

Note: This version of ASOP No. 5 is no longer in effect.  
It was superseded in 2000 by ASOP No. 5, Doc. No. 076.

**ACTUARIAL STANDARD  
OF PRACTICE  
NO. 5**

**INCURRED HEALTH CLAIM LIABILITIES**

**Developed by the  
Health Committee of the  
Actuarial Standards Board**

**Adopted by the  
Actuarial Standards Board  
January 1991**

**(Document No. 028)**



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January 1991

**TO:** Members of the American Academy of Actuaries and Other Persons  
Interested in Health-Related Actuarial Topics

**FROM:** Actuarial Standards Board (ASB)

**SUBJ:** Reformatted Edition of Actuarial Standard of Practice No. 5

This booklet contains the reformatted edition of Actuarial Standard of Practice No. 5, *Incurred Health Claim Liabilities*.

### Background

This standard was developed by the Health Committee of the Interim Actuarial Standards Board (IASB) and was published in exposure draft form in August 1987. The Health Committee considered the comments received in preparing a revised standard that was approved by the IASB, ratified by the Board of Directors of the American Academy of Actuaries, and made effective April 5, 1988. A detailed report of the comments received and the committee's disposition of them follows this background information.

In 1990, the standard was reprinted as part of the actuarial standards of practice binder, as Document No. 007. Subsequently, it was reformatted by the Health Committee of the Actuarial Standards Board (ASB) in the uniform format for standards adopted by that board. The new, reformatted edition (Document No. 028) was readopted by the ASB and became effective January 10, 1991.

In the course of reformatting, a section devoted to definitions was added. Included among the definitions is the term *incurral date*. Readers should note that the process of determining the incurral date of a claim is discussed in section 5.5. The intention of defining the term in section 2.4 was *not* to change the standard of practice as it relates to the determination of the incurral date of a claim.

The Health Committee believes that, particularly in the health area, the professional practice of actuaries varies widely. In some areas of practice, including that of estimating amounts of liabilities for incurred health claims, there may be significant differences of opinion regarding commonly accepted, proper actuarial practice. Nevertheless, the committee, along with the IASB and the ASB, firmly believes that

standards of practice are needed in this area. The standard of practice promulgated herein sets forth areas of analysis and inquiry that actuaries must consider when their practice involves incurred health claim liabilities. The standard is not meant to be a prescription of specific methods or procedures.

#### Responses to Comments on Exposure Draft

A total of thirty-four individuals responded to the exposure draft previously mentioned. The majority expressed support for the exposure draft while several others offered points for consideration without commenting on the overall value of the proposed standard. Four individuals considered the proposed standard as inappropriate or inadequate. All of the comments were carefully considered by the Health Committee and a number of changes were made to the exposure draft as a result of this valuable input.

In the following discussion, the new section numbers of the reformatted edition are inserted in brackets.

The committee broadened the definitions of the *tabular method* and *development methods* to recognize that each has many variations, too numerous to try to enumerate. The committee also stressed the estimate nature of any determination of liabilities for incurred but unpaid health claims and the appropriateness of conservative assumptions or explicit margins depending on the purpose of the estimate.

In Recommendation 2 [5.4], concerning plan provisions, the committee modified somewhat the actuary's responsibility to be familiar with plan documents and in Interpretation 2A explicitly recognized the likelihood that plan benefits may change in the event of plan termination. Interpretation 2B [5.5] was modified to clarify that reserves for health claims not yet incurred are beyond the intended scope of this standard.

Recommendation 3 [5.6], concerning data requirements and assumptions, was changed to recognize that plan data may not be credible or may be distorted by large claims. The actuary in all cases must be satisfied with the reasonableness of the data and assumptions.

Recommendation 6 [5.12], concerning the time value of money, was modified to clarify the importance of recognizing time value of money when material.

Recommendation 7 [5.13], concerning claim settlement expenses, was changed to



recognize that the liability for future claim settlement expenses may be a separate item and not included in the claim liability, and that the actuary should be aware of the manner in which the expense liability is included in plan liabilities.

Recommendation 9 [5.15], concerning the reasonableness of results, was changed to stress the estimate nature of the determination of the liability for incurred but unpaid health claims, and to point out the value of varying the methods or assumptions involved to establish a range of estimates.

In addition, a number of other changes were made throughout the standard to conform with the changes described above.

The Health Committee thanks all of the individuals who gave the benefit of their comments on the exposure draft, and believes this input improved the final standard.

#### Concordance between 1988 and 1991 Editions

Following is a listing of paragraphs in the 1988 edition, with corresponding sections in the 1991 reformatted edition:

<u>1988 Edition</u>	<u>1991 Reformatted Edition, by Section</u>
Introduction, 1st Para. on p. 1	3
2nd Para.	1.2
3rd Para.	2.1, 2.3
4th Para.	1.2, 5.2.2
5th Para.	5.2, 5.2.1, 2.2, 2.5
6th Para.	5.2.2
7th Para. on p. 2	5.1
8th Para.	6.1
Recommendation 1	5.3
Recommendation 2	5.4
Interpretation 2-A	5.4
Interpretation 2-B	5.5
Recommendation 3	5.6 and 2.1
Interpretation 3-A	5.7
Interpretation 3-B	5.8
Interpretation 3-C	5.9
Recommendation 4	5.10
Interpretation 4-A	5.10.3

Interpretation 4-B	5.10.4
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Recommendation 5	5.11
Interpretation 5-A	5.11.1
Interpretation 5-B	5.11.2
Recommendation 6	5.12 and 5.12.1
Interpretation 6-A	5.12.2
Recommendation 7	5.13
Recommendation 8	5.14
Recommendation 9	5.15

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## ACTUARIAL STANDARD OF PRACTICE NO. 5

### INCURRED HEALTH CLAIM LIABILITIES

#### PREAMBLE

##### Section 1. Purpose, Scope, and Effective Date

- 1.1 PurposeCThe standard of practice promulgated herein sets forth areas of analysis and inquiry that actuaries should consider when their practice involves incurred health claim liabilities. The standard is not meant to be a prescription of specific methods or procedures.
- 1.2 ScopeCThe standard is generic, in that it is intended to apply to health actuarial practice broadly. Practice in the area of health claim liabilities may be performed by actuaries working in varied fields and positions, such as in insured health plans, non-insured plans, health service plans, health maintenance organizations and preferred provider organizations, and government-sponsored plans. The standard applies to both insured and noninsured benefits.
- 1.3 Effective DateCThis standard was first effective April 5, 1988. The standard as presented in this booklet replaces both the 1988 edition of the standard and the 1990 reprint of it (ASB Document No. 007), effective January 10, 1991.

##### Section 2. Definitions

- 2.1 Claim LiabilityCThe actuarial present value, as of the valuation date, of future claim payments under the benefit plan for claims which have been incurred on or before the valuation date. The term *liabilities* rather than *reserves* is used in this standard to provide consistency of language and to recognize that the standard applies to both insured and noninsured benefits. No attempt is made to distinguish *reserves* versus *liabilities* in a statutory annual statement sense.
- 2.2 Development MethodsCMethods under which historical claim data, such as the number and amount of claims for the subject line of business, are recorded by period incurred and period paid, and this development pattern is used to estimate the future development of existing claims as of the valuation date.

- 2.3 Health BenefitsCMedical, dental, and vision care, disability income, accidental death and dismemberment, and similar benefits.
- 2.4 Incurral DateCThe date a claim is determined to be a liability of the plan.
- 2.5 Tabular MethodCThe application of a reserve factor developed from prior experience to an inventory of claims. For example, claim liabilities for long-term disability benefits are commonly determined by use of a tabular method.
- 2.6 TrendCThe change over time in claims cost per unit of exposure for the plan.

### Section 3. Background and Historical Issues

The determination of liabilities for incurred but unpaid health claims is an integral, fundamental part of the practice of most health actuaries. It is necessary for the proper completion of financial statements of all kinds, for pricing, and for planning and projections.

The proliferation of risk-bearing mechanisms has faced the actuarial profession with questions concerning whether and how to recognize a multitude of plan benefits. Rapidly changing health care delivery systems and health care costs have brought a greater need for the actuary to address a trend in those parameters. These events have also brought questions concerning the determination of incurral date into sharper focus. The extent of recognition of the expense of claim settlement and of the time value of money has become of increasing interest. Other issues have become of increasing importance, including the difficulties of obtaining meaningful data.

### Section 4. Current Practices and Alternatives

Since March 1988, actuarial practice has been guided by this standard. Prior to then, the historical issues stated above may have led to differences of opinion regarding commonly accepted proper actuarial practice concerning recognition of plan benefits, treatment of trend in the parameters, determination of incurral date, and recognition of the expense of claim settlement and of the time value of money.

## STANDARD OF PRACTICE

### Section 5. Analysis of Issues and Recommended Practices

- 5.1 ConservatismC Recognizing the fact that determination of liabilities for incurred but unpaid health claims is at best an estimate of the true liabilities that will emerge, varying degrees of conservatism or margin will be appropriate, depending on the purpose of the estimate.
- 5.2 MethodsC This standard is not a technical document that mandates any particular calculation methodology.
- 5.2.1 Tabular and Development MethodsC This standard contemplates both Atabular@ and Adevelopment@ methodologies as being generally accepted by health actuaries. Numerous variations of these methods may be appropriate.
- 5.2.2 Other MethodsC While the tabular and development methods are the most commonly accepted, other methods may also be appropriate. For example, during the early stages of a line of business, an approach of multiplying earned premiums by an expected loss ratio and then subtracting paid claims to date may be the only approach practically available.

In applying this standard, the actuary should also be mindful of any applicable requirements, such as generally accepted accounting principles (GAAP) or statutory valuation requirements. Such other requirements would generally not be incompatible with this standard. However, if they are incompatible and the actuary determines incurred health claim liabilities according to such requirements, and consequently deviates from this standard, the deviation and the reasons for it should be disclosed as required in section 6.2.

- 5.3 Components of Incurred Health Claim LiabilitiesC When determining liabilities for incurred but unpaid health claims, provision for both reported and unreported claims is necessary. Separate determinations of liability for reported and unreported claims may be appropriate, or the total liability may be determined without reference to the separate components.

Liabilities determined using development methods generally include provision for both reported and unreported claims. Tabular methods are typically used

to determine liabilities for reported claims only. In such situations, a separate determination of liability for unreported claims is necessary.

- 5.4 Recognition of Plan Provisions and PracticesC All pertinent plan provisions, including interpretations, administrative practices, and regulatory requirements need to be recognized in the determination of liabilities for incurred but unpaid health claims.

The plan may be an insurance policy, a self-insured plan, a reinsurance arrangement, a provider service agreement, or other form of contract. The actuary should be familiar with pertinent portions of all applicable plan documents or contracts.

The plan documents define what benefits are provided, to whom, and when the coverage starts and ends. These plan features may not be clearly delineated in the plan documents but may be the result of established administrative practices and plan interpretations. The actuary should be aware of all pertinent plan provisions.

It is important to recognize that plan benefits may change in the event of plan termination.

The actuary should recognize regulatory requirements which may not be included in the plan documents.

ExamplesC Examples of the significance of the benefits provided under the plan in the determination of liabilities for incurred but unpaid health claims follow:

When tabular methods are used, for example, on long-term disability plans, the contractual provisions describing the amount and duration of benefit payments, any offsets or integration with social insurance and other programs, and the definition of disability will be important in determining liabilities.

When development methods are used, for example, on medical plans, it is important to recognize any significant changes in the benefits provided under the plan between the experience period on which the completion factors are based and the time at which the valuation is being performed.

- 5.5 Incurral DateC With respect to the determination of the incurral date of claims and use of the incurral date in the determination of liabilities for incurred but unpaid health claims:

The actuary should look to the plan, including plan provisions, interpretations, administrative practices, and applicable regulatory requirements, to determine at

what point the claim becomes a liability of the plan.

If liabilities for claims not yet incurred are also being determined for the plan, the determination of incurral date should be consistent between such liabilities and the liabilities for incurred but unpaid health claims.

5.6 Data Requirements and Assumptions, GeneralCDetermination of liabilities for incurred but unpaid health claims requires the utilization of data and assumptions.

Projections of future claim payments will require data or assumptions as to claim history (such as number and amount of claims), morbidity, mortality, interest, inflation, or other factors which may be relatively constant among plans.

Data or assumptions are also required concerning exposure, claim filing and processing, and other factors which may vary greatly between plans and over time.

The actuary may consider different assumptions, depending on the purpose for which the valuation is being performed. For example, assumptions may differ when the valuation is performed for statutory rather than GAAP purposes.

The data and assumptions employed should be reviewed by the actuary for reasonableness and should reflect the experience of the specific benefit plan, where appropriate.

An important requirement of claim processing and accounting systems is the capture of accurate data to permit the determination of the claim incurral date and the date of payment. The actuary should make every effort to secure such data. The actuary should recognize material differences between incurral dates determined from these systems and the appropriate incurred dates defined by the plan.

In selecting assumptions for current liability determinations, the actuary should review any changes in benefit levels, exposure, claim filing, claim processing, and accounting systems to evaluate the continued applicability of prior claim lag experience.

The actuary should consider the most recent available data appropriate for the plan, including experience which has developed since the valuation date.

The actuary should be mindful of potential distortions due to large claims.

5.7 Data Requirements and Assumptions, Tabular MethodsCWith respect to data and assumptions required under tabular methods:

- 5.7.1 TablesC When applying tabular methods, the actuary should select the table that is most appropriate in the circumstances. Such selection should give consideration to the benefits being valued, the risk characteristics of the lives involved, and the characteristics of any table considered, including but not limited to its data base, exposure period, and statutory table margins, if any. The actuary should be aware of assumptions used in developing tabular factors and should modify tabular factors where appropriate.
- 5.7.2 ParametersC When utilizing a particular table, the actuary should be aware of all significant variables and parameters that are necessary for the proper use of the table. The actuary should make every effort to see that data are available that are consistent with the required tabular parameters.
- 5.8 Data Requirements and Assumptions, Development MethodsC With respect to data and assumptions required under development methods:
- 5.8.1 GeneralC A claim development chart shows, for prior experience under the benefit, how payments for claims incurred each period emerged over the periods following incurral. From this data, claim projection factors are determined to estimate remaining claim payments.
- 5.8.2 Lag PatternsC Claim development patterns may vary considerably among plans and types of benefits. Claim lags in periods of high claim processing backlog will be greater than in periods of low backlog. Claim lags will vary from one administrator to another, and claim lags may change when benefits are changed or exposure changes. There may also be seasonal variations in claim lag.

It is important, therefore, that the actuary be familiar with the processes for data collection and be mindful of changes that could significantly alter lag patterns.

- 5.9 Plans with Insufficient DataC It may be appropriate to use claim lag experience from similar benefit programs of the same insurer or administrator with modifications to reflect expected differences.

Where there is no comparable plan experience, the actuary may elect to use the anticipated claim experience used in the pricing assumptions or appropriate modification thereof.



5.10 Recognition of Trend C With respect to the recognition of trend:

- 5.10.1 General C With respect to health claims, *trend* is the change over time in claims cost per unit of exposure for the plan, due to factors such as inflation, changes in utilization and technology, changes in economic conditions and the effects of cost-shifting and plan deductibles. These factors should be recognized in the determination of liabilities for incurred but unpaid health claims to the extent that each is applicable and material for the specific plan of benefits being considered.
- 5.10.2 Efficacy of Historical Data C To the extent that different types of benefits and plans are subject to different rates of trend, the estimate of liabilities may differ. It should be recognized that trend rates observed historically may or may not be a good indicator of trend rates to be used in determining liabilities for subsequent periods.
- 5.10.3 Tabular Methods C Liabilities for reported claims on benefits which are expected to be paid out over a long period of time, such as long-term disability benefits and benefits for long-term care, are often determined using tabular methods. Tabular methods should consider any change in the level of benefits that may occur during the lifetime of the claim due to the effect of trend.
- 5.10.4 Development Methods C Use of development methods typically requires the calculation of completion factors to be applied to observed claims paid through a specific date. Completion factors for the most recent periods may be unreliable. The actuary should evaluate incurred claims for these periods using other methods such as an observed relationship of claims to premiums or exposure from prior periods. Such estimates of incurred claims should appropriately recognize any effect of trend on the plan of benefits for which the liabilities are being determined.

When using development methods, the actuary should consider the effect of trend both in the observation period and in the current period for which the claim liabilities are being determined.

- 5.10.5 Effect of Benefit StructureCA health plan's benefit structure can have a significant effect on the choice of appropriate trend rates, particularly with respect to deductible size and internal benefit limits.

Deductibles have a leveraging effect on trend rates. For example, a stop-loss policy with a large deductible may require a higher trend rate than a small deductible plan.

Plans providing scheduled benefits which are less than prevailing charges, such as some hospital indemnity plans and dental plans, are less affected by inflation but may be affected by other components of trend, such as changes in utilization.

- 5.11 Recognition of ExposureCExposure relates to the number or characteristics of units eligible for coverage. Exposure usually is a measure of the number of lives entitled to benefits but may be some other measure if appropriate. Under medical plans, exposure may relate to the numbers or demographic characteristics of covered individuals or family units. Under plans of disability income benefits, exposure may relate to the amount of covered salary or the number of units of monthly income benefits. Exposure may change over time.

The actuary's determination of liabilities for incurred but unpaid health claims should take into account any material change in exposure.

- 5.11.1 Development MethodsCWhen using development methods, it is frequently necessary to estimate incurred claims for the most recent periods on some basis other than pure application of completion factors to observed claims. In making such estimates, the actuary should recognize any material change in exposure.

- 5.11.2 Regulatory RequirementsCExposure can be influenced by regulatory requirements. If laws or regulations require that benefits be offered currently to different classes of individuals than in prior periods, the actuary should consider to what extent such change in exposure should affect the claim liability estimate.

The 1986 enactment of PL 99-272, the Consolidated Omnibus Budget Reconciliation Act (COBRA), is an example of a situation where coverage of terminating employees and certain dependents may be continued for a longer duration.

5.12 Recognition of the Time Value of MoneyCWith respect to the recognition of the time value of money in the determination of liabilities for incurred but unpaid health claims:

5.12.1 GeneralCThe actuary should consider the time value of money when determining liabilities for incurred but unpaid health claims. An interest discount is the most direct way of recognizing the time value of moneyCAs in using tabular methods to determine liabilities for unpaid long-term disability claims.

The time value of money should be recognized whenever doing so will have a material effect in the determination of liabilities for incurred but unpaid health claims. While it has not been common practice to employ interest discounts explicitly in determining liabilities for medical, dental, or short-term disability claims, this should not preclude the recognition of the time value of money on such short-term benefits.

5.12.2 Level of Interest Discount, Purpose of EstimateCThe level of any interest discounts may depend on the purpose for which the claim liabilities are being calculated. For state or federal statutory statements, any interest discounts should be consistent with statutory requirements. For GAAP accounting, any interest discounts should be consistent with GAAP standards.

5.13 Recognition of Claim Settlement ExpensesCIf the discharge of liability for incurred but unpaid health claims will necessitate future claim settlement expenses, the present value of those expenses should also be considered a liability of the plan.

The actuary should be satisfied with the manner in which the claim settlement expense liability is included in plan liabilities.

5.14 Follow-Up StudiesCA follow-up study is a test of reasonableness of a prior claim liability estimate. For claims incurred prior to the original valuation date, it consists of a comparison of subsequent claim payments plus residual claim liability yet unpaid to the original estimated claim liability.

The larger the percentage of the prior liability that has been paid, the more reliance should be placed by the actuary on the results of follow-up studies.

The actuary should, to the extent possible:

- a. acquire the data necessary to perform such follow-up studies;
- b. perform follow-up studies; and
- c. utilize the results of such studies in making current claim liability estimates.

The actuary should take into account changing circumstances in analyzing such studies.

- 5.15 Reasonableness of ResultsC The actuary's determination of the liability for incurred but unpaid health claims is but an estimate of the true liability that will emerge.

The actuary should consider varying the methods or assumptions used in order to develop a range of estimates.

The actuary should be satisfied that the estimated liabilities for incurred but unpaid health claims are reasonable.

## Section 6. Communications and Disclosures

- 6.1 GeneralC Actuaries should be able to support the methods and assumptions that have been employed and should be able to state that in the course of their work they have considered the items that are discussed in this standard. Not all of these items may be valid considerations in each circumstance. An actuary who deems any of these items as being inapplicable should be prepared to give supporting reasons and should also be guided by the *Guides and Interpretative Opinions as to Professional Conduct* of the American Academy of Actuaries.
- 6.2 Deviation from StandardC An actuary who uses a procedure which differs from this standard must include, in the actuarial communication that communicates the results of the determination of claim liabilities, an appropriate and explicit statement regarding such deviation, including its nature, rationale, and effect.

## Appendix

### Selected Actuarial Bibliography

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