals. Compare with Table 11.2(d).



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APPENDIX A. GROUPING OF CELLS

A1 It was explained in Section 2.3 that within a tableau it was desirable to group cells in some way so that the expected number of events in each cell was sufficiently large. The way that this has been done for the PHI data is described in this Appendix.

A tableau is arranged with columns representing age groups and rows representing duration groups. Three numbers, k_{column}, k_{row} and k_{cell}, in practice taken as integers, are chosen. These are the minimum numbers of expected events (recoveries or deaths) for any column, row or cell in the final, or compressed, tableau. In practice $k_{column} = k_{row} = 15$ and $k_{cell} = 8$ have been chosen.

The tableau is first traversed from left to right, from lowest age to highest age. If the total expected number of events in any column is less than k_{column} then the data in the cells in that column is added to the column to the right, that for the next higher age-group. If the total expected number of events for the new column is still less than k_{column}, then the combined column is further added to the column to the right; and so on. This procedure may mean that the last column, that for the highest age-group, may be small, and cannot be moved further to the right. The procedure is therefore carried out again from right to left, i.e. from the highest age-group to the lowest age-group. Once this has been done, no remaining non-zero column has less than k_{column} expected, unless there are fewer than k_{column} expected in the whole tableau.

The same procedure is then carried out for rows, in this case starting at the bottom, i.e. for the highest duration group and working up. The criterion is that the expected total number in the row should be no smaller than k_{row}. It is not necessary that k_{row} should be the same value as k_{column}, but it is natural to choose equal numbers. This procedure may leave rows at the top of the table which still have too few expected events, so the rows are scanned again from top to bottom of the tableau, i.e. from the lowest duration group to the highest. At the end of this procedure each row has at least k_{row} expected events, unless there are fewer than k_{row} expected in the whole tableau.

The third stage is to compress individual cells within each row. The procedure is similar: each row is traversed, first from left to right, and then from right to left, and any cell with fewer than k_{cell} expected events is added to the next cell to the right or to the left, as the case may be. At the end of this procedure each cell has at least k_{cell} expected events, unless there are fewer than k_{cell} expected in the whole tableau.

In the tables in Appendix C the grouping of columns is indicated by the ages shown at the top of each column, and the grouping of rows is indicated by the

durations shown at the left of each row. The grouping of individual cells is indicated by arrows, a right pointing arrow showing that a cell has been added to the right, and a left pointing arrow showing that it has been added to the left. The data for the grouped cell appears in the cell at the end of the arrow or series of arrows. Often this cell is the one that contributed originally the largest amount of data to the combined cell.

Using this procedure individual cells are never moved into neighbouring rows, so there are no arrows pointing upwards or downwards.

If the total expected for the whole tableau is less than twice k_{cell}, then the entire table is compressed to a single cell. Such tableaux appear in the summary tables in the text, but not always in the tables in Appendix C.

APPENDIX B. THE TWO-WAY RUNS TEST

B1 One of the tests that is commonly used for a graduation of mortality rates is the Wald-Wolfowitz runs test, which is the same as Steven's change-of-sign test. This is a non-parametric test, designed to test whether a single sequence consisting of n_1 copies of one symbol (denoted plus or $+$) and n_2 copies of another symbol (denoted minus or $-$) can be assumed to be arranged randomly; the problem would be the same if the symbols were denoted H and T for *head* and *tail*. The number of runs is the number of uninterrupted sequences of the same symbol in the total sequence, and the number of sign changes is one fewer than this.

Exact and asymptotic solutions for the number of runs in a random sequence of n_1 +s and n_2 −s are known. Asymptotically the distribution of runs is normal.

The runs test is often supplemented by a parametric test of autocorrelation coefficients for the values spaced k apart, $k = 1, 2, 3, \ldots, K$, where K is a suitable fraction (say one half or one third) of the total number of cases.

In a mortality graduation these tests are usually applied to the sign of the differences between actual deaths and expected deaths, or to the differences standardised in such a way that they are all approximately normally distributed. Autocorrelation tests are sensitive to the existence of large values, or 'outliers', whereas the runs test does not discern as unusual a pattern such as:

$$++--++--++--++--++\ldots,$$

with values in pairs. Both tests, therefore, have their place.

B2 In the graduation of recovery rates or mortality rates according to age attained and duration of sickness there is a more complicated situation. Instead of a sequence of cells there is a two-way array. The conventional runs test cannot readily be applied, and a two-way runs test has been devised. The test has been discussed by Richards (1989) and is described in detail in this Appendix.

Consider a rectangular array of m by n squares, each of which may be filled by one of three symbols: plus (+), minus (−) and null (0). The null values are required because certain of the cells in a rectangular array may have no data at all; null cells can be anywhere in the table, but they are more commonly found round the edges. In practice the array is made only just large enough to cover all the plus and minus cells, omitting any complete row or column at the edge that contains entirely null cells.

The null cells are assumed to be fixed and invariant. We are interested only in the arrangement of the plus and minus cells in the non-null parts of the array. Let there be n_1 +s and n_2 −s in the array, with $n_1 + n_2 = N$. A possible pattern with 11 pluses, 13 minuses and 6 nulls in a 6 by 5 array is shown below:

+	+	−	+	+	+
0	+	+	+	−	+
0	+	0	−	0	0
0	−	−	−	−	−
−	−	−	−	+	−

B3 We now define *links* and classify them as *bonds*, *breaks* and *voids*. A *link* is a comparison between neighbouring cells. A *bond* is where two neighbouring cells contain the same symbol, either both + or both −, and excluding cases where they are both 0. A *break* is when two neighbouring cells contain a + and −, in either order. A *void* is when either one of two neighbouring cells is a 0. We denote bonds by =, breaks by / and voids by •.

We first consider pairs of cells in neighbouring columns, which we call *horizontal links*. In each row there is one link fewer than there are cells in the array, but there are the same number of rows of links as there are rows of cells. The pattern of horizontal links for the above array is shown below:

=	/	/	=	=
•	=	=	/	/
•	•	•	•	•
•	=	=	=	=
=	=	=	/	/

We count 12 horizontal bonds (=), 6 horizontal breaks (/) and 7 horizontal voids.

We can do the same considering pairs of cells that are in adjacent rows, and call these *vertical links*. There is one link fewer in each column than there are rows in the array, but the same number of columns. The pattern of vertical links for the array shown above is given below:

●	=	/	=	/	=
●	=	●	/	●	●
●	/	●	=	●	●
●	=	=	=	/	=

There are 9 vertical bonds (=), 5 vertical breaks (/) and 10 vertical voids (●).

One could go further and consider diagonal links, both in a *dexter* (top left to bottom right) direction and in a *sinister* (top right to bottom left) direction. This has not been done for the PHI data.

If the array is rather sparse, with many null cells, one may wish to count bonds or breaks across *bridges*. A bridge occurs when two non-null cells are separated by one or more null cells. In the array above there are several bridges, including the vertical bridge in the first column, where the + in the first row is separated from the − in the bottom row by three null cells, a horizontal bridge in the third row, a vertical bridge in the third column, and one vertical bridge in each of the last two columns. If these bridges are included, we can count five extra non-void links, which in this case consist of one bond and four breaks.

Counting the horizontal and vertical links, and including the bridges, we see that there are 22 bonds, 15 breaks and 12 remaining voids out of the total of 49 links. The voids are fixed because of the position of the null cells, so we are only concerned with the distribution of bonds and breaks in the 37 non-void positions. It looks, in this example, as if there are rather more bonds than is likely to have happened by chance. Inspection of the original table shows that the top two rows contain only two minuses and nine pluses, whereas the bottom two rows contain only one plus and ten minuses. Could this have happened by chance, or does it show signs of a pattern?

B4 We now need to consider the null hypothesis against which we wish to test. There are at least three ways in which we could imagine the cells having been filled. In each of them we assume that the null cells are fixed and given. The hypotheses are:

(a) each non-null cell is filled with a + or a − with equal probability, i.e. $p(+) = p(-) = 0.5$.

(b) each non-null cell is filled at random with a + or a − with probabilities proportionate to the numbers of +s and −s that have actually occurred, i.e. $p(-) = n_1/N$ and $p(-) = n_2/N$, equivalent to 'sampling with replacement'.

(c) a total of n_1 +s and n_2 −s is arranged at random in the N non-null cells, equivalent to 'sampling without replacement'.

Given any of these three hypotheses it is possible to simulate by 'Monte Carlo simulation' a distribution of +s and −s in the cells. It is just a matter of picking a + or a − for each cell with an appropriate probability. In case (a) the probabilities are fixed at 0.5, in case (b) they are fixed at n_1/N and n_2/N, while in case (c) the probability for the first cell chosen is as in (b) and thereafter the probabilities change according to whether a + or a − has been chosen for the previous cell; in this case the final cell is always determined.

The conventional runs test corresponds to case (c), sampling without replacement, that is, the test is based on the assumption that there are specific numbers of +s and −s and the question is simply whether these are arranged at random.

B5 For each simulation we count the number of bonds and breaks, including or excluding bridges as we wish. The number of voids, which depends on the positioning of the null cells, remains unchanged. We only need record the number of bonds, b, for each simulation, since the number of breaks is necessarily the complement of this with respect to the total number of non-void links, which is fixed.

We carry out a suitable number of such simulations, say 100, 1,000 or 10,000. We count the number of bonds, b, for each simulation and record the distribution of these values. This gives an approximation to the exact distribution of the number of bonds, assuming randomness, according to our chosen hypothesis.

We can then compare the actual number of bonds in the sample we were originally considering, and consider its position in the distribution. Let the actual number of bonds be B. We can count the number of simulated cases where the simulated number of bonds is less than, equal to or greater than B. We denote these by $S_1 = \#(b < B)$, $S_2 = \#(b = B)$ and $S_3 = \#(b > B)$, where $\#(.)$ means 'the number of cases such that (.)'.

Let the total number of simulations be $S = S_1 + S_2 + S_3$. We can now proceed to our test. If $(S_2 + S_3)/S < \alpha\%$, say 5%, so that $S_1/S > 100 - \alpha\%$, say 95%, then the number of bonds in the sample under test is rather high, and the data shows excessive concentration of cells of a similar sign. If

$(S_1 + S_2)/S < \alpha\%$ then the number of bonds is rather low and the data shows excessive alternation. The latter would typically denote over-graduation, but is in practice rather unusual. The former denotes an inadequate graduation, if we are testing a graduation, or shows a substantial lack of fit in some region if we are comparing observed experienced against some prior expected basis.

Since we are normally interested in excessive concentration, i.e. a large number of bonds, the proportion $(S_2 + S_3)/S$ is denoted $p(B)$ and is recorded in the summary tables in Sections 3 to 10.

This test is a relatively crude one, less sensitive perhaps than appropriate parametric tests, just as the runs test may be less sensitive than tests of autocorrelation coefficients. It may therefore be sufficient to perform only 100 simulations in order to get a rough idea of the significance level. On the other hand there is no difficulty in carrying out a larger number of simulations if greater accuracy is desired, and 1,000 simulations have been used in the tests for this paper.

B6 To return to the specimen shown in B2 above: we have carried out successive tests with 100, 1,000 and 10,000 simulations using hypothesis (c), allocating 11 pluses and 13 minuses to the 24 non-null cells, and including bridges, with the results shown in Table B1.

One can observe from the first column that in this case there were three simulations with 22 bonds, the same number as in the original array, and a further three with more than 22 bonds, giving a proportion $p(B)$ of 6 out of 100 or 0.06. This suggests that the observed concentration of +s and −s is rather, but not very, unlikely to have happened by chance. When we look at the results of 1,000 and 10,000 simulations, we find values of $p(B)$ of 104 out of 1,000 or 0.104, and exactly 1,000 out of 10,000 or 0.100. This makes the actual distribution seem not too unlikely.

Table B1. Results of two-way runs test, including bridges

Number of bonds	100 simulations		1,000 simulations		10,000 simulations	
	Number of simulations	Cumulative number	Number of simulations	Cumulative number	Number of simulations	Cumulative number
7	0	0	0	0	1	1
8	0	0	1	1	7	8
9	0	0	3	4	16	24
10	1	1	5	9	39	63
11	3	4	11	20	84	147
12	3	7	18	38	195	342
13	1	8	40	78	333	675
14	5	13	55	133	549	1,224
15	8	21	61	194	821	2,045
16	15	36	101	295	1,113	3,158
17	13	49	122	417	1,336	4,494
18	9	58	143	560	1,360	5,854
19	12	70	134	694	1,352	7,206
20	12	82	114	808	1,020	8,226
21	12	94	88	896	774	9,000
22	3	97	55	951	498	9,498
23	1	98	23	974	258	9,756
24	2	100	19	993	148	9,904
25	0	100	6	999	61	9,965
26	0	100	0	999	22	9,987
27	0	100	0	999	7	9,994
28	0	100	1	1,000	5	9,999
29	0	100	0	1,000	1	10,000

Table C1.1. Individual males, 1987-90, DP 1 week, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
1-2 weeks										
A	29	247	477	509	534	350	279	191	109	2,725
E	35.4	221.0	379.0	417.4	451.4	330.9	261.6	208.7	113.5	2,418.9
$100A/E$	82	112	126	122	118	106	107	92	96	113
z	−0.99	1.72	**5.01**	**4.46**	**3.86**	1.02	1.04	−1.19	−0.38	67.50
2-3 weeks										
A	12	68	146	158	211	180	168	129	88	1,160
E	12.9	78.4	122.0	160.8	189.6	161.2	140.2	131.0	79.5	1,075.8
$100A/E$	93	87	120	98	111	112	120	98	111	108
z	0.12	−1.12	**2.13**	−0.18	1.52	**1.44**	**2.31**	−0.13	0.90	16.33
3-4 weeks										
A	6	25	60	73	86	73	80	72	66	541
E	5.5	36.8	49.0	77.9	97.5	91.4	85.6	95.6	66.9	606.1
$100A/E$	→	73	122	94	88	80	93	75	99	89
z		−1.66	1.49	−0.50	−1.11	−1.87	−0.55	**−2.36**	−0.05	15.82
4-8 weeks										
A	7	50	55	102	134	145	110	135	106	844
E	6.0	50.3	60.6	112.5	156.9	146.1	165.1	199.1	154.2	1,050.8
$100A/E$	→	101	91	91	85	99	67	68	69	80
z		0.03	−0.66	−0.94	−1.79	−0.05	**−4.25**	**−4.51**	**−3.84**	57.63
8-13 weeks										
A	1	14	19	37	52	57	58	54	57	349
E	2.1	14.6	21.4	36.6	57.2	58.1	75.3	98.6	67.7	431.7
$100A/E$	→	90	89	101	91	98	77	55	84	81
z		−0.28	−0.42	0.0	−0.62	−0.08	−1.94	**−4.44**	−1.24	25.70

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
13-17 weeks										
A	0	4	3	5	8	7	16	21	22	86
E	1.0	3.9	7.4	13.6	23.3	20.7	27.9	40.4	24.9	163.1
$100A/E$	→	→	57	37	34	34	57	52	88	53
z			−1.37	**−2.20**	**−3.06**	**−2.90**	**−2.16**	**−2.97**	−0.49	38.21
17-26 weeks										
A	1	0	4	10	10	10	19	14	22	90
E	0.9	5.1	8.7	14.8	25.0	24.2	31.3	48.0	25.1	183.0
$100A/E$	→	→	34	68	40	41	61	29	88	49
z			**−2.39**	−1.12	**−2.91**	**−2.78**	**−2.10**	**−4.83**	−0.52	51.21
26-30 weeks										
A	0	0	2	1	7	3	4	2	4	23
E	0.2	1.4	2.2	3.4	5.5	5.6	7.8	12.3	5.5	43.9
$100A/E$	→	→	→	→	78	→	52	34	←	52
z					−0.63		−1.61	**−2.68**		10.16
30-39 weeks										
A	1	1	2	3	1	1	7	6	5	27
E	0.2	2.0	2.9	5.5	7.9	8.1	10.9	17.2	7.2	61.8
$100A/E$	→	→	→	67	→	13	64	45	←	44
z				−0.93		**−3.37**	−1.03	**−2.61**		20.11
39 weeks - 1 year										
A	0	2	2	1	4	3	3	3	5	23
E	0.0	1.4	1.8	4.0	5.7	6.4	7.6	12.4	4.8	44.1
$100A/E$		→	→	→	70	→	43	47	←	52
z					−0.96		**2.00**	**−2.09**		9.31
1 year - 2 years										
A	0	1	0	1	3	0	4	5	1	15
E	0.0	2.0	3.1	7.4	9.6	10.1	11.3	16.7	5.2	65.4
$100A/E$		→	→	16	31	0	36	27	←	23
z				**−2.83**	−1.97	**3.03**	**−2.01**	**−3.29**		35.93

Table C1.1. (continued) Individual males, 1987-90, DP 1 week, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
2 years - 11 years										
A	0	2	2	3	3	2	3	4	3	22
E	0.0	1.6	3.9	5.7	6.6	7.2	8.3	9.2	1.5	44.0
$100A/E$		→	→	63	→	36	36	66	←	50
z				−1.10		**−2.23**	−1.68	−0.97		9.92
Total										
A	57	414	772	903	1,053	831	751	636	488	5,905
E	64.2	418.4	661.9	859.8	1,036.2	870.0	832.9	889.2	556.1	6,188.7
$100A/E$	89	99	117	105	102	96	90	72	88	95
Σz^2	0.99	7.02	40.04	37.22	45.07	48.23	52.14	109.38	17.76	357.85
										df = 75
										$p = 0.0000$

Table C1.2. Individual males, 1987-90, DP 4 weeks, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
4-8 weeks										
A	31	41	48	69	79	79	58	67	45	517
E	28.4	62.6	67.4	103.2	110.5	109.2	99.3	105.6	63.9	750.1
$100A/E$	109	66	71	67	72	72	58	63	70	69
z	0.40	**−2.67**	**−2.30**	**−3.32**	**−2.95**	**−2.85**	**−4.10**	**−3.71**	**−2.30**	76.19
8-13 weeks										
A	11	27	33	54	70	74	57	47	42	415
E	23.0	60.2	62.4	95.5	98.9	98.4	93.6	102.2	54.5	688.8
$100A/E$	48	45	53	57	71	75	61	46	77	60
z	**−2.39**	**−4.21**	**−3.66**	**4.20**	**−2.86**	**−2.41**	**−3.73**	**−5.41**	−1.63	114.31
13-17 weeks										
A	8	18	12	20	27	25	25	17	16	168
E	7.8	22.8	26.3	35.6	35.6	35.5	37.1	42.2	19.4	262.2
$100A/E$	→	85	46	56	76	71	67	40	83	64
z		−0.73	**−2.69**	**−2.53**	−1.36	−1.67	−1.90	**3.80**	−0.66	37.32
17-26 weeks										
A	4	8	17	28	27	18	23	26	11	162
E	7.1	24.2	26.4	39.2	33.2	39.8	38.7	48.3	20.0	276.9
$100A/E$	→	38	64	71	81	45	59	54	55	58
z		**−3.37**	−1.73	−1.71	−0.99	**3.38**	**−2.44**	**−3.14**	−1.90	49.06
26-30 weeks										
A	2	2	2	3	2	4	6	1	3	25
E	1.6	5.6	5.9	8.9	7.2	9.7	8.9	11.8	4.4	64.1
$100A/E$	→	→	46	34	→	35	67	25	←	39
z			−1.81	−1.82		**−2.54**	−0.81	**−2.91**		22.17
30-39 weeks										
A	3	4	5	9	4	12	7	10	1	55
E	1.8	6.9	7.7	12.0	10.5	12.9	12.1	16.2	5.9	85.9
$100A/E$	→	80	→	71	38	93	58	50	←	64
z		−0.41		−1.17	−1.85	−0.10	−1.32	**−2.25**		11.78

Table C1.2 (continued) Individual males, 1987-90, DP 4 weeks, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
39 weeks - 1 year										
A	1	2	5	3	4	6	3	6	3	33
E	1.1	3.8	4.8	8.2	7.8	8.3	9.0	10.5	3.7	57.0
$100A/E$	→	→	83	37	›	62	33	64	←	58
z			−0.38	−1.63		· 1.39	−1.83	−1.24		9.61
1 year - 2 years										
A	0	4	3	14	12	6	6	10	2	57
E	0.7	2.7	4.6	9.8	9.9	10.3	13.1	14.3	4.0	69.4
$100A/E$	›	→	87	143	121	58	46	66	←	82
z			−0.19	1.18	0.51	−1.18	−1.82	−1.36		8.25
2 years - 11 years										
A	0	2	0	4	7	2	3	1	1	20
E	0.0	1.3	4.2	4.8	5.5	6.2	8.9	8.5	1.4	40.7
$100A/E$		→	→	59	→	77	34	20	←	49
z				−1.16		−0.65	−1.80	**2.35**		10.52
Total										
A	60	108	125	204	232	226	188	185	124	1,452
E	71.5	190.0	209.6	317.2	319.1	330.4	320.7	359.6	177.1	2,295.2
$100A/E$	84	57	60	64	73	68	59	51	70	63
Σz^2	5.87	36.92	32.32	48.06	23.36	38.34	52.63	89.69	12.00	339.20 df =60 p =0.0000

Table C1.3. Individual males, 1987-90, DP 13 weeks, recoveries

Age group: / Sickness period:	19-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
13-17 weeks										
A	6	3	7	12	19	26	15	10	9	107
E	4.3	9.2	18.3	29.5	41.5	37.5	32.7	30.1	14.6	217.6
$100A/E$	→	67	38	41	46	69	46	33	62	49
z		−1.08	**−2.53**	**−3.12**	**−3.42**	1.79	**−3.01**	**−3.58**	−1.33	55.82
17-26 weeks										
A	5	15	20	26	53	46	49	30	20	264
E	7.6	17.5	39.4	65.2	85.3	77.0	68.1	64.6	29.2	453.9
$100A/E$	→	80	51	40	62	60	72	46	69	58
z		−0.91	**3.01**	**−4.79**	**−3.44**	**−3.48**	**−2.25**	**−4.25**	−1.61	82.51
26-30 weeks										
A	2	4	6	8	16	10	14	6	4	70
E	1.5	3.1	8.7	15.9	20.9	19.6	15.8	16.1	6.5	108.2
$100A/E$	→	→	90	50	76	51	89	44	←	65
z			−0.22	−1.85	−0.97	**−2.06**	−0.33	**−2.55**		15.30
30-39 weeks										
A	0	0	9	13	27	20	15	14	4	102
E	2.0	3.7	13.2	22.3	28.5	28.1	21.6	22.5	8.8	150.6
$100A/E$	→	→	48	58	95	71	69	62	46	68
z			**−2.16**	−1.87	−0.19	−1.43	−1.32	1.68	−1.45	16.86
39 weeks - 1 year										
A	0	1	8	6	14	18	11	8	4	70
E	1.3	3.5	9.3	16.3	19.0	19.1	15.1	15.7	6.0	105.3
$100A/E$	→	→	64	37	74	94	73	55	←	66
z			−1.23	**−2.43**	−1.04	−0.13	−0.93	−1.97		13.27
1 year - 2 years										
A	1	4	9	30	21	17	15	10	6	113
E	2.0	5.2	15.1	25.9	26.9	25.2	24.4	22.1	7.2	154.0
$100A/E$	→	→	63	116	78	67	62	55	←	73
z			−1.67	0.72	1.04	−1.53	−1.80	**−2.36**		15.55

Table C1.3. (continued) Individual males, 1987-90, DP 13 weeks, recoveries

Age group: / Sickness period:	19-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
2 years - 5 years										
A	2	4	12	9	20	14	14	6	6	87
E	1.2	3.4	7.1	12.0	14.1	14.9	14.4	11.0	2.5	80.5
$100A/E$	›	→	155	75	142	94	97	88	←	108
z			1.72	−0.71	1.44	−0.10	−0.0	−0.30		5.66
5 years - 11 years										
A	1	1	2	7	6	11	2	3	1	34
E	0.2	0.4	1.9	3.9	3.7	3.3	2.3	1.1	0.0	16.8
$100A/E$	→	→	→	›	202	←	←	←	←	202
z					**4.07**					16.55
Total										
A	17	32	73	111	176	162	135	87	54	847
E	20.2	45.8	113.0	190.9	240.0	224.6	194.4	183.3	74.8	1,287.1
$100A/E$	84	70	65	58	73	72	69	47	72	66
Σz^2	→→	1.99	27.42	46.58	45.31	23.95	20.08	49.74	6.42	221.50
										df =48
										p =0.0000

Table C1.4. Individual males, 1987-90, DP 26 weeks, recoveries

Age group: Sickness period:	21-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
26-30 weeks								
A	0	3	4	7	1	2	0	17
E	4.3	4.5	8.3	10.0	9.4	10.6	4.8	51.9
$100A/E$	→	34	48	70	11	13	←	33
z		-1.77	−1.33	−0.80	**−2.58**	**−3.28**		22.99
30-39 weeks								
A	6	6	6	12	10	14	4	58
E	9.7	10.8	21.2	24.8	23.2	26.6	12.0	128.4
$100A/E$	62	56	28	48	43	53	33	45
z	−1.04	−1.30	**−3.19**	**−2.47**	**−2.63**	**−2.34**	**−2.17**	36.26
39 weeks - 1 year								
A	2	4	10	10	10	6	2	44
E	7.6	7.6	15.7	18.4	17.3	19.5	7.9	94.1
$100A/E$	→	39	64	54	58	29	←	47
z		**−2.23**	−1.32	−1.84	−1.64	**−3.62**		25.87
1 year - 2 years								
A	9	10	14	11	13	13	6	76
E	11.7	10.8	22.3	26.9	28.7	28.7	9.2	138.4
$100A/E$	77	93	63	41	45	45	65	55
z	−0.65	-0.08	−1.65	**−2.97**	**−2.84**	**−2.84**	-0.90	28.92
2 years - 5 years								
A	7	5	9	9	12	11	8	61
E	6.2	9.7	12.0	18.2	18.2	16.6	3.3	84.1
$100A/E$	→	75	75	50	66	95	←	72
z		0.86	−0.71	**−2.03**	−1.33	−0.09		7.16

Table C1.4. (continued) Individual males, 1987-90, DP 26 weeks, recoveries

Age group: Sickness period:	21-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
5 years - 11 years								
A	0	7	8	2	8	5	1	31
E	1.0	3.6	4.4	3.8	3.6	1.6	0.0	17.9
$100A/E$	→	→	167	→	→	179	←	173
z			1.84			**2.19**		8.18
Total								
A	24	35	51	51	54	51	21	287
E	40.5	46.9	83.9	102.1	100.4	103.6	37.3	514.8
$100A/E$	59	75	61	50	54	49	56	56
Σz^2	1.51	10.57	20.32	23.09	26.14	42.21	5.54	129.37 df =31 p =0.0000

Table C1.5. Individual males, 1987-90, DP 52 weeks, recoveries

Age group: Sickness period:	23-44	45-49	50-54	55-64	Total
1 year - 2 years					
A	8	3	5	2	18
E	15.4	8.9	12.2	16.0	52.6
$100A/E$	52	34	41	12	34
z	1.76	−1.81	−1.93	**−3.37**	21.49
2 years - 11 years					
A	10	4	9	16	39
E	10.7	6.9	10.0	9.2	36.8
$100A/E$	94	›	77	174	106
z	−0.05		−0.83	**2.08**	5.04
Total					
A	18	7	14	18	57
E	26.1	15.9	22.2	25.2	89.3
$100A/E$	69	44	63	71	64
Σz^2	3.11	3.28	4.41	15.73	26.53
					df =7
					p =0.0004

Table C1.6. Individual males, 1987-90, all DPs, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
1-2 weeks										
A	29	247	477	509	534	350	279	191	109	2,725
E	35.4	221.0	379.0	417.4	451.4	330.9	261.6	208.7	113.5	2,418.9
$100A/E$	82	112	126	122	118	106	107	92	96	113
z	−0.99	1.72	**5.01**	**4.46**	**3.86**	1.02	1.04	−1.19	−0.38	67.50
2-3 weeks										
A	12	68	146	158	211	180	168	129	88	1,160
E	12.9	78.4	122.0	160.8	189.6	161.2	140.2	131.0	79.5	1,075.8
$100A/E$	93	87	120	98	111	112	120	98	111	108
z	−0.12	−1.12	**2.13**	0.18	1.52	1.44	**2.31**	−0.13	0.90	16.33
3-4 weeks										
A	6	25	60	73	86	73	80	72	66	541
E	5.5	36.8	49.0	77.9	97.5	91.4	85.6	95.6	66.9	606.1
$100A/E$	→	73	122	94	88	80	94	75	99	89
z		−1.66	1.49	−0.50	−1.11	−1.87	0.55	**−2.36**	−0.05	15.82
4-8 weeks										
A	38	91	103	171	213	224	168	202	151	1,361
E	34.3	112.9	128.0	215.7	267.4	255.4	264.4	304.7	218.1	1,800.9
$100A/E$	111	81	80	79	80	88	64	66	69	76
z	0.54	**−2.02**	**−2.16**	**−3.01**	**−3.29**	−1.93	**−5.90**	**−5.86**	**−4.51**	122.10
8-13 weeks										
A	12	41	52	91	122	131	115	101	99	764
E	25.0	74.8	83.8	132.1	156.1	156.5	169.0	200.8	122.3	1,120.5
$100A/E$	48	55	62	69	78	84	68	50	81	68
z	**−2.51**	**−3.85**	**−3.42**	**−3.54**	**−2.69**	**−2.00**	**−4.11**	**−7.01**	**−2.06**	126.79
13-17 weeks										
A	14	25	22	37	54	58	56	48	47	361
E	13.0	35.9	52.0	78.7	100.4	93.6	97.8	112.7	58.9	642.9
$100A/E$	107	70	42	47	54	62	57	43	79	56
z	0.13	−1.73	**−4.09**	**−4.64**	**−4.58**	**−3.63**	**−4.17**	**−6.05**	−1.48	131.62

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
17-26 weeks										
A	10	23	41	64	90	74	91	70	53	516
E	15.6	46.7	74.4	119.2	143.5	141.0	138.0	160.9	74.3	913.8
$100A/E$	64	49	55	54	63	52	66	43	71	56
z	−1.30	**−3.40**	**−3.82**	**−5.01**	**−4.43**	**−5.60**	**−3.96**	**−7.13**	**−2.41**	176.22
26-30 weeks										
A	4	6	10	15	29	24	25	11	11	135
E	3.4	11.1	19.9	32.7	42.0	45.0	41.9	50.8	21.2	268.1
$100A/E$	→	69	50	46	69	53	60	22	52	50
z		−1.05	**−2.10**	**−3.01**	−1.93	**−3.06**	**−2.54**	**−5.52**	**−2.11**	69.01
30-39 weeks										
A	4	5	22	31	38	45	39	44	14	242
E	4.4	15.3	30.4	50.5	68.1	73.8	67.8	82.5	33.9	426.7
$100A/E$	›	46	72	61	56	61	58	53	41	57
z		**2.29**	1.44	**2.68**	**−3.58**	**−3.30**	**−3.44**	**−4.19**	**−3.33**	78.61
39 weeks - 1 year										
A	1	6	16	14	32	37	27	23	14	170
E	2.8	10.8	20.9	36.1	48.2	52.1	49.1	58.1	22.3	300.6
$100A/E$	→	51	77	39	66	71	55	40	63	57
z		−1.66	−0.96	**−3.60**	**−2.27**	**−2.02**	**−3.08**	**−4.54**	−1.66	58.75
1 year - 2 years										
A	1	11	20	58	54	37	43	40	15	279
E	3.9	13.1	32.8	56.8	78.7	81.4	89.7	94.6	28.8	479.8
$100A/E$	→	71	61	102	69	45	48	42	52	58
z		−1.09	**−2.15**	0.09	**−2.72**	**−4.87**	**−4.88**	**−5.56**	**−2.48**	97.83

Table C1.6. (continued) Individual males, 1987-90, all DPs, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
2 years - 5 years										
A	3	8	18	22	39	28	35	25	22	200
E	1.5	6.7	19.3	32.0	41.9	49.8	55.3	51.2	10.0	267.6
$100A/E$	→	135	93	69	93	56	63	49	220	75
z		0.82	−0.18	−1.68	−0.37	**−3.02**	**−2.66**	**3.59**	**3.64**	45.98
5 years - 11 years										
A	1	4	2	15	21	16	16	17	2	94
E	0.4	1.6	4.7	10.3	10.5	10.6	10.4	4.7	0.0	53.2
$100A/E$	→	→	→	129	200	151	232	←	←	177
z				1.09	**3.08**	1.50	**5.00**			37.89
Total										
A	135	560	989	1,258	1,523	1,277	1,142	973	691	8,548
E	158.4	664.9	1,016.3	1,420.4	1,695.3	1,542.8	1,470.8	1,556.4	849.7	10,375.1
$100A/E$	85	84	97	89	90	83	78	63	81	82
Σz^2	9.26	51.34	91.61	121.62	115.93	118.24	175.10	290.14	71.21	1,044.45
										df =106
										p =0.0000

Table C2.1. Individual females, 1987-90, DP 1 week, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-63	Total
1-2 weeks										
A	31	81	72	78	72	52	38	19	1	444
E	39.5	85.8	80.7	84.2	78.6	56.9	34.0	23.7	2.7	486.0
$100A/E$	78	94	89	93	92	91	112	76	←	91
z	−1.27	−0.46	−0.92	−0.62	−0.69	0.58	0.60	−1.13		5.53
2-3 weeks										
A	19	31	27	27	41	29	19	16	1	210
E	14.5	31.3	32.3	35.8	31.3	28.5	17.2	14.0	2.1	207.1
$100A/E$	131	99	84	75	131	102	110	106	←	101
z	1.06	−0.0	−0.84	−1.39	1.64	0.01	0.30	0.10		6.54
3-4 weeks										
A	4	14	14	10	9	17	10	7	0	85
E	4.5	13.6	15.4	20.0	15.7	15.9	10.6	10.1	2.0	107.7
$100A/E$	→	99	91	50	57	107	94	58	←	79
z		−0.0	−0.22	**−2.13**	−1.57	0.16	−0.03	1.32		8.80
4-8 weeks										
A	7	18	22	27	22	28	15	17	1	157
E	5.3	16.0	20.0	34.5	27.2	26.0	20.4	19.8	5.6	174.7
$100A/E$	→	117	110	78	81	108	74	71	←	90
z		0.69	0.35	−1.19	−0.90	0.29	−1.08	−1.36		5.92
8-13 weeks										
A	1	5	6	12	17	6	8	6	2	63
E	1.5	5.1	6.1	11.3	8.8	10.5	8.7	8.4	3.0	63.5
$100A/E$	→	→	95	106	193	57	92	70	←	99
z			−0.06	0.06	**2.60**	1.24	0.08	−0.87		9.04

Table C2.1. (continued) Individual females, 1987-90, DP 1 week, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-63	Total
13-17 weeks										
A	0	2	1	2	0	8	6	3	0	22
E	0.5	1.1	1.3	3.9	2.4	3.0	3.0	3.7	1.1	20.0
$100A/E$	→	→	→	→	54	→	→	158	←	110
z					1.22			1.74		4.51
17-30 weeks										
A	1	0	0	2	3	2	5	6	3	22
E	0.7	1.6	1.6	5.3	2.5	2.3	3.6	3.4	0.7	21.6
$100A/E$	→	→	→	32	→	→	154	←	←	102
z				−1.89			1.75			6.61
30 weeks - 11 years										
A	0	0	3	4	2	0	1	0	0	10
E	0.0	0.9	2.5	3.6	2.6	2.1	2.4	1.2	0.2	15.5
$100A/E$		→	→	→	65	←	←	←	←	65
z					−1.27					1.60
Total										
A	63	151	145	162	166	142	102	74	8	1,013
E	66.5	155.4	160.0	198.6	169.1	145.2	99.9	84.3	17.3	1,096.1
$100A/E$	95	97	91	82	98	98	102	88	46	92
Σz^2	2.73	0.68	1.73	11.83	16.26	1.98	4.67	8.69	←←	48.56 df −41 *p* −0.19

Table C2.2. Individual females, 1987-90, DP 4 weeks, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-62	Total
4-8 weeks									
A	**14**	30	19	25	17	16	17	6	144
E	23.8	45.9	37.0	40.6	39.0	36.1	17.4	11.8	251.6
$100A/E$	59	65	51	62	44	44	98	51	57
z	−1.91	**−2.27**	**−2.88**	**−2.37**	**−3.45**	**−3.26**	−0.0	−1.53	47.57
8-13 weeks									
A	17	25	17	29	29	38	11	6	172
E	21.1	41.2	35.4	35.6	36.0	31.6	14.1	11.7	226.9
$100A/E$	81	61	48	81	80	120	78	51	76
z	−0.79	**−2.45**	**−3.01**	−1.03	−1.09	1.06	−0.70	−1.53	21.89
13-17 weeks									
A	5	7	6	14	14	7	3	2	58
E	4.7	15.5	15.6	8.8	11.9	9.3	5.7	5.1	76.7
$100A/E$	→	59	39	160	117	75	›	46	76
z		−1.72	**−2.30**	1.59	0.45	−0.60		−1.61	13.95
17-26 weeks									
A	3	8	5	3	3	6	4	4	36
E	3.4	17.1	17.5	10.6	13.3	10.5	6.6	5.8	84.7
$100A/E$	→	54	29	28	23	57	→	65	43
z		**−1.99**	**−2.86**	**−2.18**	**−2.68**	−1.23		−1.10	26.82
26-30 weeks									
A	0	5	1	1	2	1	0	0	10
E	0.7	3.9	4.8	2.9	3.8	2.5	1.4	1.4	21.4
$100A/E$	→	→	64	→	→	33	←	←	47
z			−0.96			**−2.16**			5.59

Table C2.2. (continued) Individual females, 1987-90, DP 4 weeks, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-62	Total
30-39 weeks									
A	0	1	6	3	2	1	1	1	15
E	1.1	5.3	6.5	3.9	5.0	3.7	1.9	2.0	29.4
$100A/E$	→	→	55	→	48	←	←	←	51
z			−1.49		−1.98				6.13
39 weeks - 1 year									
A	1	4	4	1	4	4	1	0	19
E	0.8	3.3	3.5	2.8	3.2	2.6	1.3	1.0	18.6
$100A/E$	→	→	→	95	→	→	→	111	102
z				0.0				0.13	0.02
1 year - 11 years									
A	1	1	2	3	6	4	2	1	20
E	1.2	4.8	3.8	4.3	9.5	4.4	2.6	1.6	32.2
$100A/E$	→	→	41	→	65	→	→	82	62
z			−1.70		−1.16			−0.37	4.36
Total									
A	41	81	60	79	77	77	39	20	474
E	56.9	137.0	124.2	109.6	121.7	100.7	51.1	40.3	741.5
$100A/E$	72	59	48	72	63	76	76	50	64
Σz^2	4.28	18.10	36.83	13.98	25.71	18.31	0.49	8.64	126.33
									df = 37
									p = 0.0000

Table C2.3. Individual females, 1987-90, DP 13 weeks, recoveries

Age group: Sickness period:	18-29	30-34	35-39	40-44	45-49	50-54	55-59	Total
13-17 weeks								
A	4	3	2	6	9	10	1	35
E	4.7	5.7	10.3	9.0	6.1	4.9	2.4	43.1
$100A/E$	→	67	19	67	→	149	←	81
z		−0.90	**−2.44**	−0.82		1.67		10.23
17-26 weeks								
A	7	3	10	11	7	2	4	44
E	9.9	12.4	22.3	18.1	13.0	8.9	6.0	90.6
$100A/E$	70	24	45	61	54	40	←	49
z	−0.77	**−2.52**	**−2.50**	1.55	1.52	**−2.18**		22.69
26-30 weeks								
A	1	2	4	2	0	0	0	9
E	3.4	3.1	5.4	4.2	3.4	2.3	1.7	23.6
$100A/E$	→	→	58	→	→	17	←	38
z			−1.30			**−2.68**		8.86
30-39 weeks								
A	4	2	3	5	2	1	1	18
E	4.3	4.4	7.7	5.1	5.0	3.5	2.6	32.6
$100A/E$	→	69	→	62	→	36	←	55
z		−0.76		−1.20		−1.98		5.93
39 weeks - 1 year								
A	2	1	7	2	3	3	0	18
E	3.3	2.6	5.1	3.5	3.6	2.5	1.8	22.3
$100A/E$	→	→	91	→	→	70	←	81
z			−0.14			0.85		0.74

Table C2.3. (continued) Individual females, 1987-90, DP 13 weeks, recoveries

Age group: Sickness period:	18-29	30-34	35-39	40-44	45-49	50-54	55-59	Total
1 year - 2 years								
A	2	3	3	3	2	1	1	15
E	3.4	2.9	6.3	4.4	4.7	3.6	2.0	27.3
$100A/E$	→	→	64	→	47	←	←	55
z			−1.15		−1.89			4.89
2 years - 11 years								
A	1	0	2	3	5	3	2	16
E	0.6	0.7	2.5	4.8	3.6	2.3	0.9	15.4
$100A/E$	→	→	→	104	←	←	←	104
z				0.03				0.00
Total								
A	21	14	31	32	28	20	9	155
E	29.7	31.7	59.8	49.1	39.3	28.0	17.5	255.1
$100A/E$	71	44	52	65	71	71	52	61
Σz^2	0.60	7.74	15.25	4.54	5.87	19.34	←←	53.34 df =20 p =0.0001

Table C2.4. Individual females, 1987-90, DP 26 weeks, recoveries

Age group: / Sickness period:	24-34	35-39	40-44	45-49	50-54	55-64	Total
26-39 weeks							
A	1	3	3	7	0	0	14
E	5.2	8.0	7.5	11.7	7.7	6.5	46.6
$100A/E$	→	30	→	52	→	0	30
z		**−2.40**		−1.97		**−3.63**	22.88
39 weeks - 1 year							
A	0	3	4	7	1	2	17
E	3.0	3.7	4.0	5.3	4.5	3.3	23.8
$100A/E$	→	→	65	→	77	←	71
z			−1.00		−0.70		1.49
1 year - 2 years							
A	2	4	2	4	1	0	13
E	4.8	4.7	5.7	6.6	8.1	3.9	33.9
$100A/E$	→	63	→	49	8	←	38
z		−0.97		−1.65	**−3.04**		12.93
2 years - 11 years							
A	2	4	3	2	6	5	22
E	3.8	4.4	4.8	3.6	5.7	1.7	24.0
$100A/E$	→	73	→	102	←	←	92
z		−0.60		0.0			0.36
Total							
A	5	14	12	20	8	7	66
E	16.8	21.0	22.0	27.1	26.1	15.3	128.2
$100A/E$	30	67	55	74	31	46	51
Σz^2	⟶	7.09	1.00	6.62	9.75	13.20	37.66
							df = 10
							$p = 0.0000$

Table C2.5 Individual females. 1987-90, DP 52 weeks, recoveries

Age group: Sickness period:	Total
Total	
A	12
E	24.8
$100A/E$	48
Σz^2	6.08
	df = 1
	p = 0.0137

Table C2.6. Individual females, 1987-90, all DPs, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
1-2 weeks										
A	31	81	72	78	72	52	38	19	1	444
E	39.5	85.8	80.7	84.2	78.6	56.9	34.0	23.7	2.7	486.0
$100A/E$	78	94	89	93	92	91	112	76	←	91
z	−1.27	−0.46	−0.92	−0.62	−0.69	−0.58	0.60	−1.13		5.53
2-3 weeks										
A	19	31	27	27	41	29	19	16	1	210
E	14.5	31.3	32.3	35.8	31.3	28.5	17.2	14.0	2.1	207.1
$100A/E$	131	99	84	75	131	102	110	106	←	101
z	1.06	−0.0	−0.84	1.39	1.64	0.01	0.30	0.10		6.54
3-4 weeks										
A	4	14	14	10	9	17	10	7	0	85
E	4.5	13.6	15.4	20.0	15.7	15.9	10.6	10.1	2.0	107.7
$100A/E$	→	99	91	50	57	107	94	58	←	79
z		−0.0	−0.22	**−2.13**	−1.57	0.16	−0.03	−1.32		8.80
4-8 weeks										
A	21	48	41	52	39	44	32	21	3	301
E	29.2	61.9	56.9	75.1	66.2	62.1	37.7	29.8	7.3	426.3
$100A/E$	72	78	72	69	59	71	85	65	←	71
z	−1.42	−1.70	**−2.05**	**−2.61**	**−3.28**	**2.24**	−0.85	**−2.07**		36.71
8-13 weeks										
A	18	30	23	41	46	44	19	9	5	235
E	22.6	46.3	41.6	46.9	44.8	42.1	22.9	19.4	3.8	290.4
$100A/E$	80	65	55	87	103	105	83	60	←	81
z	−0.87	**−2.32**	**2.80**	−0.80	0.10	0.22	−0.71	−1.80		18.44

Table C2.6. (continued) Individual females, 1987-90, all DPs, recoveries

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
13-17 weeks										
A	5	13	10	18	20	24	19	6	0	115
E	7.3	19.3	22.6	23.0	23.3	18.5	13.6	11.0	1.3	139.8
$100A/E$	→	68	**44**	78	86	130	140	49	←	82
z		−1.57	**−2.54**	−0.93	−0.58	1.17	1.34	−1.65		16.02
17-26 weeks										
A	8	11	8	14	17	15	11	14	3	101
E	7.7	24.8	31.3	37.2	33.4	25.4	18.6	14.6	0.7	193.7
$100A/E$	→	58	26	38	51	59	59	111	←	52
z		**−2.29**	**−4.07**	**−3.72**	**−2.75**	−1.96	−1.64	0.30		49.89
26-30 weeks										
A	0	6	3	7	5	2	0	0	0	23
E	1.7	6.9	9.3	11.6	10.5	9.7	6.3	5.4	0.1	61.6
$100A/E$	→	70	32	60	48	21	→	0	←	37
z		−0.70	−1.91	−1.21	−1.55	**−2.31**		**−3.29**		24.19
30-39 weeks										
A	1	4	9	9	9	9	2	2	0	45
E	2.4	9.4	14.2	18.4	16.1	17.5	11.8	9.6	0.2	99.5
$100A/E$	→	43	64	49	56	51	17	20	←	45
z		−1.82	−1.24	**−2.08**	−1.64	−1.91	**−2.71**	**−2.33**		28.32
39 weeks - 1 year										
A	1	6	6	12	11	14	6	2	0	58
E	1.8	6.7	8.7	12.2	11.2	11.9	8.8	6.2	0.2	67.7
$100A/E$	→	83	69	98	98	117	53	←	←	86
z		−0.33	−0.74	−0.0	−0.0	0.45	−1.71			3.78

Age group: Sickness period:	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	Total
1 year - 2 years										
A	2	3	6	12	13	9	3	2	0	50
E	1.7	8.4	10.8	17.4	18.8	17.6	18.9	8.8	0.1	102.6
$100A/E$	→	49	55	69	69	51	16	22	←	49
z		−1.45	−1.31	−1.17	−1.21	−1.93	**−3.54**	**−2.16**		27.62
2 years - 11 years										
A	1	1	6	8	9	9	11	7	1	53
E	0.1	2.6	6.5	9.7	16.9	11.5	12.3	3.5	0.0	63.3
$100A/E$	→	→	86	82	53	78	120	←	←	84
z			−0.25	−0.38	−1.81	−0.59	0.66			4.26
Total										
A	111	248	225	288	291	268	170	105	14	1,720
E	132.9	317.0	330.3	391.7	367.0	317.5	212.7	156.1	20.5	2,245.6
$100A/E$	84	78	68	74	79	84	80	67	68	77
Σz^2	5.50	22.25	44.21	36.33	34.16	23.92	29.39	34.33	← ←	230.09 df =84 p =0.0000

Table C3.1. Individual males, 1987-90, DP 1 week, deaths

Age group: / Sickness period:	18-44	45-49	50-54	55-59	60-65	Total
1-8 weeks						
A	0	1	1	3	3	8
E	7.8	3.5	4.3	6.0	5.5	27.1
$100A/E$	→	9	→	**44**	←	30
z		**-2.92**		**-2.09**		12.87
8-17 weeks						
A	1	1	1	2	1	6
E	3.2	2.0	3.2	5.7	4.9	19.0
$100A/E$	→	→	36	→	28	32
z			-1.69		**-2.19**	7.65
17-30 weeks						
A	1	1	2	4	2	10
E	2.8	1.9	3.2	6.7	4.8	19.3
$100A/E$	→	→	→	52	←	52
z				**-2.01**		4.04
30 weeks - 1 year						
A	1	1	0	1	2	5
E	2.5	1.9	3.3	7.8	5.0	20.4
$100A/E$	→	→	→	24	←	24
z				**-3.30**		10.89
1 year - 2 years						
A	1	0	0	5	3	9
E	2.6	2.0	3.3	7.9	4.5	20.3
$100A/E$	→	→	→	**44**	←	44
z				**-2.40**		5.75

Age group: Sickness period:	18-44	45-49	50-54	55-59	60-65	Total
2 years - 11 years						
A	2	6	7	14	5	34
E	4.2	3.7	7.5	12.7	2.8	30.9
$100A/E$	→	→	97	123	←	110
z			−0.0	0.77		0.59
Total						
A	6	10	11	29	16	72
E	23.0	15.0	24.9	46.8	27.3	137.1
$100A/E$	26	66	44	62	59	53
Σz^2	→→	8.51	2.87	25.62	4.78	41.78 df =9 p =0.0000

Table C3.2. Individual males, 1987-90, DP 4 weeks, deaths

Age group: / Sickness period:	18-39	40-49	50-54	55-59	60-64	Total
4-17 weeks						
A	1	8	4	7	7	27
E	8.1	9.8	6.4	8.9	6.1	39.2
$100A/E$	12	82	→	84	←	69
z	**−2.32**	−0.41		−0.61		5.90
17-30 weeks						
A	2	3	5	3	3	16
E	4.0	5.0	3.8	6.7	3.9	23.5
$100A/E$	→	55	→	76	←	68
z		−1.18		−0.77		1.97
30 weeks - 1 year						
A	4	5	2	6	2	19
E	3.0	4.4	3.8	7.0	4.1	22.2
$100A/E$	→	→	99	→	72	86
z			−0.0		−0.77	0.59
1 year - 2 years						
A	1	3	1	5	1	11
E	1.7	3.5	3.8	6.9	3.6	19.5
$100A/E$	→	→	56	→	57	56
z			−1.16		−1.24	2.89
2 years - 11 years						
A	3	3	4	10	1	21
E	2.5	5.3	7.8	10.8	2.6	29.0
$100A/E$	→	→	64	82	←	73
z			−1.28	−0.52		1.92
Total						
A	11	22	16	31	14	94
E	19.3	27.9	25.5	40.2	20.3	133.3
$100A/E$	57	79	63	77	69	71
Σz^2	5.36	1.55	2.99	1.23	2.14	13.27
						df =11
						p =0.28

Table C3.3. Individual males, 1987-90, DP 13 weeks, deaths

Age group: Sickness period:	19-39	40-44	45-49	50-54	55-59	60-65	Total
13-30 weeks							
A	6	4	7	11	11	5	44
E	7.9	7.2	8.3	9.3	12.1	7.5	52.4
$100A/E$	→	66	85	118	82	←	84
z		−1.19	−0.27	0.38	−0.70		2.14
30-39 weeks							
A	1	1	4	4	4	2	16
E	2.4	2.3	3.0	3.2	4.8	2.9	18.6
$100A/E$	→	→	→	86	←	←	86
z				−0.49			0.24
39 weeks - 1 year							
A	2	4	0	1	3	2	12
E	2.5	2.2	2.9	3.3	5.3	3.3	19.5
$100A/E$	→	→	→	64	→	59	62
z				−1.04		−1.04	2.15
1 year - 2 years							
A	6	2	4	5	13	6	36
E	4.7	3.8	5.0	7.1	10.5	6.4	37.5
$100A/E$	→	94	→	74	112	←	96
z		−0.00		−0.74	0.38		0.70
2 years - 5 years							
A	4	3	2	6	12	5	32
E	3.8	3.7	5.7	8.6	11.5	4.7	38.1
$100A/E$	→	→	68	70	105	←	84
z			−1.01	−0.72	0.06		1.55

Table C3.3. (continued) Individual males, 1987-90, DP 13 weeks, deaths

Age group: Sickness period:	19-39	40-44	45-49	50-54	55-59	60-65	Total
5 years - 11 years							
A	1	1	2	3	2	0	9
E	3.0	3.0	4.0	5.2	4.7	0.0	20.0
$100A/E$	→	→	40	→	50	←	45
z			−1.73		−1.42		5.03
Total							
A	20	15	19	30	45	20	149
E	24.3	22.3	28.9	36.8	48.9	24.8	186.0
$100A/E$	82	67	66	82	92	81	80
Σz^2	→→	1.43	4.10	2.54	2.67	1.07	11.82 df = 15 p = 0.69

Table C3.4. Individual males, 1987-90, DP 26 weeks, deaths

Age group: / Sickness period:	21-44	45-49	50-54	55-59	60-64	Total
26-39 weeks						
A	2	7	8	7	5	29
E	4.5	4.1	5.2	8.5	5.7	28.1
$100A/E$	→	104	→	103	←	103
z		0.0		0.02		0.00
39 weeks - 1 year						
A	5	4	2	5	4	20
E	3.0	2.9	3.8	6.6	4.2	20.5
$100A/E$	→	→	113	→	84	98
z			0.25		−0.38	0.21
1 year - 2 years						
A	2	2	7	12	6	29
E	5.3	5.4	8.5	13.9	7.9	40.9
$100A/E$	→	37	83	83	←	71
z		−1.89	−0.33	−0.71		4.18
2 years - 5 years						
A	3	2	2	8	6	21
E	5.9	7.0	11.0	17.7	6.4	48.1
$100A/E$	→	39	18	58	←	44
z		**2.06**	**−2.56**	−1.97		14.68
5 years - 11 years						
A	3	4	8	6	0	21
E	5.9	4.6	8.6	7.0	0.1	26.1
$100A/E$	→	67	90	←	←	80
z		−0.93	−0.28			0.95
Total						
A	15	19	27	38	21	120
E	24.7	24.0	37.1	53.7	24.3	163.8
$100A/E$	61	79	73	71	87	73
Σz^2	→→	8.70	6.81	4.37	0.15	20.02
						df = 12
						p = 0.0667

Table C3.5. Individual males, 1987-90, DP 52 weeks, deaths

Age group: Sickness period:	23-54	55-64	Total
1 year - 2 years			
A	3	10	13
E	7.3	8.7	16.0
$100A/E$	→	81	81
z		−0.63	0.40
2 years - 11 years			
A	8	14	22
E	16.2	13.5	29.7
$100A/E$	49	104	74
z	−1.91	0.0	3.66
Total			
A	11	24	35
E	23.5	22.2	45.8
$100A/E$	47	108	77
Σz^2	3.66	0.40	4.06
			df =3
			p =0.25

Table C3.6. Individual males, 1987-90, all DPs, deaths

Age group: Sickness period:	18-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
1-4 weeks								
A	0	0	0	1	1	0	0	2
E	1.5	1.4	2.0	2.1	2.3	3.0	2.6	15.0
$100A/E$	→	→	→	→	13	←	←	13
z					**−3.23**			10.45
4-8 weeks								
A	0	0	1	0	1	7	4	13
E	2.4	2.2	3.0	3.5	4.2	5.9	5.0	26.2
$100A/E$	→	→	→	9	→	79	←	50
z				**−2.87**		−0.68		8.70
8-13 weeks								
A	0	1	3	2	2	3	4	15
E	2.1	1.9	2.7	3.3	4.4	6.8	5.3	26.5
$100A/E$	→	→	→	60	→	55	←	57
z				−1.12		−1.72		4.22
13-17 weeks								
A	0	0	3	2	4	3	3	15
E	2.4	2.4	3.7	4.3	5.5	8.0	5.5	31.9
$100A/E$	→	→	35	→	61	44	←	47
z			−1.71		−1.07	−1.91		7.71
17-26 weeks								
A	3	2	2	7	9	12	9	44
E	3.9	4.4	6.4	8.0	10.2	16.2	10.4	59.4
$100A/E$	→	60	→	62	88	74	87	74
z		−0.97		−1.29	−0.21	−0.91	−0.28	3.57
26-30 weeks								
A	3	1	6	2	10	6	1	29
E	1.5	1.9	3.1	4.3	5.4	9.1	5.6	30.9
$100A/E$	→	→	→	111	→	85	←	94
z				0.22		−0.58		0.39

Table C3.6. (continued) Individual males, 1987-90, all DPs, deaths

Age group: Sickness period:	18-34	35-39	40-44	45-49	50-54	55-59	60-65	Total
30-39 weeks								
A	2	0	2	12	9	14	8	47
E	2.5	3.3	5.6	8.0	10.0	17.6	11.1	58.0
$100A/E$	→	→	35	→	117	80	72	81
z			**−2.05**		0.60	−0.74	−0.77	5.68
39 weeks - 1 year								
A	4	4	9	5	5	11	9	47
E	2.4	3.3	5.5	8.1	10.8	19.4	12.2	61.7
$100A/E$	→	→	151	62	46	57	74	76
z			1.57	−0.92	1.61	−1.80	−0.76	9.73
1 year - 2 years								
A	3	6	5	9	14	44	17	98
E	4.1	6.2	11.1	16.3	26.3	45.3	25.1	134.3
$100A/E$	→	87	45	55	53	97	68	73
z		−0.25	−1.67	−1.68	**2.29**	−0.11	−1.52	13.28
2 years - 5 years								
A	3	4	8	8	14	43	20	100
E	3.7	6.2	10.7	19.1	33.4	54.6	18.9	146.6
$100A/E$	→	71	75	42	42	79	106	68
z		−0.77	0.66	**−2.43**	**−3.27**	−1.51	0.15	19.94
5 years - 11 years								
A	2	3	2	11	22	20	0	60
E	2.5	5.5	8.6	13.3	24.3	21.0	0.1	75.2
$100A/E$	→	→	42	83	91	95	←	80
z			**−2.21**	−0.50	−0.36	−0.13		5.30
Total								
A	20	21	41	59	91	163	75	470
E	29.0	38.7	62.3	90.4	136.8	206.9	101.8	665.8
$100A/E$	69	54	66	65	67	79	74	71
Σz^2	→→	1.59	17.73	21.03	30.68	14.33	3.59	88.96
								df =40
								p =0.0000

Table C4.6. Individual females, 1987-90, all DP, deaths

Age group: Sickness period:	18-39	40-44	45-49	50-54	55-63	Total
1 week - 30 weeks						
A	3	0	0	0	0	3
E	11.3	5.1	5.3	4.5	5.3	31.5
$100A/E$	27	→	0	→	0	10
z	**−2.32**		**−3.07**		**−2.98**	23.65
30 weeks - 1 year						
A	2	2	5	1	4	14
E	4.7	2.6	3.6	3.7	4.2	18.8
$100A/E$	→	→	75	←	←	75
z			−0.99			0.97
1 year - 2 years						
A	4	1	3	2	2	12
E	3.5	2.6	3.4	5.5	4.2	19.2
$100A/E$	→	→	84	→	41	62
z			−0.34		−1.67	2.89
2 years - 11 years						
A	3	2	4	3	0	12
E	3.9	6.2	6.2	9.7	3.7	29.8
$100A/E$	→	49	→	36	←	40
z		−1.47		**−2.73**		9.62
Total						
A	12	5	12	6	6	41
E	23.5	16.5	18.6	23.3	17.4	99.3
$100A/E$	51	30	65	26	34	41
Σz^2	5.37	2.15	10.51	7.47	11.63	37.13
						df = 8
						$p = 0.0000$

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SICKNESS EXPERIENCE 1983-86 FOR INDIVIDUAL PHI POLICIES

INTRODUCTION

This is a further report on the sickness experience for individual PHI policies.

The first report was published in *C.M.I.R.***2**,1 (1976). It contains:

the experience of 1972 and 1973,

the exposed to risk formula and details of the method which was used to adjust the central exposed to risk to allow for the fact that claims cannot be made during the deferred period. The exposed to risk is measured in years contributed to the experience by policies on lives aged x last birthday at the beginning of each calendar year under investigation to $x + 1$ last birthday at the end of that calendar year. The unit of measurement is therefore policies multiplied by years,

a description of the data coding system and

a brief description of the computing processes.

*C.M.I.R.***4**,1 (1979) contains the experience of 1972-75.

*C.M.I.R.***7**,1 (1984) contains:

the experience of 1975-78,

graduated central sickness rates $z_x^{a/b}$,

graduated central rates of claim inception and

introduces the concept of Standard data, which is an elite subset of the Aggregate data.

*C.M.I.R.***11**,113 (1991) contains a report on the experience of 1979-82.

*C.M.I.R.***12**,1 (1991) describes the multiple state model which has been developed to assist in the analysis of PHI data in the future.

This report contains:

the experience of 1983-86 and a comparison with the graduated rates of 1975-78,

a report on the experience according to the duration in force of the policy and

a report on the difference between the experiences of the 16 offices which contributed data.

Appendix 1 contains details of the numbers of policies included in the Aggregate data, Appendix 2 contains details of the claims on those policies and Appendix 3 contains tables of the exposed to risk, weeks of sickness claim and numbers of claim inceptions in the Standard data, classified according to deferred period and age group, for all policy durations combined. Research workers may obtain, on application to the CMI Bureau, similar tables of the Aggregate data and tables of both the Aggregate and Standard data subdivided into policy durations 0, 1 and 2 and over.

1. GENERAL COMMENTS ON THE DATA

1.1 The Standard data is a subset of the Aggregate data, containing policies issued in the UK, without special terms for occupation or for known health impairment at the date of issue and for benefits in the form of level, increasing or decreasing periodical payments whilst sick beyond the deferred period.

1.2 Table 1.1 shows the exposed to risk, weeks of claim and numbers of claim inceptions for all policy durations combined and for all sickness periods combined, subdivided into Aggregate and Standard data.

1.3 One can calculate from Table 1.1 that:

the male Standard in-force data represents 75% of the male Aggregate in-force data,

the male Standard claims data represents 70% of the male Aggregate claims data,

the female Standard in-force data represents 85% of the female Aggregate in-force data and

the female Standard claims data represents 80% of the female Aggregate claims data.

1.4 The overall unstandardized central sickness and unstandardized claim inception rates, for all deferred periods, all sickness periods and all ages combined, are:

	Central sickness rates		Central claim inception rates	
	Aggregate	Standard	Aggregate	Standard
Males (ages 18-64)	0.576	0.539	0.020	0.019
Females (ages 18-59)	0.655	0.620	0.023	0.021

Table 1.1. Summary of the 1983-86 individual PHI data.

	Exposed to risk	Weeks of claim	Claim inceptions
Males - Aggregate data			
Deferred period 1 week	132,126	177,035	16,854
Deferred period 4 weeks	292,809	208,705	6,214
Deferred period 13 weeks	379,604	175,203	2,148
Deferred period 26 weeks	366,762	144,511	943
Deferred period 52 weeks	131,293	45,021	242
All deferred periods combined	1,302,594	750,475	26,401
Males - Standard data			
Deferred period 1 week	113,796	148,511	14,370
Deferred period 4 weeks	136,563	85,659	2,032
Deferred period 13 weeks	285,058	126,821	1,386
Deferred period 26 weeks	324,376	126,230	794
Deferred period 52 weeks	118,164	40,051	210
All deferred periods combined	977,957	527,272	18,792
Females - Aggregate data			
Deferred period 1 week	9,162	11,132	1,533
Deferred period 4 weeks	23,981	16,918	617
Deferred period 13 weeks	31,959	16,991	198
Deferred period 26 weeks	31,750	19,131	135
Deferred period 52 weeks	10,584	6,236	26
All deferred periods combined	107,436	70,408	2,509
Females - Standard data			
Deferred period 1 week	7,981	9,205	1,275
Deferred period 4 weeks	17,095	9,558	378
Deferred period 13 weeks	27,439	14,760	158
Deferred period 26 weeks	28,826	16,714	120
Deferred period 52 weeks	9,590	6,165	24
All deferred periods combined	90,931	56,402	1,955

1.5 The proportion of policies on female lives has continued to rise during the quadrennium. Policies on female lives were 8.7% of the total number of policies on 31 December 1986, compared with 3.8% on 1 January 1972, having risen steadily during all the years between. The overall unstandardized claim rates - the number of claims observed in a year, both new and continued from the previous year, divided by the mid-year population - have remained fairly

constant for males at around .033 whilst the corresponding rates for females have fallen from .044 in 1972 to .037 in 1986. This effect might be the result of the changing age distribution over the years. The average age of males has risen from 39.69 in 1972-75 to 43.21 in 1983-86 whilst the average age of females has fallen from 39.57 to 38.94 in the same period.

1.6 The percentage of policies in the Republic of Ireland has risen from 2.54% at 1 January 1972 to 4.00% at 31 December 1986. The overall unstandardized claim rates in the Republic of Ireland have remained fairly constant at about .030 during this period of time.

1.7 The percentage of policies bearing a rating on account of occupation has risen from 15.1% at 1 January 1972 to 17.5% at 31 December 1986. The overall unstandardized claim rates for non rated policies have remained fairly constant at about .032 during this period of time but for rated policies the rates have fluctuated between .027 and .040.

1.8 Table 1.2 shows that the experience of the 1983-86 Standard data was heavier than that of 1975-78 and 1979-82 for both males and females and for all deferred periods. The total number of weeks of sickness for males was 133.2% of the number expected according to the 1975-78 male Standard graduated sickness rates, compared with 100.4% in 1979-82. The corresponding numbers for females were 294.6 in 1983-86 and 221.7 in 1979-82.

1.9 The numbers of expected weeks of sickness for deferred period 52 weeks were calculated by using the 1975-78 graduated sickness rates for deferred period 26 weeks, because (*C.M.I.R.*7,22, Section 5.13) ". . . the data for 52 weeks deferred policies was too sparse to justify graduation . . . ."

Table 1.2. Comparison between 1975-78, 1979-82 and 1983-86 Standard data. Actual weeks of sickness % of expected weeks by 1975-78 male Standard graduated sickness rates.

Deferred period	Males			Females		
	1975-78	1979-82	1983-86	1975-78	1979-82	1983-86
1 week	100.6	100.9	131.7	211.6	168.1	219.6
4 weeks	99.1	89.3	109.0	168.2	171.6	208.0
13 weeks	98.9	94.4	131.8	214.2	258.5	295.9
26 weeks	98.7	115.2	155.2	198.7	293.8	404.7
52 weeks	65.8	102.2	149.1	114.1	220.1	498.6
All	97.9	100.4	133.2	194.1	221.7	294.6

1.10 For 1975-78, the percentages of actual to expected weeks of sickness for males ought all to be 100, except for deferred period 52 weeks. The numbers shown are slightly different from 100. The differences are the result of combining the data into 5-year age groups and because of rounding in the calculations for this paper. The percentages for females are subject to similar rounding errors.

2. EFFECT OF POLICY DURATION

2.1 The numbers in Tables 2.1 and 2.2 are standardized claim inception ratios for the Standard data, using the 1975-78 graduated male claim inception rates, *C.M.I.R.*7,105, as a comparison basis. The ratios are shown according to duration in force of the policies. The corresponding ratios for all policy durations combined are shown in Table 2.3.

2.2 The tendency shown by Table 2.1 is for the inception ratios to fall as the policy duration increases. This is not as clearly shown in Table 2.2, possibly because the data is scanty in comparison. The tables also show that female inception ratios are a little higher than male inception ratios, but the age range for females is 18-59 compared with 18-64 for males. The tendency shown by Table 2.3 is that inception ratios for all durations combined increase as the deferred period lengthens, except for deferred period 52 weeks where the data is scanty.

2.3 The numbers in Tables 2.4 and 2.5 are standardized central claim ratios for the Standard data, using the 1975-78 male Standard graduated rates as a comparison basis. The ratios are shown according to duration in force of the policies. The general trend is for the male sickness ratios to increase as the policy duration increases. The corresponding ratios for males and females for all policy durations combined are shown in Table 2.6.

2.4 Table 2.4 shows that the male sickness ratios increase as policy duration increases. Table 2.5 shows no clear trend. Table 2.6 shows a reduction in the sickness ratios for both sexes as the data passes from deferred period 1 week to deferred period 4 weeks and, thereafter, an increase as the deferred period lengthens. The female experience for ages 18-59 is heavier than the male experience for ages 18-64.

2.5 The overall picture given by these tables is of falling inception ratios and rising sickness ratios as policy duration lengthens.

Table 2.1. Males: Standard data: standardized claim inception ratios.

Deferred period	Observed inceptions × 100 / Expected inceptions			Number of inceptions		
	Duration 0	Duration 1	Duration 2 & over	Duration 0	Duration 1	Duration 2 & over
1 week	121.8	105.4	94.3	340	736	13,294
4 weeks	86.7	88.7	68.2	64	160	1,808
13 weeks	93.1	79.1	108.3	24	74	1,288
26 weeks	250.4	53.9	126.1	7	12	775
52 weeks		70.3	172.9		2	208
All deferred periods	114.0	98.6	93.1	435	984	17,373

Table 2.2. Females: Standard data: standardized claim inception ratios.

Deferred period	Observed inceptions × 100 / Expected inceptions			Number of inceptions		
	Duration 0	Duration 1	Duration 2 & over	Duration 0	Duration 1	Duration 2 & over
1 week	119.3	126.4	127.6	58	129	1,088
4 weeks	93.5	181.0	143.1	15	63	300
13 weeks	222.5	157.6	167.9	8	19	131
26 weeks	503.5	239.6	298.7	2	7	111
52 weeks		801.2	324.1		3	21
All deferred periods	120.9	145.2	139.4	83	221	1,651

Table 2.3. Males (ages 18 to 64) and females (ages 18 to 59): Standard data: standardized claim inception ratios: all policy durations combined.

Deferred period	Observed inceptions × 100 / Expected inceptions		Number of inceptions	
	Males	Females	Males	Females
1 week	95.4	127.1	14,370	1,275
4 weeks	69.9	145.1	2,032	378
13 weeks	105.9	168.7	1,386	158
26 weeks	124.1	296.5	794	120
52 weeks	85.3	167.5	210	24
All deferred periods	93.2	138.5	18,792	1,955

Table 2.4. Males: Standard data: standardized male weeks of claim ratios.

Deferred period	Observed weeks of claim × 100 / Expected weeks of claim			Number of weeks of claim		
	Duration 0	Duration 1	Duration 2 & over	Duration 0	Duration 1	Duration 2 & over
1 week	133.2	122.4	131.9	706	2,188	145,617
4 weeks	106.4	117.1	108.8	610	2,323	82,726
13 weeks	77.5	81.8	133.1	265	1,766	124,790
26 weeks	90.0	90.7	155.8	46	631	125,553
52 weeks		9.4	149.8		12	40,039
All deferred periods	108.7	102.5	133.8	1,627	6,920	518,725

Table 2.5. Females: Standard data: standardized female weeks of claim ratios.

Deferred period	Observed weeks of claim × 100 / Expected weeks of claim			Number of weeks of claim		
	Duration 0	Duration 1	Duration 2 & over	Duration 0	Duration 1	Duration 2 & over
1 week	171.5	160.0	223.9	135	346	8,724
4 weeks	86.5	267.2	206.3	103	957	8,498
13 weeks	311.8	144.9	304.4	146	389	14,225
26 weeks	216.1	184.5	409.7	15	159	16,540
52 weeks		416.4	499.7		64	6,101
All deferred periods	158.6	202.8	301.4	399	1,915	54,088

Table 2.6. Males (ages 18 to 64) and females (ages 18 to 59): Standard data: standardized weeks of claim ratios: all policy durations combined.

Deferred period	Observed weeks of claim × 100 / Expected weeks of claim		Number of weeks of claim	
	Males	Females	Males	Females
1 week	131.7	219.6	148,511	9,205
4 weeks	109.0	208.0	85,659	9,558
13 weeks	131.8	295.9	126,821	14,760
26 weeks	155.2	404.7	126,230	16,714
52 weeks	149.1	498.6	40,051	6,165
All deferred periods	133.2	294.6	527,272	56,402

3. EFFECT OF DIFFERENCES BETWEEN OFFICES

3.1 In order to maintain confidentiality, each office has been given an identifying letter which cannot be decoded by any investigator, nor by any member of the C.M.I. Committee or Sub-Committees. This identifying letter bears no relationship with the "office number" which offices who contribute data enter on their schedules or tapes. The data is contained in a computer system which is not connected to any form of intercommunicating network and will be erased after the publication of this report.

3.2 Figure 1 shows the varying volumes of male exposed to risk for all deferred periods combined. The distribution of the exposed to risk according to deferred period varies from office to office, but it is considered not to be appropriate to include the details in this report. The office code has been omitted from the x-axis in order to preserve anonymity.

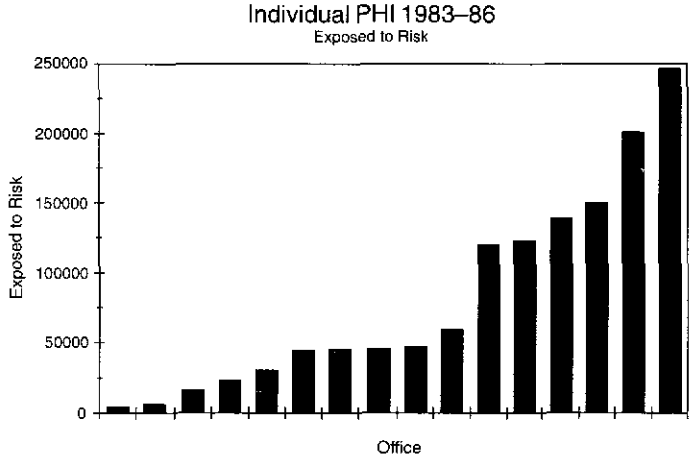

Figure 1: Males: Aggregate data: all sickness periods combined: all deferred periods combined: all ages combined: difference between offices.

3.3 Figure 2 shows the percentages of the observed number of weeks of claim to the number of weeks of claim expected using the 1975-78 male Standard graduated central sickness rates and Figure 3 shows the corresponding information for claim inceptions. The standardizing process has removed the effect of variations in the distribution of the data according to age and deferred period but not according to sickness period, which is the variable being considered in Figure 2 and which is irrelevant in Figure 3.

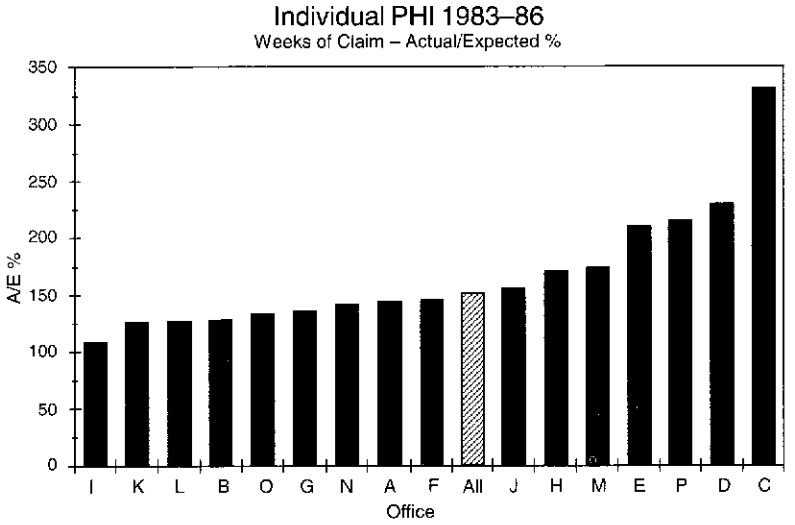

Figure 2: Males: Aggregate data: all sickness periods combined: all deferred periods combined: all ages combined: effect of differences between offices.

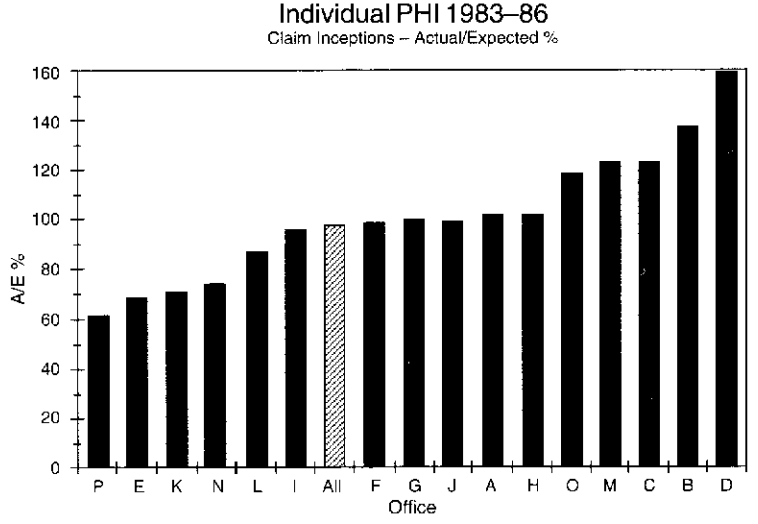

Figure 3: Males: Aggregate data: all sickness periods combined: all deferred periods combined: all ages combined: effect of differences between offices.

3.4 The different offices operate in different markets and the distribution according to deferred period differs from one office to another. But when the duration of sickness is greater than one year, the offices are all dealing with serious illnesses and it is interesting to examine the experience for these claims. Table 3.1 shows the percentage of actual weeks of claim to the expected weeks of claim according to the 1975-78 male Standard graduated central sickness rates. All deferred periods are combined, but only sickness periods 52/52 and 104/all are considered.

Table 3.1. Males: Aggregate data: comparison of actual weeks of claim with the expected weeks of claim according to the 1975-78 graduated central sickness rates: all deferred periods combined: all ages combined.

Office	100 A/E sickness period 52/52	100 A/E sickness period 104/all
A	138.7	164.3
B	153.3	59.9
C	190.9	178.5
D	217.8	246.7
E	230.1	207.3
F	146.7	141.9
G	141.4	136.7
H	211.3	280.4
I	105.6	115.9
J	127.1	187.9
K	167.4	121.3
L	128.2	127.7
M	159.4	183.6
N	132.2	176.7
O	104.6	160.0
P	222.2	253.5
All offices	155.6	164.0

3.5 Figures 4 and 5 illustrate these numbers.

3.6 It has been noted elsewhere in this paper, and in *C.M.I.R.***7** and *C.M.I.R.***12**, that the data for deferred period 4 weeks showed an unexpected trend. Because of this, the data for this deferred period was examined to see if there was any difference between the offices. Figure 6 shows the percentage which the deferred period 4 weeks exposed to risk bears to the total exposed to risk in each office and Figure 7 shows the percentage of actual weeks of sickness to the expected weeks of sickness.

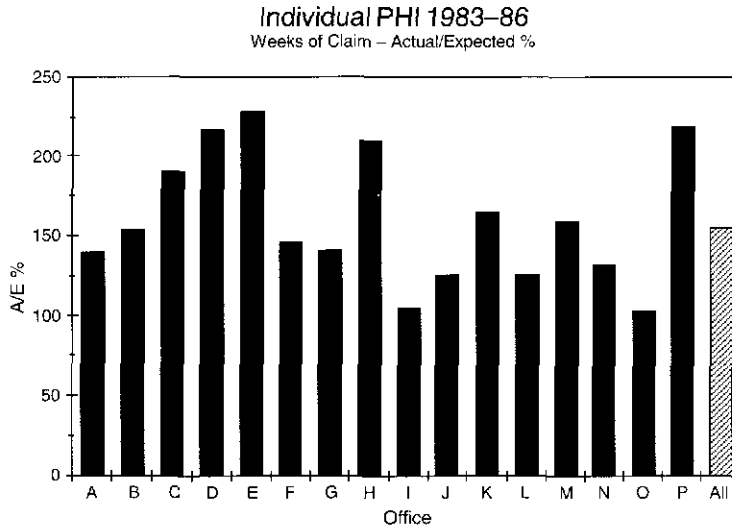

Figure 4: Males: Aggregate data: sickness period 52/52: all deferred periods combined: all ages combined: variation between offices.

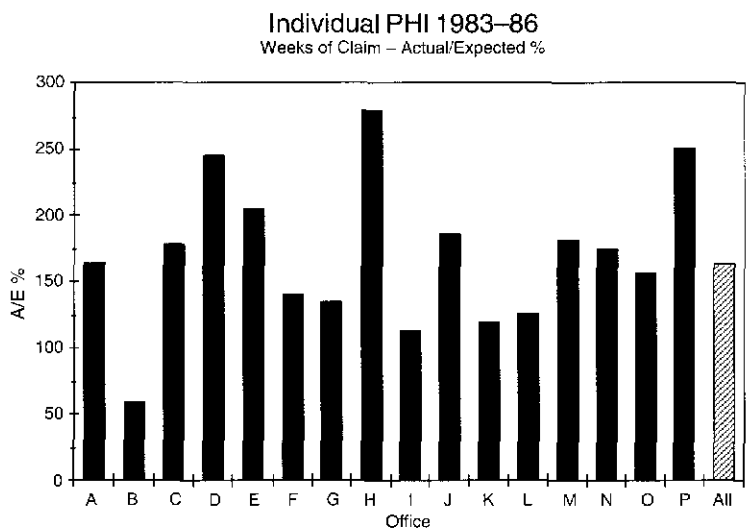

Figure 5: Males: Aggregate data: sickness period 104/all: all deferred periods combined: all ages combined: variation between offices.

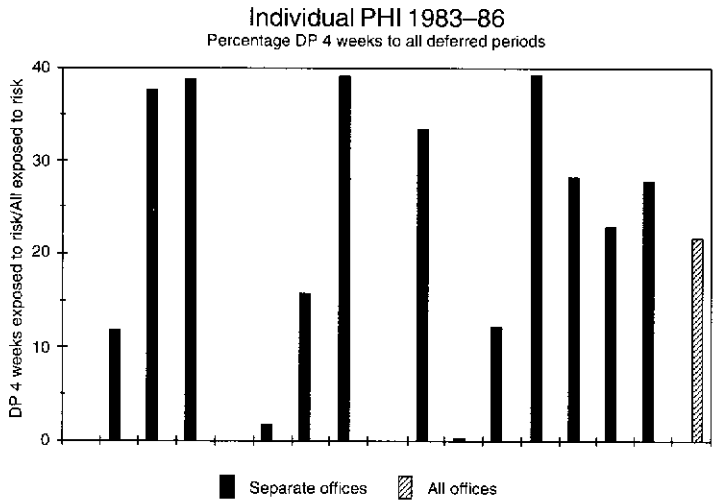

Figure 6: Males: Aggregate data: all sickness periods combined: deferred period 4 weeks: all ages combined: effect of differences between offices.

3.7 Figure 6 shows that three offices did not submit data for the 4 week deferred period and two offices submitted only a small volume. Figure 7 shows that the experience of the 4 week deferred period data was roughly consistent with the experience of all deferred periods combined except for two offices where the experience is noticeably different and the differences are in opposite directions. This report cannot include a fuller discussion of this matter without giving information which might reveal the identity of the offices involved, but there is little evidence that the strange experience of the 4 week deferred period data might have come about because of differences between the offices.

4. DIFFERENCES BETWEEN MALE AND FEMALE EXPERIENCE

4.1 The observed central sickness rates, $z_x^{d/all}$, where d denotes the deferred period in weeks, are generally higher for females than for males. This feature of PHI data has been exhibited in all the previous investigations listed in the introduction to this report. The results, for the Standard data, for all deferred periods and all sickness periods combined, are illustrated in Figure 8. The female claim rates for the different deferred periods are generally higher than those of males. The exceptions are deferred period 4 weeks, where the rate for age group 50-54 is lower for females than for males, and deferred period 13 weeks, where the rates for ages below 35 are lower for females than for males, but not much lower.

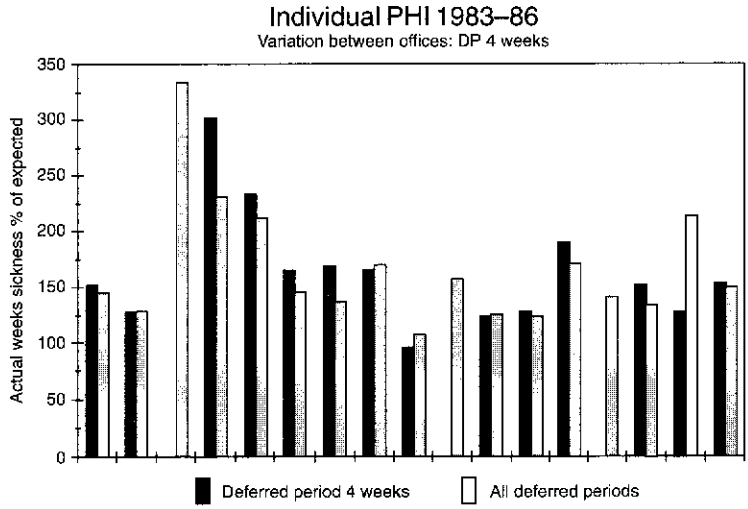

Figure 7: Males: Aggregate data: all sickness periods combined: all ages combined: actual weeks of sickness as a % of expected: comparison between deferred period 4 weeks and all deferred periods.

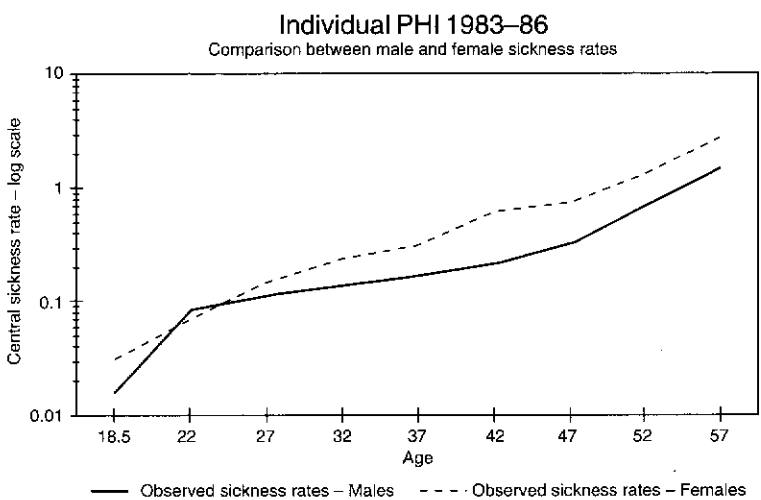

Figure 8: Standard data: all sickness periods combined: all deferred periods combined: weeks of claim: effect of sex difference.

4.2 The observed central claim inception rates are generally higher for females than for males. The results, for the Standard data, for all deferred periods and all sickness periods combined, are illustrated in Figure 9. This feature of the data occurs in the previous investigations, except at the very youngest ages, where the male claim inception rates are higher than the female, but not much higher.

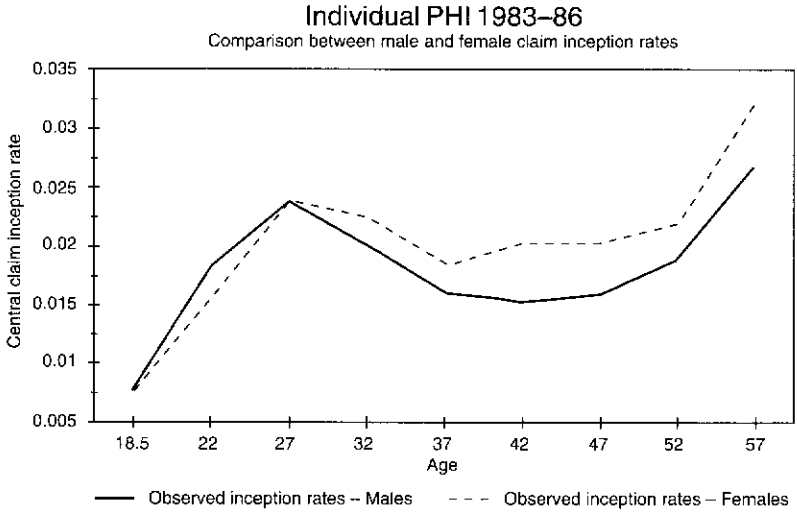

Figure 9: Standard data: all sickness periods combined: all deferred periods combined: claim inceptions: effect of sex difference.

4.3 Table 4.1 shows the observed number of weeks of sickness in the 1983-86 male Standard data as a percentage of the number expected according to the 1975-78 male Standard graduated rates. The analysis is classified by age passed through and sickness period passed through. The corresponding numbers for females, using the 1975-78 male Standard graduated rates as a comparison basis are shown in Table 4.2. These tables show that the female experience is heavier than the male at most sickness periods and is greatest between ages 30 and 44. A similar feature was observed in the experience of 1979-82 (*C.M.I.R.***11**,121, Table 3.3). Table 4.1 shows that the 1983-86 male experience is generally heavier than that of 1975-78 except at ages greater than 35 and sickness periods less than 13 weeks.

Table 4.1. Comparison of the Standard experience of males with the 1975-78 male Standard graduated rates: weeks of sickness claim: all deferred periods combined: actual weeks of sickness as a % of expected.

	Age group								
Sickness period	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	20-59
1/3	97	107	100	94	96	91	86	82	92
4/9	190	129	106	88	81	85	90	88	90
13/13	476	205	144	111	107	108	138	122	122
26/26	173	174	165	167	131	127	148	136	142
52/52	193	267	235	222	158	125	138	136	146
104/all	*0*	*173*	*375*	*302*	*232*	*141*	*132*	*147*	*154*
1/all	162	156	167	160	146	122	130	136	137

Table 4.2. Comparison of the Standard experience of females with the 1975-78 male Standard graduated rates: weeks of sickness claim: all deferred periods combined: actual weeks of sickness as a % of expected.

	Age group								
Sickness period	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	20-59
1/3	103	124	141	171	156	149	156	126	145
4/9	202	192	163	176	217	200	134	175	181
13/13	334	301	200	209	282	196	156	165	210
26/26	146	273	277	282	437	257	231	165	260
52/52	14	271	439	423	683	315	245	179	309
104/all	*0*	*213*	*793*	*780*	*594*	*403*	*339*	*324*	*386*
1/all	144	210	290	334	435	306	273	254	295

5. COMPARISON BETWEEN STANDARD DATA AND AGGREGATE DATA

5.1 Figures 10 and 11 show, for all deferred periods, all policy durations and all sickness periods combined, the volume of exposed to risk excluded from the Aggregate data when the Standard data was prepared. The numbers are illustrated in age groups.

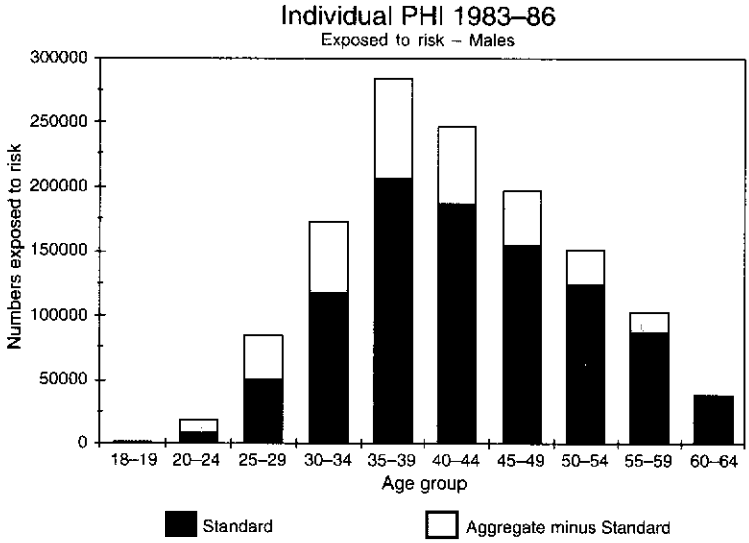

Figure 10: Male exposed to risk: division of data between Aggregate and Standard.

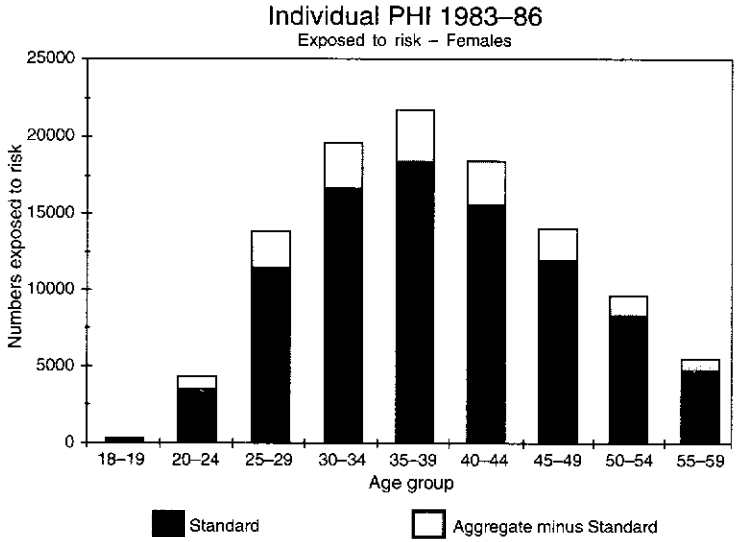

Figure 11: Female exposed to risk: division of data between Aggregate and Standard.

5.2 The male central sickness rates are shown in Figure 12 and the male central claim inception rates are shown in Figure 13 for all deferred periods, all policy durations and all sickness periods combined. Also shown are the weighted mean rates relating to the 1975-78 graduated rates. The weighted mean rates were calculated by dividing the expected claims data for all deferred periods, all policy durations and all sickness periods combined by the corresponding total exposed to risk

The sickness rates run in the following pattern:

1983-86 Aggregate > 1983-86 Standard > 1975-78 Graduated.

The claim inception rates run in the following pattern for ages 35-55 where most of the data lies:

1983-86 Aggregate > 1975-78 Graduated > 1983-86 Standard.

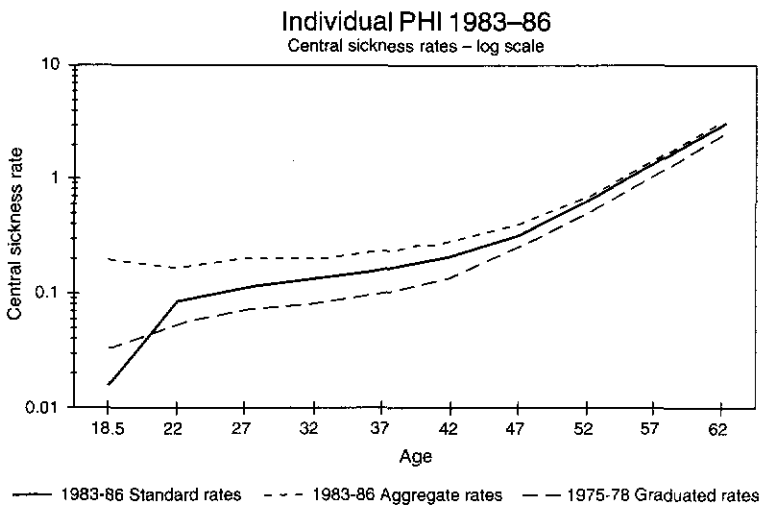

Figure 12: Males: all sickness periods combined: all deferred periods combined: weeks of claim: comparison between Aggregate and Standard data.

5.3 Table 5.1 shows the differences between the male Aggregate data and the male Standard data for all ages combined and all sickness periods combined, in actual weeks of claim as a percentage of expected weeks of claim according to the individual male Standard graduated central sickness rates 1975-78. The Aggregate experience is generally heavier than the Standard, but markedly so for deferred period 4 weeks.

Table 5.1. Males: comparison between the Aggregate experience and the Standard experience: weeks of claim: 100 A/E: comparison basis individual male Standard graduated central sickness rates 1975-78.

Deferred period	Aggregate data	Standard data
1 week	134.8	131.7
4 weeks	159.0	109.0
13 weeks	150.2	131.8
26 weeks	162.6	155.2
52 weeks	152.9	149.1
All deferred periods combined	150.9	133.2

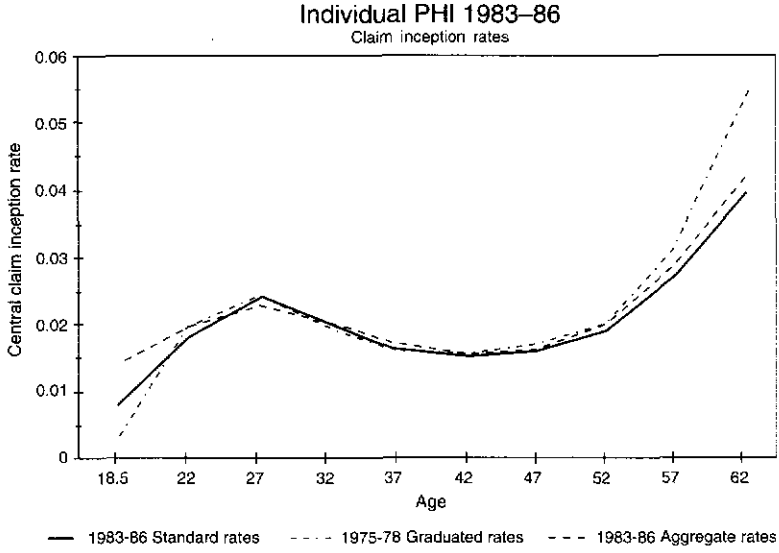

Figure 13: Males: all sickness periods combined: all deferred periods combined: claim inceptions: comparison between Aggregate and Standard data.

5.4 Table 5.2 shows the differences between the male Aggregate data and the male Standard data for all ages combined and all deferred periods combined, in actual weeks of claim as a percentage of expected weeks of claim according to the individual male Standard graduated central sickness rates 1975-78. The

Aggregate experience is generally heavier than the Standard, but the magnitude of the difference declines as the sickness period increases. The reason for this might be the changing mix of the exposed to risk as the sickness period increases; there is no deferred period 4 week data for sickness period 1/3, for example. Like is compared with like in the columns of Table 5.2, but not in the rows.

Table 5.2. Males: comparison between the Aggregate experience and the Standard experience: weeks of claim: 100 A/E: comparison basis individual male Standard graduated central sickness rates 1975-78.

Sickness period	Aggregate data	Standard data
1/3 weeks	91.1	89.6
4/9 weeks	115.7	86.9
13/13 weeks	144.7	112.9
26/26 weeks	159.3	131.3
52/52 weeks	155.6	133.5
104/all weeks	164.0	151.9
1/all weeks	150.9	133.2

5.5 Table 5.3 shows the differences between the male Aggregate data and the male Standard data for all ages combined and all sickness periods combined in the actual number of claim inceptions as a percentage of the expected number of inceptions according to the individual male Standard graduated central claim inception rates 1975-78. The Aggregate experience is generally heavier than the Standard, but markedly so for deferred period 4 weeks.

Table 5.3. Males: comparison between the Aggregate experience and the Standard experience: claim inceptions: 100 A/E: comparison basis individual male Standard graduated central claim inception rates 1975-78.

Deferred period	Aggregate data	Standard data
1 week	96.2	95.4
4 weeks	111.1	69.9
13 weeks	129.9	105.9
26 weeks	133.6	124.1
52 weeks	177.7	85.3

6. CONCLUSIONS

6.1 The volume of Standard data was 20% greater in 1983-86 than in 1979-82, but the female data had increased relatively more than the male data.

6.2 The experience of 1983-86 was heavier than in 1979-82. The average unstandardized central sickness rate increased from .374 to .546 and the average unstandardized central claim inception rate increased from .017 to .019. The greater increase in the central sickness rate compared with the increase in the central claim inception rate suggests that claims had increased more in duration than in frequency.

6.3 The experience of females was heavier than that of males in 1983-86. This was the case in the previous investigation periods.

6.4 The experience of the Aggregate data was heavier than that of the Standard data, specially for deferred period 4 weeks. The PHI Sub-Committee has previously mentioned their suspicions of the 4-weeks deferred period data in *C.M.I.R.***7**,17. Waters, in *C.M.I.R.***12**,51 and *C.M.I.R.***12**,66, discussed the problem of this data.

6.5 The experience of the sickness period 104/all data has become heavier in each successive investigation period.

6.6 As policy duration increases, claim inception rates tend to fall, but sickness rates tend to rise, except for females for whom there is no clear trend.

OFFICES WHICH CONTRIBUTED DATA TO THE INVESTIGATION

The Continuous Mortality Investigation Committee and the PHI Sub-Committee wish to thank the offices which have contributed data to this investigation.

Britannia Life	Legal & General
Clerical Medical	Medical Sickness
Commercial Union	Norwich Union
Eagle Star	Prudential
Friends Provident	Scottish Mutual
General Accident	Sun Alliance
Guardian	UNUM

One of the above 14 offices submitted data using three separate office codes, hence the reference earlier in this report to 16 offices which contributed data.

Appendix 1

Table A1. Individual PHI policies, 1983-86, Aggregate data. Numbers of policies in force at the beginning and end of each year, analysed according to different attributes.

Attribute		01-Jan-83	31-Dec-83	01-Jan-84	31-Dec-84	01-Jan-85	31-Dec-85	01-Jan-86	31-Dec-86
Sex	Male	282,610	306,568	326,779	333,637	356,520	366,796	347,487	360,746
	Female	22,491	25,136	26,218	27,972	29,872	32,417	30,757	34,371
Country	U.K.	289,898	316,105	337,519	345,941	370,608	383,174	362,325	378,694
	Republic of Ireland	14,794	15,122	15,122	15,270	15,270	15,486	15,486	15,769
	Isle of Man	108	118	59	58	116	119	64	76
	Channel Islands	301	359	297	340	398	434	369	578
Occupational Rating	Not rated	251,625	271,327	298,825	302,055	320,687	330,247	315,105	325,998
	Rated	53,476	60,377	54,172	59,554	65,705	68,966	63,139	69,119
Benefit Type	Level	221,812	239,388	240,843	236,805	257,827	257,881	239,245	242,300
	Increasing	79,771	89,037	108,875	121,762	125,523	138,527	136,194	150,426
	Decreasing	3,518	3,279	3,279	3,042	3,042	2,805	2,805	2,391
Medical Evidence	Medical	101,986	106,371	100,110	101,340	106,671	107,594	103,195	107,703
	Non-medical	134,524	156,360	145,376	162,422	173,095	187,467	177,605	193,276
	Non-selection	16	109	109	111	111	121	149	142
	Unknown	68,575	68,864	107,402	97,736	106,515	104,031	97,295	93,996
Premium Type	Level annual	265,671	285,917	308,357	310,414	335,197	341,778	319,404	329,730
	Recurrent single	0	1	1	1	1	0	0	0
	Increasing annual	39,425	45,780	44,633	51,189	51,189	57,430	58,835	65,381
	Other	5	6	6	5	5	5	5	6
Underwriting Impairment	No extra risk	271,694	294,562	325,427	333,824	349,683	362,833	350,196	366,353
	Hypertension etc.	464	494	494	530	530	554	554	586
	Neurosis	2,990	3,140	3,135	3,243	3,248	3,357	3,349	3,428
	Unknown	16,321	18,706	9,299	8,468	17,247	15,958	7,763	7,181
	Other	13,632	14,802	14,642	15,544	15,684	16,511	16,382	17,569
Total		305,101	331,704	352,997	361,609	386,392	399,213	378,244	395,117

Appendix 2

Table A2. Individual PHI policies, 1983-86: number of claims during each year, analysed according to different attributes.

Attribute		1983	1984	1985	1986
Sex	Male	9,552	10,567	11,733	12,187
	Female	877	1,007	1,166	1,126
Country	U.K.	9,950	11,118	12,535	12,811
	Republic of Ireland	473	451	357	498
	Isle of Man	4	1	0	0
	Channel Islands	2	4	7	4
Occupational Rating	Not rated	8,626	9,755	10,620	10,924
	Rated	1,802	1,816	2,273	2,386
	Unknown	1	3	6	3
Benefit Type	Level	8,038	8,576	9,582	9,624
	Increasing	1,857	2,462	2,906	3,278
	Decreasing	534	536	411	411
Medical Evidence	Medical	2,989	3,041	3,368	3,698
	Non-medical	3,947	4,605	5,442	5,589
	Unknown	3,493	3,928	4,089	4,026
Premium Type	Level annual	9,211	10,084	11,180	11,407
	Recurrent single	1	2	1	0
	Increasing annual	1,217	1,488	1,718	1,906
	Other	0	0	0	0

Appendix 2 (continued)

Table A2. (continued) Individual PHI policies, 1983-86: number of claims during each year, analysed according to different attributes.

Attribute		1983	1984	1985	1986
Underwriting Impairment	No extra risk	9,063	10,376	11,381	11,787
	Hypertension etc.	23	24	23	30
	Neurosis	147	141	163	133
	Unknown	200	43	248	235
	Other	996	990	1,084	1,128
Mode of Commencement	Continuation	3,154	3,629	4,361	4,869
	New claim	7,033	7,618	8,218	8,094
	Interrupted claim	4	5	6	0
	Revived claim	41	70	77	64
	Benefit rate changed	197	252	237	286
Full/Reduced Rate	Full	10,280	11,445	12,708	13,043
	Reduced	149	129	191	270
Mode of Cessation	Current claim	3,218	3,727	4,636	5,099
	Policy expired	181	184	117	203
	Death	138	218	144	205
	Recovery	6,691	7,171	7,755	7,509
	Lump sum	7	1	5	12
	Ex-gratia commutation	6	9	10	13
	Benefit altered	188	264	232	272
Total		10,429	11,574	12,899	13,313

APPENDIX 3

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 1. Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	1	1,506	9,510	15,983	21,680	17,263	14,690	12,931	12,360	7,872	113,796
Actual weeks of sickness	0	144	1,274	2,379	3,470	3,145	2,835	2,720	3,003	2,172	21,142
Actual rate of sickness	0.000	0.096	0.134	0.149	0.160	0.182	0.193	0.210	0.243	0.276	0.186
Expected weeks of sickness	0	148	1,188	2,377	3,680	3,279	3,129	3,165	3,641	2,989	23,596
Actual/Expected %		97.3	107.2	100.1	94.3	95.9	90.6	85.9	82.5	72.7	89.6
Sickness period 4/9											
Exposed to risk	0	1,414	9,406	15,922	21,623	17,226	14,663	12,919	12,354	7,871	113,398
Actual weeks of sickness	0	56	581	1,260	1,914	2,010	2,260	2,807	3,682	2,825	17,395
Actual rate of sickness		0.040	0.062	0.079	0.089	0.117	0.154	0.217	0.298	0.359	0.153
Expected weeks of sickness		32	374	988	1,931	2,103	2,396	2,855	3,843	3,701	18,223
Actual/Expected %		175.0	155.3	127.5	99.1	95.6	94.3	98.3	95.8	76.3	95.5
Sickness period 13/13											
Exposed to risk	0	1,239	9,189	15,792	21,510	17,148	14,609	12,895	12,345	7,870	112,597
Actual weeks of sickness	0	12	198	655	1,040	1,020	1,366	2,096	2,817	2,110	11,314
Actual rate of sickness		0.010	0.022	0.041	0.048	0.059	0.094	0.163	0.228	0.268	0.100
Expected weeks of sickness		7	118	376	797	895	1,052	1,354	2,157	2,822	9,578
Actual/Expected %		171.4	167.8	174.2	130.5	114.0	129.8	154.8	130.6	74.8	118.1

APPENDIX 3 (continued)

Individual PHI policies 1983-86: All offices - Standard sickness experience

Table 1. (continued) Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	0	998	8,841	15,583	21,327	17,022	14,519	12,855	12,326	7,869	111,340
Actual weeks of sickness	0	0	238	620	1,425	1,098	2,021	2,965	3,598	2,951	14,916
Actual rate of sickness		0.000	0.027	0.040	0.067	0.065	0.139	0.231	0.292	0.375	0.134
Expected weeks of sickness		5	102	346	774	921	1,152	1,587	2,707	3,790	11,384
Actual/Expected %		0.0	233.3	179.2	184.1	119.2	175.4	186.8	132.9	77.9	131.0
Sickness period 52/52											
Exposed to risk	0	595	8,053	15,114	20,917	16,735	14,318	12,761	12,286	7,864	108,643
Actual weeks of sickness	0	0	249	932	1,500	1,324	1,612	3,348	5,653	4,744	19,362
Actual rate of sickness		0.000	0.031	0.062	0.072	0.079	0.113	0.262	0.460	0.603	0.178
Expected weeks of sickness		6	92	228	484	672	1,101	2,019	4,187	5,890	14,679
Actual/Expected %		0.0	270.7	408.8	309.9	197.0	146.4	165.8	135.0	80.5	131.9
Sickness period 104/all											
Exposed to risk	0	134	6,179	13,942	19,881	16,008	13,792	12,483	12,170	7,844	102,433
Actual weeks of sickness	0	0	28	558	1,974	3,285	2,157	9,965	21,762	24,653	64,382
Actual rate of sickness		0.000	0.005	0.040	0.099	0.205	0.156	0.798	1.788	3.143	0.629
Expected weeks of sickness		4	109	239	532	923	2,054	4,549	10,590	16,297	35,297
Actual/Expected %		0.0	25.7	233.5	371.1	355.9	105.0	219.1	205.5	151.3	182.4

APPENDIX 3 (continued)

Individual PHI policies 1983-86: All offices - Standard sickness experience

Table 2. Males - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 4/9											
Exposed to risk	130	3,179	10,070	18,530	27,384	23,062	19,065	16,605	12,764	5,774	136,563
Actual weeks of sickness	4	162	470	1,032	1,758	1,608	1,870	2,275	2,565	1,740	13,484
Actual rate of sickness	0.031	0.051	0.047	0.056	0.064	0.070	0.098	0.137	0.201	0.301	0.099
Expected weeks of sickness	2	82	439	1,165	2,245	2,352	2,435	2,818	3,224	2,564	17,326
Actual/Expected %	200.0	197.6	107.1	88.6	78.3	68.4	76.8	80.7	79.6	67.9	77.8
Sickness period 13/13											
Exposed to risk	111	2,787	9,578	18,030	26,944	22,809	18,921	16,540	12,741	5,774	134,235
Actual weeks of sickness	0	81	268	612	980	899	1,261	1,888	2,156	1,529	9,674
Actual rate of sickness	0.000	0.029	0.028	0.034	0.036	0.039	0.067	0.114	0.169	0.265	0.072
Expected weeks of sickness	0	20	163	534	1,113	1,177	1,220	1,491	2,008	2,225	9,951
Actual/Expected %		405.0	164.4	114.6	88.1	76.4	103.4	126.6	107.4	68.7	97.2
Sickness period 26/26											
Exposed to risk	86	2,265	8,851	17,280	26,276	22,419	18,702	16,439	12,707	5,772	130,797
Actual weeks of sickness	0	21	199	549	997	911	1,058	2,446	2,935	2,354	11,470
Actual rate of sickness	0.000	0.009	0.022	0.032	0.038	0.041	0.057	0.149	0.231	0.408	0.088
Expected weeks of sickness	1	30	131	320	667	854	1,164	1,808	2,656	2,453	10,084
Actual/Expected %	0.0	70.0	151.9	171.6	149.5	106.7	90.9	135.3	110.5	96.0	113.7
Sickness period 52/52											
Exposed to risk	45	1,449	7,446	15,777	24,908	21,610	18,240	16,225	12,631	5,768	124,099
Actual weeks of sickness	0	0	263	379	1,067	1,035	775	2,748	4,090	3,599	13,956
Actual rate of sickness	0.000	0.000	0.035	0.024	0.043	0.048	0.042	0.169	0.324	0.624	0.112
Expected weeks of sickness	0	13	72	201	487	733	1,185	2,168	3,635	3,648	12,142
Actual/Expected %		0.0	365.3	188.6	219.1	141.2	65.4	126.8	112.5	98.7	114.9
Sickness period 104/all											
Exposed to risk	6	549	5,021	12,810	22,121	19,882	17,230	15,732	12,421	5,747	111,519
Actual weeks of sickness	0	0	265	883	2,200	2,703	1,959	6,481	11,494	11,090	37,075
Actual rate of sickness	0.000	0.000	0.053	0.069	0.099	0.136	0.114	0.412	0.925	1.930	0.332
Expected weeks of sickness	0	16	78	193	520	1,007	2,255	5,040	9,501	10,496	29,106
Actual/Expected %		0.0	339.7	457.5	423.1	268.4	86.9	128.6	121.0	105.7	127.4

APPENDIX 3 (continued)

Individual PHI policies 1983-86: All offices - Standard sickness experience

Table 3. Males - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 13/13											
Exposed to risk	97	2,896	16,616	38,136	64,210	56,276	43,991	33,333	21,103	8,400	285,058
Actual weeks of sickness	0	105	445	920	1,800	2,349	2,130	3,173	2,971	1,495	15,388
Actual rate of sickness	0.000	0.036	0.027	0.024	0.028	0.042	0.048	0.095	0.141	0.178	0.054
Expected weeks of sickness	0	15	164	614	1,541	1,920	2,117	2,341	2,330	1,636	12,678
Actual/Expected %		700.0	271.3	149.8	116.8	122.3	100.6	135.5	127.5	91.4	121.4
Sickness period 26/26											
Exposed to risk	76	2,464	15,298	36,320	62,106	54,924	43,257	32,997	21,017	8,394	276,853
Actual weeks of sickness	0	115	361	1,045	2,263	2,709	2,699	3,977	4,348	2,725	20,242
Actual rate of sickness	0.000	0.047	0.024	0.029	0.036	0.049	0.062	0.121	0.207	0.325	0.073
Expected weeks of sickness	1	35	202	553	1,301	1,795	2,382	3,144	3,387	2,127	14,927
Actual/Expected %	0.0	328.6	178.7	189.0	173.9	150.9	113.3	126.5	128.4	128.1	135.6
Sickness period 52/52											
Exposed to risk	46	1,743	12,800	32,723	57,870	52,165	41,727	32,287	20,822	8,384	260,567
Actual weeks of sickness	0	75	309	1,036	2,419	2,935	3,400	5,124	5,893	5,264	26,455
Actual rate of sickness	0.000	0.043	0.024	0.032	0.042	0.056	0.081	0.159	0.283	0.628	0.102
Expected weeks of sickness	0	14	115	388	1,052	1,646	2,520	4,011	5,571	4,931	20,248
Actual/Expected %		535.7	268.7	267.0	229.9	178.3	134.9	127.7	105.8	106.8	130.7
Sickness period 104/all											
Exposed to risk	15	821	8,505	25,945	49,603	46,578	38,530	30,712	20,342	8,336	229,387
Actual weeks of sickness	0	0	315	1,670	3,498	4,866	7,427	11,447	16,792	18,721	64,736
Actual rate of sickness	0.000	0.000	0.037	0.064	0.071	0.104	0.193	0.373	0.825	2.246	0.282
Expected weeks of sickness	1	23	128	381	1,134	2,295	4,904	9.568	15,132	14,805	48,371
Actual/Expected %	0.0	0.0	246.1	438.3	308.5	212.0	151.4	119.6	111.0	126.5	133.8

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 4. Males - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	23	1,149	11,857	35,869	71,237	64,929	53,669	42,981	29,935	12,727	324,376
Actual weeks of sickness	0	0	122	330	1,360	1,548	2,305	3,919	5,746	3,117	18,447
Actual rate of sickness	0.000	0.000	0.010	0.009	0.019	0.024	0.043	0.091	0.192	0.245	0.057
Expected weeks of sickness	0	9	92	325	868	1,199	1,671	2,473	3,435	3,097	13,169
Actual/Expected %		0.0	132.6	101.5	156.7	129.1	137.9	158.5	167.3	100.6	140.1
Sickness period 52/52											
Exposed to risk	15	842	10,287	33,189	68,084	62,850	52,382	42,295	29,693	12,710	312,347
Actual weeks of sickness	0	0	86	307	1,661	2,174	3,105	5,382	8,782	6,231	27,728
Actual rate of sickness	0.000	0.000	0.008	0.009	0.024	0.035	0.059	0.127	0.296	0.490	0.089
Expected weeks of sickness	0	5	61	260	818	1,310	2,089	3,469	5,247	4,936	18,195
Actual/Expected %		0.0	141.0	118.1	203.1	166.0	148.6	155.1	167.4	126.2	152.4
Sickness period 104/all											
Exposed to risk	5	415	7,447	27,837	61,513	58,401	49,612	40,701	29,096	12,647	287,674
Actual weeks of sickness	0	0	64	539	2,657	5,098	8,222	10,805	23,623	29,047	80,055
Actual rate of sickness	0.000	0.000	0.009	0.019	0.043	0.087	0.166	0.265	0.812	2.297	0.278
Expected weeks of sickness	0	9	82	300	1,035	2,117	4,647	9,331	15,926	16,529	49,976
Actual/Expected %		0.0	78.0	179.7	256.7	240.8	176.9	115.8	148.3	175.7	160.2

APPENDIX 3 (continued)

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 5. Males - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	9	247	2,944	10,050	22,154	24,935	22,460	18,694	12,237	4,434	118,164
Actual weeks of sickness	0	0	47	65	255	257	852	1,556	3,974	2,195	9,201
Actual rate of sickness	0.000	0.000	0.016	0.006	0.012	0.010	0.038	0.083	0.325	0.495	0.078
Expected weeks of sickness	0	1	17	79	266	520	896	1,533	2,162	1,722	7,196
Actual/Expected %		0.0	276.5	82.3	95.9	49.4	95.1	101.5	183.8	127.5	127.9
Sickness period 104/all											
Exposed to risk	2	108	1,951	7,878	19,304	22,842	21,050	17,963	11,970	4,408	107,476
Actual weeks of sickness	0	0	52	842	369	703	2,564	4,189	11,284	10,847	30,850
Actual rate of sickness	0.000	0.000	0.027	0.107	0.019	0.031	0.122	0.233	0.943	2.461	0.287
Expected weeks of sickness	0	2	22	85	325	828	1,972	4,118	6,552	5,761	19,665
Actual/Expected %		0.0	236.4	990.6	113.5	84.9	130.0	101.7	172.2	188.3	156.9

APPENDIX 3 (continued)

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 6. Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	1	1,506	9,510	15,983	21,680	17,263	14,690	12,931	12,360	7,872	113,796
Actual weeks of sickness	0	144	1,274	2,379	3,470	3,145	2,835	2,720	3,003	2,172	21,142
Actual rate of sickness	0.000	0.096	0.134	0.149	0.160	0.182	0.193	0.210	0.243	0.276	0.186
Expected weeks of sickness	0	148	1,188	2,377	3,680	3,279	3,129	3,165	3,641	2,989	23,596
Actual/Expected %		97.3	107.2	100.1	94.3	95.9	90.6	85.9	82.5	72.7	89.6
Sickness period 4/9											
Exposed to risk	130	4,593	19,476	34,452	49,007	40,288	33,728	29,524	25,118	13,645	249,961
Actual weeks of sickness	4	218	1,051	2,292	3,672	3,618	4,130	5,082	6,247	4,565	30,879
Actual rate of sickness	0.031	0.047	0.054	0.067	0.075	0.090	0.122	0.172	0.249	0.335	0.124
Expected weeks of sickness	2	114	813	2,153	4,176	4,455	4,831	5,673	7,067	6,265	35,549
Actual/Expected %	200.0	191.2	129.3	106.5	87.9	81.2	85.5	89.6	88.4	72.9	86.9
Sickness period 13/13											
Exposed to risk	208	6,922	35,383	71,958	112,664	96,233	77,521	62,768	46,189	22,044	531,890
Actual weeks of sickness	0	198	911	2,187	3,820	4,268	4,757	7,157	7,944	5,134	36,376
Actual rate of sickness	0.000	0.029	0.026	0.030	0.034	0.044	0.061	0.114	0.172	0.233	0.068
Expected weeks of sickness	0	42	445	1,524	3,451	3,992	4,389	5,186	6,495	6,683	32,207
Actual/Expected %		471.4	204.7	143.5	110.7	106.9	108.4	138.0	122.3	76.8	112.9

APPENDIX 3 (continued)

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 6. (continued) Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	185	6,876	44,847	105,052	180,946	159,294	130,147	105,272	75,985	34,762	843,366
Actual weeks of sickness	0	136	920	2,544	6,045	6,266	8,083	13,307	16,627	11,147	65,075
Actual rate of sickness	0.000	0.020	0.021	0.024	0.033	0.039	0.062	0.126	0.219	0.321	0.077
Expected weeks of sickness	2	79	527	1,544	3,610	4,769	6,369	9,012	12,185	11,467	49,564
Actual/Expected %	0.0	172.2	174.6	164.8	167.5	131.4	126.9	147.7	136.5	97.2	131.3
Sickness period 52/52											
Exposed to risk	115	4,876	41,530	106,853	193,933	178,295	149,127	122,262	87,669	39,160	923,820
Actual weeks of sickness	0	75	954	2,719	6,902	7,725	9,744	18,158	28,392	22,033	96,702
Actual rate of sickness	0.000	0.015	0.023	0.025	0.036	0.043	0.065	0.149	0.324	0.563	0.105
Expected weeks of sickness	0	39	357	1,156	3,107	4,881	7,791	13,200	20,802	21,127	72,460
Actual/Expected %		192.3	267.2	235.2	222.1	158.3	125.1	137.6	136.5	104.3	133.5
Sickness period 104/all											
Exposed to risk	28	2,027	29,103	88,412	172,422	163,711	140,214	117,591	85,999	38,982	838,489
Actual weeks of sickness	0	0	724	4,492	10,698	16,655	22,329	42,887	84,955	94,358	277,098
Actual rate of sickness	0.000	0.000	0.025	0.051	0.062	0.102	0.159	0.365	0.988	2.421	0.330
Expected weeks of sickness	1	54	419	1,198	3,546	7,170	15,832	32,606	57,701	63,888	182,415
Actual/Expected %	0.0	0.0	172.8	375.0	301.7	232.3	141.0	131.5	147.2	147.7	151.9

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 7. Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	436	1,723	1,809	1,221	1,001	762	508	521	7,981
Actual weeks of sickness	0	44	267	380	355	297	242	194	194	1,973
Actual rate of sickness		0.101	0.155	0.210	0.291	0.297	0.318	0.382	0.372	0.247
Expected weeks of sickness		43	215	269	207	190	162	124	153	1,363
Actual/Expected %		102.3	124.2	141.3	171.5	156.3	149.4	156.5	126.8	144.8
Sickness period 4/9										
Exposed to risk	0	405	1,704	1,802	1,213	997	757	507	519	7,904
Actual weeks of sickness	0	33	166	238	205	273	283	262	337	1,797
Actual rate of sickness		0.081	0.097	0.132	0.169	0.274	0.374	0.517	0.649	0.227
Expected weeks of sickness		9	68	112	108	122	124	112	161	816
Actual/Expected %		366.7	244.1	212.5	189.8	223.8	228.2	233.9	209.3	220.2
Sickness period 13/13										
Exposed to risk	0	353	1,666	1,784	1,200	989	752	503	519	7,766
Actual weeks of sickness	0	5	87	180	83	188	84	129	236	992
Actual rate of sickness		0.014	0.052	0.101	0.069	0.190	0.112	0.256	0.455	0.128
Expected weeks of sickness		2	21	42	44	52	54	53	91	359
Actual/Expected %		250.0	414.3	428.6	188.6	361.5	155.6	243.4	259.3	276.3

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 7. (continued) Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	0	282	1,604	1,760	1,178	976	742	501	519	7,562
Actual weeks of sickness	0	0	105	150	105	251	84	95	170	960
Actual rate of sickness		0.000	0.065	0.085	0.089	0.257	0.113	0.190	0.328	0.127
Expected weeks of sickness		1	18	39	43	53	59	62	114	389
Actual/Expected %		0.0	583.3	384.6	244.2	473.6	142.4	153.2	149.1	246.8
Sickness period 52/52										
Exposed to risk	0	164	1,459	1,708	1,134	948	725	493	517	7,148
Actual weeks of sickness	0	0	12	253	72	392	72	102	337	1,240
Actual rate of sickness		0.000	0.008	0.148	0.063	0.414	0.099	0.207	0.652	0.173
Expected weeks of sickness		2	17	26	26	38	56	78	176	419
Actual/Expected %		0.0	70.6	973.1	276.9	1,031.6	128.6	130.8	191.5	295.9
Sickness period 104/all										
Exposed to risk	0	37	1,109	1,570	1,029	877	677	476	511	6,286
Actual weeks of sickness	0	0	0	104	364	232	106	110	1,327	2243
Actual rate of sickness		0.000	0.000	0.066	0.354	0.265	0.157	0.231	2.597	0.357
Expected weeks of sickness		1	19	27	28	51	101	173	445	845
Actual/Expected %		0.0	0.0	385.2	1,300.0	454.9	105.0	63.6	298.2	265.4

APPENDIX 3 (continued)

Individual PHI policies 1983-86: All offices - Standard sickness experience

Table 8. Females - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 4/9										
Exposed to risk	74	1,630	3,023	3,244	3,244	2,465	1,690	1,119	606	17,095
Actual weeks of sickness	4	71	218	278	455	535	396	144	214	2,315
Actual rate of sickness	0.054	0.044	0.072	0.086	0.140	0.217	0.234	0.129	0.353	0.135
Expected weeks of sickness	1	42	132	204	266	251	216	190	153	1,455
Actual/Expected %	400.0	169.0	165.2	136.3	171.1	213.1	183.3	75.8	139.9	159.1
Sickness period 13/13										
Exposed to risk	82	1,408	2,882	3,144	3,163	2,418	1,674	1,112	606	16,489
Actual weeks of sickness	0	34	145	120	256	402	213	91	122	1,383
Actual rate of sickness	0.000	0.024	0.050	0.038	0.081	0.166	0.127	0.082	0.201	0.084
Expected weeks of sickness	0	10	49	93	131	125	108	100	96	712
Actual/Expected %		340.0	295.9	129.0	195.4	321.6	197.2	91.0	127.1	194.2
Sickness period 26/26										
Exposed to risk	46	1,116	2,676	2,994	3,041	2,343	1,650	1,102	605	15,573
Actual weeks of sickness	0	12	121	67	180	536	215	107	148	1,386
Actual rate of sickness	0.000	0.011	0.045	0.022	0.059	0.229	0.130	0.097	0.245	0.089
Expected weeks of sickness	1	15	40	55	77	89	103	121	126	627
Actual/Expected %	0.0	80.0	302.5	121.8	233.8	602.2	208.7	88.4	117.5	221.1
Sickness period 52/52										
Exposed to risk	23	685	2,269	2,693	2,793	2,196	1,598	1,083	601	13,941
Actual weeks of sickness	0	0	119	8	251	490	414	140	180	1,602
Actual rate of sickness	0.000	0.000	0.052	0.003	0.090	0.223	0.259	0.129	0.300	0.115
Expected weeks of sickness	0	6	22	34	55	75	104	145	173	614
Actual/Expected %		0.0	540.9	23.5	456.4	653.3	398.1	96.6	104.0	260.9
Sickness period 104/all										
Exposed to risk	4	243	1,552	2,105	2,303	1,903	1,479	1,031	590	11,210
Actual weeks of sickness	0	0	147	416	561	347	639	575	187	2,872
Actual rate of sickness	0.000	0.000	0.095	0.198	0.244	0.182	0.432	0.558	0.317	0.256
Expected weeks of sickness	0	7	24	32	54	96	194	330	451	1,188
Actual/Expected %		0.0	612.5	1,300.0	1,038.9	361.5	329.4	174.2	41.5	241.8

APPENDIX 3 (continued)

Individual PHI policies 1983-86: All offices - Standard sickness experience

Table 9. Females - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 13/13										
Exposed to risk	53	1,002	3,528	5,319	6,082	4,918	3,311	2,078	1,148	27,439
Actual weeks of sickness	0	18	85	143	331	382	332	245	159	1,695
Actual rate of sickness	0.000	0.018	0.024	0.027	0.054	0.078	0.100	0.118	0.139	0.062
Expected weeks of sickness	0	5	35	86	146	168	159	146	127	872
Actual/Expected %		360.0	242.9	166.3	226.7	227.4	208.8	167.8	125.2	194.4
Sickness period 26/26										
Exposed to risk	39	851	3,229	5,024	5,801	4,743	3,224	2,051	1,144	26,106
Actual weeks of sickness	0	34	62	142	375	556	436	377	232	2,214
Actual rate of sickness	0.000	0.040	0.019	0.028	0.065	0.117	0.135	0.184	0.203	0.085
Expected weeks of sickness	1	12	43	77	122	155	178	195	184	967
Actual/Expected %	0.0	283.3	144.2	184.4	307.4	358.7	244.9	193.3	126.1	229.0
Sickness period 52/52										
Exposed to risk	19	594	2,657	4,452	5,252	4,401	3,050	1,991	1,132	23,548
Actual weeks of sickness	0	2	1	101	275	782	445	498	345	2,449
Actual rate of sickness	0.000	0.003	0.000	0.023	0.052	0.178	0.146	0.250	0.305	0.104
Expected weeks of sickness	0	5	24	53	95	139	184	247	303	1,050
Actual/Expected %		40.0	4.2	190.6	289.5	562.6	241.8	201.6	113.9	233.2
Sickness period 104/all										
Exposed to risk	4	258	1,693	3,390	4,227	3,722	2,701	1,850	1,098	18,943
Actual weeks of sickness	0	0	0	301	468	973	1,671	1,757	3,232	8,402
Actual rate of sickness	0.000	0.000	0.000	0.089	0.111	0.261	0.619	0.950	2.944	0.444
Expected weeks of sickness	0	7	25	50	97	183	344	576	817	2,099
Actual/Expected %		0.0	0.0	602.0	482.5	531.7	485.8	305.0	395.6	400.3

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 10. Females - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	4	424	2,513	4,833	5,864	5,299	4,650	3,461	1,778	28,826
Actual weeks of sickness	0	0	41	237	222	382	511	753	486	2,632
Actual rate of sickness	0.000	0.000	0.016	0.049	0.038	0.072	0.110	0.218	0.273	0.091
Expected weeks of sickness	0	3	19	44	71	98	145	199	204	783
Actual/Expected %		0.0	215.8	538.6	312.7	389.8	352.4	378.4	238.2	336.1
Sickness period 52/52										
Exposed to risk	1	297	2,132	4,367	5,435	5,030	4,486	3,385	1,763	26,896
Actual weeks of sickness	0	0	82	282	428	513	658	941	845	3,749
Actual rate of sickness	0.000	0.000	0.038	0.065	0.079	0.102	0.147	0.278	0.479	0.139
Expected weeks of sickness	0	2	13	34	65	105	179	278	312	988
Actual/Expected %		0.0	630.8	829.4	658.5	488.6	367.6	338.5	270.8	379.5
Sickness period 104/all										
Exposed to risk	0	126	1,461	3,452	4,593	4,457	4,136	3,201	1,724	23,150
Actual weeks of sickness	0	0	44	383	691	1,210	1,835	3,441	2,729	10,333
Actual rate of sickness		0.000	0.030	0.111	0.150	0.271	0.444	1.075	1.583	0.446
Expected weeks of sickness		3	16	37	77	162	387	734	944	2,360
Actual/Expected %		0.0	275.0	1,035.1	897.4	746.9	474.2	468.8	289.1	437.8

APPENDIX 3 (continued)

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 11. Females - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	1	87	659	1,403	1,850	1,922	1,700	1,331	637	9,590
Actual weeks of sickness	0	0	0	51	89	530	273	421	224	1,588
Actual rate of sickness	0.000	0.000	0.000	0.036	0.048	0.276	0.161	0.316	0.352	0.166
Expected weeks of sickness	0	0	4	11	22	40	68	109	113	367
Actual/Expected %			0.0	463.6	404.5	1,325.0	401.5	386.2	198.2	432.7
Sickness period 104/all										
Exposed to risk	0	30	426	1,069	1,505	1,639	1,520	1,242	622	8,053
Actual weeks of sickness	0	0	0	43	108	511	461	1,232	2,222	4,577
Actual rate of sickness		0.000	0.000	0.040	0.072	0.312	0.303	0.992	3.572	0.568
Expected weeks of sickness		1	5	12	25	59	142	285	340	869
Actual/Expected %		0.0	0.0	358.3	432.0	866.1	324.6	432.3	653.5	526.7

APPENDIX 3 (continued)

Individual PHI policies 1983-86
All offices - Standard sickness experience

Table 12. (continued) Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	436	1,723	1,809	1,221	1,001	762	508	521	7,981
Actual weeks of sickness	0	44	267	380	355	297	242	194	194	1,973
Actual rate of sickness		0.101	0.155	0.210	0.291	0.297	0.318	0.382	0.372	0.247
Expected weeks of sickness		43	215	269	207	190	162	124	153	1,363
Actual/Expected %		102.3	124.2	141.3	171.5	156.3	149.4	156.5	126.8	144.8
Sickness period 4/9										
Exposed to risk	74	2,035	4,727	5,046	4,457	3,462	2,447	1,626	1,125	24,999
Actual weeks of sickness	4	104	384	516	660	808	679	406	551	4,112
Actual rate of sickness	0.054	0.051	0.081	0.102	0.148	0.233	0.277	0.250	0.490	0.164
Expected weeks of sickness	1	51	200	316	374	373	340	302	314	2,271
Actual/Expected %	400.0	203.9	192.0	163.3	176.5	216.6	199.7	134.4	175.5	181.1
Sickness period 13/13										
Exposed to risk	135	2,763	8,076	10,247	10,445	8,325	5,737	3,693	2,273	51,694
Actual weeks of sickness	0	57	317	443	670	972	629	465	517	4,070
Actual rate of sickness	0.000	0.021	0.039	0.043	0.064	0.117	0.110	0.126	0.227	0.079
Expected weeks of sickness	0	17	105	221	321	345	321	299	314	1,943
Actual/Expected %		335.3	301.9	200.5	208.7	281.7	196.0	155.5	164.6	209.5

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 12. (continued) Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	89	2,673	10,022	14,611	15,884	13,361	10,266	7,115	4,046	78,067
Actual weeks of sickness	0	46	329	596	882	1,725	1,246	1,332	1,036	7,192
Actual rate of sickness	0.000	0.017	0.033	0.041	0.056	0.129	0.121	0.187	0.256	0.092
Expected weeks of sickness	2	31	120	215	313	395	485	577	628	2,766
Actual/Expected %	0.0	148.4	274.2	277.2	281.8	436.7	256.9	230.8	165.0	260.0
Sickness period 52/52										
Exposed to risk	44	1,827	9,176	14,623	16,464	14,497	11,559	8,283	4,650	81,123
Actual weeks of sickness	0	2	214	695	1,115	2,707	1,862	2,102	1,931	10,628
Actual rate of sickness	0.000	0.001	0.023	0.048	0.068	0.187	0.161	0.254	0.415	0.131
Expected weeks of sickness	0	15	80	158	263	397	591	857	1,077	3,438
Actual/Expected %		13.3	267.5	439.9	424.0	681.9	315.1	245.3	179.3	309.1
Sickness period 104/all										
Exposed to risk	8	694	6,241	11,586	13,657	12,598	10,513	7,800	4,545	67,642
Actual weeks of sickness	0	0	191	1,247	2,192	3,273	4,712	7,115	9,697	28,427
Actual rate of sickness	0.000	0.000	0.031	0.108	0.161	0.260	0.448	0.912	2.134	0.420
Expected weeks of sickness	0	19	89	158	281	551	1,168	2,098	2,997	7,361
Actual/Expected %		0.0	214.6	789.2	780.1	594.0	403.4	339.1	323.6	386.2

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 13. Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 1 week											
Exposed to risk	1	1,506	9,510	15,983	21,680	17,263	14,690	12,931	12,360	7,872	113,796
Number of claim inceptions	0	125	1,089	2,120	2,830	2,311	1,848	1,561	1,466	1,020	14,370
Central claim inception rate	0.000	0.083	0.115	0.133	0.131	0.134	0.126	0.121	0.119	0.130	0.126
Expected claim inceptions	0	164	1,128	1,980	2,734	2,196	1,904	1,755	1,839	1,368	15,068
Actual/Expected %		76.2	96.5	107.1	103.5	105.2	97.1	88.9	79.7	74.6	95.4
Deferred period 4 weeks											
Exposed to risk	130	3,179	10,070	18,530	27,384	23,062	19,065	16,605	12,764	5,774	136,563
Number of claim inceptions	2	29	81	172	280	256	294	336	358	224	2,032
Central claim inception rate	0.015	0.009	0.008	0.009	0.010	0.011	0.015	0.020	0.028	0.039	0.015
Expected claim inceptions	0	17	86	223	417	422	419	461	495	365	2,905
Actual/Expected %		170.6	94.2	77.1	67.1	60.7	70.2	72.9	72.3	61.4	69.9
Deferred period 13 weeks											
Exposed to risk	97	2,896	16,616	38,136	64,210	56,276	43,991	33,333	21,103	8,400	285,058
Number of claim inceptions	0	11	46	84	158	217	202	294	254	120	1,386
Central claim inception rate	0.000	0.004	0.003	0.002	0.002	0.004	0.005	0.009	0.012	0.014	0.005
Expected claim inceptions	0	2	21	75	180	211	218	228	219	153	1,307
Actual/Expected %		550.0	219.0	112.0	87.8	102.8	92.7	128.9	116.0	78.4	106.0

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 13. (continued) Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 26 weeks											
Exposed to risk	23	1,149	11,857	35,869	71,237	64,929	53,669	42,981	29,935	12,727	324,376
Number of claim inceptions	0	0	6	19	62	70	110	162	245	120	794
Central claim inception rate	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.004	0.008	0.009	0.002
Expected claim inceptions	0	1	6	20	51	67	88	121	156	130	640
Actual/Expected %		0.0	100.0	95.0	121.6	104.5	125.0	133.9	157.1	92.3	124.1
Deferred period 52 weeks											
Exposed to risk	9	247	2,944	10,050	22,154	24,935	22,460	18,694	12,237	4,434	118,164
Number of claim inceptions	0	0	3	2	5	8	20	38	86	48	210
Central claim inception rate	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.002	0.007	0.011	0.002
Expected claim inceptions	0	0	1	6	16	26	37	53	64	45	248
Actual/Expected %			300.0	33.3	31.3	30.8	54.1	71.7	134.4	106.7	84.7
All deferred periods											
Exposed to risk	260	8,977	50,997	118,568	206,665	186,465	153,875	124,544	88,399	39,207	977,957
Number of claim inceptions	2	165	1,225	2,397	3,335	2,862	2,474	2,391	2,409	1,532	18,792
Central claim inception rate	0.008	0.018	0.024	0.020	0.016	0.015	0.016	0.019	0.027	0.039	0.019
Expected claim inceptions	0	184	1,242	2,304	3,398	2,922	2,666	2,618	2,773	2,061	20,168
Actual/Expected %		89.7	98.6	104.0	98.1	97.9	92.8	91.3	86.9	74.3	93.2

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 14. Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 1 week										
Exposed to risk	0	436	1,723	1,809	1,221	1,001	762	508	521	7,981
Number of claim inceptions	0	41	222	299	226	172	134	99	82	1,275
Central claim inception rate		0.094	0.129	0.165	0.185	0.172	0.176	0.195	0.157	0.160
Expected claim inceptions		47	204	224	154	127	99	69	78	1,002
Actual/Expected %		87.2	108.8	133.5	146.8	135.4	135.4	143.5	105.1	127.2
Deferred period 4 weeks										
Exposed to risk	74	1,630	3,023	3,244	3,244	2,465	1,690	1,119	606	17,095
Number of claim inceptions	1	14	39	53	71	86	56	26	32	378
Central claim inception rate	0.014	0.009	0.013	0.016	0.022	0.035	0.033	0.023	0.053	0.022
Expected claim inceptions	0	9	26	39	49	45	37	31	24	260
Actual/Expected %		155.6	150.0	135.9	144.9	191.1	151.4	83.9	133.3	145.4
Deferred period 13 weeks										
Exposed to risk	53	1,002	3,528	5,319	6,082	4,918	3,311	2,078	1,148	27,439
Number of claim inceptions	0	1	10	16	27	33	30.5	22.5	18	158
Central claim inception rate	0.000	0.001	0.003	0.003	0.004	0.007	0.009	0.011	0.016	0.006
Expected claim inceptions	0	1	4	11	17	18	16	14	12	93
Actual/Expected %		100.0	250.0	145.5	158.8	183.3	190.6	160.7	150.0	169.9

APPENDIX 3 (continued)

Individual PHI policies 1983-86

All offices - Standard sickness experience

Table 14. Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 26 weeks										
Exposed to risk	4	424	2,513	4,833	5,864	5,299	4,650	3,461	1,778	28,826
Number of claim inceptions	0	0	2	9	12	21	22.5	34.5	19	120
Central claim inception rate	0.000	0.000	0.001	0.002	0.002	0.004	0.005	0.010	0.011	0.004
Expected claim inceptions	0	0	1	3	4	5	8	10	9	40
Actual/Expected %			200.0	300.0	300.0	420.0	281.3	345.0	211.1	300.0
Deferred period 52 weeks										
Exposed to risk	1	87	659	1,403	1,850	1,922	1,700	1,331	637	9,590
Number of claim inceptions	0	0	0	0	2	7	5	7	3	24
Central claim inception rate	0.000	0.000	0.000	0.000	0.001	0.004	0.003	0.005	0.005	0.003
Expected claim inceptions	0	0	0	1	1	2	3	4	3	14
Actual/Expected %				0.0	200.0	350.0	166.7	175.0	100.0	171.4
All deferred periods										
Exposed to risk	132	3,579	11,446	16,608	18,261	15,605	12,113	8,497	4,690	90,931
Number of claim inceptions	1	56	273	377	338	319	248	189	154	1,955
Central claim inception rate	*0.008*	*0.016*	*0.024*	*0.023*	*0.019*	*0.020*	*0.020*	*0.022*	*0.033*	*0.022*
Expected claim inceptions	0	57	235	278	225	197	163	128	126	1,409
Actual/Expected %		98.2	116.2	135.6	150.2	161.9	152.1	147.7	122.2	138.8

CMIR, **15** (1996) 209-290

SICKNESS EXPERIENCE 1979-82 AND 1983-86 FOR GROUP PHI POLICIES

1. INTRODUCTION

1.1 This is the third report on the sickness experience for group PHI policies.

1.2 The first report, published in *C.M.I.R.***5**,51 (1981), contains:

the experience of 1973-76,

the central exposed to risk formula and details of the method which was used to adjust the exposed to risk to allow for the fact that claims cannot be made during the deferred period. The central exposed to risk is measured in years contributed to the experience by lives aged x last birthday at the beginning of the record year under investigation to $x + 1$ last birthday at the end of that record year,

a description of the data coding system and

some notes about the special problems relating to the analysis of group data.

1.2 A second report, *C.M.I.R.***8**,89 (1986), contains the experience of the period 1975-78.

1.3 This report contains:

the experience of 1979-82 and 1983-86 and a comparison with the individual Standard graduated male rates, 1975-78, *C.M.I.R.*7,99,

a report on the experience in 1983-86 according to the duration in force of the policy and

a report on the difference between the experiences of the 8 offices whose data was analysed.

Appendix 1 contains details of the numbers of policies included in the Aggregate data.

Appendix 2 contains details of the claims on those policies.

Appendix 3 contains the Aggregate data for 1979-82 and the Aggregate and Standard data for 1983-86. The tables show the exposed to risk, weeks of sickness claim and numbers of claim inceptions, classified according to deferred period, sickness period and age

group, for all policy durations combined, and the corresponding expected weeks of claim and claim inceptions according to the individual Standard graduated male rates, 1975-78, but using the graduated rates for deferred period 26 weeks as an approximation for the deferred period 52 weeks data.

1.4 Research workers can obtain, on application to the CMI Bureau, tables of the 1979-82 Aggregate data for all policy durations combined and of the 1983-86 Aggregate and Standard data for policy durations 0, 1, 2 years and over and all policy durations combined.

2. GENERAL COMMENTS ON THE DATA

2.1 The Standard data is a subset of the Aggregate data, containing policies issued in the UK, without special terms for occupation or for known health impairment at the date of issue and for benefits in the form of level, increasing or decreasing periodical payments whilst sick beyond the deferred period.

2.2 Table 2.1 shows the central exposed to risk, weeks of claim and numbers of claim inceptions for all policy durations combined and for all sickness periods combined. The Aggregate data is tabulated for 1979-82, but the 1983-86 data is subdivided into Aggregate and Standard data.

2.3 One can calculate from Table 2.1 that, for 1983-86,

the male Standard in-force data represents 70% of the male Aggregate in-force data,

the male Standard claims data represents 69% of the male Aggregate claims data,

the female Standard in-force data represents 75% of the female Aggregate in-force data,

the female Standard claims data represents 85% of the female Aggregate claims data and

the Aggregate data for 1983-86 is 38% of the Aggregate data for 1979-82.

2.4 The reason for the reduction in the volume of data is that there were several irrecoverable data errors, particularly in record year 1983, and it was considered prudent not to use any of the data submitted by the offices who had suffered this misfortune in the period 1983-86. The PHI Sub-Committee would

like to place on record that they are grateful to those offices for submitting the data and to express their regret that it was not possible to use the data concerned.

2.5 The overall unstandardized central sickness rates and unstandardized claim inception rates, for all deferred periods, all sickness periods and all ages combined, are:

	Central sickness rates		
	Aggregate 1979-82	Aggregate 1983-86	Standard 1983-86
Males (ages 18-64)	0.338	0.569	0.564
Males (ages 18-59)	0.230	0.358	0.327
Females (ages 18-59)	0.248	0.373	0.417

	Central claim inception rates		
	Aggregate 1979-82	Aggregate 1983-86	Standard 1983-86
Males (ages 18-64)	0.003	0.004	0.004
Males (ages 18-59)	0.002	0.003	0.003
Females (ages 18-59)	0.002	0.003	0.003

2.6 These numbers show that the experience was heavier in 1983-86 than in 1979-82. The rates for females appear to be lower than those for males, but this is because the average age of the females is lower.

2.7 The proportion of policies on female lives has stabilised at about 17% of the data, having risen from 11% in 1975. The overall unstandardized claim rates - the number of claims observed in a year, both new and continued from the previous year, divided by the mid-year population - have risen steadily from .00664 for males and .00454 for females in 1975 to .01386 for males and .00987 for females in 1986.

2.8 The percentage of policies in the Republic of Ireland has risen from 15% at 1 January 1975 to 21% at 31 December 1986 after having fallen to around 9% in the period 1978-82. The overall unstandardized claim rates in the Republic of Ireland have risen somewhat more than in the UK.

2.9 The percentage of policies bearing a rating on account of occupation has fallen slightly between 1975 and 1985, but increased markedly in 1986. The reason for the increase is not known. The overall unstandardized claim rates for non rated policies have increased during the period 1975-86.

2.10 Death rates of claimants have been fairly constant, but the recovery rates have fallen during the years 1975-86.

Table 2.1. Summary of the 1979-82 and 1983-86 group PHI data.

	Exposed to risk	Weeks of claim	Claim inceptions
Males - Aggregate data - 1979-82			
Deferred period 1 week	762	738	42
Deferred period 4 weeks	4,588	2,395	56
Deferred period 13 weeks	70,625	20,457	290
Deferred period 26 weeks	310,801	108,026	758
Deferred period 52 weeks	37,440	11,684	61
All deferred periods combined	424,216	143,300	1,207
Males - Aggregate data - 1983-86			
Deferred period 1 week	352	1,161	20
Deferred period 4 weeks	4,102	3,569	66
Deferred period 13 weeks	40,377	16,341	188
Deferred period 26 weeks	102,373	63,762	344
Deferred period 52 weeks	12,982	6,319	31
All deferred periods combined	160,186	91,152	649
Males - Standard data - 1983-86			
Deferred period 1 week	251	894	15
Deferred period 4 weeks	2,193	1,381	33
Deferred period 13 weeks	27,873	10,180	110
Deferred period 26 weeks	70,292	45,605	235
Deferred period 52 weeks	11,580	5,230	24
All deferred periods combined	112,189	63,290	417
Females - Aggregate data - 1979-82			
Deferred period 1 week	71	10	2
Deferred period 4 weeks	521	1,157	10
Deferred period 13 weeks	15,000	3,854	60
Deferred period 26 weeks	69,471	16,142	126
Deferred period 52 weeks	3,931	913	6
All deferred periods combined	88,994	22,076	204
Females - Aggregate data - 1983-86			
Deferred period 1 week	34	44	5
Deferred period 4 weeks	425	1,030	9
Deferred period 13 weeks	6,822	1,790	33
Deferred period 26 weeks	25,366	8,846	57
Deferred period 52 weeks	959	837	2
All deferred periods combined	33,606	12,547	106
Females - Standard data - 1983-86			
Deferred period 1 week	29	44	5
Deferred period 4 weeks	331	923	4
Deferred period 13 weeks	5,239	1,327	26
Deferred period 26 weeks	18,774	7,554	48
Deferred period 52 weeks	766	628	2
All deferred periods combined	25,139	10,476	85

3. EFFECT OF POLICY DURATION

3.1 The numbers in Table 3.1 are standardized male claim inception ratios for the 1983-86 male Standard data, using the individual Standard graduated male inception rates, 1975-78, *C.M.I.R.*7,105, as a comparison basis. The numbers of expected inceptions used when preparing Table 3.1 were not rounded to the nearest integer as the corresponding numbers are in other tables, because, for many of the values, the nearest integer was 0 which made 100 × Actual inceptions ÷ Expected inceptions come to infinity which is not a very meaningful result. The ratios for males are shown according to duration in force of the policies. The corresponding ratios for all durations combined, males and females, are shown in Table 3.2. The amount of exposed to risk in each female data cell is too small to enable a reliable comparison to be made for the three duration classifications.

Table 3.1. Males: Standard data: group PHI 1983-86: standardized claim inception ratios.

	Observed inceptions × 100 / Expected inceptions			Number of inceptions		
Deferred period	Duration 0	Duration 1	Duration 2 and over	Duration 0	Duration 1	Duration 2 and over
1 week	0.0	0.0	43.1	0	0	15
4 weeks	0.0	187.6	63.2	0	3	30
13 weeks	402.8	116.3	76.3	12	17	81
26 weeks	500.4	227.3	149.9	5	23	207
52 weeks	0.0	127.5	82.7	0	1	23
All deferred periods	398.3	162.2	100.4	17	44	356

Table 3.2. Males (ages 18 to 64) and females (ages 18 to 59): Standard data: group PHI 1983-86: standardized claim inception ratios: all policy durations combined.

	Observed inceptions × 100 / Expected inceptions		Number of inceptions	
Deferred period	Males	Females	Males	Females
1 week	44.1	166.7	15	5
4 weeks	67.3	80.0	33	4
13 weeks	88.0	162.5	110	26
26 weeks	156.7	200.0	235	48
52 weeks	85.7	153.1	24	2
All deferred periods	108.0	172.4	417	85

3.2 The numbers in Table 3.3 are standardized male central claim ratios, for the male Standard data using the individual Standard graduated male sickness rates, 1975-78, *C.M.I.R.*7,99 as a comparison basis. The percentages for males are shown according to duration in force of the policies.

Table 3.3. Males: Standard data: group PHI 1983-86: standardized weeks of claim ratios.

	Observed weeks of claim × 100 / Expected weeks of claim			Number of weeks of claim		
Deferred period	Duration 0	Duration 1	Duration 2 and over	Duration 0	Duration 1	Duration 2 and over
1 week	0.0	0.0	232.8	0	0	894
4 weeks	0.0	168.4	95.3	0	32	1,349
13 weeks	583.3	169.1	112.0	245	641	9,294
26 weeks	840.0	280.3	238.2	168	967	44,470
52 weeks	0.0	390.5	157.3	0	82	5,148
All deferred periods	635.4	225.4	190.9	413	1,722	61,155

Table 3.4. Males (ages 18 to 64) and females (ages 18 to 59): Standard data: group PHI: standardized weeks of claim ratios: all policy durations combined.

	Observed weeks of claim × 100 / Expected weeks of claim		Number of weeks of claim	
Deferred period	Males	Females	Males	Females
1 week	232.8	146.7	894	44
4 weeks	96.1	788.9	1,381	923
13 weeks	116.7	149.6	10,180	1,327
26 weeks	239.6	337.1	45,605	7,554
52 weeks	158.7	826.3	5,230	628
All deferred periods	192.5	312.6	63,290	10,476

3.3 The general trend shown by these tables is that, for males, both claim inception ratios and sickness ratios tend to decrease as policy duration increases but the amount of data at duration 0 is very small. The tables also show that female inception ratios and sickness ratios are higher than the corresponding ratios for males.

4. EFFECT OF DIFFERENCES BETWEEN OFFICES

4.1 In order to maintain confidentiality, each office has been given an identifying letter in this report. This letter is different from the "office number" used on their schedules or tapes by offices who contribute data. It cannot be decoded by any member of the C.M.I. Committee or of the Sub-Committees. The data for this report is contained in a computer system which is not connected to any form of network; it cannot be inspected over the telephone system and it will be erased after the publication of this report.

4.2 Figure 1 shows the varying volume of exposed to risk for all deferred periods combined. The distribution of the exposed to risk according to deferred period is different for each office, but it is not considered appropriate to include the details in this report because the information is somewhat "market sensitive."

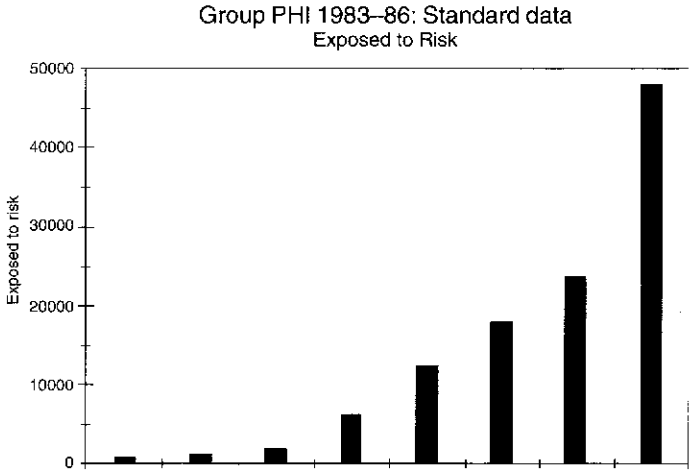

Figure 1: Difference between offices - exposed to risk.

4.3 Figure 2 shows the percentages of the observed number of weeks of claim to the number of weeks of claim expected using the individual Standard graduated male central sickness rates, 1975-78. Figure 3 shows the corresponding information for claim inceptions. The standardizing process has removed the effect of variations in the distribution of the data according to age and deferred period but not according to sickness period (duration since falling sick, not duration of claim). This duration is relevant in Figure 2, but not in Figure 3.

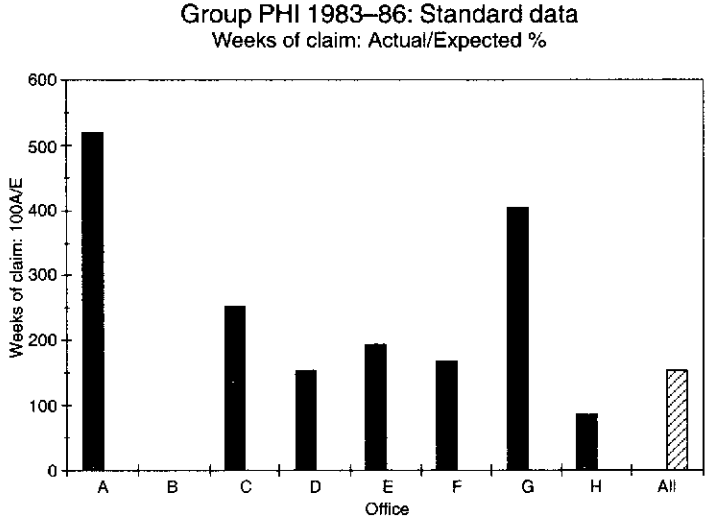

Figure 2: Difference between offices - weeks of claim.

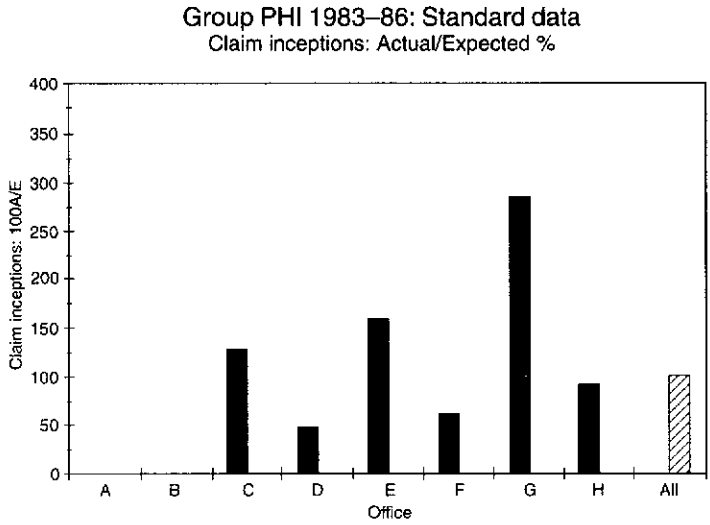

Figure 3: Difference between offices - claim inceptions.

4.4 In the case of office A, the expected number of inceptions was very small and led to an unreasonably large value for the percentage of Actual to Expected inceptions. In the case of Office B there were no claims.

5. DIFFERENCES BETWEEN MALE AND FEMALE EXPERIENCE

5.1 The observed central sickness rates, $z_x^{d/all}$, where d denotes the deferred period in weeks, are generally higher for females than for males. This feature of PHI data has been exhibited in all the previous investigations listed in the introduction of this report. The results, for the Standard data, for all deferred periods and all sickness periods combined, are illustrated in Figure 4. The female claim rates for the different deferred periods are generally higher than those of males. The exceptions are deferred period 4 weeks, where the rate for age group 50-54 is lower for females than for males, and deferred period 13 weeks, where the rates for ages below 35 are lower for females than for males, but not much lower.

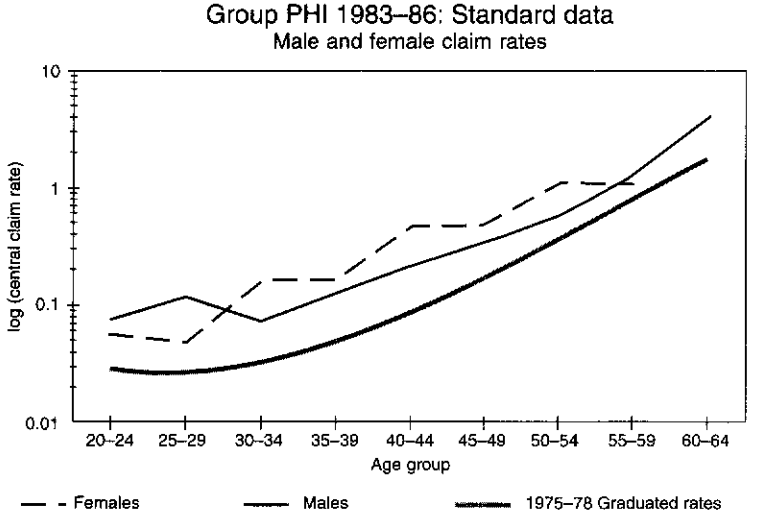

Figure 4: Comparison between male and female sickness rates: all offices combined: all deferred periods combined: all sickness periods combined: Standard data 1983-86 and average of graduated rates 1975-78.

5.2 The observed central claim inception rates are generally higher for females than for males. This feature of the PHI data has been exhibited in all the previous investigations listed in the introduction to this report. The results, for the Standard data, for all deferred periods and all sickness periods combined, are illustrated in Figure 5. This feature of the data occurs in the previous investigations, except at the very youngest ages, where the male claim inception rates are higher than the female, but not much higher.

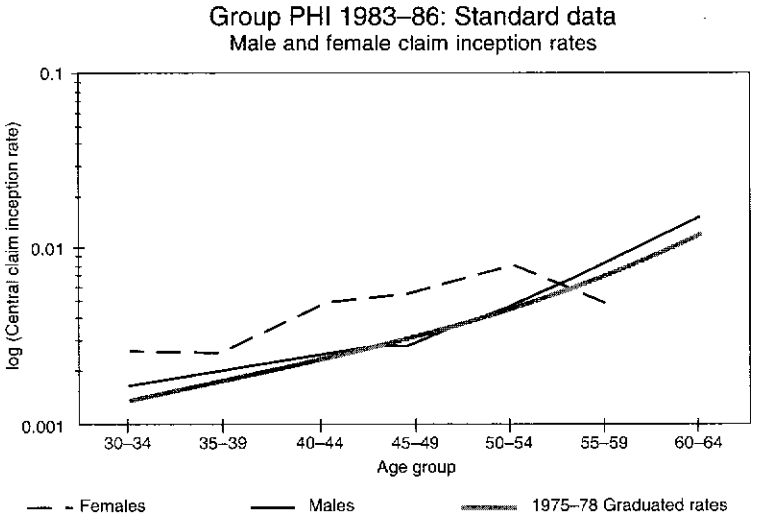

Figure 5: Comparison between male and female central claim inception rates: all offices combined: all deferred periods combined: all sickness periods combined: Standard data 1983-86 and average of graduated rates 1975-78.

5.3 In both Figures 4 and 5, the averages of the individual Standard graduated male rates, 1975-78 are shown. These rates are, for Figure 4, the total expected weeks of sickness for all sickness periods combined and all deferred periods combined divided by the corresponding exposed to risk and, for Figure 5, the total expected claim inceptions for all deferred periods combined, divided by the corresponding exposed to risk. The graphs show that the observed claim inception rates for males in 1983-86 were very similar to the individual Standard graduated male rates, 1975-78 but, for females, they were higher. The sickness rates for males were higher than the individual Standard graduated male rates, 1975-78, and higher still for females.

5.4 Table 5.1 shows the observed number of weeks of sickness in the 1983-86 male Standard data as a percentage of the number expected according to the individual Standard graduated male rates, 1975-78. The analysis is classified by age passed through and sickness period passed through. The corresponding numbers for females, using the individual Standard graduated male rates, 1975-78 as a comparison basis are shown in Table 5.2. These tables show that the female experience is heavier than the male at most sickness periods and most ages.

Table 5.1. Comparison of the 1983-86 Standard experience of males with the individual Standard graduated male sickness rates, 1975-78: weeks of sickness claim: all deferred periods combined: actual weeks of sickness % of expected.

	Age group							
Sickness period	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
1/3	0	0	0	100	33	46	75	76
4/9	1,700	33	69	134	100	60	54	72
13/13	460	188	113	139	54	92	125	82
26/26	222	209	114	204	144	152	144	121
52/52	588	465	116	175	204	204	167	142
104/all	45	278	66	212	233	192	164	180

Table 5.2. Comparison of the 1983-86 Standard experience of females with the individual Standard graduated male sickness rates, 1975-78: weeks of sickness claim: all deferred periods combined: actual weeks of sickness % of expected.

	Age group							
Sickness period	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
1/3	0	0	0	0	0	0	150	550
4/9	100	0	50	0	0	0	189	314
13/13	325	130	100	5	300	130	246	52
26/26	163	95	361	343	325	356	237	106
52/52	95	248	489	574	720	445	279	154
104/all	0	0	1,048	643	1,056	314	463	269

6. COMPARISON BETWEEN THE 1983-86 STANDARD DATA AND AGGREGATE DATA

6.1 The male central sickness rates are shown in Figure 6 and the male central claim inception rates are shown in Figure 7 for all deferred periods and all sickness periods combined. Also shown are the weighted mean rates relating to the individual Standard graduated male rates, 1975-78. The weighted mean rates were calculated by dividing the expected claim data for all deferred periods and all sickness periods combined by the corresponding total exposed to risk.

6.2 The sickness rates run roughly in the following pattern, although there is some crossing of the rates:

1983-86 Aggregate > 1983-86 Standard > 1975-78 Graduated

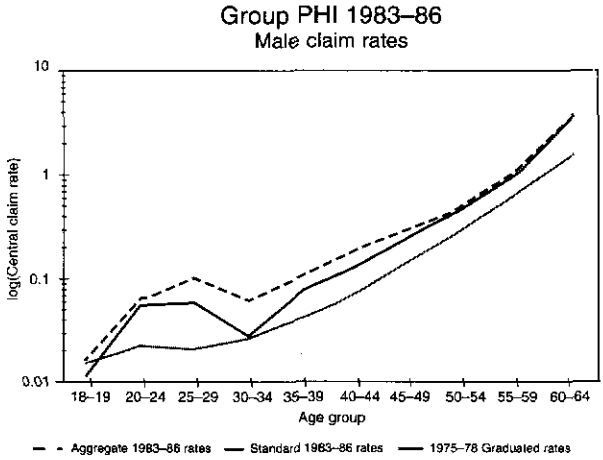

Figure 6: Comparison between 1983-86 Aggregate sickness rates, 1983-86 Standard sickness rates and individual Standard graduated male rates, 1975-78: all offices combined: all deferred periods combined: all sickness periods combined.

6.3 Except for ages between 35 and 50, the claim inception rates run roughly in the following pattern:

1983-86 Aggregate > 1983-86 Standard > 1975-78 Graduated

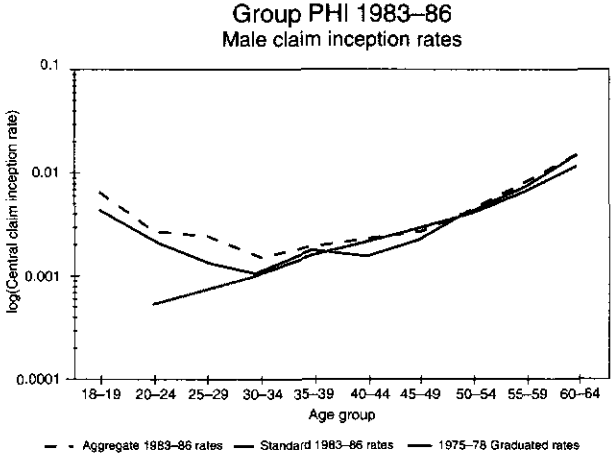

Figure 7: Comparison between Aggregate claim inception rates, Standard claim inception rates and individual Standard graduated male rates, 1975-78: all offices combined: all deferred periods combined: all sickness periods combined.

6.4 Table 6.1 shows the differences between the male Aggregate data and the male Standard data, for all ages combined and all sickness periods combined, in the actual weeks of claim as a percentage of expected weeks of claim according to the individual Standard graduated male central sickness rates 1975-78. The Aggregate experience is generally heavier than the Standard, but markedly so for deferred period 4 weeks.

Table 6.1. Males: comparison between the Aggregate experience and the Standard experience: weeks of claim: 100A/E: comparison basis individual Standard graduated male rates, 1975-78.

Deferred period	Aggregate data	Standard data
1 week	229.9	232.8
4 weeks	115.2	98.4
13 weeks	134.4	116.7
26 weeks	244.4	239.6
52 weeks	173.3	158.7

6.5 Table 6.2 shows the differences between the male Aggregate data and the male Standard data, for all ages combined and all deferred periods combined, in the actual weeks of claim as a percentage of expected weeks of claim according to the individual Standard graduated male central sickness rates 1975-78. The Aggregate experience is generally heavier than the Standard, but the magnitude of the difference declines as the sickness period increases. The reason for this might be the changing mix of the exposed to risk as the sickness period increases; there is no deferred period 4 week data in the sickness period 0/4 data, for example. Like is compared with like in the columns of Table 6.2 but not in the rows.

Table 6.2. Males: comparison between the Aggregate experience and the Standard experience: weeks of claim: 100 A/E: comparison basis individual Standard graduated male rates, 1975-78.

Sickness period	Aggregate data	Standard data
0/4 weeks	63.5	62.3
4/9 weeks	129.4	79.4
13/13 weeks	112.7	97.7
26/26 weeks	150.0	151.2
52/52 weeks	189.1	178.1
104/all weeks	228.5	218.4

6.6 Table 6.3 shows the differences between the male Aggregate data and the male Standard data, for all ages combined and all sickness periods combined, in the actual number of claim inceptions as a percentage of the expected number of inceptions according to the individual Standard graduated male central claim inception rates 1975-78. The Aggregate experience is generally heavier than the Standard.

Table 6.3. Males: comparison between the Aggregate experience and the Standard experience: claim inceptions: 100A/E: comparison basis individual Standard graduated male inception rates, 1975-78.

Deferred period	Aggregate data	Standard data
1 week	41.7	44.1
4 weeks	76.7	67.3
13 weeks	106.2	88.0
26 weeks	165.4	150.0
52 weeks	100.0	85.7

7. COMPARISON BETWEEN 1979-82 AND 1983-86 EXPERIENCES

7.1 The Standard data was not isolated for the 1979-82 investigation, so the time-trend analysis is necessarily based on the Aggregate data. Figure 8 illustrates the change in the weeks of claim between 1979-82 and 1983-86 and Figure 9 illustrates the change in the inception experience. In both cases, the sickness experience has deteriorated, specially at the younger ages.

8. CONCLUSION

8.1 The conclusions to be drawn from the foregoing analysis are:

a. the experience of males in 1983-86 was heavier than that of 1979-82, particularly at the younger ages;

b. the experience of females in 1983-86 was generally heavier than that of males; and

c. in the case of males in 1983-86, the experience becomes lighter as the policy duration increases.

There is not sufficient data to enable point (c) to be investigated in the case of females.

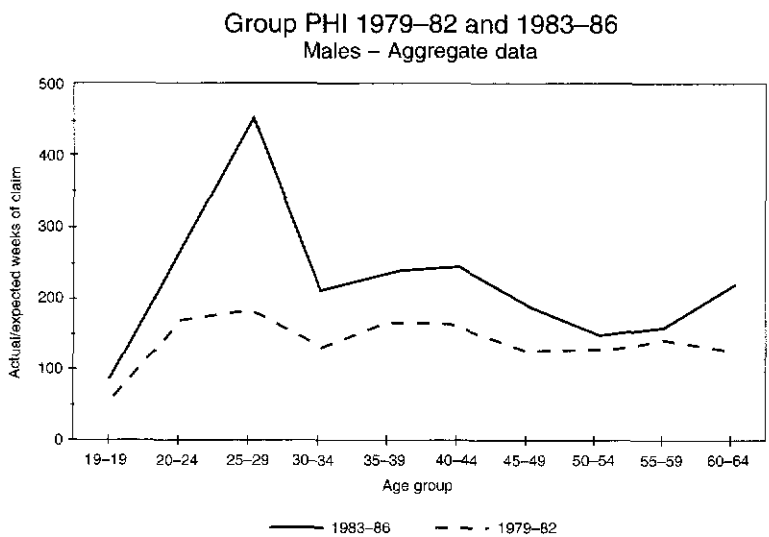

Figure 8: Observed weeks of claim as a percentage of expected by 1975-78 individual Standard graduated male central sickness rates.

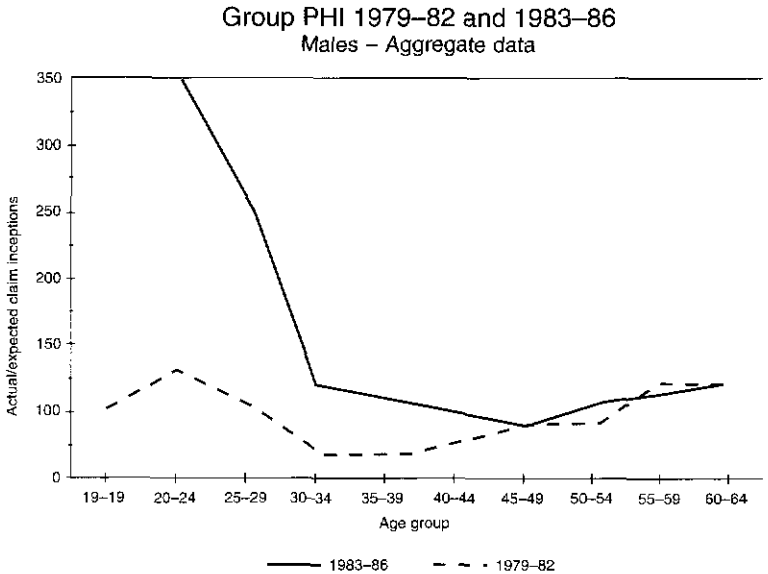

Figure 9: Observed claim inceptions as a percentage of expected by 1975-78 individual Standard graduated male central claim inception rates.

9. OFFICES WHICH CONTRIBUTED DATA TO THE INVESTIGATION

The Continuous Mortality Investigation Committee and the Permanent Health Insurance Sub-Committee wish to thank the offices which have contributed data to this investigation.

Eagle Star
Friends Provident
Guardian
Norwich Union
Scottish Amicable
Scottish Life
Standard Life
UNUM

Appendix 1

Table 1. Group PHI policies, 1979-82, Aggregate data. Numbers of policies in force at the beginning and end of each year, analysed according to different attributes.

Attribute		01-Jan-79	31-Dec-79	01-Jan-80	31-Dec-80	01-Jan-81	31-Dec-81	01-Jan-82	31-Dec-82
Sex	Male	103,188	116,979	116,979	123,831	121,948	119,474	120,715	113,964
	Female	20,238	25,092	25,092	27,495	27,092	26,331	26,492	26,762
Country	U.K.	112,672	130,517	130,517	138,365	136,079	133,270	134,672	130,771
	Republic of Ireland	10,671	11,472	11,472	12,903	12,903	12,467	12,467	9,877
	Isle of Man	0	0	0	0	0	0	0	0
	Channel Islands	83	82	82	58	58	68	68	78
Occupational Rating	Not rated	119,882	137,955	137,955	148,378	146,188	143,634	145,036	138,739
	Rated	3,544	4,116	4,116	2,948	2,852	2,171	2,171	1,987
Benefit Type	Level	60,334	63,328	63,328	61,019	60,527	35,392	35,885	45,839
	Increasing	63,078	78,702	78,702	90,299	88,506	110,406	111,315	94,882
	Decreasing	14	41	41	8	7	7	7	5
Medical Evidence	Medical	11,095	11,566	11,566	10,281	9,773	9,935	9,935	8,240
	Non-medical	10,960	10,638	10,638	9,295	9,251	9,185	9,185	7,548
	Non-selection	96,172	115,736	115,736	126,229	124,495	122,532	123,934	122,107
	Unknown	5,199	4,131	4,131	5,521	5,521	4,153	4,153	2,831
Premium Type	Level annual	27,826	27,722	27,722	25,894	25,669	24,504	25,906	20,708
	Recurrent single	93,891	112,334	112,334	123,264	121,204	119,608	119,608	117,983
	Increasing annual	0	0	0	1	0	0	0	0
	Other	1,709	2,015	2,015	2,167	2,167	1,693	1,693	2,035
Underwriting Impairment	No extra risk	60,232	61,646	61,646	61,799	59,531	53,104	53,104	42,734
	Hypertension etc.	67	48	48	37	36	52	52	41
	Neurosis	206	210	210	12	12	15	15	14
	Unknown	62,479	79,714	79,714	88,872	88,872	92,061	93,463	97,456
	Other	442	453	453	606	589	573	573	481
Total		123,426	142,071	142,071	151,326	149,040	145,805	147,207	140,726

APPENDIX 1 (continued)

Table 2. Group PHI policies, 1983-86, Aggregate data. Numbers of policies in force at the beginning and end of each year, analysed according to different attributes.

Attribute		01-Jan-83	31-Dec-83	01-Jan-84	31-Dec-84	01-Jan-85	31-Dec-85	01-Jan-86	31-Dec-86
Sex	Male	34,266	28,323	45,414	44,952	47,693	46,407	45,533	45,260
	Female	6,990	6,103	9,157	9,384	10,216	9,579	9,482	9,559
Country	U.K.	32,581	26,938	42,598	41,820	45,393	43,970	42,999	43,293
	Republic of Ireland	8,625	7,444	11,929	12,463	12,463	11,964	11,964	11,471
	Isle of Man	0	0	0	4	4	4	4	8
	Channel Islands	50	44	44	49	49	48	48	47
Occupational Rating	Not rated	39,658	33,097	52,665	52,325	55,898	53,988	53,017	38,973
	Rated	1,598	1,329	1,906	2,011	2,011	1,998	1,998	15,846
Benefit Type	Level	19,870	16,313	26,151	25,485	27,976	26,391	26,109	25,589
	Increasing	21,381	18,106	28,413	28,844	29,926	29,590	28,901	29,225
	Decreasing	5	7	7	7	7	5	5	5
Medical Evidence	Medical	7,626	6,554	9,478	8,787	8,787	7,985	7,985	6,903
	Non-medical	7,269	6,680	7,146	6,657	6,657	6,289	6,289	5,698
	Non-selection	23,530	18,929	22,223	21,115	24,688	22,946	21,975	21,746
	Unknown	2,831	2,263	15,724	17,777	17,777	18,766	18,766	20,472
Premium Type	Level annual	19,005	16,442	26,664	25,954	25,987	24,868	23,897	22,706
	Recurrent single	20,216	15,389	25,312	25,756	29,296	29,401	29,401	30,245
	Increasing annual	0	0	0	0	0	0	0	0
	Other	2,035	2,595	2,595	2,626	2,626	1,717	1,717	1,868
Underwriting Impairment	No extra risk	38,504	32,258	50,830	50,903	54,476	52,781	52,781	52,641
	Hypertension etc.	35	31	31	27	27	19	19	14
	Neurosis	13	10	8	14	14	16	16	14
	Unknown	2,246	1,752	2,835	2,456	2,456	2,181	1,210	1,053
	Other	458	375	867	936	936	989	989	1,097
Total		41,256	34,426	54,571	54,336	57,909	55,986	55,015	54,819

Appendix 2

Table 1. Group PHI polices, 1979-82: Aggregate data: number of claims during each year, analysed according to different attributes.

Attribute		1979	1980	1981	1982
Sex	Male	787	904	998	1196
	Female	102	132	161	221
Country	UK	806	949	1057	1304
	Republic of Ireland	81	86	102	113
	Isle of Man	0	0	0	0
	Channel Islands	2	1	0	0
Occupational Rating	None	852	1019	1138	1389
	Rated	37	17	21	28
	Unknown	0	0	0	0
Benefit Type	Level	518	544	574	711
	Increasing	371	492	584	703
	Decreasing	0	0	1	3
Medical Evidence	Medical	68	44	56	64
	Non-medical	73	77	71	69
	Non-selection limit applies	652	813	918	1,196
	Unknown	96	102	114	88
Premium Type	Level annual	207	179	176	218
	Recurrent single	671	847	974	1169
	Increasing annual	0	0	0	0
	Other	11	10	9	30

Appendix 2 (continued)

Table 1. (continued) Group PHI polices, 1979-82: Aggregate data: number of claims during each year, analysed according to different attributes.

Attribute		1979	1980	1981	1982
Impairment Type	No extra risk	814	991	1113	1365
	Hypertension etc.	2	1	0	0
	Neurosis	0	0	0	0
	Unknown	67	37	40	46
	Others	6	7	6	6
Mode of Commencement	Continuation	557	659	766	1025
	New claim	318	356	373	363
	Interrupted claim	0	1	5	3
	Revival of claim	3	3	1	2
	Benefit rate changed	11	17	14	24
Rate of Benefit	Full rate	872	1008	1122	1371
	Reduced rate	17	28	37	46
Mode of Cessation	Current claim	661	760	925	1156
	Policy expired	33	52	43	36
	Death	44	59	40	54
	Recovery	138	139	133	123
	Lump sum paid	0	1	2	1
	Ex gratia commutation	0	1	0	4
	Benefit rate changed	7	13	8	19
	Other	6	11	8	24
Total		889	1036	1159	1417

APPENDIX 2 (continued)

Table 2. Group PHI polices, 1983-86: Aggregate data: number of claims during each year, analysed according to different attributes.

Attribute		1983	1984	1985	1986
Sex	Male	614	598	612	629
	Female	75	95	103	94
Country	UK	527	549	581	543
	Republic of Ireland	162	144	134	179
	Isle of Man	0	0	0	0
	Channel Islands	0	0	0	1
Occupational Rating	None	650	655	671	604
	Rated	38	37	43	102
	Unknown	1	1	1	17
Benefit Type	Level	403	386	384	365
	Increasing	285	303	325	357
	Decreasing	1	4	6	1
Medical Evidence	Medical	91	100	91	95
	Non-medical	109	103	110	102
	Non-selection limit applies	395	390	423	401
	Unknown	94	100	91	125
Premium Type	Level annual	303	327	307	296
	Recurrent single	363	327	370	389
	Increasing annual	0	0	0	0
	Other	23	39	38	38
Impairment Type	No extra risk	676	682	704	660
	Hypertension etc.	2	2	1	0
	Neurosis	4	3	2	3
	Unknown	0	0	0	50
	Others	7	6	8	10

APPENDIX 2 (continued)

Table 2. (continued) Group PHI polices, 1983-86: Aggregate data: number of claims during each year, analysed according to different attributes.

Attribute		1983	1984	1985	1986
Mode of Commencement	Continuation	422	487	537	524
	New claim	224	181	155	186
	Interrupted claim	0	0	0	0
	Revival of claim	6	1	6	4
	Benefit rate changed	37	24	17	9
Rate of Benefit	Full rate	661	665	685	685
	Reduced rate	28	28	30	38
Mode of Cessation	Current claim	507	521	555	556
	Policy expired	37	32	48	50
	Death	28	30	23	19
	Recovery	89	87	63	79
	Lump sum paid	2	2	0	0
	Ex gratia commutation	0	0	1	0
	Benefit rate changed	24	13	13	7
	Other	2	8	12	12
Total		689	693	715	723

Appendix 3

Group PHI policies 1979-82
All offices - Aggregate sickness experience
Table A1. Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	1	6	30	92	105	130	126	137	99	36	762
Actual weeks of sickness	0	0	0	0	5	2	19	29	20	7	82
Actual rate of sickness	0.000	0.000	0.000	0.000	0.048	0.015	0.151	0.212	0.202	0.194	0.108
Expected weeks of sickness	0	1	4	14	18	25	27	34	29	14	166
Actual/Expected %		0.0	0.0	0.0	27.8	8.0	70.4	85.3	69.0	50.0	49.4
Sickness period 4/9											
Exposed to risk	0	5	29	89	102	128	126	137	98	36	750
Actual weeks of sickness	0	0	0	0	10	0	33	25	20	14	102
Actual rate of sickness		0.000	0.000	0.000	0.098	0.000	0.262	0.182	0.204	0.389	0.136
Expected weeks of sickness		0	1	6	9	16	21	30	30	17	130
Actual/Expected %			0.0	0.0	111.1	0.0	157.1	83.3	66.7	82.4	78.5
Sickness period 13/13											
Exposed to risk	0	5	27	87	99	126	125	134	98	36	737
Actual weeks of sickness	0	0	0	0	14	0	20	28	11	28	101
Actual rate of sickness		0.000	0.000	0.000	0.141	0.000	0.160	0.209	0.112	0.778	0.137
Expected weeks of sickness		0	0	2	4	7	9	14	17	13	66
Actual/Expected %				0.0	350.0	0.0	222.2	200.0	64.7	215.4	153.0
Sickness period 26/26											
Exposed to risk	0	5	26	83	94	123	123	132	95	36	717
Actual weeks of sickness	0	0	0	0	2	0	16	30	26	24	98
Actual rate of sickness		0.000	0.000	0.000	0.021	0.000	0.130	0.227	0.274	0.667	0.137
Expected weeks of sickness		0	0	2	3	7	10	16	21	17	76
Actual/Expected %				0.0	66.7	0.0	160.0	187.5	123.8	141.2	128.9

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A1. (continued) Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	0	5	23	78	88	117	121	129	95	36	692
Actual weeks of sickness	0	0	0	0	0	0	0	22	90	23	135
Actual rate of sickness		0.000	0.000	0.000	0.000	0.000	0.000	0.171	0.947	0.639	0.195
Expected weeks of sickness		0	0	1	2	5	9	20	32	27	96
Actual/Expected %				0.0	0.0	0.0	0.0	110.0	281.3	85.2	140.6
Sickness period 104/all											
Exposed to risk	0	3	16	61	78	109	116	123	90	36	632
Actual weeks of sickness	0	0	0	0	0	0	52	52	64	52	220
Actual rate of sickness		0.000	0.000	0.000	0.000	0.000	0.448	0.423	0.711	1.444	0.348
Expected weeks of sickness		0	0	1	2	6	17	45	78	75	224
Actual/Expected %				0.0	0.0	0.0	305.9	115.6	82.1	69.3	98.2

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A2. Males - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 4/9											
Exposed to risk	25	168	410	878	889	626	587	489	359	157	4,588
Actual weeks of sickness	0	2	26	45	32	44	53	76	79	51	408
Actual rate of sickness	0.000	0.012	0.063	0.051	0.036	0.070	0.090	0.155	0.220	0.325	0.089
Expected weeks of sickness	0	4	18	55	73	64	75	83	91	70	533
Actual/Expected %		50.0	144.4	81.8	43.8	68.8	70.7	91.6	86.8	72.9	76.5
Sickness period 13/13											
Exposed to risk	22	162	398	863	880	620	584	487	358	157	4,531
Actual weeks of sickness	0	0	12	29	29	32	35	83	68	53	341
Actual rate of sickness	0.000	0.000	0.030	0.034	0.033	0.052	0.060	0.170	0.190	0.338	0.075
Expected weeks of sickness	0	1	7	26	36	32	38	44	56	60	300
Actual/Expected %		0.0	171.4	111.5	80.6	100.0	92.1	188.6	121.4	88.3	113.7
Sickness period 26/26											
Exposed to risk	19	151	380	836	865	607	575	482	355	157	4,427
Actual weeks of sickness	0	0	0	28	23	54	18	107	78	50	358
Actual rate of sickness	0.000	0.000	0.000	0.033	0.027	0.089	0.031	0.222	0.220	0.318	0.081
Expected weeks of sickness	0	2	6	15	22	23	36	53	74	67	298
Actual/Expected %		0.0	0.0	186.7	104.5	234.8	50.0	201.9	105.4	74.6	120.1
Sickness period 52/52											
Exposed to risk	14	131	345	778	829	578	556	475	349	157	4,212
Actual weeks of sickness	0	0	0	0	0	30	13	158	74	0	275
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.052	0.023	0.333	0.212	0.000	0.065
Expected weeks of sickness	0	1	3	10	16	20	36	63	100	99	348
Actual/Expected %		0.0	0.0	0.0	0.0	150.0	36.1	250.8	74.0	0.0	79.0
Sickness period 104/all											
Exposed to risk	6	86	270	653	739	513	505	454	336	152	3,714
Actual weeks of sickness	0	0	0	0	0	0	161	445	107	300	1,013
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.319	0.980	0.318	1.974	0.273
Expected weeks of sickness	0	3	4	10	17	26	66	145	257	278	806
Actual/Expected %		0.0	0.0	0.0	0.0	0.0	243.9	306.9	41.6	107.9	125.7

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A3. Males - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 13/13											
Exposed to risk	481	3,286	8,056	13,210	12,917	10,378	8,458	6,572	4,775	2,492	70,625
Actual weeks of sickness	13	75	60	130	220	289	424	435	613	512	2,771
Actual rate of sickness	0.027	0.023	0.007	0.010	0.017	0.028	0.050	0.066	0.128	0.205	0.039
Expected weeks of sickness	2	17	80	213	310	354	407	462	527	485	2,857
Actual/Expected %	650.0	441.2	75.0	61.0	71.0	81.6	104.2	94.2	116.3	105.6	97.0
Sickness period 26/26											
Exposed to risk	409	2,954	7,454	12,489	12,312	9,957	8,143	6,366	4,640	2,434	67,158
Actual weeks of sickness	8	113	55	130	236	308	459	603	830	859	3,601
Actual rate of sickness	0.020	0.038	0.007	0.010	0.019	0.031	0.056	0.095	0.179	0.353	0.054
Expected weeks of sickness	7	42	99	190	258	325	448	607	748	617	3,341
Actual/Expected %	114.3	269.0	55.6	68.4	91.5	94.8	102.5	99.3	111.0	139.2	107.8
Sickness period 52/52											
Exposed to risk	276	2,301	6,230	10,962	11,026	9,038	7,465	5,910	4,347	2,304	59,859
Actual weeks of sickness	0	124	7	87	234	458	542	852	1,413	1,319	5,036
Actual rate of sickness	0.000	0.054	0.001	0.008	0.021	0.051	0.073	0.144	0.325	0.572	0.084
Expected weeks of sickness	2	19	56	130	200	285	451	734	1,163	1,355	4,395
Actual/Expected %	0.0	652.6	12.5	66.9	117.0	160.7	120.2	116.1	121.5	97.3	114.6
Sickness period 104/all											
Exposed to risk	95	1,230	3,942	7,848	8,328	7,058	6,036	4,885	3,676	1,983	45,081
Actual weeks of sickness	0	267	0	73	430	742	440	1,472	2,003	3,622	9,049
Actual rate of sickness	0.000	0.217	0.000	0.009	0.052	0.105	0.073	0.301	0.545	1.827	0.201
Expected weeks of sickness	7	35	59	115	190	348	768	1,522	2,734	3,522	9,300
Actual/Expected %	0.0	762.9	0.0	63.5	226.3	213.2	57.3	96.7	73.3	102.8	97.3

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A4. Males - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	948	12,903	34,517	52,613	51,164	41,657	38,168	33,485	29,042	16,304	310,801
Actual weeks of sickness	0	57	520	720	666	941	1,462	2,238	4,731	5,055	16,390
Actual rate of sickness	0.000	0.004	0.015	0.014	0.013	0.023	0.038	0.067	0.163	0.310	0.053
Expected weeks of sickness	8	99	267	477	623	769	1,189	1,927	3,333	3,967	12,659
Actual/Expected %	0.0	57.6	194.8	150.9	106.9	122.4	123.0	116.1	141.9	127.4	129.5
Sickness period 52/52											
Exposed to risk	596	10,052	29,520	47,086	46,619	38,188	35,289	31,185	27,206	15,461	281,202
Actual weeks of sickness	0	31	625	1,046	1,487	1,243	2,028	4,331	8,350	9,264	28,405
Actual rate of sickness	0.000	0.003	0.021	0.022	0.032	0.033	0.057	0.139	0.307	0.599	0.101
Expected weeks of sickness	3	54	175	369	560	796	1,407	2,558	4,807	6,005	16,734
Actual/Expected %	0.0	57.4	357.1	283.5	265.5	156.2	144.1	169.3	173.7	154.3	169.7
Sickness period 104/all											
Exposed to risk	168	5,209	19,588	35,360	36,715	30,671	28,955	26,021	22,886	13,300	218,873
Actual weeks of sickness	0	5	565	601	1,619	2,642	4,607	8,329	19,612	25,251	63,231
Actual rate of sickness	0.000	0.001	0.029	0.017	0.044	0.086	0.159	0.320	0.857	1.899	0.289
Expected weeks of sickness	*8*	*109*	*217*	*382*	*618*	*1,112*	*2,712*	*5,965*	*12,527*	*17,382*	*41,032*
Actual/Expected %	0.0	4.6	260.4	157.3	262.0	237.6	169.9	139.6	156.6	145.3	154.1

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A5. Males - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	37	462	2,047	4,654	5,916	5,755	6,028	5,540	4,584	2,417	37,440
Actual weeks of sickness	0	0	0	0	95	167	176	509	936	836	2,719
Actual rate of sickness	0.000	0.000	0.000	0.000	0.016	0.029	0.029	0.092	0.204	0.346	0.073
Expected weeks of sickness	0	2	12	36	71	120	240	454	810	939	2,684
Actual/Expected %		0.0	0.0	0.0	133.8	139.2	73.3	112.1	115.6	89.0	101.3
Sickness period 104/all											
Exposed to risk	11	236	1,281	3,308	4,610	4,657	5,023	4,678	3,943	2,053	29,800
Actual weeks of sickness	0	0	0	0	208	502	451	1,507	3,157	3,140	8,965
Actual rate of sickness	0.000	0.000	0.000	0.000	0.045	0.108	0.090	0.322	0.801	1.529	0.301
Expected weeks of sickness	0	1	8	26	55	97	200	384	697	797	2,265
Actual/Expected %		0.0	0.0	0.0	378.2	517.5	225.5	392.4	452.9	394.0	395.8

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A6. Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	1	6	30	92	105	130	126	137	99	36	762
Actual weeks of sickness	0	0	0	0	5	2	19	29	20	7	82
Actual rate of sickness	0.000	0.000	0.000	0.000	0.048	0.015	0.151	0.212	0.202	0.194	0.108
Expected weeks of sickness	0	1	4	14	18	25	27	34	29	14	166
Actual/Expected %		0.0	0.0	0.0	27.8	8.0	70.4	85.3	69.0	50.0	49.4
Sickness period 4/9											
Exposed to risk	25	173	439	967	991	754	713	626	457	193	5,338
Actual weeks of sickness	0	2	26	45	42	44	86	101	99	65	510
Actual rate of sickness	0.000	0.012	0.059	0.047	0.042	0.058	0.121	0.161	0.217	0.337	0.096
Expected weeks of sickness	0	4	19	61	82	80	96	113	121	87	663
Actual/Expected %		50.0	136.8	73.8	51.2	55.0	89.6	89.4	81.8	74.7	76.9
Sickness period 13/13											
Exposed to risk	503	3,453	8,481	14,160	13,896	11,124	9,167	7,193	5,231	2,685	75,893
Actual weeks of sickness	13	75	72	159	263	321	479	546	692	593	3,213
Actual rate of sickness	0.026	0.022	0.008	0.011	0.019	0.029	0.052	0.076	0.132	0.221	0.042
Expected weeks of sickness	2	18	87	241	350	393	454	520	600	558	3,223
Actual/Expected %	650.0	416.7	82.8	66.0	75.1	81.7	105.5	105.0	115.3	106.3	99.7
Sickness period 26/26											
Exposed to risk	1,376	16,013	42,377	66,021	64,435	52,344	47,009	40,465	34,132	18,931	383,103
Actual weeks of sickness	8	170	575	878	927	1,303	1,955	2,978	5,665	5,988	20,447
Actual rate of sickness	0.006	0.011	0.014	0.013	0.014	0.025	0.042	0.074	0.166	0.316	0.053
Expected weeks of sickness	15	143	372	684	906	1,124	1,683	2,603	4,176	4,668	16,374
Actual/Expected %	53.3	118.9	154.6	128.4	102.3	115.9	116.2	114.4	135.7	128.3	124.9

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A6. (continued) Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	923	12,951	38,165	63,558	64,478	53,676	49,459	43,239	36,581	20,375	383,405
Actual weeks of sickness	0	155	632	1,133	1,816	1,898	2,759	5,872	10,863	11,442	36,570
Actual rate of sickness	0.000	0.012	0.017	0.018	0.028	0.035	0.056	0.136	0.297	0.562	0.095
Expected weeks of sickness	5	76	246	546	849	1,226	2,143	3,829	6,912	8,425	24,257
Actual/Expected %	0.0	203.9	256.9	207.5	213.9	154.8	128.7	153.4	157.2	135.8	150.8
Sickness period 104/all											
Exposed to risk	280	6,764	25,097	47,230	50,470	43,008	40,635	36,161	30,931	17,524	298,100
Actual weeks of sickness	0	272	565	674	2,257	3,886	5,711	11,805	29,943	32,365	82,478
Actual rate of sickness	0.000	0.040	0.023	0.014	0.045	0.090	0.141	0.326	0.806	1.847	0.277
Expected weeks of sickness	15	148	288	534	882	1,589	3,763	8,061	16,293	22,054	53,627
Actual/Expected %	0.0	183.8	196.2	126.2	255.9	244.6	151.8	146.4	153.1	146.8	153.8

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A7. Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	14	7	9	11	8	15	7	71
Actual weeks of sickness	0	0	0	0	0	4	2	0	0	6
Actual rate of sickness			0.000	0.000	0.000	0.364	0.250	0.000	0.000	0.085
Expected weeks of sickness			2	1	2	2	2	4	2	15
Actual/Expected %			0.0	0.0	0.0	200.0	100.0	0.0	0.0	40.0
Sickness period 4/9										
Exposed to risk	0	0	13	7	8	8	7	15	7	65
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			1	0	1	1	1	3	2	9
Actual/Expected %			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Sickness period 13/13										
Exposed to risk	0	0	12	7	8	8	7	15	7	64
Actual weeks of sickness	0	0	0	0	0	0	0	0	4	4
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.571	0.063
Expected weeks of sickness			0	0	0	0	1	2	1	4
Actual/Expected %							0.0	0.0	400.0	100.0
Sickness period 26/26										
Exposed to risk	0	0	11	6	8	8	7	15	7	62
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	1	2	2	5
Actual/Expected %							0.0	0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A7. (continued) Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	0	0	10	6	8	8	7	15	7	61
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	1	2	2	5
Actual/Expected %							0.0	0.0	0.0	0.0
Sickness period 104/all										
Exposed to risk	0	0	7	4	6	8	6	15	7	53
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	1	5	6	12
Actual/Expected %							0.0	0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A8. Females - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 4/9										
Exposed to risk	10	43	46	78	82	83	92	50	37	521
Actual weeks of sickness	0	0	4	10	4	13	24	10	16	81
Actual rate of sickness	0.000	0.000	0.087	0.128	0.049	0.157	0.261	0.200	0.432	0.155
Expected weeks of sickness	0	1	2	5	7	8	12	8	9	52
Actual/Expected %		0.0	200.0	200.0	57.1	162.5	200.0	125.0	177.8	155.8
Sickness period 13/13										
Exposed to risk	9	41	45	75	81	82	92	50	37	512
Actual weeks of sickness	0	0	0	0	0	13	13	14	13	53
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.159	0.141	0.280	0.351	0.104
Expected weeks of sickness	0	0	1	2	3	4	6	5	6	27
Actual/Expected %			0.0	0.0	0.0	325.0	216.7	280.0	216.7	196.3
Sickness period 26/26										
Exposed to risk	6	36	41	72	80	80	89	49	35	488
Actual weeks of sickness	0	0	0	0	0	26	1	31	23	81
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.325	0.011	0.633	0.657	0.166
Expected weeks of sickness	0	0	1	1	2	3	6	5	7	25
Actual/Expected %			0.0	0.0	0.0	866.7	16.7	620.0	328.6	324.0
Sickness period 52/52										
Exposed to risk	4	31	36	66	76	76	87	48	34	458
Actual weeks of sickness	0	0	0	0	0	42	0	27	16	85
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.553	0.000	0.563	0.471	0.186
Expected weeks of sickness	0	0	0	1	1	3	6	6	10	27
Actual/Expected %				0.0	0.0	1,400.0	0.0	450.0	160.0	314.8
Sickness period 104/all										
Exposed to risk	1	14	25	51	62	64	77	43	32	369
Actual weeks of sickness	0	0	0	0	0	0	364	312	181	857
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	4.727	7.256	5.656	2.322
Expected weeks of sickness	0	0	0	1	1	3	10	14	24	53
Actual/Expected %				0.0	0.0	0.0	3,640.0	2,228.6	754.2	1,617.0

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A9. Females - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 13/13										
Exposed to risk	513	2,145	2,993	2,326	1,956	1,596	1,467	1,205	799	15,000
Actual weeks of sickness	22	31	66	53	37	35	64	117	55	480
Actual rate of sickness	0.043	0.014	0.022	0.023	0.019	0.022	0.044	0.097	0.069	0.032
Expected weeks of sickness	2	11	30	37	47	54	71	85	88	425
Actual/Expected %	1,100.0	281.8	220.0	143.2	78.7	64.8	90.1	137.6	62.5	112.9
Sickness period 26/26										
Exposed to risk	436	1,918	2,763	2,174	1,834	1,512	1,393	1,159	772	13,961
Actual weeks of sickness	26	38	102	65	52	58	51	143	187	722
Actual rate of sickness	0.060	0.020	0.037	0.030	0.028	0.038	0.037	0.123	0.242	0.052
Expected weeks of sickness	8	28	37	33	38	49	77	110	124	504
Actual/Expected %	325.0	135.7	275.7	197.0	136.8	118.4	66.2	130.0	150.8	143.3
Sickness period 52/52										
Exposed to risk	293	1,471	2,287	1,859	1,584	1,327	1,232	1,053	712	11,818
Actual weeks of sickness	45	37	162	0	67	101	134	172	343	1,061
Actual rate of sickness	0.154	0.025	0.071	0.000	0.042	0.076	0.109	0.163	0.482	0.090
Expected weeks of sickness	2	12	21	22	29	42	74	131	191	524
Actual/Expected %	2,250.0	308.3	771.4	0.0	231.0	240.5	181.1	131.3	179.6	202.5
Sickness period 104/all										
Exposed to risk	97	754	1,375	1,228	1,094	945	899	815	569	7,776
Actual weeks of sickness	0	0	79	0	13	149	341	231	778	1,591
Actual rate of sickness	0.000	0.000	0.057	0.000	0.012	0.158	0.379	0.283	1.367	0.205
Expected weeks of sickness	7	21	21	18	25	47	114	254	423	930
Actual/Expected %	0.0	0.0	376.2	0.0	52.0	317.0	299.1	90.9	183.9	171.1

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A10. Females - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	1,053	10,422	13,532	10,187	7,781	7,097	7,188	6,988	5,223	69,471
Actual weeks of sickness	0	88	108	70	243	382	357	531	648	2,427
Actual rate of sickness	0.000	0.008	0.008	0.007	0.031	0.054	0.050	0.076	0.124	0.035
Expected weeks of sickness	9	80	105	92	95	131	224	402	599	1,737
Actual/Expected %	0.0	110.0	102.9	76.1	255.8	291.6	159.4	132.1	108.2	139.7
Sickness period 52/52										
Exposed to risk	656	8,108	11,553	8,919	6,838	6,267	6,472	6,381	4,885	60,079
Actual weeks of sickness	0	116	152	211	363	621	445	1,000	1,155	4,063
Actual rate of sickness	0.000	0.014	0.013	0.024	0.053	0.099	0.069	0.157	0.236	0.068
Expected weeks of sickness	4	43	69	70	82	131	258	523	863	2,043
Actual/Expected %	0.0	269.8	220.3	301.4	442.7	474.0	172.5	191.2	133.8	198.9
Sickness period 104/all										
Exposed to risk	192	4,092	7,468	6,271	4,866	4,532	4,938	5,022	4,034	41,415
Actual weeks of sickness	0	194	228	299	122	1,224	1,028	2,105	4,452	9,652
Actual rate of sickness	0.000	0.047	0.031	0.048	0.025	0.270	0.208	0.419	1.104	0.233
Expected weeks of sickness	10	85	83	68	82	164	462	1,151	2,208	4,313
Actual/Expected %	0.0	228.2	274.7	439.7	148.8	746.3	222.5	182.9	201.6	223.8

APPENDIX 3 (continued)

Group PHI policies 1979-82

All offices - Aggregate sickness experience

Table A11. Females - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	15	348	647	586	436	509	536	540	314	3,931
Actual weeks of sickness	0	0	0	0	0	0	52	102	125	279
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.189	0.398	0.071
Expected weeks of sickness	0	2	4	5	5	11	21	44	55	147
Actual/Expected %		0.0	0.0	0.0	0.0	0.0	247.6	231.8	227.3	189.8
Sickness period 104/all										
Exposed to risk	3	154	398	407	321	396	436	453	269	2,837
Actual weeks of sickness	0	0	0	0	52	0	87	408	87	634
Actual rate of sickness	0.000	0.000	0.000	0.000	0.162	0.000	0.200	0.901	0.323	0.223
Expected weeks of sickness	0	3	4	4	5	14	41	104	147	322
Actual/Expected %		0.0	0.0	0.0	1,040.0	0.0	212.2	392.3	59.2	196.9

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A12. Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	14	7	9	11	8	15	7	71
Actual weeks of sickness	0	0	0	0	0	4	2	0	0	6
Actual rate of sickness			0.000	0.000	0.000	0.364	0.250	0.000	0.000	0.085
Expected weeks of sickness			2	1	2	2	2	4	2	15
Actual/Expected %			0.0	0.0	0.0	200.0	100.0	0.0	0.0	40.0
Sickness period 4/9										
Exposed to risk	10	43	59	85	90	91	99	65	44	586
Actual weeks of sickness	0	0	4	10	4	13	24	10	16	81
Actual rate of sickness	0.000	0.000	0.068	0.118	0.044	0.143	0.242	0.154	0.364	0.138
Expected weeks of sickness	0	1	3	5	8	9	13	11	11	61
Actual/Expected %		0.0	133.3	200.0	50.0	144.4	184.6	90.9	145.5	132.8
Sickness period 13/13										
Exposed to risk	522	2,186	3,050	2,408	2,045	1,686	1,566	1,270	843	15,576
Actual weeks of sickness	22	31	66	53	37	48	77	131	72	537
Actual rate of sickness	0.042	0.014	0.022	0.022	0.018	0.028	0.049	0.103	0.085	0.034
Expected weeks of sickness	2	11	31	39	50	58	78	92	95	456
Actual/Expected %	1,100.0	281.8	212.9	135.9	74.0	82.8	98.7	142.4	75.8	117.8
Sickness period 26/26										
Exposed to risk	1,495	12,376	16,347	12,439	9,703	8,697	8,677	8,211	6,037	83,982
Actual weeks of sickness	26	126	210	135	295	466	409	705	858	3,230
Actual rate of sickness	0.017	0.010	0.013	0.011	0.030	0.054	0.047	0.086	0.142	0.038
Expected weeks of sickness	17	108	143	126	135	183	308	519	732	2,271
Actual/Expected %	152.9	116.7	146.9	107.1	218.5	254.6	132.8	135.8	117.2	142.2

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A12. (continued) Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	968	9,958	14,533	11,436	8,942	8,187	8,334	8,037	5,952	76,347
Actual weeks of sickness	45	153	314	211	430	764	631	1,301	1,639	5,488
Actual rate of sickness	0.046	0.015	0.022	0.018	0.048	0.093	0.076	0.162	0.275	0.072
Expected weeks of sickness	6	57	94	98	117	187	360	706	1,121	2,746
Actual/Expected %	750.0	268.4	334.0	215.3	367.5	408.6	175.3	184.3	146.2	199.9
Sickness period 104/all										
Exposed to risk	293	5,014	9,273	7,961	6,349	5,945	6,356	6,348	4,911	52,450
Actual weeks of sickness	0	194	307	299	187	1,373	1,820	3,056	5,498	12,734
Actual rate of sickness	0.000	0.039	0.033	0.038	0.029	0.231	0.286	0.481	1.120	0.243
Expected weeks of sickness	17	109	108	91	113	228	628	1,528	2,808	5,630
Actual/Expected %	0.0	178.0	284.3	328.6	165.5	602.2	289.8	200.0	195.8	226.2

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A13. Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 1 week											
Exposed to risk	1	6	30	92	105	130	126	137	99	36	762
Number of claim inceptions	0	0	1	0	3	3	7	11	10	7	42
Central claim inception rate	0.000	0.000	0.033	0.000	0.029	0.023	0.056	0.080	0.101	0.194	0.055
Expected claim inceptions	0	1	4	11	13	17	16	19	15	6	102
Actual/Expected %		0.0	25.0	0.0	23.1	17.6	43.8	57.9	66.7	116.7	41.2
Deferred period 4 weeks											
Exposed to risk	25	168	410	878	889	626	587	489	359	157	4,588
Number of claim inceptions	0	1	4	8	4	4	7	9	12	7	56
Central claim inception rate	0.000	0.006	0.010	0.009	0.004	0.006	0.012	0.018	0.033	0.045	0.012
Expected claim inceptions	0	1	4	11	14	11	13	14	14	10	92
Actual/Expected %		100.0	100.0	72.7	28.6	36.4	53.8	64.3	85.7	70.0	60.9
Deferred period 13 weeks											
Exposed to risk	481	3,286	8,056	13,210	12,917	10,378	8,458	6,572	4,775	2,492	70,625
Number of claim inceptions	1	7	8	13	25	33	42	47	62	52	290
Central claim inception rate	0.002	0.002	0.001	0.001	0.002	0.003	0.005	0.007	0.013	0.021	0.004
Expected claim inceptions	0	2	10	26	36	39	42	45	50	45	295
Actual/Expected %		350.0	80.0	50.0	69.4	84.6	100.0	104.4	124.0	115.6	98.3
Deferred period 26 weeks											
Exposed to risk	948	12,903	34,517	52,613	51,164	41,657	38,168	33,485	29,042	16,304	310,801
Number of claim inceptions	0	5	25	36	35	47	73	102	211	224	758
Central claim inception rate	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.003	0.007	0.014	0.002
Expected claim inceptions	1	6	17	29	37	43	62	95	152	166	608
Actual/Expected %	0.0	83.3	147.1	124.1	94.6	109.3	117.7	107.4	138.8	134.9	124.7

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A13. (continued) Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 52 weeks											
Exposed to risk	37	462	2,047	4,654	5,916	5,755	6,028	5,540	4,584	2,417	37,440
Number of claim inceptions	0	0	0	0	3	3	4	10	24	17	61
Central claim inception rate	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002	0.005	0.007	0.002
Expected claim inceptions	0	0	1	3	4	6	10	16	24	25	89
Actual/Expected %			0.0	0.0	75.0	50.0	40.0	62.5	100.0	68.0	68.5
All deferred periods											
Exposed to risk	1,492	16,825	45,060	71,447	70,991	58,546	53,367	46,223	38,859	21,406	424,216
Number of claim inceptions	1	13	38	57	70	90	133	179	319	307	1,207
Central claim inception rate	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.004	0.008	0.014	0.003
Expected claim inceptions	1	10	36	80	104	116	143	189	255	252	1,186
Actual/Expected %	100.0	130.0	105.6	71.3	67.3	77.6	93.0	94.7	125.1	121.8	101.8

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A14. Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 1 week										
Exposed to risk	0	0	14	7	9	11	8	15	7	71
Number of claim inceptions	0	0	0	0	0	1	1	0	0	2
Central claim inception rate			0.000	0.000	0.000	0.091	0.125	0.000	0.000	0.028
Expected claim inceptions			2	1	1	1	1	2	1	9
Actual/Expected %			0.0	0.0	0.0	100.0	100.0	0.0	0.0	22.2
Deferred period 4 weeks										
Exposed to risk	10	43	46	78	82	83	92	50	37	521
Number of claim inceptions	0	0	1	1	1	1	3	1	2	10
Central claim inception rate	0.000	0.000	0.022	0.013	0.012	0.012	0.033	0.020	0.054	0.019
Expected claim inceptions	0	0	0	1	1	2	2	1	1	8
Actual/Expected %				100.0	100.0	50.0	150.0	100.0	200.0	125.0
Deferred period 13 weeks										
Exposed to risk	513	2,145	2,993	2,326	1,956	1,596	1,467	1,205	799	15,000
Number of claim inceptions	2	5	7	7	7	7	6	12	7	60
Central claim inception rate	0.004	0.002	0.002	0.003	0.004	0.004	0.004	0.010	0.009	0.004
Expected claim inceptions	0	1	4	5	5	6	7	8	8	44
Actual/Expected %		500.0	175.0	140.0	140.0	116.7	85.7	150.0	87.5	136.4
Deferred period 26 weeks										
Exposed to risk	1,053	10,422	13,532	10,187	7,781	7,097	7,188	6,988	5,223	69,471
Number of claim inceptions	0	4	6	4	11	18	24	26	33	126
Central claim inception rate	0.000	0.000	0.000	0.000	0.001	0.003	0.003	0.004	0.006	0.002
Expected claim inceptions	1	5	7	6	6	7	12	20	27	91
Actual/Expected %	0.0	80.0	85.7	66.7	183.3	257.1	200.0	130.0	122.2	138.5

APPENDIX 3 (continued)

Group PHI policies 1979-82: All offices - Aggregate sickness experience

Table A14. (continued) Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 52 weeks										
Exposed to risk	15	348	647	586	436	509	536	540	314	3,931
Number of claim inceptions	0	0	0	0	0	0	1	2	3	6
Central claim inception rate	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.004	0.010	0.002
Expected claim inceptions	0	0	0	0	0	1	1	2	2	6
Actual/Expected %						0.0	100.0	100.0	150.0	100.0
All deferred periods										
Exposed to risk	1,591	12,958	17,232	13,184	10,264	9,296	9,291	8,798	6,380	88,994
Number of claim inceptions	2	9	14	12	19	27	35	41	45	204
Central claim inception rate	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.005	0.007	0.002
Expected claim inceptions	1	6	13	13	13	17	23	33	39	158
Actual/Expected %	200.0	150.0	107.7	92.3	146.2	158.8	152.2	124.2	115.4	129.1

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B1. Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	0	4	6	12	45	51	62	61	71	40	352
Actual weeks of sickness	0	0	0	0	7	2	5	9	13	18	54
Actual rate of sickness		0.000	0.000	0.000	0.156	0.039	0.081	0.148	0.183	0.450	0.153
Expected weeks of sickness		0	1	2	8	10	13	15	21	15	85
Actual/Expected %			0.0	0.0	87.5	20.0	38.5	60.0	61.9	120.0	63.5
Sickness period 4/9											
Exposed to risk	0	4	5	11	45	51	62	61	71	40	350
Actual weeks of sickness	0	0	0	0	13	2	9	19	18	34	95
Actual rate of sickness		0.000	0.000	0.000	0.289	0.039	0.145	0.311	0.254	0.850	0.271
Expected weeks of sickness		0	0	1	4	6	10	13	22	19	75
Actual/Expected %				*0.0*	*325.0*	*33.3*	*90.0*	*146.2*	*81.8*	*178.9*	*126.7*
Sickness period 13/13											
Exposed to risk	0	4	5	11	45	51	62	61	71	40	350
Actual weeks of sickness	0	0	0	0	14	0	0	27	14	40	95
Actual rate of sickness		0.000	0.000	0.000	0.311	0.000	0.000	0.443	0.197	1.000	0.271
Expected weeks of sickness		0	0	0	2	3	4	6	12	14	41
Actual/Expected %					700.0	0.0	0.0	450.0	116.7	285.7	231.7
Sickness period 26/26											
Exposed to risk	0	4	5	11	45	51	62	61	71	40	350
Actual weeks of sickness	0	0	0	0	19	7	0	26	0	56	108
Actual rate of sickness		0.000	0.000	0.000	0.422	0.137	0.000	0.426	0.000	1.400	0.309
Expected weeks of sickness		0	0	0	2	3	5	8	*16*	19	53
Actual/Expected %					950.0	233.3	0.0	325.0	0.0	294.7	203.8

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B1. (continued) Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	0	4	5	11	45	51	62	61	71	40	350
Actual weeks of sickness	0	0	0	0	14	14	0	37	46	52	163
Actual rate of sickness		0.000	0.000	0.000	0.311	0.275	0.000	0.607	0.648	1.300	0.466
Expected weeks of sickness		0	0	0	1	2	5	10	24	30	72
Actual/Expected %					1,400.0	700.0	0.0	370.0	191.7	173.3	226.4
Sickness period 104/all											
Exposed to risk	0	4	5	10	45	50	62	61	70	40	347
Actual weeks of sickness	0	0	0	0	0	0	0	219	188	239	646
Actual rate of sickness		0.000	0.000	0.000	0.000	0.000	0.000	3.590	2.686	5.975	1.862
Expected weeks of sickness		0	0	0	1	3	9	22	61	83	179
Actual/Expected %					0.0	0.0	0.0	995.5	308.2	288.0	360.9

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B2. Males - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 4/9											
Exposed to risk	14	126	322	585	820	692	518	429	418	178	4,102
Actual weeks of sickness	3	27	59	84	47	52	47	32	72	41	464
Actual rate of sickness	0.214	0.214	0.183	0.144	0.057	0.075	0.091	0.075	0.172	0.230	0.113
Expected weeks of sickness	0	1	4	13	30	37	41	53	92	86	357
Actual/Expected %		2,700.0	1,475.0	646.2	156.7	140.5	114.6	60.4	78.3	47.7	130.0
Sickness period 13/13											
Exposed to risk	14	121	310	572	812	688	517	428	418	178	4,058
Actual weeks of sickness	0	7	21	80	26	47	39	17	41	33	311
Actual rate of sickness	0.000	0.058	0.068	0.140	0.032	0.068	0.075	0.040	0.098	0.185	0.077
Expected weeks of sickness	0	1	4	9	19	28	40	68	142	133	444
Actual/Expected %		700.0	525.0	888.9	136.8	167.9	97.5	25.0	28.9	24.8	70.0
Sickness period 26/26											
Exposed to risk	12	114	294	554	800	682	512	426	417	178	3,989
Actual weeks of sickness	0	0	2	55	52	56	79	26	27	31	328
Actual rate of sickness	0.000	0.000	0.007	0.099	0.065	0.082	0.154	0.061	0.065	0.174	0.082
Expected weeks of sickness	1	4	5	10	21	39	76	155	363	370	1,044
Actual/Expected %	0.0	0.0	40.0	550.0	247.6	143.6	103.9	16.8	7.4	8.4	31.4
Sickness period 52/52											
Exposed to risk	9	95	258	516	777	665	504	423	415	178	3,840
Actual weeks of sickness	0	0	0	28	142	160	142	55	47	50	624
Actual rate of sickness	0.000	0.000	0.000	0.054	0.183	0.241	0.282	0.130	0.113	0.281	0.163
Expected weeks of sickness	0	1	2	7	15	23	33	57	119	113	370
Actual/Expected %		0.0	0.0	400.0	946.7	695.7	430.3	96.5	39.5	44.2	168.6
Sickness period 104/all											
Exposed to risk	2	64	188	425	711	619	479	409	403	177	3,477
Actual weeks of sickness	0	0	0	0	92	89	271	333	735	322	1,842
Actual rate of sickness	0.000	0.000	0.000	0.000	0.129	0.144	0.566	0.814	1.824	1.819	0.530
Expected weeks of sickness	0	2	3	6	17	31	63	131	308	323	884
Actual/Expected %		0.0	0.0	0.0	541.2	287.1	430.2	254.2	238.6	99.7	208.4

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B3. Males - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 13/13											
Exposed to risk	107	1,395	3,257	5,821	8,658	7,691	5,571	3,950	2,511	1,416	40,377
Actual weeks of sickness	0	40	89	111	263	276	283	383	356	256	2,057
Actual rate of sickness	0.000	0.029	0.027	0.019	0.030	0.036	0.051	0.097	0.142	0.181	0.051
Expected weeks of sickness	0	7	32	94	208	262	268	277	277	276	1,701
Actual/Expected %		571.4	278.1	118.1	126.4	105.3	105.6	138.3	128.5	92.8	120.9
Sickness period 26/26											
Exposed to risk	90	1,268	3,028	5,541	8,352	7,462	5,428	3,868	2,457	1,396	38,890
Actual weeks of sickness	0	22	71	107	248	310	316	444	526	521	2,565
Actual rate of sickness	0.000	0.017	0.023	0.019	0.030	0.042	0.058	0.115	0.214	0.373	0.066
Expected weeks of sickness	2	18	40	84	175	244	299	369	396	354	1,981
Actual/Expected %	0.0	122.2	177.5	127.4	141.7	127.0	105.7	120.3	132.8	147.2	129.5
Sickness period 52/52											
Exposed to risk	59	1,017	2,583	4,964	7,717	6,982	5,137	3,689	2,350	1,348	35,846
Actual weeks of sickness	0	0	101	138	166	419	361	422	485	786	2,878
Actual rate of sickness	0.000	0.000	0.039	0.028	0.022	0.060	0.070	0.114	0.206	0.583	0.080
Expected weeks of sickness	1	8	23	59	140	220	310	458	629	793	2,641
Actual/Expected %	0.0	0.0	439.1	233.9	118.6	190.5	116.5	92.1	77.1	99.1	109.0
Sickness period 104/all											
Exposed to risk	21	566	1,719	3,716	6,286	5,891	4,467	3,247	2,099	1,218	29,230
Actual weeks of sickness	0	0	237	90	208	612	559	734	2,559	3,842	8,841
Actual rate of sickness	0.000	0.000	0.138	0.024	0.033	0.104	0.125	0.226	1.219	3.154	0.302
Expected weeks of sickness	1	16	26	55	144	290	569	1,012	1,561	2,163	5,837
Actual/Expected %	0.0	0.0	911.5	163.6	144.4	211.0	98.2	72.5	163.9	177.6	151.5

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B4. Males - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	175	3,312	9,354	14,029	18,645	16,020	13,812	11,990	9,551	5,485	102,373
Actual weeks of sickness	3	131	280	241	675	821	954	1,161	1,565	2,231	8,062
Actual rate of sickness	0.017	0.040	0.030	0.017	0.036	0.051	0.069	0.097	0.164	0.407	0.079
Expected weeks of sickness	1	25	72	127	227	296	430	690	1,096	1,335	4,299
Actual/Expected %	300.0	524.0	388.9	189.8	297.4	277.4	221.9	168.3	142.8	167.1	187.5
Sickness period 52/52											
Exposed to risk	105	2,833	8,459	13,141	17,687	15,324	13,308	11,605	9,305	5,380	97,147
Actual weeks of sickness	0	127	411	284	843	1,022	1,698	1,863	2,665	4,659	13,572
Actual rate of sickness	0.000	0.045	0.049	0.022	0.048	0.067	0.128	0.161	0.286	0.866	0.140
Expected weeks of sickness	1	15	50	103	212	319	531	952	1,644	2,089	5,916
Actual/Expected %	0.0	846.7	822.0	275.7	397.6	320.4	319.8	195.7	162.1	223.0	229.4
Sickness period 104/all											
Exposed to risk	24	1,829	6,465	11,044	15,352	13,594	11,997	10,581	8,650	5,057	84,593
Actual weeks of sickness	0	17	315	366	935	2,093	3,155	5,638	9,823	19,786	42,128
Actual rate of sickness	0.000	0.009	0.049	0.033	0.061	0.154	0.263	0.533	1.136	3.913	0.498
Expected weeks of sickness	1	38	71	119	258	493	1,124	2,426	4,735	6,609	15,874
Actual/Expected %	0.0	44.7	443.7	307.6	362.4	424.5	280.7	232.4	207.5	299.4	265.4

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B5. Males - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	9	114	334	970	2,054	2,381	2,392	2,230	1,723	775	12,982
Actual weeks of sickness	0	0	0	0	65	43	9	310	567	615	1,609
Actual rate of sickness	0.000	0.000	0.000	0.000	0.032	0.018	0.004	0.139	0.329	0.794	0.124
Expected weeks of sickness	0	1	2	8	25	50	95	183	304	301	969
Actual/Expected %		0.0	0.0	0.0	260.0	86.0	9.5	169.4	186.5	204.3	166.0
Sickness period 104/all											
Exposed to risk	2	61	229	778	1,786	2,157	2,212	2,106	1,636	744	11,711
Actual weeks of sickness	0	0	0	0	46	165	200	48	1,185	3,066	4,710
Actual rate of sickness	0.000	0.000	0.000	0.000	0.026	0.076	0.090	0.023	0.724	4.121	0.402
Expected weeks of sickness	0	1	3	8	30	78	207	483	895	972	2,677
Actual/Expected %		0.0	0.0	0.0	153.3	211.5	96.6	9.9	132.4	315.4	175.9

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B6. Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	0	4	6	12	45	51	62	61	71	40	352
Actual weeks of sickness	0	0	0	0	7	2	5	9	13	18	54
Actual rate of sickness		0.000	0.000	0.000	0.156	0.039	0.081	0.148	0.183	0.450	0.153
Expected weeks of sickness		0	1	2	8	10	13	15	21	15	85
Actual/Expected %			0.0	0.0	87.5	20.0	38.5	60.0	61.9	120.0	63.5
Sickness period 4/9											
Exposed to risk	14	130	327	596	865	743	580	490	489	218	4,452
Actual weeks of sickness	3	27	59	84	60	54	56	51	90	75	559
Actual rate of sickness	0.214	0.208	0.180	0.141	0.069	0.073	0.097	0.104	0.184	0.344	0.126
Expected weeks of sickness	0	1	4	14	34	43	51	66	114	105	432
Actual/Expected %		2,700.0	1,475.0	600.0	176.5	125.6	109.8	77.3	78.9	71.4	129.4
Sickness period 13/13											
Exposed to risk	121	1,520	3,572	6,404	9,515	8,430	6,150	4,439	3,000	1,634	44,785
Actual weeks of sickness	0	47	110	191	303	323	322	427	411	329	2,463
Actual rate of sickness	0.000	0.031	0.031	0.030	0.032	0.038	0.052	0.096	0.137	0.201	0.055
Expected weeks of sickness	0	8	36	103	229	293	312	351	431	423	2,186
Actual/Expected %		587.5	305.6	185.4	132.3	110.2	103.2	121.7	95.4	77.8	112.7
Sickness period 26/26											
Exposed to risk	277	4,698	12,681	20,135	27,842	24,215	19,814	16,345	12,496	7,099	145,602
Actual weeks of sickness	3	153	353	403	994	1,194	1,349	1,657	2,118	2,839	11,063
Actual rate of sickness	0.011	0.033	0.028	0.020	0.036	0.049	0.068	0.101	0.169	0.400	0.076
Expected weeks of sickness	4	47	117	221	425	582	810	1,222	1,871	2,078	7,377
Actual/Expected %	75.0	325.5	301.7	182.4	233.9	205.2	166.5	135.6	113.2	136.6	150.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B6. (continued) Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	182	4,063	11,639	19,602	28,280	25,403	21,403	18,008	13,864	7,721	150,165
Actual weeks of sickness	0	127	512	450	1,230	1,658	2,210	2,687	3,810	6,162	18,846
Actual rate of sickness	0.000	0.031	0.044	0.023	0.043	0.065	0.103	0.149	0.275	0.798	0.126
Expected weeks of sickness	2	25	77	177	393	614	974	1,660	2,720	3,326	9,968
Actual/Expected %	0.0	508.0	664.9	254.2	313.0	270.0	226.9	161.9	140.1	185.3	189.1
Sickness period 104/all											
Exposed to risk	49	2,524	8,606	15,973	24,180	22,311	19,217	16,404	12,858	7,236	129,358
Actual weeks of sickness	0	17	552	456	1,281	2,959	4,185	6,972	14,490	27,255	58,167
Actual rate of sickness	0.000	0.007	0.064	0.029	0.053	0.133	0.218	0.425	1.127	3.767	0.450
Expected weeks of sickness	2	57	103	188	450	895	1,972	4,074	7,560	10,150	25,451
Actual/Expected %	0.0	29.8	535.9	242.6	284.7	330.6	212.2	171.1	191.7	268.5	228.5

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B7. Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	3	0	0	0	3	11	17
Actual rate of sickness			0.000	1.500	0.000	0.000	0.000	0.429	1.375	0.500
Expected weeks of sickness			0	0	1	1	1	2	2	7
Actual/Expected %					0.0	0.0	0.0	150.0	550.0	242.9
Sickness period 4/9										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	1	0	0	0	4	20	25
Actual rate of sickness			0.000	0.500	0.000	0.000	0.000	0.571	2.500	0.735
Expected weeks of sickness			0	0	1	0	1	2	2	6
Actual/Expected %					0.0		0.0	200.0	1,000.0	416.7
Sickness period 13/13										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	0	0	0	0	0	2	2
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.059
Expected weeks of sickness			0	0	0	0	0	1	1	2
Actual/Expected %								0.0	200.0	100.0
Sickness period 26/26										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	0	1	2	3
Actual/Expected %								0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B7. (continued) Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	0	1	3	4
Actual/Expected %								0.0	0.0	0.0
Sickness period 104/all										
Exposed to risk	0	0	2	2	6	3	5	7	8	33
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness			0	0	0	0	1	3	7	11
Actual/Expected %							0.0	0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B8. Females - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 4/9										
Exposed to risk	5	35	67	54	65	54	58	54	33	425
Actual weeks of sickness	0	1	0	9	11	10	4	13	11	59
Actual rate of sickness	0.000	0.029	0.000	0.167	0.169	0.185	0.069	0.241	0.333	0.139
Expected weeks of sickness	0	1	3	3	5	6	7	9	8	42
Actual/Expected %		100.0	0.0	300.0	220.0	166.7	57.1	144.4	137.5	140.5
Sickness period 13/13										
Exposed to risk	5	33	65	52	64	53	58	54	33	417
Actual weeks of sickness	0	0	0	3	3	3	0	9	3	21
Actual rate of sickness	0.000	0.000	0.000	0.058	0.047	0.057	0.000	0.167	0.091	0.050
Expected weeks of sickness	0	0	1	2	3	3	4	5	5	23
Actual/Expected %			0.0	150.0	100.0	100.0	0.0	180.0	60.0	91.3
Sickness period 26/26										
Exposed to risk	5	31	61	52	62	53	58	53	33	408
Actual weeks of sickness	0	0	0	0	0	0	0	0	3	3
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.007
Expected weeks of sickness	0	0	1	1	2	2	4	6	7	23
Actual/Expected %			0.0	0.0	0.0	0.0	0.0	0.0	42.9	13.0
Sickness period 52/52										
Exposed to risk	4	27	56	50	60	51	57	53	33	391
Actual weeks of sickness	0	0	0	0	0	0	0	0	49	49
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.485	0.125
Expected weeks of sickness	0	0	1	1	1	2	4	7	9	25
Actual/Expected %			0.0	0.0	0.0	0.0	0.0	0.0	544.4	196.0
Sickness period 104/all										
Exposed to risk	2	18	39	43	56	44	54	52	33	341
Actual weeks of sickness	0	0	0	0	0	0	0	676	222	898
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.000	6.727	2.633
Expected weeks of sickness	0	1	1	1	1	2	7	17	25	55
Actual/Expected %		0.0	0.0	0.0	0.0	0.0	0.0	3,976.5	888.0	1,632.7

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B9. Females - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 13/13										
Exposed to risk	129	1,069	1,246	928	994	951	635	502	368	6,822
Actual weeks of sickness	0	13	13	62	1	99	34	72	28	322
Actual rate of sickness	0.000	0.012	0.010	0.067	0.001	0.104	0.054	0.143	0.076	0.047
Expected weeks of sickness	0	6	12	15	24	32	31	35	41	196
Actual/Expected %		216.7	108.3	413.3	4.2	309.4	109.7	205.7	68.3	164.3
Sickness period 26/26										
Exposed to risk	110	988	1,178	886	949	907	610	486	360	6,474
Actual weeks of sickness	0	7	48	63	11	59	48	99	28	363
Actual rate of sickness	0.000	0.007	0.041	0.071	0.012	0.065	0.079	0.204	0.078	0.056
Expected weeks of sickness	2	14	16	14	20	30	34	46	58	234
Actual/Expected %	0.0	50.0	300.0	450.0	55.0	196.7	141.2	215.2	48.3	155.1
Sickness period 52/52										
Exposed to risk	76	816	1,034	795	845	821	560	454	347	5,748
Actual weeks of sickness	0	0	28	98	51	87	69	99	141	573
Actual rate of sickness	0.000	0.000	0.027	0.123	0.060	0.106	0.123	0.218	0.406	0.100
Expected weeks of sickness	1	7	9	9	15	26	34	56	93	250
Actual/Expected %	0.0	0.0	311.1	1,088.9	340.0	334.6	202.9	176.8	151.6	229.2
Sickness period 104/all										
Exposed to risk	28	462	712	602	640	646	453	384	307	4,234
Actual weeks of sickness	0	0	0	179	132	10	36	37	138	532
Actual rate of sickness	0.000	0.000	0.000	0.297	0.206	0.015	0.079	0.096	0.450	0.126
Expected weeks of sickness	2	13	11	9	15	32	58	120	228	488
Actual/Expected %	0.0	0.0	0.0	1,988.9	880.0	31.3	62.1	30.8	60.5	109.0

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Aggregate sickness experience

Table B10. Females - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	205	4,175	5,124	3,505	2,854	2,506	2,347	1,934	2,716	25,366
Actual weeks of sickness	0	50	56	107	166	171	321	229	241	1,341
Actual rate of sickness	0.000	0.012	0.011	0.031	0.058	0.068	0.137	0.118	0.089	0.053
Expected weeks of sickness	2	32	40	32	35	46	73	111	312	683
Actual/Expected %	0.0	156.3	140.0	334.4	474.3	371.7	439.7	206.3	77.2	196.3
Sickness period 52/52										
Exposed to risk	129	3,639	4,671	3,251	2,652	2,343	2,240	1,855	1,484	22,264
Actual weeks of sickness	0	146	118	103	171	409	467	410	340	2,164
Actual rate of sickness	0.000	0.040	0.025	0.032	0.064	0.175	0.208	0.221	0.229	0.097
Expected weeks of sickness	1	20	28	25	32	49	89	152	262	658
Actual/Expected %	0.0	730.0	421.4	412.0	534.4	834.7	524.7	269.7	129.8	328.9
Sickness period 104/all										
Exposed to risk	35	2,389	3,609	2,637	2,154	1,943	1,937	1,642	1,360	17,706
Actual weeks of sickness	0	85	51	26	60	778	677	1,322	2,342	5,341
Actual rate of sickness	0.000	0.036	0.014	0.010	0.028	0.400	0.350	0.805	1.722	0.302
Expected weeks of sickness	2	50	40	28	36	70	181	376	744	1,527
Actual/Expected %	0.0	170.0	127.5	92.9	166.7	1,111.4	374.0	351.6	314.8	349.8

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Aggregate sickness experience

Table B11. Females - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	4	55	118	121	140	140	131	134	116	959
Actual weeks of sickness	0	0	0	0	16	0	0	53	0	69
Actual rate of sickness	0.000	0.000	0.000	0.000	0.114	0.000	0.000	0.396	0.000	0.072
Expected weeks of sickness	0	1	1	2	3	6	10	21	40	84
Actual/Expected %		0.0	0.0	0.0	533.3	0.0	0.0	252.4	0.0	82.1
Sickness period 104/all										
Exposed to risk	0	31	74	97	115	122	116	127	111	793
Actual weeks of sickness	0	0	0	104	78	131	0	90	365	768
Actual rate of sickness		0.000	0.000	1.072	0.678	1.074	0.000	0.709	3.288	0.968
Expected weeks of sickness		1	1	2	3	7	17	46	97	174
Actual/Expected %		0.0	0.0	5,200.0	2,600.0	1,871.4	0.0	195.7	376.3	441.4

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B12. Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Actual weeks of sickness	0	0	0	3	0	0	0	3	11	17
Actual rate of sickness			0.000	1.500	0.000	0.000	0.000	0.429	1.375	0.500
Expected weeks of sickness			0	0	1	1	1	2	2	7
Actual/Expected %					0.0	0.0	0.0	150.0	550.0	242.9
Sickness period 4/9										
Exposed to risk	5	35	69	56	72	57	63	61	41	459
Actual weeks of sickness	0	1	0	10	11	10	4	17	31	84
Actual rate of sickness	0.000	0.029	0.000	0.179	0.153	0.175	0.063	0.279	0.756	0.183
Expected weeks of sickness	0	1	4	14	34	43	51	66	114	327
Actual/Expected %		100.0	0.0	71.4	32.4	23.3	7.8	25.8	27.2	25.7
Sickness period 13/13										
Exposed to risk	134	1,102	1,313	982	1,065	1,007	698	563	409	7,273
Actual weeks of sickness	0	13	13	65	4	102	34	81	33	345
Actual rate of sickness	0.000	0.012	0.010	0.066	0.004	0.101	0.049	0.144	0.081	0.047
Expected weeks of sickness	0	6	13	17	27	35	35	41	47	221
Actual/Expected %		216.7	100.0	382.4	14.8	291.4	97.1	197.6	70.2	156.1
Sickness period 26/26										
Exposed to risk	320	5,194	6,365	4,445	3,872	3,469	3,020	2,480	3,117	32,282
Actual weeks of sickness	0	57	104	170	177	230	369	328	272	1,707
Actual rate of sickness	0.000	0.011	0.016	0.038	0.046	0.066	0.122	0.132	0.087	0.053
Expected weeks of sickness	4	46	57	47	57	78	111	164	379	943
Actual/Expected %	0.0	123.9	182.5	361.7	310.5	294.9	332.4	200.0	71.8	181.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B12. (continued) Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	213	4,537	5,881	4,219	3,704	3,358	2,993	2,503	1,988	29,396
Actual weeks of sickness	0	146	146	201	238	496	536	562	530	2,855
Actual rate of sickness	0.000	0.032	0.025	0.048	0.064	0.148	0.179	0.225	0.267	0.097
Expected weeks of sickness	2	28	39	37	51	83	137	237	407	1,021
Actual/Expected %	0.0	521.4	374.4	543.2	466.7	597.6	391.2	237.1	130.2	279.6
Sickness period 104/all										
Exposed to risk	65	2,900	4,436	3,381	2,971	2,758	2,565	2,212	1,819	23,107
Actual weeks of sickness	0	85	51	309	270	919	713	2,125	3,067	7,539
Actual rate of sickness	0.000	0.029	0.011	0.091	0.091	0.333	0.278	0.961	1.686	0.326
Expected weeks of sickness	4	65	53	40	55	111	264	562	1,101	2,255
Actual/Expected %	0.0	130.8	96.2	772.5	490.9	827.9	270.1	378.1	278.6	334.3

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B13. Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 1 week											
Exposed to risk	0	4	6	12	45	51	62	61	71	40	352
Number of claim inceptions	0	0	0	0	2	1.5	1.5	3	5	7	20
Central claim inception rate		0.000	0.000	0.000	0.044	0.029	0.024	0.049	0.070	0.175	0.057
Expected claim inceptions		0	1	1	6	6	8	8	11	7	48
Actual/Expected %			0.0	0.0	33.3	25.0	18.8	37.5	45.5	100.0	41.7
Deferred period 4 weeks											
Exposed to risk	14	126	322	585	820	692	518	429	418	178	4,102
Number of claim inceptions	1	4	9	11	8	6.5	7	4.5	10.5	4.5	66
Central claim inception rate	0.071	0.032	0.028	0.019	0.010	0.009	0.014	0.010	0.025	0.025	0.016
Expected claim inceptions	0	1	3	7	12	13	11	12	16	11	86
Actual/Expected %		400.0	300.0	157.1	66.7	50.0	63.6	37.5	65.6	40.9	76.7
Deferred period 13 weeks											
Exposed to risk	107	1,395	3,257	5,821	8,658	7,691	5,571	3,950	2,511	1,416	40,377
Number of claim inceptions	0	4	11	13	24	27	23	30	35	21	188
Central claim inception rate	0.000	0.003	0.003	0.002	0.003	0.004	0.004	0.008	0.014	0.015	0.005
Expected claim inceptions	0	1	4	12	24	29	28	27	26	26	177
Actual/Expected %		400.0	275.0	108.3	100.0	93.1	82.1	111.1	134.6	80.8	106.2
Deferred period 26 weeks											
Exposed to risk	175	3,312	9,354	14,029	18,645	16,020	13,812	11,990	9,551	5,485	102,373
Number of claim inceptions	1	6	14	11	28	33	36	51	69	95	344
Central claim inception rate	0.006	0.002	0.001	0.001	0.002	0.002	0.003	0.004	0.007	0.017	0.003
Expected claim inceptions	0	2	5	8	13	17	23	34	50	56	208
Actual/Expected %		300.0	280.0	137.5	215.4	194.1	156.5	150.0	138.0	169.6	165.4

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B13. (continued) Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 52 weeks											
Exposed to risk	9	114	334	970	2,054	2,381	2,392	2,230	1,723	775	12,982
Number of claim inceptions	0	0	0	0	1	0	0	7	12	11	31
Central claim inception rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.007	0.014	0.002
Expected claim inceptions	0	0	0	1	1	2	4	6	9	8	31
Actual/Expected %				0.0	100.0	0.0	0.0	116.7	133.3	137.5	100.0
All deferred periods											
Exposed to risk	305	4,951	13,273	21,417	30,222	26,835	22,355	18,660	14,274	7,894	160,186
Number of claim inceptions	2	14	34	35	63	68	67.5	95.5	131.5	138.5	649
Central claim inception rate	0.007	0.003	0.003	0.002	0.002	0.003	0.003	0.005	0.009	0.018	0.004
Expected claim inceptions	0	4	13	29	56	67	74	87	112	108	550
Actual/Expected %		350.0	261.5	120.7	112.5	101.5	91.2	109.8	117.4	128.2	118.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B14. Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 1 week										
Exposed to risk	0	0	2	2	7	3	5	7	8	34
Number of claim inceptions	0	0	0	1	0	0	0	1	3	5
Central claim inception rate			0.000	0.500	0.000	0.000	0.000	0.143	0.375	0.147
Expected claim inceptions			0	0	1	0	1	1	1	4
Actual/Expected %					0.0		0.0	100.0	300.0	125.0
Deferred period 4 weeks										
Exposed to risk	5	35	67	54	65	54	58	54	33	425
Number of claim inceptions	0	1	0	0.5	1.5	1	1	2.5	1.5	9
Central claim inception rate	0.000	0.029	0.000	0.009	0.023	0.019	0.017	0.046	0.045	0.021
Expected claim inceptions	0	0	1	1	1	1	1	1	1	7
Actual/Expected %			0.0	50.0	150.0	100.0	100.0	250.0	150.0	128.6
Deferred period 13 weeks										
Exposed to risk	129	1,069	1,246	928	994	951	635	502	368	6,822
Number of claim inceptions	0	1	1	5	1	10	5	6	4	33
Central claim inception rate	0.000	0.001	0.001	0.005	0.001	0.011	0.008	0.012	0.011	0.005
Expected claim inceptions	0	1	2	2	3	4	3	3	4	22
Actual/Expected %		100.0	50.0	250.0	33.3	250.0	166.7	200.0	100.0	150.0
Deferred period 26 weeks										
Exposed to risk	205	4,175	5,124	3,505	2,854	2,506	2,347	1,934	2,716	25,366
Number of claim inceptions	0	2	2	5	7	7	13	12	9	57
Central claim inception rate	0.000	0.000	0.000	0.001	0.002	0.003	0.006	0.006	0.003	0.002
Expected claim inceptions	0	2	3	2	2	3	4	5	14	35
Actual/Expected %		100.0	66.7	250.0	350.0	233.3	325.0	240.0	64.3	162.9

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Aggregate sickness experience

Table B14. (continued) Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 52 weeks										
Exposed to risk	4	55	118	121	140	140	131	134	116	959
Number of claim inceptions	0	0	0	0	1	0	0	1	0	2
Central claim inception rate	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.007	0.000	0.002
Expected claim inceptions	0	0	0	0	0	0	0	0	1	1
Actual/Expected %									0.0	200.0
All deferred periods										
Exposed to risk	343	5,334	6,557	4,610	4,060	3,654	3,176	2,631	3,241	33,606
Number of claim inceptions	0	4	3	11.5	10.5	18	19	22.5	17.5	106
Central claim inception rate	0.000	0.001	0.000	0.002	0.003	0.005	0.006	0.009	0.005	0.003
Expected claim inceptions	0	3	6	5	7	8	9	10	21	69
Actual/Expected %		133.3	50.0	230.0	150.0	225.0	211.1	225.0	83.3	153.6

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C1. Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	0	2	3	3	25	30	52	50	57	29	251
Actual weeks of sickness	0	0	0	0	4	2	5	9	13	5	38
Actual rate of sickness		0.000	0.000	0.000	0.160	0.067	0.096	0.180	0.228	0.172	0.151
Expected weeks of sickness		0	0	0	4	6	11	12	17	11	61
Actual/Expected %					100.0	33.3	45.5	75.0	76.5	45.5	62.3
Sickness period 4/9											
Exposed to risk	0	2	3	3	25	29	52	50	57	29	250
Actual weeks of sickness	0	0	0	0	10	2	9	19	18	0	58
Actual rate of sickness		0.000	0.000	0.000	0.400	0.069	0.173	0.380	0.316	0.000	0.232
Expected weeks of sickness		0	0	0	2	4	8	11	18	14	57
Actual/Expected %					500.0	50.0	112.5	172.7	100.0	0.0	101.8
Sickness period 13/13											
Exposed to risk	0	2	3	3	25	29	52	50	57	29	250
Actual weeks of sickness	0	0	0	0	14	0	0	27	14	0	55
Actual rate of sickness		0.000	0.000	0.000	0.560	0.000	0.000	0.540	0.246	0.000	0.220
Expected weeks of sickness		0	0	0	1	2	4	5	10	10	32
Actual/Expected %					1,400.0	0.0	0.0	540.0	140.0	0.0	171.9
Sickness period 26/26											
Exposed to risk	0	2	3	3	25	29	52	50	57	29	250
Actual weeks of sickness	0	0	0	0	19	7	0	26	0	0	52
Actual rate of sickness		0.000	0.000	0.000	0.760	0.241	0.000	0.520	0.000	0.000	0.208
Expected weeks of sickness		0	0	0	1	2	4	6	13	14	40
Actual/Expected %					1,900.0	350.0	0.0	433.3	0.0	0.0	130.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C1. (continued) Males - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	0	2	3	3	25	29	52	50	57	29	250
Actual weeks of sickness	0	0	0	0	14	14	0	37	46	0	111
Actual rate of sickness		0.000	0.000	0.000	0.560	0.483	0.000	0.740	0.807	0.000	0.444
Expected weeks of sickness		*0*	*0*	*0*	*1*	*1*	*4*	*8*	*19*	*22*	*55*
Actual/Expected %					1,400.0	1,400.0	0.0	462.5	242.1	0.0	201.8
Sickness period 104/all											
Exposed to risk	0	2	3	3	25	29	52	50	57	29	250
Actual weeks of sickness	0	0	0	0	0	0	0	219	188	173	580
Actual rate of sickness		0.000	0.000	0.000	0.000	0.000	0.000	4.380	3.298	5.966	2.320
Expected weeks of sickness		0	0	0	1	2	8	18	50	60	139
Actual/Expected %					0.0	0.0	0.0	1,216.7	376.0	288.3	417.3

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C2. Males - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 4/9											
Exposed to risk	3	51	127	262	408	367	302	297	267	109	2,193
Actual weeks of sickness	0	17	2	11	37	39	19	14	43	41	223
Actual rate of sickness	0.000	0.333	0.016	0.042	0.091	0.106	0.063	0.047	0.161	0.376	0.102
Expected weeks of sickness	0	1	6	16	33	37	39	50	67	48	297
Actual/Expected %		1,700.0	33.3	68.8	112.1	105.4	48.7	28.0	64.2	85.4	75.1
Sickness period 13/13											
Exposed to risk	3	51	125	258	404	367	302	297	267	109	2,183
Actual weeks of sickness	0	3	0	13	26	28	3	4	36	33	146
Actual rate of sickness	0.000	0.059	0.000	0.050	0.064	0.076	0.010	0.013	0.135	0.303	0.067
Expected weeks of sickness	0	0	2	8	17	19	19	27	42	42	176
Actual/Expected %			0.0	162.5	152.9	147.4	15.8	14.8	85.7	78.6	83.0
Sickness period 26/26											
Exposed to risk	3	49	123	253	400	364	298	296	267	109	2,162
Actual weeks of sickness	0	0	0	19	13	1	12	0	27	31	103
Actual rate of sickness	0.000	0.000	0.000	0.075	0.033	0.003	0.040	0.000	0.101	0.284	0.048
Expected weeks of sickness	0	1	2	5	10	14	19	33	56	14	154
Actual/Expected %		0.0	0.0	380.0	130.0	7.1	63.2	0.0	48.2	221.4	66.9
Sickness period 52/52											
Exposed to risk	2	45	114	239	390	358	295	294	265	109	2,111
Actual weeks of sickness	0	0	0	28	0	0	46	6	0	50	130
Actual rate of sickness	0.000	0.000	0.000	0.117	0.000	0.000	0.156	0.020	0.000	0.459	0.062
Expected weeks of sickness	0	0	1	3	8	12	19	39	76	69	227
Actual/Expected %			0.0	933.3	0.0	0.0	242.1	15.4	0.0	72.5	57.3
Sickness period 104/all											
Exposed to risk	1	33	93	206	359	334	278	285	259	107	1,955
Actual weeks of sickness	0	0	0	0	0	0	20	229	364	166	779
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.804	1.405	1.551	0.398
Expected weeks of sickness	0	1	1	3	8	17	36	91	198	195	550
Actual/Expected %		0.0	0.0	0.0	0.0	0.0	55.6	251.6	183.8	85.1	141.6

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C3. Males - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 13/13											
Exposed to risk	71	991	2,210	3,824	6,018	5,275	3,840	2,821	1,743	1,080	27,873
Actual weeks of sickness	0	20	45	66	185	81	188	256	150	182	1,173
Actual rate of sickness	0.000	0.020	0.020	0.017	0.031	0.015	0.049	0.091	0.086	0.169	0.042
Expected weeks of sickness	0	5	22	62	144	180	185	198	192	210	1,198
Actual/Expected %		400.0	204.5	106.5	128.5	45.0	101.6	129.3	78.1	86.7	97.9
Sickness period 26/26											
Exposed to risk	62	906	2,056	3,641	5,810	5,131	3,756	2,768	1,715	1,065	26,910
Actual weeks of sickness	0	0	35	39	187	63	208	246	240	416	1,434
Actual rate of sickness	0.000	0.000	0.017	0.011	0.032	0.012	0.055	0.089	0.140	0.391	0.053
Expected weeks of sickness	1	13	27	55	122	168	207	264	276	270	1,403
Actual/Expected %	0.0	0.0	129.6	70.9	153.3	37.5	100.5	93.2	87.0	154.1	102.2
Sickness period 52/52											
Exposed to risk	41	734	1,731	3,231	5,345	4,805	3,558	2,645	1,640	1,036	24,766
Actual weeks of sickness	0	0	52	0	91	160	221	259	302	621	1,706
Actual rate of sickness	0.000	0.000	0.030	0.000	0.017	0.033	0.062	0.098	0.184	0.599	0.069
Expected weeks of sickness	0	6	16	38	97	152	215	329	439	609	1,901
Actual/Expected %		0.0	325.0	0.0	93.8	105.3	102.8	78.7	68.8	102.0	89.7
Sickness period 104/all											
Exposed to risk	15	402	1,079	2,327	4,255	4,021	3,080	2,328	1,452	937	19,896
Actual weeks of sickness	0	0	15	0	0	354	395	479	1,622	3,002	5,867
Actual rate of sickness	0.000	0.000	0.014	0.000	0.000	0.088	0.128	0.206	1.117	3.204	0.295
Expected weeks of sickness	1	11	16	34	97	198	392	725	1,080	1,664	4,218
Actual/Expected %	0.0	0.0	93.8	0.0	0.0	178.8	100.8	66.1	150.2	180.4	139.1

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Standard sickness experience

Table C4. Males - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 26/26											
Exposed to risk	139	2,309	6,298	8,968	12,142	10,681	9,629	8,769	7,274	4,083	70,292
Actual weeks of sickness	3	71	128	102	355	476	585	892	1,159	1,784	5,555
Actual rate of sickness	0.022	0.031	0.020	0.011	0.029	0.045	0.061	0.102	0.159	0.437	0.079
Expected weeks of sickness	1	18	49	81	148	197	300	505	835	993	3,127
Actual/Expected %	300.0	394.4	261.2	125.9	239.9	241.6	195.0	176.6	138.8	179.7	177.6
Sickness period 52/52											
Exposed to risk	82	1,940	5,607	8,264	11,363	10,140	9,242	8,459	7,063	3,996	66,156
Actual weeks of sickness	0	100	190	103	357	685	1,138	1,549	2,032	3,745	9,899
Actual rate of sickness	0.000	0.052	0.034	0.012	0.031	0.068	0.123	0.183	0.288	0.937	0.150
Expected weeks of sickness	0	10	33	65	136	211	369	694	1,248	1,552	4,318
Actual/Expected %		1,000.0	575.8	158.5	262.5	324.6	308.4	223.2	162.8	241.3	229.2
Sickness period 104/all											
Exposed to risk	16	1,190	4,156	6,646	9,510	8,792	8,244	7,635	6,518	3,731	56,438
Actual weeks of sickness	0	17	166	76	621	953	2,121	3,974	6,990	15,233	30,151
Actual rate of sickness	0.000	0.014	0.040	0.011	0.065	0.108	0.257	0.520	1.072	4.083	0.534
Expected weeks of sickness	1	25	46	72	160	319	772	1,750	3,568	4,876	11,589
Actual/Expected %	0.0	68.0	360.9	105.6	388.1	298.7	274.7	227.1	195.9	312.4	260.2

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Standard sickness experience

Table C5. Males - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	8	102	280	838	1,824	2,151	2,141	1,996	1,526	714	11,580
Actual weeks of sickness	0	0	0	0	0	0	9	215	528	538	1,290
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.108	0.346	0.754	0.111
Expected weeks of sickness	0	1	2	7	22	45	85	164	270	277	873
Actual/Expected %		0.0	0.0	0.0	0.0	0.0	10.6	131.1	195.6	194.2	147.8
Sickness period 104/all											
Exposed to risk	2	55	197	669	1,589	1,950	1,987	1,887	1,456	687	10,479
Actual weeks of sickness	0	0	0	0	0	105	147	48	1,061	2,579	3,940
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.054	0.074	0.025	0.729	3.754	0.376
Expected weeks of sickness	0	1	2	7	27	71	186	433	797	898	2,422
Actual/Expected %		0.0	0.0	0.0	0.0	147.9	79.0	11.1	133.1	287.2	162.7

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C6. Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 1/3											
Exposed to risk	0	2	3	3	25	30	52	50	57	29	251
Actual weeks of sickness	0	0	0	0	4	2	5	9	13	5	38
Actual rate of sickness		0.000	0.000	0.000	0.160	0.067	0.096	0.180	0.228	0.172	0.151
Expected weeks of sickness		0	0	0	4	6	11	12	17	11	61
Actual/Expected %					100.0	33.3	45.5	75.0	76.5	45.5	62.3
Sickness period 4/9											
Exposed to risk	3	53	130	265	433	396	354	347	324	138	2,443
Actual weeks of sickness	0	17	2	11	47	41	28	33	61	41	281
Actual rate of sickness	0.000	0.321	0.015	0.042	0.109	0.104	0.079	0.095	0.188	0.297	0.115
Expected weeks of sickness	0	1	6	16	35	41	47	61	85	62	354
Actual/Expected %		1,700.0	33.3	68.8	134.3	100.0	59.6	54.1	71.8	66.1	79.4
Sickness period 13/13											
Exposed to risk	74	1,044	2,338	4,085	6,447	5,671	4,194	3,168	2,067	1,218	30,306
Actual weeks of sickness	0	23	45	79	225	109	191	287	200	215	1,374
Actual rate of sickness	0.000	0.022	0.019	0.019	0.035	0.019	0.046	0.091	0.097	0.177	0.045
Expected weeks of sickness	0	5	24	70	162	201	208	230	244	262	1,406
Actual/Expected %		460.0	187.5	112.9	138.9	54.2	91.8	124.8	82.0	82.1	97.7
Sickness period 26/26											
Exposed to risk	204	3,266	8,480	12,865	18,377	16,205	13,735	11,883	9,313	5,286	99,614
Actual weeks of sickness	3	71	163	160	574	547	805	1,164	1,426	2,231	7,144
Actual rate of sickness	0.015	0.022	0.019	0.012	0.031	0.034	0.059	0.098	0.153	0.422	0.072
Expected weeks of sickness	2	32	78	141	281	381	530	808	1,180	1,291	4,724
Actual/Expected %	150.0	221.9	209.0	113.5	204.3	143.6	151.9	144.1	120.8	172.8	151.2

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C6. (continued) Males - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Sickness period 52/52											
Exposed to risk	133	2,823	7,735	12,575	18,947	17,483	15,288	13,444	10,551	5,884	104,863
Actual weeks of sickness	0	100	242	131	462	859	1,414	2,066	2,908	4,954	13,136
Actual rate of sickness	0.000	0.035	0.031	0.010	0.024	0.049	0.092	0.154	0.276	0.842	0.125
Expected weeks of sickness	0	17	52	113	264	421	692	1,234	2,052	2,529	7,374
Actual/Expected %		588.2	465.4	115.9	175.0	204.0	204.3	167.4	141.7	195.9	178.1
Sickness period 104/all											
Exposed to risk	34	1,682	5,528	9,851	15,738	15,126	13,641	12,185	9,742	5,491	89,018
Actual weeks of sickness	0	17	181	76	621	1,412	2,683	4,949	10,225	21,153	41,317
Actual rate of sickness	0.000	0.010	0.033	0.008	0.039	0.093	0.197	0.406	1.050	3.852	0.464
Expected weeks of sickness	2	38	65	116	293	607	1,394	3,017	5,693	7,693	18,918
Actual/Expected %	0.0	44.7	278.5	65.5	211.9	232.6	192.5	164.0	179.6	275.0	218.4

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C7. Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	0	2	8	3	1	7	8	29
Actual weeks of sickness	0	0	0	3	0	0	0	3	11	17
Actual rate of sickness				1.500	0.000	0.000	0.000	0.429	1.375	0.586
Expected weeks of sickness				0	1	1	0	2	2	6
Actual/Expected %					0.0	0.0		150.0	550.0	283.3
Sickness period 4/9										
Exposed to risk	0	0	0	2	7	3	1	7	8	28
Actual weeks of sickness	0	0	0	1	0	0	0	4	20	25
Actual rate of sickness				0.500	0.000	0.000	0.000	0.571	2.500	0.893
Expected weeks of sickness				0	1	0	0	2	2	5
Actual/Expected %					0.0			200.0	1,000.0	500.0
Sickness period 13/13										
Exposed to risk	0	0	0	2	7	3	1	7	8	28
Actual weeks of sickness	0	0	0	0	0	0	0	0	2	2
Actual rate of sickness				0.000	0.000	0.000	0.000	0.000	0.250	0.071
Expected weeks of sickness				0	0	0	0	1	1	2
Actual/Expected %								0.0	200.0	100.0
Sickness period 26/26										
Exposed to risk	0	0	0	2	7	3	1	7	8	28
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness				0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness				0	0	0	0	1	2	3
Actual/Expected %								0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C7. (continued) Females - deferred period 1 week

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	0	0	0	2	7	3	1	7	8	28
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness				0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness				0	0	0	0	1	3	4
Actual/Expected %								0.0	0.0	0.0
Sickness period 104/all										
Exposed to risk	0	0	0	2	6	3	1	7	8	27
Actual weeks of sickness	0	0	0	0	0	0	0	0	0	0
Actual rate of sickness				0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expected weeks of sickness				0	0	0	0	3	7	10
Actual/Expected %								0.0	0.0	0.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C8. Females - deferred period 4 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 4/9										
Exposed to risk	3	28	54	39	49	46	50	43	19	331
Actual weeks of sickness	0	1	0	0	0	0	0	13	2	16
Actual rate of sickness	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.302	0.105	0.048
Expected weeks of sickness	0	1	2	2	4	5	6	7	5	32
Actual/Expected %		100.0	0.0	0.0	0.0	0.0	0.0	185.7	40.0	50.0
Sickness period 13/13										
Exposed to risk	3	28	53	39	49	46	50	43	19	330
Actual weeks of sickness	0	0	0	0	0	0	0	9	0	9
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.209	0.000	0.027
Expected weeks of sickness	0	0	1	1	2	2	3	4	3	16
Actual/Expected %			0.0	0.0	0.0	0.0	0.0	225.0	0.0	56.3
Sickness period 26/26										
Exposed to risk	3	27	50	38	49	46	50	43	19	325
Actual weeks of sickness	0	0	0	0	0	0	0	0	3	3
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.158	0.009
Expected weeks of sickness	0	0	1	1	1	2	3	5	4	17
Actual/Expected %			0.0	0.0	0.0	0.0	0.0	0.0	75.0	17.6
Sickness period 52/52										
Exposed to risk	3	24	47	37	48	46	49	42	19	315
Actual weeks of sickness	0	0	0	0	0	0	0	0	49	49
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.579	0.156
Expected weeks of sickness	0	0	0	0	1	2	3	6	5	17
Actual/Expected %					0.0	0.0	0.0	0.0	980.0	288.2
Sickness period 104/all										
Exposed to risk	2	17	33	33	44	40	47	41	18	275
Actual weeks of sickness	0	0	0	0	0	0	0	676	170	846
Actual rate of sickness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	16.488	9.444	3.076
Expected weeks of sickness	0	0	1	0	1	2	6	13	14	37
Actual/Expected %			0.0		0.0	0.0	0.0	5,200.0	1,214.3	2,286.5

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C9. Females - deferred period 13 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 13/13										
Exposed to risk	116	816	918	734	760	735	499	398	263	5,239
Actual weeks of sickness	0	13	13	13	1	81	35	72	15	243
Actual rate of sickness	0.000	0.016	0.014	0.018	0.001	0.110	0.070	0.181	0.057	0.046
Expected weeks of sickness	0	4	9	12	18	25	24	28	29	149
Actual/Expected %		325.0	144.4	108.3	5.6	324.0	145.8	257.1	51.7	163.1
Sickness period 26/26										
Exposed to risk	98	758	868	705	728	705	481	389	256	4,988
Actual weeks of sickness	0	7	29	24	11	34	48	99	2	254
Actual rate of sickness	0.000	0.009	0.033	0.034	0.015	0.048	0.100	0.254	0.008	0.051
Expected weeks of sickness	2	11	11	11	15	23	26	37	41	177
Actual/Expected %	0.0	63.6	263.6	218.2	73.3	147.8	184.6	267.6	4.9	143.5
Sickness period 52/52										
Exposed to risk	70	628	761	635	647	641	443	369	249	4,443
Actual weeks of sickness	0	0	25	51	51	52	52	99	107	437
Actual rate of sickness	0.000	0.000	0.033	0.080	0.079	0.081	0.117	0.268	0.430	0.098
Expected weeks of sickness	1	5	7	8	12	20	27	46	67	193
Actual/Expected %	0.0	0.0	357.1	637.5	425.0	260.0	192.6	215.2	159.7	226.4
Sickness period 104/all										
Exposed to risk	26	360	511	476	480	508	358	312	219	3,250
Actual weeks of sickness	0	0	0	179	132	10	0	37	35	393
Actual rate of sickness	0.000	0.000	0.000	0.376	0.275	0.020	0.000	0.119	0.160	0.121
Expected weeks of sickness	2	10	8	7	11	25	46	97	163	369
Actual/Expected %	0.0	0.0	0.0	2,557.1	1,200.0	40.0	0.0	38.1	21.5	106.5

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Standard sickness experience

Table C10. Females - deferred period 26 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 26/26										
Exposed to risk	169	3,055	3,756	2,695	2,271	2,051	1,921	1,550	1,306	18,774
Actual weeks of sickness	0	50	10	106	140	171	269	214	204	1,164
Actual rate of sickness	0.000	0.016	0.003	0.039	0.062	0.083	0.140	0.138	0.156	0.062
Expected weeks of sickness	1	24	29	24	28	38	60	89	150	443
Actual/Expected %	0.0	208.3	34.5	441.7	500.0	450.0	448.3	240.4	136.0	262.8
Sickness period 52/52										
Exposed to risk	102	2,631	3,401	2,484	2,105	1,909	1,831	1,483	1,274	17,220
Actual weeks of sickness	0	18	42	86	157	409	429	362	332	1,835
Actual rate of sickness	0.000	0.007	0.012	0.035	0.075	0.214	0.234	0.244	0.261	0.107
Expected weeks of sickness	1	14	20	19	25	40	73	122	225	539
Actual/Expected %	0.0	128.6	210.0	452.6	628.0	1,022.5	587.7	296.7	147.6	340.4
Sickness period 104/all										
Exposed to risk	29	1,675	2,602	1,972	1,684	1,568	1,569	1,299	1,172	13,570
Actual weeks of sickness	0	0	0	21	60	778	653	1,266	1,777	4,555
Actual rate of sickness	0.000	0.000	0.000	0.011	0.036	0.496	0.416	0.975	1.516	0.336
Expected weeks of sickness	1	35	29	21	28	57	147	298	642	1,258
Actual/Expected %	0.0	0.0	0.0	100.0	214.3	1,364.9	444.2	424.8	276.8	362.1

APPENDIX 3 (continued)

Group PHI policies 1983-86

All offices - Standard sickness experience

Table C11. Females - deferred period 52 weeks

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	2	45	73	96	121	108	113	115	93	766
Actual weeks of sickness	0	0	0	0	16	0	0	53	0	69
Actual rate of sickness	0.000	0.000	0.000	0.000	0.132	0.000	0.000	0.461	0.000	0.090
Expected weeks of sickness	0	0	0	1	1	2	5	9	16	34
Actual/Expected %				0.0	1,600.0	0.0	0.0	588.9	0.0	202.9
Sickness period 104/all										
Exposed to risk	0	28	44	76	100	94	101	110	90	643
Actual weeks of sickness	0	0	0	104	78	131	0	38	208	559
Actual rate of sickness		0.000	0.000	1.368	0.780	1.394	0.000	0.345	2.311	0.869
Expected weeks of sickness		1	0	1	2	3	9	25	49	90
Actual/Expected %		0.0		10,400.0	3,900.0	4,366.7	0.0	152.0	424.5	621.1

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C12. Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 1/3										
Exposed to risk	0	0	0	2	8	3	1	7	8	29
Actual weeks of sickness	0	0	0	3	0	0	0	3	11	17
Actual rate of sickness				1.500	0.000	0.000	0.000	0.429	1.375	0.586
Expected weeks of sickness				0	1	1	0	2	2	6
Actual/Expected %					0.0	0.0		150.0	550.0	283.3
Sickness period 4/9										
Exposed to risk	3	28	54	41	56	49	51	50	27	359
Actual weeks of sickness	0	1	0	1	0	0	0	17	22	41
Actual rate of sickness	0.000	0.036	0.000	0.024	0.000	0.000	0.000	0.340	0.815	0.114
Expected weeks of sickness	0	1	2	2	5	5	6	9	7	37
Actual/Expected %		100.0	0.0	50.0	0.0	0.0	0.0	188.9	314.3	110.8
Sickness period 13/13										
Exposed to risk	119	844	971	775	816	784	550	448	290	5,597
Actual weeks of sickness	0	13	13	13	1	81	35	81	17	254
Actual rate of sickness	0.000	0.015	0.013	0.017	0.001	0.103	0.064	0.181	0.059	0.045
Expected weeks of sickness	0	4	10	13	20	27	27	33	33	167
Actual/Expected %		325.0	130.0	100.0	5.0	300.0	129.6	245.5	51.5	152.1
Sickness period 26/26										
Exposed to risk	270	3,840	4,674	3,440	3,055	2,805	2,453	1,989	1,589	24,115
Actual weeks of sickness	0	57	39	130	151	205	317	313	209	1,421
Actual rate of sickness	0.000	0.015	0.008	0.038	0.049	0.073	0.129	0.157	0.132	0.059
Expected weeks of sickness	3	35	41	36	44	63	89	132	197	640
Actual/Expected %	0.0	162.9	95.1	361.1	343.2	325.4	356.2	237.1	106.1	222.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C12. (continued) Females - all deferred periods combined

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Sickness period 52/52										
Exposed to risk	177	3,328	4,282	3,254	2,928	2,707	2,437	2,016	1,643	22,772
Actual weeks of sickness	0	18	67	137	224	461	481	514	488	2,390
Actual rate of sickness	0.000	0.005	0.016	0.042	0.077	0.170	0.197	0.255	0.297	0.105
Expected weeks of sickness	2	19	27	28	39	64	108	184	316	787
Actual/Expected %	0.0	94.7	248.1	489.3	574.4	720.3	445.4	279.3	154.4	303.7
Sickness period 104/all										
Exposed to risk	57	2,080	3,190	2,559	2,314	2,213	2,076	1,769	1,507	17,765
Actual weeks of sickness	0	0	0	304	270	919	653	2,017	2,190	6,353
Actual rate of sickness	0.000	0.000	0.000	0.119	0.117	0.415	0.315	1.140	1.453	0.358
Expected weeks of sickness	3	46	38	29	42	87	208	436	875	1,764
Actual/Expected %	0.0	0.0	0.0	1,048.3	642.9	1,056.3	313.9	462.6	250.3	360.1

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C13. Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 1 week											
Exposed to risk	0	2	3	3	25	30	52	50	57	29	251
Number of claim inceptions	0	0	0	0	1	1.5	1.5	3	5	3	15
Central claim inception rate		0.000	0.000	0.000	0.040	0.050	0.029	0.060	0.088	0.103	0.060
Expected claim inceptions		0	0	0	3	4	7	7	8	5	34
Actual/Expected %					33.3	37.5	21.4	42.9	62.5	60.0	44.1
Deferred period 4 weeks											
Exposed to risk	3	51	127	262	408	367	302	297	267	109	2,193
Number of claim inceptions	0	3	1	2	6	4.5	3.5	2	6.5	4.5	33
Central claim inception rate	0.000	0.059	0.008	0.008	0.015	0.012	0.012	0.007	0.024	0.041	0.015
Expected claim inceptions	0	0	1	3	6	7	7	8	10	7	49
Actual/Expected %			100.0	66.7	100.0	64.3	50.0	25.0	65.0	64.3	67.3
Deferred period 13 weeks											
Exposed to risk	71	991	2,210	3,824	6,018	5,275	3,840	2,821	1,743	1,080	27,873
Number of claim inceptions	0	2	5	9	17	9	15	21	17	15	110
Central claim inception rate	0.000	0.002	0.002	0.002	0.003	0.002	0.004	0.007	0.010	0.014	0.004
Expected claim inceptions	0	1	3	8	17	20	19	19	18	20	125
Actual/Expected %		200.0	166.7	112.5	100.0	45.0	78.9	110.5	94.4	75.0	88.0
Deferred period 26 weeks											
Exposed to risk	139	2,309	6,298	8,968	12,142	10,681	9,629	8,769	7,274	4,083	70,292
Number of claim inceptions	1	3	7	5	16	18	21	38	51	75	235
Central claim inception rate	0.007	0.001	0.001	0.001	0.001	0.002	0.002	0.004	0.007	0.018	0.003
Expected claim inceptions	0	1	3	5	9	11	16	25	38	42	150
Actual/Expected %		300.0	233.3	100.0	177.8	163.6	131.3	152.0	134.2	178.6	156.7

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C13. (continued) Males - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	All ages
Deferred period 52 weeks											
Exposed to risk	8	102	280	838	1,824	2,151	2,141	1,996	1,526	714	11,580
Number of claim inceptions	0	0	0	0	0	0	0	5	10	9	24
Central claim inception rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.007	0.013	0.002
Expected claim inceptions	0	0	0	0	1	2	4	6	8	7	28
Actual/Expected %					*0.0*	*0.0*	*0.0*	*83.3*	*125.0*	*128.6*	*85.7*
All deferred periods											
Exposed to risk	221	3,455	8,918	13,895	20,417	18,504	15,964	13,933	10,867	6,015	112,189
Number of claim inceptions	1	8	13	16	40	33	41	69	89.5	106.5	417
Central claim inception rate	0.005	0.002	0.001	0.001	0.002	0.002	0.003	0.005	0.008	0.018	0.004
Expected claim inceptions	0	2	7	16	36	44	53	65	82	81	386
Actual/Expected %		400.0	185.7	100.0	111.1	75.0	77.4	106.2	109.1	131.5	108.0

Table C14. Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 1 week										
Exposed to risk	0	0	0	2	8	3	1	7	8	29
Number of claim inceptions	0	0	0	1	0	0	0	1	3	5
Central claim inception rate				0.500	0.000	0.000	0.000	0.143	0.375	0.172
Expected claim inceptions				0	1	0	0	1	1	3
Actual/Expected %					0.0			100.0	300.0	166.7
Deferred period 4 weeks										
Exposed to risk	3	28	54	39	49	46	50	43	19	331
Number of claim inceptions	0	1	0	0	0	0	0	2.5	0.5	4
Central claim inception rate	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.058	0.026	0.012
Expected claim inceptions	0	0	0	0	1	1	1	1	1	5
Actual/Expected %					0.0	0.0	0.0	250.0	50.0	80.0
Deferred period 13 weeks										
Exposed to risk	116	816	918	734	760	735	499	398	263	5,239
Number of claim inceptions	0	1	1	1	1	8	5	6	3	26
Central claim inception rate	0.000	0.001	0.001	0.001	0.001	0.011	0.010	0.015	0.011	0.005
Expected claim inceptions	0	1	1	1	2	3	2	3	3	16
Actual/Expected %		100.0	100.0	100.0	50.0	266.7	250.0	200.0	100.0	162.5
Deferred period 26 weeks										
Exposed to risk	169	3,055	3,756	2,695	2,271	2,051	1,921	1,550	1,306	18,774
Number of claim inceptions	0	2	0	5	6	7	11	10	7	48
Central claim inception rate	0.000	0.001	0.000	0.002	0.003	0.003	0.006	0.006	0.005	0.003
Expected claim inceptions	0	2	2	2	2	2	3	4	7	24
Actual/Expected %		100.0	0.0	250.0	300.0	350.0	366.7	250.0	100.0	200.0

APPENDIX 3 (continued)

Group PHI policies 1983-86: All offices - Standard sickness experience

Table C14. (continued) Females - claim inceptions

Age group	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	All ages
Deferred period 52 weeks										
Exposed to risk	2	45	73	96	121	108	113	115	93	766
Number of claim inceptions	0	0	0	0	1	0	0	1	0	2
Central claim inception rate	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.009	0.000	0.003
Expected claim inceptions	0	0	0	0	0	0	0	0	0	0
Actual/Expected %										
All deferred periods										
Exposed to risk	290	3,944	4,801	3,566	3,209	2,943	2,584	2,113	1,689	25,139
Number of claim inceptions	0	4	1	7	8	15	16	21	14	85
Central claim inception rate	0.000	0.001	0.000	0.002	0.002	0.005	0.006	0.010	0.008	0.003
Expected claim inceptions	0	3	3	3	6	6	6	9	12	48
Actual/Expected %		133.3	33.3	233.3	133.3	250.0	266.7	227.8	112.5	177.1

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