

## SOCIETY OF ACTUARIES



## COMMITTEE ON CONTINUING EDUCATION

## Individual Disability Income

### Overview

Disability income coverage was first introduced as a separate contract in the U.S. in the late nineteenth century. From the earliest policies, which offered limited disability benefits with the company retaining the right to cancel or increase rates, the historical development of individual disability has been one of general improvements in the quality of benefits and rights of policyholders. This trend has not been smooth. The impact of a depression, various recessions and competition, interspersed with periods of favorable experience, caused companies to alternatively expand and contract their policy provisions.

In the 1960's and 1970's, both state and federal governments began providing disability income benefits. These programs, together with rapidly growing group disability products, reduced substantially a major part of the middle income and blue-collar markets. This left the professional and executive occupations as the primary target markets for most carriers. The U.S. market was at that time dominated by four companies that specialized in selling individual disability products through both career agencies and independent brokers.

Influenced by favorable experience and low penetration in this target market and shrinking margins in individual life insurance, many other companies entered or re-entered the individual disability market in the early 1980's. The result was a flurry of aggressive competitive activity, more liberal policy provisions, underwriting rules, and lower rates. By 1986, many companies saw the consequences of this activity materializing in the form of deteriorating loss ratios. The late 1980's and the 1990's have so far witnessed tighter underwriting and higher rates as companies strive to regain their margins.

The overall market for individual disability insurance compared to that for individual life insurance is small. Total individual disability premium income is estimated to be about \$3.0 billion with the annual premium on new sales approximately \$500 million. Business is concentrated in relatively few companies. The top ten writers of individual disability income have over 65% of the total industry premium.

### The Actuary's Role

Individual disability insurance consists of numerous policy forms with a variety of provisions, definitions of disability, benefit periods, and elimination periods. Unlike life insurance, the risk does not cease when the insured becomes disabled. The complexity of the business and the potential volatility of the results demand that the actuary be proactively involved in most aspects of the business, including marketing, underwriting, claim management, product design, pricing, valuation, financial reporting, and monitoring. The individual disability actuary is seldom without challenging problems. The claim experience in the 1980's and the underlying contract provisions changed dramatically, making industry disability tables and standards quickly out-of-date. The quality of disability data bases maintained by individual companies varies considerably with only a few having sufficient experience to achieve some level of credibility. The individual disability actuary must often base his or her decisions on best judgment with little objective data. Adding to the list of challenging problems is that for a company to achieve a reasonable profit margin, its loss ratios must emerge as close to the statutory minimums as possible and expense ratios must be maintained correspondingly low. The individual disability actuary must not only be strong technically but also a sound business person.

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## INTRODUCTION

A good historical perspective of the individual disability income business can be found in two sources: *Disability Income Insurance—The Unique Risk* by Charles E. Soule and *The Disability Newsletter*, published by Milliman and Robertson, Inc. Mr. Soule's book discusses a wide range of topics pertaining to individual disability. *The Disability Newsletter* was founded by John H. Miller, past-president of the S.O.A. and a very knowledgeable and influential actuary in the field of disability income. It is now published by the Minneapolis office of Milliman & Robertson, consulting actuaries. Both sources will be referred to frequently throughout this guide.

C.E. Soule, *Disability Income—The Unique Risk*, Chapter 1 ("Historical Highlights & Developments"), p. 1, Second Edition, Business One Irwin, Homewood, IL, 1989.

The history and development of the individual disability business in the U.S. are described from the 1890's to the 1980's.

Level: Basic Pages: 21

J.H. Miller, *The Disability Newsletter*, No. 34 (Aug. 1982), "Evolution of Noncancellable—The Third Generation of Disability Policies," No.35, (Nov. 1982)." History," No. 37 (May 1983) "History of Noncan", Milliman & Robertson, Inc. 8500 Normandale Lake Boulevard, Suite 1850, Minneapolis, Minnesota 55437.

Mr. Miller's actuarial career began in the 1920's, and thus he witnessed many of the developments he discusses in this series of articles. He expressed considerable concern over product changes in the early 1980's.

Level: Basic Pages: 19

W.D. Kidwell, *Health Section News*, No. 9 (May, 1987), "Kidwell Recounts Checkered History of Disability Income," Society of Actuaries.

This article discusses the importance of control in the management of disability income insurance, where it is needed, and how it may be lost through the power of unsound competition and its consequences.

Level: Intermediate Pages: 4

## INDIVIDUAL DISABILITY INCOME MARKETS

The primary markets for individual disability income in the U.S. are the professional, executive and white collar occupations. The primary product form is noncancellable, which guarantees both renewability and rates. The resources described below discuss these markets in more detail, particularly the differences between the life insurance and individual disability markets.

C.E. Soule, *Disability Income—The Unique Risk*, Chapter 3 ("Stability and Motivation"), p. 22, Chapter 8 ("Sales and Marketing"), p. 73.

Chapter 3 discusses factors that affect stability and motivation in the individual disability market, e.g., government programs, economy, occupation, and over-insurance. Chapter 8 discusses such topics as markets, distribution, and competition.

Level: Basic Pages: 16

F.T. O'Grady, editor, *Individual Health Insurance*, Chapter 8 "Selling Individual Health Insurance" by N.J. Abkemeier, p. 159, Society of Actuaries, 1988.

This textbook is on the S.O.A. exam syllabus and will be referenced frequently in this guideline. It is a compilation of chapters written by different authors on a variety of topics pertaining to individual health insurance. Disability income is covered along with other individual health products. Chapter 8 discusses markets, products, channels, and compensation.

Level: Basic Pages: 9

Life Insurance Marketing Research Association (LIMRA), *The Disability Income Buyer—a Market Study of New Individual Policies*, a 1987 Report, I/R Code 84.00, 8 Farm Springs, Farmington, Connecticut 06032.

This report describes female and male buyers of disability income insurance and the products they buy. The survey includes 6,489 policies sampled by 27 companies in 1986.

Level: Basic Pages: 29

LIMRA, *Individual Health Issues and In Force Survey—United States and Canada*, a 1992 Report, I/R Code 40.90.

This LIMRA report is an annual survey of competitors' new and in-force individual health business. Noncancellable and guaranteed renewable disability business is reported separately.

Level: Basic Pages: 59

Health Insurance Association of America, (HIAA)

*Compensation Systems Available to Disabled Persons in the United States.* Health Insurance Institute, Washington, D.C. 1979.

This is a report of the research subcommittee of the Disability Insurance Committee of the HIAA. It is intended to increase the awareness, within the industry, of the multitude of systems available, the lack of coordination among them, and the effect that varying combinations could have on a person's income during a disability. In order to understand the individual disability market, we must be aware of the alternative forms of disability coverage and their impact on individual disability products.

Level: Basic Pages: 40

H.S. Lyman, *The Disability Newsletter*, No. 56 (May 1991), "Life Companies—Should We Stay in The Disability Business."

A number of companies have been reviewing the strategic fit of manufacturing their own individual disability products. This article reviews some of the advantages and disadvantages of underwriting individual disability insurance.

Level: Basic Pages: 2

## PRODUCT DESIGN AND PRICING

The variety of individual disability coverages, definitions of disability, and benefit options makes these products very complicated relative to individual life products. The resources described below provide a good background for sorting out the different products and options, as well as the basics on constructing, pricing, and filing these coverages.

F.T. O'Grady, editor, *Individual Health Insurance*, Chapter 3 ("Individual Disability Benefits" by W.D. Kidwell), p. 35. Chapter 4 "Individual Health Insurance Premiums" by W.F. Bluhm and S. Koppel, p. 57. Chapter 10 "Individual Health Insurance Policy Forms" by C. Habeck and M. Litow, p. 187, Appendices 2 and 3, p. 207.

Chapter 3 describes the major disability income benefit plans and the nuances of defining disability and determining eligibility. Chapter 4 discusses the process of gross premium formulation for individual health insurance including choice of data, modeling techniques, regulatory limitations, strategic limitations, and actuarial considerations. Chapter 10 discusses the basic requirements of well-constructed individual health insurance forms. The appendices provide copies of the Uniform Individual Accident and Sickness Policy Provision Law and Restatement of the NAIC Uniform Individual Accident and Sickness Policy Provision in Simplified Language.

Level: Intermediate Pages: 92

LIMRA, *The Financial Dynamics of Individual Long-Term Disability Income*, a 1986 Report, I/R Code 40.40.

A survey of individual disability income markets and product provisions of 98 U.S. and 12 Canadian companies in mid-1985. The survey also provides information on agent compensation.

Level: Basic Pages: 22

C.E. Soule, *Disability Income—The Unique Risk*, Chapter 6 ("Contractual Provisions and Benefits"), p. 48.

This chapter consists of a detailed description of all the various contract provisions and optional benefits found in typical individual disability income contracts.

Level: Basic Pages: 16

*Record, Society of Actuaries*, Vol. 9 (1983), No. 2,3, "Contractual Provisions and Extra Benefits", p. 407, p. 1151.

These two panel discussions provide insight into many of the issues that surrounded the controversial contract provisions introduced in the early 1980's, most of which are still found in current individual disability income contracts.

Level: Intermediate Pages: 48

E.P. Barnhart, *Transactions, Society of Actuaries (TSA)*, Vol. XII (1960), "Adjustments of Premiums Under Guaranteed Renewable Policies", p. 472.

This paper was written when the guaranteed renewable, adjustable premium policy was a relatively new concept in accident and sickness insurance. It provides a thorough discussion of the insurer's and insured's rights, contract provisions, and rate revision formulas.

Level: Advanced Pages: 54

A.L. Wilmes, *The Disability Newsletter*, No. 55 (Nov. 1990), "ARDI: The New Term in Disability Income."

This article discusses the market niche, actuarial considerations, and policy features around annually renewable term disability income insurance, which is a relatively new product in the individual disability market.

Level: Basic Pages: 2

J.D. Miller, *Health Section News*, No. 9 (May, 1987), "Universal Disability Income Also Pays for Health, LTC," Society of Actuaries.

This article describes the possible development of an universal disability income product and how its savings features might help to finance long term care insurance.

Level: Intermediate Pages: 2

E. Halpern, *TSA*, Vol. XXXI (1979), "An Approach to the Pricing of a Social Insurance Supplement to Disability Income Policies," p. 533.

A social insurance supplement is a disability income rider that pays an additional benefit if the insured is not receiving social security or other social insurance disability benefits. This paper provides a framework for the actuarial structure and discusses some of the problems encountered in the design and pricing of these riders.

Level: Intermediate

Pages: 14

National Association of Insurance Commissioners (NAIC), "Guidelines for Filing of Rates for Individual Health Insurance Forms", Model Regulation Services, April 1984, 120 West 12th St., Suite 1100, Kansas City, Missouri 64105.

These guidelines are promulgated by the NAIC to provide some uniformity among the states around filing requirements for individual health forms. However, a number of states have adopted their own versions or amendments. New York Regulation 62 provides a set of filing requirements.

Level: Intermediate

Pages: 10

## UNDERWRITING AND CLAIM MANAGEMENT

The underwriting and claim management processes for individual disability are significantly different from all other lines of insurance. A critical mistake is to assume they are only extensions of the individual life processes. The resources below clearly describe the major elements of these processes as they apply to individual disability insurance.

C.E. Soule, *Disability Income—The Unique Risk*, Ch. 7,9,10,11,12,14, 1988.

These chapters cover overinsurance, the disability application, underwriting tools, substandard underwriting, and the occupation schedule. Also, chapter 14 also discusses individual disability claim management.

Level: Basic

Pages: 61

F.T. O'Grady, editor, *Individual Health Insurance*, Ch. 6 ("Underwriting Individual Health Insurance" by J. Hadley), Ch. 7 ("Individual Health Insurance Claims Administration" by J. Hadley), p. 117.

These chapters cover underwriting and claim management for individual disability along with individual health insurance in general.

Level: Basic

Pages: 41

*Record, Society of Actuaries*, Vol. 16 (1990), No. 1, "Individual Disability Income—Managing the Bottom Line," p. 147.

D. Scarlett discusses more current issues around individual disability underwriting and claim management, particularly about AIDS, geographic variations in experience, applications, financial underwriting, and the need for good control and communication.

Level: Intermediate

Pages: 17

J.A. Appleton, *Claim Administration Principles and Practices*, Section 4: ("Disability Claim Administration"), p. 239, 2nd Edition, International Claim Association, (I.C.A.) 1989, Garold Felland, Secretary of I.C.A., Minnesota Mutual Life Insurance Co., 400 N. Roberts Street, St. Paul, Minnesota, 55101.

This textbook is a standard reference used to train disability claim specialists.

Level: Basic

Pages: 35

## REINSURANCE

In many ways, reinsurance for individual disability insurance is much like individual life insurance. For example, YRT and coinsurance are typical reinsurance arrangements. However, there are not as many disability reinsurers, and shopping of substandard risks is not as prevalent.

C.E. Soule, *Disability Income—The Unique Risk*, Chapter 19 ("Reinsurance"), p. 186.

This chapter covers the reasons for individual disability reinsurance, automatic vs facultative, special treaties and their characteristics, and reinsurance service.

Level: Basic

Pages: 10

*Record, Society of Actuaries*, Vol. 16 (1990), No. 1 "Individual Disability Income—Managing the Bottom Line," p. 147.

L. VandeKopple provides a thorough discussion of the vital aspects of individual disability reinsurance.

Level: Intermediate

Pages: 17

*Reports of the Law Committee*, International Claims Association (I.C.A.), 1990, Garold Felland, Secretary, Minnesota Mutual Life Insurance Co., 400 N. Roberts St., St. Paul, Minnesota, 55101.

This text is published annually and consists of articles researched and written by member lawyers of the International Claim Association. Many of the subjects are pertinent to legal issues affecting individual disability claim management practices. These texts are available for purchase by members of the I.C.A.

Level: Basic to Intermediate

## INDIVIDUAL DISABILITY EXPERIENCE

There are a number of milestone disability studies over the years that have set the standard for valuation and pricing assumptions. These are described below. In addition the S.O.A. Individual Health Committee collects and reports individual disability experience. However, several factors limit the usefulness of these studies. First, a number of changes in contract provisions were introduced in the 1980's that should cause significantly different claim experience than the earlier contract provisions. Studies based on experience through the mid-1980's will not reflect these new provisions. Secondly, the general underlying experience, particularly claim continuance, deteriorated in the late 1980's and early 1990's for the industry in general. These studies, including the latest study in the *TSA Reports*, do not include this experience. Companies should rely upon *their own* experience as much as possible.

E.P. Barnhart, *TSA XXV* (1973), "1971 Experience Modification of the 1964 Commissioners Disability Table," p. 119.

The 1964 Commissioners Disability Table (CDT) was developed for valuation purposes only and was not intended to be used for pricing. However, given the lack of data, it became the basis for pricing many products at that time, by default. This paper represents one of the first published attempts to modify the valuation table to reflect claims experience differences by sex, elimination periods, and occupation groups, and to update the experience base. Although, the data is obsolete for pricing today, the paper provides an excellent discussion of the different factors affecting claim costs.

Level: Advanced Pages: 78

E.P. Barnhart, *TSA, XXXV* (1983), "1982 Disability Tables," p. 733.

Mr. Barnhart updated his 1971 Tables to take into account major changes in the reported experience of the 1970's. Mr. Barnhart also made some technical corrections on the long term slope of his continuance tables. Although this is an improvement on the earlier studies, the 1970's experience is not reflective of more current experience, particularly the 1986-1991 period.

Level: Advanced Pages: 89

*TSA, XXXVII* (1985), "Report of the Committee to Recommend New Disability Tables for Valuation", p. 449.

The Committee's charge was to develop new disability tables for possible adoption for valuation of individual policy reserves and claim reserves. The tables were based on industry experience from the mid to late 1970's and recognize differences by age, sex, four occupation classes, elimination period, accident vs sickness, and duration from date of disablement. An experience based basic table was first developed and then loaded to get the valuation table. The Committee developed two diskettes that provide the various actuarial values from these two tables. They can be obtained from the S.O.A. office. The valuation table is referred to as the 1985 Commissioners Individual Disability A table (CIDA) in the NAIC Minimum Reserve Standards. Because experience has changed so much since the 1970's, the disability actuary should exercise caution in using these tables unadjusted for pricing or for valuations.

Level: Advanced Pages: 153

W.J. Thompson, *The Disability Newsletter*, No. 54 (June 1990), "Survey: 1985 CIDA Table."

This is a survey of the six leading individual disability writers to determine how well the 1985 CIDA Tables reflect current experience.

Level: Intermediate Pages: 2

*TSA, 1985-86-87 Reports*, "Report of the Committee on Individual Health Insurance, Experience Under Individual Disability Loss-Of-Time Policies, 1984-85," p. 71.

This report provides inter-company experience for years 1984-85. As mentioned earlier, this experience does not reflect the deteriorated experience of the 1986-1991 period, nor many of the newer contract provisions. Also, experience is separated into two occupation groups, whereas most companies now use at least 5 occupation classes. Notwithstanding these shortcomings, the Reports do provide a good basis for evaluating trends over time and analyzing claim cost differences by variety of subgroups.

Level: Intermediate Pages: 126

HIAA, *Policy & Research Findings*, "Trends in AIDS Disability Insurance Claims," 1991.

The HIAA began collecting inter-company information on AIDS disability claims during the first quarter of 1989 and now collects and reports this information quarterly for both individual and group disability insurance.

Level: Basic Pages: 10

*Record, Society of Actuaries*, Vol. 14, No. 4B (1988), "AIDS: Coping with the Health Benefit Plan Implications," p. 2429.

The discussion by panelist R. Beal looks at the potential impact of AIDS on individual disability insurance and his own company's experience.

Level: Intermediate Pages: 35

*Record, Society of Actuaries*, Vol. 15 (1989), No. 1, "Individual Disability Income—Where Have All the Margins Gone?" p. 47.

The panel consisted of disability actuaries from four of the largest writers of individual disability insurance discussing the experience of the industry and their own companies during the more recent period of time that claim costs began to deteriorate.

Level: Intermediate Pages: 26

D. Kidwell & M. Seliber, *The Disability Newsletter*, No. 58 (May 1992), "Non-Can DI: 1991 Financial Experience."

This report is a continuation of an annual review of the combined experience of 9 of the largest writers of non-cancellable individual disability income insurance. Most of the data is extracted from Schedule H of the U.S. statutory statements. *The Disability Newsletter* has also published prior years' reviews.

Level: Intermediate Pages: 4

C.E. Soule, *Disability Income—The Unique Risk*, Chapter 18 (Evaluation of Results), p. 172.

This chapter covers the different ways of analyzing individual disability experience (loss ratios vs actuarial studies), important parameters to study, and the roles of actuarial, underwriting, and claims management in the analysis of results.

Level: Basic Pages: 14

*Record, Society of Actuaries*, Vol. 16 (1990), No. 1, "Individual Disability Income—Managing the Bottom Line," p. 147.

D. Kidwell covers a wide range of financial and statistical tools that can be used to analyze and manage individual disability experience.

Level: Intermediate Pages: 17

J.B. Pharr, *TSA XXXI* (1979), "The Individual Accident and Health Loss Ratio Dilemma," p. 373.

The objective of this paper is to discuss the misconceptions and distortions commonly encountered in the use of individual accident and health insurance loss ratios due in large part to the way active life reserves are used in the calculations. These ratios are used routinely by regulators, company management, and insurance industry analysts.

Level: Intermediate Pages: 15

LIMRA, *A Long-Term Look at Disability Income Lapsation*, A 1992 Report I/R Code 63.30, Farmington, CT.

This study examines combined long-term lapsation of non-can individual disability income insurance occurring between 1989 and 1990 policy anniversaries for 17 companies. LIMRA has been producing this lapsation study annually since 1985.

Level: Basic Pages: 15

## INDIVIDUAL DISABILITY RESERVES

Individual disability insurance requires both active life and disabled life (claim) reserves. The industry has been slowly updating its statutory reserve bases, moving from the obsolete 1964 CDT table to the 1985 Commissioners Individual Disability A and B tables (1985 CIDA and 1985 CIDB). Claim reserves are one of the most volatile financial elements of this line of business. As the average time on claim lengthened during the 1980's, many companies needed to strengthen their claim reserve bases.

NAIC, *Minimum Reserve Standards for Individual and Group Health Insurance Contracts*, Model Regulation Services—July 1989, July 1991.

This represents the most current minimum reserve standard for individual disability insurance. It recognizes the 1985 CIDA and 1985 CIDB tables for more recent issued business. Unfortunately, few states have adopted these standards or versions of them. The process of promulgating minimum reserve standards is much slower for health insurance than for life insurance. Many states have no minimum reserve standards for health insurance.

Level: Intermediate Pages: 11

F. T. O'Grady, *Individual Health Insurance*, Chapter 5 ("Reserves and Liabilities for Individual Health Insurance" by R. Shapland), p. 93, Society of Actuaries.

This chapter discusses the general theory and purpose of the various types of accounting reserves and liabilities applicable to individual health insurance. The legal requirements for statutory accounting statements are covered. Generally Accepted Accounting Practices (GAAP) requirements are not specifically covered, but the theoretical information should provide a foundation for GAAP accounting.

Level: Intermediate Pages: 23

NAIC, *Proceedings of the National Association of Insurance Commissioners*, 1984 Volume II, 1985 CIDB (1983C tables), p. 561.

This volume describes the construction of the 1983C tables, which were later adopted as the 1985 CIDB Valuation Tables.

Level: Advanced Pages: 42

NAIC, *Proceedings of the National Association of Insurance Commissioners*, 1986 Volume II, 1985 CIDA (DTS Valuation Tables), p. 570.

This volume presents the DTS (Disability Termination Study) Valuation Tables, adopted as the 1985 CIDA Valuation Tables and includes discussion regarding use of the 1983C tables, and comparative values with the DTS Valuation Table.

Level: Advanced Pages: 20

Actuarial Standards Board, *Actuarial Standard of Practice No. 5—Incurred Health Claim Liabilities*, January 1991.

This standard of practice sets forth areas of analysis and inquiry that actuaries should consider when their practice involves incurred health claim liabilities.

Level: Intermediate Pages: 10

E.H. Minor, *TSA*, XVII (1965), "Loss-Of-Time Health Insurance Reserves Based on the 1964 Commissioners Disability Table," p. 368.

This paper outlines the characteristics of the 1964 CDT table, discusses the factors which influence reserve considerations, and describes suitable methods of determining active and disabled life reserves. Although the table is basically obsolete now, the paper is invaluable.

Level: Intermediate Pages: 48

Task Force on Financial Implications of AIDS, *TSA*, XLII (1990), "The Financial Implications of AIDS for Life Insurance Companies in the United States," "The Financial Implications of AIDS, for Individual Disability Insurance in the United States," p. 639.

The objective of the Task Force was to provide information useful in the assessment of the financial effect of AIDS, to provide recommendations regarding the role of the valuation actuary in addressing the challenges created by AIDS, and to evaluate alternative means of reserving for AIDS in statutory and GAAP financial statements. The first paper covers individual life insurance and the second, individual disability insurance. However, much of the information and principles general to both types of insurance are found in the first paper and are not repeated in the second.

Level: Intermediate Pages: 98

T.F. Harris, *The Disability Newsletter*, No. 57 (Dec. 1991), "M&R AIDS Reserving Survey Results Disability Insurance Response."

This summarizes the disability response of an inter-company survey asking if additional reserves for AIDS were in the 1990 statutory statements. The complete AIDS Reserving Survey results can be obtained from the author.

Level: Basic Pages: 1

This Actuarial Specialty Guide on Individual Disability Income was developed under the auspices of the Professional Actuarial Specialty Guides Committee on Continuing Education by:

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