2002

Report of the Disability Committee

(This paper has been prepared for issue to, and discussion by, Members of The Institute of Actuaries of Australia. The Council wishes it to be understood that opinions put forward herein are not necessarily those of the Institute and the Council is not responsible for those opinions.)

THE INSTITUTE OF ACTUARIES OF AUSTRALIA

2002 REPORT OF THE DISABILITY COMMITTEE

By

J Hocking, BSc, FIA, FIAA, MACS, ASIA
K R Hopper, BEc, FIAA
C W Y Hui, BSc, FIAA
D J Longden, BA(Hon), FIA
D A Service, FIA, FIAA, ASA
B P Smith, BA, FIA, FIAA, ASA
D R Stevens, FIAA
W L Young, BSc, BEc, GMQ, FIAA
H T T Bui, BEc, FIAA (convenor)

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1. EXECUTIVE SUMMARY

For this investigation, covering the calendar years 1995 to 1998, the volume of data available for analysis has increased to more than 1,150,000 years of exposure. Female data has increased 11% to 186,000 years of exposure.

The overall average claim cost has continued to increase, with 1995-98 claims costs 20% to 30% higher than 1992-95, largely due to increases in claim duration. Incidence rate changes over the period have been relatively minor. In fact, over the last 10 years, claims costs have deteriorated on average 5% to 10% per annum, depending on occupation class and deferment period.

The deterioration in claims duration occurred across a range of occupation classes and cause of disability.

When analysed by cause of claims, the worst deterioration in claims costs since the 1997 report are due to accident and mental illness for both males and females. Female claims costs increased over a wide range of causes.

Female claim incidence rates are generally well in excess of male rates, confirming the results of previous investigations.

Smoker claims cost experience continues to be higher than non-smoker for most occupation classes.

2. INTRODUCTION

The Committee was established in 1973. Its brief from Council is to "carry out investigations into morbidity of insured and other lives and to report to Council thereon". The Committee's first report covered the period 1974 to 1978.

The last report analysed data for the four years from 1992 to 1995. This report is based on data in respect of individual disability income business for the period 1 January 1995 to 31 December 1998 and largely follows the format of the previous report. (An interim report for the period 1993 to 1996 was produced and published in the December 1998 Quarterly Journal. An interim report covering the same period as this report (1995-98) was prepared in November 2000 and presented at the Life Forum in Canberra.)

The results from this investigation have been compared with those expected under the Australian table IAD89-93 as well as with those expected under US table CIDA85.

The Committee has carried out significant checking of the raw data supplied by contributors for invalid or inconsistent data. Nevertheless, the Committee cannot accept any responsibility for errors or other adverse consequences arising from the use of the information contained in this report.

Due care and judgement are required in reaching conclusions based on this report or in applying the results. Factors to be considered include:

- changes in market share of contributing offices and the inclusion of new contributors,
- variations in experience between individual contributors,
- variations in experience between the years of the investigation, and
- economic conditions.

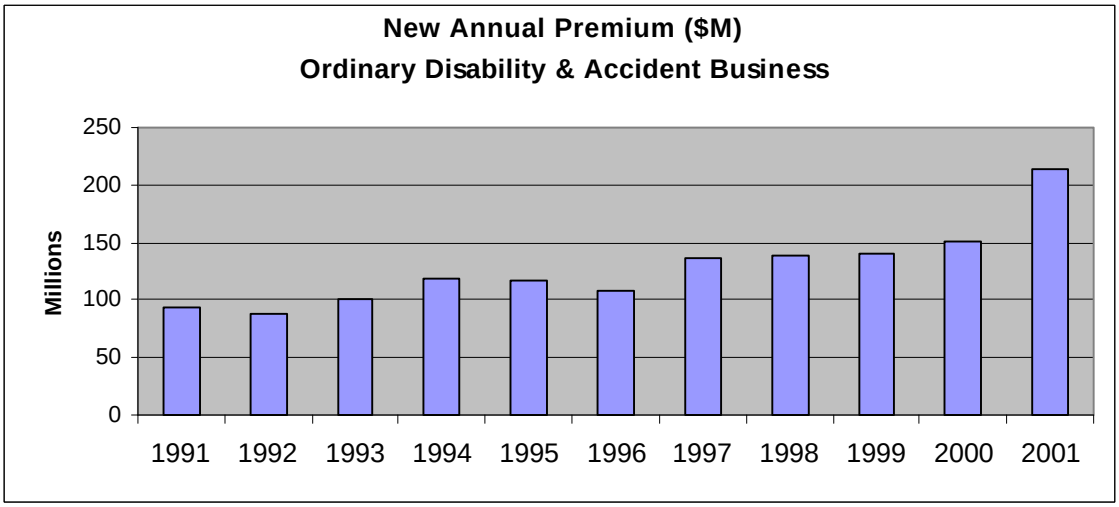
3 INDIVIDUAL DISABILITY INCOME INSURANCE IN AUSTRALIA

3.1 The Australian market

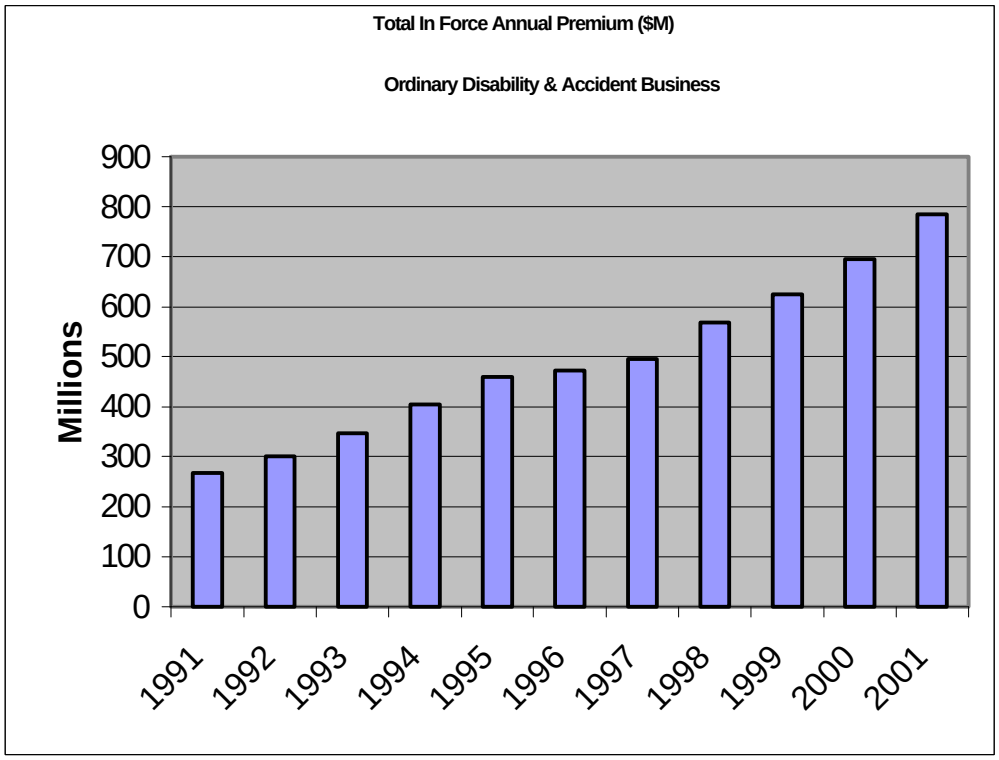
Of the 30 currently registered life companies in Australia (excluding reinsurers), 22 sell individual disability income business. Market share is dominated by a few companies, and has been for some time.

Reinsurance plays an important part in the individual disability market with roughly 20% of the business being reinsured.

Graph 1 - New Disability Income Business by Annual Premium
Source : DEXX&R, December 2001



Graph 2 - Inforce Disability Income Business by Annual Premium
Source : DEXX&R, December 2001



3.2 Description of products

3.2.1 The standard product

The standard product sold in Australia consists of an income payment made on total disablement. Payments are made monthly in arrears, with benefits accruing from the end of the deferment period. Payments continue until the end of the benefit period. Premiums are generally stepped, and are not guaranteed. The product is usually guaranteed renewable.

There are a large number of product variations within that standard approach. The main variations are described below.

3.2.2 Benefit periods

The benefit periods available are:

- fixed term - 1 year, 2 year, 5 year
- to specified age - 55, 60, or 65
- lifetime

Previously, benefit periods were differentiated for accident and sickness. Generally, benefit periods are now coterminous.

The choice of benefit period is sometimes used as an underwriting tool. Thus high-risk occupations are sometimes restricted to fixed terms of 2 or 5 years. Restrictions on benefit period have become more prevalent for particular causes of claim, eg. 2 years on mental illness claims.

The most common benefit period is to age 65. Lifetime benefit periods have been increasingly popular, but poor experience is leading to significant price increases or even withdrawal of the option, and hence this trend is not expected to continue.

3.2.3 Deferment periods

This period typically ranges from 7 days to 2 years. However, the most common deferment period is 1 month, and then 2 weeks. These deferment periods covered 90% of lives exposed in 1995-98.

Substantial rate increases, especially in the 2 week segment, have seen a move towards longer waiting periods, and the 90 day option in particular has become more prominent (10-15% of sales).

The 2-year deferment period segment of the market is also seeing growth. This is primarily used by individuals who have corporate cover (usually limited to a 2 year benefit period for tax reasons) wanting to top up their cover to retirement age or lifetime.
Longer deferment periods are often used as an underwriting tool to provide the cover requested by the client for most conditions, while allowing the insurer to limit exposure to problematic conditions.

3.2.4 Premiums

Originally, most products in Australia had level premiums. Virtually all business is now sold on a stepped premium basis, with premiums changing each year in line with age.

The main rating factors are:

- age
- occupation

- sex
- smoker status
- level of impairment

Medical practitioners, and to a lesser extent legal practitioners, have continued to come under focus. Several companies have created specific occupation classes for these professions.

Level of impairment is not treated in the same way it is for lump sum risk products. Instead of premium loadings, impairments are commonly handled by applying an exclusion or longer deferment period to the condition causing concern, eg. for an existing lower back problem.

3.2.5 Premium guarantees and guaranteed renewability

A feature of the Australian market is that most products:

- have non-guaranteed premiums: while future premium rates are not guaranteed, any review must apply to a whole class of business.
- are guaranteed renewable: once a life has been accepted for insurance, the policy cannot be cancelled – even though premium rates can be reviewed.

The trend of premium increases is continuing in respect of both inforce and new business.

3.2.6 Benefit escalation

Insured benefits for those not on claim are usually increased by any increase in the Consumer Price Index (CPI).

Also, benefits for those on claim are commonly increased after payments start. That increase is usually set as the lower of a fixed amount (typically 3% or 5% per annum) and the increase in the CPI. This product feature is normally an option for which an extra premium is paid.

3.2.7 Definition of disability

The definition of disability typically contains three segments:

- the insured person must be unable to do at least one of the important duties of their occupation; and
- the insured person must not be working; and
- the insured person must be under the regular care of a medical practitioner.

3.2.8 Replacement ratios

Most disability income products on sale in Australia are on an agreed value basis. This means that once the benefit level has been agreed at the underwriting stage, then it remains unchanged over the life of the contract, even if the individual's future earnings fall below the level applicable at underwriting.

Indemnity products are becoming more prevalent, both as a means for insurers to contain claims costs and as an additional, cheaper offering to consumers in the face of rising premiums. Replacement ratios are similar to those for agreed value products, however pre-disability income is typically measured over the 12 months prior to disability occurring. A premium discount of around 15%-25% usually applies relative to agreed value products.

The maximum replacement ratio is generally 75% of pre-disability income, being measured when the policy is issued. Some companies permit 100% of superannuation contributions to be covered, usually paying the benefit directly into a super fund.

Pre-disability income definitions vary in practice, and may result in higher replacement ratios. For example, superannuation contributions are often included in the definition, effectively enabling employees to "cash in" their super.

The 75% scale is reduced for high-income earners. A typical approach would be:

- 75% of the first $250,000 of annual salary, plus
- 50% of the next $100,000 of annual salary, plus
- 20% of any balance.

3.2.9 Claim offsets

In most cases, income from worker's compensation and social security is offset against the amount payable to ensure the replacement ratio is not exceeded. For some policies other income, such as that from accident policies, is also offset.

3.2.10 Partial disablement

This benefit is designed to encourage claimants to return to work by allowing them to maintain benefits, proportionally reduced, while returning to work on a part-time basis. There is concern that the relaxation of conditions for this benefit, and the possibility of going on partial disability benefits before being totally disabled, will increase the cost of this benefit beyond what was expected.

3.2.11 Auxiliary benefits

These benefits are designed to cover minor gaps in benefit provisions as well as to encourage rehabilitation. Some have minor costs but others can be quite costly. As these have been added gradually over time, the full cost may not have been recognised or allowed for.

- Trauma benefit: If the insured suffers a specified trauma event, the monthly benefit is payable for a guaranteed period, usually 6 months, irrespective of the actual period of the individual's disability.

- Specified injury benefit: This benefit operates in the same way as Trauma benefits, but different guaranteed benefits are applied to a number of specified injuries, eg. 3 months for a broken femur, 5 years for paraplegia.

- Rehabilitation costs: These are paid up to a maximum amount. They come in two forms:
  - Reimbursement of costs incurred as part of an approved rehabilitation program, or incurred during rehabilitation, eg. purchase of a wheelchair;
  - Additional payments while a rehabilitation program is undertaken.

- Nursing care: If the insured requires nursing care during the deferment period, a payment is made for each day that care is required.

- Travel benefit: This benefit pays the costs of repatriation if the insured is disabled while away from home.

- Death benefit: If the insured dies while on claim, a death benefit is paid. This can take the form of a small lump sum or the continuation of the income for a period, typically three months, after death.

- Interim Accident benefit: This is paid in the event of the insured becoming disabled from an accident whilst the proposal is being considered, usually with a maximum term of 90 days. Typically it is limited to a maximum amount and/or maximum payment term such as 2 years.

- Accelerated Accident Options: These pay the monthly benefit during the waiting period in the event of the insured becoming disabled due to an accident.

3.2.12 Distribution

Distribution of these products is mainly through third party advisers and brokers. Powerful dealer groups have emerged writing large volumes of business for products on their recommended lists.

Rating houses have also emerged as major drivers of product development through their recommended lists and product ratings. Product design has occasionally suffered as a result of this both in terms of consumer need and shareholder value.

The takeover market for external transfers of business between different writers has been active in recent years. Typically "clean-skin" policies less that 5 years inforce have been accepted on a personal statement. Reinsurers are becoming less inclined to support this and have tightened their requirement, accepting policies less than 3 years inforce for example. Twisting weakens the screening process and may explain the dampened selection effect, particularly at younger ages.

3.2.13 Pricing approaches

Until the release of IAD89-93, the US CIDA 85 tables were almost universally used for pricing. Some companies are now using IAD89-93. Given the wide difference in inter-company experience, the tables require company-specific adjustment.

3.3 Current issues

3.3.1 Profitability

With the significant deterioration in claims experience there continues to be a number of companies losing money on their individual disability income products, despite premium rate increases. The picture is confusing because the extent of losses depends on the reserving basis adopted for claims in payment. However it is clear that a strong response to the problem is required.

3.3.2 Definition of disablement

There is continuing and relentless pressure to liberalise definitions of disability. The definition based on the insured's occupation has moved significantly in recent years from:

- inability to perform duties of any occupation, to
- inability to perform own/own or similar occupation, to
- inability to perform major duties/one of the major duties/one of the duties of own occupation, to
- inability to work more than 10 hours in own occupation.

There are two unknowns in this liberalisation which some companies may have ignored in pricing. The first is that the experience available is usually for products with a mix of tighter disablement definitions. The second is the impact of the change to a more litigious society.

Partial disability definitions, a major focus for the Rating Houses, have also weakened and it has been possible in some circumstances to obtain replacement ratios in excess of 100%.

3.3.3 Occupational Classification

Another phenomenon associated with weakening product standards is that there is evidence of occupation creep occurring within the industry. This is an unknown and may mean companies are mis-pricing occupational risks. It is quite likely to be contributing to the deterioration in the occupational results of this investigation.

4. DATA

4.1 Exposure

The amount of data available for analysis continues to grow significantly. The data used in this report relates to calendar years 1995 to 1998 inclusive.

Total exposure is now 1,153,816 years of exposure, with 1,030,101 years in the 2 week and 1 month deferment period. This is a 6.5% increase over the total exposure for the 1997 report. Total female exposure has increased by 11% to 185,925 years.

4.2 Attributes of the data

Table A shows the number of inforce and claim records collected by the Committee. This table does not represent years of exposure or numbers of claims occurring, these are shown in Tables B and C. Excluding business overheads and cancellable business, the 1,560,580 inforce records provide 1,153,816 years of exposure. Claims are counted for the proportion of the benefit at which they commence. The 33,095 records for new claims provide a total of 28,936 claims.

If claim rates for sub-groups are calculated from the inforce and claim records in table A, the indications as to the degree of risk of morbidity may be clouded by the composition of those sub-groups. For example, females would appear to have lower overall claim rates than males. This is because the difference between male and female morbidity has been masked by the higher proportion of blue collar lives amongst males.

Table A indicates the following changes in the data collected over the period 1995 to 1998

- a continuing increase in the proportion of female insured lives,
- a continuing increase in the proportion of 1 month deferment period business,
- an increase in the proportion of business with lifetime accident and sickness benefits, and
- an increase in the proportion of non-smoker business, and a decline in the proportion of aggregate.

Table B shows the age distribution of the total exposure, which is very similar to that shown in previous reports. The distribution for each occupation class is also similar although heavier risk occupation classes tend to be younger. Female lives also tend to be younger than male lives.

4.3 Data inclusion and exclusion

4.3.1 In force data

The main analysis relates to non cancellable business with a benefit period of at least one year. Lives with exclusions, out of working hours coverage and business accepted under automatic acceptance arrangements are included in the analysis.

Separate analyses are performed for office overheads and cancellable business.

Data collected by the Committee but not used are group data, overseas data and certain excluded occupations.

The Committee does not collect data relating to loaded lives.

The following table shows for each type of business the exposure and the corresponding table in which the experience is analysed.

	Table	Exposure
Guaranteed renewable	B and C	1,153,816
Cancellable business	P	65,592
Business overheads	O	35,578

4.3.2 Claims

Claim details are collected to enable incidence and termination rates to be calculated. Specifically, claims data are not collected for benefits paid within the deferment period or additional amounts paid over and above the insured monthly benefit.

5. METHOD OF ANALYSIS

5.1 Presentation of results

There is an emphasis on the 'actual versus expected' style of comparison where 'expected' is mainly based on the Australian table IAD89-93. Comparisons have also been made with the US CIDA 85 table as this was the 'expected' table in the last report. Both tables are widely used in Australia for valuation, claims reserving and as a base for premium rate setting.

The elements of incidence and termination of disability are shown as separate items. This type of presentation allows results to be used readily for rating under Australian conditions.

5.2 Incidence rates

The exposure is calculated using a census method from the inforce records at the start and end of each calendar year, taking account of the month of renewal. An adjustment is made in respect of each claim to remove the period of claim from the exposure, as the insured is not exposed to the risk of incidence of disability during the claim period.

Claims are counted for the proportion of the monthly benefit at which they commence. For example, a claim commencing at 50% of the insured benefit amount is counted as 50% of a claim in determining incidence rates.

5.3 Termination rates

Termination rates are calculated:

- daily in the first 3 months of disability
- monthly up to 2 years of disability
- annually thereafter.

They are calculated from recoveries and deaths, using all claims reported by the contributors in the period, i.e. including open claims and claims closed during the period of investigation. Claims finalised due to the expiry of the benefit period do not count as recoveries.

5.4 Lump sum settlements

Lump sum settlements do not count as terminations.

To the extent that lump sum settlements are paid on claims that may be expected to be longer term claims, this method will overstate termination rates. On the other hand, some of the settlements are at short durations, and are probably the prepayment of short term claims. As such, excluding them from the investigation would tend to understate the termination rates.

In any case, since lump sum settlements represent less than 0.3% of total claim terminations, the Committee does not feel this distorts the results significantly.

5.5 Rating factors

Morbidity is affected by many factors. This report analyses data by:

- sex
- age
- occupation class
- deferment period (2 weeks and 1 month).

Note that a deferment period of 15 days is treated as 2 weeks, and 28 and 30 days as 1 month.

There is also partial analysis of:

- selection
- smoking status
- cause of claim
- other deferment periods
- business overheads insurance
- variation by company.

At this stage, due to system constraints, lack of data, or because the effect is considered likely to be swamped by other rating factors or variation by contributor, no analysis has been carried out on the following factors:

- medical evidence
- 'own' versus 'any' occupation definition of disability
- benefit period
- no claim bonus
- benefit size
- claims escalation
- non-coterminous benefit periods
- occupation on a more detailed basis
- 24 hour/out of working hours coverage policies.

No analysis is possible at this stage (as data is not collected) for:

- benefit size as a proportion of income (replacement ratio)
- impaired lives
- source of business (tied, independent, direct)
- geographic location
- second claims
- nursing benefits
- rehabilitation or ancillary benefits.

The effect of minimum benefit periods for specific injuries and partial disability benefit is reflected in the experience, but is not separately identified in the analysis at this stage.

5.6 Occupation classifications

The tables in this report and IAD89-93 are divided into four occupation classes A, B, C and D. These four classes separate occupations into the following broad categories:

A Professional, white collar and sedentary, e.g. accountant, barrister, doctor, teacher. Other sedentary white collar, e.g. clerk, estate agent.

B Other sedentary including supervision of manual workers, e.g. restaurateur (no cooking, no bar), lab technician.

C Light manual workers, e.g. carpenter, building foreman, printer, shoemaker, butcher (retail shop).

D Moderate manual workers, e.g. barman, bricklayer, crane operator, couriers. Heavy manual workers, e.g. butcher (slaughterer), labourer.

To achieve consistency over all contributors and to avoid the necessity for a contributor to examine individual cases to classify them, contributors supply the Committee with the broad guidelines used by their underwriters. The Committee then advises the contributor on classification. Contributors also supply their own occupation class codes.

Contributors may not always contribute to each category. There is also variation in the classification of occupations. For example, the allocation of four occupations across classes, obtained from a past survey of some contributors, is:

Occupation	A	B	C	D
Auctioneer	8	4	-	-
Interior Decorator	-	2	7	2
Butcher (Retail)	-	1	8	3
Bricklayer	-	-	4	6

The variation in occupation classification would be expected to result in varying experience between companies.

CIDA 85 also uses four occupation classes, which are broadly in line with the Australian classifications. They are defined as follows:

Class 1 Professional, technical and managerial occupations that generally involve office duties only.

Class 2 Supervisory and other skilled clerical and skilled technical people.

Class 3 Non-hazardous light manual workers.

Class 4 Hazardous work with heavy manual labour or using heavy equipment.

5.7 Deferment periods

This report sets out detailed results for the 2 week and 1 month deferment periods, because they contain the greatest volume of data. Full analysis of data for other deferment periods has not been included because they represent only a small proportion of the exposure.

5.8 Selection

Selection has been investigated using a select period of the first and second year of the policy.

5.9 Data collection and verification

A PC program has been supplied to contributors, which is designed to edit the data and report on common errors. This enables the larger part of the data verification procedures to be done before the data is sent to the Committee. Companies are asked to sign off the data.

When received, more extensive tests are performed and items of significance are raised with the relevant contributor. Results are also carefully evaluated in the light of the previous report and the Committee's general experience with disability income business.

In this way, the quality of the data is enhanced, but it is not possible for the Committee to test all aspects of the data.

In particular, the Committee is highly dependent on the individual contributors to supply correct data, and encourages companies to test their contributions carefully and ensure that sign off is entrusted to the actuary who is in the best position to identify data problems.

5.10 Confidentiality of data

The Committee has procedures in place to ensure the security and confidentiality of the data provided by contributors. In particular, where data is being prepared which could be identified as relating to an individual contributor this data is only available to the person responsible for the database and one Committee member who is not an employee of any life office. This applies especially to the data used in Section 7 of this report (where variation in experience by contributor is analysed).

6. SUMMARY OF RESULTS

6.1 Introduction

Detailed results are shown in the attached tables and graphs. This section comments on some of the general differences in experience by different rating factors.

6.2 Comparison with the previous report

The current experience (1995-98) overlaps with the previous experience (1992-95) by one year, so changes in experience over time are affected by this overlap.

Variations in individual company experience and their weightings will affect the reported experience. For example, even if the experience remained constant for each contributor the aggregate experience will change as a result of the changing volume, and hence changing weighting, of each contributor's data.

Comparison has been made with both the IAD89-93 and the CIDA 85 table.

Claim costs have increased significantly, largely due to increases in average claim duration. Incidence rates have also increased compared to the previous period, but the increases are generally smaller and not uniform across occupation class and deferment periods.

The following table shows the change in experience from 1992-95 to 1995-98, using the change in actual to expected ratios on IAD89-93.

WEIGHTED AVERAGE CHANGE IN EXPERIENCE FROM 1992-95 TO 1995-98

Deferment Period 2 Weeks

	Deferment period 2 weeks		
	Claim Incidence	Claim Duration	Cost
Male A	0%	37%	38%
Male B	6%	35%	43%
Male C	0%	21%	21%
Male D	-7%	25%	18%
Female A	-6%	17%	13%

	Deferment Period 1 Month		
	Claim Incidence	Claim Duration	Cost
Male A	4%	17%	20%
Male B	8%	39%	52%
Male C	9%	17%	30%
Male D	9%	8%	19%
Female A	0%	26%	25%

Claim duration and claim cost are for the first 3 years of the benefit period. Claim costs have been calculated at a zero interest rate. Details by quinquennial age for the period 1995-98 are shown in Tables G1 and G2.

6.3 Trend In Claims Cost Across Investigation Periods

This section of the report looks at the trend in the claims cost over the last 5 investigations that spanned 10 years to December 1998.

The tables below show the average claim cost per $1 monthly benefit for the first three years of benefit expressed as a percentage of IAD89-93. The tables show results separately for male occupation classes A and C and female occupation class A. The first table shows the results for a 2 week deferment period and the second for a 1 month deferment period.

2 Week Deferment Period

Investigation	Male A	Male C	Female A
1989-1993	100%	100%	100%
1991-1994	120%	105%	125%
1992-1995	123%	109%	130%
1993-1996	130%	114%	135%
1995-1998	170%	132%	147%
Av. Increase p.a.	10%	5%	7%

1 Month Deferment Period

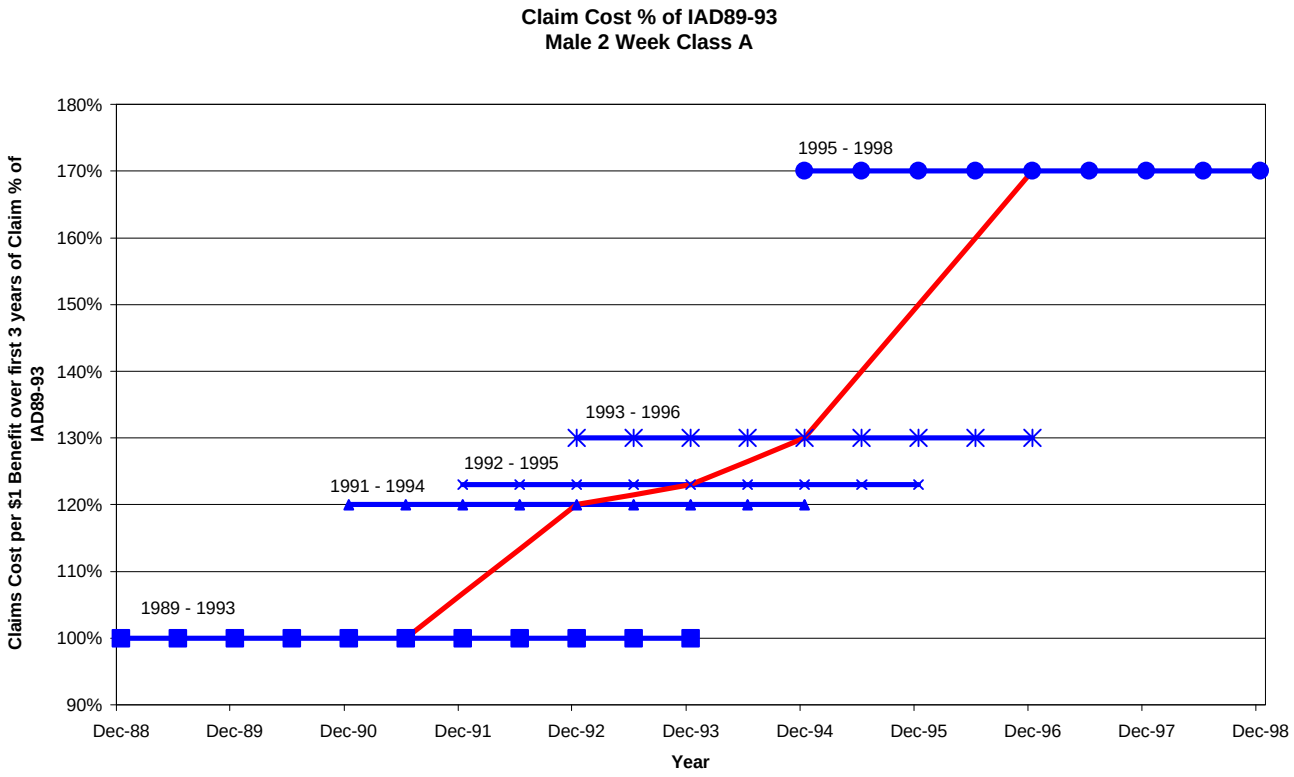
Investigation	Male A	Male C	Female A
1989-1993	100%	100%	100%
1991-1994	115%	104%	110%
1992-1995	126%	108%	118%
1993-1996	125%	108%	108%
1995-1998	151%	140%	147%
Av. Increase p.a.	8%	6%	7%

These results show a steady increase in claims cost from the 1989-93 investigation up to 1995-1998 period. The trend in experience across the various investigations is illustrated by the following graphs.

The first graph shows the results across the investigation period for the Male Class A 2 week deferment period. We have added a trend line between the mid point of each investigation. The second graph show the trend lines for Male Class A and C for both 2 week and 1 month deferment.

The third graph compares the trend in Incidence Rates and Average Claim Duration for Male Class A 2 week deferment periods. The trend seen in this graph indicates that the main cause of the increase in claims cost relates to an increase in average claims duration. The final graph compares the Male Class A results with Female Class A.

There is a similar trend across the investigation periods for the various occupation classes, deferment periods and sex.


Claim Cost % of IAD89-93
Male 2 Week Class A
Claims Cost per $1 Benefit over first 3 years of Claim % of IAD89-93
180%
170%
160%
150%
140%
130%
120%
110%
100%
90%
1995 - 1998
1993 - 1996
1992 - 1995
1991 - 1994
1989 - 1993
Dec-88
Dec-89
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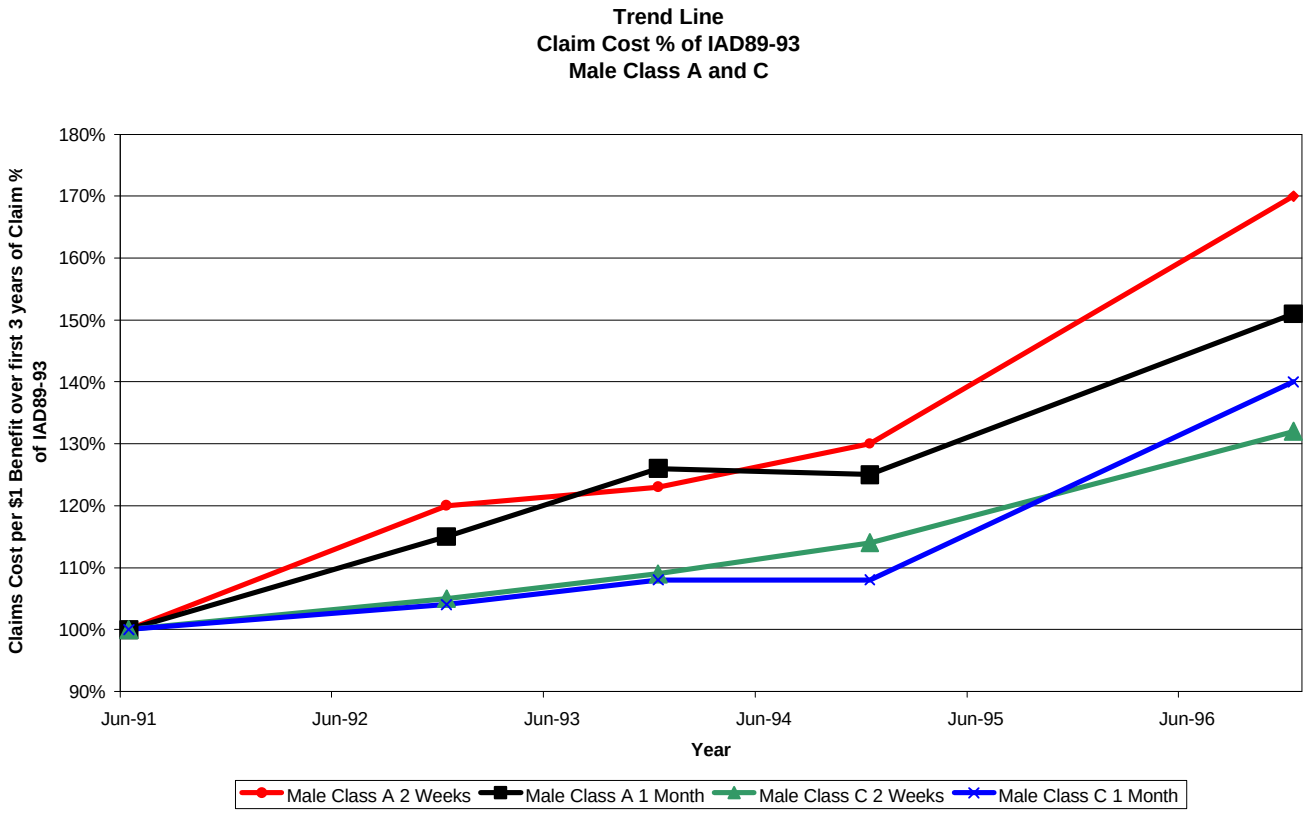
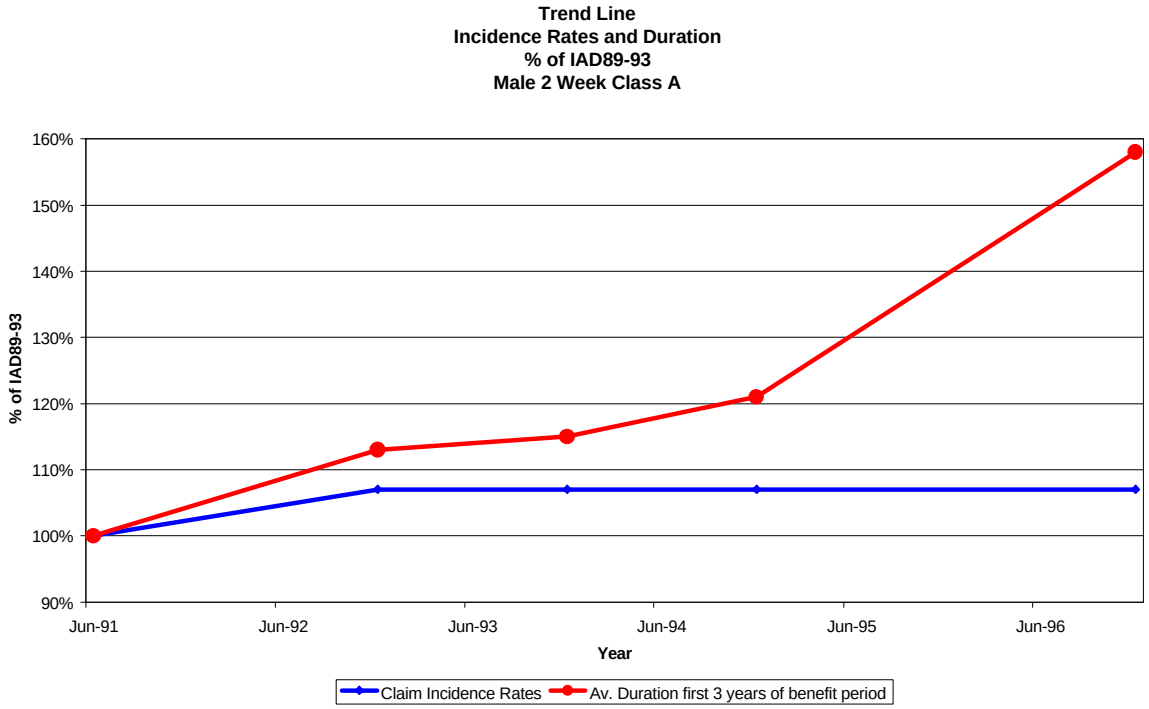
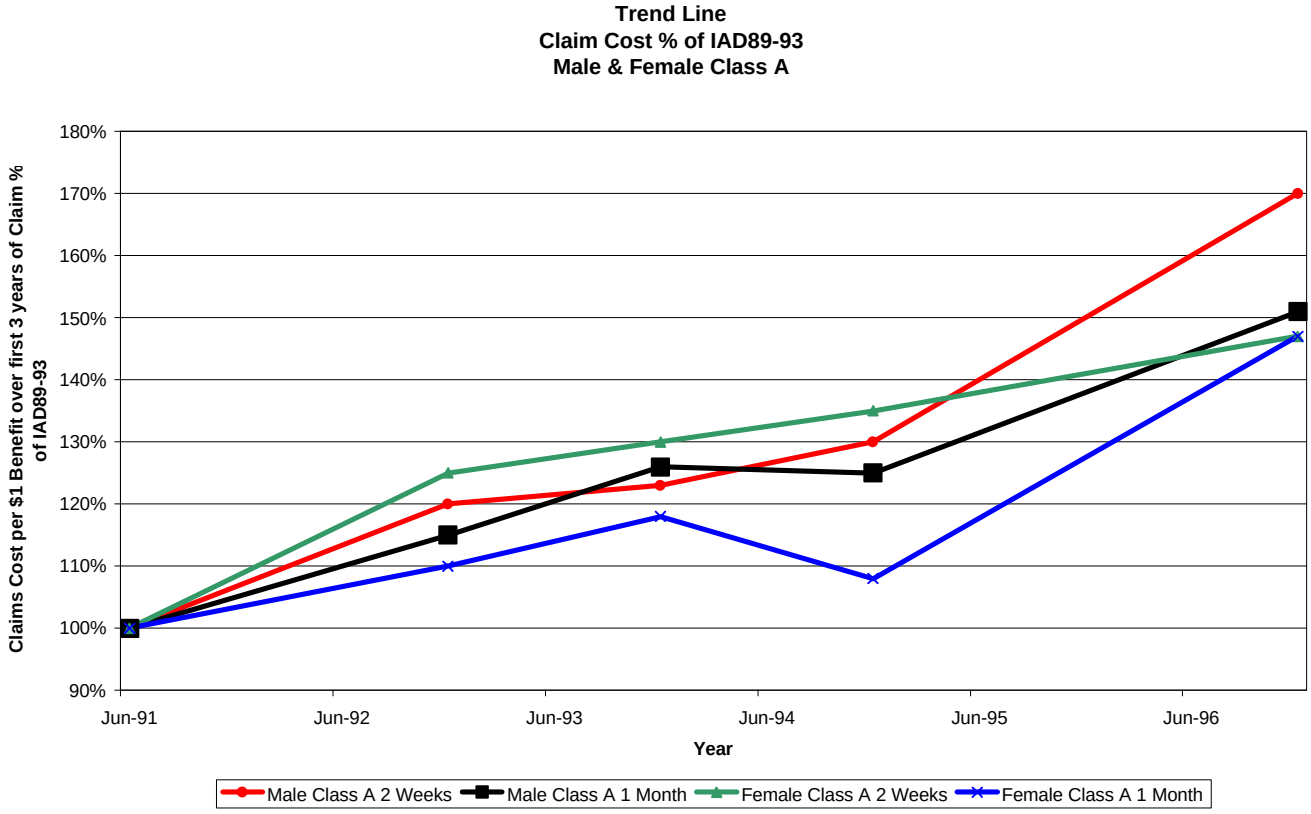
Dec-94
Dec-95
Dec-96
Dec-97
Dec-98
Year


Trend Line
Claim Cost % of IAD89-93
Male Class A and C
Claims Cost per $1 Benefit over first 3 years of Claim % of IAD89-93
180%
170%
160%
150%
140%
130%
120%
110%
100%
90%
Jun-91
Jun-92
Jun-93
Jun-94
Jun-95
Jun-96
Year
Male Class A 2 Weeks
Male Class A 1 Month
Male Class C 2 Weeks
Male Class C 1 Month


Trend Line
Incidence Rates and Duration
% of IAD89-93
Male 2 Week Class A
160%
150%
140%
130%
120%
110%
100%
90%
% of IAD89-93
Jun-91
Jun-92
Jun-93
Jun-94
Jun-95
Jun-96
Year
Claim Incidence Rates
Av. Duration first 3 years of benefit period


Trend Line
Claim Cost % of IAD89-93
Male & Female Class A
180%
170%
160%
150%
140%
130%
120%
110%
100%
90%
Claims Cost per $1 Benefit over first 3 years of Claim % of IAD89-93
Jun-91
Jun-92
Jun-93
Jun-94
Jun-95
Jun-96
Year
Male Class A 2 Weeks
Male Class A 1 Month
Female Class A 2 Weeks
Female Class A 1 Month

6.4 Exposed to risk and numbers of new claims – Table B and C

Tables B and C show the exposed to risk and numbers of claims in some detail. This allows users to assess the statistical reliability of various results.

6.5 Incidence rates by age – Table D.

Table D shows incidence rates by age, sex and occupation. Incidence rates in most cases increase steadily with age. This increase in incidence rates with age remains broadly unchanged from IAD89-93, as can be seen in Table F2 and Graphs E to H.

6.6 Incidence rates by occupation class – Table D

Table D also compares the incidence rates for the four occupation classes by age.

Incidence rates increase as one moves through the occupation classes. The difference between occupation classes in percentage terms decreases with increasing age. The ratios have increased since the last report. This is due to the worsening experience of Classes B,C and D, especially 1 month business for Male Class C, rather than improvements in experience in Class A

Weighted Average Incidence Rates as % of Male Class A

	2 Weeks	1 Month
Male B	156% (142%)	156% (148%)
Male C	243% (232%)	320% (282%)
Male D	273% (271%)	379% (332%)

Weighted Average Incidence Rates as % of Female Class A

	2 Weeks	1 Month
Female B	138% (106%)	134% (126%)
Female C	164% (169%)	157% (153%)
Female D	176% (175%)	174% (125%)

(Figures in brackets are for 1992-95)

6.7 Incidence rates by deferment period – Table D

Table D also shows incidence rates for the two major deferment periods. Incidence rates reduce significantly as the deferment period increases.

Graphs A to D present the crude incidence rates for 2 weeks and 1 month deferment periods, by quinquennial age.

Ratio of Weighted Average Incidence Rates

1 Month to 2 Weeks	Males		Females	
Class A	36%	(35%)	41%	(39%)
Class B	36%	(35%)	43%	(49%)
Class C	45%	(41%)	40%	(45%)
Class D	47%	(40%)	43%	(32%)

(Figures in brackets are for 1992-95)

These ratios have remained fairly stable over the last two reports.

6.8 Incidence rates by sex – Table E

Table E compares the number of female claims with those expected if females experienced the rates of incidence experienced by males in this investigation.

Note that, due to the small volume of data, Table E demonstrates great variability by age and occupation class in the ratio of female to male incidence rates.

The results of the comparison of female to male incidence rates are consistent with those in previous reports. Care is needed in interpreting the results as the number of female claims is still small for occupation classes B, C and D.

Overall there is strong evidence of female incidence rates being significantly higher than males.

Ratio of Female to Male Incidence Rates

	2 weeks Deferment Period	No of new female claims	1 Month Deferment Period	No of new female claims
Class A	147% (145%)	985	172% (177%)	1,520
Class B	120% (111%)	168	146% (145%)	224
Class C	100% (109%)	296	90% (92%)	296
Class D	94% (90%)	107	84% (64%)	78
Combined	128% (130%)	1,556	145% (148%)	2,117

(Figures in brackets are for 1992-95)

6.9 Comparison with standard tables – Tables F1 and F2

Tables F1 and F2 show the actual number of claims compared with the number expected using IAD89-93 and CIDA 85 respectively.

Comparison with IAD89-93

Table F1, where the actual number of claims is compared with IAD89-93, the actual to expected ratio fluctuates around 100%.

Ratio of Actual Claims to Number Expected on IAD89-93

Deferment Period 2 Weeks

	Males		Females	
Class A	107%	(107%)	100%	(106%)
Class B	94%	(89%)	103%	(94%)
Class C	99%	(99%)	99%	(111%)
Class D	98%	(105%)	84%	(88%)
Combined	100%	(101%)	99%	(104%)

Deferment Period 1 Month

	Males		Females	
Class A	114%	(110%)	100%	(100%)
Class B	110%	(102%)	102%	(96%)
Class C	111%	(102%)	87%	(84%)
Class D	118%	(108%)	88%	(63%)
Combined	114%	(106%)	97%	(96%)

(Figures in brackets are for 1992-95)

Graphs E to H chart the ratio of Australian crude incidence rates to IAD89-93 incidence rates by age and occupation class, with an overlaid bar chart of total actual claims as a measure of significance for each set of results.

Comparison to CIDA 85

It can be seen from Table F2 that the actual to expected ratio increases with age. This is more marked for the 2 week deferment period that for 1 month. This shows that the CIDA 85 incidence rates by age are inappropriate for Australia.

Ratio of Actual Claims to Number Expected on CIDA 85

Deferment Period 2 Weeks

	Males		Females	
Class A	71%	(69%)	53%	(53%)
Class B	57%	(54%)	44%	(39%)
Class C	69%	(68%)	46%	(50%)
Class D	69%	(72%)	44%	(45%)
Combined	68%	(68%)	50%	(50%)

Deferment Period 1 Month

	Males		Females	
Class A	66%	(63%)	47%	(46%)
Class B	47%	(44%)	38%	(35%)
Class C	56%	(51%)	36%	(33%)
Class D	60%	(54%)	36%	(25%)
Combined	59%	(55%)	44%	(41%)

(Figures in brackets are for 1992-95)

Overall, the experience, when compared to the standard tables, has deteriorated since the previous report for most occupation classes and deferment periods. The Australian incidence rates continue to be a fraction of the CIDA 85 table for all occupations and deferment period.

6.10 Average claim duration – Tables G1 and G2

Tables G1 and G2 compare average claim durations and claim costs for curtate benefit durations of 1, 2 and 3 years against IAD89-93 and CIDA. The following comments are based on the first three years of benefit.

Average claim durations are much longer for 1 month deferment business than for 2 week business. Claim duration for occupation class A appears to be longer than for occupation classes B to D.

The general lengthening of average claim durations was noted earlier in section 6.2. The length of claim continued to increase from 1989-93 for all occupation classes and deferment periods.

Comparison of Average Duration against IAD89-93

	2 weeks deferment period		1 month deferment period	
Male Class A	158%	(115%)	133%	(114%)
Male Class B	136%	(101%)	183%	(132%)
Male Class C	133%	(110%)	124%	(106%)
Male Class D	131%	(105%)	127%	(118%)
Female Class A	144%	(123%)	147%	(117%)

(Figures in brackets are for 1992-95)

Australian average claim durations were generally shorter than CIDA 85 for 2 week deferment period in the last report, but have deteriorated to being longer in this report, indicating lower Australian termination rates than CIDA 85.

For 1 month deferment period, claim duration remain longer than CIDA 85, and the differential have actually increased compared to the last report..

Comparison of Average Duration against CIDA 85

	2 weeks deferment period		1 month deferment period	
Male Class A	138%	(99%)	143%	(121%)
Male Class B	109%	(80%)	167%	(120%)
Male Class C	107%	(88%)	112%	(95%)
Male Class D	104%	(82%)	113%	(105%)
Female Class A	136%	(116%)	168%	(133%)

(Figures in brackets are for 1992-95)

6.11 Claim continuance – Table H

Table H shows the number of lives still claiming at each duration out of 1,000 lives initially claiming, separately for each occupation class. It also compares the claim termination rates with the IAD89-93 table for each occupation and deferment period.

Claim continuance rates show some increase with age for business with 1 month deferment period .

Termination rates continue to be higher for 2 week business than for 1 month business.

Termination rates have decreased at all durations compared to the previous report.

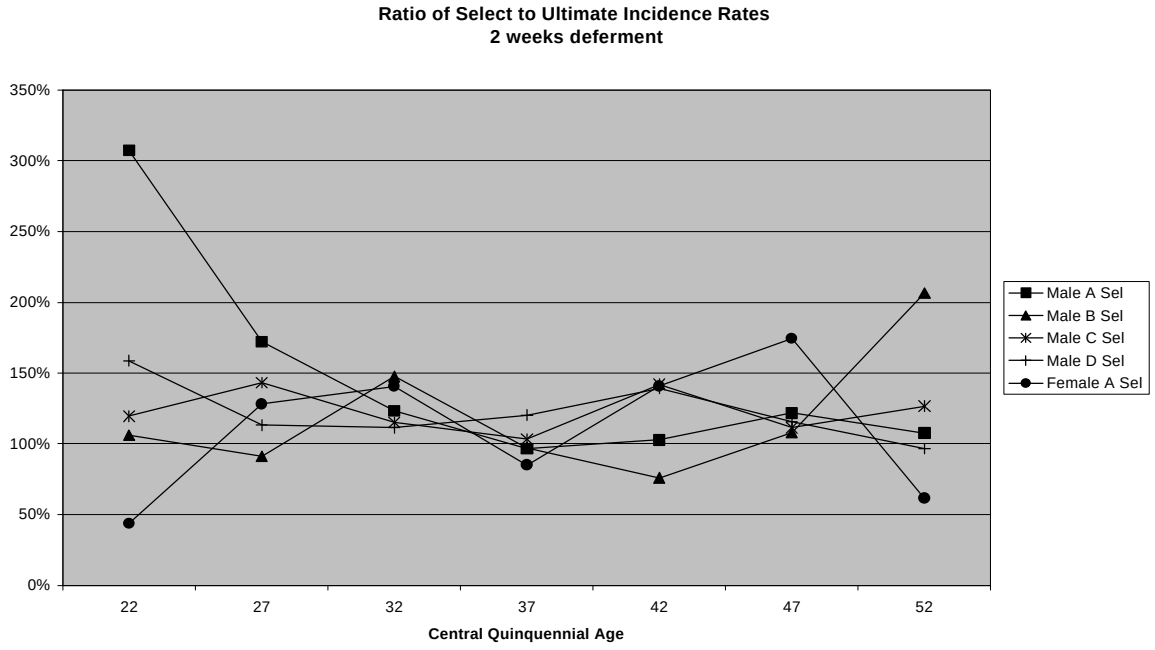
There are few claims at the longer durations so care is needed in interpreting the resulting termination rates.

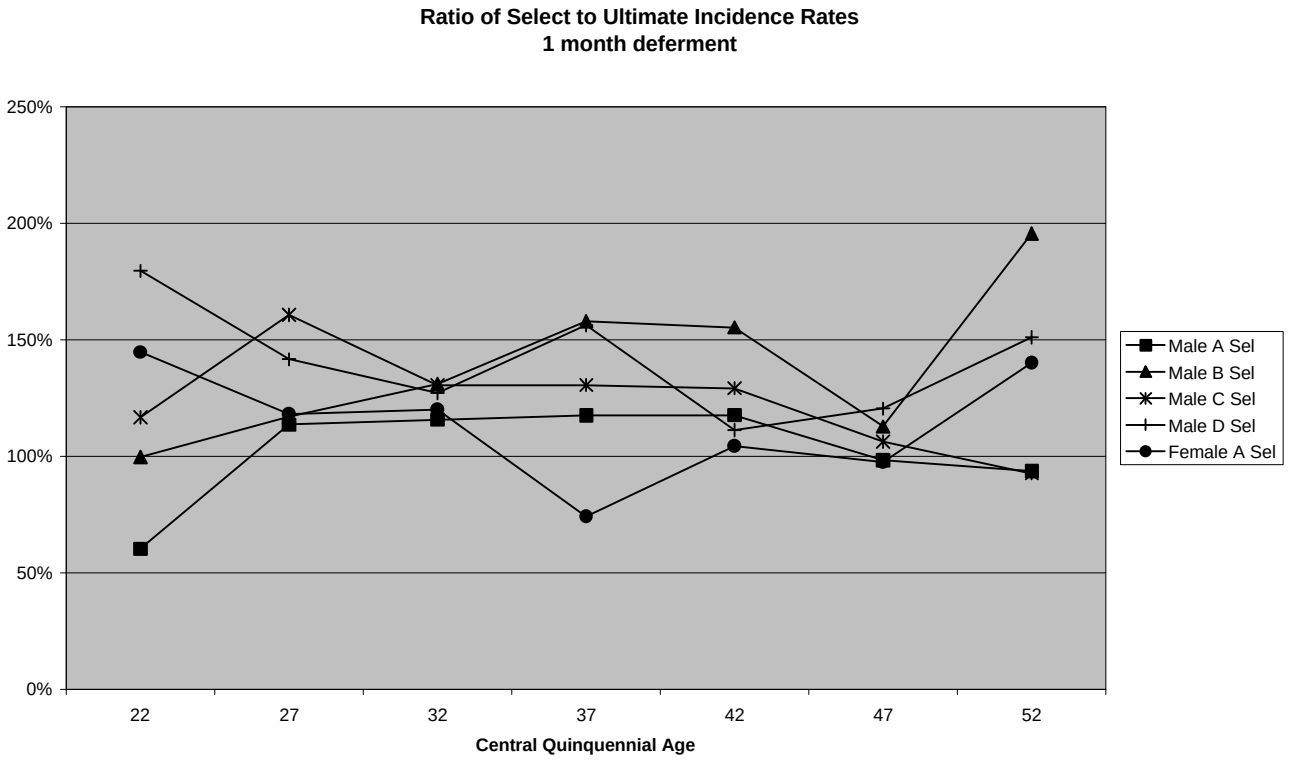
6.12 The effect of selection - Table I

Table I investigates the effect of selection for selection periods of one and two years.

The results show strong evidence of anti-selection, at young ages and for Occupation Class A. This is particularly evident in the analysis of policies with 2 weeks deferment and less so for those with a 1 month deferment period. The anti-selection effect reduces by age, but some evidence of selection at ages 47 and 52 can be observed. However, it should be noted that there is little select exposure at these ages.

The comparison is presented graphically below.


Ratio of Select to Ultimate Incidence Rates
2 weeks deferment
350%
300%
250%
200%
150%
100%
50%
0%
22
27
32
37
42
47
52
Central Quinquennial Age
Male A Sel
Male B Sel
Male C Sel
Male D Sel
Female A Sel


Ratio of Select to Ultimate Incidence Rates
1 month deferment
250%
200%
150%
100%
50%
0%
22
27
32
37
42
47
52
Central Quinquennial Age
Male A Sel
Male B Sel
Male C Sel
Male D Sel
Female A Sel

6.13 Incidence rates by cause of claim - Table K

Table K shows incidence rates by cause of claim for new claims.

The following table shows the analysis of the major causes of claim by sex and occupation classes for 2 week business. The results for 1 month deferment period are very similar.

Proportions of Claims by Cause for 2 Week Deferment Period

	Male			
	Class A	**Class B**	**Class C**	**Class D**
Mental and nervous	19% (18%)	8% (8%)	6% (7%)	7% (9%)
Digestive system	9% (12%)	10% (11%)	9% (12%)	8% (13%)
Genito-urinary and pregnancy & childbirth	2% (3%)	2% (3%)	1% (2%)	1% (3%)
Musculoskeletal	14% (19%)	17% (19%)	16% (24%)	21% (26%)
Accident and violent cause	28% (17%)	45% (39%)	52% (34%)	49% (23%)
Others	29% (31%)	18% (20%)	15% (21%)	14% (26%)
TOTAL	100%	100%	100%	100%

	Female			
	Class A	**Class B**	**Class C**	**Class D**
Mental and nervous	22% (20%)	16% (16%)	17% (13%)	15%(8%)
Digestive system	8%(8%)	6% (8%)	9% (9%)	7%(9%)
Genito-urinary and pregnancy & childbirth	15%(20%)	16% (13%)	14%(19%)	10%(16%)
Musculoskeletal	12% (9%)	15% (21%)	12%(16%)	16%(30%)
Accident and violent cause	18% (10%)	23% (18%)	23%(17%)	30%(15%)
Others	25% (33%)	24% (24%)	25%(26%)	23%(22%)
TOTAL	100%	100%	100%	100%

(Figures in bracket represent 1992-95 equivalent)

Occupation class A continues to have a relatively higher (and growing) incidence of claims due to mental and nervous disorder than other occupation classes. The incidence of mental claims has increased since the last report for all occupations. The proportion of accidents and musculoskeletal claims (which includes back complaints) increases by occupation class.

Two new features of the data are worthy of comments this year:

Firstly, the proportion of sickness claims reported without a cause has declined significantly compared to previous investigations, falling from between 25% to 50% to under 5%. This is a significant improvement in the quality of data submitted by contributing offices, perhaps reflecting the attention claim management now receives from companies' management.

Secondly, the proportion of claims due to accidents and violent causes increased dramatically compared to previous investigations for all occupations; for occupation D this proportion doubled compared to the last investigation.

Claims reported without a cause have been distributed in the same proportion as sickness claims with known causes, as in previous investigations.

The volume of female claims in classes B, C and D is limited and the results should be interpreted with care.

6.14 Accident experience - Table J

Table J shows the proportion of new claims due to accidents.

The results show that the proportion reduces with increasing age and increases with occupation class. Females generally have a lower proportion of accident claims than males.

For some occupations, the ratios are much higher than those in the last report. This is consistent with the improvement of data quality. In earlier reports, table J had been calculated using the assumption that claims without a cause are sickness claims; however, the improvement in the recording of cause of claims has revealed that a number of these were in fact accident claims.

6.15 Female to male experience by cause of claim - Table K

The results in Table K have been summarised below to show the number of female claims, per 1,000 years of exposure, in excess of the number experienced by males for the five main causes of disablement. As shown in the previous section, these five causes make up around 75% of all claims.

Incidence rates for females are generally higher than those for males. This is mainly due to extra mental and genito-urinary claims. On the other hand, accident rates for females are lower than for males.

Excess of Female over Male Incidence Rates
(per 1,000)

Deferment Period 2 Weeks

	Class A	Class B	Class C	Class D
Mental and nervous	2.7	4.0	5.9	4.6
Digestive system	0.4	-1.2	0.3	-1.1
Genito-urinary and pregnancy & childbirth	5.3	6.5	7.4	4.7
Musculoskeletal	0.3	0.2	-2.6	-3.8
Accident and violent cause	-1.4	-6.9	-16.4	-14.5
Others	0.9	4.2	5.3	4.2
Total	8.3	6.8	-0.2	-5.8

Deferment Period 1 Month

	Class A	Glass B	Class C	Class D
Mental and nervous	1.6	1.3	1.6	2.9
Digestive system	0.0	-0.2	-0.4	-2.0
Genito-urinary and pregnancy & childbirth	2.4	3.3	3.1	4.2
Musculoskeletal	0.4	0.8	-0.5	2.1
Accident and violent cause	0.0	0.6	-8.2	-11.7
Others	0.5	-0.2	1.7	-0.6
Total	4.9	5.6	-2.7	-5.1

6.16 Non-smoker to smoker experience - Tables L1 and L2

Table L1 shows ratios of non-smoker to smoker experience for incidence rates, claim duration and claims costs. Non-smoker experience is better for all classes except Male B for which non-smoker experience is worse in all aspects. The non-smoker incidence rate of Male D with a 2 weeks deferment period is also found to be higher than that of smokers, but the differential is not significant. This finding is contrary to the results of the previous study.

The ratios of non-smoker to smoker claim costs are shown below. Note that the paucity of claims data in some classes can distort the detailed results.

Ratio of non-smoker to smoker claim costs
for the first 3 years of the benefit period

	Male A	Male B	Male C	Male D	Female A
2 Weeks	38%	110%	85%	83%	79%
1 Month	62%	113%	66%	79%	75%

The aggregate experience analysed in Tables A to K, M and N includes a proportion of smoking status "unknown", especially for the older policies, which has been excluded from the Table L1 analysis.

The comparison of non-smoker experience to aggregate is shown in Table L2. Again, the results for Male B is contrary to that of the previous study. The claim incidence rate and claim cost of non-smokers with a 2 week deferment are higher than that of aggregate, and the average duration of non-smokers with a 1 month deferment is higher than that of aggregate.

Due to the sensitivity of the weighted averages presented in Tables L1 and L2, these results should be used with care.

6.17 Analysis of closed claims – Tables M & N

Closed claims are those claims where benefit payments ceased in the period 1 January 1995 to 31 December 1998. Closed claims will include some claims for which recovery was only temporary and which recommenced later. In calculating these average claim durations, the Committee has limited claim length to 2 years in order to avoid distortions introduced by claims terminating due to the expiration of 2 year benefit periods.

Table M shows the average claim duration by cause of claim and sex.

The deterioration in claims duration relative to the last report does not appear to be limited to any particular cause of claim. Duration of claims for genito-urinary, and mental and nervours conditions have the worst deterioration. Claims for AIDS, accident and senility have reduced in duration

Table N shows the average claim duration by cause of claim and age at disablement. The average claim duration increases significantly at older ages.

Only 0.9% of all claims ceased because of death of the insured.

6.18 Average duration of claims by year closed

It is not possible to determine the average claim duration for claims commencing in recent years as some claims will not have been closed. We have therefore calculated the average duration for claims closed each calendar year as an indication of the trend in claim costs.

Whilst the table shows the average duration of claims that are closed, readers should note that changes in the number of closed claims from year to year may distort the apparent changes in duration. For example, if there was an increase in the number of new claims with no change in claim termination rates the average duration of closed claims in that year would reduce due to a change in mix.

Average Length of Closed Claims in Days by Year Closed					
	1995	**1996**	**1997**	**1998**	**1995-8**
2 Weeks	101	115	135	139	122
1 month	132	148	159	143	146

Claim duration is for the first two years of the benefit period.

6.19 Average length of claims by occupation class

The analysis of closed claims by occupation class shows that sickness claims for male lives class A last significantly longer than for the other classes. Accident claim lengths are shorter than sickness claim lengths for all occupations.

Claims length for females displays no clear pattern by occupation.

Average Length of Closed Claims in Days					
Males	**Class A**	**Class B**	**Class C**	**Class D**	**All**
Accidents	104	116	74	69	79
Sickness	171	154	135	148	151
All Causes	**152**	**138**	**102**	**108**	**118**

Females	**Class A**	**Class B**	**Class C**	**Class D**	**All**
Accidents	128	130	136	137	130
Sickness	169	142	155	179	164
All Causes	**161**	**139**	**151**	**167**	**158**

Claim duration is for the first two years of the benefit period.

6.20 Business overheads - Table O

Table O shows the experience of business overheads business.

Compared to non-business overheads business, business overheads have similar incidence rates but shorter durations in the first year.

Although Business Overheads benefits are almost exclusively written with a 12 month or less benefit period, several companies pay benefits beyond 12 months until a full 12 months of benefit have been paid. Table O shows a 2 year benefit period claim duration and claim cost to provide more complete data.

6.21 Cancellable business - Table P

Table P shows a comparison of cancellable business with non-cancellable business.

The results show that both the incidence rates and average claim durations for this business are generally better than those of corresponding non-cancellable business. The exception is female lives where the number of claims is small.

6.22 Indicative Claim Cost by Cause of Claim

The table below shows the indicative claim cost by cause of claim. The claims cost has been calculated by combining the incidence rates by cause shown in Table K and the duration of closed claims, first two years only, by cause shown in Table M. In determining claims costs a rate of interest of zero has been assumed. The occupation class characteristics have been combined by weighting by active lives exposure for the appropriate deferment period. Since the claim durations used are derived from a set of closed claims which are not identical to the claims used to derive the incidence rates, the claims costs are therefore provided as indicative values only.

Indicative Claims Cost By Cause of Disability

	Indicative Claims Cost per $1,000 benefit per month					
	Males			Females		
	95-98	92-95	% Change	95-98	92-95	% Change
Accident	33.88	26.20	29%	20.36	13.78	48%
Musculoskeletal	24.90	29.25	-15%	19.24	16.17	19%
Mental	14.22	11.94	19%	30.17	21.66	39%
Circulatory System	7.80	7.98	-2%	3.63	2.27	60%
Neoplasms	7.48	7.42	1%	10.12	8.24	23%
Digestive System	5.20	6.65	-22%	4.51	4.43	2%
Nervous System	4.04	4.57	-12%	5.83	6.26	-7%
Infective & Parasitic	3.45	4.30	-20%	7.86	8.14	-3%
Respiratory System	2.34	3.24	-28%	2.87	2.46	17%
Skin	1.43	2.44	-42%	0.74	1.70	-57%
Blood	1.10	0.78	40%	0.72	0.73	-2%
Genito-Urinary	0.96	1.50	-36%	7.51	8.41	-11%
Nutritional	0.75	0.97	-22%	1.46	1.04	41%
Senility & Ill-defined	0.71	0.29	144%	1.04	0.65	60%
AIDS	0.63	1.54	-59%	0.51	0.00	
Pregnancy	0.00	0.00		2.05	1.36	51%
Congenital	0.00	0.00		0.01	0.00	
HIV+ & Lymphadenopathy	0.00	0.04	-100%	0.00	0.00	

The table above shows that claims cost deterioration between the last report and this report has not been uniform by cause or by sex.

For males, the worst deterioration can be observed for accident and mental causes, while claims costs due to other major causes have reduced over the period.

For females, claims cost increases over the period are spread among a larger number of causes than for males. Of the major causes of claims, the worst deterioration come from mental causes, accident, musculoskeletal and neoplasm..

Section 7 Variation in Experience by Company

For the ten largest contributors, the following table compares the actual experience with that expected using the IAD89-93 table applied to the company's exposure. Ratios of actual to expected average experience are shown for number of claims, and average duration and average claims cost for the first three years of benefit. The average of the ten companies' experience is also shown as a percentage of IAD89-93 to give an indication of the level of "average" experience of the top ten contributors. Note that this is the average of the ten companies above, thus is not comparable with "industry averages" elsewhere in the report.

Ratio of actual company experience to IAD89-93

Company	Incidence	Duration	Claim Cost
A	113%	275%	308%
B	110%	139%	187%
C	99%	159%	177%
D	113%	132%	165%
E	104%	136%	150%
F	97%	141%	143%
G	114%	114%	137%
H	100%	120%	132%
I	87%	122%	109%
J	78%	123%	101%
Average	103%	141%	153%

The table clearly shows that the variation from the average experience can be very wide. The company with the highest claims costs is at 308% of IAD8993. The lowest claims costs is equivalent to 101% IAD89-93.

The gap between the heaviest and the lightest company experience has also widened compared to the previous report.

It is interesting to note that the average of the ten contributors is now 153% of IAD89-93 and that each of the ten contributors have experienced duration well in excess of IAD 89-93 claims duration. Possible reasons for the differences in experience between companies include:

- underwriting controls,
- claims management,
- demographic mix,
- product design, and
- differences in occupation classifications.

It is important to note the necessity for consistency between pricing and experience. A high level of claims, properly allowed for in pricing, may be part of a wider business strategy.

Individual offices need to be careful to adjust aggregate rates to reflect their own particular experience. To use the overall rate from the Australian experience would be inappropriate without adjustment.

8. FUTURE DEVELOPMENTS

8.1 General

Previous committee reports have noted reliance on a Cobol processing system that was written in the 1970's and a spreadsheet system to process the output that was originally written in the late 1980's on Lotus version 2. This spreadsheet system has been updated as part of the processing of the data for this report.

The Committee is delighted to announce that a system to replace both the Cobol system and the associated spreadsheets has now (February 2003) entered beta testing. This new system will be capable of allowing contributing companies to validate their own data and to undertake their own experience analysis with the committee's data being a by-product of this validation. News on the release date of the new software will be communicated to contributors as soon as it becomes firm.

The Committee has, for some time, been desirous of having the data collection, processing and management out-sourced so the committee could focus on the comprehensive analysis of the results.

This has now been achieved, with IAAust contracting with the Centre for Actuarial Research at the Australian National University to provide those services on a commercial basis with effect from 1 January 2003.

8.2 Graduation

The committee plans to graduate the 1995-98 data during 2003 and to produce a new "standard table".

9. REFERENCES AND READING LIST

The following is a partial list of references to recent papers and sources of data which may be useful, particularly to actuaries not deeply involved in disability business.

Continuous Mortality Investigation Reports
Institute of Actuaries and Faculty of Actuaries

Transactions of the Society of Actuaries
Reports Numbers

Disability Newsletter
Milliman USA
(Issued three times a year)
www.millminn.com

De Ravin (1998) *The Management of Disability Income Claims*, Australian Actuarial Journal, Volume IV Issue 4

Haberman, S. and Walsh, D. (1998) *Analysis of trends in PHI claim inceptions data*, Transactions of the 26th International Congress of Actuaries

Haberman, S. and Renshaw, A. (1998) *Modelling the recent time trends in UK permanent health insurance recovery, mortality and claim inception transition intensities*, Actuarial Research Paper 113, Department of Actuarial Science and Statistics, City University, London

Haberman, S. and Pitacco, E. (1999) *Actuarial Models for Disability Insurance*, Chapman and Hall/CRC.

Service, D. and Ferris, K. (2001) *Disability Experience and Economic Correlations*, Institute of Actuaries of Australia, Convention 2001

Service, D. and Pitt, D. (2002) *Disability Claims – Does Anyone Recover?* Australian Actuarial Journal, Volume 8, Issue 4

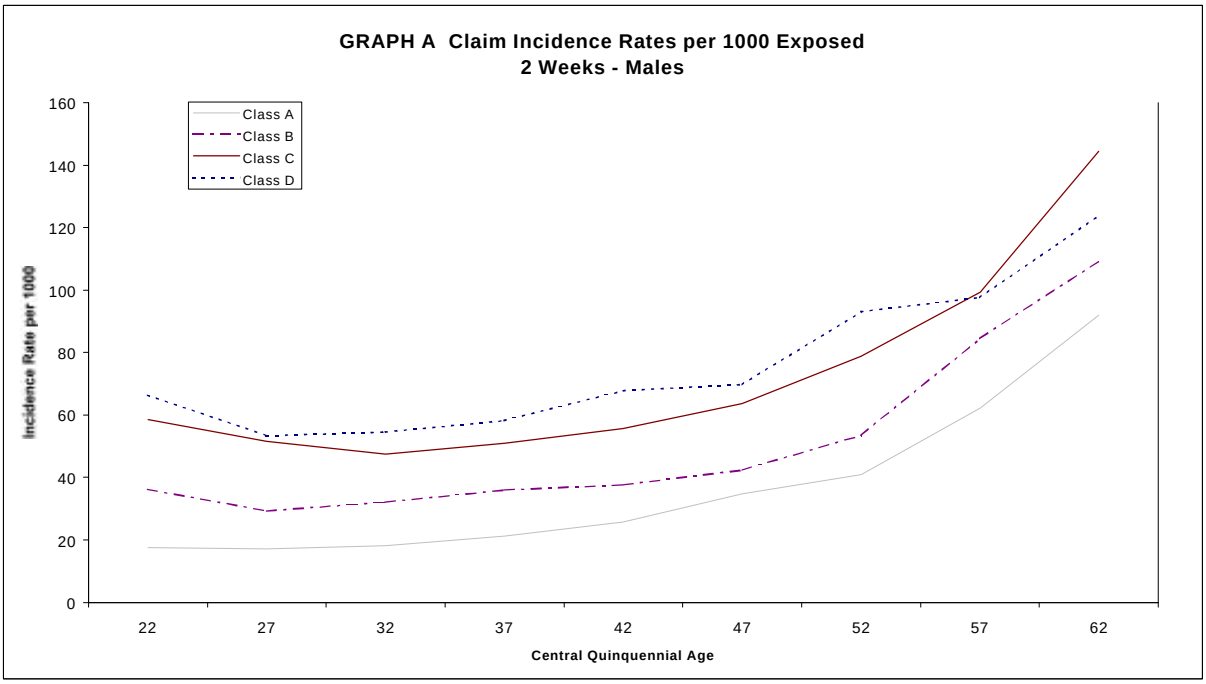
10. GRAPHS AND TABLES

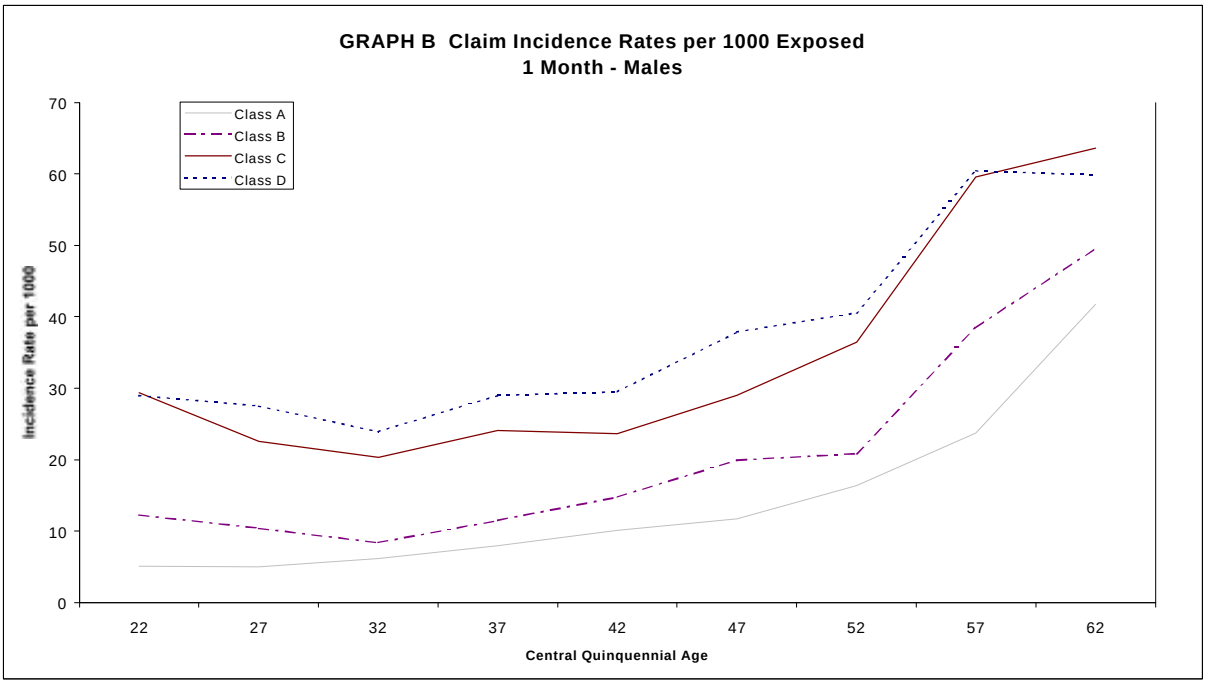
Graph

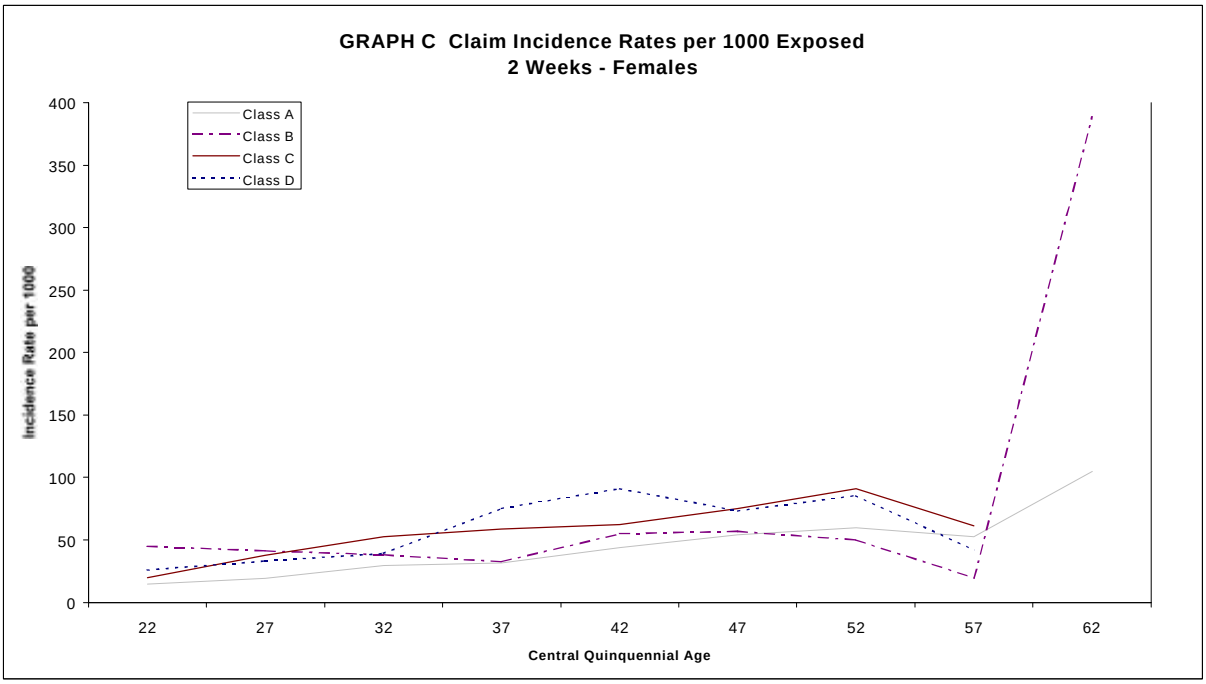
A Incidence Rates: 2 Weeks - Males
B Incidence Rates: 1 Month - Males
C Incidence Rates: 2 Weeks - Females
D Incidence Rates: 1 Month - Females
E Incidence Rates as a % of IAD 89-93: 2 Weeks - Males
F Incidence Rates as a % of IAD 89-93: 1 Month - Males
G Incidence Rates as a % of IAD 89-93: 2 Weeks - Females
H Incidence Rates as a % of IAD 89-93: 1 Month - Females

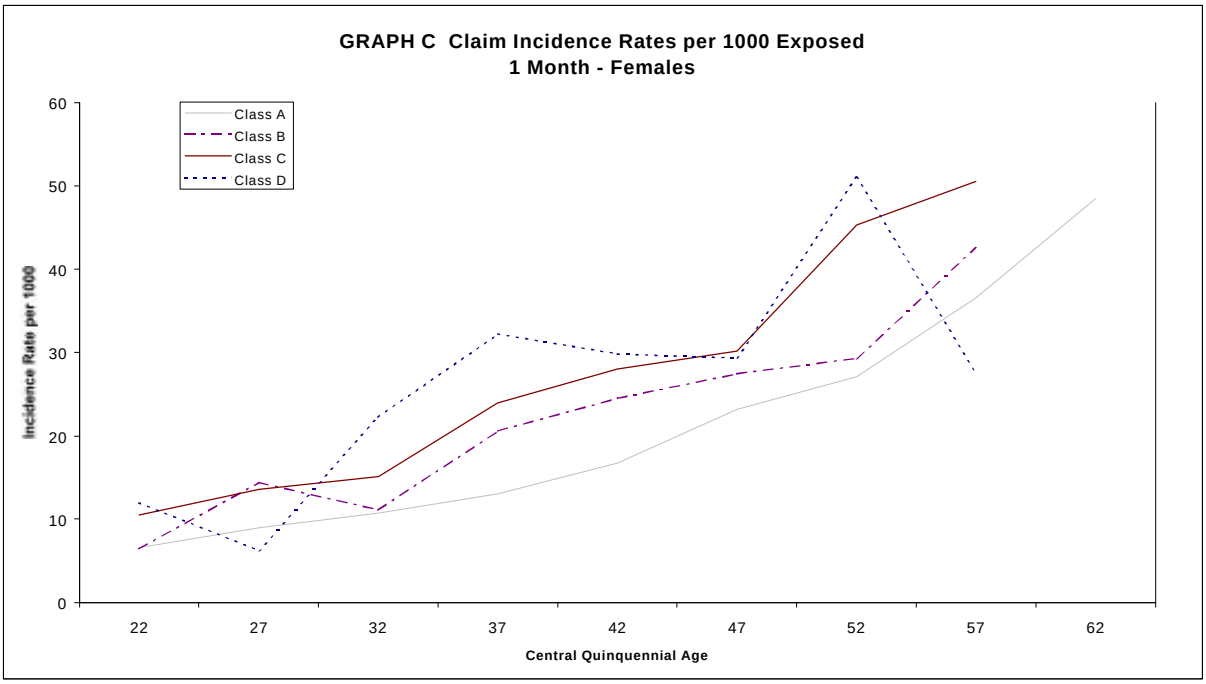
Table

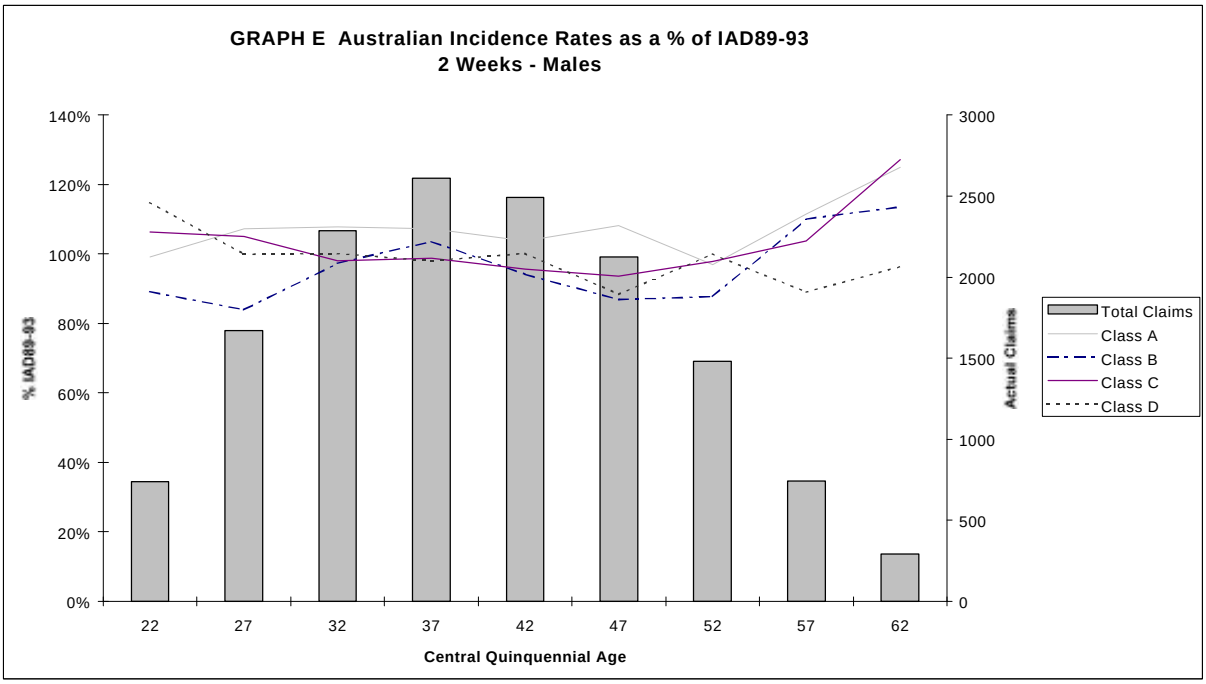
A Attributes of the Data
B Lives Exposed in Years
C Number of New Claims
D Incidence Rates by Occupation Class
E Comparison of Female to Male Claim Incidence
F1 Comparison of New Claims with CIDA 85
F2 Comparison of New Claims with IAD89-93
G1 Comparison of Incidence, Duration and Claim Cost with CIDA 85
G2 Comparison of Incidence, Duration and Claim Cost with IAD89-93
H Claim Continuance Table and Comparison of Rates with IAD89-93
I Comparison of Select to Ultimate Incidence Rates
J Proportion of Claims due to Accident
K Incidence Rates by Cause of Claim and Occupation Class
L1 Comparison of Non-Smoker with Smoker Experience
L2 Comparison of Non-Smoker with Aggregate Experience
M Length of Claim in Days by Cause of Claim and Sex
N Length of Claim in Days by Cause of Claim and Age
O Business Overheads Incidence, Duration and Claim Cost
P Comparison of Cancellable with Non-Cancellable Experience

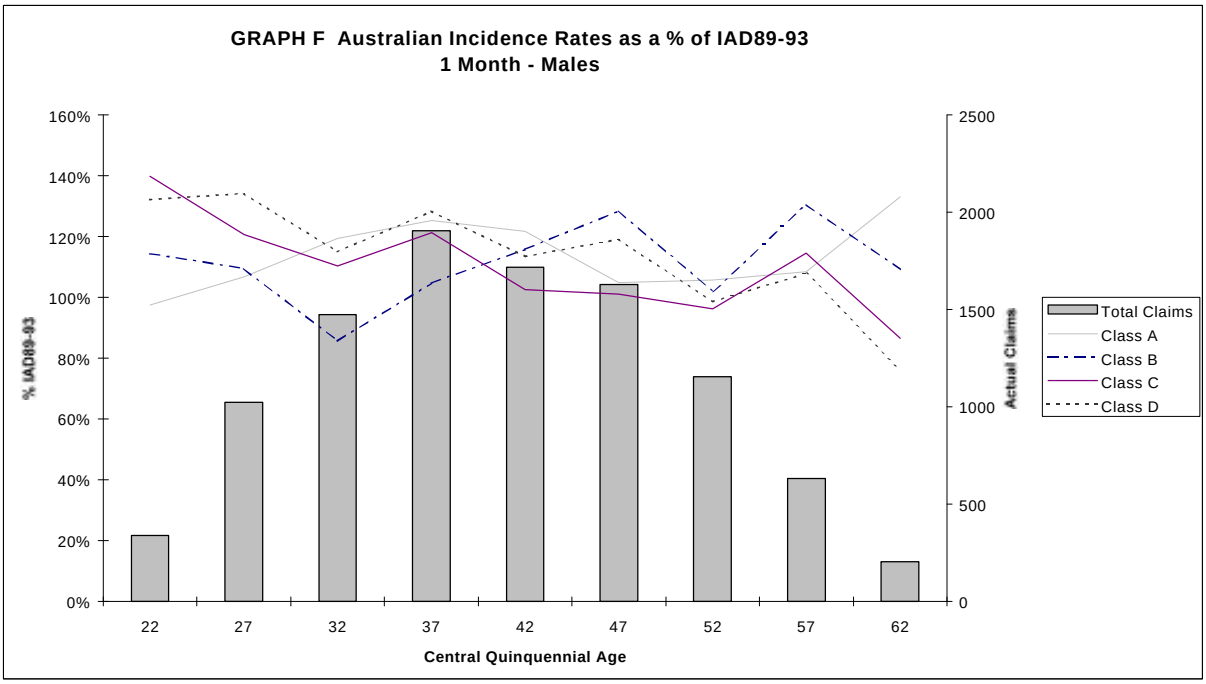

GRAPH A Claim Incidence Rates per 1000 Exposed
2 Weeks - Males
Class A
Class B
Class C
Class D
Incidence Rate per 1000
0
20
40
60
80
100
120
140
160
22
27
32
37
42
47
52
57
62
Central Quinquennial Age

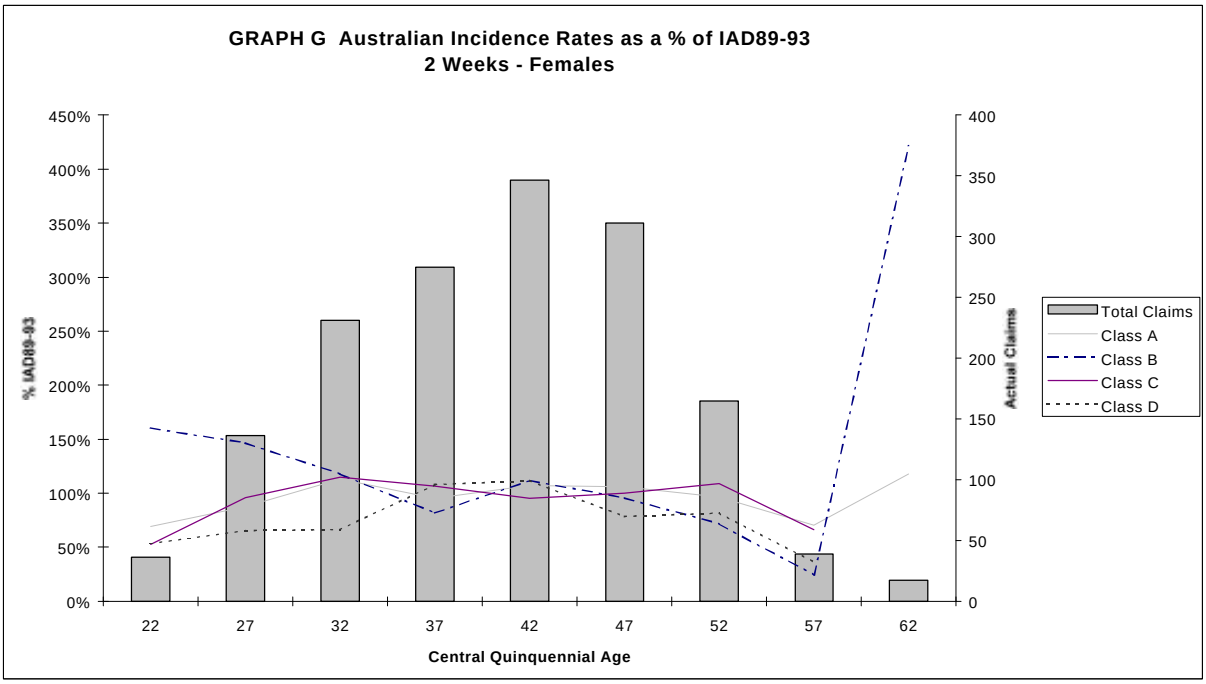

GRAPH B Claim Incidence Rates per 1000 Exposed
1 Month - Males
Class A
Class B
Class C
Class D
Incidence Rate per 1000
0
10
20
30
40
50
60
70
22
27
32
37
42
47
52
57
62
Central Quinquennial Age

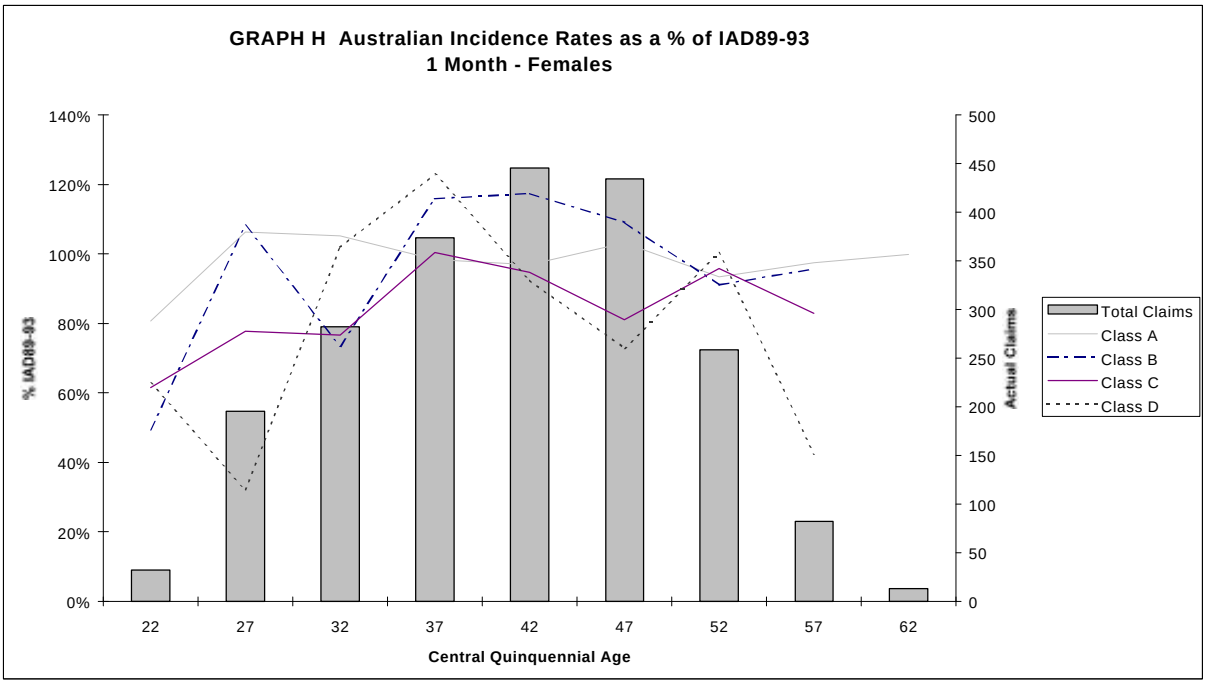

GRAPH C Claim Incidence Rates per 1000 Exposed
2 Weeks - Females
Class A
Class B
Class C
Class D
Incidence Rate per 1000
400
350
300
250
200
150
100
50
0
22
27
32
37
42
47
52
57
62
Central Quinquennial Age


GRAPH C Claim Incidence Rates per 1000 Exposed
1 Month - Females
Class A
Class B
Class C
Class D
Incidence Rate per 1000
60
50
40
30
20
10
0
22
27
32
37
42
47
52
57
62
Central Quinquennial Age


GRAPH E Australian Incidence Rates as a % of IAD89-93
2 Weeks - Males
140%
120%
100%
80%
60%
40%
20%
0%
% IAD89-93
3000
2500
2000
1500
1000
500
0
Actual Claims
22
27
32
37
42
47
52
57
62
Central Quinquennial Age
Total Claims
Class A
Class B
Class C
Class D


GRAPH F Australian Incidence Rates as a % of IAD89-93
1 Month - Males
160%
140%
120%
100%
80%
60%
40%
20%
0%
% IAD89-93
2500
2000
1500
1000
500
0
Actual Claims
22
27
32
37
42
47
52
57
62
Central Quinquennial Age
Total Claims
Class A
Class B
Class C
Class D


GRAPH G Australian Incidence Rates as a % of IAD89-93
2 Weeks - Females
% IAD89-93
Actual Claims
Central Quinquennial Age
Total Claims
Class A
Class B
Class C
Class D


GRAPH H Australian Incidence Rates as a % of IAD89-93
1 Month - Females
% IAD89-93
Actual Claims
Central Quinquennial Age
Total Claims
Class A
Class B
Class C
Class D