Note: This version of ASOP No. 3 is no longer in effect.
It was superseded in 1994 by ASOP No. 3, Doc. No. 048.

ACTUARIAL STANDARD OF PRACTICE NO. 3

RELATING TO CONTINUING CARE RETIREMENT COMMUNITIES (CCRCs)

Adopted by the

Interim Actuarial Standards Board (IASB)

May 1987

Developed by the
Committee on Continuing Care Retirement Communities
of the
American Academy of Actuaries
for the
Specialty Committee of the IASB

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TABLE OF CONTENTS

June 1987

To: Members of the American Academy of Actuaries and other persons with an interest in Continuing Care Retirement Communities (CCRCs)

The American public is becoming increasingly aware of Continuing Care Retirement Communities as an effective way of meeting an important and growing need. There is concurrently a growing appreciation that the financial planning and administration of CCRCs have much in common with insurance arrangements and that the application of sound actuarial principles is an essential tool for effective management.

The Committee on Continuing Care Retirement Communities of the American Academy of Actuaries, created early in 1985, became convinced of the desirability of defining actuarial standards in this specialized field. The committee prepared a proposed Statement of Actuarial Standards of Practice Relating to Continuing Care Retirement Communities, which was submitted to the Interim Actuarial Standards Board (IASB) early in 1986 through the IASB Specialty Committee. In May 1986, with the authorization of the IASB, the proposed statement was published as an Exposure Draft, with a comment deadline September 1, 1986. The committee's report* describes the comment letters that were received and the modifications that were made to the proposed statement.

In April 1987 the revised statement was adopted by the IASB in the form that appears on pages 1 to 23 of this booklet. The Recommendations of the statement should be observed by members of the Academy when practicing in this specialized field.

Subdivisions of the American Institute of Certified Public Accounts (AICPA) and of the Healthcare Financial Management Association (HFMA) have been working to identify and define any specialized accounting principles that may be applicable to CCRCs. The Academy committee, which has been in communication with these groups, understands that there is agreement on the principle that the financial accounting of a CCRC must make use of the actuarial present values of the obligations assumed by the CCRC and its residents in their contracts, or residency agreements, and on the desirability of avoiding conflicts in the position of the two professions.

The Academy committee understands that the work of the AICPA subcommittee has not yet developed to the point where it is feasible to coordinate and formalize positions. Although the committee believes that such coordination is important--even essential--it recognizes that the growing importance of CCRCs in our country makes it desirable to publish a formal statement of professional standards in the field without delay.

* The "Report of the Committee on Continuing Care Retirement Communities," appended at the end of the Standard in the original booklet, has been omitted from the present reprint because of its length. The report can be obtained on request from the Actuarial Standards Board, 1720 I Street, N.W., Washington, D.C. 20006; telephone (202) 223-8196.

The IASB shares those views and wishes to emphasize that publication of this Standard must not be an impediment to further cooperation in assuring consistency between the positions of the two professions.

The Statement* was prepared by the Academy's Committee on Continuing Care Retirement Communities under the auspices of the Specialty Committee of the IASB. The following members of the Academy's committee participated:

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* Retitled Actuarial Standard of Practice No. 3, Relating to Continuing Care Retirement Communities, to conform with style adopted by the Actuarial Standards Board.

PREFACE

The Committee on Guides to Professional Conduct has included in its publications a statement of the considerations which guide its deliberations. That statement, only slightly modified, is pertinent to this Standard and is reproduced here.

> The Committee believes that from time to time it is desirable to remind the members of the actuarial profession of some of the basic considerations which guide their deliberations.
>
> First, and foremost, the Committee fully appreciates that professional actuarial performance rests on judgment and integrity and that rules cannot be substituted for either. The Committee believes that practicing actuaries may welcome the views of other actuaries with experience in a field and that the views of such peers can be helpful on matters encountered in the course of professional practice.
>
> The successful practice of any profession requires: a need for the professional services; availability of competent professionals to perform those services; and perception by the public that the members of the profession act with good judgment and integrity. Guidelines published by a profession do little to affect the need for professional services. However, guidelines are helpful to members of a profession and their study should be a mandatory part of the education of those entering the profession. Such guidelines also have great importance in informing the public about the standard of performance which the members of the profession should be expected to observe. If such information is lacking, or is inadequate, the resulting public misunderstanding may lead to the adoption of politically determined regulations which conflict with sound professional practice.
>
> A member of a profession might be charged improperly with unprofessional practice. Clear statements of what members of the profession regard as proper practice may reduce the likelihood of such unjustified charges and may provide a defense if charges are made. This "safe harbor" aspect of professional guidelines is not a principal objective, but the Committee regards it as a consideration to be kept in mind in drafting guidelines. The term "safe harbor" carries with it the responsibility to bring to the practice the full range of the actuary's professional judgment.
>
> The public expects any profession to exercise self-discipline, reflected not only in the professional conduct of the individual members but also in a structure by which the profession as a whole can discipline errant members. The actuarial profession has that responsibility, one which it takes seriously. Any such disciplinary structure works most effectively and fairly when there exist reasonable and clear statements of the standards of practice and conduct to which members of the profession are expected by their peers to adhere.

ACTUARIAL STANDARD OF PRACTICE NO. 3

RELATING TO

CONTINUING CARE RETIREMENT COMMUNITIES (CCRCS)

SECTION 1. SCOPE

1.1 This Standard gives advice to an actuary who is serving a continuing care retirement community. It is designed to focus on the applications of actuarial techniques to this specialized field. The Standard is not concerned with ethical issues, which are addressed in the Guides and Interpretative Opinions as to Professional Conduct of the American Academy of Actuaries.

1.2 The term "continuing care retirement community" (CCRC) refers to a residential facility for retired people which provides stated housekeeping, social, and health care services. The residency agreement, or contract, between the CCRC and the resident or pair of joint residents defines the services to be provided by the CCRC and the fees to be paid by residents for those services, including the degree to which they may be modified in the future. The contracts are of long duration, and may be for the life of the individual or the life of the survivor of joint residents. The services always include living quarters and access to a health care bed[1] and usually include one or more daily meals, cleaning, flat laundry, transportation, social activities, and so forth.

1.3 CCRC is used as a generic term in this Standard. Another term, "life care community" (LCC), refers to a CCRC which, in addition to meeting the general definition, satisfies two further conditions: (1) health care costs are risk-pooled and are prefunded in the fee structure—since the resident does not pay the full cost of health care when usage actually occurs; and (2) its contracts continue for the full lifetime of the resident.

1.4 In return for the services promised by the CCRC, each resident or pair of residents agrees to pay fees according to a schedule set forth in the contract. The typical fee schedule has three parts: (1) an advance fee which is payable before the resident assumes occupancy and a designated portion of which may be refundable upon termination of the contract; (2) periodic fees which are payable throughout the term of the contract; and (3) additional fees on an "as used" basis covering services not otherwise provided for (such as extra meals, guest meals, use of a carport, or, if applicable, health care in excess of specified limits). The contract also states the portion, if any, of the advanced fee which will be refunded upon termination.

[1]The term health care is used throughout this document to refer to the case where a resident cannot live independently and requires outside support services in order to function in the community. This term would include personal care or assisted living services and nursing care. The exact definition for these services would vary by community and geographic location.

1.5 The advance fees, together with the periodic fees, investment income, and any gifts or other funds, constitute the resources available to finance the CCRC's physical plant and basic promised services. Unless specifically provided otherwise by law or in the residency agreement (or the terms of a gift), funds from any such source may be used for any such purpose. In other words, the actuary is concerned with evaluating total current and projected revenues versus total current and projected expenses regardless of how management or regulation decides to apply specific revenues toward specific expenses.

1.6 In order to assure that the CCRC will have funds sufficient to meet its promises, the sum of the advance fee plus the actuarial present value at entry of the periodic fees should be not less than the actuarial present value at entry of the costs of discharging all the CCRC's obligations to the resident.[2] The nature of that fee structure emphasizes the long-term character of the relationship.

1.7 Most of the residents at any time will be living normally active lives in the independent residential units; specified health care services on a temporary basis are available to such active residents. The remainder of the residents will have been transferred permanently to the health care center. The community may offer more than one level of health care such as intermediate or skilled nursing care, assisted living or personal care, and home health care.

1.8 Entry into a CCRC usually depends on meeting criteria as to health and the ability to pay current and expected fees. The periodic fees are usually subject to adjustment as deemed necessary by management. Therefore, entry into a CCRC involves a great deal of trust in those who operate it. Some CCRCs set aside assets or funds from contributions to subsidize residents whose income cannot keep up with fee increases. Other CCRCs share the costs of subsidizing these residents among those residents who can afford to pay.

1.9 Since the services and/or refund payments promised by a CCRC are contingent upon the occurrence, timing, and duration of future events, a CCRC should be guided by actuarial principles. In particular, actuarial principles are needed to assist management in estimating those revenue and expense items that are a function of future population (demographic) flows, and to develop fees that normalize the impact of changing population flows.[3]

1.10 Accordingly, actuaries may be called upon to advise the owners, operators, and residents of a CCRC, as well as other professionals and regulatory bodies. The spectrum of services that an actuary might perform includes:

(a) Developing and pricing contracts which (i) adequately provide for the economic survival of the community in the short and long run; and (ii) fairly represent to the user the economic consequences of entering into a residence contract;

[2] In this Standard, the term "actuarial present value" means that the projected future amount is estimated by appropriate probability assumptions such as mortality, morbidity, withdrawal and is discounted to the valuation date.
[3] It should be noted that we do not recommend the pay-as-you-go approach for a LCC, although it might be appropriate for other types of CCRCs which make relatively limited promises (refer to paragraph 1.13).

(b) Projecting future cash flows;

(c) Projecting changes in the future population of residents and estimating the future needs for health care beds;

(d) Determining actuarial assets and liabilities and planning for surplus needs;

(e) Participating in the design of a CCRC's financial management and accounting systems; and

(f) Assisting in the development of financial feasibility studies.

1.11 An actuary may be engaged to perform any of the above tasks or to contribute the actuarial elements of a task to be performed by another person. An actuary may be engaged to conduct other actuarial work in connection with a CCRC, or to appraise work done by others.

1.12 This Standard applies to actuaries who serve both non-profit and for-profit (proprietary) CCRCs. The interpretation of and response to the results of an actuarial study may vary according to the corporation's financial objectives.

1.13 While the same basic actuarial principles and practices apply to all CCRCs, some will have a greater impact on a LCC with its broader lifetime promises than on a CCRC which has made less extensive promises.[4] In other words, some considerations which would be significant for a life care community might not be material in the financial planning and accounting for a CCRC which has made less extensive promises.

[4] The term "less extensive promises" is used to refer to contracts providing materially less than full prepaid health care.

SECTION 2. GENERAL CONSIDERATIONS

2.1 The main obligations of a CCRC are room, board, health care services and, where applicable, refunds of advance fees. The dollar cost of a given service and the scope and manner of providing the service may change over time. Changes in some of these obligations will primarily correspond with inflation, but not with changes in projected population flows. Changes in other obligations will correspond with inflation, changes in projected population flows, and with other causes, for example, medical advances and changing perceptions of recreational needs. Moreover, health care will be used more intensively with the increasing age of the residents, and disbursements thereof or will also increase independently of inflation. Such changes may be relatively small in any one year, but can be very large over the lifetimes of the residents.

2.2 A CCRC typically has a population numbering in the hundreds. This means that the current and previous resident populations of even the largest CCRC will be too small to have full statistical credibility in the selection of assumptions for rates such as mortality, morbidity, and withdrawal.

2.3 The foregoing characteristics of a CCRC suggest that the fee structure will require periodic adjustment to reflect emerging experience. In the same vein, the actuary who makes best estimates based on reasonable assumptions should consider the potential impact of different assumptions and the desirability of sensitivity tests to show how calculated results will vary if experience materially differs from the assumptions used.

2.4 The CCRC fee structure, which consists of an advance fee and a periodic fee at a minimum, has the following characteristics. Both the advance fees and periodic fees typically vary depending on the size of the living unit. Advance fees may differ and periodic fees usually differ depending on the number of occupants in the living unit. However, neither the advance fees nor the periodic fees typically vary with the age or sex of the resident. Fees should include provision for health care liabilities to cover the anticipated greater use of promised health care as the resident group ages. Since periodic fees are allowed and expected to increase, they may be calculated to increase with expected levels of inflation.

2.5 Even though fees do not generally vary by age and sex, the actuarial present values of the costs that are to be covered by fees must reflect the age, sex, joint occupancy, level of care, and, to the extent deemed appropriate, the health characteristics of the population under study.

2.6 The advance fee may be set relatively high and the periodic fees relatively low, or vice versa. A CCRC's management must choose the mix between advance fees and periodic fees. This will be influenced by: (a) marketing considerations; (b) the fact that the advance fee represents a commitment in hand; (c) the fact that the periodic fee is the only fee that can be adjusted for existing residents to meet future unanticipated needs, such as higher rates of inflation; and (d) the fact that high advance fees can reduce or eliminate the need for permanent financing.

2.7 The modern form of the continuing care contract does not place limits on increases in periodic lees. It is desirable to set initial periodic lees at a level such that expected increases in such fees should match the CCRC's internal inflation. In other words, sound actuarial practice will not attempt to fund, on a pay-as-you-go basis, those cost increases that vary with demographic forces. Instead, the fee structure should include provision for prepayment of those costs, analogous to level premium life insurance and pension related benefits.[5]

2.8 A reasonable goal in fee setting is the accumulation of some amount of surplus. A surplus is needed to protect against adverse experience or to prepare the community to meet unanticipated future needs. This Standard does not attempt to define a "reasonable" surplus. Such a measure must be developed between the actuary and the CCRC's management. In developing this measure, the actuary should disclose to management whether margins have been implicitly included in the selection of assumptions or need to be explicitly calculated and added to the actuarial equation.

2.9 An actuary depends on information furnished by the operators of a CCRC in several important respects: historical demographic data as a partial basis for developing assumptions; current and projected demographic and cost data; and current financial data. These data are the basis for calculating fees and liabilities. In using such data, the actuary must develop an opinion as to their reasonableness. It is useful for the actuary to be involved with other experts in the general and financial planning and accounting of a CCRC.

2.10 The actuary must completely understand the scope of the CCRC's promises to residents and prospective residents and the nature of its fee structure in order to accurately conduct an evaluation. Sources for this information are the CCRCs form or forms of residency agreement, the information booklet which the CCRC furnishes to prospective residents, and any other reasonably available source of information about the CCRC. In interpreting these documents, the actuary should be aware of:

(a) the policies for selection of proposed new residents, and how these policies are actually applied;

(b) the term of the residency agreement, and any limitation on the period for which promises are made;

(c) any limitation on the CCRC's ability to change future periodic fees;

(d) any consequences of the inability of a resident to pay any future fees;[6]

[5] This sentence should not be interpreted as implying that the annual level of prepayment is guaranteed or that sound actuarial practice puts any restriction on the CCRC's ability to pay any kind of charge from any kind of fee or other asset.

[6] An actuary who desires to reflect potential Medicaid revenue should be aware of the Medicaid reimbursement policy in regard to continuing care contracts and the appropriate spend-down provisions.

(e) any provision for refunding the advance fee;

(f) any limitation on the services provided, and any requirement of additional charges for services;

(g) any contract provisions which provide for free care in the health care center, or for higher rates to be charged while a resident is in the health care center;

(h) any affiliation with another entity, and the extent to which any such entity would assume responsibility for obligations of the CCRC;

(i) any provision or circumstance which may throw doubt on the ability of the CCRC to remain a going concern; and

(j) any other matter which may have a material effect on the future cash flows of the CCRC.

2.11 The actuary should be familiar with any laws and regulations applicable to CCRCs in the appropriate jurisdiction.

2.12 High occupancy, sound pricing, and effective financial management are keys to the successful operation of a CCRC. The ability of a CCRC to attract new residents to fill vacancies will depend on keeping the CCRC competitive as to its physical plant, its fee schedule, and the general attractiveness of its whole environment. An actuary engaged to advise a prospective CCRC about its financial feasibility, or an existing CCRC about its financial planning and accounting, should be alert for any circumstances which might throw doubt on any aspects of its future ability to attract new residents. Any such circumstance should be noted in the actuary's report, with the actuary's comments thereon.

2.13 For setting fees and determining actuarial present values, this Standard outlines practices that follow the closed group method. Under the closed group method, the future consequences of contracts in effect with residents on the valuation date are projected, and the actuarial present values of such events are determined. The closed group method does not directly take into account those persons who are expected to become residents after the valuation date, except to the following extent. It is assumed that: (a) the annual number of new residents will be sufficient to fill the vacancies; (b) they will pay actuarially adequate fees; and (c) all costs associated with health care beds not used by continuing care contractholders will be met from other sources, such as fees for the use of health care beds by those who are not permanent residents. If the actuary has reservations about the validity of any of the preceding conditions, then an appropriate adjustment or comment should be included in the actuarial report. The objective of the closed group method is to relate the value of promised services and refund promises for the current group of residents to the amount of fees that they have paid in the past and are expected to pay in the future.

2.14 For protecting population and cash flows, this Standard outlines practices that follow the open group method. Under the open group method, specific assumptions are made about the number and characteristics of new residents who will fill vacancies generated by the death, permanent transfer, or withdrawal of existing residents. The objective of the open group method is to estimate population flows for determining the appropriate capacity of the health care facility and to generate cash flow projection for purposes of testing projected liquidity and the ability of the CCRC to meet financial requirements that may be imposed by lenders or legislation.

2.15 **RECOMMENDATION 1. Frequency of actuarial studies.** For both the closed and open group methods, all calculations should be repeated periodically to reflect current residents' data and, to the extent appropriate, revised assumptions. Since CCRCs typically adjust advance fees and periodic fees annually and the actuarial evaluation is an integral part of the determination and rationale for fee adjustments, it is desirable that a CCRC conduct annual actuarial studies. However, in practice due to the cost and relative newness of the application of actuarial principles to the financial management of CCRCs, actuarial studies may be conducted every two to three years.

2.16 This Standard includes two alternative approaches to the actuarially based financial management of a CCRC. The first is the comprehensive approach, in which all financial aspects of the CCRC's operations are deemed to be actuarial. The second is the component approach, in which the actuarial focus is on health care costs, as an addition to the residency costs of the CCRC, and on advance fee amortization, as an offset to the periodic fees otherwise needed. Both approaches depend on adequate provision being made for residency needs and for physical plant maintenance and replacement. Under the comprehensive approach such provision is inside the actuarial equation; under the component approach such provision is outside the actuarial equation. In principle, the two approaches should produce comparable results. The component approach came into being as an acceptable way for existing CCRCs with established histories of favorable cash flows to recognize their actuarial needs long after becoming operational.

2.17 **RECOMMENDATION 2. Provision for future services such as physical plant replacement.** Under both the comprehensive approach and the component approach the actuary should develop and report an opinion as to whether financial provision is being made for residency needs and for physical plant maintenance and replacement. The actuarial report should include an appropriate disclosure if the actuary has relied on others in developing such opinion.[7]

2.18 Some CCRCs and their actuaries may find the comprehensive approach more desirable because of its straightforward application. Other CCRCs and their actuaries may find the component approach more desirable because of the ease with which it can be incorporated into traditional accounting statements prepared in accordance with generally accepted accounting principles (GAAP).

[7] The actuary should be aware of Interpretative Opinion 3(a)(4) when relying on the work of another person.

SECTION 3. ACTUARIALLY BASED FINANCIAL MANAGEMENTS

COMPREHENSIVE APPROACH

3.1 The comprehensive approach to actuarially based financial management of a CCRC incorporates all of the revenues and expenses for the CCRC in the actuarial equation for evaluating the fee structure. The financial statements associated with the comprehensive approach are the actuarial balance sheet, an accompanying statement of operations,[8] a statement of changes in financial position, and a cash flow projection.

3.2 The steps involved in conducting a comprehensive actuarial study are: (a) determining the actuarial adequacy of periodic fees for current residents toward funding the actuarial present value of future services (which includes the expensing of fixed assets) and refund obligations, taking into consideration the existing assets and liabilities, and making appropriate provisions for surplus; (b) assessing the adequacy for new residents of the combination of the advance fee and the actuarial present value of periodic fees in covering the actuarial present value of the costs of performing all the obligations (including the actuarial present value of advance fee refunds) assumed by the CCRC plus provision for surplus; and (c) projecting future population flows for input into the development of a cash flow projection.

3.3 The financial condition of a CCRC is considered to be in satisfactory actuarial balance at a given date if:

(a) its resources that are available for current residents (including the actuarial present value of periodic fees expected to be paid in the future by present residents) are equal to the actuarial present value of the expected costs of performing all remaining obligations to such residents under their contracts, with appropriate provision for surplus; and

(b) for a typical cohort of new entrants the sum of the advance fee paid at or before occupancy plus the actuarial present value at occupancy of periodic fees is equal to the actuarial present value at occupancy of the costs of performing all obligations assumed by the CCRC, with appropriate provision for surplus; and

(c) cash balances are projected to remain positive.

3.4 The preparation of the actuarially based balance sheet is the foundation of this approach. The balance sheet directly evaluates the CCRC's condition in respect to current residents.

[8] At a minimum, the actuarial balance sheet and a cash flow projection are required for any comprehensive study. It is also desirable to include an actuarial statement of operations and a statement of changes in financial position to assist the user in interpreting the changes between successive actuarial balance sheets.

The accounting profession is currently developing CCRC financial standards. Since the actuarial profession desires that actuarial financial statements be as consistent as feasible with accounting statements, the Committee on CCRCs has decided not to include illustrative financial statements with this Standard. Such statements will be developed at a time in the future when both professions have implemented their respective standards of practice. In the interim, actuaries should use their own judgment for developing the format of their financial statements.

If the balance sheet shows a deficit, or reflects an undesirable reduction in surplus, consideration should be given to increasing fees or taking cost reduction measures. If the balance sheet shows a "reasonable" surplus, the existing fees may be appropriate. If the balance sheet shows an "excessive" surplus or a high growth in the surplus, consideration may be given to reducing the fees or increasing the services offered.[9] The actuary should report these findings to the CCRC's management and discuss with management any appropriate steps to be taken.

3.5 Some items in the actuarially based balance sheet, such as cash, receivables, inventories, payables, accruals, escrowed deposits, and so forth, will come directly from the accounting balance sheet without the use of actuarial techniques.

3.6 The items in the actuarially based balance sheet that depend on actuarial techniques involve assumptions about contingencies (such as mortality and morbidity) and the time value of money. These items include, for example, the actuarial present value of future periodic fees, the actuarial present value of the costs of providing promised future services, and the actuarial present value of the obligation for refundable entry fees.

3.7 The customary steps for calculating the actuarial present values for the current population (closed group) include the following:

(a) Using appropriate assumptions about mortality, morbidity, and withdrawal, the actuary projects the number of survivors for each future year by age, sex, level of care, and variations in contractual guarantees.

(b) Using this survivorship projection, and taking into account any limitation on the CCRC's ability to increase periodic fees, the actuary applies assumptions about future changes in periodic fees to compute the amounts of periodic fees expected to be paid in each future year.

(c) Using the same survivorship projection, the actuary applies assumptions as to the unit costs for various kinds of expense and as to rates of inflation to compute the amounts of expense to be incurred in each future year in providing promised services.

(d) Again using the same survivorship projection, the actuary computes the amounts of any advance fees expected to be refunded in each future year.

(e) Using assumption(s) as to interest, the actuary computes the actuarial present value of the amounts projected in (b), (c), and (d) above.

3.8 The initial periodic fee generally equals the actuarial present value of future expenses including the present value of advance fee refunds, plus provision for surplus, minus the

[9] This sentence may not necessarily apply to proprietary CCRCs, where management may use the surplus to meet its dividend objectives.

advance fee, divided by the actuarial present value of a life annuity at entry which increases by the assumed rate of inflation.

3.9 The use of present values makes it unnecessary to explicitly provide for interest income; the present value calculation implicitly assumes that interest earnings are equal to the interest discount assumption.

3.10 The actuary may also be concerned with the valuation of invested securities, of physical plant, of debt, and of any potential transfer of economic resources which may take place over time or at a materially later date.

3.11 **RECOMMENDATION 3. Time value of money and consistency in valuing assets and liabilities.** An actuary is accustomed to putting all financial items on a comparable basis by determining the present value of assets and liabilities as of the same date, using reasonably consistent interest assumptions. The interest assumption used in valuing assets should be consistent with the interest assumption used in valuing liabilities. This should be the normal practice in preparing actuarial reports for CCRCs.

3.12 Physical plant, which typically represents a large portion of the assets of a CCRC, deserves special comment. Elements of the plant must be replaced as they reach the end of their useful lives if the CCRC is to remain a going concern. Provision for such replacement may be funded by charges to each years' operation reflecting the current cost of the portion of assets "used up" in that year. For each item of plant, that charge is measured by an annuity which, along with the depreciation reserve at the beginning of the year, would accumulate with interest to the anticipated cost of replacing the item at the end of its estimated useful life; and, just as the actuarial present value of the services to be provided by the physical plant is included in assets, the actuarial present value of those future charges to current residents is a liability of the CCRC. Under those conditions, an earnings rate is effectively attributed to the use of the physical plant. Such use is matched with the provision of contractual services to residents, a form of "immunization", and the distinction which is often made between interest-bearing assets and non-interest-bearing assets becomes inapplicable.

3.13 Ordinary financial reporting often has not recognized the time value of money in connection with debt, physical plant, or other obligations to transfer resources over a significant period of time, and an actuary working with other professionals on the financial accounting and reporting of a CCRC may encounter other practices in those respects. An actuary working with another professional who is required by the tenets of the other profession to record values that do not take into account the time value of money may accept those values for that purpose, provided any material difference is disclosed in the actuarial report together with the actuary's appraisal of the significance of the difference.

SECTION 4. ACTUARIALLY BASED FINANCIAL MANAGEMENT:

COMPONENT APPROACH

4.1 In contrast to the comprehensive approach, which incorporates all financial aspects of the CCRC in the actuarial equation, the component approach incorporates in the actuarial equation only the advance fees and those revenues and expenses that are a function of the number of continuing care contractholders in the various levels of care. These elements are inserted in a modified statement of operations and balance sheet to appropriately match revenues with expenses. The financial statements associated with the component approach are the actuarially adjusted balance sheet, an actuarially adjusted statement of operations,[10] a statement of changes in financial position, and a cash flow projection.

4.2 The steps in the component approach are calculating: (a) required fee supplements to satisfy actuarial health care liabilities as an addition to the expenses of operating the residency facility; and (b) the actuarial amortization of advance fees as an addition to the income from periodic fees and other sources. It applies the full closed group valuation technique for current residents to those liabilities that vary with changes in population flows, which are primarily health care liabilities.

4.3 The first step in the component approach is to compute the annual cost of the future health care provided for in the residency agreement. This is called the health care premium. It is generally calculated to increase by the assumed rate of inflation. (Refer to Paragraph 10.7.) If it is calculated on an attained age basis, it equals the actuarial present value of future health care expenses (excluding accruals for health care costs) minus the value of assets held for the net health care liability, divided by the actuarial present value of a life annuity which increases by the assumed rate of inflation. If it is calculated on an entry age basis, it equals the entry age actuarial present value of future health care expenses divided by the entry age actuarial present value of a life annuity which increases by the assumed rate of inflation.

4.4 The net health care liability at any time equals the actuarial present value of future health care expenses minus the actuarial present value of future health care premiums. The expected addition to the assets held for the net health care liability in a given year is equal to the expected return thereon plus the health care premium minus the expected health care expenses.

4.5 The amortization of advance fees applies only to the actuarial present value of that portion which is nonrefundable. An acceptable method for calculating the current year amortization of nonrefundable advance fees is described in the following two steps. First, the actuarial present value of any refund provision is determined for each unit (that is, for each resident or pair of residents covered by a given advance fee). The calculation recognizes the probability that the refund will occur, the amount of the refund, and, to the extent advance fees are invested in income-earning holdings, an interest discount. Such value is subtracted from the unit's unamortized and unrefunded advance fee. Second, the

[10] Refer to footnote 8.

difference is amortized over the expected lifetime of an individual resident and over the joint-and-last-survivor expected lifetime of a pair of residents for whom a single advance fee is paid. Such expected lifetimes depend on the current health categories of the residents as well as on age and sex. As a maximum, such amortization should be level. It may instead be calculated to start lower and increase with assumed rates of inflation, interest, or increased health care utilization. In practice, the incidence of advance-fee amortization, whether level or increasing, under the component approach will affect the amount of periodic fee required in a given year.

4.6 The aggregate unamortized and unrefunded advance fee for all units is carried forward from year to year with adjustment for actual advance fee receipts and refunds, and for amortization. The nonrefundable portion of such aggregate for each unit, if all assumptions have been realized, equals the prior year's amortization multiplied by the current year's expected lifetime. To the extent that advance fees are invested in income-bearing holdings, credit is also given for interest. Experience variations for the group as a whole are allocated to increase or reduce the remainder to be amortized for each surviving individual or pair.

4.7 If the sum of the CCRC's current operating costs, including provision for depreciating and replacing fixed assets, and the actuarially computed addition to the net health care liability, with an appropriate margin for surplus, equals the sum of the current periodic fees and the actuarial amortization of advance fees plus interest on assets held for the net health care liability, then the fee structure may be deemed to be adequate.

4.8 The CCRC's financial records should recognize as liabilities the unamortized and unrefunded advance fees, the net health care liability, and an appropriate liability for the replacement of fixed assets. Depending on applicable accounting practices, the net health care liability may have to be designated as part of the fund balance or surplus.

SECTION 5. ACTUARIAL STATEMENT OF OPERATIONS

5.1 The actuarially based (or adjusted) statement of operations is a statement of revenues and expenses prepared on an accrual basis. Each item in the actuarially based (or adjusted) statement of operations represents operating revenues or disbursements of the year, adjusted for changes during the year in the related items of the actuarially based (or adjusted) balance sheet. For each such item, the cash component and the change in the related balance sheet item should be shown separately, either in the statement or in a footnote.

5.2 By that process the recognition of income will automatically be properly matched with the incidence of related expense, the financial planning and accounting for the CCRC will most closely reflect economic reality throughout the terms of its contracts, and equity will be maintained among different generations of residents.

SECTION 6. CASH FLOW PROJECTIONS

6.1 In addition to being in actuarial balance, a CCRC must be able to meet its short-term cash needs at all times. Typically, a large portion of a CCRC's assets, such as physical plant, is nonliquid. As a result, a CCRC may be adequately priced from an actuarial present value analysis and yet encounter cash shortages in the short run, particularly during the early years of operation. A cash flow projection for at least ten years will reveal whether or not this problem is likely to arise. Such a projection will indicate whether changes in the proposed pricing or in other aspects of the CCRCS financial planning need consideration. A cash flow projection is necessary under both the comprehensive and component approaches.

6.2 Cash flow projections are performed using open group methods which reflect the financial effects of new residents replacing existing residents. The assumptions that are used in the cash flow projections should be generally consistent with those used for pricing and the computation of actuarial present values. A cash flow projection, however, should recognize short-term relationships between interest and inflation rates while pricing and the computation of actuarial present values may focus on the long-term relationships between these rates.

6.3 **RECOMMENDATION 4. Likelihood of negative cash balance.** The actuary should comment in the actuarial report about the likelihood that the CCRC is projected to experience a negative cash balance within the next ten years.

SECTION 7. POPULATION PROJECTIONS

7.1 The population flow projection provides an estimate of the number of residents by contract type and permanent status in the CCRC's various levels of care (i.e., independent living in apartments or congregate facilities, assisted living or personal care, and nursing care) and number of beds needed by level of care. The results of the population flow projection may be used by the actuary to develop a cash flow projection or may be used as actuarial input for a financial feasibility study or for internal financial projections prepared by others.

7.2 The projection of future population flows should be based on appropriate actuarial methodology, which may be a multiple decrement model or Markov model or time series model. In the future, other models may prove to be more reliable and, therefore, may replace current practice. The selection of the appropriate population projection method depends on the actuary's assessment of the method's credibility and the type of data available.

7.3 An actuary using a multiple decrement model must select appropriate mortality, morbidity, withdrawal, and other demographic assumptions. These assumptions are applied to the current census of the CCRC to project apartment density ratios (number of contractholders in apartments divided by the number of occupied apartments), the rate of apartment turnover (the ratio of units vacated during a year and made available for new

occupants), health care usage by type of health care guarantee, and the availability of health care beds to non-residents. Such a projection is based on the number of living units, the age, sex, and health characteristics of current residents, the proportion of apartment units with double occupancy, and the corresponding characteristics of replacement residents. Since the initial census has a significant impact on the resulting projection, the actuary should use the current census for an existing CCRC, or presales and their characteristics for a CCRC that is being developed, or, if necessary, a hypothetical census that represents the actuary's best estimate of the initial census.

7.4 Projections may be done using several alternative sets of plausible assumptions, reflecting different health characteristics at entry and different management policies regarding admissions to the CCRC and transfers to the health care center. It is important to test the impact of different assumptions.

7.5 **RECOMMENDATION 5. Updating projections.** The population projection, as with all projections, should be compared periodically with actual experience. Any new projection should be based on assumptions that reflect recent experience and should also reflect changes in management policies or resident characteristics or other material influences.

SECTION 8. ACTUARIALLY ASSISTED FINANCIAL MANAGEMENT:

LIMITED ENGAGEMENTS

8.1 There may be cases where a comprehensive or component study of a CCRC is not desired or necessary, but where the actuary is engaged for a more limited scope. For example, the actuary may be asked to generate future population flows which reflect deaths, transfers, and withdrawals among present residents, and the admission of new residents; or to estimate the need for future health care beds; or to prepare input for selected balance sheet accounts of a CCRC; or to develop actuarially sound funding requirements for proposed options for advance fee refunds or health care guarantees (e.g., the period that residents receive health care without substantial additional charges); or to perform some other limited assignment without addressing the lull scope of the CCRC's actuarially based financial accounting. In these cases, it is not necessary that the actuary evaluate the total fee structure (and management may not desire such an evaluation).

8.2 **RECOMMENDATION 6. Scope of limited engagements**. For limited engagements the actuary's report and opinion should make clear the scope of the engagement and the limited applicability of the results and any opinion. The actuary's report should advise users of the report that the entire fee structure may not be actuarially adequate nor is the entire fee structure actuarially based; only those portions that were included in the limited engagement may be judged for actuarial adequacy.

SECTION 9. FEASIBILITY STUDIES

9.1 An economic feasibility study includes (but need not be limited to) the following:

(a) a market study, or demand analysis, as a basis for judging whether or not the proposed CCRC is likely to achieve acceptable occupancy rates and also for forming opinions as to the demographic characteristics of the initial population;

(b) an appraisal of the economic viability of the proposed contract between the CCRC and its residents;

(c) an evaluation of the pricing structure;

(d) an appraisal of the proposed admissions policies as to the health and financial requirements of prospective residents;

(e) a projection of future population flows and health care bed needs;

(f) a pro-forma balance sheet as of the commencement of operations, taking into account the expected cost of development and construction and the probable funding resources, including advance fees and any indebtedness;

(g) a cash flow projection for at least the first ten years of operations.

SECTION 10. ACTUARIAL ASSUMPTIONS

10.1 The financial forecasts generated by the actuarial model are not predictions; they are projections of what the financial consequences would be if future experience were to reproduce the actuarial assumptions on which the projections are based. The actuary should use professional judgment in selecting assumptions that are likely to reflect future economic reality, including trends. The actuary's report should explain that the results are valid only for the stated assumptions.

10.2 The calculation of actuarial present values and fees requires the use of assumptions as to mortality, morbidity, withdrawal, interest, inflation, changes in periodic fees, changes in advance fees, revenues, expenses, arid any other pertinent contingencies. For purposes of population flow projections, assumptions are also needed about the profile of new residents who will enter the community when vacancies occur, by age, sex, health characteristics, and single versus double occupancies.

10.3 Mortality and morbidity rates will differ according to the age, sex, and health status of the resident. Withdrawal rates may differ according to the sex of the resident and whether or not the resident is part of a double occupancy. Select and ultimate rates should be considered for all of the preceding assumptions. Also, it may be appropriate to vary the rates for various times in the future (e.g., generational rates). Rates of transfer to the

health care center whether temporary or permanent) and the duration of temporary stays, are influenced by the policies that are employed by the particular CCRC. Such policies, in turn are influenced by the availability of health care beds and the availability of home health care.

10.4 In choosing mortality assumptions, the actuary should select different assumptions for permanent residents of an apartment versus permanent residents of the health care center. Also, the actuary should reflect those factors that are likely to cause the mortality to differ from the general population. In the absence of other guiding criteria, the actuary may conclude that the ultimate mortality curve (i.e., rate of increase) is similar to the mortality curve of annuitants.

10.5 Morbidity in the context of a CCRC should be separated into temporary and permanent transfers to the health care center. Temporary transfers are distinguished from permanent transfers in that the resident is expected to return to the independent living unit. For the case of a permanent transfer, the resident is expected to remain in the health care center for the rest of his or her life. In selecting morbidity assumptions, the actuary should consider the effect the CCRC's practices in declaring permanent transfers may have on the probable frequency of such transfers and the subsequent mortality rates.

10.6 The persistency of current residents of a CCRC is affected by withdrawals as well as by mortality. The projection of the number of present residents expected to be in each occupancy status in future years requires the use of withdrawal assumptions. The characteristics of the current residents of a CCRC and its provisions for advance fee refunds should be taken into account when selecting the withdrawal assumptions.

10.7 Assumptions as to rates of interest and inflation should be mutually consistent and should be based on expectations over the future terms of the contracts with present residents. The actuary may find it reasonable to use current rates for the immediate year and grade future rates to a level that is appropriate for the longer term. The long-term inflation assumptions may not correspond to any single index of consumer prices. The actuary may also find it reasonable to use different inflation rates for various categories of revenues and expenses. The excess or deficit of interest assumptions over the inflation assumptions should be consistent with the real interest rates which may be expected during the contracts' terms. If relatively high rates of inflation are assumed for any period, the actuary should consider what is likely to be a reasonable relationship between interest and inflation rates in such a period.

10.8 The assumptions as to future increases in periodic tees should be consistent with the inflation assumption that is used to increase expenses. When computing the present values of future periodic fees and future expenses, it will usually be found that the effects of the fee increases and expense inflation tend to offset each other, so that the excess of the assumed rate of interest over the assumptions about fee increases and expense inflation is more critical than their absolute levels.

10.9 No such offsetting effect exists in the computation of the present value of the provision for refundable advance fees and in that computation the level of the interest assumption is

critical. There may be circumstances when calculating this present value in which at would be appropriate to select a different interest assumption than that used in computing the present value of future expenses and future periodic fees. In such a case, the effects should be noted in the actuarial report.

10.10 **RECOMMENDATION 7. Assumptions about periodic fee increases.** A key element of the long-run viability of a CCRC is the expectation by residents that their periodic fee increases should approximately correspond to the community's inflation experience. The actuary should clearly state the assumption about future periodic fee increases. If the actuary uses assumed fee increases that exceed the expense inflation assumptions, the actuarial report and any actuarial opinion should identify any such excess and include appropriate comment.

10.11 For a new or prospective CCRC, the initial revenue and expense assumptions are extremely important in the financial evaluation. The actuary should conduct tests of reasonableness for start-up operating expenses and for revenues from sources other than advance and periodic fees. For an existing CCRC, the actuary may decide not to conduct tests of reasonableness unless the current year assumptions vary materially from the previous experience.

10.12 For an existing CCRC, its own experience will be a helpful guide in selecting or adjusting assumptions. However, the resident population of even the largest CCRC will be too small to have full statistical credibility in the selection of assumptions such as rates of mortality, morbidity, and withdrawal. Therefore, it is appropriate to compare the particular CCRC's experience with a broader base of comparable experience, and to draw, as may be needed, on such comparable experience in the selection of assumptions.

10.13 The relative lack of statistically credible experience for a CCRC puts a heavy responsibility on the CCRC and its advisors to watch actual experience closely as it emerges and to revise assumptions when needed.

10.14 When selecting assumptions, actuaries are accustomed to consider making provision for adverse deviations of actual experience from the assumed experience. The actuary for a CCRC should bear in mind three considerations:

(a) Over-conservative assumptions lead to redundant fees, so that the current generation of residents subsidizes those who become residents later;

(b) Over-optimistic assumptions are likely to have the result that future generations of residents will be called on to subsidize the current generation; and

(c) Residency agreements usually provide that periodic fees can be changed from time to time as may be needed.

10.15 **RECOMMENDATION 8. Sensitivity tests.** In addition to using good judgment in the selection of assumptions, the actuary should emphasize in any report that the stated

results depend on the assumptions and that actual experience may be different. Initial assumptions may prove to be inaccurate, admission policies may change, management practices for the transfer of residents may change, and medical or technological breakthroughs may affect the longevity or morbidity of residents. These possible occurrences suggest that the actuary measure the sensitivity of results to likely variations in assumptions, monitor and compare actual experience with projections, and make revised calculations periodically, based on the new population base and using revised assumptions if appropriate. The actuary's report should contain a description of the tests of potential variation in projections and a summary of the results. If the actuary does not conduct sensitivity tests on assumptions, the report should include an explanation for why these tests were not generated.

SECTION 11. APPROXIMATIONS: MATERIALITY

11.1 The use of approximations is acceptable if the actuary is prepared to demonstrate that the result does not differ materially from the result obtained from using more precise methods or assumptions.

11.2 The adequacy of methods and assumptions may be judged by the aggregate effect, and not necessarily by the individual effect of specific methods or assumptions.

11.3 **RECOMMENDATION 9. Standards of materiality.** In making a decision as to materiality, the actuary should compare the aggregate effect on the balance sheet surplus or deficit with the total liabilities. The actuary should take into account the effect which differences may have on a decision by an informed user. Any item which, in the actuary's opinion, is likely to require a fee increase that is greater than the marketplace can stand should be considered material.

SECTION 12. REPORTS AND OPINIONS

12.1 **RECOMMENDATION 10. Scope of actuarial report.** All actuarial communications, including but not limited to actuarial reports, statements of actuarial opinion, and statements of actuarial review, are subject to Interpretative Opinion 3. An actuary's report or opinion should make clear the scope of the engagement and any limitations on the applicability of the report or opinion. The actuarial report should contain descriptions of the actuarial data, assumptions, and methods. It should include a statement of the actuary's opinion as to: (a) whether the data and assumptions used are appropriate; (b) whether the methods employed are consistent with sound actuarial principles and practices; and (c) whether provision has been made for all actuarial liabilities and related statement items which ought to be established.

12.2 **RECOMMENDATION 11. Affiliation with another organization.** If the CCRC is affiliated with another entity, the actuarial report should contain a comment as to the

extent, if any, to which such affiliate would assume responsibility for obligations of the CCRC.

12.3 **RECOMMENDATION 12. Material changes in assumptions.** Material changes in actuarial assumptions from those previously used should be disclosed in the actuarial report, and their effects noted. Such disclosures should not be limited to factors explicitly assumed, but should include reference to the handling, or absence of handling, of such factors as the actuary deems to have pertinence.

12.4 **RECOMMENDATION 13. Comment on balance sheet deficit.** If the balance sheet shows a deficit, the implications of the deficit should be made clear. The deficit should be put in perspective as to whether or not it requires remedial action is a nominal amount that might be typical among similar CCRCs[11]. The actuarial report should describe known plans of management for dealing with the deficit, and the actuary's comments thereon. Specific solutions for eliminating the deficit typically include increasing periodic fees more than expense inflation or reducing the costs of providing the promised services. If the solution requires additional periodic fee increases, the report's description of the plan to deal with the deficit should note the extent to which future periodic fees are assumed to increase more than the expense inflation assumption.

12.5 **RECOMMENDATION 14. Direct and indirect users.** The actuary should consider the prospective direct and indirect users of the report. Direct users include the management and board of the CCRC that commissioned the actuarial study. Indirect users may include the CCRC's auditors, existing and prospective residents of the CCRC, existing or prospective investors or in purchasers of the CCRC, regulatory authorities, and potential lenders.

12.6 **RECOMMENDATION 15. Comment on "going concern" assumption.** The actuarial report and any statement of actuarial opinion should contain appropriate comment on the CCRC's perceived ability to operate as a going concern and the impact of any actuarial deficit.

12.7 **RECOMMENDATION 16. Qualification of opinion.** If the actuary is unable to form a needed opinion, or if the opinion is adverse or qualified, the statement of actuarial opinion and the actuarial report should specifically state the reason.

SECTION 13. RELATIONS WITH THE AUDITOR

13.1 A public accountant engaged to audit financial statements of a CCRC is required by the tenets of the accounting profession to express an opinion as to whether financial statements are fairly presented in accordance with GAAP. GAAP as applied to a CCRC may differ in significant respects from GAAP for other entities and may also differ from

[11] One method for providing a prospective on an actuarial deficit is to calculate the "funded status or ratio" and compare its value to the values that have been obtained for similar CCRCs, or industry standards. One definition for the actuarial funded status is 100 X 1+ [surplus (deficit)/liabilities].

generally accepted actuarial principles and practices (GAAPP) applicable to CCRCs. The actuary should understand GAAP as it is applied to CCRCs.

13.2 **RECOMMENDATION 17. Material differences between GAAP and GAAPP.** The actuarial report should include an explanation of any respect in which the assignment is materially affected by any difference between GAAP and GAAPP.

SECTION 14. MISCELLANEOUS

14.1 Interpretative Opinion 4 applies in part to an actuary's use of any actuarial principle or practice which does not conform to this Standard. The Standard is not intended to restrict the actuary in the exercise of professional judgment. An actuary who uses a procedure which differs materially from this Standard should be prepared to justify such use and should include in the actuarial report an appropriate and explicit statement with respect to the nature, rationale, and effect of such use.

14.2 When a CCRC changes an actuary or appoints an additional actuary, each actuary should be aware of Interpretative Opinion 1(d).

APPENDIX 1.

PARAGRAPHS CONTAINING REFERENCES TO ACTUARIAL REPORTS

2.12 Ability to attract new residents.

2.13 Conditions for applying closed group method.

2.16 Approach used for developing actuarial analysis.

2.17 Provision for future services, and reliance on others.

3.4 Size of surplus.

3.13 Disclosure of differences between actuarial balance sheet and values used by other professionals.

6.3 Projected negative cash balance.

8.2 Limitations of specific engagement.

10.1 Qualification that results are based on certain assumptions.

10.9 Effect of selecting different value for discounting refundable advance fee liability.

10.10 Assumption about periodic fee increases (e.g., more than inflation).

10.15 Description of sensitivity tests.

12.1 Scope.

12.2 Financial responsibility of another entity.

12.3 Material changes in assumptions.

12.4 Actuarial balance sheet deficit and remedy.

12.6 Comment on CCRC's ability to operate as a going concern.

12.7 Reasons for no opinion or adverse opinion.

13.2 Material differences between GAAP and GAAPP.

14.1 Deviation from standard practices.

APPENDIX 2.

INDEX TO RECOMMENDATIONS