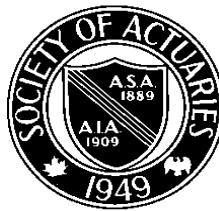


REPORT OF THE INDIVIDUAL DISABILITY EXPERIENCE COMMITTEE
ANALYSIS OF EXPERIENCE FROM 1990 TO 2007

March 2013



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Additional Caveat and Disclaimer

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Section I: Introduction

In November of 1999, the NAIC Life and Health Actuarial Task Force (LHATF) formally requested that the Society of Actuaries (SOA) undertake a study of individual disability income (IDI) experience in the US and the construction of new morbidity tables based on that experience. The responsibility for conducting the study and constructing new tables was assigned to the Individual Disability Experience Committee (IDEC) of the SOA.

Between May and December 2002, IDEC collected experience data covering the exposure period from 01/01/90 – 12/31/99 from twelve carriers. A report analyzing the IDI experience in the US was published in May 2005. Subsequent to the distribution of that report, some contributing companies submitted revised data to the SOA. Along with the resulting data clean up, refinements were made to the calculations of actual to expected (A/E) experience. Additionally, claims resulting from normal pregnancy were removed from the study since modern contracts generally do not cover these claims. Lastly, two new sections were added to the report, one covering the morbidity experience by smoker status, and one covering morbidity experience by cause of disability (diagnosis groups). A revised report was published in June 2011.

While the revised data was being analyzed and the new report was being written, IDEC determined that the study period was becoming outdated and concluded it was appropriate to collect additional data covering the experience period from 01/01/00 – 12/31/07. The data was gathered throughout 2009 from 16 companies. Appendix A lists the contributors, which represented approximately 90% of 2011 sales (LIMRA – DISABILITY INCOME SALES – US – 2011 ANNUAL SALES). After reviewing the data provided by the participating companies, IDEC decided that it would be appropriate to produce a new experience report that would cover the entire 18 years of experience data that had been gathered over the last decade. The experience underlying this report is the same used to produce the IDEC experience table published in late 2012.

Compared to the previous study, this new data request added five new contributors. One contributor that provided data for the 1990's study did not contribute data to the more recent study. Due to the material difference in the type of business and in morbidity experience from other companies in the study period, the data from this original contributor was removed from the industry experience results.

From a claim incidence perspective, this report analyzes the IDI industry experience from 01/01/90 – 12/31/06. The 2007 experience year was dropped from the industry database due to the fact that the claim incidence was materially lower than any of the other experience years. The IDEC consensus was that the 2007 incidence data was incomplete due to reporting delays for the last year of the study. The 2006 experience year also exhibited lower incidence, though not as dramatic as the 2007 data. Adjustment factors were applied to the claims to represent a reasonable lag in reporting. These adjustment factors varied by elimination period.

From a claim termination perspective, this report analyzes the IDI industry experience from 01/01/90 – 12/31/07. The 2007 experience year from the most recent data collection, as well as the 1999 experience year from the prior data collection effort, was considered light for

termination activity in comparison with other experience years. Therefore, adjustment factors were applied to terminations to represent a reasonable lag in termination recording. In addition, a few companies provided revised termination data for the 1/1/90-12/31/99 study period, and this report reflects the updated data.

It is important to note that this study examines two eras in the US IDI industry. The first era occurred during the first part of the 1990's where IDI carriers in total suffered historically high statutory financial losses. The second era was a result of actions taken by IDI carriers and a favorable economic environment and positive statutory profits for the industry started to re-emerge during the last few years of the 1990's decade and for the 2000's. This study identifies and quantifies many of the significant trends occurring during this 18-year period. This report focuses on the experience trends relative to the 1985 Commissioner's Individual Disability Table A (85 CIDA)¹ tables. This experience data is used by the IDEC as the basis for a new IDI experience table, which was presented in November 2012 to the NAIC Health Actuarial Task Force (HATF) in anticipation that it would serve as the basis for a new valuation table.

The SOA selected Towers Watson of Hartford, Connecticut to perform the data processing for the study. For the 1/1/90-12/31/99 study, Towers Watson inherited the combined data from the original consultant and inserted the data corrections in the experience database. During the transition, some of the data available for the 1/1/90-12/31/99 original report could not be recovered. Disability Buy-Out data from the 1/1/90-12/31/99 could not be recovered by Towers Watson and is, therefore, not available in this report. They developed the software to perform the claim incidence and termination studies based upon specifications provided by the IDEC, and generated the additional manipulations and analytics described earlier in this section. Regarding the 1/1/00-12/31/07 study, their responsibilities included collection and review of the data and integration with the 1/1/90-12/31/99 data. The confidentiality of each contributor's data and results has been maintained.

¹ "Report of the Society of Actuaries Committee to Recommend New Disability Tables for Valuation," Transactions of the Society of Actuaries, Volume XXXVII (1985), p.449.

One of the major carriers in the IDI industry reached an agreement with the SOA prior to providing data for the study. Per the agreement, this contributor could request that its data be scaled down if it represented at least 50% of the total exposure. This contributor's data exceeded the exposure threshold and, therefore, requested that its data be scaled down to represent 40% of the total exposure for both the incidence and termination study. Table I.a illustrates the impact of this exercise.

Table I.a			
Impact of Scaling Down One Contributor's Data			
Measure	Unweighted	Weighted	Ratio
Incidence exposure	\$119.8B	\$105.3B	88%
Incidence claim count	341,128	302,469	89%
Termination exposure	\$31.4B	\$25.2B	80%
Claim termination count	371,731	297,385	80%

Combined experience data was placed in Excel pivot tables, which allowed the IDEC to examine the incidence and termination experience based on a variety of combinations of the policy and claim characteristics represented in the data. The IDEC study explores claim incidence and/or termination experience for a wide range of policy and claim characteristics, which are listed in the following table.

Table I.b		
Policy and Claim Characteristics Discussed in Report		
Characteristic	Incidence Study	Termination Study
Contract Type - A&S, OE, DBO, etc.	X	X
Attained Age at Disablement	X	X
Attained Age During Disablement		X
Gender	X	X
IDEC Occupation Class	X	X
Key Occupations - Physicians & Surgeons, Executives, Lawyers, etc.	X	X
Elimination Period	X	X
Benefit Period	X	X
Duration of Disablement		X
Calendar Year of Incidence	X	X
Issue Year	X	
Underwriting Type - Normal, GSI, GTI, GI	X	
Market - Individual, Employer-Sponsored, Association	X	X
Cost-of-Living Riders	X	X
Diagnosis	X	X
Smoking Status	X	X

Because of the nature of the data contributed to the study, we were unable to measure claims experience by different definitions of disablement, e.g., long-term own occupation, own occupation and not working, etc.

The following points discuss specific aspects of the IDEC study:

- Only claims incidence experience that occurred between 1/1/90 and 12/31/06 and claims termination experience that occurred between 1/1/90 and 12/31/07 was included in the study. Not all contributors provided claims experience for the full eighteen-year study period. Contributors are noted in Appendix A.
- The study measures experience in terms of count and amount. In general, claims experience is worse when measured in terms of amount (i.e., higher incidence and lower terminations). Except for several initial tables in Sections III and IV of this report, most results in this report are presented in terms of amount, since this measure reflects the financial impact of the claims experience more closely.

1. Accident & Sickness (A&S) Disability Income

These contracts provide disability benefits to cover the loss of earned income when an insured is disabled due to an accident or sickness. The benefits are typically paid monthly.

2. Overhead Expense (OE) Disability

These contracts provide disability benefits to cover overhead business expenses incurred while the insured is disabled due to an accident or sickness. The benefits are paid monthly and cover vouchered overhead expenses subject to the maximum monthly benefit for each contract.

3. Disability Buy-Out (DBO)

These contracts provide funds to facilitate the transfer of ownership of a business from a disabled insured to his or her partner. The benefits are paid in the form of a lump sum at the end of the elimination period or a scheduled plan of monthly payments.

4. Key Person (KP)

These contracts pay benefits to a business to offset losses associated with having a key employee disabled. The benefits are paid monthly.

5. Unknown

There is a small amount of data (less than 0.1% of the total exposure) where the contract type is unknown.

The 1985 CIDA claim incidence rates vary by the following four occupation classes:

- Class 1: Professional, technical, and managerial occupations that are generally office duties only.
- Class 2: Supervisory and other skilled clerical and technical people.
- Class 3: Non-hazardous work with light manual labor.
- Class 4: Hazardous work with heavy manual labor or using heavy equipment.

Companies have generally developed expanded occupation classes, most notably splitting Class 1 into two or more additional classes. However, because of the lack of uniformity among companies in the construction of their occupation classes, and the movement of certain occupations among the expanded occupation classes over time, the IDEC did not attempt to study any subsets of the four CIDA occupation classes that might align with occupation classes used by contributing companies. However, because a preliminary review of incidence experience showed a significant difference between the Medical and Non-medical occupations, Medical occupations were split out from the rest of CIDA Class 1 to form a new Class M. Consequently, there are five occupation classes analyzed in this report. Due to the relatively small amount of exposure in Occupation Classes 3 and 4, those classes have been combined with Class 2 throughout most of this report.

Furthermore, after a preliminary review of the data, it appeared that sales occupations were not consistently assigned to a common CIDA occupation class. In fact, there were exposures from sales occupations in all four CIDA occupation classes. It was decided to reclassify all sales exposures as Class 2.

The new Class M includes the following Medical occupations:

Physicians	Pharmacists
Surgeons	Psychiatrists
Dentists	Psychologists
Chiropractors	Veterinarians
Podiatrists	Other Medical
Nurses	

- As a rule, an “*” was displayed in the various tables in this report if they reflected the results of fewer than 10 claims in the case of incidence results and fewer than 10 claim terminations in the case of termination results. We did not assign any credibility measure to the results that are displayed in these tables. In certain situations where the A/E ratios were too high to be meaningful, we replaced the A/E with “NM” (not meaningful). This was mostly used with termination tables for short-term benefits beyond five years and for OE terminations. The reader is, therefore, cautioned that some of the results where the exposure is small may exhibit statistical fluctuations rather than the true underlying experience.

- In the 1/1/90-12/31/99 study, claim incidence experience for policies issued from the exercise of a guaranteed issue option or future increase option (GIO/FIO) in an existing contract were analyzed separately. Due to variation among companies in the level of details provided, the IDEC combined the GIO/FIO data with the normal underwriting category, leaving us with three underwriting categories: Normal, Guaranteed Standard Issue (GSI) & Guaranteed To Issue (GTI).
- In the claim termination portion of the study, the duration of disablement in which a claim terminated was measured in terms of the period of time between the date of disablement (i.e., the beginning of the elimination period) and the last paid to date of the paid benefits. Because contributors could not consistently provide the necessary information on partial or residual disability benefits, our claim termination analysis was not able to measure the financial impact of paying less than the maximum monthly benefit for claims with residual or partial disability benefits.
- Because all contributors were not able to consistently distinguish between terminations due to expired benefits (i.e., expiries) and terminations due to recovery or death, the IDEC developed a rule for identifying expiries. For certain contributors, we were able to use their termination codes. For others, we had to impute the claim termination reasons using the approach described in the remainder of this bullet. For each claim in the termination study, the length of the maximum benefit period was calculated. For claims where the maximum benefit was 60 months or less, a claim termination was labeled an expiry if the last paid to date was within three months prior to the end of the maximum benefit period. For claims where the maximum benefit period was longer than 60 months, a claim termination was labeled an expiry if the last paid to date was within six months prior to the end of the maximum benefit period. The claims labeled as expiries were not counted as claim terminations. Even with the rules described above, it appears that the IDEC was not able to properly identify all expiries as is suggested in termination rates spiking at certain key durations (e.g., the end of the second claim year, attained age 65, etc.).
- The impact of claim settlements was problematic in the termination study. A claim settlement is a claim termination in which the carrier has reached an agreement with the claimant to terminate the claim prior to the date the claimant has recovered or benefits expire. In such cases, the carrier typically pays a lump sum amount (or, in some cases, a new schedule of benefits not contingent upon continued disablement) that represents in some fashion the economic value of the future disability benefits should the claimant remain on claim. Claim settlements should not be treated as normal claim terminations since the financial impact associated with claim settlements with the lump sum benefit is different from normal claim terminations where there is no benefit paid beyond the date of recovery or death. Two issues arise with claim settlements when performing a claim termination study:

1. *Distinguishing claim settlements from normal claim terminations.*

Contributors were not able to consistently identify claim settlements. Further, contributors could possibly have different definitions of what constituted claim settlements. For example, claims for which the carriers had advanced two or three months of benefits to facilitate a claimant's return to work may have been labeled as claim settlements by some contributors. For our purposes, such "advance-pay-and-close" terminations should not be treated as claim settlements, provided the last paid to date reflected the end of the period for which benefits were advanced. Additionally, contributors may not have identified claim settlements consistently throughout the study period.

2. *Handling identified claim settlements.*

Assuming that a claim could be appropriately identified as a claim settlement, it is not clear how to treat the claim termination within the study. For the most part, claims that are settled in this fashion should represent longer term claims. In other words, such claims should have a lower chance of recovery. The IDEC considered recalculating the last paid to date of claim settlements to reflect a claim duration that was equivalent to the total benefit payout, including the lump-sum benefit. This approach proved difficult because (a) the total benefit payout often included cost-of-living benefits, residual benefits and other types of benefits that would distort any derived claim duration based on the total benefit payout or (b) the lump-sum benefit at time of settlement often reflected the interest rate environment at that time for each contributor's own claim settlement guidelines.

As a result, the IDEC developed a rule for identifying claim settlements consistently among all contributed claim terminations. The rule is as follows:

- a. The total of all claim payments on a terminated claim was divided by the maximum monthly benefit.
- b. The number of months between the end of the elimination period and the last paid to date of a terminated claim was calculated.
- c. An X-ratio equal to the value from (a) divided by the value from (b) was calculated.
- d. If the X-ratio was greater than 1.50, then the terminated claim was considered a claim settlement for the purpose of performing the claim termination study.
- e. A claim settlement in the claim termination study contributed exposure from the end of the elimination period to the earlier of the end of the period for which benefits were paid, or the end of the study period, but was not counted as a claim termination within the study.

The X-ratio of 1.50 was selected after considering the actual-to-expected claim termination experience under a range of alternative thresholds. We concluded that setting the X-ratio at 1.50 did not significantly increase the average actual-to-expected claim termination ratios above the average ratios at lower thresholds, and that increasing the X-ratio materially higher than 1.50 would produce significantly higher average actual-to-expected claim termination ratios.

After a review of the data identified using the rules above and discussions with data contributors, certain data contributors confirmed that their “settlement” closed reason code was a better indicator of actual settlements compared to using the X-ratio. For those data contributors, we used their termination reasons codes.

Although the rules regarding the identification of claim settlements are less than perfect (i.e., they may not identify all claim settlements or incorrectly label some normal claim terminations as settlements), the rules were applied consistently to all contributed data, other than as described in the previous paragraph. Furthermore, the IDEC believes that the resulting claim termination results relative to the 85 CIDA table appear reasonable.

- The NAIC has adopted adjustments to the 85 CIDA claim termination rates for the purpose of calculating statutory minimum claim reserves. The resulting table of claim termination rates is called the CIDC table. Except for a comparison in Section 2, the claim termination analysis in this report does not measure experience relative to the CIDC table. However, Section 4 of this report provides claim termination experience data that allows the reader to perform such comparisons. Table I.c provides the claim termination rate adjustments used to derive the CIDC table:

Table I.c			
CIDC Table			
Percentages of 85 CIDA Claim Termination Rates			
Duration	Adjustment Factor	Duration	Adjustment Factor
Week		Month	
1-4	0.366	15	0.888
5-8	0.365	16	0.932
9-13	0.370	17	0.976
Month		18	1.020
4	0.391	19	1.049
5	0.371	20	1.078
6	0.435	21	1.107
7	0.500	22	1.136
8	0.564	23	1.165
9	0.613	24	1.195
10	0.663	Year	
11	0.712	3	1.369
12	0.756	4	1.204
13	0.800	5	1.199
14	0.844	6+	1.000

The results of the IDEC study represent average IDI industry experience during 1/1/90-12/31/07 as represented by the contributing companies identified in Appendix A. Readers should use caution in assuming that these results will apply to their own companies' experience. Companies are encouraged to measure their own experience to determine whether such claim trends and relationships are applicable to their blocks of IDI business.

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Current members of the IDEC would like to recognize past members of the committee for their contribution to the original release of the REPORT OF THE INDIVIDUAL DISABILITY EXPERIENCE COMMITTEE ANALYSIS OF EXPERIENCE FROM 1990 TO 1999:

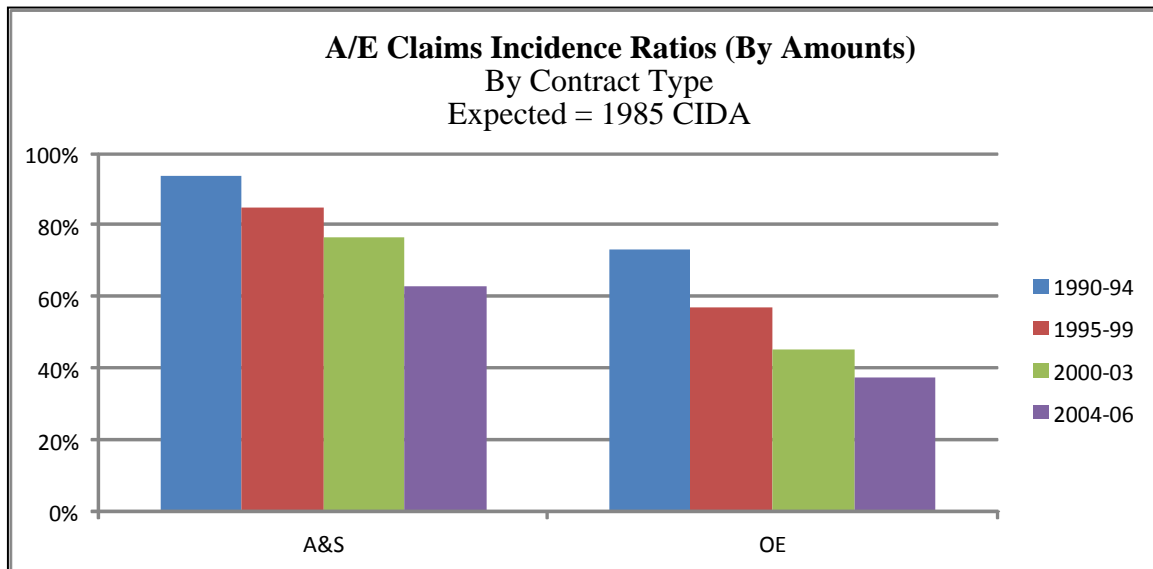
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Section II: Summary of Results

This section summarizes some of the more significant results from the IDEC study. References to occupation class refer to the five IDEC occupation classes, which are described in Section I. Most of the analyses are based on the amount of policies and claims, and not on count for reasons discussed in Section I.

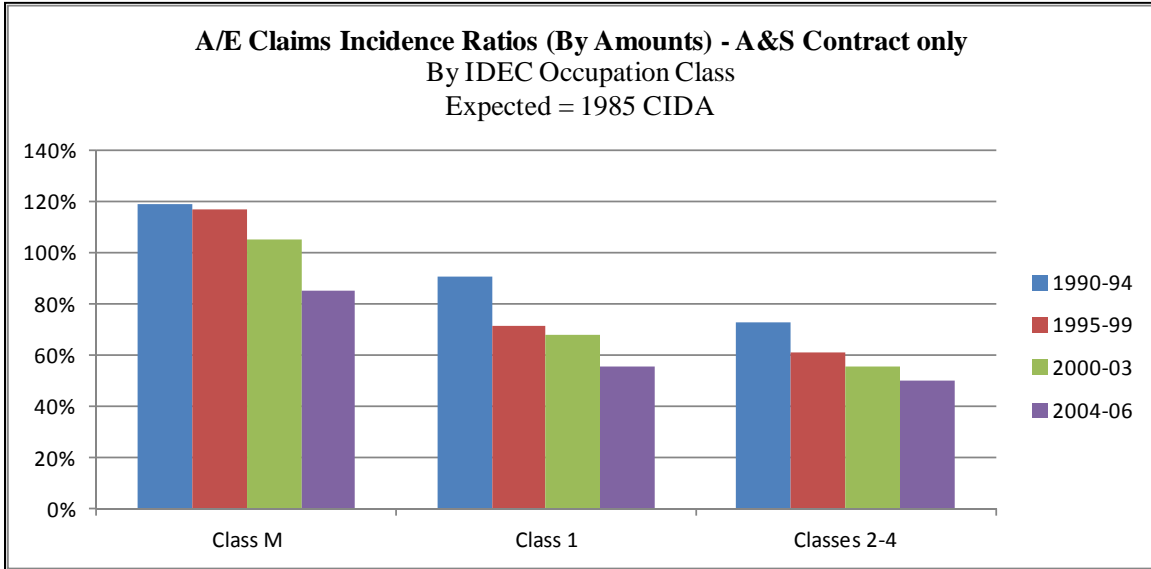
1. In general, average claim incidence experience over the 1/1/90-12/31/06 time period was lower than 1985 CIDA claim incidence and improved over time.

Chart 1



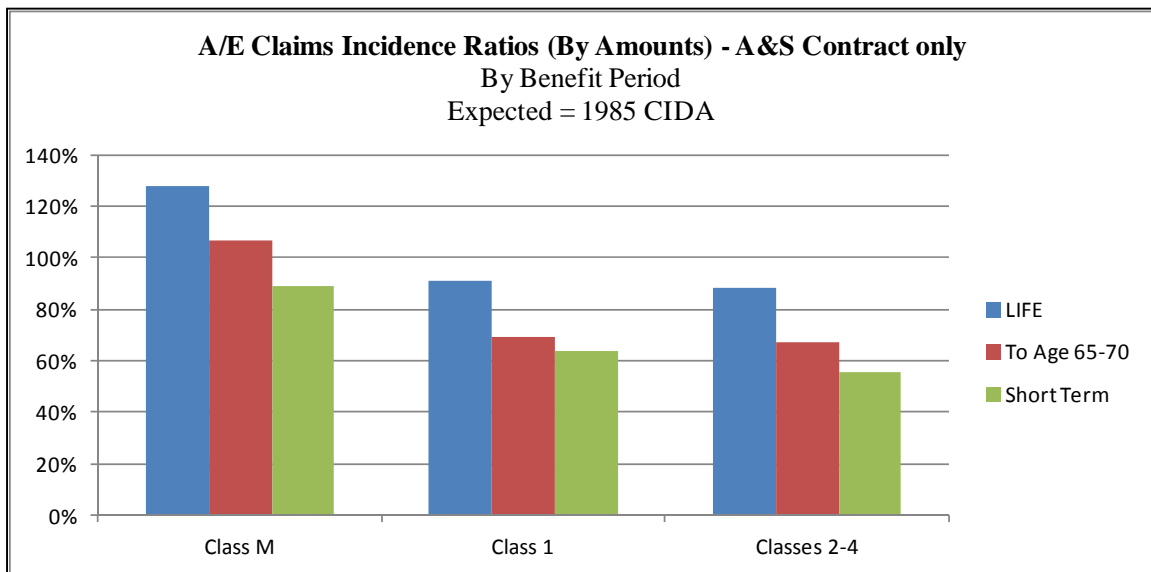
- Blue/grey collar occupations experienced significantly better claim incidence experience relative to 1985 CIDA than the white collar / professional / executive occupations. Medical occupations had higher incidence A/E's than Occupation Class 1 in all periods.

Chart 2



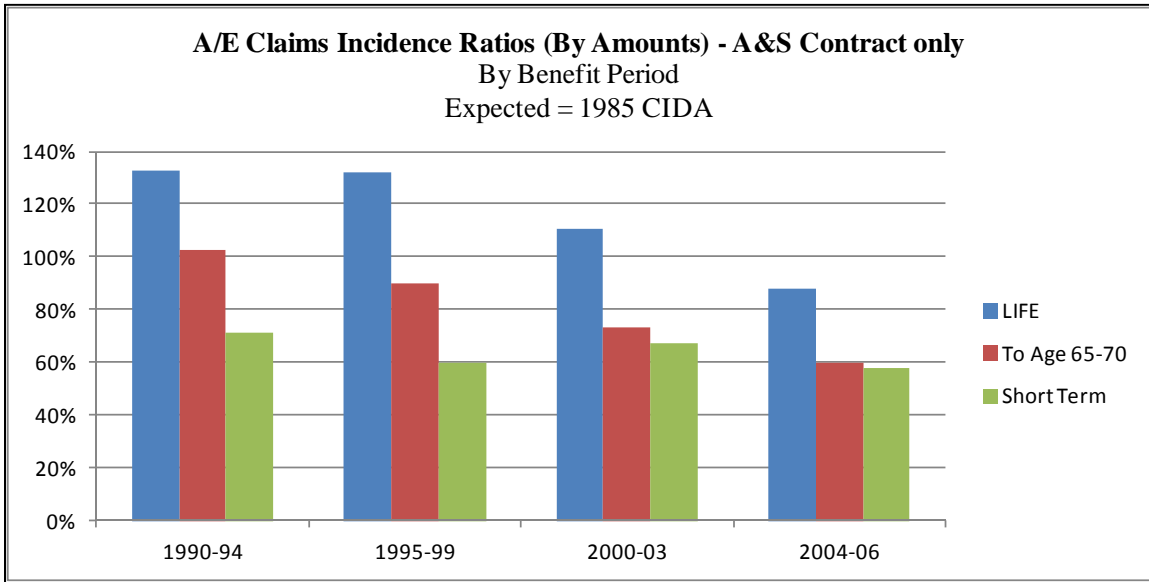
- Across all occupation classes, claims with lifetime benefit periods have significantly higher claim incidence than claims with either short-term or To Age 65-70 benefit periods.

Chart 3



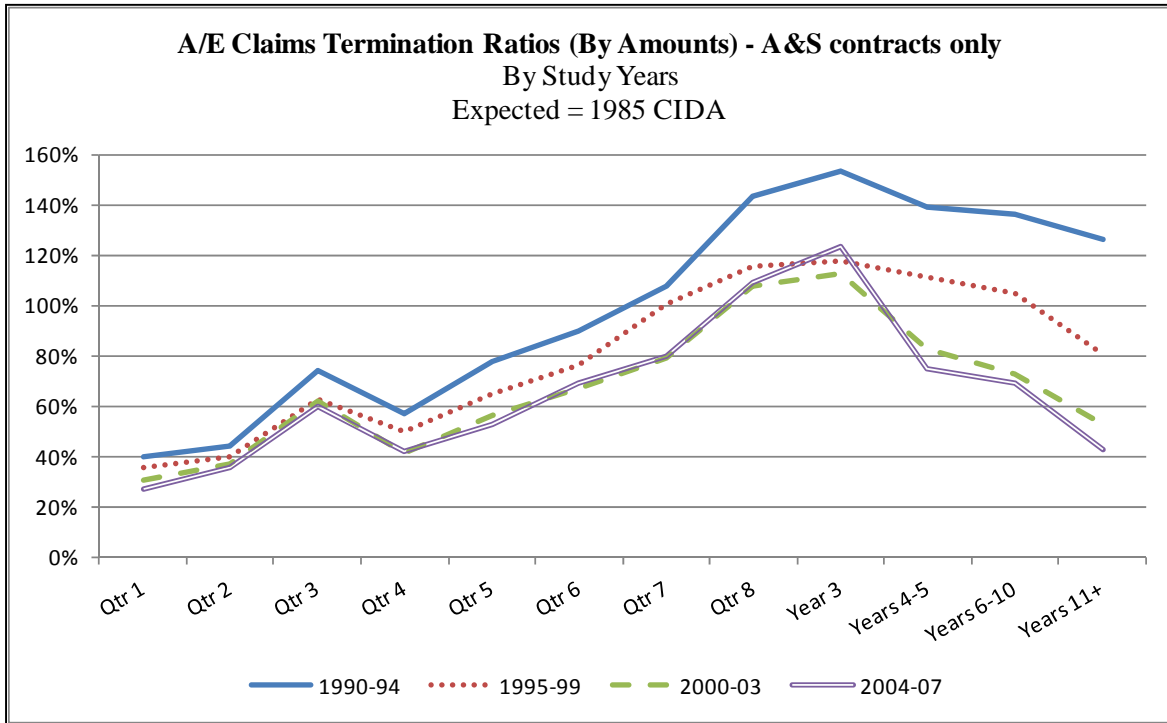
4. Across all study years, claims with lifetime benefit periods have significantly higher claim incidence than claims with either short-term or To Age 65-70 benefit periods, although claim incidence has declined even for lifetime benefit periods in the more recent study years.

Chart 4



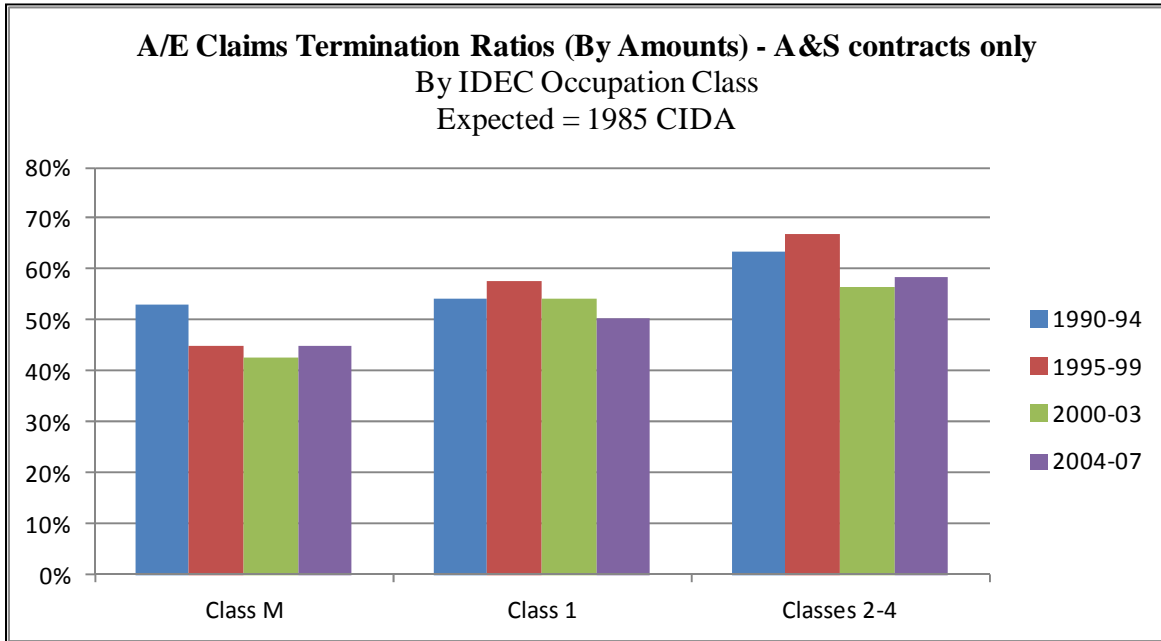
- Claim termination rates decreased throughout the study period and are significantly below the levels anticipated in the 1985 CIDA. The claim termination deterioration was more pronounced in the later claim durations with the more recent study years

Chart 5



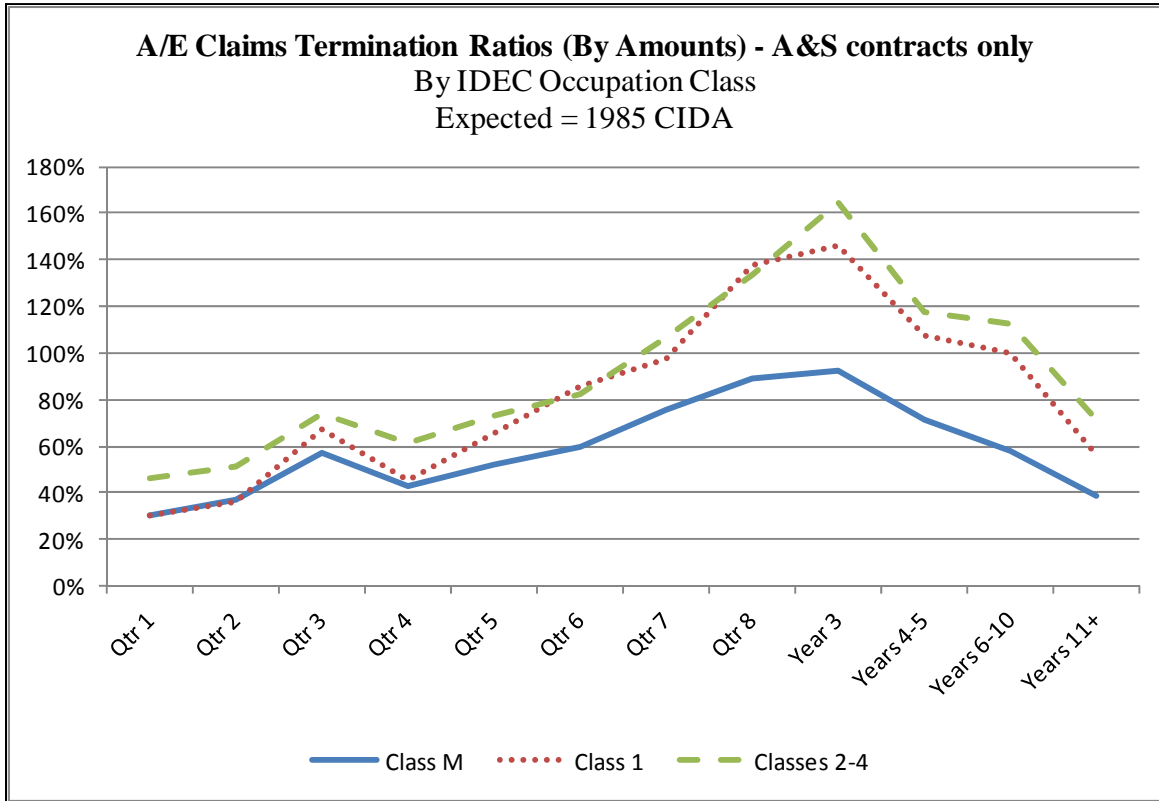
6. Although claim termination rates decreased throughout the study period, the story is more complex at the occupation class level. Occupation Class M has exhibited the lowest claim termination rates, but has been stable since 1995. Most of the claim termination deterioration since 1995 comes from Occupation Class 1, which represents more than 40% of the claim termination exposure in the 2000's study.

Chart 6



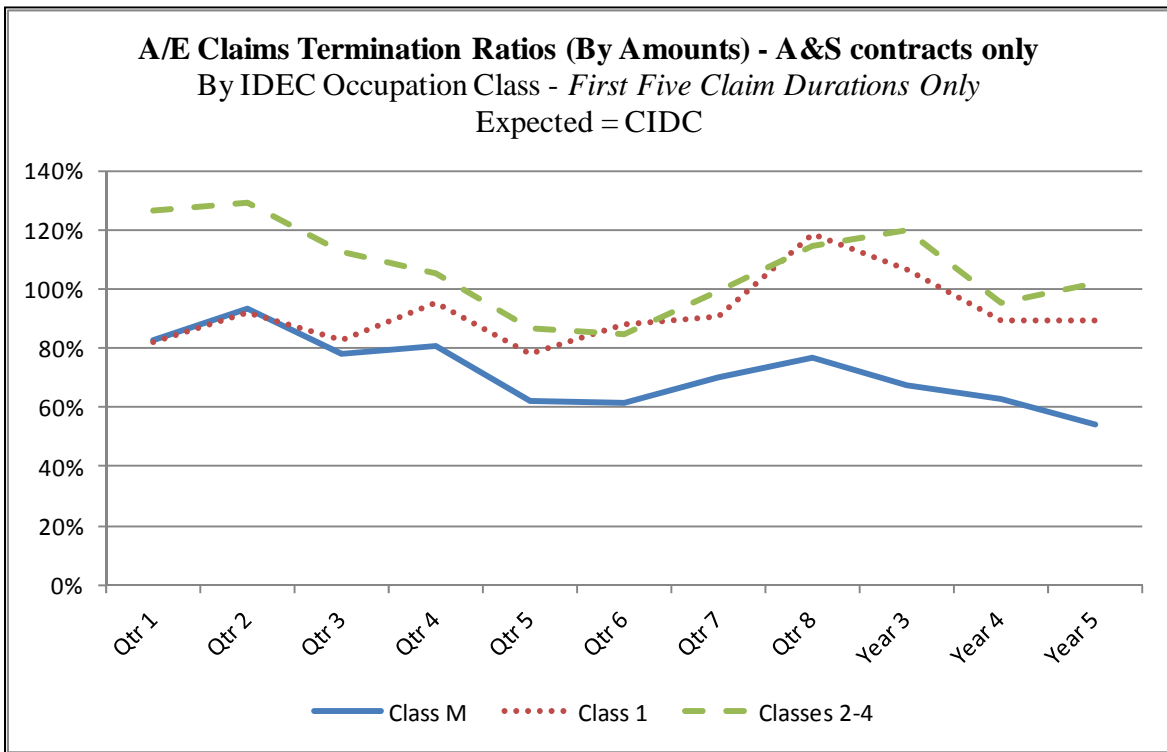
7. Claim termination rates are generally below 50% of 1985 CIDA termination rates for the first 12 months of disablement for Occupation Class M and 1. The A/E ratio increases during the second claim year and peaks in the early part of the third claim year - being either about equal to the 1985 CIDA (Class M) or much higher than the 1985 CIDA (Classes 1-4). By year seven, most claim terminations fall below 100% of the 1985 CIDA. Starting with the second year, it is interesting to note that Medical occupations exhibit much lower termination rates than Non-medical occupations.

Chart 7



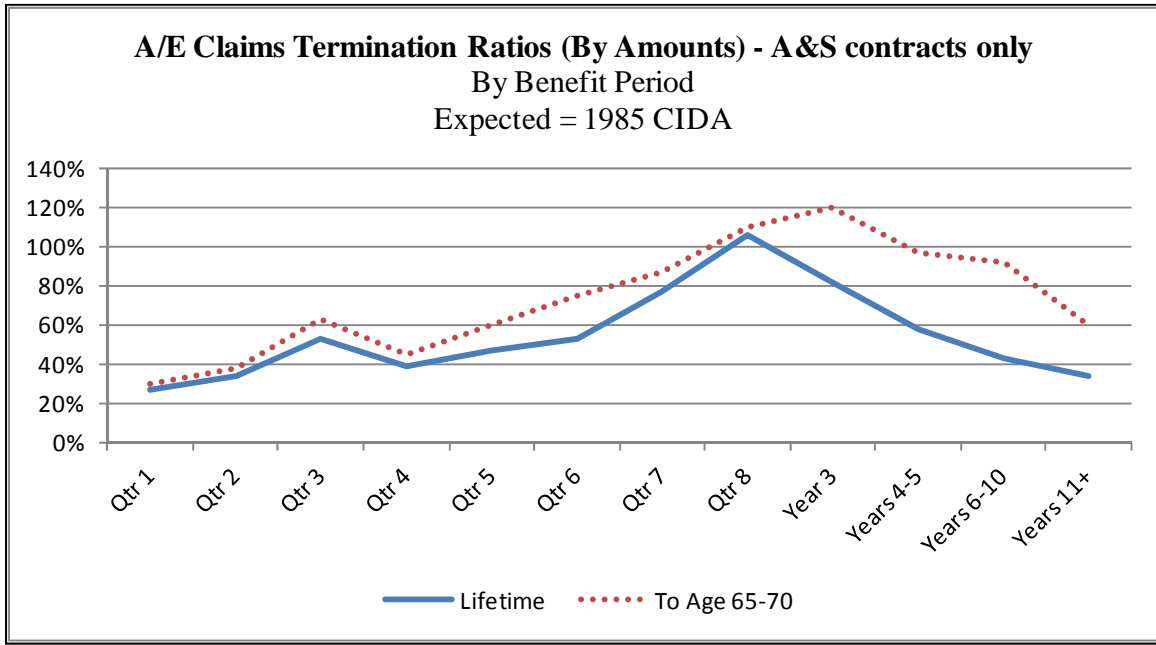
8. Using CIDC as the “expected,” Occupation Classes 2-4 are generally above the CIDC termination rates (A/E = 112% over the first five claim durations), while claim termination rates for Occupation Class 1 are below the CIDC termination rate (A/E = 86% over the first five claim durations). Medical occupations are materially lower than CIDC termination rates (A/E = 75% over the first five claim durations).

Chart 8



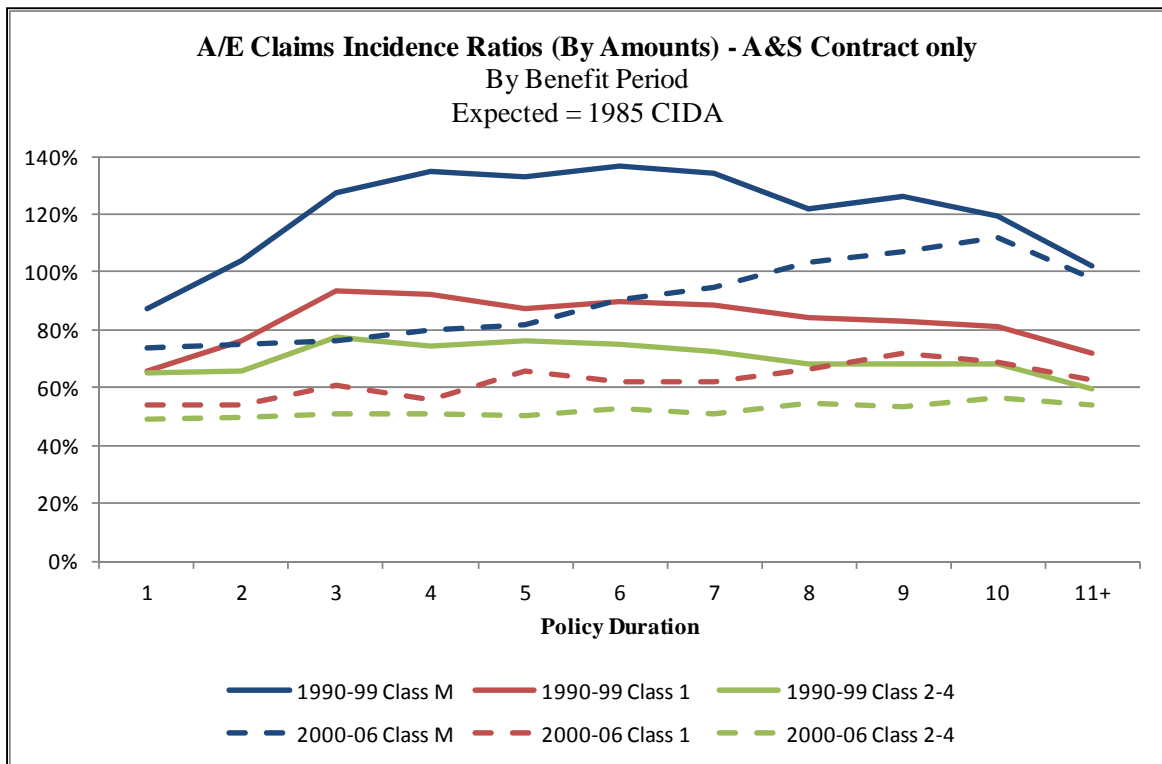
9. Lifetime and To Age 65-70 benefit periods produced similar claim termination experience through the first two years on claim, but then the longer benefit period generates significantly lower claim termination experience.

Chart 9



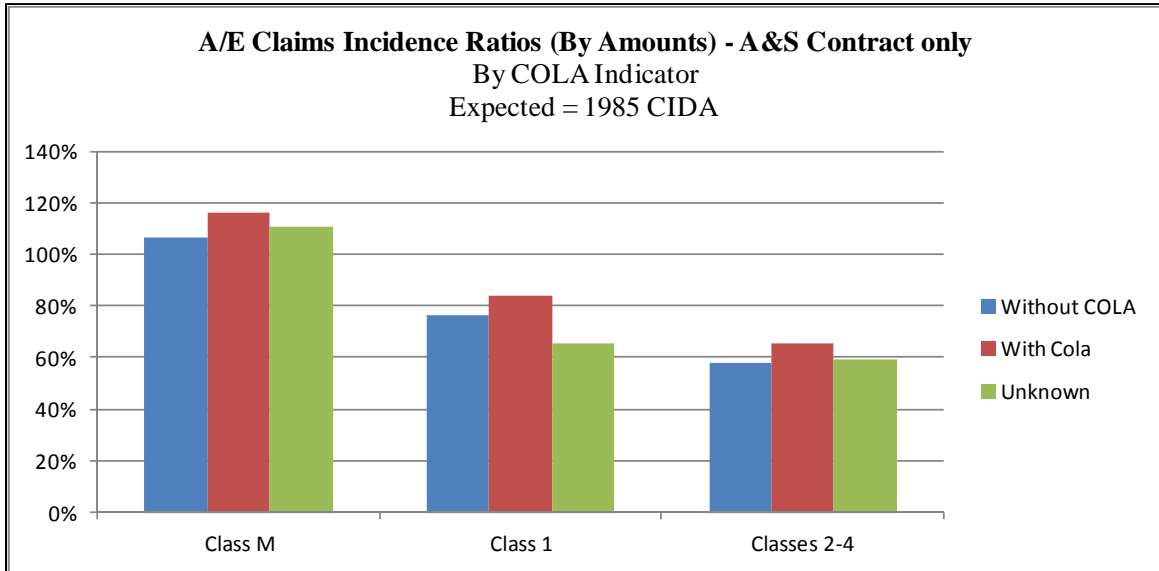
10. During the 1990's, the A/E claim incidence ratios by policy year in IDEC Occupation Classes 1 and M reflected the impact of the two-year contestable period, followed by higher incidence ratios that grade down gradually as a percent of 1985 CIDA after policy year four. During the 2000's, the "humped" durational pattern in the third policy year seems to have disappeared, highlighting the much tighter risk management controls put in place in the 1990's.

Chart 10



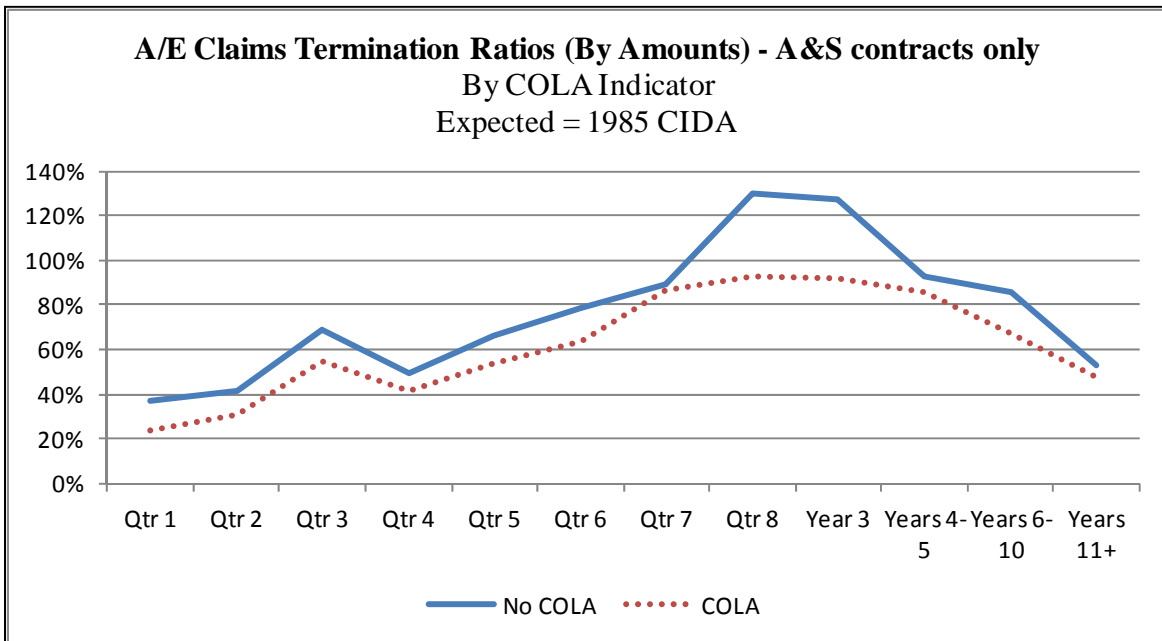
11. Policies having a Cost-Of-Living-Adjustment (COLA) feature exhibit a somewhat higher propensity to go on claim.

Chart 11



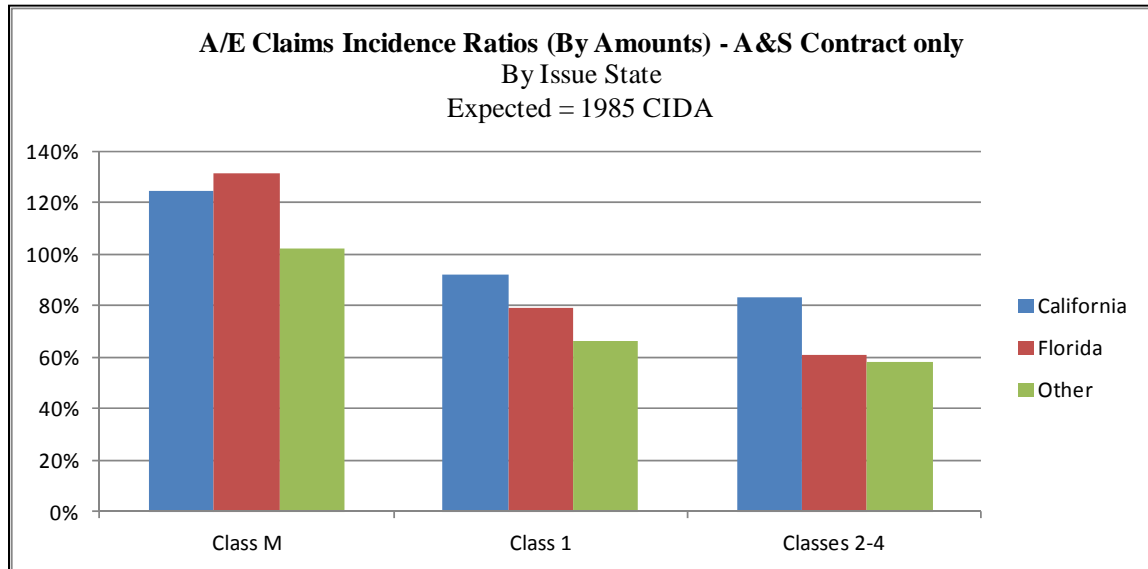
12. Claims with a COLA feature produced materially lower claim termination experience than claims without the rider.

Chart 12



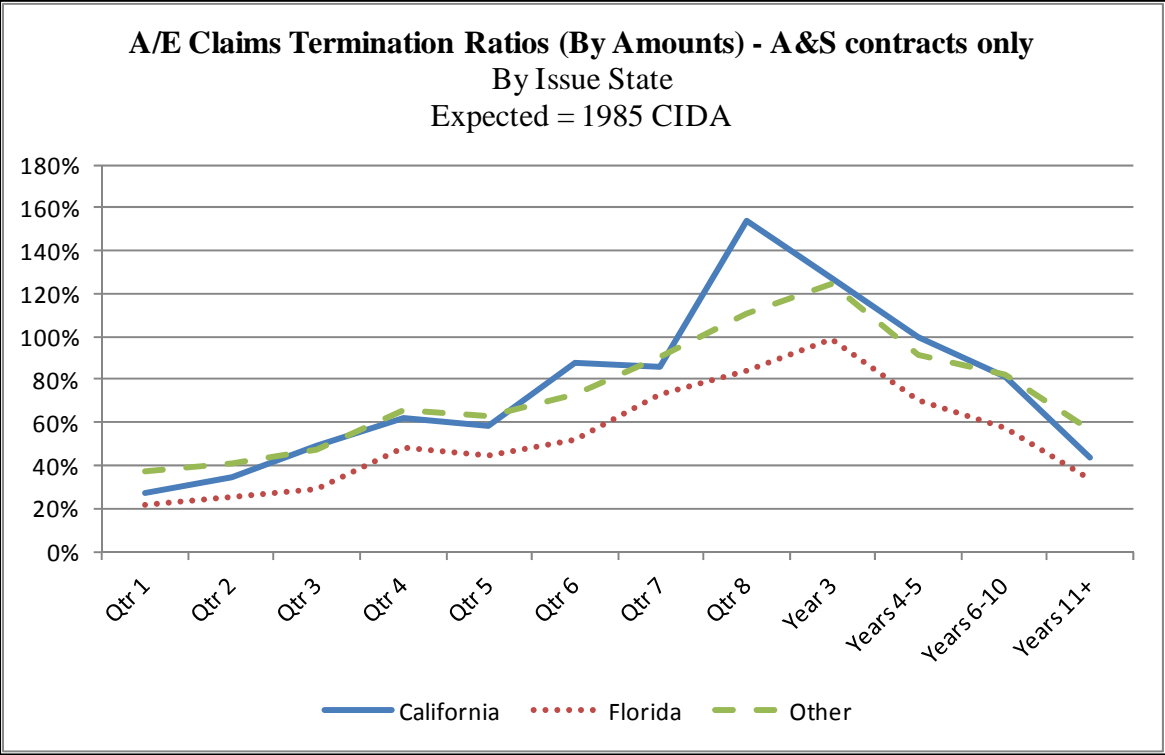
13. California and Florida have significantly higher claim incidence experience in IDEC Occupation Classes 1 and M than all other states combined. In the other occupation classes, Florida claim incidence experience is in line with the rest of the nation (excluding California), but California incidence remains relatively high.

Chart 13



14. In general, claim termination experience in Florida is lower than claim termination experience in California or all other states combined. California claim termination experience is more consistent with that of all other states (excluding Florida).

Chart 14

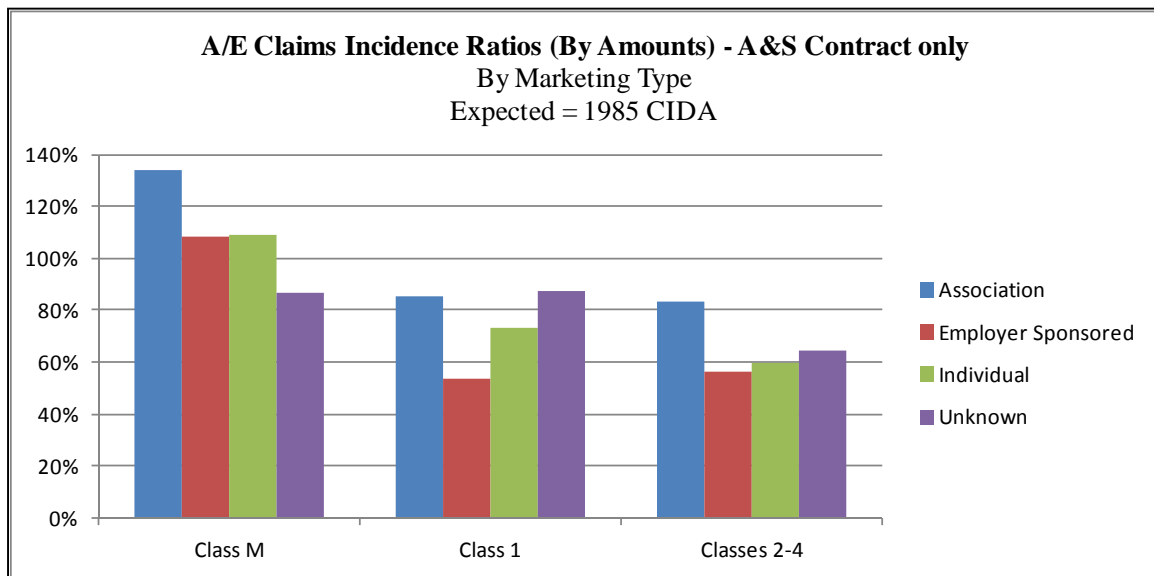


15. Significant differences in incidence experience exist among Individually Sold business, Employer-Sponsored multi-life business, and business purchased through Association endorsements. In Occupation Class 1, Employer-Sponsored claim incidence was 26% below the claim incidence of Individual business (54% vs. 73%).

It appears that the morbidity is unaffected for Medical occupations whether the product is sold in the Individual or Employer-sponsored market.

Overall, Association claim incidence exhibits the highest level for all occupation classes.

Chart 15

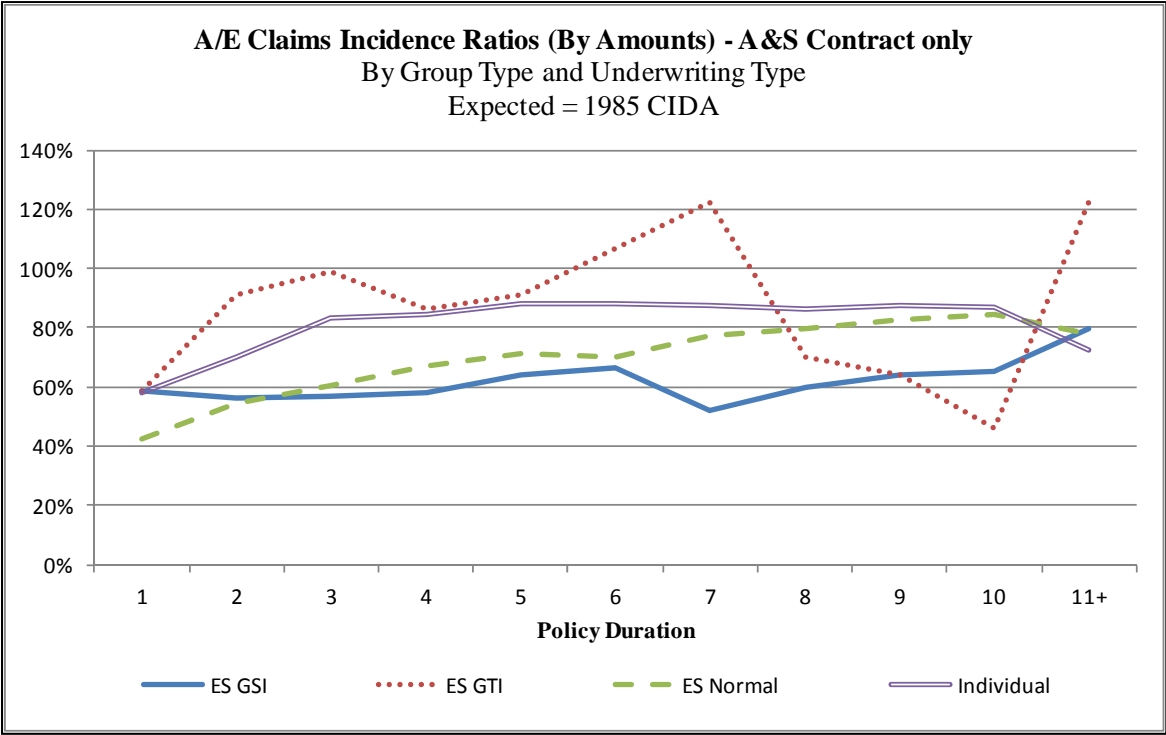


16. Guaranteed standard issue (GSI) business in the Employer-Sponsored market produced claim incidence ratios that were slightly worse during the first policy year than the incidence rates for traditionally underwritten business in the Employer-Sponsored market. In policy years 2+, GSI business had better experience than traditionally underwritten business in the Employer-Sponsored market.

Both GSI and traditionally underwritten business in the Employer-Sponsored market produced consistently lower claim incidence ratios than traditionally underwritten business in the Individually-Sold market. A large portion of the Employer-Sponsored GSI business was employer paid (with 100% participation of eligible lives), while voluntary employee-paid (with less than 100% participation of eligible lives) completes the category. The IDEC study was unable to distinguish between employer-paid and employee-paid Employer-Sponsored business.

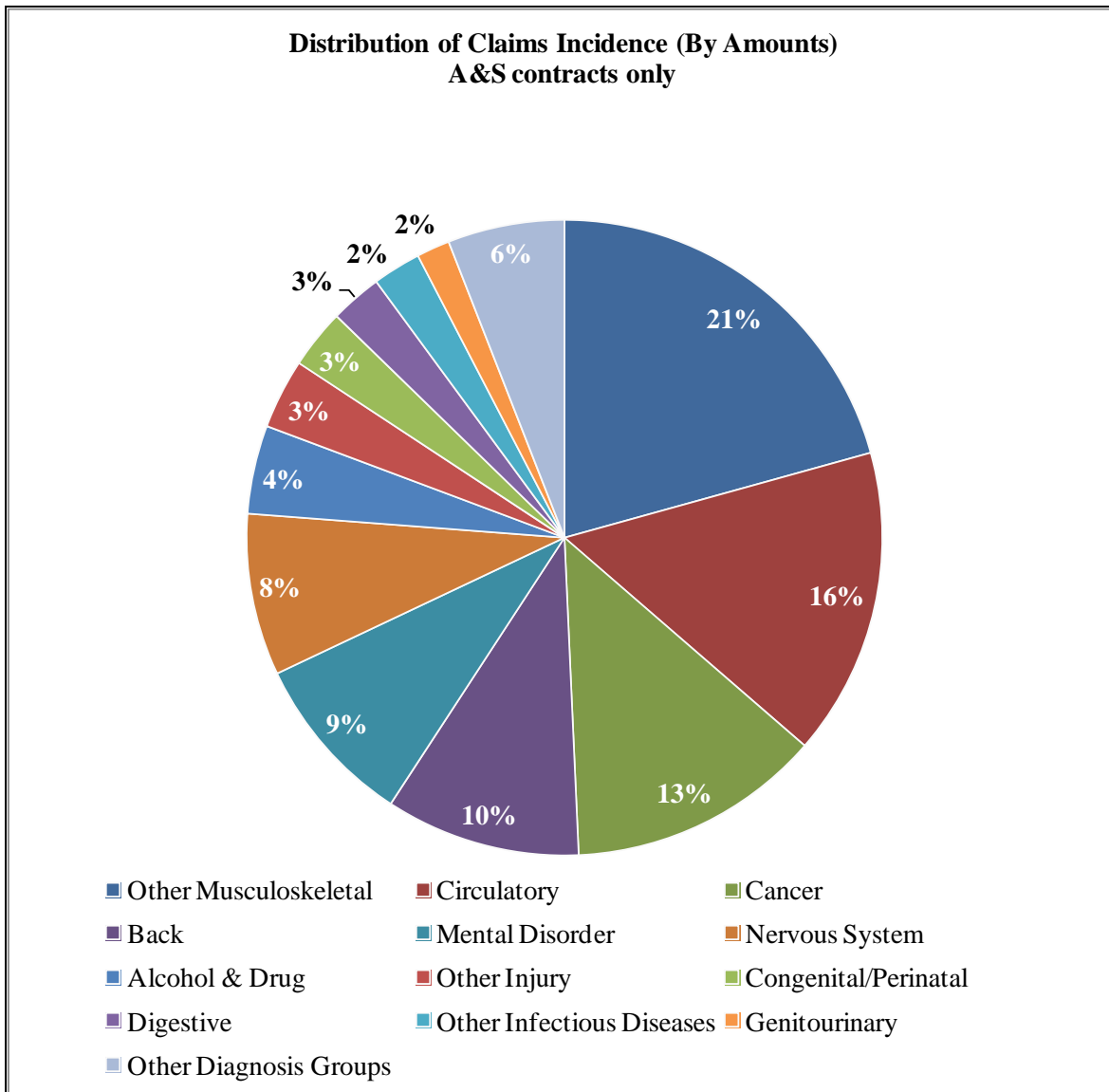
Guaranteed-to-Issue (GTI) business in the Employer-Sponsored market produced claim incidence rates that were higher than claim incidence of either GSI or traditionally underwritten Employer-Sponsored business, but with less exposure, results are more volatile.

Chart 16



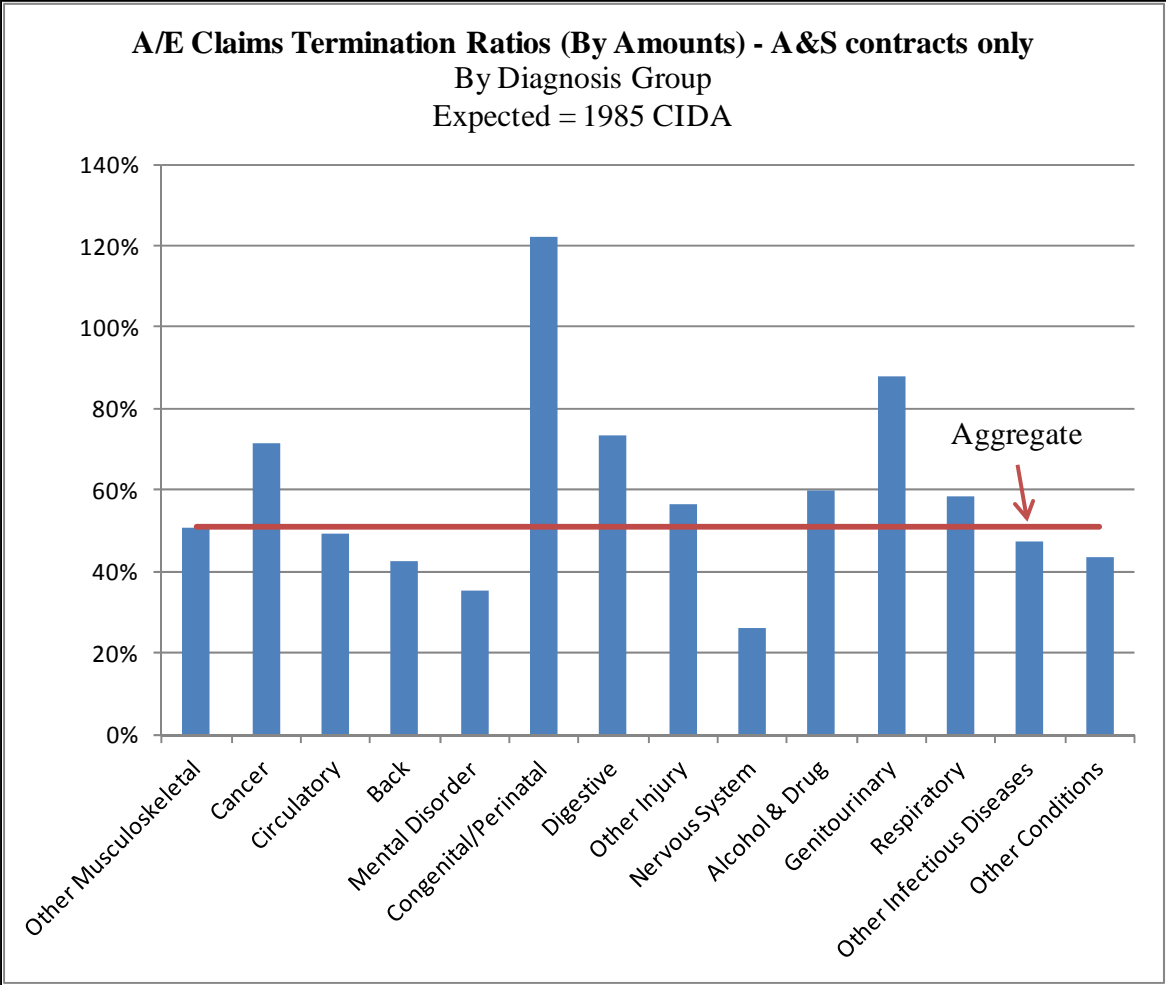
17. The analysis of claim data by diagnosis revealed that musculoskeletal and circulatory conditions were the leading disabling causes. Rounding up with cancer claims, those top three diagnoses account for half of all claims (by amount).

Chart 17



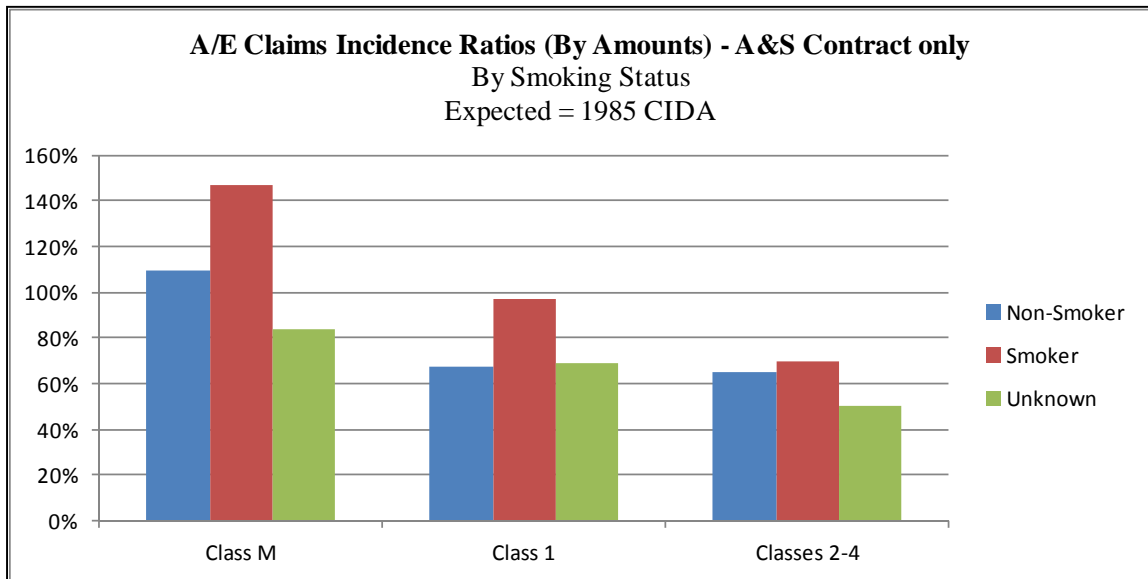
18. Even though we cannot perform a claim incidence A/E analysis by diagnosis since the expected is not defined by diagnosis, we can compare relative claim terminations by diagnosis using an A/E approach. It is interesting to note that Mental Disorders are recovering at a materially lower rate than the average claim population, but Alcohol and Drug abuse are recovering at an above average rate. Nervous System conditions are exhibiting the lowest claim termination rates, while Congenital/Perinatal conditions are recovering at the fastest rate. Back conditions also tend to bring the average claim termination rates down.

Chart 18



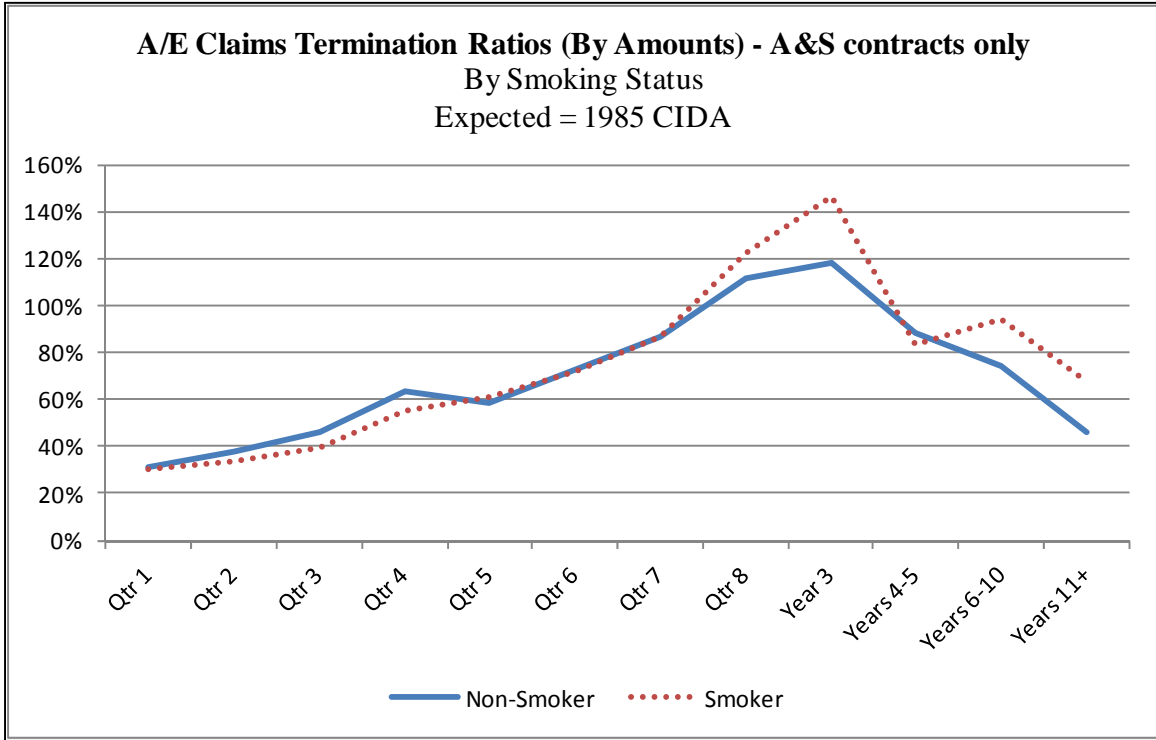
19. A review of the claim incidence by smoking status highlights that Smokers have higher claim incidence ratios than Non-smokers, although the difference is much less noticeable in Occupation Classes 2-4.

Chart 19



20. Claim termination rates do not vary by Smoker status for the first two claim years. Starting with the third claim year, Smokers exhibit higher claim terminations, which may be driven by higher mortality related to tobacco usage.

Chart 20



Section III: Claim Incidence Results

This section explores claim incidence trends during the 1/1/90-12/31/06 period relative to the parameters reflected in the 1985 CIDA claim incidence rate tables, which are attained age, gender, occupation class, and elimination period. The data was first split into five contract types for the experience analysis as described in Section I.

Claim Incidence by Contract Type

Table III.a. shows the overall A/E claim incidence ratios for the five contract types over the 1/1/90-12/31/06 study period. Experience is measured by count and amount. In addition, total claims and exposure for the five contract types are provided. Exposure by count for a policy is the number of years that the policy contributes during the specific study period. Exposure by amount is the exposure by count multiplied by the policy's benefit amount. The benefit amount for A&S, OE, and KP contracts is the maximum monthly benefit or expense reimbursement. The benefit amount for DBO contracts is the total face amount typically paid as a lump sum at the end of a long elimination period or spread out over a fixed period of time such as 60 months.

Table III.a.						
Actual to Expected Claim Incidence Ratios by Contract Type						
Study Period 1/1/90-12/31/06						
Contract Type	Actual to Expected		Claims		Exposure	
	Count	Amount	Count	Amount	Count	Amount
A&S	66%	79%	281,124	488,992,473	31,176,809	72,287,201,659
OE	50%	52%	20,905	104,469,957	1,843,031	10,196,739,911
DBO	43%	41%	263	21,364,887	218,323	22,741,096,299
KP	26%	29%	19	129,990	6,572	40,183,888
Unknown	32%	30%	158	298,759	29,812	74,024,501

Most of the study exposure is from A&S contracts, which had an overall actual to expected (A/E) ratio of 66% by count and 79% by amount. The higher A/E ratio by amount compared to the A/E ratio by count indicates a generally higher incidence for policies with larger benefit amounts.

OE policies experienced lower average A/E ratios (50% by count, 52% by amount) than A&S policies. The A/E claim incidence ratios for OE contracts are generally lower than the corresponding ratios for A&S contracts across all occupation classes and elimination periods. This is attributable to the following reasons:

- OE policies cover a specific business need and generally experience less anti-selection than A&S contracts.
- OE policies have short benefit periods (12 months is typical), and experience shows that higher claim incidence is associated with policies with longer benefit periods.

The volume of DBO contracts in the study is quite small. In fact, no exposures on DBO contracts exist for the study period 1/1/90-12/31/99 for reasons stated in Section I.

Due to the very small volume of exposure, no additional analysis has been done for KP and Unknown contract types in this report.

Table III.b. displays the A/E ratios for A&S, OE, and DBO policies for each of the four study periods. Each study year group includes the experience of full policy years that began in the indicated calendar years.

Table III.b.						
A/E Claim Incidence Ratios by Study Period and Contract Type						
By Count and Amount						
Study Period	A&S Policies		OE Policies		DBO Policies	
	Count	Amount	Count	Amount	Count	Amount
1990-94	74%	94%	63%	73%	n/a	n/a
1995-99	66%	85%	51%	57%	n/a	n/a
2000-03	63%	77%	44%	45%	47%	51%
2004-06	55%	63%	38%	37%	39%	31%
1990-2006	66%	79%	50%	52%	43%	41%

When viewing experience by study period, there is a clear pattern of decreasing A/E ratios for all products.

Claim Incidence by Occupation Class

Table III.c. and Table III.d. show the distribution by count and amount, respectively, of A&S, OE, and DBO exposure in the study by occupation class. Clearly, most of the exposure is in the original CIDA Class 1, which is now split between Class 1 and Class M.

Table III.c.						
Distribution of Exposures (by Count)						
For A&S, OE, and DBO Contracts						
By Occupation Class and Study Period						
Accident and Sickness Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
1990-94	26%	48%	15%	7%	4%	100%
1995-99	28%	49%	14%	6%	3%	100%
2000-03	25%	56%	12%	5%	2%	100%
2004-06	24%	58%	12%	5%	2%	100%
Total A&S	26%	53%	13%	6%	3%	100%
Overhead Expense Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
1990-94	63%	25%	8%	3%	1%	100%
1995-99	62%	26%	8%	3%	1%	100%
2000-03	46%	40%	10%	3%	2%	100%
2004-06	46%	40%	9%	3%	2%	100%
Total OE	54%	33%	9%	3%	1%	100%
Disability Buy-Out Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
2000-03	27%	62%	8%	2%	2%	100%
2004-06	26%	64%	7%	1%	1%	100%
Total OE	26%	63%	8%	1%	1%	100%

Table III.d.						
Distribution of Exposures (by Amount)						
For A&S, OE, and DBO Contracts						
By Occupation Class and Study Period						
Accident and Sickness Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
1990-94	38%	48%	10%	3%	1%	100%
1995-99	39%	48%	10%	2%	1%	100%
2000-03	31%	56%	9%	2%	1%	100%
2004-06	29%	59%	9%	2%	1%	100%
Total A&S	34%	53%	9%	2%	1%	100%
Overhead Expense Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
1990-94	74%	21%	4%	1%	0%	100%
1995-99	73%	22%	4%	1%	0%	100%
2000-03	56%	37%	5%	1%	1%	100%
2004-06	56%	37%	5%	1%	1%	100%
Total OE	64%	30%	5%	1%	1%	100%
Disability Buy-Out Contracts						
Study Period	Class M	Class 1	Class 2	Class 3	Class 4	Total
2000-03	18%	68%	7%	4%	3%	100%
2004-06	19%	71%	6%	2%	2%	100%
Total OE	19%	69%	6%	3%	2%	100%

Table III.e. and Table III.f. provide the A/E claim incidence (by count and amount, respectively) separately for A&S, OE, and DBO contracts for the four study periods used in this report.

Table III.e.				
A/E Claim Incidence Ratios (by Count)				
For A&S, OE, and DBO Contracts				
By Occupation Class and Study Period				
Accident and Sickness Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
1990-94	102%	81%	62%	74%
1995-99	99%	66%	53%	66%
2000-03	88%	64%	50%	63%
2004-06	75%	54%	45%	55%
Total A&S	92%	66%	54%	66%
Overhead Expense Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
1990-94	66%	61%	58%	63%
1995-99	55%	44%	48%	51%
2000-03	46%	43%	42%	44%
2004-06	38%	36%	40%	38%
Total OE	53%	45%	47%	50%
Disability Buy-Out Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
2000-03	77%	37%	29%	47%
2004-06	70%	30%	*	39%
Total OE	74%	34%	21%	43%

Table III.f.				
A/E Claim Incidence Ratios (by Amount)				
For A&S, OE, and DBO Contracts				
By Occupation Class and Study Period				
Accident and Sickness Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
1990-94	118%	90%	72%	94%
1995-99	117%	71%	61%	85%
2000-03	105%	68%	56%	77%
2004-06	85%	55%	50%	63%
Total A&S	107%	70%	61%	79%
Overhead Expense Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
1990-94	76%	68%	64%	73%
1995-99	61%	45%	52%	57%
2000-03	47%	45%	37%	45%
2004-06	37%	39%	34%	37%
Total OE	55%	47%	45%	52%
Disability Buy-Out Contracts				
Study Period	Class M	Class 1	Classes 2-4	Total
2000-03	80%	51%	25%	51%
2004-06	40%	29%	*	31%
Total OE	59%	40%	25%	41%

The trend of improving incidence is evident in all occupation classes. A/E ratios by amount are higher than the A/E ratios by count in all cases for A&S contracts. For all study periods and occupation classes, A/E ratios are highest for the A&S contracts.

Claim Incidence by Elimination Period

Claim incidence experience by elimination period for A&S and OE contracts is displayed in the following tables. DBO contracts are not included because most DBO elimination periods are 180 days or longer. Table III.g. shows the distribution of the amount exposed by elimination period within each occupation class separately for A&S and OE contracts.

Table III.g.				
Distribution of A&S and OE Contracts by Elimination Period				
Within Occupation Class - By Amount				
Study Period: 1/1/90-12/31/06				
Elimination Period	A&S Contracts			
	Class M	Class 1	Classes 2-4	Total
Under 30 days	0%	0%	2%	0%
30 days	6%	5%	14%	6%
60 days	11%	7%	11%	9%
90 days	71%	64%	57%	65%
180 days	10%	21%	15%	16%
Over 180 days	1%	4%	2%	3%
All EPs	100%	100%	100%	100%
Elimination Period	OE Contracts			
	Class M	Class 1	Classes 2-4	Total
Under 30 days	0%	0%	1%	0%
30 days	58%	40%	43%	52%
60 days	23%	24%	23%	23%
90 days	18%	35%	31%	24%
180 days	0%	1%	1%	0%
Over 180 days	0%	0%	1%	0%
All EPs	100%	100%	100%	100%

Policies with elimination periods of 90 days or longer make up 84% of A&S exposures, but only 24% of OE exposures. During the 1980s and 1990s, companies generally discouraged the purchase of shorter elimination periods for A&S. On the other hand, OE policies are typically sold with short elimination periods. Neither contract type has much exposure in elimination periods of less than 30 days, and OE contracts have little exposure in elimination periods of longer than 90 days.

Table III.h. shows the distribution (by amount) among elimination periods for each contract type and study period. The table shows a gradual shift toward longer elimination periods.

Table III.h.					
Distribution of A&S and OE Contracts by Elimination Period					
Within Study Period - By Amount					
All Occupation Classes Combined					
Elimination Period	A&S Contracts				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30 days	1%	0%	0%	0%	0%
30 days	12%	8%	4%	3%	6%
60 days	15%	10%	6%	5%	9%
90 days	58%	63%	69%	70%	65%
180 days	13%	16%	18%	19%	16%
Over 180 days	2%	3%	3%	3%	3%
All EPs	100%	100%	100%	100%	100%
Elimination Period	OE Contracts				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30 days	1%	1%	0%	0%	0%
30 days	63%	57%	45%	43%	52%
60 days	22%	24%	24%	24%	23%
90 days	14%	19%	30%	32%	24%
180 days	0%	0%	1%	0%	0%
Over 180 days	0%	0%	0%	0%	0%
All EPs	100%	100%	100%	100%	100%

Table III.i. shows the A/E claim incidence ratios (by amount) by elimination period within each occupation class, separately for A&S and OE contracts:

Table III.i.				
A/E Claim Incidence Ratios (by Amount) for A&S and OE Contracts				
By Elimination Period and Occupation Class				
Study Period: 1/1/90-12/31/06				
Elimination Period	A&S Contracts			
	Class M	Class 1	Classes 2-4	Total
Under 30 days	63%	56%	48%	50%
30 days	85%	70%	61%	70%
60 days	73%	54%	50%	61%
90 days	130%	77%	68%	94%
180 days	124%	64%	77%	79%
Over 180 days	190%	75%	121%	99%
All EPs	107%	70%	61%	79%
Elimination Period	OE Contracts			
	Class M	Class 1	Classes 2-4	Total
Under 30 days	51%	68%	43%	52%
30 days	55%	47%	46%	52%
60 days	46%	40%	37%	43%
90 days	87%	53%	52%	66%
180 days	*	121%	45%	98%
Over 180 days	*	*	305%	260%
All EPs	55%	47%	45%	52%

The Under 30 days and 30-day elimination periods exhibit relatively low A/E results compared to the more common elimination period of 90 days. It is generally recognized that the 1985 CIDA termination rates at early claim durations are too high. The 30 and 90-day incidence rates in the 1985 CIDA table are consistent with the overstated termination rates. The very high incidence expected for a 30-day elimination period, followed by very high expected claim terminations in month two and three, lead to a more appropriate 90-day incidence rate. Because the A/E ratios in this report use CIDA for expected incidence, the A/E ratios for 30-day elimination periods are likely to be lower than the ratios for 90-day elimination periods. This is evident in the ratios displayed above.

The 60-day A/E claim incidence ratios appear relatively low compared to the other elimination periods because the 85 CIDA 60-day incidence rates are artificially high. The 85 CIDA table distinguishes incidence among 0, 7, 14, 30, and 90-day elimination periods, but not the 60-day elimination period, since very few policies issued in the 1970s had 60-day elimination periods. For the purpose of this study, expected 60-day claim incidence rates were developed by multiplying the 85 CIDA 30-day incidence rates by the claim continuance factors from the 30-day continuance table that represented the probabilities of remaining on claim from the 30th day

to the 60th day of disablement. This approach generally overstates the 60-day incidence rates. People receiving disability benefits will remain disabled longer than disabled people who are in the elimination period but not receiving benefits. This can be observed by comparing 90-day incidence rates from the 85 CIDA table to 90-day incidence rates calculated from 30-day incidence rates and claim continuance factors from 30 days to 90 days. Furthermore, because they are based on the relatively high 30-day incidence rates, the 60-day incidence rates also appear high relative to the 90-day incidence rates.

A similar situation exists for the 180-day incidence rates, which are based on the 90-day incidence rates in the 85 CIDA table. The lack of “true” expected incidence rates for 60-day and 180-day or longer elimination periods should be kept in mind when reviewing all of the A/E ratios by elimination period in this report.

Comparing the A/E ratios of A&S and OE contracts with similar elimination periods, it appears that OE contracts have better incidence experience relative to CIDA with 30, 60, and 90-day elimination periods, but not necessarily with the other elimination periods. In total, OE contracts appear to have a much lower A/E compared to A&S contracts, as indicated earlier. However, some of the difference is due to OE contracts having more exposure in the shorter elimination periods, which have lower A/E ratios due to the characteristics of the 1985 CIDA table discussed above in the paragraph under Table III.i.

As noted earlier, the A/E ratios for Class M are significantly higher than for the other occupation classes. This appears to be the case for all elimination periods except for OE contracts with very short elimination periods, where there is little exposure.

Table III.j. shows A/E ratios (by amount) for each elimination period split by study period, shown separately for A&S and OE contracts. Except for OE elimination periods with little exposure, the table shows that the trend of improving claim incidence applies to all elimination periods. The shift over time to longer elimination periods, where A/E ratios are higher, causes the improvement in the total A/E ratios to be less than the improvement displayed for each elimination period.

Table III.j.					
A/E Claim Incidence Ratios (by Amount) for A&S and OE Contracts					
By Elimination Period and Study Period					
All Occupation Classes Combined					
Elimination Period	A&S Contracts				Total
	1990-94	1995-99	2000-03	2004-06	
Under 30 days	58%	49%	43%	36%	50%
30 days	86%	67%	62%	53%	70%
60 days	71%	60%	57%	46%	61%
90 days	127%	113%	89%	71%	94%
180 days	107%	92%	76%	61%	79%
Over 180 days	154%	113%	88%	73%	99%
All EPs	94%	85%	77%	63%	79%
Elimination Period	OE Contracts				Total
	1990-94	1995-99	2000-03	2004-06	
Under 30 days	60%	49%	44%	31%	52%
30 days	73%	56%	45%	36%	52%
60 days	65%	50%	38%	31%	43%
90 days	127%	96%	59%	51%	66%
180 days	59%	139%	*	*	98%
Over 180 days	*	*	11%	182%	260%
All EPs	73%	57%	45%	37%	52%

Claim Incidence by Gender

The 1985 CIDA tables have different claim incidence rates by gender, (i.e., the tables are sex distinct). The discussion below shows how experience by gender during the study period varied relative to the 1985 CIDA table.

Table III.k. shows the percentage of female A&S exposure within the various elimination period and occupation classes. Table III.l. shows the percentage of female A&S exposure within the various study periods and occupation classes. Overall, females represent 22% by count and 17% by amount of all A&S exposure in the study. The percentage of female exposure has steadily increased over time throughout the study period.

Table III.k.				
Percent of Female Exposure by Count and Amount				
For A&S Contracts by Elimination Period and Occupation Class				
Elimination Period	By Count			
	Class M	Class 1	Classes 2-4	Total
<30 days	16%	25%	6%	10%
30 days	25%	23%	15%	20%
60 days	24%	23%	19%	22%
90 days	23%	23%	21%	23%
180 days	26%	21%	21%	22%
>180 days	20%	16%	14%	16%
All EPs	24%	22%	18%	22%
Elimination Period	By Amount			
	Class M	Class 1	Classes 2-4	Total
<30 days	13%	24%	6%	10%
30 days	20%	20%	14%	18%
60 days	18%	20%	16%	18%
90 days	18%	18%	16%	18%
180 days	20%	16%	14%	16%
>180 days	14%	13%	10%	13%
All EPs	19%	17%	15%	17%

Table III.l.				
Percent of Female Exposure by Count and Amount				
For A&S Contracts by Study Period and Occupation Class				
Study Period	By Count			
	Class M	Class 1	Classes 2-4	Total
1990-94	21%	20%	16%	19%
1995-99	24%	21%	17%	21%
2000-03	24%	23%	20%	23%
2004-06	25%	24%	22%	24%
1990-2006	24%	22%	18%	22%
Study Period	By Amount			
	Class M	Class 1	Classes 2-4	Total
1990-94	16%	15%	14%	15%
1995-99	18%	16%	14%	17%
2000-03	20%	18%	16%	18%
2004-06	21%	19%	17%	19%
1990-2006	19%	17%	15%	17%

Table III.m. compares the A/E claim incidence ratios (by amount) for A&S contracts by gender separated into elimination period and occupation class groupings. Table III.n. compares the A/E claim incidence ratios (by amount) for A&S contracts by gender separated into study period and occupation class groupings.

Table III.m.				
A/E Claim Incidence Ratios (By Amount)				
For A&S Contracts by Gender, Elimination Period, and Occupation Class				
Study Period: 1/1/90-12/31/06				
Elimination Period	Males			
	Class M	Class 1	Classes 2-4	Total
<30 days	66%	62%	48%	51%
30 days	81%	69%	61%	69%
60 days	76%	57%	50%	63%
90 days	134%	78%	69%	96%
180 days	134%	65%	78%	81%
>180 days	199%	73%	126%	100%
All EPs	110%	71%	61%	80%
Elimination Period	Females			
	Class M	Class 1	Classes 2-4	Total
<30 days	51%	42%	43%	44%
30 days	93%	71%	63%	76%
60 days	66%	48%	49%	55%
90 days	119%	73%	66%	89%
180 days	93%	63%	74%	71%
>180 days	147%	84%	90%	95%
All EPs	99%	67%	61%	77%

Table III.n.				
A/E Claim Incidence Ratios (By Amount)				
For A&S Contracts by Gender, Elimination Period, and Occupation Class				
Study Period: 1/1/90-12/31/06				
Study Period	Males			
	Class M	Class 1	Classes 2-4	Total
1990-94	122%	94%	73%	95%
1995-99	124%	73%	61%	87%
2000-03	107%	69%	55%	77%
2004-06	86%	55%	50%	63%
1990-2006	110%	71%	61%	80%
Study Period	Females			
	Class M	Class 1	Classes 2-4	Total
1990-94	110%	80%	70%	88%
1995-99	99%	67%	61%	79%
2000-03	101%	66%	58%	76%
2004-06	85%	57%	51%	65%
1990-2006	99%	67%	61%	77%

Female A/E claim incidence ratios are lower than or equal to the corresponding ratios for males overall and in all occupation classes. By study period, the A/E ratios for females in Class M and Class 1 are lower in the earlier periods, relative to the male ratios, but slightly higher than the male ratio for the 1/1/04-12/31/06 study period. In general, female incidence experience reflects similar relationships to the 1985 CIDA as the male experience does. This suggests that relative differences by gender observed in this study are consistent with the experience included in the development of the 1985 CIDA table.

Claim Incidence by Attained Age

Tables III.o., III.p., III.q., and III.r. show the A/E claim incidence ratios (by amount) for A&S contracts by attained age groups, separately for males and females, within the various elimination period and occupation class groups. Tables III.s. and III.t. show the A/E claim incidence ratios (by amount) for A&S contracts by attained age groups, separately for males and females, for each occupation class and study period, for all of the elimination periods combined.

Focusing on the ratios for the 90-day and longer elimination periods, it appears that the A/E ratios are highest in the age 35-44 range for males and the age 30-34 range for females, where the ratios are quite high. The female ratios are lowest at ages 45-49 and then increase again at higher ages, while the male ratios generally decline after ages 35-39 until age 65. The pattern of higher ratios at lower ages, especially for females, suggests that the 1985 CIDA incidence by attained age is too steep.

Table III.o.
A/E Claim Incidence Ratios (by Amount) for A&S Contracts
Male - By Attained Age, Occupation Class
Elimination Period <30, 30 & 60 Days
Study Period: 1/1/90-12/31/06

Elimination Period - Under 30 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	*	*	35%	35%
30-34	*	*	40%	40%
35-39	*	49%	38%	38%
40-44	54%	55%	44%	45%
45-49	48%	56%	45%	46%
50-54	60%	57%	50%	51%
55-59	56%	61%	51%	53%
60-64	70%	71%	50%	55%
65+	125%	73%	55%	72%
Elimination Period - 30 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	58%	101%	57%	61%
30-34	99%	118%	57%	71%
35-39	107%	97%	60%	76%
40-44	96%	80%	60%	74%
45-49	82%	67%	59%	67%
50-54	73%	60%	63%	65%
55-59	77%	66%	64%	69%
60-64	77%	64%	62%	67%
65+	68%	49%	50%	57%
Elimination Period - 60 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	70%	73%	60%	65%
30-34	74%	67%	52%	62%
35-39	83%	71%	46%	67%
40-44	79%	64%	48%	65%
45-49	74%	57%	47%	61%
50-54	74%	53%	49%	60%
55-59	80%	53%	55%	64%
60-64	72%	51%	55%	60%
65+	64%	49%	49%	56%

Table III.p.
A/E Claim Incidence Ratios (by Amount) for A&S Contracts
Male - By Attained Age, Occupation Class
Elimination Period 90, 180, >180 Days
Study Period: 1/1/90-12/31/06

Elimination Period - 90 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	56%	75%	60%	65%
30-34	103%	96%	78%	93%
35-39	134%	107%	76%	109%
40-44	151%	99%	72%	111%
45-49	142%	83%	67%	100%
50-54	140%	72%	63%	94%
55-59	137%	69%	68%	93%
60-64	114%	63%	65%	83%
65+	96%	53%	58%	71%
Elimination Period - 180 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	50%	75%	51%	58%
30-34	83%	75%	80%	78%
35-39	193%	97%	93%	115%
40-44	152%	81%	89%	96%
45-49	137%	72%	91%	88%
50-54	144%	67%	74%	83%
55-59	133%	61%	74%	77%
60-64	118%	50%	64%	67%
65+	78%	38%	41%	48%
Elimination Period - Over 180 days				
Attained Age	Class M	Class 1	Classes 2-4	Total
Under 30	*	*	*	*
30-34	*	38%	127%	84%
35-39	243%	88%	279%	151%
40-44	207%	96%	102%	113%
45-49	256%	94%	131%	123%
50-54	171%	74%	128%	95%
55-59	213%	66%	129%	96%
60-64	183%	59%	89%	85%
65+	*	*	*	29%

Table III.g.
A/E Claim Incidence Ratios (by Amount) for A&S Contracts
Female - By Attained Age, Occupation Class
Elimination Period <30, 30 & 60 Days
Study Period: 1/1/90-12/31/06

Attained Age	Elimination Period - Under 30 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	*	37%	37%	37%
30-34	*	31%	41%	39%
35-39	67%	26%	37%	36%
40-44	25%	27%	41%	35%
45-49	52%	49%	40%	44%
50-54	46%	45%	41%	43%
55-59	57%	54%	44%	49%
60-64	57%	62%	53%	55%
65+	*	29%	33%	39%
Attained Age	Elimination Period - 30 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	167%	139%	91%	123%
30-34	174%	128%	81%	128%
35-39	115%	91%	64%	93%
40-44	79%	54%	57%	65%
45-49	69%	58%	56%	61%
50-54	73%	64%	60%	66%
55-59	82%	67%	62%	70%
60-64	78%	62%	55%	64%
65+	60%	65%	56%	61%
Attained Age	Elimination Period - 60 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	93%	95%	65%	86%
30-34	98%	63%	61%	77%
35-39	84%	49%	49%	65%
40-44	54%	39%	45%	47%
45-49	49%	39%	42%	44%
50-54	57%	47%	44%	50%
55-59	74%	60%	50%	62%
60-64	77%	50%	75%	64%
65+	41%	39%	72%	46%

Table III.r.
A/E Claim Incidence Ratios (by Amount) for A&S Contracts
Female - By Attained Age, Occupation Class
Elimination Period 90, 180 & >180 Days
Study Period: 1/1/90-12/31/06

Attained Age	Elimination Period - 90 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	134%	106%	84%	112%
30-34	192%	125%	93%	153%
35-39	139%	89%	76%	110%
40-44	105%	64%	60%	80%
45-49	91%	57%	53%	68%
50-54	97%	67%	58%	74%
55-59	118%	75%	70%	85%
60-64	114%	78%	80%	88%
65+	109%	55%	43%	67%
Attained Age	Elimination Period - 180 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	54%	61%	53%	56%
30-34	91%	78%	82%	84%
35-39	94%	68%	79%	77%
40-44	87%	56%	56%	64%
45-49	85%	53%	65%	62%
50-54	102%	63%	85%	73%
55-59	120%	75%	80%	83%
60-64	136%	78%	99%	92%
65+	*	77%	*	64%
Attained Age	Elimination Period - Over 180 days			
	Class M	Class 1	Classes 2-4	Total
Under 30	*	*	*	*
30-34	*	*	*	126%
35-39	162%	64%	*	84%
40-44	88%	62%	111%	71%
45-49	84%	47%	101%	59%
50-54	220%	117%	83%	128%
55-59	270%	141%	79%	150%
60-64	*	108%	*	84%
65+	*	*	*	*

Table III.s.					
A/E Claim Incidence Ratios (by Amount) for A&S Contracts					
Male - By Attained Age and Occupation Class					
Study Period 1/1/90-12/31/06					
Attained Age	Occupation Class M				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	80%	50%	20%	44%	59%
30-34	110%	111%	61%	53%	94%
35-39	136%	135%	90%	67%	118%
40-44	132%	136%	108%	87%	121%
45-49	121%	127%	108%	86%	112%
50-54	119%	123%	116%	88%	111%
55-59	125%	124%	111%	94%	112%
60-64	105%	108%	100%	81%	98%
65+	87%	75%	96%	76%	84%
Attained Age	Occupation Class 1				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	103%	64%	53%	63%	78%
30-34	118%	87%	72%	58%	92%
35-39	121%	93%	82%	67%	97%
40-44	101%	85%	83%	68%	86%
45-49	89%	75%	71%	59%	74%
50-54	83%	70%	66%	52%	66%
55-59	86%	66%	67%	54%	65%
60-64	81%	61%	63%	49%	60%
65+	73%	42%	57%	41%	49%
Attained Age	Occupation Classes 2-4				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	70%	45%	40%	44%	57%
30-34	72%	59%	46%	45%	62%
35-39	74%	57%	51%	49%	62%
40-44	73%	62%	57%	47%	61%
45-49	75%	60%	54%	48%	60%
50-54	72%	61%	57%	50%	60%
55-59	72%	64%	61%	55%	63%
60-64	73%	63%	53%	49%	59%
65+	71%	63%	53%	43%	52%

Table III.t.					
A/E Claim Incidence Ratios (by Amount) for A&S Contracts					
Female - By Attained Age and Occupation Class					
Study Period 1/1/90-12/31/06					
Attained Age	Occupation Class M				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	142%	107%	109%	119%	125%
30-34	164%	162%	174%	154%	164%
35-39	119%	114%	134%	104%	118%
40-44	86%	82%	89%	81%	85%
45-49	76%	85%	74%	65%	75%
50-54	83%	80%	95%	71%	82%
55-59	96%	100%	107%	93%	99%
60-64	106%	105%	91%	91%	96%
65+	*	101%	74%	78%	76%
Attained Age	Occupation Class 1				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	129%	111%	91%	62%	107%
30-34	109%	113%	104%	97%	107%
35-39	88%	70%	83%	68%	78%
40-44	61%	58%	58%	46%	56%
45-49	64%	55%	52%	47%	54%
50-54	79%	68%	63%	54%	63%
55-59	83%	71%	76%	65%	71%
60-64	79%	69%	76%	62%	69%
65+	57%	39%	63%	54%	57%
Attained Age	Occupation Classes 2-4				
	1990-94	1995-99	2000-03	2004-06	Total
Under 30	87%	89%	69%	68%	82%
30-34	83%	74%	83%	79%	80%
35-39	68%	67%	62%	59%	65%
40-44	65%	55%	54%	40%	55%
45-49	64%	54%	45%	43%	52%
50-54	67%	59%	53%	49%	56%
55-59	69%	65%	66%	55%	63%
60-64	83%	62%	74%	60%	68%
65+	41%	51%	54%	50%	51%

Section IV: Claim Termination Results

This section explores claim termination trends during the 1/1/90-12/31/07 period relative to the parameters reflected in the 85 CIDA claim termination rate tables, which are attained age at disablement, gender, occupation class and elimination period. Because the Medical occupation experience differs significantly from the other occupation classes, experience for Medical occupations is shown separately when results by occupation class are shown. The Medical occupations are denoted by Occupation Class M.

Claim Termination Experience by Contract Type

Table IV.a shows the total claim terminations over the full study period by duration of disablement in terms of count and amount represented in the A/E claim termination ratios in Table IV.b. The A&S claims are separated between long-term benefit periods (i.e., To Age 65 and longer) and short-term benefit periods.

Table IV.a						
Actual Claim Terminations						
Study Period: 1/1/90 – 12/31/07						
Duration of Disablement	A&S Claims Short-Term Benefit Periods		A&S Claims Long-Term Benefit Periods		OE Claims	
	By Count	By Amount	By Count	By Amount	By Count	By Amount
Quarter 1	31,820	18,999,015	26,022	32,608,210	6,093	26,762,807
Quarter 2	21,060	18,196,603	48,208	100,458,814	6,560	32,122,385
Quarter 3	9,195	9,328,494	30,911	68,695,943	3,637	18,813,090
Quarter 4	4,268	4,656,509	17,241	40,688,681	2,033	11,091,658
Quarter 5	2,837	3,102,972	10,971	25,048,228	1,649	11,894,407
Quarter 6	1,583	1,825,576	7,460	18,296,691	789	4,449,249
Quarter 7	1,152	1,429,341	5,445	12,592,145	509	3,622,070
Quarter 8	950	1,390,687	4,609	11,411,359	224	1,470,566
Year 3	2,984	3,822,774	12,255	30,386,221	512	5,683,955
Years 4 – 5	1,128	1,377,222	10,763	26,879,121	175	1,586,663
Years 6 - 10	619	750,524	9,283	25,348,188	74	381,398
Years 11+	102	54,643	5,024	9,460,410	*	27,400

Table IV.b provides the A/E claim termination ratios (as percentages of the 85 CIDA claim termination rates) by duration of disablement for A&S and OE claims. The OE contracts generally have benefit periods that do not exceed 24 months.

Table IV.b A/E Claim Termination Ratios by Duration of Disablement Study Period: 1/1/90 – 12/31/07						
Duration of Disablement	A&S Claims Short-Term Benefit Periods		A&S Claims Long-Term Benefit Periods		OE Claims	
	By Count	By Amount	By Count	By Amount	By Count	By Amount
Quarter 1	58%	50%	37%	29%	36%	32%
Quarter 2	70%	59%	43%	36%	56%	49%
Quarter 3	79%	71%	50%	44%	83%	72%
Quarter 4	94%	90%	66%	61%	124%	109%
Quarter 5	106%	100%	65%	58%	201%	191%
Quarter 6	106%	105%	75%	71%	249%	180%
Quarter 7	134%	142%	95%	85%	363%	312%
Quarter 8	157%	202%	114%	109%	271%	208%
Year 3	375%	385%	120%	113%	NM	NM
Years 4 – 5	194%	191%	94%	88%	NM	NM
Years 6 - 10	NM	NM	76%	77%	NM	NM
Years 11+	NM	NM	58%	50%	NM	NM

Table IV.b shows that A/E claim termination ratios for A&S contracts are less than 100% during the first year of disablement, but increase with duration during the first year. A/E claim terminations continue to increase during the second year, rising above 100% in Quarter 5 for contracts with short-term benefit periods, and in Quarter 8 for contracts with long-term benefit periods. This pattern is generally consistent with the adjustments to the 85 CIDA termination rates that produce the CIDA claim termination rates, at least during the first two years of disablement. A/E ratios on OE contracts show an increasing pattern by duration for the first seven quarters, and are well over 100% during the second year. Compared to A/E termination ratios by count, A/E termination ratios by amount are generally lower. This suggests that claims with larger amounts have lower termination rates on average.

For A&S contracts with long-term benefit periods, A/E claim termination ratios peak in Year 3, then generally decline by duration. By Years 11+, the A/E ratios are less than half of the Year 3 levels. A/E ratios for A&S contracts with short-term benefit periods remain well above 100% for Years 3 through 10.

At all durations, A&S contracts with long-term benefit periods demonstrate much lower A/E ratios than either A&S contracts with short-term benefit periods or OE contracts. This result is explored further in Section VI of this report.

Table IV.c shows A/E claim termination ratios (by amount) for A&S and OE contracts broken out by four calendar periods of exposure: 1/1/90-12/31/94, 1/1/95-12/31/99, 1/1/00-12/31/03, and 1/1/04-12/31/07.

Table IV.c				
A/E Claim Termination Ratios by Amount				
By Duration of Disablement and Exposure Period				
	A&S Claims with Short-Term Benefit Periods			
	1990-95	1995-99	2000-03	2004-07
Quarter 1	55%	48%	37%	29%
Quarter 2	60%	61%	48%	54%
Quarter 3	75%	75%	58%	46%
Quarter 4	98%	89%	53%	98%
Quarter 5	109%	97%	111%	60%
Quarter 6	121%	100%	74%	94%
Quarter 7	150%	137%	167%	114%
Quarter 8	195%	156%	149%	467%
Year 3	338%	239%	1533%	1241%
Years 4 – 5	207%	185%	267%	17%
Years 6+	NM	NM	NM	NM
	A&S Claims with Long-Term Benefit Periods			
	1990-95	1995-99	2000-03	2004-07
Quarter 1	31%	28%	30%	27%
Quarter 2	40%	35%	37%	35%
Quarter 3	53%	46%	40%	42%
Quarter 4	69%	59%	62%	59%
Quarter 5	71%	60%	55%	52%
Quarter 6	84%	73%	67%	69%
Quarter 7	100%	96%	78%	79%
Quarter 8	133%	110%	107%	102%
Year 3	130%	107%	106%	117%
Years 4 – 5	132%	106%	82%	75%
Years 6 - 10	122%	98%	73%	69%
Years 11+	130%	81%	53%	42%

Table IV.c (Continued)				
	OE Claims			
	1990-95	1995-99	2000-03	2004-07
Quarter 1	33%	31%	32%	31%
Quarter 2	56%	48%	42%	49%
Quarter 3	90%	77%	62%	64%
Quarter 4	105%	86%	105%	141%
Quarter 5	224%	177%	172%	210%
Quarter 6	296%	165%	127%	154%
Quarter 7	398%	296%	307%	269%
Quarter 8	368%	160%	201%	172%
Year 3+	NM	NM	NM	NM

During the first seven quarters, A&S contracts with short-term benefit periods generally show lower A/E ratios for each successive study period. This pattern is most clear during the first quarter.

A/E ratios for A&S contracts with long-term benefit periods also appear lower for more recent study periods. The deterioration over time is most pronounced in Years 4 and later.

The A/E ratios for OE contracts do not show a consistent pattern by study period.

Table IV.d shows the A/E claim termination ratios (by amount) for five calendar periods of claims incurral: Pre-1990, 1/1/90-12/31/94, 1/1/95-12/31/99, 1/1/00-12/31/03, and 1/1/04-12/31/07. Each calendar period represents the years in which claims were incurred, i.e., the beginning of the elimination period.

Table IV.d					
A/E Claim Termination Ratios (By Amount)					
By Calendar Period of Incurral					
Study Period: 1/1/90-12/31/07					
Duration of Disablement	A&S Claims with Short-Term Benefit Periods				
	Pre-1990	1990-94	1995-99	2000-03	2004-07
Year 1	71%	61%	58%	50%	44%
Year 2	119%	126%	111%	115%	112%
Year 3	288%	326%	257%	NM	NM
Years 4-5	196%	206%	133%	NM	NM
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	A&S Claims with Long-Term Benefit Periods				
	Pre-1990	1990-94	1995-99	2000-03	2004-07
Year 1	49%	42%	40%	39%	39%
Year 2	89%	83%	69%	69%	66%
Year 3	125%	121%	99%	117%	120%
Years 4-5	128%	118%	83%	76%	64%
Years 6-10	116%	75%	70%	83%	NM
Years 11+	59%	43%	52%	NM	NM
Duration of Disablement	OE Claims				
	Pre-1990	1990-94	1995-99	2000-03	2004-07
Year 1	67%	52%	47%	44%	47%
Year 2	206%	229%	187%	181%	225%
Year 3+	NM	NM	NM	NM	NM

During the first year of claim, A&S contracts with short-term benefit periods show lower A/E termination ratios for more recent incurral periods. After Year 1, there is no clear pattern by incurral period. For A&S contracts with long-term benefit periods, A/E ratios during the first two years are similar across the last three incurral year groups, settling in at a level lower than that for incurral year groups Pre-1990 and 1/1/90-12/31/94. A/E claim termination ratios for Years 4 and 5 decline steadily across incurral year group. For OE contracts, A/E claim termination ratios in Year 1 decline across incurral year group from pre-1990 to 1/1/00-12/31/03, then increase slightly in 1/1/04-12/31/07. In general, A/E claim termination ratios for incurral period 1/1/04-12/31/07 show higher terminations over incurral year groups 1/1/95-12/31/99 and 1/1/00-12/31/03.

Ultimate Claim Termination Experience by Attained Age (Duration Years 11+)

Claim termination rates in the 85 CIDA table for the first 10 years of disablement are based on age at disablement and duration of claim. After 10 years of disablement (i.e., the ultimate period), claim termination rates in the 85 CIDA table are based on attained age during the claim year regardless of the age at disablement.

Table IV.e shows the A/E claim termination ratios for A&S contracts after 10 years of disablement, by attained age during the claim.

Table IV.e A/E Claim Termination Ratios A&S Contracts Duration of Disablement – 11 Years and Later Study Period: 1/1/90 – 12/31/07			
Attained Age	By Count		
	Male	Female	Combined
30-39	239%	85%	166%
40-49	115%	109%	113%
50-59	53%	58%	54%
60-64	51%	45%	50%
65-69	68%	109%	72%
70-74	39%	*	39%
75-79	33%	*	32%
80 and older	9%	*	9%
Attained Age	By Amount		
	Male	Female	Total
30-39	120%	55%	93%
40-49	94%	109%	98%
50-59	48%	74%	51%
60-64	44%	42%	44%
65-69	52%	58%	53%
70-74	34%	*	34%
75-79	20%	*	20%
80 and older	18%	*	17%

Table IV.e shows a generally decreasing slope by attained age in the pattern of the ultimate claim termination rates relative to 85 CIDA, reaching a ratio under 50% (by amount) for both males and females by attained ages 60-64, increasing slightly at 65-69, then declining steadily. The increase in A/E claim termination ratios at attained ages 65-69 is most likely the result of benefit period expiries that are inappropriately counted as claim terminations, causing the A/E claim termination ratios to be artificially high for this attained age group. Table IV.f shows that the volume of claim terminations is low for attained ages 75 and over, so no firm conclusions should be drawn for very high ages. In any case, the slope of claim termination rates by attained age appears to be much flatter than the 85 CIDA rates. Although the industry has a limited count of claim terminations after age 69, the results in Table IV.e suggest that the mortality assumed in the construction of 1985 CIDA has not materialized or that it has improved dramatically over the last few decades.

Table IV.f Claim Terminations A&S Contracts Duration of Disablement – 11 Years and Later Study Period: 1/1/90 – 12/31/07			
Attained Age	By Count		
	Male	Female	Combined
30-39	31	10	41
40-49	535	230	766
50-59	1,417	396	1,813
60-64	1,259	169	1,428
65-69	654	94	749
70-74	215	5	220
75-79	82	2	84
80 and older	14	-	14

Claim Termination Experience by Elimination Period

The 85 CIDA claim termination rates differentiate by elimination period only in the first six months of disablement. Table IV.g compares the A/E claim termination ratios by elimination period.

Table IV.g						
A/E Claim Termination Ratios (by Amount)						
By Elimination Period (Days)						
Study Period: 1/1/90 – 12/31/07						
Duration of Disablement	A&S Claims with Short-Term Benefit Periods					
	Under 30	30	60	90	180	Over 180
Quarter 1	62%	49%	32%			
Quarter 2	86%	70%	51%	42%		
Quarter 3	86%	81%	72%	62%	50%	*
Quarter 4	106%	96%	86%	90%	62%	*
Quarter 5	138%	101%	97%	99%	88%	47%
Quarter 6	121%	116%	121%	89%	87%	108%
Quarter 7	154%	144%	127%	154%	90%	*
Quarter 8	133%	164%	246%	237%	118%	*
Year 3	354%	493%	318%	373%	274%	157%
Years 4 – 5	174%	212%	188%	186%	161%	*
Years 6 –+	NM	NM	NM	NM	NM	NM
Duration of Disablement	A&S Claims with Long-Term Benefit Periods					
	Under 30	30	60	90	180	Over 180
Quarter 1	46%	32%	18%			
Quarter 2	60%	48%	37%	33%		
Quarter 3	67%	57%	51%	42%	29%	*
Quarter 4	68%	74%	74%	58%	50%	*
Quarter 5	48%	75%	69%	54%	53%	32%
Quarter 6	54%	76%	80%	70%	63%	38%
Quarter 7	72%	85%	92%	81%	99%	172%
Quarter 8	302%	100%	142%	102%	114%	264%
Year 3	72%	115%	116%	113%	107%	114%
Years 4 – 5	90%	87%	100%	85%	99%	86%
Years 6 - 10	338%	83%	83%	72%	82%	90%
Years 11+	112%	46%	58%	47%	80%	36%

Table IV.g (Continued)				
Duration of Disablement	OE Contracts			
	Under 30	30	60	90
Quarter 1	41%	33%	21%	
Quarter 2	82%	52%	41%	39%
Quarter 3	130%	75%	58%	71%
Quarter 4	133%	115%	101%	91%
Quarter 5	287%	224%	95%	189%
Quarter 6	311%	240%	137%	147%
Quarter 7	*	408%	148%	452%
Quarter 8	*	249%	310%	312%

Table IV.g shows that differences in termination experience among elimination periods occur beyond the first six months of disablement. The A/E claim termination ratios generally decrease as the elimination period becomes longer for at least the first three quarters for short-term benefit periods and the first five quarters of disablement for long-term benefit periods. This indicates a somewhat worsening termination experience relative to the 85 CIDA table as the elimination period lengthens.

Claim Termination Experience by Occupation Class

The 85 CIDA table differentiates termination rates by occupation class through the first three months of disablement. Table IV.g shows the A/E claim termination ratios (by amount) for the A&S contracts by elimination period (Under 90 days and 90 days & higher) within Occupation Classes M, 1, and Occupation Classes 2-4 combined.

Table IV.h						
A/E Claim Termination Ratios (by Amount) for A&S Claims						
By Elimination Period and Occupation Class						
Study Period: 1/1/90 – 12/31/07						
With Short-Term Benefit Periods						
Duration of Disablement	Elimination Periods Under 90 Days			Elimination Periods 90 Days and Higher		
	Class M	Class 1	Classes 2-4	Class M	Class 1	Classes 2-4
Year 1	56%	53%	65%	51%	48%	65%
Year 2	99%	131%	123%	119%	116%	110%
Year 3	471%	529%	338%	267%	420%	336%
Years 4 – 5	151%	203%	224%	158%	185%	195%
Years 6 +	NM	NM	NM	NM	NM	NM
With Long-Term Benefit Periods						
Duration of Disablement	Elimination Periods Under 90 Days			Elimination Periods 90 Days and Higher		
	Class M	Class 1	Classes 2-4	Class M	Class 1	Classes 2-4
Year 1	39%	40%	49%	38%	39%	44%
Year 2	65%	94%	100%	58%	78%	70%
Year 3	86%	140%	150%	88%	134%	134%
Years 4 – 5	61%	123%	129%	73%	100%	100%
Years 6 - 10	61%	115%	119%	56%	91%	98%
Years 11+	42%	50%	89%	37%	62%	57%

For claims with long-term benefit periods, the A/E claim termination ratios for Medical occupations are significantly lower than those for Occupation Classes 1 or 2-4 after the first year of disablement. This observation holds for claims with short-term benefit periods, with the exception of the second year of disability for claims with an elimination period of 90 days or greater.

Claim Termination Experience by Gender

Tables IV.i (short-term benefit periods) and IV.j (long-term benefit periods) compare the A/E claim termination ratios for A&S claims by gender within occupation class and elimination period groupings.

Table IV.j				
A/E Claim Termination Ratios (by Amount)				
A&S Claims with Short-Term Benefit Periods – By Gender				
Study Period: 1/1/90 – 12/31/07				
Duration of Disablement	Occupation Class M			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	50%	66%	44%	68%
Year 2	96%	108%	125%	96%
Year 3	548%	290%	266%	275%
Years 4 – 5	125%	232%	160%	149%
Years 6+	NM	NM	NM	NM
Duration of Disablement	Occupation Class 1			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	53%	53%	50%	44%
Year 2	138%	115%	129%	83%
Year 3	559%	445%	376%	566%
Years 4 – 5	203%	205%	178%	219%
Years 6+	NM	NM	NM	NM
Duration of Disablement	Occupation Classes 2-4			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	64%	66%	66%	60%
Year 2	126%	105%	111%	103%
Year 3	349%	278%	319%	426%
Years 4 – 5	237%	161%	180%	293%
Years 6+	NM	NM	NM	NM

Table IV.j				
A/E Claim Termination Ratios A/E Claim Termination Ratios (by Amount)				
A&S Claims with Long-Term Benefit Periods – By Gender				
Study Period: 1/1/90 – 12/31/07				
Duration of Disablement	Occupation Class M			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	34%	51%	33%	55%
Year 2	61%	83%	57%	66%
Year 3	83%	99%	85%	103%
Years 4 – 5	58%	80%	70%	96%
Years 6 - 10	58%	84%	51%	103%
Years 11+	40%	57%	34%	73%
Duration of Disablement	Occupation Class 1			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	39%	43%	38%	43%
Year 2	95%	91%	80%	71%
Year 3	145%	127%	137%	125%
Years 4 – 5	118%	146%	95%	123%
Years 6 - 10	104%	171%	83%	134%
Years 11+	49%	52%	58%	89%
Duration of Disablement	Occupation Classes 2-4			
	Elimination Periods Under 90 Days		Elimination Periods 90 Days & Longer	
	Male	Female	Male	Female
Year 1	49%	49%	43%	47%
Year 2	101%	95%	71%	69%
Year 3	141%	191%	123%	187%
Years 4 – 5	128%	138%	93%	138%
Years 6 - 10	110%	182%	96%	108%
Years 11+	86%	109%	61%	25%

For claims with long-term benefit periods, females show higher A/E claim termination ratios within the Medical occupations at all durations of disability. Females show higher A/E claim termination ratios in Occupation Class 1 for claim durations 4 and later, and for durations 3 and later in Occupation Classes 2-4. There are no consistent differences in A/E claim termination ratios by gender for claims with short-term benefit periods.

Claim Termination Experience by Age at Disablement

Table IV.k compares the A/E claim termination ratios for male claims with short-term benefit periods by age at disablement.

Table IV.k					
A&S Claims with Short-Term Benefit Periods – Males by Age at Disablement					
Study Period: 1/1/90 – 12/31/07					
Occupation Class M					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	41%	37%	36%	56%	102%
Year 2	71%	92%	88%	95%	127%
Year 3	*	250%	986%	215%	991%
Years 4 – 5	*	223%	77%	82%	*
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	35%	39%	39%	53%	54%
Year 2	69%	184%	79%	122%	167%
Year 3	846%	*	120%	193%	823%
Years 4 – 5	*	234%	104%	195%	*
Years 6+	NM	NM	NM	NM	NM
Occupation Class 1					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	44%	54%	51%	55%	74%
Year 2	104%	136%	128%	183%	184%
Year 3	297%	423%	595%	998%	3555%
Years 4 – 5	152%	179%	204%	364%	*
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	49%	32%	44%	67%	94%
Year 2	152%	78%	138%	217%	112%
Year 3	177%	215%	352%	726%	852%
Years 4 – 5	*	146%	103%	514%	*
Years 6+	NM	NM	NM	NM	NM

Table IV.k (Continued)					
Occupation Classes 2-4					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	64%	63%	62%	63%	110%
Year 2	96%	147%	133%	133%	261%
Year 3	269%	390%	348%	403%	NM
Years 4 – 5	219%	222%	234%	380%	NM
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	68%	63%	66%	71%	75%
Year 2	96%	111%	137%	131%	62%
Year 3	182%	397%	248%	319%	NM
Years 4 – 5	145%	197%	142%	463%	NM
Years 6+	NM	NM	NM	NM	NM

Table IV.1 compares the A/E claim termination ratios for female claims with short-term benefit periods by age at disablement.

Table IV.1					
A&S Claims with Short-Term Benefit Periods – Females by Age at Disablement					
Study Period: 1/1/90 – 12/31/07					
Occupation Class M					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	74%	63%	58%	63%	119%
Year 2	116%	107%	94%	*	*
Year 3	191%	338%	299%	562%	*
Years 4 – 5	161%	284%	*	*	*
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	90%	45%	52%	47%	132%
Year 2	106%	107%	94%	*	*
Year 3	173%	183%	301%	1171%	*
Years 4 – 5	*	*	*	*	*
Years 6+	NM	NM	NM	NM	NM
Occupation Class 1					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	62%	49%	50%	58%	58%
Year 2	79%	97%	128%	449%	*
Year 3	243%	354%	1023%	820%	*
Years 4 – 5	156%	277%	143%	*	*
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	55%	38%	40%	50%	26%
Year 2	83%	107%	74%	58%	*
Year 3	545%	329%	758%	1365%	*
Years 4 – 5	*	242%	*	*	*
Years 6+	NM	NM	NM	NM	NM

Table IV.I (Continued)					
Occupation Classes 2-4					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	73%	65%	60%	54%	149%
Year 2	89%	108%	133%	91%	*
Year 3	164%	430%	278%	360%	*
Years 4 – 5	240%	175%	*	*	*
Years 6+	NM	NM	NM	NM	NM
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	75%	45%	60%	53%	*
Year 2	72%	87%	174%	46%	*
Year 3	350%	200%	600%	1632%	*
Years 4 – 5	409%	171%	*	*	*
Years 6+	NM	NM	NM	NM	NM

Table IV.m compares the A/E claim termination ratios for male claims with long-term benefit periods by age at disablement.

Table IV.m					
A&S Claims with Long-Term Benefit Periods – Males by Age at Disablement					
Study Period: 1/1/90 – 12/31/07					
Occupation Class M					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	35%	33%	33%	35%	53%
Year 2	65%	60%	59%	63%	56%
Year 3	91%	82%	71%	102%	563%
Years 4 – 5	62%	54%	56%	76%	*
Years 6 - 10	90%	41%	60%	101%	*
Years 11+	43%	39%	42%	*	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	40%	35%	30%	29%	37%
Year 2	63%	62%	51%	49%	64%
Year 3	83%	90%	65%	124%	404%
Years 4 – 5	98%	72%	52%	116%	*
Years 6 - 10	105%	50%	45%	47%	*
Years 11+	49%	30%	37%	*	*
Occupation Class 1					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	39%	37%	38%	43%	54%
Year 2	73%	101%	101%	88%	79%
Year 3	113%	118%	157%	236%	453%
Years 4 – 5	134%	136%	97%	119%	*
Years 6 - 10	150%	99%	101%	81%	*
Years 11+	74%	58%	37%	8%	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	41%	35%	37%	42%	65%
Year 2	59%	72%	89%	105%	83%
Year 3	105%	140%	136%	169%	360%
Years 4 – 5	98%	96%	83%	145%	*
Years 6 - 10	117%	75%	84%	75%	*
Years 11+	94%	52%	55%	54%	*

Table IV.m (Continued)					
Occupation Classes 2-4					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	43%	44%	52%	57%	62%
Year 2	74%	106%	122%	98%	140%
Year 3	103%	102%	149%	430%	841%
Years 4 – 5	229%	93%	78%	204%	*
Years 6 - 10	149%	110%	93%	*	*
Years 11+	115%	79%	72%	*	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	41%	41%	44%	50%	62%
Year 2	51%	66%	89%	76%	121%
Year 3	119%	107%	127%	174%	686%
Years 4 – 5	109%	79%	84%	190%	*
Years 6 - 10	120%	101%	80%	212%	*
Years 11+	73%	41%	100%	*	*

Table IV.n compares the A/E claim termination ratios for female claims with long-term benefit periods by age at disablement.

Table IV.n					
A&S Claims with Long-Term Benefit Periods – Females by Age at Disablement					
Study Period: 1/1/90 – 12/31/07					
Occupation Class M					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	64%	47%	40%	38%	26%
Year 2	83%	72%	97%	87%	912%
Year 3	98%	97%	105%	108%	*
Years 4 – 5	94%	83%	62%	59%	*
Years 6 - 10	146%	67%	67%	*	*
Years 11+	75%	41%	60%	*	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	87%	39%	36%	45%	73%
Year 2	73%	61%	66%	81%	89%
Year 3	77%	102%	139%	110%	*
Years 4 – 5	58%	107%	99%	255%	*
Years 6 - 10	89%	119%	94%	*	*
Years 11+	157%	45%	25%	*	*
Occupation Class 1					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	55%	40%	38%	38%	41%
Year 2	75%	88%	104%	116%	*
Year 3	130%	144%	114%	67%	*
Years 4 – 5	168%	106%	166%	189%	*
Years 6 - 10	245%	123%	175%	*	*
Years 11+	45%	70%	33%	*	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	65%	37%	35%	38%	65%
Year 2	65%	65%	75%	110%	253%
Year 3	139%	108%	137%	99%	*
Years 4 – 5	129%	129%	107%	162%	*
Years 6 - 10	168%	121%	128%	*	*
Years 11+	167%	57%	89%	*	*

Table IV.n (Continued)					
Occupation Classes 2-4					
Duration of Disablement	Elimination Periods Under 90 Days				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	54%	47%	47%	44%	65%
Year 2	63%	91%	114%	270%	*
Year 3	122%	312%	97%	*	*
Years 4 – 5	134%	141%	113%	284%	*
Years 6 - 10	195%	205%	166%	*	*
Years 11+	173%	71%	45%	*	*
Duration of Disablement	Elimination Periods 90 Days & Over				
	Under 40	40 – 49	50 - 59	60 – 64	65+
Year 1	61%	39%	45%	31%	38%
Year 2	41%	74%	89%	114%	*
Year 3	97%	198%	290%	219%	*
Years 4 – 5	168%	128%	100%	252%	*
Years 6 - 10	140%	71%	117%	*	*
Years 11+	*	*	*	*	*

Section V: Incidence Experience by Policy Year and Issue Year

This section examines claim incidence experience by issue year and policy year. Mortality rates for individually underwritten life insurance have a select period of 20 years. The 1985 CIDA claim incidence rates are aggregate rates, i.e., they do not assume a select period of any length. This study examines the existence of a select period for claim incidence. However, to study claim incidence patterns by policy year, it is important to consider cohorts of issue years, since industry underwriting and marketing practices have changed over time.

In this section, policy years are separated into years 1, 2, 3, 4, 5, 6-10, and 11+. Issue years are separated into six periods: Pre-1985, 1/1/85-12/31/89, 1/1/90-12/31/94, 1/1/95-12/31/99, 1/1/00-12/31/03, and 1/1/04-12/31/06.

By Contract Type

Table V.a. shows the A/E claim incidence ratios by combinations of policy year and issue year for A&S contracts. Table V.b. shows comparable A/E claim incidence ratios for OE contracts.

Table V.a.							
A/E Claim Incidence Ratios by Issue Year and Policy Year							
A&S Contracts							
Study Period: 1/1/90-12/31/06							
Policy Year	Issue Year (By Count)						Total
	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	
1		74%	71%	59%	68%	63%	68%
2		79%	76%	60%	65%	57%	70%
3		89%	85%	65%	65%	61%	78%
4		90%	80%	64%	61%		78%
5		87%	78%	70%	61%		78%
6-10	81%	79%	77%	64%	57%		76%
11+	58%	62%	65%	61%			59%
Total	59%	73%	73%	64%	64%	61%	66%
Policy Year	Issue Year (By Amount)						Total
	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	
1		78%	76%	57%	57%	55%	65%
2		88%	85%	60%	58%	54%	72%
3		104%	104%	65%	62%	57%	85%
4		108%	98%	64%	58%		87%
5		106%	95%	69%	61%		89%
6-10	98%	99%	95%	66%	54%		89%
11+	70%	78%	79%	64%			74%
Total	74%	90%	87%	65%	58%	55%	79%

Table V.b.							
A/E Claim Incidence Ratios by Issue Year and Policy Year							
OE Contracts							
Study Period: 1/1/90-12/31/06							
Policy Year	Issue Year (By Count)						
	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	Total
1		58%	47%	31%	33%	39%	42%
2		68%	55%	43%	37%	36%	50%
3		71%	57%	42%	34%	43%	53%
4		76%	49%	39%	32%		53%
5		73%	47%	42%	33%		54%
6-10	68%	64%	45%	39%	43%		54%
11+	50%	47%	39%	44%			47%
Total	52%	57%	45%	40%	35%	39%	50%
Policy Year	Issue Year (By Amount)						
	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	Total
1		63%	57%	26%	26%	24%	40%
2		68%	63%	41%	36%	34%	51%
3		73%	68%	37%	29%	29%	53%
4		85%	55%	34%	28%		54%
5		81%	51%	41%	32%		55%
6-10	77%	74%	51%	36%	30%		56%
11+	54%	52%	45%	49%			50%
Total	58%	64%	51%	37%	30%	28%	52%

For A&S contracts, A/E claim incidence ratios generally increase during the first three years and then decrease slightly thereafter. These results suggest that a long select period, which is observed in individual life mortality, most likely does not exist for individual disability insurance. Unlike individual life, individual disability income experience typically reflects a significant anti-selection effect. The impact of anti-selection can be observed in the jump in the A/E claim incidence ratios after the two-year contestable period observed in Table V.a, followed by a general downward trend. As a result of this anti-selection effect, it becomes difficult to measure the selective effect of individual underwriting on claim incidence.

Interestingly, the pattern of anti-selection after the first two years seems to be less pronounced in more recent issue years. This may be reflecting enhanced risk management practices implemented in the mid-1990s. On the other hand, it may be due to a shift from normal underwriting to other underwriting types. Section X explores claim incidence experience under various types of underwriting.

A similar pattern of A/E claim incidence ratios can be observed for OE contracts issued prior to 1995, but not for OE contracts issued after 1994. In total, the A/E incidence ratios appear to remain relatively flat after the first policy year.

The above tables also show that incidence experience has improved even within specific policy years. This may be due to the general tightening of new contracts and underwriting as a reaction to the poor financial results experienced in the early 1990's.

Table V.c. displays the A/E claim incidence ratios (by amount) for A&S contracts by the same combinations of policy year and issue year, additionally split by occupation class.

The pattern of A/E claim incidence ratios (by amount) increasing during the first three policy years and then slowly declining is more evident in Occupation Classes M, 1, and 2, but not in the other occupation classes.

Table V.c.							
A/E Claim Incidence Ratios by Issue Year and Policy Year							
A&S Contracts (by Amount)							
Study Period: 1/1/90-12/31/06							
Occupation Class M							
Issue Year (By Amount)							
Policy Year	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	Total
1		86%	91%	75%	69%	80%	83%
2		103%	108%	83%	71%	80%	96%
3		125%	133%	76%	82%	75%	114%
4		140%	131%	88%	79%		121%
5		138%	128%	85%	77%		120%
6-10	122%	130%	131%	86%	67%		119%
11+	94%	102%	105%	84%			99%
Total	98%	116%	116%	84%	74%	79%	107%
Occupation Class 1							
Issue Year (By Amount)							
Policy Year	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	Total
1		79%	69%	50%	57%	50%	59%
2		88%	75%	56%	57%	50%	65%
3		99%	97%	64%	61%	52%	78%
4		100%	86%	61%	54%		76%
5		95%	78%	70%	62%		78%
6-10	92%	87%	77%	62%	52%		77%
11+	66%	65%	64%	55%			65%
Total	70%	78%	73%	61%	57%	50%	70%
Occupation Classes 2-4							
Issue Year (By Amount)							
Policy Year	Pre-1985	1985-1989	1990-1994	1995-1999	2000-2003	2004-2006	Total
1		70%	68%	54%	49%	49%	59%
2		72%	67%	48%	52%	46%	59%
3		87%	70%	57%	48%	58%	67%
4		82%	67%	49%	52%		66%
5		82%	67%	53%	47%		67%
6-10	77%	71%	61%	51%	48%		64%
11+	56%	59%	57%	52%			57%
Total	58%	69%	62%	51%	50%	50%	61%

Section VI: Impact of Benefit Provisions on Incidence and Termination Experience

This section discusses the impact of various types of benefit provisions on claim incidence and terminations. Specifically, it examines the impact on claim incidence and termination experience from various benefit periods and the presence of a cost of living benefit.

Benefit Period

Table VI.a. shows A/E claim incidence ratios by benefit period within the three occupation classes with significant levels of lifetime benefit exposure. Benefit periods have been split into Short-Term (typically a two or five year maximum benefit), To Age 65-70, and Lifetime benefit period groupings.

Table VI.a.				
A/E Claim Incidence Ratios (by Amount)				
For A&S Contracts by Benefit Period				
Study Period: 1/1/90-12/31/06				
Elimination Period	Occupation Class M			Lifetime / To Age 65-70
	Short-Term	To Age 65-70	Lifetime	
Under 30 days	64%	60%	53%	.89
30 days	74%	88%	89%	1.01
60 days	62%	74%	78%	1.05
90 days	110%	126%	162%	1.28
180 days	100%	121%	177%	1.47
Over 180 days	157%	186%	255%	1.37
Total	89%	107%	128%	1.20
Elimination Period	Occupation Class 1			Lifetime / To Age 65-70
	Short-Term	To Age 65-70	Lifetime	
Under 30 days	55%	60%	68%	1.13
30 days	64%	73%	74%	1.02
60 days	48%	55%	63%	1.16
90 days	71%	74%	111%	1.51
180 days	56%	65%	88%	1.37
Over 180 days	66%	76%	84%	1.11
Total	64%	69%	91%	1.31
Elimination Period	Occupation Classes 2-4			Lifetime / To Age 65-70
	Short-Term	To Age 65-70	Lifetime	
Under 30 days	48%	35%	70%	2.02
30 days	59%	65%	85%	1.31
60 days	45%	54%	60%	1.10
90 days	60%	72%	100%	1.39
180 days	66%	83%	92%	1.12
Over 180 days	123%	121%	121%	1.00
Total	56%	67%	88%	1.31

The differences in A/E claim incidence ratios between To Age 65-70 benefit periods and the Lifetime benefit period demonstrate the material impact that Lifetime benefit periods may have on the decision to file a disability claim. The claim incidence for Class M policies with lifetime benefits is 20% greater than for Class M policies with To Age 65-70 benefit periods in aggregate, with higher ratios for elimination periods of 90 days or longer. The ratios for the other occupation classes shown are generally higher than the Class M ratios.

Table VI.b. shows A/E claim termination ratios for the same categories of benefit periods and occupation classes split by duration of disablement. For Occupation Classes 1 and M, claims with lifetime benefits show generally lower termination rates than claims with short-term or To Age 65-70 benefit periods, especially in claim year three and later.

Table VI.b.				
A/E Claim Termination Ratios (by Amount)				
A&S by Benefit Period				
Study Period 1/1/90-12/31/07				
Occupation Class M				
Duration of Disablement	Short-Term	To Age 65-70	Lifetime	Lifetime/To Age 65-70
Quarter 1	48%	30%	23%	0.78
Quarter 2	53%	37%	34%	0.91
Quarter 3	63%	43%	36%	0.82
Quarter 4	80%	58%	47%	0.81
Quarter 5	90%	53%	44%	0.84
Quarter 6	76%	63%	42%	0.67
Quarter 7	143%	76%	63%	0.83
Quarter 8	238%	80%	96%	1.20
Year 3	343%	94%	69%	0.74
Years 4-5	155%	81%	41%	0.51
Years 6-10	NM	69%	35%	0.50
Years 11+	NM	48%	27%	0.55
Occupation Class 1				
Duration of Disablement	Short-Term	To Age 65-70	Lifetime	Lifetime/To Age 65-70
Quarter 1	41%	28%	26%	0.93
Quarter 2	52%	36%	31%	0.86
Quarter 3	65%	44%	41%	0.93
Quarter 4	83%	67%	60%	0.89
Quarter 5	99%	66%	51%	0.77
Quarter 6	118%	86%	67%	0.78
Quarter 7	151%	93%	102%	1.09
Quarter 8	210%	137%	110%	0.80
Year 3	468%	140%	108%	0.77
Years 4-5	194%	110%	83%	0.75
Years 6-10	NM	112%	52%	0.46
Years 11+	NM	66%	37%	0.56
Occupation Classes 2-4				
Duration of Disablement	Short-Term	To Age 65-70	Lifetime	Lifetime/To Age 65-70
Quarter 1	55%	35%	39%	1.12
Quarter 2	67%	43%	42%	0.96
Quarter 3	81%	55%	52%	0.94
Quarter 4	102%	65%	68%	1.05
Quarter 5	107%	64%	56%	0.87
Quarter 6	111%	74%	83%	1.13
Quarter 7	134%	101%	95%	0.94
Quarter 8	169%	118%	174%	1.47
Year 3	337%	146%	87%	0.60
Years 4-5	213%	110%	101%	0.92
Years 6-10	NM	112%	76%	0.68
Years 11+	NM	72%	68%	0.94

Cost of Living Benefit

Table VI.c. shows A/E claim incidence ratios by amount for policies that can be identified as having or not having Cost of Living Adjustment (COLA) benefits. However, the data gathered did not allow IDEC to perform analysis by the COLA rate. The experience is split by long-term benefit period groups and occupation class groups. Generally, the inclusion of COLA benefits increases incidence rates, especially with shorter elimination periods

Similarly, Table VI.d. shows A/E claim termination ratios for policies with and without COLA benefits. The data is split by occupation class groups and long-term benefit period groups.

In Occupation Class M, the presence of COLA produces lower termination ratios in nearly all claim durations. The combination of lifetime benefits and COLA results in very low termination ratios at claim durations after year five.

In Occupation Classes 1 and 2-4, there does not appear to be a clear effect of COLA on termination experience, especially after the fifth quarter on claim. At many claim durations, the termination ratio with COLA is greater than the ratio without COLA. This may be due to less significant levels of exposure in these occupation classes. Nevertheless, at claim durations of 11 years and later, the termination ratios are quite low when both lifetime benefits and COLA are present.

Table VI.c
A/E Claim Incidence Ratios (by Amount)
A&S Contracts with Long-Term Benefit Periods
With and Without COLA Benefits
Study Period 1/1/90-12/31/07

Occupation Class M						
Elimination Period	To Age 65-70			Lifetime Benefits		
	Without COLA	With COLA	COLA / No COLA	Without COLA	With COLA	COLA / No COLA
Under 30	51%	71%	1.38	61%	*	
30 days	85%	89%	1.05	96%	107%	1.12
60 days	69%	77%	1.12	83%	90%	1.08
90 days	132%	138%	1.05	179%	185%	1.04
180+	134%	134%	1.00	210%	207%	0.99
Total	102%	111%	1.09	133%	145%	1.09
Occupation Class 1						
Elimination Period	To Age 65-70			Lifetime Benefits		
	Without COLA	With COLA	COLA / No COLA	Without COLA	With COLA	COLA / No COLA
Under 30	47%	79%	1.67	78%	*	
30 days	73%	74%	1.00	78%	95%	1.23
60 days	51%	54%	1.05	69%	74%	1.07
90 days	85%	83%	0.98	120%	131%	1.10
180+	72%	67%	0.93	83%	70%	0.83
Total	73%	73%	1.00	94%	106%	1.13
Occupation Classes 2-4						
Elimination Period	To Age 65-70			Lifetime Benefits		
	Without COLA	With COLA	COLA / No COLA	Without COLA	With COLA	COLA / No COLA
Under 30	29%	55%	1.92	69%	*	
30 days	61%	76%	1.24	87%	98%	1.13
60 days	51%	57%	1.10	52%	62%	1.19
90 days	85%	91%	1.07	145%	197%	1.36
180+	93%	91%	0.98	113%	161%	1.43
Total	67%	77%	1.16	95%	138%	1.45

Table VI.d.						
A/E Claim Termination Ratios (by Amount)						
A&S Claims, Study Period 1/1/90-12/31/06						
Occupation Class M						
Duration of Disablement	To Age 65-70			Lifetime		
	No COLA	COLA	COLA / No COLA	No COLA	COLA	COLA / No COLA
Quarter 1	32%	24%	0.74	25%	22%	0.91
Quarter 2	40%	30%	0.75	35%	33%	0.94
Quarter 3	45%	38%	0.84	41%	40%	0.98
Quarter 4	58%	51%	0.88	59%	41%	0.69
Quarter 5	57%	49%	0.85	50%	42%	0.83
Quarter 6	65%	51%	0.79	50%	46%	0.92
Quarter 7	74%	77%	1.04	63%	65%	1.04
Quarter 8	93%	64%	0.69	118%	64%	0.54
Year 3	88%	75%	0.85	59%	74%	1.25
Years 4-5	82%	78%	0.95	41%	46%	1.13
Years 6-10	71%	63%	0.89	42%	30%	0.72
Years 11+	47%	43%	0.91	36%	22%	0.62
Occupation Class 1						
Duration of Disablement	To Age 65-70			Lifetime		
	No COLA	COLA	COLA / No COLA	No COLA	COLA	COLA / No COLA
Quarter 1	29%	22%	0.75	22%	21%	0.94
Quarter 2	36%	29%	0.81	35%	29%	0.84
Quarter 3	45%	44%	0.97	50%	44%	0.89
Quarter 4	73%	63%	0.87	70%	60%	0.86
Quarter 5	69%	65%	0.94	59%	47%	0.80
Quarter 6	92%	81%	0.89	72%	72%	1.00
Quarter 7	91%	106%	1.17	89%	88%	0.99
Quarter 8	149%	135%	0.90	138%	88%	0.64
Year 3	143%	114%	0.80	106%	98%	0.92
Years 4-5	106%	114%	1.08	97%	90%	0.92
Years 6-10	115%	99%	0.86	59%	74%	1.26
Years 11+	60%	110%	1.82	48%	42%	0.88
Occupation Classes 2-4						
Duration of Disablement	To Age 65-70			Lifetime		
	No COLA	COLA	COLA / No COLA	No COLA	COLA	COLA / No COLA
Quarter 1	34%	22%	0.65	37%	25%	0.67
Quarter 2	43%	30%	0.71	43%	33%	0.78
Quarter 3	55%	47%	0.84	61%	40%	0.66
Quarter 4	66%	62%	0.93	77%	65%	0.84
Quarter 5	64%	62%	0.96	73%	38%	0.52
Quarter 6	78%	83%	1.06	86%	102%	1.19
Quarter 7	112%	76%	0.68	104%	116%	1.12
Quarter 8	113%	169%	1.49	137%	184%	1.35
Year 3	136%	127%	0.94	98%	94%	0.96
Years 4-5	103%	122%	1.19	105%	107%	1.02
Years 6-10	105%	126%	1.21	81%	96%	1.19
Years 11+	71%	74%	1.05	77%	40%	0.53

Section VII: Incidence and Termination Experience by Occupation

Most contributors were able to assign specific occupation codes to their policies and claims. Although there is no consistent coding system for occupations, the IDEC manually reviewed the occupational codes of the contributors and assigned them into the following occupations:

Medical Occupations

Chiropractors
Dentists
Nurses
Physicians & Surgeons
Podiatrists
Psychologists & Psychiatrists
Pharmacists
Veterinarians
Other Medical Occupations

Non-medical Occupations

Accountants & Actuaries
Engineers & Architects
Executives & Managers
Insurance Sales
Lawyers
Other Sales
Stockbrokers & Commodity Traders
Teachers
Other Occupations

The “Other Occupation” category consists mainly of occupations not included in the specific occupation groups. Since some contributors were not able to identify their policies and claims by occupation or at least not in this level of detail, the “Other Occupations” also includes policies that would have otherwise fallen in the specified occupations.

Incidence Experience by Occupation

Table VII.a shows the percent of the A&S and OE exposure in terms of count and amount represented by the occupational groups. The average amount for each occupation is also provided. Physicians & Surgeons comprise the largest segment in both A&S and OE policies. Executives & Managers were the second largest segment for A&S policies, while Dentists were the second largest segment for OE policies. The average policy sizes for Physicians & Surgeons and Stockbrokers & Commodity Traders were noticeably higher than for other occupational groups.

Table VII.a						
Percent of Total Exposure and Average Face Amount per Policy						
By Occupation						
Occupational	A&S Policies			OE Policies		
	Policies	Amount	Average Amount/Policy	Policies	Amount	Average Amount/Policy
Physicians & Surgeons	17%	26%	3,567	27%	38%	7,669
Executives & Managers	15%	18%	2,845	5%	4%	4,715
Lawyers	7%	8%	2,617	8%	7%	4,951
Dentists	4%	4%	2,558	17%	18%	5,859
Other Sales	4%	4%	2,098	2%	1%	3,137
Engineers & Architects	2%	2%	1,947	1%	1%	4,184
Accountants & Actuaries	2%	2%	2,056	1%	1%	4,533
Insurance Sales	2%	2%	1,926	4%	2%	2,665
Other Medical Occupations	1%	1%	1,896	3%	2%	4,778
Psychologists & Psychiatrists	1%	1%	2,499	2%	1%	3,000
Nurses	1%	1%	1,518	0%	0%	2,422
Stockbrokers & Commodity Traders	1%	1%	3,954	0%	0%	5,363
Teachers	1%	1%	1,385	0%	0%	3,127
Pharmacists	1%	1%	1,884	1%	1%	5,117
Chiropractors	0%	0%	2,463	2%	2%	4,438
Veterinarians	0%	0%	1,888	1%	1%	5,447
Podiatrists	0%	0%	2,505	1%	1%	4,927
Other Occupations	41%	29%	1,669	24%	19%	4,410
Total	100%	100%	2,319	100%	100%	5,533

Tables VII.b and VII.c break out the information in Table VII.a by issue year group. Table VII.b shows results for issue years prior to 2000. Table VII.c shows results for issue years 2000 and later.

Table VII.b						
Percent of Total Exposure and Average Amount per Policy						
By Occupation						
Issue Years Prior to 2000						
Occupational	A&S Policies			OE Policies		
	Policies	Amount	Average Amount/Policy	Policies	Amount	Average Amount/Policy
Physicians & Surgeons	17%	28%	3,572	28%	39%	7,355
Executives & Managers	13%	16%	2,634	5%	4%	4,565
Lawyers	7%	8%	2,523	8%	8%	4,769
Dentists	4%	4%	2,514	17%	18%	5,445
Other Sales	4%	4%	2,043	2%	1%	3,091
Engineers & Architects	2%	2%	1,893	1%	1%	4,030
Accountants & Actuaries	2%	2%	1,983	2%	1%	4,478
Insurance Sales	2%	2%	1,828	4%	2%	2,578
Other Medical Occupations	2%	1%	1,857	3%	3%	4,803
Psychologists & Psychiatrists	1%	1%	2,487	2%	1%	2,944
Nurses	2%	1%	1,487	0%	0%	2,496
Stockbrokers & Commodity Traders	1%	1%	3,841	0%	0%	5,104
Teachers	1%	1%	1,207	0%	0%	2,134
Pharmacists	1%	1%	1,840	1%	1%	4,974
Chiropractors	0%	0%	2,484	2%	2%	4,389
Veterinarians	0%	0%	1,847	1%	1%	5,140
Podiatrists	0%	0%	2,477	1%	1%	4,753
Other Occupations	40%	28%	1,545	23%	17%	3,960
Total	100%	100%	2,221	100%	100%	5,257

Table VII.c
Percent of Total Exposure and Average Amount per Policy
By Occupation
Issue Years 2000 & Later

Occupational	A&S Policies			OE Policies		
	Policies	Amount	Average Amount/Policy	Policies	Amount	Average Amount/Policy
Physicians & Surgeons	12%	14%	3,526	20%	29%	11,955
Executives & Managers	26%	31%	3,555	11%	7%	5,302
Lawyers	6%	6%	3,430	7%	6%	7,152
Dentists	3%	3%	2,913	15%	20%	10,287
Other Sales	3%	2%	2,740	2%	1%	3,490
Engineers & Architects	2%	2%	2,345	1%	1%	5,225
Accountants & Actuaries	1%	1%	3,001	0%	0%	6,209
Insurance Sales	1%	1%	4,260	2%	1%	4,402
Other Medical Occupations	1%	1%	2,383	1%	1%	4,125
Psychologists & Psychiatrists	0%	0%	2,818	1%	0%	4,508
Nurses	1%	0%	2,107	0%	0%	1,956
Stockbrokers & Commodity Traders	1%	1%	4,684	0%	0%	6,897
Teachers	1%	1%	2,593	1%	0%	5,818
Pharmacists	0%	0%	2,384	0%	0%	8,209
Chiropractors	0%	0%	1,662	1%	1%	5,751
Veterinarians	0%	0%	2,508	1%	1%	8,877
Podiatrists	0%	0%	2,987	1%	1%	8,379
Other Occupations	43%	36%	2,449	36%	32%	7,103
Total	100%	100%	2,969	100%	100%	8,145

There is a marked shift in exposure by occupation group between the two issue year break outs. Compared to the pre-2000 issues, the percentage of exposure by face amount for A&S contracts for 2000 and later issues is almost doubled for executives and managers, and roughly halved for physicians and surgeons. For A&S policies issued 2000 and later, executives and managers show a larger percentage of exposure than physicians and surgeons. For most occupation groups, the average size is materially higher in Table VII.c than in Table VII.b, but this is not the case for physicians and surgeons. It was not possible to tell whether this shift was due to underlying market trends or to the differences among contributing companies during the two study periods.

The average A/E claim incidence ratios (by amount) by occupation for A&S and OE policies are provided in Table VII.d.

Table VII.d A/E Claim Incidence Ratios (by Amount) By Occupation Study Period: 1/1/90 to 12/31/06		
Occupations	A&S Policies	OE Policies
Physicians & Surgeons	108%	56%
Executives & Managers	65%	52%
Lawyers	65%	42%
Dentists	105%	47%
Other Sales	82%	56%
Engineers & Architects	52%	30%
Accountants & Actuaries	61%	41%
Insurance Sales	107%	64%
Other Medical Occupations	89%	57%
Psychologists & Psychiatrists	80%	45%
Nurses	107%	47%
Stockbrokers & Commodity Traders	127%	46%
Teachers	51%	18%
Pharmacists	90%	36%
Chiropractors	209%	115%
Veterinarians	95%	49%
Podiatrists	146%	75%
Other Occupations	64%	46%
Total	79%	52%

Chiropractors, Podiatrists and Stockbrokers & Commodity Traders show the highest A/E Claims Incidence Ratios. Teachers, Accountants & Actuaries, Executives & Managers, and Lawyers show the lowest A/E Claims Incidence Ratios.

Table VII.e shows how the various occupational groups are distributed among occupation classes within the study.

Table VII.e						
Distribution of Exposure (by Amount) Among the IDEC Occupation Classes						
Within Occupational Groups						
A&S and OE Policies Combined						
Occupational Group	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3	Occ Class 4	Total
Physicians & Surgeons	100%	0%	0%	0%	0%	100%
Executives & Managers	0%	96%	2%	1%	1%	100%
Lawyers	0%	99%	0%	1%	0%	100%
Dentists	100%	0%	0%	0%	0%	100%
Other Sales	0%	0%	100%	0%	0%	100%
Engineers & Architects	0%	96%	2%	2%	1%	100%
Accountants & Actuaries	0%	96%	1%	1%	1%	100%
Insurance Sales	0%	0%	100%	0%	0%	100%
Other Medical Occupations	100%	0%	0%	0%	0%	100%
Psychologists & Psychiatrists	100%	0%	0%	0%	0%	100%
Nurses	100%	0%	0%	0%	0%	100%
Stockbrokers & Commodity Traders	0%	0%	100%	0%	0%	100%
Teachers	0%	79%	8%	5%	7%	100%
Pharmacists	100%	0%	0%	0%	0%	100%
Chiropractors	100%	0%	0%	0%	0%	100%
Veterinarians	100%	0%	0%	0%	0%	100%
Podiatrists	100%	0%	0%	0%	0%	100%
Other Occupations	0%	81%	9%	6%	3%	100%

Table VII.e shows that most of the selected occupation groups are either Medical or Occupation Class 1. It appears that contributing companies are mostly consistent in the way occupations are assigned to an occupation class. An exception to this is teachers, who show a greater spread of exposure across occupation classes.

Table VII.f shows the distribution of the exposure by occupational grouping within each occupation class.

Table VII.f					
Distribution of Exposure (by Amount) Among the Occupational Groups					
Within IDEC Occupation Class					
A&S and OE Policies Combined					
Occupational Group	Occ Class M	Occ Class 1	Occ Class 2	Occ Class 3	Occ Class 4
Physicians & Surgeons	71%	0%	0%	0%	0%
Executives & Managers	0%	32%	4%	10%	11%
Lawyers	0%	15%	0%	3%	1%
Dentists	15%	0%	0%	0%	0%
Other Sales	0%	0%	38%	0%	0%
Engineers & Architects	0%	3%	0%	1%	1%
Accountants & Actuaries	0%	3%	0%	1%	2%
Insurance Sales	0%	0%	19%	0%	0%
Other Medical Occupations	4%	0%	0%	0%	0%
Psychologists & Psychiatrists	2%	0%	0%	0%	0%
Nurses	2%	0%	0%	0%	0%
Stockbrokers & Commodity Traders	0%	0%	9%	0%	0%
Teachers	0%	1%	1%	1%	4%
Pharmacists	1%	0%	0%	0%	0%
Chiropractors	2%	0%	0%	0%	0%
Veterinarians	1%	0%	0%	0%	0%
Podiatrists	1%	0%	0%	0%	0%
Other Occupations	0%	46%	29%	84%	82%
Total	100%	100%	100%	100%	100%

Physicians & Surgeons and Dentists account for most of the exposure in occupation class M. While Executives & Managers and Lawyers combine for almost half of the exposure in Occupation Class 1, the largest segment for this occupation class is Other Occupations. Other Sales and Insurance Sales account for over half of the exposure in Occupation Class 2.

Table VII.g shows the average A/E claim incidence ratios for the selected occupation groups broken out by occupation class and elimination period group.

Table VII.g			
A/E Claim Incidence Ratios (by Amount) – By Occupation			
A&S Contracts			
Study Period 1/1/90 to 12/31/06			
Occupations	Occupation Class M		
	Under 90 Days	90+ Days	Total
Physicians & Surgeons	75%	128%	108%
Dentists	79%	135%	105%
Other Medical Occupations	71%	119%	89%
Psychologists & Psychiatrists	56%	104%	80%
Nurses	96%	126%	107%
Pharmacists	68%	117%	90%
Chiropractors	154%	324%	209%
Veterinarians	74%	129%	95%
Podiatrists	103%	228%	146%
Total Occupation Class M	78%	130%	107%
Occupations	Occupation Class 1		
	Under 90 Days	90+ Days	Total
Executives & Managers	65%	68%	67%
Lawyers	55%	72%	67%
Other Sales	*	*	*
Engineers & Architects	50%	56%	54%
Accountants & Actuaries	55%	70%	64%
Insurance Sales	*	*	*
Stockbrokers & Commodity Traders	*	*	*
Teachers	56%	66%	62%
Other Occupations	64%	82%	74%
Total Occupation Class 1	62%	75%	70%

Table VII.g (Continued)			
Occupations	Occupation Classes 2-4		
	Under 90 Days	90+ Days	Total
Executives & Managers	50%	44%	47%
Lawyers	38%	18%	26%
Other Sales	75%	88%	82%
Engineers & Architects	44%	35%	40%
Accountants & Actuaries	50%	31%	39%
Insurance Sales	92%	123%	107%
Stockbrokers & Commodity Traders	93%	140%	127%
Teachers	47%	28%	34%
Other Occupations	52%	57%	53%
Total Occupation Classes 2-4	56%	70%	61%
Total All Occupations	65%	92%	79%

Table VII.h shows A/E claim termination ratios for A&S contracts (by amount) for the selected occupation groups. The comparison is limited to claims with long-term benefit periods.

Table VII.h						
A/E Claim Termination Ratios (by Amount) by Occupation						
A&S Contracts – Long-Term Benefit Periods						
Study Period 1/1/90 to 12/31/07						
Occupations	Duration of Disablement					
	Year 1	Year 2	Year 3	Year 4-5	Yr 6-10	Yr 11+
Physicians & Surgeons	36%	59%	85%	68%	53%	40%
Dentists	41%	56%	95%	59%	51%	29%
Other Medical Occupations	41%	59%	86%	84%	73%	30%
Psychologists & Psychiatrists	40%	85%	126%	152%	108%	37%
Nurses	67%	96%	137%	130%	97%	75%
Pharmacists	52%	105%	126%	80%	121%	69%
Chiropractors	30%	45%	84%	68%	106%	30%
Veterinarians	53%	72%	43%	49%	36%	80%
Podiatrists	30%	46%	41%	58%	31%	33%
Total Medical Occupations	38%	60%	88%	70%	57%	39%
Executives & Managers	38%	76%	129%	96%	95%	71%
Lawyers	34%	83%	138%	154%	106%	61%
Other Sales	46%	80%	140%	103%	99%	63%
Engineers & Architects	48%	104%	110%	106%	137%	96%
Accountants & Actuaries	44%	83%	219%	91%	122%	78%
Insurance Sales	41%	96%	132%	117%	98%	74%
Stockbrokers & Commodity Traders	21%	52%	83%	125%	73%	41%
Teachers	57%	75%	153%	107%	63%	309%
Other Occupations	44%	84%	140%	100%	100%	49%
Total Non-medical Occupations	41%	81%	136%	106%	99%	59%
All Occupations	40%	71%	113%	88%	77%	50%

Among the Medical occupations, Podiatrists show the lowest overall A/E claim termination ratios, and Chiropractors show low A/E claim termination ratios for the first two years of claim relative to other Medical occupations. These two occupations also showed some of the highest A/E claim incidence ratios. For at least the first two years of a claim, Nurses and Pharmacists show high A/E claim termination ratios relative to other Medical professions.

Among the Non-medical occupations, Stockbrokers & Commodity Traders show the lowest overall A/E claim termination ratios. This occupation also showed high A/E claim incidence ratios relative to the other selected professions.

Section VIII: Geographic Differences in Incidence and Termination Experience

This section looks at differences in claim incidence and termination experience among key states (California, Florida and All Others) and geographic regions in the US. The analysis by geographic differences has been limited to A&S contracts only.

Claim Incidence Experience by Key States

Table VIII.a shows the relative exposure by amount among California, Florida and All Other states and their respective A/E claim incidence ratios (by amount) over the 1/1/90-12/31/06 study period.

Table VIII.a Exposure Percent and A/E Claim Incidence Ratios (by Amount) A&S Contracts By Key State Study Period: 1/1/90 – 12/31/06			
State	% of Exposure	A/E	Ratio to All Other
California	10%	101%	1.34
Florida	5%	96%	1.28
All Other	84%	75%	1.00
Total	100%	79%	1.06

Relative to All Other states, the A/E claim incidence ratio for California is 34% higher, and for Florida the A/E claim incidence ratio is 28% higher. This is consistent with the IDEC study of 1/1/90-12/31/99 experience and with the results that have been described by many companies over the years.

Table VIII.b shows the A/E claim incidence ratios split by key state and study year period.

Table VIII.c shows the results of Table VIII.b as a ratio to All Other States.

Table VIII.b A/E Claim Incidence Ratios (by Amount) - By Key State By Study Period				
Study Period	California	Florida	All Other	Total
1990-94	128%	107%	87%	94%
1995-99	106%	111%	80%	85%
2000-03	92%	95%	73%	77%
2004-06	75%	70%	61%	63%
Total	101%	96%	75%	79%

<p align="center">Table VIII.c A/E Claim Incidence Ratios (by Amount) - By Key State Ratio of A/E to "All Other States" By Study Period</p>				
Study Period	California	Florida	All Other	Total
1990-94	147%	122%	100%	107%
1995-99	133%	139%	100%	106%
2000-03	126%	130%	100%	105%
2004-06	123%	115%	100%	103%
Total	134%	128%	100%	106%

Table VIII.c shows that the relative differences in A/E claim incidence ratios between California and those for All Other States have decreased steadily across study period. The relative differences in A/E claim incidence ratios between Florida and All Other States peaked in the late 90's and have decreased during the 2000's.

Table VIII.d examines the A/E claim incidence ratios by key state, occupation class and issue year group.

Table VIII.d			
A/E Claim Incidence Ratios (by Amount)			
A&S Contracts - By Key State			
By Occupation Class and Issue Year			
Study Period: 1/1/90 – 12/31/06			
Issue Year	Occupation Class M		
	California	Florida	All Other
Prior to 1985	103%	123%	95%
1985-1989	128%	140%	111%
1990-1994	141%	146%	110%
1995-1999	111%	81%	82%
2000-2003	125%	73%	69%
2004-2006	137%	88%	73%
Total	124%	131%	102%
Issue Year	Occupation Class 1		
	California	Florida	All Other
Prior to 1985	79%	72%	68%
1985-1989	98%	84%	73%
1990-1994	103%	87%	68%
1995-1999	82%	75%	57%
2000-2003	78%	66%	54%
2004-2006	67%	60%	48%
Total	92%	79%	66%
Issue Year	Occupation Classes 2-4		
	California	Florida	All Other
Prior to 1985	71%	58%	57%
1985-1989	97%	64%	65%
1990-1994	97%	66%	59%
1995-1999	61%	54%	50%
2000-2003	68%	61%	47%
2004-2006	65%	42%	49%
Total	83%	61%	58%

For the Medical occupations, the relative difference in A/E claim incidence ratios between California and All Other States increases for each successive issue year group. This seems to imply that tightened underwriting of Medical occupations in California has been less effective than anticipated. For the Medical occupations issued in Florida, the relative difference compared to All Other States is generally less for policies issued 1995 and later than for policies issued prior to 1995.

Table VIII.e breaks down the A/E claim incidence ratios by key state into occupation class and elimination period subgroups.

Table VIII.e			
A/E Claim Incidence Ratios (by Amount) - By Key State			
By Occupation Class and Elimination Period			
Study Period: 1/1/90 – 12/31/06			
	Occupation Class M		
Elimination Period (Days)	California	Florida	All Other
<30	65%	90%	62%
30	96%	85%	82%
60	87%	91%	68%
90	166%	175%	122%
180+	184%	146%	122%
Total	124%	131%	102%
	Occupation Class 1		
Elimination Period (Days)	California	Florida	All Other
<30	68%	55%	56%
30	91%	69%	66%
60	77%	61%	49%
90	100%	91%	72%
180+	79%	78%	64%
Total	92%	79%	66%
	Occupation Classes 2-4		
Elimination Period (Days)	California	Florida	All Other
<30	53%	37%	47%
30	86%	52%	59%
60	71%	50%	47%
90	89%	77%	65%
180+	132%	123%	76%
Total	83%	61%	58%

Table VIII.e shows that the California A/E claim incidence ratios are consistently worse than All Other States by elimination period and occupation class. With some exceptions in the shorter elimination periods, the same is generally true for the Florida A/E claim incidence ratios, but the difference is less pronounced for Occupations Classes 2-4.

Claim Termination Experience by Key State

Table VIII.f compares the average A/E claim termination ratios by key state.

Table VIII.f			
A/E Claim Termination Ratios (by Amount)			
A&S Contracts with Long-Term Benefit Periods			
By Key State			
Study Period: 1/1/90 – 12/31/07			
Year of Disablement	Occupation Class M		
	California	Florida	All Other
Year 1	36%	23%	41%
Year 2	58%	49%	62%
Year 3	79%	74%	92%
Year 4-5	77%	52%	72%
Year 6-10	52%	40%	63%
Year 11+	36%	22%	45%
Year of Disablement	Occupation Class 1		
	California	Florida	All Other
Year 1	37%	29%	41%
Year 2	95%	56%	82%
Year 3	127%	119%	140%
Year 4-5	117%	86%	106%
Year 6-10	115%	75%	98%
Year 11+	45%	40%	63%
Year of Disablement	Occupation Classes 2-4		
	California	Florida	All Other
Year 1	41%	36%	48%
Year 2	85%	61%	80%
Year 3	213%	138%	126%
Year 4-5	114%	107%	108%
Year 6-10	83%	89%	110%
Year 11+	80%	70%	70%

Termination rates for Florida are significantly lower than those for All Other States across all durations for Occupation Classes M and 1, and are lower in the first two years of disablement for Occupation Classes 2-4.

For Occupation Class M, termination rates for California are generally lower than those for All Other States. This also holds true for Occupation Classes 1 and 2-4 in the first year of disablement, but is not apparent in later claim durations.

Claim Incidence Experience by Geographic Region – All Other States

The Other States were split into the following six regions for the purposes of this incidence study:

Geographic Regions					
<u>Midwest</u>	<u>Mountain</u>	<u>Northeast</u>	<u>South</u>	<u>Southwest</u>	<u>West</u>
AR	CO	CT	AL	AZ	AK
IA	ID	DC	FL	NM	CA
IL	MT	DE	GA	OK	HI
IN	NV	MA	KY	TX	OR
KS	UT	MD	LA		WA
MI	WY	ME	MS		
MN		NH	NC		
MO		NJ	SC		
ND		NY	TN		
NE		PA	VA		
OH		RI	WV		
SD		VT			
WI					

Table VIII.g compares the A/E claim incidence rates for A&S contracts by geographic region, excluding California and Florida.

<p align="center">Table VIII.g A/E Claim Incidence Ratios (by Amount) By Geographic Region, Excluding California and Florida Study Period: 1/1/90 – 12/31/06</p>						
Issue Year	Occupation Class M					
	Midwest	Mountain	Northeast	Southeast	Southwest	West
Prior to 1985	93%	98%	92%	104%	106%	97%
1985-99	103%	135%	110%	119%	122%	111%
1990-94	104%	125%	110%	119%	124%	105%
1995-99	85%	103%	93%	100%	85%	90%
2000-03	67%	66%	80%	78%	56%	78%
2004 & later	57%	39%	85%	60%	88%	89%
Total	97%	117%	104%	112%	114%	103%
Issue Year	Occupation Class 1					
	Midwest	Mountain	Northeast	Southeast	Southwest	West
Prior to 1985	65%	69%	75%	69%	67%	60%
1985-99	67%	75%	80%	74%	72%	59%
1990-94	60%	74%	74%	64%	65%	58%
1995-99	50%	56%	63%	54%	54%	52%
2000-03	45%	53%	56%	56%	50%	43%
2004 & later	42%	54%	50%	42%	53%	31%
Total	59%	68%	73%	64%	64%	56%
Issue Year	Occupation Classes 2-4					
	Midwest	Mountain	Northeast	Southeast	Southwest	West
Prior to 1985	56%	51%	68%	56%	52%	51%
1985-99	53%	62%	80%	69%	60%	56%
1990-94	50%	52%	76%	65%	67%	52%
1995-99	50%	48%	67%	52%	60%	37%
2000-03	49%	43%	54%	49%	47%	46%
2004 & later	45%	42%	57%	44%	47%	34%
Total	52%	52%	72%	60%	58%	50%

The range of A/E claim incidence ratios by region (excluding California and Florida) do not vary as much as the ratios do in the key state comparison. Generally, the Midwest and West regions have the lowest overall claim incidence. Incidence rates in the Northeast are higher than for the other regions for Occupation Classes 1 and 2-4.

Section IX: Incidence and Termination Experience by Market

Many contributors were able to separate their experience into three distinct markets:

1. Individual Market – Policies are sold to individuals with no employer or association/affinity sponsorship.
2. Employer-Sponsored Market – Policies are sold to individuals through some form of employer sponsorship. The premiums for this business can be paid by employers, employees or shared between employers and employees. The IDEC did not gather the necessary information to analyze employer-sponsored market by payer.
3. Association Market – Policies are sold to individuals through sponsorship by professional associations or affinity groups.

This section examines the difference in claim incidence and termination experience in these three markets. The scope of the discussion is limited to A&S contracts.

Distribution of Exposure by Market and Occupation Class

Table IX.a shows the distribution of exposures (by amount) among the markets within the occupation classes. Note that some study contributors were unable to separate their experience by market and thus 11% of the total exposure has been assigned to the Unknown Market category.

Table IX.a Distribution of Exposure (by Amount) by Market and Occupation Class A&S Contracts Only Study Period: 1/1/90 – 12/31/06					
Occupation Class	Individual	Employer-Sponsored	Association	Unknown	Total
Class M	55%	27%	7%	11%	100%
Class 1	57%	32%	2%	9%	100%
Classes 2-4	65%	18%	0%	17%	100%
Total	57%	29%	3%	11%	100%

Table IX.b shows the distribution of exposures (by amount) among the occupation classes among the Individual, Employer-Sponsored and Association Markets, excluding the unknowns.

Table IX.b Distribution of Exposure (by Amount) by Market and Occupation Class A&S Contracts Only Study Period: 1/1/90 – 12/31/06				
Occupation Class	Individual	Employer-Sponsored	Association	Total
Class M	61%	31%	8%	100%
Class 1	63%	35%	2%	100%
Classes 2-4	78%	22%	0%	100%
Total	64%	32%	4%	100%

Table IX.b shows that among the contributors that could identify the markets, 64% of the exposure is in the Individual Market, 32% is in the Employer-Sponsored Market, and 4% is in the Association Market. In Occupation Classes 2-4, the percentage of the exposure in the Individual Market is much higher than for the other occupation classes.

Table IX.c shows the distribution of exposures (by amount) among the occupation classes within the markets.

Table IX.c Distribution of Exposure (by Amount) - By Occupation Class Within Market A&S Contracts Only Study Period: 1/1/90 – 12/31/06					
Occupation Class	Individual	Employer-Sponsored	Association	Unknown	Total
Class M	33%	33%	73%	35%	34%
Class 1	53%	59%	26%	44%	53%
Classes 2-4	15%	8%	1%	21%	13%
Total	100%	100%	100%	100%	100%

Table IX.c shows that business sold through the Association Market is almost entirely concentrated in Occupation Classes 1 and M.

Claim Incidence Experience by Market

Table IX.d provides the A/E claim incidence ratios by market and occupation class.

Table IX.d A/E Claim Incidence Ratios (by Amount) by Market and Occupation Class A&S Contracts Only Study Period: 1/1/90 – 12/31/06					
Occupation Class	Individual	Employer-Sponsored	Association	Unknown	Total
Class M	109%	108%	134%	87%	107%
Class 1	73%	54%	86%	87%	70%
Classes 2-4	60%	56%	84%	64%	61%
Total	80%	73%	121%	78%	79%

From Table IX.d, the Employer-Sponsored Market has consistently had the lowest A/E claim incidence ratios, while the Association Market has consistently had the highest ratios. The A/E claim incidence ratio is particularly high for the Association, Occupation Class M, which makes up 73% of the Association experience. The Employer-Sponsored overall A/E claim incidence ratio is 91% of the Individual overall ratio. The Association ratio is 151% of the Individual overall ratio.

The remaining incidence analysis by market concentrates on Occupation Classes 1 and M. Table IX.e shows the average A/E claim incidence ratios by market and elimination period, split between Occupation Classes 1 and M.

Table IX.e A/E Claim Incidence Ratios (by Amount) by Market and Elimination Period A&S Contracts Only – Occupation Classes 1 and M Study Period: 1/1/90 – 12/31/06					
Elimination Period	Individual	Employer-Sponsored	Association	Unknown	Total
Occupation Class M					
EP<90	78%	76%	88%	81%	78%
EP>=90	139%	120%	162%	96%	130%
All EP	109%	108%	134%	87%	107%
Occupation Class 1					
EP<90	63%	46%	69%	70%	62%
EP>=90	81%	55%	93%	114%	75%
All EP	73%	54%	86%	87%	70%
All Occupations					
EP<90	63%	58%	84%	71%	65%
EP>=90	97%	78%	143%	90%	92%
All EP	80%	73%	121%	78%	79%

The overall favorable claim incidence experience in the Employer-Sponsored Market compared to the Individual Market is evident in Table IX.e. Although the incidence experience for Occupation Class M does exhibit the same favorability, the impact is less pronounced, particularly for elimination periods of less than 90 days. For all elimination periods combined, the A/E claim incidence ratio for Occupation Class 1 in the Employer-Sponsored Market is 74% of the corresponding ratio in the Individual Market; whereas for Occupation Class M, the A/E claim incidence ratio in the Employer-Sponsored Market is 99% of the corresponding ratio in the Individual Market. Looking just at the elimination periods of 90 days or longer, the A/E claim incidence ratio for Occupation Class 1 in the Employer-Sponsored Market is 68% of the corresponding ratio in the Individual Market; whereas for Occupation Class M, the A/E claim incidence ratio in the Employer-Sponsored Market is 86% of the ratio in the Individual Market.

The claim incidence experience in the Association Market is significantly worse overall than the claim incidence experience in the Individual Market. For Occupation Class 1, the Association A/E claim incidence ratio is 118% of the Individual ratio, whereas for Occupation Class M, the Association ratio is 123% of the Individual ratio.

Table IX.f compares the trends in the A/E claim incidence ratios between the Individual Market and the Employer-Sponsored Market from 1990 to 2006. The comparison is split between elimination periods of less than 90 days and elimination periods of 90 days and over, and between Occupation Class 1 and Occupation Class M.

<p align="center">Table IX.f A/E Claim Incidence Ratio Trends (by Amount) by Market and Elimination Period A&S Contracts Only – Occupation Class 1 and M Non-medical vs. Medical Occupations Study Period: 1/1/90 – 12/31/06</p>						
Years	Elimination Periods Under 90 Days					
	Occupation Class M			Occupation Class 1		
	Individual	Employer-Sponsored	Employer-Sponsored/Individual	Individual	Employer-Sponsored	Employer-Sponsored/Individual
1990-1994	97%	82%	0.85	86%	51%	0.59
1995-1999	80%	81%	1.02	59%	42%	0.72
2000-2003	72%	75%	1.04	57%	49%	0.85
2004-2006	58%	58%	1.00	47%	41%	0.88
Overall	78%	76%	0.98	63%	46%	0.74
Years	Elimination Periods 90 Days & Over					
	Occupation Class M			Occupation Class 1		
	Individual	Employer-Sponsored	Employer-Sponsored/Individual	Individual	Employer-Sponsored	Employer-Sponsored/Individual
1990-1994	168%	136%	0.81	118%	67%	0.57
1995-1999	162%	134%	0.83	91%	55%	0.61
2000-2003	138%	120%	0.87	79%	59%	0.75
2004-2006	107%	94%	0.88	63%	48%	0.76
Overall	139%	120%	0.87	81%	55%	0.68

For Occupation Class 1, Table IX.f shows a narrowing in the differences in the A/E claim incidence ratios during the more recent years between Employer-Sponsored and Individual Markets. This trend is more the result of improving incidence experience in the Individual Market rather than worsening experience in the Employer-Sponsored Market.

For Occupation Class M policies with shorter elimination periods (under 90 days), the relationship between A/E incidence ratios for the Employer-Sponsored Market and the Individual Market has stabilized, with the Employer-Sponsored Market generally having similar A/E claim incidence ratios beginning in 1995. For Medical occupations with the longer elimination periods, the A/E claim incidence ratios between the Individual Market and the Employer-Sponsored Market have drifted slightly higher, but have consistently averaged around 87% from 2000 and later.

Table IX.g looks at the impact of a lifetime benefit period on the average A/E claim incidence ratios for the various markets split between Occupation Class 1 and Occupation Class M.

Table IX.g						
A/E Claim Incidence Ratio Trends (by Amount) by Market and Elimination Period						
A&S Contracts Only – Occupation Classes 1 and M – To Age 65-70 Benefit Periods Only						
Non-medical vs. Medical Occupations						
Study Period: 1/1/90 – 12/31/06						
Market	Elimination Periods Under 90 Days					
	Occupation Class M			Occupation Class 1		
	To Age 65-70	Lifetime	Lifetime/To Age 65-70	To Age 65-70	Lifetime	Lifetime/To Age 65-70
Individual	78%	84%	1.09	64%	66%	1.03
ER Sponsored	78%	84%	1.08	46%	58%	1.24
Association	90%	88%	0.99	76%	32%	0.43
Unknown	90%	66%	0.74	70%	93%	1.33
Total	81%	83%	1.03	63%	69%	1.09
Market	Elimination Periods 90 Days & Over					
	Occupation Class M			Occupation Class 1		
	To Age 65-70	Lifetime	Lifetime/To Age 65-70	To Age 65-70	Lifetime	Lifetime/To Age 65-70
Individual	135%	175%	1.30	80%	113%	1.41
ER Sponsored	118%	157%	1.33	55%	76%	1.39
Association	157%	207%	1.32	90%	122%	1.35
Unknown	94%	94%	1.00	104%	155%	1.49
Total	126%	163%	1.29	72%	109%	1.50

Table IX.g confirms that the higher incidence associated with lifetime benefit periods observed in Section VI, particularly with longer elimination periods, holds true regardless of market or occupational groupings.

Claim Termination Experience by Market

Table IX.h compares the A/E claim termination ratios by market. The results are shown for Occupation Class M and Occupation Classes 1 and 2-4.

Table IX.h					
A/E Claim Termination Ratios (by Amount)					
A&S Contracts Only – By Market					
Study Period: 1/1/90 – 12/31/06					
Duration of Disablement	Occupation Class M				
	Individual	Employer- Sponsored	Unknown	Total	Ratio Employer- Sponsored/ Individual
Year 1	39%	35%	41%	39%	0.91
Year 2	63%	58%	63%	62%	0.91
Year 3	97%	86%	91%	92%	0.89
Year 4	83%	78%	69%	76%	0.94
Year 5	80%	77%	48%	65%	0.96
Years 6 - 10	70%	58%	49%	58%	0.83
Years 11+	40%	40%	38%	39%	1.00
Duration of Disablement	Occupation Class 1				
	Individual	Employer- Sponsored	Unknown	Total	Ratio Employer- Sponsored/ Individual
Year 1	42%	41%	40%	41%	0.98
Year 2	89%	81%	82%	84%	0.92
Year 3	146%	133%	148%	146%	0.91
Year 4	134%	113%	97%	108%	0.84
Year 5	130%	128%	96%	107%	0.99
Years 6 - 10	119%	93%	94%	100%	0.78
Years 11+	74%	66%	52%	57%	0.89
Duration of Disablement	Occupation Classes 2-4				
	Individual	Employer- Sponsored	Unknown	Total	Ratio Employer- Sponsored/ Individual
Year 1	51%	48%	56%	53%	0.94
Year 2	103%	84%	77%	87%	0.82
Year 3	189%	151%	148%	164%	0.80
Year 4	137%	98%	103%	115%	0.72
Year 5	126%	160%	111%	122%	1.27
Years 6 - 10	130%	102%	103%	113%	0.79
Years 11+	71%	69%	73%	72%	0.98

For occupations in Occupation Class 1 and Occupation Class M, claim termination experience in the Employer-Sponsored Market is generally lower than in the Individual Market in almost all years of disablement.

Two possible reasons why the claim termination experience for Occupation Class 1 and M are lower in the Employer-Sponsored Market are:

- a. The significantly lower claim incidence in the Employer-Sponsored Market (see Table IX.e) suggests that the typical claims in this market may be more severe or long-term. Higher claim incidence is associated more often with short-term claims.
- b. Claimants in the Employer-Sponsored Market may be more likely to have additional disability benefits from other sources (e.g., group LTD coverage). The higher total income while disabled provides a lesser incentive to return to work.

Relative differences in claim termination rates by market in Occupation Classes 2-4 are not as consistent as in Occupation Class 1 and M. During the first four years of disablement, claim termination experience for Occupation Classes 2-4 in the Employer-Sponsored Market is somewhat worse than in the Individual Market, but reverses in disablement year five. The amount of data available for analysis becomes somewhat limited in duration 5+ for Occupation Classes 2-4, and the volatility in the claim termination results is likely impacted by the lack of sufficient experience data.

Section X: Claim Incidence Experience by Underwriting Type

This section analyzes differences in claim incidence experience related to different types of underwriting. The specific types of underwriting that are reviewed are as follows:

- Traditional underwriting – this involves regular Medical underwriting with no guaranteed issue rules applied.
- Guaranteed standard issue (GSI) underwriting– this involves issuing policies to employer-sponsored cases on a standard basis to all applications under a specified monthly amount limit. Given the time period of the study, we expect that a large percentage of the GSI underwriting involves 100% participation of all eligible employees within each case; however, there is some portion of voluntary GSI included. Unfortunately, most contributors were unable to distinguish between the two types of GSI underwriting in their data.
- Guaranteed to issue (GTI) underwriting – this involves traditional underwriting of policies in employer-sponsored cases, with a guarantee that policies will be issued to eligible employees, albeit possibly rated or with waived impairments.
- Guaranteed insurability (GI) underwriting – this involves issuing coverage as a result of electing options within guaranteed insurability riders.

Claim Incidence Experience for Traditional Underwriting

Table X.a compares A/E claim incidence ratios (by amount) for Accident and Sickness business issued via traditional underwriting among the various markets.

Table X.a					
A/E Claim Incidence Ratios (by Amount)					
Traditional Underwriting by Market					
Study Period: 1/1/90 – 12/31/06					
Policy Year	Individual	Employer-Sponsored	Association	Unknown	Total
1	58%	43%	73%	90%	59%
2	71%	54%	90%	85%	69%
3	85%	61%	112%	100%	83%
4-5	88%	69%	126%	97%	87%
6-10	89%	79%	126%	89%	88%
11+	73%	78%	101%	75%	74%
All Years	78%	72%	113%	86%	78%

For all policy years combined, the A/E claim incidence ratio for the Employer-Sponsored and Association Markets are 92% and 145%, respectively, of the ratio for the Individual Market. In years 11+, the A/E claim incidence ratio for the Employer-Sponsored Market exceeds the ratio for the Individual Market.

The A/E claim incidence ratios for the Individual and Employer-Sponsored Markets exhibit materially different patterns by policy year. The A/E claim incidence ratios for the Individual Market increase in the first ten years (with a notably large jump in year three) and then decrease with the ultimate ratio in years 11+ coming back to the level seen in the first two years. The A/E claim incidence ratios for the Employer-Sponsored Market exhibits a much flatter pattern, increasing steadily through the first ten years, and then remaining very stable.

Table X.b further splits the comparison by occupation groupings and occupation class.

Table X.b					
A/E Claim Incidence Ratios (by Amount)					
Traditional Underwriting by Market and Occupational Groups					
Study Period: 1/1/90 – 12/31/06					
Policy Year	Individual	Employer-Sponsored	Association	Unknown	Total
Occupation Class M					
1	71%	65%	87%	113%	76%
2	95%	80%	88%	101%	92%
3	120%	92%	118%	107%	111%
4-5	128%	110%	134%	119%	123%
6-10	124%	114%	138%	109%	121%
11+	98%	105%	112%	91%	99%
All Years	106%	105%	123%	104%	106%
Occupation Class 1					
1	56%	33%	43%	145%	53%
2	70%	45%	92%	137%	66%
3	86%	48%	100%	147%	78%
4-5	83%	51%	102%	114%	76%
6-10	79%	59%	97%	97%	75%
11+	66%	56%	82%	83%	65%
All Years	71%	53%	90%	105%	68%
Occupation Classes 2-4					
1	54%	38%	27%	67%	54%
2	58%	44%	171%	64%	58%
3	62%	49%	36%	84%	65%
4-5	64%	48%	94%	79%	66%
6-10	63%	52%	58%	74%	64%
11+	55%	54%	89%	65%	56%
All Years	58%	50%	77%	71%	60%

For the Individual Market in Occupation Class 1 and Occupation Class M, the A/E claim incidence ratios for Traditional underwriting show a jump in policy year three. The jump is almost nonexistent for the Individual Market in Occupation Classes 2-4. There is no evidence of

such a jump in A/E claim incidence ratios for Occupation Class 1 in the Employer-Sponsored Market, while the increase in the A/E claim incidence ratios for policy years 3-5 for Occupation Class M in the Employer-Sponsored Market is less pronounced, indicating less anti-selection arising in the Employer-Sponsored Market than the Individual Market in Occupation Class 1. Traditional underwriting in the Association Market exhibits its own pattern of claim incidence by policy year. Generally, the jump in incidence occurs in policy year two, except for Occupation Class M. Except for Occupation Class M, there appears to be a general improvement in the claim incidence after year two.

Table X.c shows the claim incidence experience of traditionally underwritten business in the Individual Market by occupation class and year of issue.

<p align="center">Table X.c A/E Claim Incidence Ratios (by Amount) Traditional Underwriting – Individual Market By Issue Year Study Period: 1/1/90 – 12/31/06</p>							
Policy Year	Pre-1985	1985-89	1990-94	1995-99	2000-03	2004-06	Total
Occupation Class M							
1		72%	82%	62%	54%	66%	71%
2		107%	104%	87%	85%	59%	95%
3		138%	136%	86%	79%	100%	120%
4-5		140%	136%	118%	79%		128%
6-10	131%	129%	134%	100%	57%		124%
11+	89%	100%	107%	82%			98%
All Years	94%	110%	116%	96%	73%	69%	106%
Occupation Class 1							
1		85%	74%	48%	51%	36%	56%
2		107%	80%	57%	56%	56%	70%
3		121%	100%	71%	68%	48%	86%
4-5		115%	84%	70%	56%		83%
6-10	94%	89%	82%	66%	54%		79%
11+	64%	67%	68%	61%			66%
All Years	66%	78%	75%	65%	57%	45%	71%
Occupation Classes 2-4							
1		59%	54%	52%	54%	49%	54%
2		65%	59%	54%	57%	51%	58%
3		81%	59%	59%	50%	59%	62%
4-5		78%	58%	59%	54%		64%
6-10	78%	63%	62%	57%	57%		63%
11+	49%	61%	63%	59%			55%
All Years	52%	65%	61%	57%	54%	51%	58%

Claim incidence of policies issued to Occupation Class M through Traditional underwriting in the Individual Market was very similar for business issued pre-1985 and 1/1/90-12/31/94. Starting with issue years 1/1/95-12/31/99, there is a trend towards improving incidence by issue year group that continues through 1/1/04-12/31/06. Note that the 100% ratio for Medical Occupations issued in 1/1/04-12/31/06 in policy year three represents the results of business issued only in one calendar year (2004) and may not be indicative of how the results on this generation of Medical Business will ultimately emerge.

Claim incidence of policies issued to Occupation Class 1 through Traditional underwriting in the Individual Market generally showed improvements among each successive issue year grouping. Claim incidence of policies issued to Occupation Classes 2-4 through Traditional underwriting in the Individual Market has been quite stable, with changes appearing much more gradually.

Table X.d shows the claim incidence experience of traditionally underwritten business in the Employer-Sponsored Market by year of issue.

<p align="center">Table X.d A/E Claim Incidence Ratios (by Amount) Traditional Underwriting – Employer-Sponsored Market By Issue Year Study Period: 1/1/90 – 12/31/06</p>							
Policy Year	Pre-1985	1985-89	1990-94	1995-99	2000-03	2004-06	Total
Occupation Class M							
1		48%	68%	80%	59%	63%	65%
2		75%	88%	93%	50%	92%	80%
3		99%	111%	65%	72%	50%	92%
4-5		132%	116%	92%	71%		110%
6-10	117%	128%	120%	91%	52%		114%
11+	102%	110%	104%	81%			105%
All Years	104%	115%	107%	88%	63%	70%	105%
Occupation Class 1							
1		42%	49%	33%	27%	22%	33%
2		47%	59%	46%	41%	25%	45%
3		57%	53%	47%	42%	39%	48%
4-5		59%	57%	44%	45%		51%
6-10	67%	65%	65%	50%	40%		59%
11+	56%	58%	53%	47%			56%
All Years	58%	59%	57%	47%	40%	26%	53%
Occupation Classes 2-4							
1		31%	43%	34%	34%	38%	38%
2		59%	46%	34%	40%	44%	44%
3		49%	60%	52%	31%	38%	49%
4-5		51%	47%	51%	38%		48%
6-10	65%	53%	51%	52%	33%		52%
11+	64%	50%	49%	46%			54%
All Years	64%	51%	49%	48%	36%	40%	50%

Aggregate claim incidence of policies issued to both Occupation Class 1 and Occupation Class M through Traditional underwriting in the Employer-Sponsored Market showed general improvements among each successive issue year grouping. Results for the Occupation Classes 2-4 grouping were more stable from the beginning of the period through the end of the study period.

Claim Incidence Experience for GSI and GTI Underwriting

Table X.e compares the A/E claim incidence ratios from traditionally underwritten business in the Individual and Employer-Sponsored Markets to those from business in the Employer-Sponsored Market issued under GSI and GTI underwriting. Results are split between Occupation Classes M, 1, and 2-4.

Table X.e				
A/E Claim Incidence Ratios (by Amount)				
Comparison of Traditional, GSI and GTI Underwriting				
By Market				
Study Period: 1/1/90 – 12/31/06				
Occupation Class M				
Policy Year	Individual Mkt Traditional UW	Employer-Sponsored Market		
		Traditional	GSI	GTI
1	71%	65%	56%	86%
2	95%	80%	75%	139%
3	120%	92%	79%	145%
4-5	128%	110%	83%	122%
6-10	124%	114%	97%	134%
11+	98%	105%	108%	174%
All Years	106%	105%	87%	128%
Occupation Class 1				
Policy Year	Individual Mkt Traditional UW	Employer-Sponsored Market		
		Traditional	GSI	GTI
1	56%	33%	59%	47%
2	70%	45%	51%	73%
3	86%	48%	52%	62%
4-5	83%	51%	54%	67%
6-10	79%	59%	47%	48%
11+	66%	56%	46%	86%
All Years	71%	53%	53%	59%
Occupation Classes 2-4				
Policy Year	Individual Mkt Traditional UW	Employer-Sponsored Market		
		Traditional	GSI	GTI
1	54%	38%	61%	*
2	58%	44%	75%	*
3	62%	49%	69%	177%
4-5	64%	48%	76%	*
6-10	63%	52%	65%	*
11+	55%	54%	67%	*
All Years	58%	50%	69%	88%

Claim incidence for Occupation Class M in the Employer-Sponsored Market issued under GSI underwriting is lower than claim incidence for such policies issued under GTI underwriting. Results are mixed in the other Occupation Classes, particularly Occupation Classes 2-4, where there is limited company data available. The GSI incidence in Occupation Classes 2-4 is generally comparable to the incidence of traditionally underwritten business in the Employer-Sponsored Market.

Policies issued in the Employer-Sponsored Market under GSI underwriting exhibit lower claim incidence than the ones issued in the Individual Market with Traditional Underwriting, indicating the less anti-selective nature of Employer-Sponsored programs. For all policy years combined, the A/E incidence ratios for GSI employer-sponsored business (87% for Occupation Class M and 53% for Occupation Class 1) are 75-82% of the A/E incidence ratios for Traditional underwriting (106% for Occupation Class M and 71% for Occupation Class 1) in the Individual Market. This result suggests that GSI underwriting generally had a similar impact on reducing anti-selection for both Medical and Non-medical occupations.

Table X.f compares the A/E claim incidence ratios in the Employer-Sponsored Market under GSI underwriting by year of issue.

<p align="center">Table X.f A/E Claim Incidence Ratios (by Amount) GSI Underwriting – Employer-Sponsored Market By Issue Year Study Period: 1/1/90 – 12/31/06</p>							
Policy Year	Pre-1985	1985-89	1990-94	1995-99	2000-03	2004-06	Total
Occupation Class M							
1		23%	69%	60%	53%	39%	56%
2		67%	115%	60%	61%	49%	75%
3		53%	109%	55%	77%	85%	79%
4-5		89%	110%	91%	51%		83%
6-10	88%	94%	110%	96%	57%		97%
11+	95%	112%	117%	79%			108%
All Years	94%	95%	108%	83%	59%	48%	87%
Occupation Class 1							
1		38%	55%	52%	65%	56%	59%
2		68%	50%	55%	51%	49%	51%
3		43%	77%	56%	48%	53%	52%
4-5		25%	61%	61%	52%		54%
6-10	55%	44%	40%	47%	51%		47%
11+	72%	36%	38%	50%			46%
All Years	69%	40%	50%	52%	54%	53%	53%
Occupation Classes 2-4							
1		0%	129%	76%	54%	39%	56%
2		14%	96%	73%	78%	49%	75%
3		17%	72%	60%	79%	85%	79%
4-5		13%	23%	77%	84%		83%
6-10	30%	24%	30%	75%	65%		97%
11+	44%	51%	32%	143%			108%
All Years	39%	27%	77%	76%	73%	53%	69%

For Occupation Class M, the A/E claim incidence ratios in the Employer-Sponsored Market under GSI underwriting worsened somewhat for business issued between 1990 and 1994, but improved significantly for business issued in 1995 and later to be more consistent with the incidence experienced by the Pre-1990 issued business. For Occupation Class 1, the A/E claim incidence ratios in the Employer-Sponsored Market under GSI underwriting remained fairly steady, especially from 1995 onward.

Claim Incidence Experience of Guaranteed Insurability Options

Table X.g shows the A/E claim incidence ratios for business issued as the result of elections of options under guaranteed insurability riders. Note that the data for Guaranteed Insurability Election analysis was not available for the 1/1/00-12/31/06 portion of the study. As a result, data is shown only for the 1/1/90-12/31/99 time period below.

Table X.g A/E Claim Incidence Ratios (by Amount) A&S Contracts Only Guaranteed Insurability Elections Study Period: 1/1/90 – 12/31/99			
Policy Year	Occupation Class M	Occupation Class 1	Occupation Classes 2-4
1	251%	192%	145%
2	211%	158%	115%
3	216%	142%	101%
4-5	176%	149%	85%
6-10	152%	106%	90%
11+	139%	100%	52%

The patterns of A/E claim incidence ratios for all Occupation Classes in Table X.g represent classic examples of anti-selection, wearing off over ten years.

Section XI: Incidence and Termination by Diagnosis

Most contributors were able to provide specific diagnosis (ICD-9) codes for the cause of claims. The IDEC grouped the various diagnosis codes in the following categories:

<u>Diagnosis Groupings</u>	<u>ICD-9 Codes</u>
Alcohol & Drug	291, 292, 303, 304
Back	722, 723, 724, 847
Cancer	140 - 239, V10
Carpal Tunnel Syndrome	354
Chronic Fatigue Syndrome	312
Circulatory	390 - 459
Complications of Pregnancy	630 - 676 (excluding 650), V23 - V29, V34 - V37
Congenital/Perinatal	740 - 779
Digestive	520 - 579
Disease of Blood	280 - 289
Disease of Skin	680 - 709
Endocrine, Nutritional & Metabolic	240 - 278
Genitourinary	580 - 629, V56
Immunodeficiency	042, 279, V08
Mental Disorder	290, 293 - 319 (excluding 303, 304, 312), V11, V40
Nervous System	321 - 389 (excluding 354)
No Classifiable Diagnosis	780 - 799, V12 - V21, V41 - V47, V50, V55, V57 - V83
Other Infectious Diseases	001 - 139 (excluding 042), 320
Other Injury	850 - 959
Other Musculoskeletal	710 - 739 (excluding 722 - 724), 800 - 848 (excluding 847), V48, V49, V52 - V54
Other Unspecified Effect External Causes	990 - 999
Respiratory	460 - 519
Toxicity/Poisoning	980 - 989

The incidence portion of this section will focus on claims distribution by diagnosis, as “expected” is not defined by diagnosis. There are about 12% of the actual claims (by amount) where specific diagnosis codes were not provided. These are excluded from the claim incidence distribution in the tables below as they are assumed to follow the same distribution of claims as those where a diagnosis code was provided.

IDEC eliminated all normal pregnancy claims from its data. However, the distinction between the ICD-9 codes for Complications of Pregnancy and Congenital/Perinatal is not trivial and it appears that some of the Congenital/Perinatal conditions listed in the tables in these sections are for females that could have otherwise been classified as Complications of Pregnancies.

Claims Incidence by Diagnosis

Table XI.a shows the distribution of claim incidence by type of contract in terms of amount and count.

Table XI.a						
Distribution of Claim Incidence by Amount and Count						
By Contract Type						
Study Period: 1/1/90 to 12/31/06						
Diagnosis Group	By Claim Amount			By Claim Count		
	A & S	OE	Total	A & S	OE	Total
Other Musculoskeletal	21%	23%	21%	23%	24%	23%
Circulatory	16%	19%	16%	15%	18%	15%
Cancer	13%	11%	13%	12%	11%	12%
Back	10%	10%	10%	10%	9%	10%
Mental Disorder	9%	5%	8%	7%	5%	6%
Nervous System	8%	7%	8%	8%	7%	8%
Alcohol & Drug	5%	5%	5%	3%	4%	3%
Other Injury	4%	4%	4%	4%	4%	4%
Congenital/Perinatal	3%	3%	3%	3%	3%	3%
Digestive	3%	3%	3%	4%	3%	4%
Other Infectious Diseases	2%	3%	2%	4%	4%	4%
Genitourinary	2%	2%	2%	3%	3%	3%
Other Diagnosis Groups	6%	5%	6%	7%	6%	7%
Total	100%	100%	100%	100%	100%	100%

Although Mental Disorder disabilities are more prevalent on Accident & Sickness contracts, while disabilities from Circulatory diagnoses have a bigger weight for Overhead Expense contracts, the majority of the diagnoses are similarly distributed by contract type. The remainder of this section will focus its attention on Accident & Sickness contracts with the distribution of claims focusing on the amounts, except where indicated in the table.

Table XI.b shows the distribution of claim incidence by Study Period Segments in terms of amounts.

Table XI.b					
Distribution of Claim Incidence by Amount (A&S contracts only)					
By Study Period Segments					
Study Period: 1/1/90 to 12/31/06					
Diagnosis Group	1990-1994	1995-1999	2000-2003	2004-2006	Total
Other Musculoskeletal	18%	20%	23%	24%	21%
Circulatory	20%	19%	10%	10%	16%
Cancer	10%	11%	15%	18%	13%
Back	8%	9%	12%	11%	10%
Mental Disorder	7%	8%	11%	10%	9%
Nervous System	7%	7%	9%	10%	8%
Alcohol & Drug	6%	6%	3%	2%	5%
Other Injury	4%	4%	3%	3%	4%
Congenital/Perinatal	4%	3%	3%	2%	3%
Digestive	3%	3%	3%	2%	3%
Other Infectious Diseases	4%	3%	1%	1%	2%
Genitourinary	2%	2%	1%	1%	2%
Other Diagnosis Groups	6%	5%	7%	6%	6%
Total	100%	100%	100%	100%	100%

Of particular note, Circulatory and Alcohol & Drug causes of disabilities were more prevalent in the 1990's than the 2000's and, conversely, Cancer, Mental Disorders & Nervous System causes of disabilities were more prevalent in the 2000's. This may be due to differences among the contributing companies for the two data requests rather than actual trends in the disabling conditions, although this has not been confirmed.

Table XI.c shows the distribution of claim incidence by gender in terms of amounts.

<p align="center">Table XI.c Distribution of Claim Incidence by Amount and Count (A&S contracts only) By Gender Study Period: 1/1/90 to 12/31/06</p>					
Diagnosis Group	Females		Diagnosis Group	Males	
	Claim Amount	Claim Count		Claim Amount	Claim Count
Other Musculoskeletal	19%	20%	Other Musculoskeletal	21%	23%
Cancer	14%	13%	Circulatory	17%	17%
Congenital/Perinatal	13%	10%	Cancer	13%	11%
Circulatory	10%	10%	Back	10%	10%
Mental Disorder	9%	7%	Mental Disorder	9%	6%
Back	8%	8%	Nervous System	9%	8%
Nervous System	7%	7%	Alcohol & Drug	5%	3%
Alcohol & Drug	4%	3%	Other Injury	4%	5%
Genitourinary	3%	4%	Digestive	3%	4%
Other Injury	3%	3%	Other Infectious Diseases	3%	4%
Other Infectious Diseases	2%	3%	Respiratory	1%	2%
Digestive	2%	3%	Genitourinary	1%	2%
Other Diagnosis Groups	7%	8%	Other Diagnosis Groups	4%	5%
Total	100%	100%	Total	100%	100%

Musculoskeletal issues (excluding back) were the leading cause of disability for both males and females. However, the females' second leading cause of disability was Cancer, while it was Circulatory conditions for males.

Table XI.d shows the distribution of claim incidence by attained age in terms of amount.

Table XI.d						
Distribution of Claim Incidence by Amount (A&S contracts only)						
By Attained Age						
Study Period: 1/1/90 to 12/31/06						
Diagnosis Group	Under 30	30-39	40-49	50-59	60+	Total
Other Musculoskeletal	22%	19%	21%	21%	22%	21%
Circulatory	9%	10%	14%	18%	21%	16%
Cancer	5%	8%	12%	15%	16%	13%
Back	10%	10%	11%	9%	8%	10%
Mental Disorder	7%	9%	11%	8%	4%	9%
Nervous System	7%	7%	8%	9%	9%	8%
Alcohol & Drug	5%	7%	5%	3%	2%	5%
Other Injury	6%	4%	4%	3%	3%	4%
Congenital/Perinatal	18%	13%	1%	0%	0%	3%
Digestive	2%	2%	3%	3%	3%	3%
Other Infectious Diseases	2%	2%	2%	3%	3%	2%
Genitourinary	2%	2%	2%	1%	2%	2%
Other Diagnosis Groups	6%	6%	6%	6%	6%	6%
Total	100%	100%	100%	100%	100%	100%

Intuitively, it makes sense that the prevalence of disabilities from Cancer and Circulatory issues increases with age and that Congenital/Perinatal conditions occur in the younger female population. It is interesting to note that the frequency of Musculoskeletal conditions, including Back issues, and Mental Disorders does not vary significantly by attained age.

Table XI.e shows the distribution of claim incidence by Medical and Non-medical occupations in terms of amount and count.

Table XI.e				
Distribution of Claim Incidence by Amount and Count (A&S contracts only)				
Medical vs. Non-medical Occupations				
Study Period: 1/1/90 to 12/31/06				
Diagnosis Group	By claim amount		By claim count	
	Medical	Non-medical	Medical	Non-medical
Other Musculoskeletal	21%	20%	22%	23%
Circulatory	16%	15%	15%	15%
Cancer	11%	14%	11%	12%
Back	10%	10%	9%	10%
Mental Disorder	7%	10%	6%	7%
Nervous System	8%	8%	8%	8%
Alcohol & Drug	7%	3%	5%	2%
Other Injury	3%	4%	3%	5%
Congenital/Perinatal	4%	2%	5%	2%
Digestive	2%	3%	3%	4%
Other Infectious Diseases	2%	3%	3%	4%
Genitourinary	1%	2%	2%	3%
Other Diagnosis Groups	6%	6%	6%	7%
Total	100%	100%	100%	100%

Claims classified as Alcohol & Drug related made up a higher percentage of claims for the Medical occupations than for the Non-medical occupations, while the reverse relationship is true for Mental Disorders.

Table XI.f shows the distribution of claim incidence by issue state in terms of amount.

Table XI.f				
Distribution of Claim Incidence by Amount (A&S contracts only)				
By Issue State				
Study Period: 1/1/90 to 12/31/06				
Diagnosis Group	California	Florida	Other	Total
Other Musculoskeletal	19%	20%	21%	21%
Circulatory	17%	19%	15%	16%
Cancer	12%	12%	13%	13%
Back	11%	11%	10%	10%
Mental Disorder	11%	9%	8%	9%
Nervous System	7%	8%	8%	8%
Alcohol & Drug	5%	6%	4%	5%
Other Injury	3%	3%	4%	4%
Congenital/Perinatal	3%	2%	3%	3%
Digestive	2%	2%	3%	3%
Other Infectious Diseases	3%	2%	3%	2%
Genitourinary	2%	1%	2%	2%
Other Diagnosis Groups	6%	6%	6%	6%
Total	100%	100%	100%	100%

California has a higher proportion of Mental Disorder disability incidence, while Florida sees a higher concentration of Circulatory disabilities.

Finally, Table XI.g shows the distribution of claim incidence by benefit period in terms of amount.

Table XI.g Distribution of Claim Incidence by Amount (A&S contracts only) By Benefit Period Study Period: 1/1/90 to 12/31/06				
Diagnosis Group	Lifetime	To Age 65-70	Short-Term	Total
Other Musculoskeletal	22%	19%	25%	21%
Circulatory	9%	17%	15%	16%
Cancer	11%	14%	12%	13%
Back	14%	9%	10%	10%
Mental Disorder	12%	9%	6%	9%
Nervous System	9%	8%	8%	8%
Alcohol & Drug	3%	6%	3%	5%
Other Injury	5%	3%	4%	4%
Congenital/Perinatal	4%	3%	2%	3%
Digestive	2%	2%	3%	3%
Other Infectious Diseases	1%	2%	4%	2%
Genitourinary	1%	1%	2%	2%
Other Diagnosis Groups	6%	6%	6%	6%
Total	100%	100%	100%	100%

It is interesting to note the proportion of Back and Mental Disorder disabling conditions for policies with a Lifetime benefit period. These conditions are more difficult to diagnose empirically and may illustrate the anti-selective nature of the population willing to spend the extra premium dollars to purchase a contract with a Lifetime benefit period.

Claims Termination by Diagnosis

This section analyzes the A/E claim termination rates by diagnosis. Results are displayed for the top 13 diagnosis groups by claim termination count. In order to provide some order of magnitude, it is important to point out that the weighted study had more than 265,000 Accident and Sickness claim terminations with reported diagnoses. The first diagnosis group in the tables below (Other Musculoskeletal) accounted for more than 60,000 of those terminations, while the last named category (Other Infectious Diseases) accounted for 3,700 terminations.

Table XI.h displays the A/E claim termination rates by claim duration and diagnosis groupings in terms of monthly indemnity amounts.

<p align="center">Table XI.h A/E Claim Termination Rates (by Amount) by Diagnosis Group By Claim Duration Study Period: 1/1/90 to 12/31/07</p>								
Diagnosis Group	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10	Years 11+	Total
Other Musculoskeletal	47%	62%	101%	59%	56%	53%	45%	51%
Cancer	46%	170%	294%	226%	234%	153%	73%	72%
Circulatory	41%	66%	106%	92%	67%	84%	63%	49%
Back	36%	61%	86%	68%	77%	66%	44%	43%
Mental Disorder	17%	55%	112%	96%	106%	99%	56%	35%
Congenital/Perinatal	120%	244%	181%	*	*	*	*	122%
Digestive	66%	116%	120%	107%	83%	73%	75%	73%
Other Injury	51%	72%	127%	91%	78%	82%	30%	56%
Nervous System	17%	30%	65%	63%	50%	63%	39%	26%
Alcohol & Drug	42%	96%	229%	197%	134%	164%	159%	60%
Genitourinary	81%	81%	159%	123%	350%	130%	210%	88%
Respiratory	44%	62%	201%	115%	258%	162%	52%	59%
Other Infectious Diseases	37%	85%	83%	90%	81%	77%	23%	47%
Other Diagnosis	33%	61%	114%	93%	76%	67%	37%	43%
Total	41%	75%	124%	94%	87%	80%	50%	51%

Of the conditions listed above, it is interesting to note that Mental Disorders are recovering at a materially lower rate than the average claim population, but Alcohol & Drug abuse, which are often grouped with Mental Disorders due to their ICD-9 codes and other similarities, are recovering at an above average rate. Nervous System conditions are exhibiting the lowest claim termination rates, while Congenital/Perinatal conditions are recovering at the fastest rate. Back conditions also tend to bring the average claim termination rates down. Cancer claims have an average termination rate in the first claim duration, but higher than average in the other durations.

As seen in the previous sections of this report, claim termination rates vary by gender, issue state and occupation class. However, with a few exceptions, the diagnosis group does not accentuate the differences previously observed as can be seen in Table XI.i through Table XI.l.

Table XI.i A/E Claim Terminations (by Amount) by Diagnosis Group By Gender Study Period: 1/1/90 to 12/31/07			
Diagnosis Group	Females	Males	Total
Other Musculoskeletal	50%	51%	51%
Cancer	69%	73%	72%
Circulatory	51%	49%	49%
Back	45%	42%	43%
Mental Disorder	35%	36%	35%
Congenital/Perinatal	122%	NA	122%
Digestive	66%	75%	73%
Other Injury	59%	56%	56%
Nervous System	23%	27%	26%
Alcohol & Drug	63%	59%	60%
Genitourinary	103%	74%	88%
Respiratory	50%	62%	59%
Other Infectious Diseases	57%	44%	47%
Other Diagnosis	52%	40%	43%
Total	57%	49%	51%

In the above table, we should note that females seem to have significantly higher A/E claim termination ratios (compared to males) for Genitourinary. Males, on the other hand, seem to have a better recovery rate than females (relative to 1985 CIDA) in disabilities resulting from Digestive and Respiratory conditions.

Table XI.j displays results by diagnosis and issue state group.

Table XI.j				
A/E Claim Terminations (by Amount) by Diagnosis Group				
By Benefit Period				
Study Period: 1/1/90 to 12/31/07				
Diagnosis Group	California	Florida	Other	Total
Other Musculoskeletal	49%	34%	53%	51%
Cancer	63%	60%	74%	72%
Circulatory	51%	31%	52%	49%
No Classifiable Diagnosis	50%	42%	58%	56%
Back	37%	30%	46%	43%
Mental Disorder	39%	34%	35%	35%
Congenital/Perinatal	122%	115%	123%	122%
Digestive	89%	61%	72%	73%
Other Injury	52%	41%	58%	56%
Nervous System	32%	22%	25%	26%
Alcohol & Drug	55%	48%	63%	60%
Genitourinary	90%	60%	90%	88%
Respiratory	53%	42%	62%	59%
Other Diagnosis	46%	36%	49%	47%
Total	52%	37%	56%	53%

Section VIII highlighted that Florida has materially lower claim termination rates. Table XI.j displays that this fact is true across all diagnoses. However, it appears that Cancer claims terminate at a relatively faster rate when compared to the state average (60% of 1985 CIDA vs. an average of 37% of 1985 CIDA).

Section IV mentioned that Occupation Class M had significantly lower termination rates than Occupation Classes 1 and 2-4. Table XI.k shows that this relationship is true for most diagnosis groups.

Table XI.k A/E Claim Terminations (by Amount) by Diagnosis Group By IDEC Occupation Class Study Period: 1/1/90 to 12/31/07				
Diagnosis Group	Class M	Class 1	Classes 2-4	Total
Other Musculoskeletal	42%	55%	67%	51%
Cancer	64%	78%	69%	72%
Circulatory	42%	53%	64%	49%
Back	33%	52%	55%	43%
Mental Disorder	36%	34%	42%	35%
Congenital/Perinatal	124%	120%	115%	122%
Digestive	66%	73%	91%	73%
Other Injury	47%	59%	76%	56%
Nervous System	22%	29%	34%	26%
Alcohol & Drug	60%	60%	56%	60%
Genitourinary	87%	81%	112%	88%
Respiratory	52%	64%	59%	59%
Other Infectious Diseases	48%	46%	51%	47%
Other Diagnosis	34%	52%	54%	43%
Total	45%	54%	61%	51%

Table XI.I shows actual versus expected termination experience by diagnosis group and benefit period. The anti-selective nature of the insured that purchase contracts with a Lifetime benefit period is on display in this table as the lower termination rate is across most diagnosis groups.

Table XI.I A/E Claim Terminations (by Amount) by Diagnosis Group By Benefit Period Study Period: 1/1/90 to 12/31/07				
Diagnosis Group	Lifetime	To Age 65-70	Short-Term	Total
Other Musculoskeletal	40%	51%	69%	78%
Cancer	61%	73%	74%	80%
Circulatory	39%	48%	69%	81%
Back	33%	43%	55%	76%
Mental Disorder	33%	36%	37%	90%
Congenital/Perinatal	103%	129%	104%	80%
Digestive	60%	71%	107%	73%
Other Injury	46%	57%	73%	56%
Nervous System	21%	26%	42%	26%
Alcohol & Drug	60%	59%	67%	60%
Genitourinary	71%	85%	117%	88%
Respiratory	53%	58%	64%	59%
Other Infectious Diseases	24%	50%	61%	47%
Other Diagnosis	36%	44%	57%	43%
Total	40%	51%	66%	51%

It is interesting to note that claims with Lifetime benefit periods have lower claim termination rates for all diagnosis groups than claims with shorter benefit periods. This is additional evidence that the presence of the Lifetime benefit period negatively affects claim experience.

The typical Accident & Sickness contract sold today has a 90-day elimination period. Although not present in most of the exposure for this study, it is now more common that the current typical contract would include provisions limiting the benefits being paid for certain conditions to two years (e.g., Mental Disorders). Table XI.m highlights the shift in distribution of claims by diagnosis at time of satisfying the elimination period (i.e., at onset of the claim) and the distribution at the end of the second year of the claim.

<p align="center">Table XI.m Distribution of Claims (by Amount) at Incidence Time and After Two Years on Claim By Diagnosis Group; 90 Day Elimination Period Only Study Period: 1/1/90 to 12/31/06</p>			
Diagnosis Group	Proportion of Incidence at Onset	Two-Year Claim Continuation	Proportion of Claims Still Disabled after Two Years
Other Musculoskeletal	20.1%	50.6%	19.2%
Cancer	14.7%	39.6%	11.0%
Circulatory	14.5%	56.3%	15.4%
Back	10.3%	56.3%	11.0%
Mental Disorder	10.2%	71.0%	13.7%
Nervous System	8.3%	79.2%	12.4%
Alcohol & Drug	5.2%	44.6%	4.4%
Congenital/Perinatal	3.6%	1.9%	0.1%
Other Injury	3.1%	46.9%	2.8%
Digestive	2.1%	38.5%	1.5%
Other Diagnosis Groups	8.1%	56.3%	8.6%
Total	100.0%	53.1%	100.0%

It is interesting to note that Mental Disorders are the 5th ranked diagnosis group at onset, representing 10% of the claims, but then two years later, they represent 14% of the claims and are 3rd ranked in the distribution of those remaining claims.

Section XII: Claim Incidence Experience by Smoker Status

This section discusses the impact of Smoker status on claim incidence. Many contributors were able to split experience into Smoker and Non-smoker categories. Experience is summarized combining Smoker status with a number of other key variables. Specifically, this section examines the impact on Smoker/Non-smoker claim incidence experience from contract type, occupation class, gender, and elimination period.

Claim Incidence Experience by Smoker Status

Table XII.a shows the relative exposure by amount split between Smoker and Non-smoker status and their respective A/E claim incidence ratios (by amount) over the 1/1/90-12/31/06 study period.

Table XII.a			
Exposure Percent and			
A/E Claim Incidence Ratios (by Amount)			
Smoker Status and Contract Type			
Study Period: 1/1/90 – 12/31/06			
A&S Contracts			
Smoker Status	% of Exposure	A/E	Smoker/Non-smoker
Non-smoker	82%	82%	1.15
Smoker	6%	94%	
Unknown	12%	64%	
Total	100%	79%	
OE Contracts			
Smoker Status	% of Exposure	A/E	Smoker/Non-smoker
Non-smoker	81%	53%	1.32
Smoker	4%	70%	
Unknown	15%	43%	
Total	100%	52%	

Claim incidence experience for A&S contracts is lower for the Non-smoker population than the Smoker segments. The OE contracts exhibit lower A/E ratios and wider variance within the segments. The vast majority of experience resides in the Non-smoker segment.

Table XII.b shows the average A/E claim incidence ratios by occupation class for A&S contracts.

<p align="center">Table XII.b A/E Claim Incidence Ratios (by Amount) by Smoker Status For A&S Contracts By Occupation Class Study Period: 1/1/90 – 12/31/06</p>			
Occupation Class	Non-smoker	Smoker	Smoker/Non-smoker
1	68%	97%	1.44
2	75%	84%	1.12
3	49%	56%	1.14
4	61%	59%	0.97
M	110%	147%	1.34
Total	82%	94%	1.15

The results indicate a clear distinction in incidence experience for the Occupation Classes M and 1 versus the remaining three occupation classes, which fall into a much narrower range. As a result of this phenomenon and the high concentration of data for Occupation Class 1, the remaining tables combine Occupation Classes 2-4 into a single grouping. The ratio of Smoker to Non-smoker incidence is much higher for Occupation Classes 1 and M than the ratio for Occupation Classes 2-4.

Table XII.c shows the relative exposure and average A/E claim incidence ratios by amount and occupation class.

Table XII.c			
Exposure Percent and			
A/E Claim Incidence Ratios (by Amount)			
For A&S Contracts by Smoker Status and Occupation Class			
Study Period: 1/1/90 – 12/31/06			
	Occupation Class M		
Smoker Status	% of Exposure	A/E	Smoker/Non-smoker
Non-smoker	86%	110%	1.34
Smoker	3%	147%	
Unknown	11%	84%	
Total	100%	107%	
	Occupation Class 1		
Smoker Status	% of Exposure	A/E	Smoker/Non-smoker
Non-smoker	81%	68%	1.44
Smoker	7%	97%	
Unknown	12%	69%	
Total	100%	70%	
	Occupation Classes 2-4		
Smoker Status	% of Exposure	A/E	Smoker/Non-smoker
Non-smoker	72%	65%	1.06
Smoker	9%	69%	
Unknown	19%	50%	
Total	100%	61%	

The ratio of Smoker to Non-smoker classification is 134% in the Occupation Class M category, and 144% in Occupation Class 1, although exposure is heavily weighted to Non-smokers. In contrast, the amount of increased incidence due to the Smoker status is much less pronounced in the Occupation Classes 2-4 category.

Table XII.d shows the average A/E claim incidence ratios by gender and occupation class for A&S contracts.

Table XII.d A/E Claim Incidence Ratios (by Amount) by Smoker Status For A&S Contracts By Occupation Class and Gender Study Period: 1/1/90 – 12/31/06			
	Occupation Class M		
Gender	Non-smoker	Smoker	Smoker/Non-smoker
Male	114%	166%	1.45
Female	98%	113%	1.14
Total	110%	147%	1.34
	Occupation Class 1		
Gender	Non-smoker	Smoker	Smoker/Non-smoker
Male	69%	104%	1.52
Female	65%	82%	1.27
Total	68%	97%	1.44
	Occupation Classes 2-4		
Gender	Non-smoker	Smoker	Smoker/Non-smoker
Male	66%	72%	1.09
Female	64%	62%	0.97
Total	65%	69%	1.06

These results illustrate that the differences in incidence experience for Smokers versus Non-smokers is greater for Males than Females in all Occupation Classes.

Table XII.e shows the average A/E claim incidence ratios by elimination period for A&S contracts.

Table XII.e A/E Claim Incidence Ratios (by Amount) by Smoker Status For A&S Contracts By Elimination Period Study Period: 1/1/90 – 12/31/06			
Elimination Period	Non-smoker	Smoker	Smoker/Non-smoker
<30	58%	60%	1.03
30	75%	78%	1.04
60	61%	71%	1.16
90	96%	112%	1.17
180	76%	110%	1.45
>180	95%	164%	1.73
Total	82%	94%	1.15

Generally, the pattern of higher incidence experience at elimination periods of 90 days and greater appears relatively consistent when segmenting the data by Smoker status. An interesting phenomenon occurs in the 30 days and under elimination period where Smoker experience is near the corresponding Non-smoker experience.

Table XII.f shows the average A/E claim incidence ratios by attained age and occupation class for A&S contracts.

Table XII.f A/E Claim Incidence Ratios (by Amount) by Smoker Status For A&S Contracts By Occupation Class and Attained Age Study Period: 1/1/90 – 12/31/06			
Attained Age	Occupation Class M		
	Non-smoker	Smoker	Smoker/Non-smoker
<30	97%	134%	1.37
30-34	135%	128%	0.94
35-39	123%	146%	1.19
40-44	109%	138%	1.27
45-49	103%	155%	1.51
50-54	107%	156%	1.46
55-59	114%	140%	1.23
60-64	101%	151%	1.49
Total	110%	147%	1.34
Attained Age	Occupation Class 1		
	Non-smoker	Smoker	Smoker/Non-smoker
<30	93%	119%	1.28
30-34	99%	127%	1.28
35-39	85%	124%	1.46
40-44	72%	108%	1.52
45-49	65%	97%	1.50
50-54	63%	93%	1.49
55-59	63%	92%	1.45
60-64	57%	77%	1.35
Total	68%	97%	1.44
Attained Age	Occupation Classes 2-4		
	Non-smoker	Smoker	Smoker/Non-smoker
<30	69%	66%	0.96
30-34	72%	66%	0.91
35-39	69%	66%	0.95
40-44	64%	71%	1.11
45-49	61%	68%	1.11
50-54	63%	71%	1.14
55-59	67%	74%	1.11
60-64	67%	72%	1.07
Total	65%	69%	1.06

For Occupation Class 1 and Occupation Class M, the ratio of Smoker to Non-smoker claim incidence is relatively level with increases in attained age (generally 120% to 150%). The ratio is much less pronounced for Occupation Classes 2-4, with attained ages under 40 actually exhibiting a lower Smoker incidence than Non-smokers. This may be due in part to the relatively high level of claims resulting from accidents at these younger ages that are not affected by smoking habits.

APPENDIX A

List of Contributors

1990s & 2000s

- Ameritas Life Insurance Corporation
- Berkshire Life Insurance Company of America
- Illinois Mutual Life Insurance Company
- Massachusetts Casualty Insurance Company
- Massachusetts Mutual Life Insurance Company
- Monarch Life Insurance Company/Penn Mutual Life Insurance Company
- Northwestern Mutual Life Insurance Company
- Paul Revere Life Insurance Company
- Principal Financial Group
- Provident Life & Accident Insurance Company
- Unum Group

2000s Only

- Connecticut Mutual Life Insurance Company
- Guardian Life Insurance Company
- Mutual of Omaha Insurance Company
- RiverSource Life Insurance Company
- Standard Life Insurance Company