

The Real Risk of Disability
In the United States

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Introduction

The risk of becoming disabled is often poorly understood. For a male, age 35, employed in a white collar occupation, the risk of becoming disabled for at least 90 days before reaching age 65 is over twice the risk of dying during that time period. For females, the risk of becoming disabled relative to dying is over three times.

Although the probability of suffering a disability is significantly greater than dying before age 65, the segment of the population that is covered by group or individual disability insurance is roughly one half the size of the segment covered by life insurance. This suggests that many workers do not understand or appreciate the very significant risk of becoming disabled or the financial consequences that can arise from a disability.

The Life and Health Insurance Foundation for Education (LIFE) has engaged Milliman, Inc. to write a paper highlighting the risk of suffering a disability in the U.S. This report focuses on the results of the Individual Disability Experience Committee (IDEC) of the Society of Actuaries (SOA), which has analyzed the experience of individual disability income (IDI) policies during the 1990s. The IDEC is in the process of developing new industry disability table to replace the 1985 Commissioner's Individual Disability A (85 CIDA) table, which is the current industry standard and based on industry experience of the 1970s and early 1980s. The IDEC study has offered many insights regarding the disability risk in the U.S. insured population, which are highlighted in this report.

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Highlights

The 1990s were a time of significant changes in disability trends. The IDEC study has been able to quantify many aspects of the disability experience of that era, which has become critical information for anyone involved in managing the risk and cost of disability. The following are some of the highlights of the IDEC study discussed in this report.

- The probability that a person in a professional, executive or white collar (non-medical) occupation will be disabled sometime between the ages of 35 and 65 is 27% for males and 31% for females.
- On the other hand, the average length of male claims is significantly longer than for female claims. The average length of claim for both sexes is considerably longer than expected under the 85 CIDA table.
- Claim incidence for non-medical occupations improved consistently during the 1990s due in part to an expanding economy, tighter underwriting and more conservative contractual provisions on new business.
- Disability experience associated with the medical occupations was poor enough to deserve its own occupation classification. These professions experience substantially higher incidence and lower claim termination rates than most other professional, executive or white collar occupations.
- Policies with lifetime benefits experience both higher claim incidence and lower claim terminations than policies with benefit periods to age 65 or shorter, which is one of the clearest examples of anti-selection encouraged by rich product designs.
- Female incidence rates continue to be higher than male incidence rates, although the differences decrease with age.
- Although pregnancy related claims are a major component of female claim incidence under age 40, the IDEC analysis shows that female incidence is greater than male incidence in almost all other diagnosis groupings as well.
- Cardiovascular conditions are the leading cause of male claims in their 50s, followed by musculoskeletal conditions and then cancer.
- For females in their 50s, the incidence rates for cardiovascular, musculoskeletal and cancer claims are very close and are the most prevalent types of claims.

Individual Disability Experience Trends in the U.S.

In 2005, the IDEC developed a preliminary table from its analysis of industry IDI experience during the 1990's. The final IDEC table, which is under development, will serve as the basis of a new industry standard for calculating statutory minimum reserves. A comparison of the IDEC preliminary table to the 85 CIDA table measures how and where IDI experience since the 1970's and early 1980's has changed.

The IDI Risk

The insured population for IDI has certain characteristics that affect the level of disability experience and that are not representative of the general population:

- The insured population for the most part is employed and earns a higher level of income on average.
- Insureds must undergo some form of underwriting when the policies are issued to ensure that they are healthy and employed at that time.
- Economic factors (e.g., recessions and economic expansions) can affect the level of claim incidence and termination rates.
- IDI contracts that provide more generous benefits or policy provisions typically invite higher incidence and lower terminations.

IDI contracts require that the insured must be unable to perform the material and substantial duties of his or her occupation due to an accident or sickness, or words to this effect, to receive disability benefits. Within this general definition of disability, there are considerable variations among contracts. Some may require loss of income, some may require that the claimant not be gainfully employed, and others may change the definition of occupation from the claimant's regular occupation at the time of disablement to one that he or she may be qualified to do, based on education, training, or experience.

Risk Classifications

The 85 CIDA table separated claim experience by age, sex, waiting period (i.e., the time that an insured must be disabled before receiving benefits) and occupation class. The four occupation classes are:

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

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

Class 3: Non-hazardous work with light manual duties.

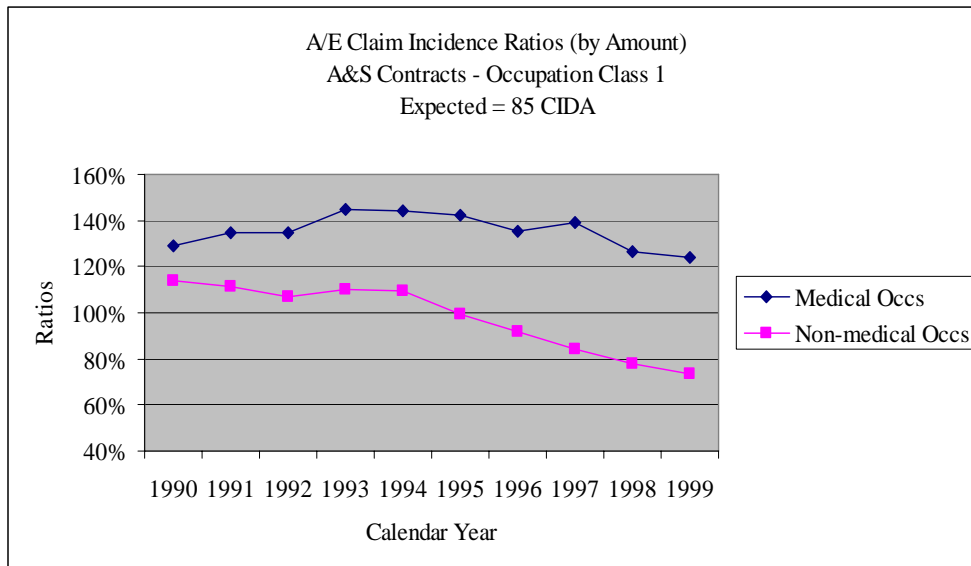
Class 4: Hazardous work with heavy manual labor or using heavy equipment.

Most medical professions were included in Class 1 when the 85 CIDA table was developed. Because of the economic factors affecting medical professions during the 1990s and their impact on claim experience of these professions, the IDEC decided to group all medical occupations, which had generally been Class 1 risks, into a separate class (Class M) for the purpose of studying experience. As a result, the IDEC table has 5 occupation classes.

The Probability of Becoming Disabled

Non-medical occupations experienced a 35% drop in claim incidence rates between 1990 and 1999. Medical occupations experienced increasing claim incidence ratios between 1990 and 1995 and moderately decreasing claim incidence thereafter. Chart 1 shows the overall claim incidence experience by year during the 1990s relative to the expected incidence based on the 85 CIDA table.

Chart 1



The improving claim incidence for the non-medical occupations could have been attributable to a combination of improved health, economic expansion, and tighter underwriting and contractual provisions on newly issued business. As mentioned above, the IDEC table is based on average experience over the full 10-year period. Thus, if current claim incidence experience is similar to the level experienced in the second half of the 1990s, then the IDEC table may contain some margin.

Table 1 compares overall claim incidence rates between the IDEC and 85 CIDA tables, by age, sex and Occupation Class 1 and M (IDEC only). The values show that the incidence rates for IDEC Class M (i.e., medical occupations formerly included in 85 CIDA Class 1) are significantly higher than those for 85 CIDA Class 1, while the values for IDEC Class 1 (i.e., non-medical occupations formerly included in 85 CIDA Class 1) are similar to, and sometimes lower than, those for 85 CIDA Class 1.

Table 1 Annual Claim Incidence Rate per 1,000 Disabilities Lasting At Least 90 Days			
Age	85CIDA - Class 1		
	Male	Female	Female/Male
25	1.87	3.69	197%
35	1.64	5.28	322%
45	3.35	8.75	261%
55	8.58	11.77	137%
62	16.38	16.10	98%
Age	IDEC - Class 1		
	Male	Female	Female/Male
25	1.63	5.68	349%
35	2.09	6.11	293%
45	3.49	6.55	188%
55	7.02	10.08	144%
62	11.82	14.52	123%
Age	IDEC - Class M		
	Male	Female	Female/Male
25	2.29	8.75	382%
35	2.96	10.19	344%
45	6.09	9.97	164%
55	13.61	14.39	106%
62	23.38	21.95	94%

Table 2 shows the probability of a person who is active at age 35 becoming disabled for at least 90 days before reaching age 65 based on the 85CIDA and IDEC tables.

Table 2 Probability of an Active Person Age 35 Becoming Disabled for at Least 90 Days Before Reaching Age 65			
Occupation Class	Disabled Before 65		
	CIDA	IDEC	IDEC/CIDA
Males			
Class M	29.2%	37.2%	127%
Class 1	29.2%	26.7%	91%
Class 2	43.2%	33.3%	77%
Class 3	54.7%	41.0%	75%
Class 4	57.5%	51.0%	89%
Females			
Class M	34.3%	40.1%	117%
Class 1	34.3%	31.2%	91%
Class 2	45.3%	37.1%	82%
Class 3	55.1%	49.7%	90%
Class 4	58.3%	61.6%	106%
NOTE: For 85 CIDA, there is no distinction between Class 1 and Class M			

Table 2 shows that, except for the medical professions, the overall probability of becoming disabled based on the IDEC table has generally decreased relative to the 85CIDA table. As a result of deteriorating experience on medical professions, many disability insurers have placed medical occupations into their own class or classes with higher rates for new business.

Expected Length on Claim

The IDEC study determined that the probabilities of claims recovering decreased significantly since the 85 CIDA table was developed, particularly in the early years of a disablement when expected claim termination rates are the highest. Lower claim termination rates mean that IDI claimants have remained disabled longer on average than was anticipated in the 85 CIDA table. Table 3 compares the average length of claim following a 90-day waiting period between the 85 CIDA and IDEC tables for occupation Classes M and 1.

Table 3 Average Length of Claim For Disabilities Lasting at Least 90 Days (in Years)						
Occupation Class	Disabled at Age 35			Disabled at Age 45		
	IDEC	85 CIDA	IDEC/ 85 CIDA	IDEC	85 CIDA	IDEC/ 85 CIDA
	Males					
Class M	7.52	3.98	189%	7.81	4.16	188%
Class 1	5.92	3.98	149%	6.56	4.16	158%
	Females					
Class M	4.87	3.75	130%	7.05	3.95	178%
Class 1	3.65	3.75	97%	5.91	3.95	149%

NOTE: For 85 CIDA, there is no distinction between Class 1 and Class M

The proportional increase in the average length of claim was generally greater for males than females and for medical occupations than the white collar, executive, and other professional occupations.

Other Claim Trends

The IDEC study identified a number of other factors affecting disability experience, such as the following:

1. Policies with lifetime benefit periods experience both higher claim incidence and lower claim termination rates. This is a clear example of anti-selection associated among people choosing to purchase more generous contracts and benefits and was observed among most medical and non-medical occupations. Few disability carriers still offer lifetime benefit periods.
2. Similarly, policies with cost-of-living riders experience lower claim termination rates, although claim incidence rates do not appear to be materially affected by these riders.
3. Disability incidence and claim termination rates vary by state of residence, a trend that is likely due to a variety of factors, including economic trends, demographics, health issues, legal environment, and others. California and Florida are the two states with trends that differ most widely from nationwide experience. Both states have significantly higher claim incidence rates than the combined experience of all other states for Occupation Class 1. In the other occupation classes, Florida claim incidence rates are somewhat lower than the experience of other states, but California incidence remains relatively high. On the other hand, Florida claims experienced significantly lower claim termination rates, while California claim termination experience was in line with the rest of the country.

4. Significant differences in claim incidence experience exist among Individually Sold business, Employer Sponsored multi-life business, and business purchased through Association endorsements. In Class 1, Employer Sponsored claim incidence was 80% of Individual claim incidence: 62% for Non-medical occupations and 96% for Medical occupations. Overall, Association claim incidence for Class 1 was 130% of Individual claim incidence.

Diagnosis Differences in IDI Claim Experience

The IDEC study was able to relate claim incidence and termination experience by diagnosis. Because of the preponderance of possible diagnosis codes, the IDEC defined 10 diagnostic groupings that would contain medical conditions causing most of the disabilities. In this section, the charts reflect experience on policies with waiting periods of 90 days, meaning that only those disabilities lasting 90 days or longer are included in the analysis.

Prevalent Diagnosis Groupings by Age

Chart 2 provides the average incidence rates related to 9 diagnosis groupings for males in Class 1 at three age ranges, 30-39, 40-49 and 50-59. The incidence rates for all groupings, except AIDS, increase with age, with cardiovascular, musculoskeletal and cancer claim incidence growing the fastest. Cardiovascular claim incidence is the most pre-common cause for disability for ages 50-59, significantly higher than either musculoskeletal or cancer claims.

Chart 2

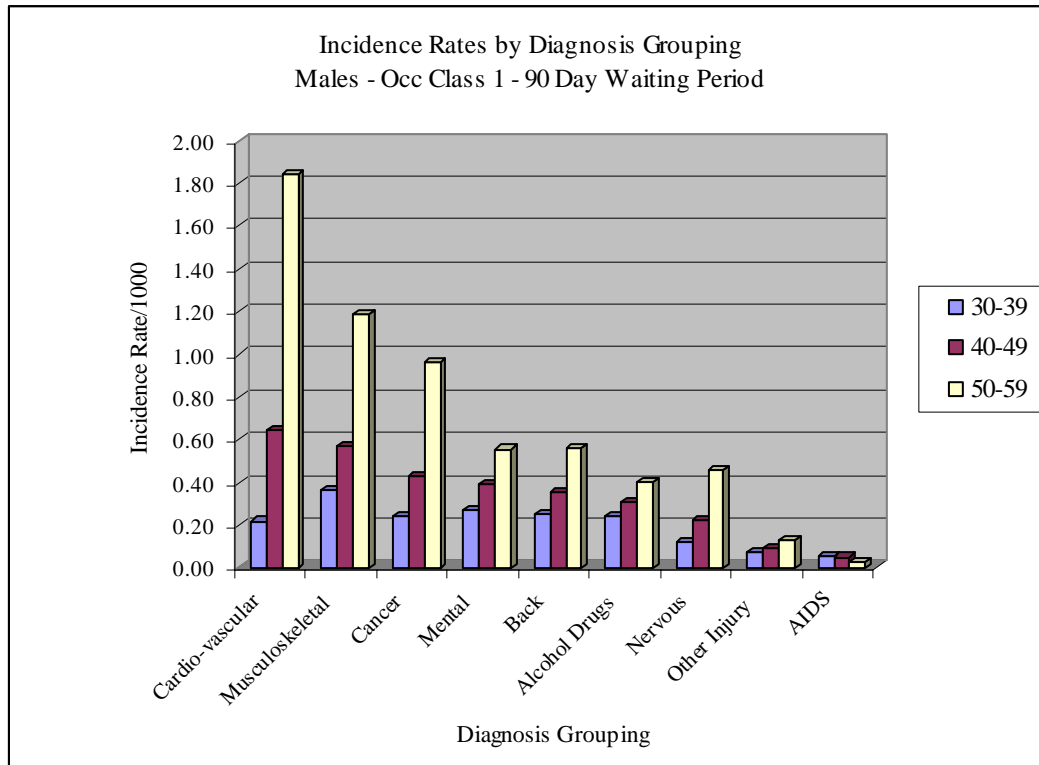
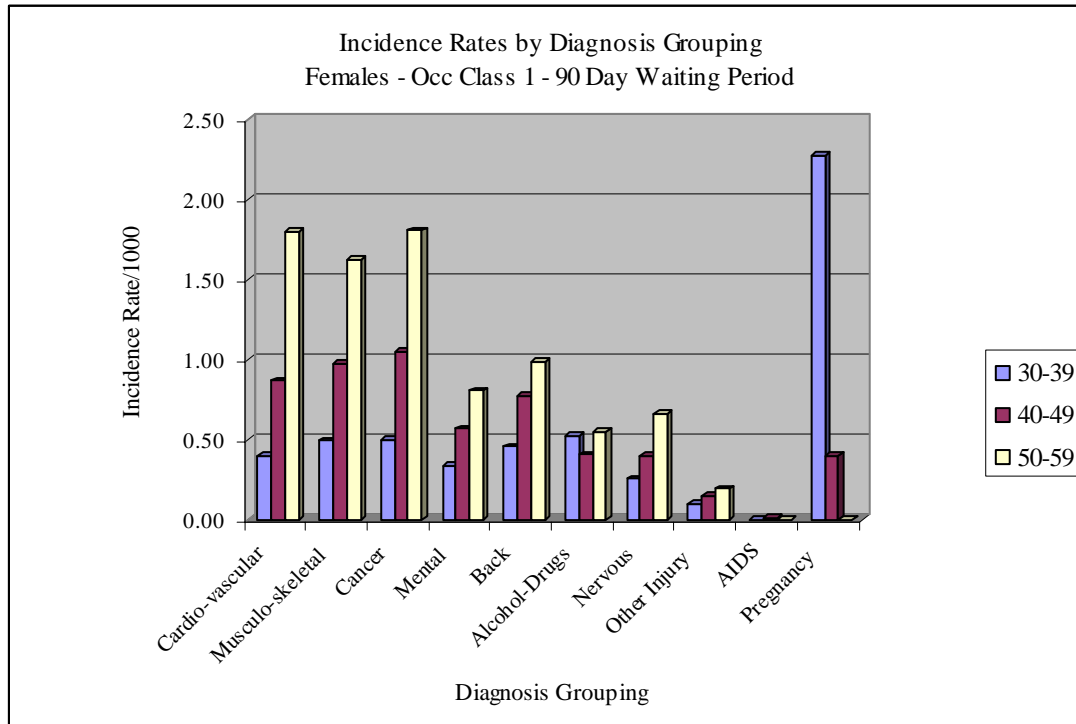


Chart 3 shows the average incidence rates related to 10 diagnosis groupings for females in Class 1 at the three age ranges. For females age 30-39, disabilities due to pregnancy (which are mainly complications of pregnancy) are the most prominent claim type. For

ages 40-49 and 50-59, cardiovascular, musculoskeletal and cancer claims have the largest incidence rates. Unlike males where cardiovascular claims are the most prominent, claims due to cardiovascular, musculoskeletal and cancer conditions are quite comparable for ages 40 to 59.

Chart 3



Diagnostic Grouping by Sex

Both the 85 CIDA and IDEC tables show higher incidence for females than males at most ages, but with a significantly shorter average length of claim for females. This leads to the question of whether the differences between male and female incidence are attributable to certain medical conditions. Charts 4, 5 and 6 compare the incidence by diagnosis (excluding pregnancies) between the sexes at the three age ranges.

Chart 4

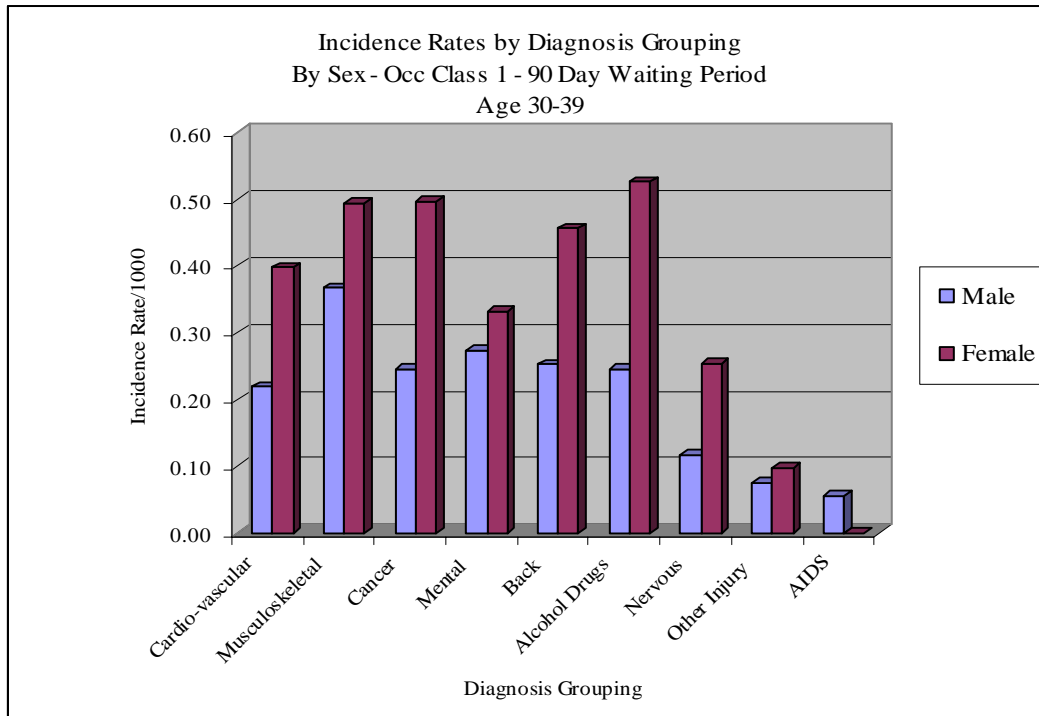


Chart 5

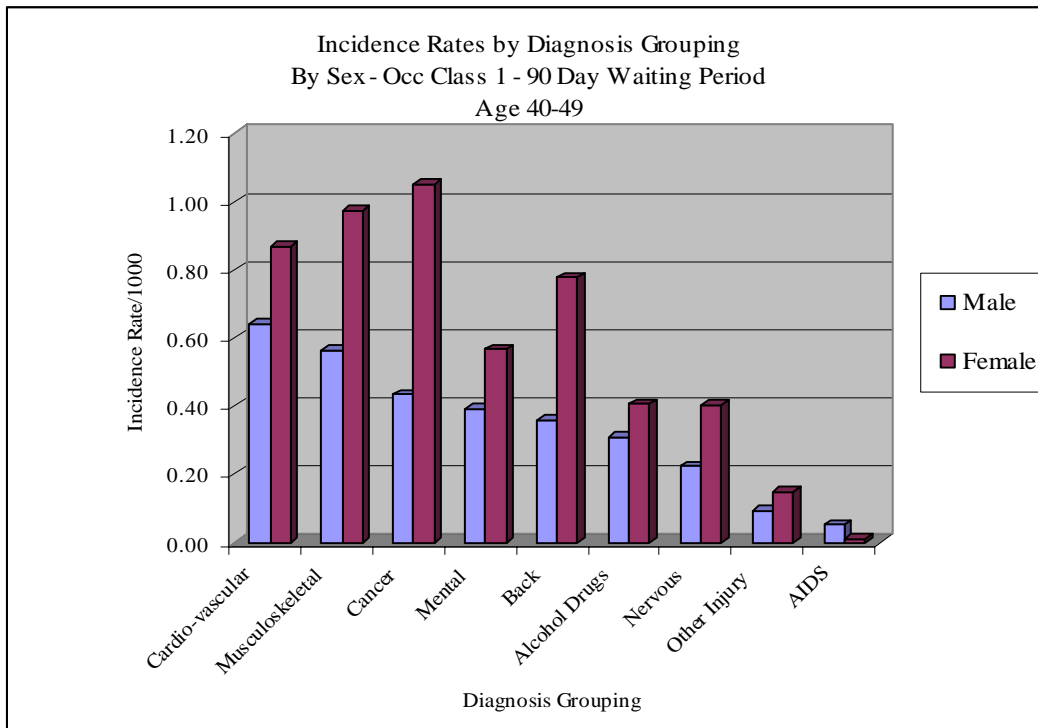
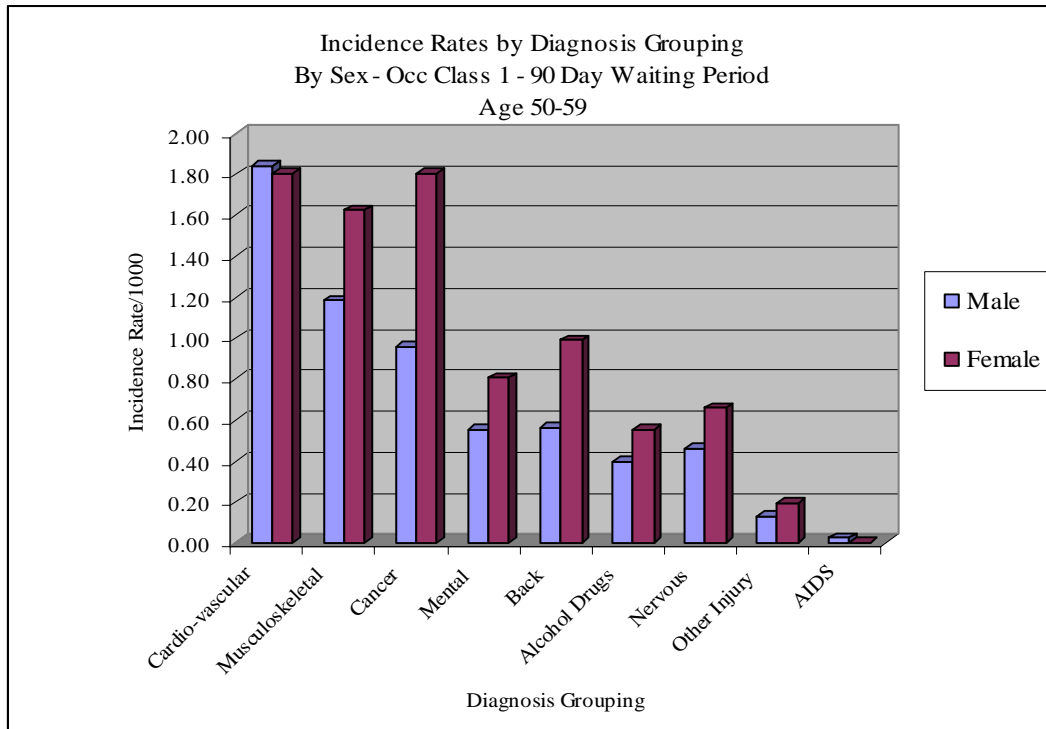


Chart 6



Except for AIDS claims in all age groups and cardiovascular claims in ages 50-59, female incidence for each of the diagnostic groupings exceeds male incidence by a significant margin. Cancer incidence rates for females exceed cancer incidence rates for males by the widest margin among the diagnosis groupings for ages 40-49 and 50-59, second only to alcohol and drugs at ages 30-39.

Conclusion

The results from the IDEC study provide a wealth of information on disability risk, including a much greater understanding of the underlying factors that affect claim incidence rates and claim termination rates. For example, the IDEC study indicates that claim incidence rates on individual disability policies generally decreased during the 1990's. One reason for this trend could be medical advances in treating conditions such as cancer and cardiovascular disease, although other factors (including stricter underwriting by the insurers who sold the policies) were certainly important as well.

The study also shows that the average length of a disability claim in the 1990's was significantly longer than the average length of a claim in the 1970's and early 1980's. This pattern might be the result of a reduction in claims for cancer and cardiovascular conditions, which tend to be shorter in length, and an increase in claims for psychiatric and musculoskeletal conditions, which tend to be longer in length. It might also be a reflection of the more generous benefits provided by individual disability insurance policies in the 1990's, relative to the 1970's and early 1980's, which make it easier for a claimant to remain away from work without experiencing a significant loss of income.

Finally, the study offers insight on differences in disability experience for some particular risk segments. For example, medical occupations, which were once thought to have experience consistent with other 85 CIDA Class 1 occupations, actually experience higher claim incidence rates and lower claim termination rates than the non-medical occupations in 85 CIDA Class 1.

Disability insurers will be able to use the information from the IDEC study in pricing their policies more accurately and in setting aside appropriate reserves for the payment of future benefits. Likewise, disability consumers will have a better understanding of the risks of disability that they face, and they will be able to make more informed decisions about the type of insurance coverage that will be most valuable to them.