



ACTUARIAL STANDARDS BOARD

**Actuarial Standard
of Practice
No. 3**

Continuing Care Retirement Communities

Revised Edition

**Developed by the
Task Force to Revise ASOP No. 3 of the
Health Committee of the
Actuarial Standards Board**

**Adopted by the
Actuarial Standards Board
September 2007**

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TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Continuing Care Retirement Communities

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 3

This document contains the final version of the revision of ASOP No. 3, now titled *Continuing Care Retirement Communities*.

Background

In 1987, the Interim Actuarial Standards Board adopted a document titled *Relating to Continuing Care Retirement Communities (CCRCs)*. In 1990, the ASB revised and reformatted ASOP No. 3, *Relating to Continuing Care Retirement Communities*. In 1994, the ASB adopted another revision titled *Practices Relating to Continuing Care Retirement Communities*. In light of the evolution in practice since then, as well as the adoption of a new format for standards, the ASB believed it was appropriate to revise this standard in order to reflect current, generally accepted actuarial practice.

Although parts of the existing ASOP that were considered educational in nature were moved to the appendix, some educational material was retained in the body of the proposed revision to reflect the paucity of literature concerning actuarial practice regarding CCRCs.

This revision includes some prescriptive disclosure requirements that the task force believes are appropriate and are intended to enhance the quality of actuarial communications regarding CCRCs.

Exposure Draft

The exposure draft of this revision was issued in December 2006 with a comment deadline of April 30, 2007. The Task Force to Revise ASOP No. 3 carefully considered the eight comment letters received and made changes to the language in several sections in response. For a summary of the substantive issues contained in the exposure draft comment letters and the responses, please see appendix 2.

There were no significant changes from the exposure draft although several clarifications were made.

The ASB voted in September 2007 to adopt this standard.

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Task Force to Revise ASOP No. 3

Molly J. Shaw, Chairperson

Dave Bond	Darryl G. Wagner
Gary L. Brace	Gregory T. Zebolsky
Gary Teitel	

Health Committee of the ASB

Paul R. Fleischacker, Chairperson

Michael S. Abroe	James M. Gutterman
Gary L. Brace	John C. Lloyd
Robert G. Cosway	John W.C. Stark

Actuarial Standards Board

Cecil D. Bykerk, Chairperson

Albert J. Beer	Robert G. Meilander
William C. Cutlip	Godfrey Perrott
Alan D. Ford	Lawrence J. Sher
David R. Kass	Karen F. Terry

ACTUARIAL STANDARD OF PRACTICE NO. 3

CONTINUING CARE RETIREMENT COMMUNITIES

STANDARD OF PRACTICE

Section 1. Purpose, Scope, Cross References, and Effective Date

- 1.1 Purpose—This actuarial standard of practice (ASOP) provides guidance to the actuary when performing professional services related to a continuing care retirement community (CCRC).
- 1.2 Scope—This standard applies to actuaries when performing professional services, including giving advice, in connection with CCRCs (including nonprofit and for-profit entities). These professional services may be performed for owners, operators, financing entities, current residents, or prospective residents of a CCRC, as well as for other professionals or regulatory bodies.

Examples of the services covered by this ASOP include, but are not limited to, the following:

- a. testing the financial condition of the CCRC for satisfactory actuarial balance;
- b. estimating actuarial values of assets and liabilities;
- c. evaluating the fee structure for existing residents or a cohort of new residents;
- d. developing population projections, including resident movements, independent living unit turnover, and health center utilization;
- e. projecting future cash flows and cash and investment balances;
- f. designing and pricing new residency agreements;
- g. estimating the future services obligation under GAAP;
- h. assisting in developing financial feasibility studies;
- i. performing mortality, morbidity, and withdrawal experience studies; and
- j. providing appropriate rates of mortality, morbidity, or life expectancies for the CCRC's use.

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The actuary should comply with this standard except to the extent it may conflict with applicable law (statutes, regulations, and other legally binding authority). If compliance with applicable law requires the actuary to depart from the guidance set forth in this standard, the actuary should refer to section 4 regarding deviation.

- 1.3 Cross References—When this standard refers to the provisions of other documents, the reference includes the referenced documents as they may be amended or restated in the future, and any successor to them, by whatever name called. If any amended or restated document differs materially from the originally referenced document, the actuary should consider the guidance in this standard to the extent it is applicable and appropriate.
- 1.4 Effective Date—This standard is effective for professional services performed in connection with a CCRC on or after March 1, 2008.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice.

- 2.1 Additional Fee—An amount that may be payable by a resident, in accordance with a residency agreement, for services made available but not covered by the advance fee and the periodic fees (such as guest meals, additional meals, barber/beauty shop, use of a carport, and non-covered health care services).
- 2.2 Actuarial Balance Sheet—A measure of the assets and liabilities, as of the valuation date, associated with current residents.
- 2.3 Advance Fee—An amount payable by a resident at the inception of a residency agreement. The advance fee is usually specified in the residency agreement and is usually payable prior to the resident assuming occupancy of a living unit (sometimes referred to as an *entrance fee*, *endowment fee*, *entry fee*, or *founder's fee*).
- 2.4 Cash and Investment Balance—The value of cash, cash equivalents, and marketable securities of a CCRC (historically referred to as *cash balance* by CCRC practitioners). This excludes the value of the physical property assets of the CCRC.
- 2.5 Cohort of New Residents—A hypothetical group of new residents assumed to enter the CCRC over a specified period of time and assumed to have certain demographic characteristics.
- 2.6 Continuing Care Retirement Community (CCRC)—A residential facility that provides stated housekeeping, social, and health care services in return for some combination of an advance fee, periodic fees, and additional fees.

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- 2.7 Fee Structure—A combination of fees that generally includes advance fees, periodic fees, and additional fees.
- 2.8 Health Care Guarantee—A clause in a residency agreement guaranteeing access to health care and defining the type of health care services to be provided to the resident. These health care services may be offered with or without additional charges to the periodic fees.
- 2.9 Health Center—A facility associated with a CCRC where health care is provided to residents in accordance with the residency agreement. The health center typically includes some combination of assisted living, special care, and nursing care units. Non-residents may also live in the health center.
- 2.10 Independent Living Unit—Living quarters designed for residents capable of living independently. A resident could receive home health care in the independent living unit, but a resident who needs full-time health care on either a temporary or permanent basis is normally transferred to the health center.
- 2.11 Levels of Care—Varying degrees of care, which are based on a resident’s health status. Typical levels of care include independent living units, assisted living units, nursing care units, and special care units. The levels of care may be dictated by state licensure. A transfer to a different level of care need not involve a transfer to a different type of living unit.
- 2.12 Living Unit—The various living quarters of a CCRC, including independent living units and health center units.
- 2.13 Morbidity Rate—The probability of incurring an illness or disability requiring the transfer to a different level of care. The permanent transfer rates and the temporary transfer rates together comprise the morbidity rates.
- 2.14 Non-Resident—A person living in the CCRC who has signed an agreement without a health care guarantee and without a refund guarantee. Non-residents normally pay for all health care services received on a fee for service basis.
- 2.15 Periodic Fee—Amounts payable by a resident periodically (usually monthly) during the existence of a residency agreement. The periodic fees are typically adjusted from time to time to reflect changes in operating costs.
- 2.16 Permanent Transfer—A move from one level of care to another level of care without expectation of returning to the former level of care.
- 2.17 Physical Property—Physical assets, such as land, building, furniture, fixtures, or equipment, which belong to the CCRC. These assets, excluding land, are assumed to depreciate over their respective lifetimes. These assets are also referred to as the fixed assets of the CCRC.

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- 2.18 Population Projection—An estimate of the number of residents expected to live in the CCRC at various future times.
- 2.19 Residency Agreement—The contract between one or more individuals and the CCRC that describes the services to be provided and the obligations of the parties. The contracts are usually of long duration and may be for the life of the individual or the life of the survivor of two or more individuals. The residency agreement describes the health care guarantee, if any, and any portion of the advance fee that would be refundable upon termination of the residency agreement.
- 2.20 Resident—A person living in the CCRC who has signed a residency agreement with a health care guarantee or a refund guarantee.
- 2.21 Temporary Transfer—A move from one level of care to another level of care with the expectation of returning to the former level of care.
- 2.22 Trend—Measure of rates of change, over time, that affects revenues, costs, or actuarial assumptions.
- 2.23 Withdrawal Rate—The probability that a residency agreement will be terminated by the resident's leaving the CCRC for reasons other than death.
- 2.24 Valuation Date—The date as of which the values of the assets and liabilities of the CCRC are determined.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 Introduction—When providing professional services related to a CCRC, the actuary should consider the relevant financial items associated with the CCRC, current residents, new residents, and levels of care provided, as well as relevant residency agreement provisions and applicable law. The actuary should use methods and assumptions that are, in the actuary's professional judgment, appropriate in light of the scope and purpose of the assignment.
- 3.2 Determination of Satisfactory Actuarial Balance—In determining whether the CCRC is in satisfactory actuarial balance as of the valuation date, the actuary should evaluate whether the CCRC meets all of the following three conditions:
 - 3.2.1 Condition 1: Adequate Resources for Current Residents—The resources available to the CCRC related to current residents include any existing resources for the current residents plus the actuarial present value of future resources, such as periodic fees expected to be paid in the future by such residents.

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The actuary may consider these resources adequate if they are greater than or equal to any existing liabilities for the current residents plus the actuarial present value of the expected costs associated with the obligations to such residents under their contracts. The actuary should determine if this condition is satisfied through the use of the actuarial balance sheet (see section 3.4).

A proposed CCRC is not required to meet this condition to be in satisfactory actuarial balance. The actuary should start evaluating this condition for a new CCRC when the block of current residents is of sufficient size to make this determination. For example, the actuary may evaluate this condition at the earlier of three years after opening or when the CCRC reaches its targeted occupancy.

- 3.2.2 Condition 2: Adequate Fee Structure for a Cohort of New Residents—For a cohort of new residents, the expected fees are the sum of the advance fee paid at or before occupancy plus the actuarial present value at occupancy of the new residents' expected future periodic fees. Expected fees may include any future additional fees and third party payments attributable to the new residents.

The actuary may consider the fee structure adequate if the expected fees are greater than or equal to the actuarial present value at occupancy of the costs associated with the obligations assumed by the CCRC for that cohort. The actuary should determine if this condition is satisfied through the use of the cohort pricing analysis (see section 3.5).

- 3.2.3 Condition 3: Positive Projected Cash and Investment Balances—The actuary should project cash and investment balances over the projection period. This projection should include revenue and expenses from all known sources, including current and new residents and non-residents.

The actuary should choose a projection period that extends to a point at which, in the actuary's professional judgment, the use of a longer period would not materially affect the results and conclusions.

The actuary may consider the cash and investment balances adequate if these balances are positive in each projection year. The actuary should determine if this condition is satisfied through the use of the cash flow projection (see section 3.7).

- 3.3 Projected Population Movements—The actuary should base the development of the actuarial balance sheet (see section 3.4), the cohort pricing analysis (see section 3.5), and the cash flow projection (see section 3.7) respectively on the three types of population projections described below, using appropriate assumptions for mortality, morbidity, and withdrawal. The actuary should project the residents' movements through various levels of care, the number of surviving residents by level of care status, and the projected number of independent living units occupied.

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- 3.3.1 Closed-Group Projection of Current Residents—When testing for condition 1 (see sections 3.2.1 and 3.4), the actuary should use a population projection that is performed solely with respect to current residents on the valuation date. The actuary should project the surviving residents' movements through various levels of care until contract termination by death or withdrawal. This projection excludes new residents and non-residents.
- 3.3.2 Closed-Group Projection of a Cohort of New Residents—When testing for condition 2 (see sections 3.2.2 and 3.5), the actuary should use a population projection that is performed solely with respect to a cohort of new residents. The actuary should project the surviving residents' movements through various levels of care until contract termination by death or withdrawal. This projection excludes non-residents.
- 3.3.3 Open-Group Projection—When testing for condition 3 (see sections 3.2.3 and 3.7), the actuary should use a population projection that tracks residents in the CCRC on the valuation date together with expected new residents consistent with assumed occupancy levels. The actuary should reflect non-residents in this population projection if they will fill unoccupied units or beds in various levels of care consistent with assumed occupancy levels.
- 3.4 Actuarial Balance Sheet—The actuary should consider the guidance below when developing the actuarial balance sheet.
- 3.4.1 Assets—The actuary should estimate the following: the actuarial present value of future periodic fees (described in section 3.6.1), the actuarial present value of future additional fees and third party payments (described in section 3.6.2), and the actuarial value of physical property for assets currently in service (described in section 3.6.3).
- The actuary should reflect in the actuarial balance sheet other assets from the accounting balance sheet as appropriate, in the actuary's professional judgment. These assets generally include such items as cash and investment balances, current receivables, and other items not specifically reflected in the above guidance.
- 3.4.2 Liabilities—The actuary should estimate the following: the actuarial present value of the future use of physical property (described in section 3.6.4), the actuarial present value of future operating expenses (described in section 3.6.5), the actuarial present value of future refunds (described in section 3.6.6), and the actuarial present value of the long-term debt (described in section 3.6.7).
- The actuary should reflect in the actuarial balance sheet other liabilities from the accounting balance sheet as appropriate, in the actuary's professional judgment. These liabilities generally include such items as current payables, resident

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deposits, fees paid in advance, short-term debt obligations, and other items not specifically reflected in the above guidance.

- 3.5 Cohort Pricing Analysis—The actuary should develop the cohort pricing analysis based on the present value of revenues and expenses associated with a cohort of new residents.

The revenues include the advance fees, the actuarial present value of future periodic fees (described in section 3.6.1), and the actuarial present value of future additional fees and third party payments (described in section 3.6.2).

The expenses include the actuarial present value of the future use of physical property (described in section 3.6.4), the actuarial present value of future operating expenses (described in section 3.6.5), and the actuarial present value of future refunds (described in section 3.6.6).

The actuary may consider, subject to disclosure, the use of expense levels consistent with the targeted number of residents when there is expected to be a material change in the population, such as growth resulting from new construction.

- 3.6 Actuarial Asset and Liability Values—When developing the actuarial balance sheet or the cohort pricing analysis, the actuary should develop the following present value items.

3.6.1 Future Periodic Fees—The actuary should estimate the actuarial present value of future periodic fees by projecting the fees payable by the surviving residents of the appropriate closed-group population in each level of care in each future year, and discounting the result back to the valuation date. The estimate of future fees will usually reflect current rates adjusted for projected future fee increases.

3.6.2 Future Additional Fees and Third Party Payments—The actuary should estimate the actuarial present value of future additional fees (such as guest meals and additional meals) and payments to the CCRC from third party payers (such as Medicare, Medicaid, and other insurance), if applicable, by projecting the additional revenue payable by, or on behalf of, the surviving residents of the appropriate closed-group population in each level of care in each future year and discounting the result back to the valuation date. The estimate of these future revenues should usually reflect current experience adjusted for projected future increases to such revenues.

3.6.3 Physical Property for Assets Currently in Service—The actuary should estimate the actuarial value of physical property for assets currently in service as the present value of the projected remaining annual capital expense charges associated with assets in service as of the valuation date.

The actuary should estimate the annual capital expense charge for the use of an asset for each year using its useful lifetime. The projected annual capital expense charge consists of the imputed interest charge for the use of the asset plus the

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change in asset value from one year to the next. In calculating the capital expense charges, the actuary should use a rate consistent with the cost of capital at the time the asset was originally put into service or the cost of capital in the current economic environment.

- 3.6.4 Future Use of Physical Property—The actuary should estimate the actuarial present value of the future use of physical property by taking the projected annual capital expense charges for both the current and replacement fixed assets allocated to the surviving residents of the appropriate closed-group population in each future year and discounting the result back to the valuation date. The actuary should use a methodology to estimate the annual capital expense charges that is consistent with the methodology used in section 3.6.3.
- 3.6.5 Future Operating Expenses—The actuary should estimate the actuarial present value of future operating expenses by taking the operating expenses allocated to the surviving residents of the appropriate closed-group population in each future year and discounting the result back to the valuation date. The actuary should exclude from future operating expenses (a) future capital expenditures, which are discussed in section 3.6.4; and (b) the future long-term debt interest and principal payments, which are discussed in section 3.6.7.

When estimating future operating expenses, the actuary should reflect future cost trends and reflect underlying expense consumption patterns in the allocation. The actuary should allocate expenses across the various levels of care and within each level of care on an appropriate basis such as per person, per unit, or per square foot.

- 3.6.6 Future Refunds—The actuary should estimate the actuarial present value of future refunds by estimating the amount of refund due each terminating resident of the appropriate closed-group population in each future year and discounting the amounts back to the valuation date. The actuary should base the estimate of the refund due each terminating resident each future year on the terms of the residency agreement assumed to be applicable to that resident and the CCRC's actual practice, if any, with regard to payment of refunds.
- 3.6.7 Value of Long-Term Debt—The actuary should estimate the actuarial present value of long-term debt as the discounted value of the projected remaining principal and interest payments as of the valuation date. The present value of long-term debt may be different than the amount on the accounting balance sheet depending on the relationship between the discount rate and the actual or expected interest rate on the debt.
- 3.7 Cash Flow Projections—The actuary should perform cash flow projections over the projection period using open-group methods and should reflect the projected financial effects of existing residents, new residents replacing existing residents, and non-residents to the extent living unit capacity allows. The actuary should select assumptions in the

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cash flow projections that are consistent with those used in the development of the actuarial balance sheet and cohort pricing analysis (see sections 3.4 and 3.5).

The actuary should reflect revenues from all known sources (such as advance fees, periodic fees, additional fees, payments from non-residents, reimbursements from Medicare or other third party payer, and investment income). The actuary should reflect expenses from all known sources (such as operating expenses, capital expenditures, debt interest and principal payments, any cost of using an offsite health facility, and refunds of advance fees).

The cash flow projection should show the cash and investment balances at the beginning and end of each projection year.

The actuary should consider the guidance in ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*, when choosing assumptions for cash flow projections.

3.8 Selection of Actuarial Assumptions—The actuary should consider the guidance below when selecting assumptions for performing actuarial analyses covered by this ASOP.

3.8.1 Mortality, Morbidity, and Withdrawal Assumptions—In selecting assumptions for rates of mortality, morbidity and withdrawal, the actuary should consider which of the following, in the actuary’s professional judgment, are appropriate to reflect in each of these assumptions:

- a. age and gender;
- b. health characteristics;
- c. permanent and temporary transfer patterns;
- d. level of care status and expected differences in experience between residents in different levels of care;
- e. time elapsed since the last change in the level of care;
- f. single or multiple occupancy;
- g. profile of new residents who are expected to enter the CCRC when vacancies occur;
- h. time elapsed since the resident entered the CCRC;
- i. actual experience of the CCRC and the credibility of the experience;

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- j. contractual guarantees, such as health care guarantees and advance fee refunds; and
- k. operational policies and practices of the CCRC, such as transfer policies.

The actuary should consider trend assumptions for rates of mortality, morbidity, and withdrawal that are reasonable, in the actuary's professional judgment. In selecting trend assumptions, the actuary should consider and review appropriate data. These data may include past trend experience studies, past projections of trends or appropriate industry studies.

- 3.8.2 Trend Assumptions for Fees and Expenses—The actuary should set trend assumptions for periodic fees, advance fees, additional fees, and other revenue items. The actuary should also set trend assumptions for operating expenses, capital expenditures, and other expense items. The actuary may use different trend assumptions, as appropriate, for various categories of revenues and expenses. In setting trend assumptions for periodic fees, the actuary should also take into account practical, competitive, and contractual considerations.

The actuary should select assumptions as to future trends in periodic fees that are consistent with the trend assumptions that are used in projecting future expenses. If the actuary uses different trend assumptions for periodic fees and operating expenses, the actuary should disclose this difference in an appropriate actuarial communication.

- 3.8.3 Investment Rate and Discount Rate Assumptions—The actuary should select investment rate and discount rate assumptions that are individually reasonable, mutually consistent, and reflective of the long-term nature of the contracts.

- a. Investment Rate—The actuary should consider the past investment performance, short- and long-term market expectations, and the future investment strategy of the CCRC to estimate investment income for the cash flow projection.
- b. Discount Rate—The actuary should use a discount rate to estimate actuarial present values that, in the actuary's professional judgment, is reasonable and appropriate, and is consistent with the investment rate.

- 3.8.4 Revenue and Expense Allocation Assumptions—The actuary should assume an allocation of general revenues and expenses to the various levels of care, and to current and new residents. The actuary should consider whether the sum of all allocated expenses reconciles to the total projected expenses of the CCRC.

- 3.8.5 Going-Concern Assumption—The actuarial balance sheet, the cohort pricing analysis, and the cash flow projection rely on assumptions predicated on the

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ongoing financial viability and continuation of the CCRC. This implies that the CCRC will be able to maintain appropriate occupancy levels by attracting new residents to replace existing residents as the latter vacate units. The actuary should consider the ability of the CCRC to attract new residents or any other known, significant circumstances that, in the actuary's professional judgment, may affect the CCRC's ability to remain a going concern.

- 3.8.6 Reasonableness of Assumptions—The actuary should review the assumptions for reasonableness. The assumptions should be reasonable, in the actuary's professional judgment, in the aggregate and for each assumption individually, using relevant information available to the actuary.

In reviewing the assumptions for reasonableness, the actuary may consider such factors as the following:

- a. the purpose of the measurement;
- b. the frequency with which the projections are expected to be updated;
- c. the length of the projection period;
- d. the sensitivity of the projections to the effect of variations in key actuarial assumptions;
- e. the potential variability of the assumption;
- f. the size of the CCRC's resident population;
- g. the ability to increase fees or decrease expenses in future periods;
- h. the level of surplus available to provide for adverse fluctuation; and
- i. any significant margins for uncertainty which have been included in the actuarial assumptions.

- 3.9 Benevolence Funds and Financial Assistance Subsidies—The actuary should consider both the funds available and the potential future liabilities for residents who do not pay the full scheduled fees. For example, some CCRCs may set aside assets or funds from charitable contributions to assist residents who cannot afford the full scheduled fees, the periodic fee increases, or advance fees. Other CCRCs may include the costs of any assistance in the basic fee structure.

- 3.10 For-Profit CCRCs—When performing professional services with respect to for-profit CCRCs, the actuary should consider the nature and financial implications of the ownership arrangement, including owner's equity, past and possible future equity

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distributions, potential income tax liability, and historical and future capital expenditures funded by the owner.

- 3.11 Equity or Cooperative CCRCs—The actuary should consider the nature and financial implications of any ownership arrangement, including advance fee payments and refunds, and the value of assets invested in the physical property and the replacement costs of these fixed assets. For example, in some CCRCs, residents may either own a particular unit or a membership in the CCRC.
- 3.12 Additional Considerations Affecting a CCRC's Finances—The actuary should consider the scope of the CCRC's commitments to current and prospective residents and the nature of its fee structure. The actuary may obtain this knowledge from the applicable residency agreements and any other reasonable source of information about the CCRC. When interpreting these documents, the actuary should consider the following:
- a. the admission criteria and how they are applied;
 - b. the terms of the residency agreement and any limitations on the period for which commitments are made;
 - c. any known, significant limitations on the CCRC's ability to change future periodic fees;
 - d. any provision for refunding the advance fee;
 - e. any limitation on the services provided and any requirement of additional charges for services;
 - f. any contract provisions for prepaid health care or for additional charges if a resident receives health care;
 - g. any affiliation with another entity and the extent to which any such entity would assume responsibility for the CCRC's obligations; and
 - h. any other matter that, in the actuary's professional judgment, is expected to have a material effect on the CCRC's current or future financial statements.
- 3.13 External Restrictions—The actuary should consider restrictions on the CCRC from external sources, such as applicable law, regulation, or other binding authority. Examples include a state's Medicaid reimbursement policy, regulations restricting the use of health center beds by non-residents, and any relevant lender-imposed restrictions.
- 3.14 Reliance on Data or Other Information Supplied by Others—When relying on data or other information supplied by others, the actuary should refer to ASOP No. 23, *Data Quality*, for guidance.

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- 3.15 Documentation—The actuary should prepare and retain appropriate documentation regarding the methods, assumptions, procedures, and the sources of the data used. The documentation should be in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary's work, and should be sufficient to comply with the disclosure requirements in section 4.

Section 4. Communications and Disclosures

- 4.1 Communications and Disclosures—When issuing actuarial communications under this standard, the actuary should refer to ASOP No. 23 and ASOP No. 41, *Actuarial Communications*. In addition, the actuary should disclose the following items in an actuarial communication:

- 4.1.1 Actuarial Data, Assumptions, and Methods—The actuarial communication should describe, as applicable, the actuarial data, assumptions and methods used in performing the actuarial analysis, including the following:
- a. summary of historical resident data and population statistics for residents as of the valuation date;
 - b. historical and current financial data used to produce the actuarial balance sheet, cohort pricing analysis, and cash flow projections;
 - c. assumed rates of mortality, morbidity, withdrawal, and occupancy;
 - d. assumptions and methodology used in performing the population projections;
 - e. investment and discount rates;
 - f. trend rates for revenues and expenses, and the relationship between the two;
 - g. assumptions and methodology used to value and depreciate the physical property;
 - h. assumptions and methodology used to estimate each actuarial present value;
 - i. assumptions and methodology used for any significant margin for uncertainty, or a similar adjustment or provision, included in the actuarial valuation, including any significant assumptions affecting the valuation regarding surplus available to provide for adverse fluctuations;

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- j. assumptions and methodology used to allocate general revenue and expenses; and
- k. any material changes in assumptions or methods from the most recent prior analysis.

4.1.2 Assignments Involving an Opinion on Satisfactory Actuarial Balance—The actuarial communication should disclose the actuarial balance sheet, the cohort pricing analysis, and the cash and investment balances at the beginning and end of each projection year, which were prepared to test the three conditions in section 3.2, and state whether or not each condition is met.

If one or more of the three conditions is not met, the actuary should make disclosures according to the following:

- a. Condition 1: Actuarial Balance Sheet Deficit—If the actuarial balance sheet shows a deficit (regardless of the results of conditions 2 and 3), the actuary should state the implications of the deficit. The actuarial communication should describe management’s plans for handling the deficit, if known, and the actuary’s comments thereon, if any;
- b. Condition 2: Cohort Pricing Analysis Deficit or Inadequacy—If the cohort pricing analysis indicates a deficit or inadequacy, the actuary should state the implications of the pricing inadequacy, including the projected impact on the actuarial balance sheet in the future. The actuarial communication should describe management’s plans for handling the pricing inadequacy, if known, and the actuary’s comments thereon, if any;
- c. Condition 3: Negative Cash and Investment Balances on the Cash Flow Projection—If the cash flow projection indicates negative or declining cash and investment balances over the projection period, the actuary should state the implications of the projected negative or declining cash and investment balances. If the cash flow projection indicates negative cash and investment balances, the actuarial communication should describe management’s plans for handling the negative cash and investment balances, including the estimated time before positive cash and investment balances are achieved, if known, and the actuary’s comments thereon, if any; and
- d. Qualification of Opinion—If the actuary is unable to form the needed opinion regarding whether the CCRC is in satisfactory actuarial balance, or if the opinion is adverse (due to failing one or more of the above conditions), or otherwise qualified, then the statement of actuarial opinion and the actuarial communication should explain why the actuary is unable to form an unqualified favorable opinion.

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- 4.1.3 Specific Disclosures—The actuary should specifically disclose the following in an actuarial communication:
- a. any significant issues regarding the going-concern assumption;
 - b. any assistance assumed to be derived from dedicated benevolence funds;
 - c. any significant issues related to for-profit CCRCs;
 - d. any significant issues regarding equity and cooperative CCRCs;
 - e. any significant issues regarding proposed CCRCs;
 - f. any significant issues regarding the reasonableness of the actuarial assumptions;
 - g. that actual experience may significantly differ from projected experience;
 - h. that measurements made at a future date may differ significantly from the current measurement due to potential volatility in an actuarial assumption (for example, present value calculations, periodic fee analyses or population projections);
 - i. the results of any sensitivity tests performed; and
 - j. any additional issues not addressed elsewhere in section 4 that, in the actuary’s professional judgment, are expected to have a material impact on the actuarial analyses.
- 4.2 Deviation—If, in the actuary’s professional judgment, the actuary has deviated materially from the guidance set forth elsewhere in this standard, the actuary can still comply with this standard by applying the following sections as appropriate:
- 4.2.1 Material Deviations to Comply with Applicable Law—If compliance with applicable law requires the actuary to deviate materially from the guidance set forth in this standard, the actuary should disclose that the assignment was prepared in compliance with applicable law, and the actuary should disclose the specific purpose of the assignment and indicate that the work product may not be appropriate for other purposes. The actuary should use professional judgment to determine whether additional disclosure would be appropriate in light of the purpose of the assignment and the intended users of the actuarial communication.
- 4.2.2 Other Material Deviations—The actuary’s communication should disclose any other material deviation from the guidance set forth in this standard. The actuary should consider whether, in the actuary’s professional judgment, it would be appropriate and practical to provide the reasons for, or to quantify the expected

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impact of, such deviation. The actuary should be prepared to explain the deviation to a principal, another actuary, or other intended users of the actuary's communication. The actuary should also be prepared to justify the deviation to the actuarial profession's disciplinary bodies.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes, but is not part of the standard of practice.

Background

Certain contractual obligations of a CCRC are contingent upon the occurrence, timing, and duration of certain future events. The resident typically pays for such future promised services through a combination of advance and periodic fees, typically before the services are provided. Actuarial methods are used to establish the fee structure and to measure the CCRC's liabilities for the provision of future promised services.

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 property, its fee schedule, and the general attractiveness of its whole environment.

Current Practices

Current actuarial practices for CCRCs are generally now well established. Prior to the release of the first edition of this ASOP and the release of subsequent educational material by various entities, actuaries used differing analytical approaches. These approaches included differing methods to determine closed and open-group resident projections, projected refunds, physical property valuations, long-term debt, and other items. While historically differences did exist, these differences have now mostly been eliminated and standardized practices have evolved.

Illustrative Capital Expense Charge Development and Physical Property Valuation

The physical property, or fixed assets, of a CCRC are a significant asset of the CCRC, and also a significant cost to the residents of the CCRC. In order to provide for equity among generations of residents, it is necessary to allocate an appropriate part of the cost of the use of physical property to current residents as of the valuation date, and to the cohort of new residents.

The method described in this appendix for developing and assigning the annual capital expense charge for asset use, determining the asset's actuarial value, and determining the liability for asset use, is one illustrative method designed to provide for equity among generations of residents. (Illustrative formulas for expensing and valuing physical property are presented at the end of this appendix.)

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Physical property assets may be valued and depreciated using level, decreasing or increasing depreciation methodologies based on actuarial principles, the nature of the underlying assets and other factors.

Capital Expense (Imputed Interest plus Depreciation) Charges—The annual capital expense charge for physical property consists of the imputed interest for the use of the asset, or opportunity cost of using cash resources for purchasing a fixed asset (because it is not an interest-earning investment), plus the change in asset value from one year to the next.

- a. Each item of physical property is assigned an assumed useful lifetime and an appropriate rate of inflation. While GAAP expected lifetimes might be available, alternative lifetimes may be available from other sources such as engineering studies performed by the client. In the case of land, the expected useful lifetime may be perpetual.
- b. The annual capital expense charge for the use of an asset is developed for each year using its useful lifetime and is calculated as one of a series of annual amounts. The present value of this series, discounted to the time of acquisition, equals the cost of the asset. This series of annual amounts may be decreasing, level, or increasing.
- c. In similar fashion, capital expense charges are developed for physical property assumed to be purchased in future years. It is assumed that each asset will be replaced at the end of its useful lifetime with a new asset. The cost of the new asset is assumed to equal the original cost indexed for inflation. The asset is continually replaced at the end of successive useful lifetimes.

An approximation of these replacement costs that better reflects the expected magnitude and timing of future capital expenditures may also be used. These approximations reflect a sufficient level of future capital expenditures necessary to maintain the physical property for future use.

Capital expense charges are developed for the following items:

- a. Actuarial value of physical property for assets currently in service—reflected as an asset on the actuarial balance sheet;
- b. Actuarial present value of future use of physical property consumed by current residents throughout their respective lifetimes—reflected as a liability on the actuarial balance sheet; and
- c. Actuarial present value for future use of physical property consumed by a hypothetical group of prospective residents—reflected as a liability on the cohort pricing analysis.

Value of Physical Property for Assets Currently in Service—The actuarial value of each asset is the discounted value (without survivorship) of the remaining annual capital expense charges as

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of the valuation date. The sum of these values for all such assets in service as of the valuation date is reflected as an asset on the actuarial balance sheet.

Value of Future Use of Physical Property for Existing Residents—The actuarial present value of the future use of physical property for existing residents is the discounted value (with survivorship) of the annual capital expense charges for the physical property, *and* its replacements, allocated to existing residents as of the valuation date.

- a. The part of each future year's capital expense charge that relates to the existing residents as of the valuation date is determined by estimating the ratio of the existing resident survivorship group use to total CCRC use. The ratio may be in proportion to population, to number of CCRC occupied beds or units, to square footage, or to some other appropriate measure. For years during fill-up or material change in population, it may be appropriate to substitute a target or ultimate level of use for the actual estimated level of total use.
- b. The current actuarial liability for the promised future use of a physical asset (and its replacements) with respect to the existing resident closed group is the sum (for all years) of the part of such capital expense charge in each future year related to the existing closed group, as determined in (a), discounted to the valuation date.

Value of Future Use of Physical Property for the New Entrant Cohort—The actuarial present value of the future use of physical property for the new entrant cohort is the discounted value (with survivorship) of the annual capital expense charges for the physical property, and its replacements, allocated to the new entrant cohort closed group.

- a. The part of each future year's capital expense charge that relates to the new entrant cohort is determined by estimating the ratio of the new entrant cohort survivorship group use to total CCRC use.
- b. The current actuarial liability for the promised future use of a physical asset (and its replacements) with respect to the new entrant cohort is the sum (for all years) of the part of such capital expense charge in each future year related to the new entrant cohort closed group, as determined in (a), discounted to the valuation date.

Illustrative Formulas for Expensing and Valuing Physical Property

Note: These formulas illustrate allocations on a per-resident basis. Other allocation bases such as units, beds, square footage, etc. may be more appropriate for certain assets.

A. Relationships of Asset Cost, Asset Value, and Open-Group Annual Expense

- e = Expected years of the asset's useful lifetime.
- E_n = Annual expense in year n for use of the asset. For simplicity in these illustrations, we assume it is payable at the end of the year.
- j = Assumed annual rate of increase in E . Note that j could be zero. Setting $j = k$ makes it possible to anticipate a smooth progression in annual expense at the time the asset is replaced when its useful lifetime ends. (It is not necessary that E_n 's form a geometric series. However, in this example the E_n 's do form such a series.)
- k = Assumed annual rate of increase in replacement cost of A .
- i = Assumed annual discount, or cost of capital, rate.
- v = $1/(1 + i)$.
- A_0 = Acquisition cost of the asset.

$$A_0 = v * E_1 + v^2 * E_2 + \dots + v^e * E_e.$$

From this we obtain

$$E_1 = \frac{A_0 * (i - j)}{1 - [v * (1 + j)]^e}, \quad \text{provided } i \neq j$$

V_n = Value of the current asset at duration n , where $n < e$.

$$V_n = v * E_{n+1} + v^2 * E_{n+2} + \dots + v^{e-n} * E_e.$$

From this we obtain

$$E_{n+1} = i * V_n + (V_n - V_{n+1}).$$

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This shows that the annual expense for a physical asset consists of the interest that is forgone (because it is not an interest-earning investment), plus the change in asset value from one year to the next. In the case of land, the annual expense consists of only the interest that is foregone, since there is no assumed change in asset value (lifetime is perpetual).

B. Relationship of Closed-Group Liability with Open-Group Expense

P_n = Projected total population at duration n , determined on an open-group basis. Depending on the circumstances, a reasonable approximation for P may be a constant number equaling the current population.

C_n = Projected surviving population at duration n from a specified closed group. The closed group may be the closed group of current residents, or the closed group for a cohort of new residents.

If a part of a given CCRC is used for persons not under contract, only the fraction devoted to those under contract should be considered. One way of accomplishing this is to include those not under contract in P_n , but not in C_n .

$R_{n+1} = \frac{C_n + C_{n+1}}{P_n + P_{n+1}}$, representing the ratio of the projected closed group population to the projected total population.

L_n = Liability at duration n for the future use of the asset and its replacements by a specific closed group.

$L_n = v * R_{n+1} * E_{n+1} + v^2 * R_{n+2} * E_{n+2} + \dots + v^{e-n} * R_e * E_e$
 $+ v^{e-n+1} * R_{e+1} * E_{e+1} + v^{e-n+2} * R_{e+2} * E_{e+2} + \dots + v^{2e-n} * R_{2e} * E_{2e}$
 $+ \dots + \text{until } R = 0.$

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Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of this revision to ASOP No. 3, *Continuing Care Retirement Communities*, was issued in December 2006 with a comment deadline of April 30, 2007. Eight comment letters were received, some of which may have been submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term “commentator” may refer to more than one person associated with a particular comment letter. The Task Force to Revise ASOP No. 3 carefully considered all comments received, and the Health Committee and the ASB reviewed (and modified, where appropriate) the proposed changes to the ASOP. Summarized below are the significant issues and questions contained in the comment letters and the responses to each. The term “reviewers” includes the task force, the Health Committee, and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the final revised ASOP.

GENERAL COMMENTS	
Comment	One commentator questioned the appropriateness of having a small group develop an ASOP with the risk that an ASOP can be shaped to benefit special interests without regard to the larger public good, and that all interests impacted by the results of actuarial practice in the area (such as the residents of a CCRC) be represented in the formulation of those standards.
Response	The purpose of the ASOP is to provide guidance to actuaries practicing in the CCRC environment and the reviewers believe that the exposure process provides ample opportunity for peer review of the standards being proposed. Anyone, including all members of the public, is permitted to comment on any standard. All comments received by the comment deadline are posted online and available for anyone to review until the ASOP is finalized.
Comment	One commentator suggested putting more emphasis on principles and less on prescription and adding phrasing to the ASOP sufficient to allow actuaries to respond to situations they may confront which call for actuarial judgment beyond what is indicated in the ASOP.
Response	The reviewers believe that the ASOP provides adequate flexibility for actuarial judgment and made no change.
Comment	One commentator suggested there be a discussion of equity among residents and a discussion on the extent to which CCRC pricing should reflect actuarial principles on a resident-by-resident basis.
Response	The reviewers believe the wording should not be prescriptive, and equity and pricing decisions vary from community to community, and made no change.
Comment	The transmittal memorandum of the exposure draft asked if the proposed standard codifies appropriate actuarial practice, and if not, how should it be changed. One commentator expressed disappointment in the content because it focused more on reformatting than attempts to codify actuarial practice evolution since 1994. Another commentator indicated the proposed standard does codify appropriate actuarial practice.
Response	The reviewers believe that the ASOP describes appropriate actuarial practice.

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SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.1, Purpose	
Comment	One commentator suggested there be a statement about the rationale for applying actuarial techniques that includes more than just prepayment of health care. The reason should state that it is due to the existence of advance fees which represent a prepayment of some costs be they health care or shelter, and funding of this prepayment using advance fees depends on estimates of the resident’s longevity which is the purpose of actuarial projections.
Response	The reviewers believe that such a comment belongs in the background section of appendix 1, and that the background section is sufficiently general to cover the reasons included in the comment.
Section 1.2, Scope	
Comment	One commentator suggested that the business context for this ASOP be indicated as well as who requires the actuarial services and why.
Response	The reviewers believe that the current wording adequately indicates who potential users are and the various uses of the actuarial analysis, and made no change.
Comment	One commentator suggested adding “financing entities” to the list of entities using the results of an actuarial communication prepared according to this ASOP.
Response	The reviewers agree and added “financing entities” to the list of potential users of an actuarial communication.
SECTION 2. DEFINITIONS	
Comment	One commentator suggested there be definitions for the various types of actuarial studies.
Response	The reviewers note that the examples cited in section 1.2, Scope, are adequately described and did not believe that formal definitions were needed. The reviewers added estimating the future services obligation under GAAP to the examples of services provided in section 1.2.
Comment	One commentator asked if mortality rate needed to be defined.
Response	The reviewers believe that mortality rate was a term that was well understood in the actuarial community and that a definition was therefore not needed.
Section 2.2, Actuarial Balance Sheet	
Comment	One commentator suggested there needs to be a clear distinction between an actuarial balance sheet and an accounting balance sheet.
Response	The reviewers believe that the development of the actuarial balance sheet as described in section 3.4, Actuarial Balance Sheet, is sufficiently clear in that the actuarial balance sheet is not the same as the accounting balance sheet.
Section 2.5, Cohort of New Residents	
Comment	Several commentators suggested revised wording in order to clarify this definition. One commentator asked if the cohort was real or hypothetical. Another commentator suggested that the definition be refined to specify the time period over which the cohort of new residents would be expected to occur.
Response	The reviewers agree that the definition needed to be clarified, and the definition was revised to indicate this was a hypothetical distribution over a specified period of time relating to assumed future residents.
Section 2.6, Continuing Care Retirement Community (CCRC)	
Comment	One commentator asked if some kind of guarantee wasn’t an essential part of the definition of a CCRC.
Response	The reviewers note that a CCRC may or may not include a guarantee and made no change.
Section 2.9, Health Center	
Comment	One commentator suggested that the definition include reference to dementia care.
Response	The reviewers consider that the reference to special care is broad enough to include dementia care and made no change.

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Section 2.13, Morbidity Rate	
Comment	One commentator suggested that the definition be expanded to note that a transfer to a different level of care may not require a transfer to a different living unit.
Response	The reviewers agree that this is an important clarification, but felt it was better placed in the definition for Levels of Care and modified section 2.11 accordingly.
Section 2.14, Non-Resident	
Comment	One commentator questioned how a person living in a CCRC could be “non-resident” and suggested that this term be changed.
Response	The reviewers believe the definition is clear and the distinction between resident and non-resident is an important concept in CCRC analyses, and made no change.
Section 2.17, Physical Property	
Comment	One commentator criticized this definition as going too far in restricting the meaning of words of common understanding.
Response	The reviewers consider the definition to be appropriate and made no change.
Section 2.18, Population Projection	
Comment	One commentator suggested changing the definition to add number, age and status. One commentator asked if the definition should specify the number of residents by care level expected to live.
Response	The reviewers consider the definition to be appropriate and made no change. Section 3.3, Projected Population Movements, implies that population projections are done in sufficient detail as needed by the intended use of the population projection.
Section 2.20, Resident	
Comment	One commentator questioned whether a contractholder should be considered a resident if there is no health guarantee but there is a substantial refund guarantee.
Response	The reviewers agree and revised section 2.14, Non-Resident, and section 2.20, Resident, to incorporate either a health care guarantee or a refund guarantee.
Section 2.23, Withdrawal Rate	
Comment	One commentator questioned the need for this definition.
Response	The reviewers believe that the definition is needed.
Section 2.24, Valuation Date	
Comment	One commentator suggested that “at” be changed to “as of.”
Response	The reviewers agree and made the change, and a similar change was made to the first sentence of section 3.2, Determination of Satisfactory Actuarial Balance.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Introduction	
Comment	Two commentators suggested that “policy provisions” was not appropriate when dealing with CCRCs. One commentator suggested using “contract provisions” instead, while the other commentator suggested using “residency contract provisions” or “residency agreement provisions.”
Response	The reviewers agree that “policy” was not appropriate and changed the reference to “residency agreement provisions,” which is consistent with terminology used in section 2, Definitions.

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Section 3.2, Determination of Satisfactory Actuarial Balance	
Comment	<p>The transmittal memorandum of the exposure draft asked if requiring a CCRC to meet all three conditions for determining satisfactory actuarial balance was appropriate.</p> <p>One commentator supported this section as written.</p> <p>One commentator believes meeting all three conditions is appropriate for satisfactory actuarial balance but noted that it is not clear that the ASOP requires all three conditions be met for the CCRC to be in satisfactory actuarial balance and made a suggestion to revise the language.</p> <p>One commentator indicated that the concept of satisfactory actuarial balance does need to include all three criteria, but guidance should be given to provide flexibility for the actuary to provide a favorable opinion if only two of the three criteria are initially met using baseline assumptions. This has real world implications in states where regulations mandate this opinion to avoid fee adjustments to residents that are not desired or marketable.</p> <p>One commentator indicated that the requirement to meet all three conditions for satisfactory actuarial balance was more a matter of actuarial judgment in light of the use which the actuary anticipates will be made of his/her work than a question appropriate for legislating within the context of an ASOP. The standard should be that the actuary consider all three elements and justify in writing the basis for structuring the analysis, including actuarial balance, in the way the actuary has chosen.</p> <p>One commentator indicated that in the situation where a community is slightly less than 100% funded on valuation, but shows good surplus in pricing and positive cash flows, this community is not in satisfactory actuarial balance but may not be considered “impaired.”</p>
Response	<p>The reviewers believe that the test for satisfactory actuarial balance includes meeting all three conditions and made no change. As indicated in section 4.1.2, Assignments Involving an Opinion on Satisfactory Actuarial Balance, the actuarial communication would discuss the implications of not meeting any of the three conditions, and the actuary can discuss the projected time frame for meeting all of the conditions using the baseline assumptions.</p>
Section 3.2.1, Condition 1: Adequate Resources for Current Residents	
Comment	<p>One commentator indicated that beginning to evaluate this condition after the community has been in operation three years is arbitrary, and targeted occupancy is not defined. The commentator suggested that an evaluation be made immediately after the close of the first fiscal year when residents have moved in, and preferably it could be based on a hypothetical census at projected full occupancy as opposed to the current census in order to minimize the impact of overhead allocation to a smaller census during fill-up.</p> <p>One commentator stated that in terms of time frame, it may be appropriate to provide the actuary with a defined term for describing the financial state of the facility prior to testing for satisfactory actuarial balance such as “pre-actuarial balance determination.”</p>
Response	<p>The reviewers believe that a first evaluation of this condition is most useful after the community has achieved a stable occupancy level and once mature annual operating expenses can be determined, which typically would be after the fill-up period has been completed. The reviewers note that section 3.2.1 gives an example as to when this might occur.</p>

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Section 3.2.2, Condition 2: Adequate Fee Structure for a Cohort of New Residents	
Comment	One commentator indicated that as written the analysis does not allow for outside subsidization of the fee structure, for example, sources such as charitable donations, endowments or from other financial programs such as LTC insurance or Medicare/Medicaid. Instead, it is limited to amounts paid by the resident. These third party payments are addressed in section 3.6.2, Future Additional Fees and Third Party Payments. It also doesn't allow for consideration of additional fees.
Response	The reviewers agree with the suggestion and clarified the wording to include future additional fees and third party payments attributable to the new residents.
Section 3.2.3, Condition 3: Positive Projected Cash and Investment Balances	
Comment	<p>The transmittal memorandum of the exposure draft asked if the proposed wording for the time period to be covered by the cash flow projection was appropriate.</p> <p>One commentator suggested that the minimum number of years should approximate the average remaining life expectancy of the current CCRC cohort.</p> <p>Another commentator suggested 10 years of stabilized operations should be reflected in the cash flow projection. So for a new community, the projection would reflect the remainder of the fill-up period plus 10 years.</p> <p>Another commentator indicated that it was unclear as to the value of the second sentence in the middle paragraph. In the first sentence, it states the actuary should choose a projection period based on his/her judgment. Adding a sentence to say the actuary "may" consider a minimum period is ineffective. The commentator recommended that the sentence either read as "should consider" or be eliminated.</p> <p>Another commentator indicated that the choice of a projection period can be a material aspect of an actuary's work. The period should be sufficient to be informative for the users of the actuary's work, especially in affecting decisions that may be made in reliance on that work, and projection periods should never be chosen to conceal deferred elements beyond the chosen period that might be material if the projection were continued further. Hence, the choice of a particular projection period is a matter of actuarial judgment, the basis for which the actuary should document in his/her actuarial communication. For instance, for the purpose of examining a CCRC, it might be decided to use the probable maximum lifespan of the youngest residents as an appropriate future projection horizon, or the actuary might deem it desirable to have a projection that spans two or three managerial generations since a change in leadership might be viewed as a material event. A specific period, whether it is 10 or 20 years, should be omitted from the ASOP in favor of a more principled approach to this question.</p>
Response	The reviewers believe that the first sentence of the second paragraph is the key criteria and expanded that sentence to indicate that use of a longer time period should not materially affect the results and conclusions. The second sentence of the second paragraph was deleted.
Section 3.3, Projected Population Movements	
Comment	One commentator indicated that the notion of "levels of care" implies differences in care that can vary widely from one community to the next. Some communities are very effective at increasing services as needed to enable residents to stay in their independent living units. Other communities may have unfilled beds in a higher area of the community and so may move residents to a higher level before care at that level is absolutely needed. Consequently, it is important that the experience of the particular CCRC community which the actuary is concerned be a driver in any calculations. Managerial and medical decisions relating to care levels may vary widely from community to community, or even from time to time within a community. Still, the ASOP is silent on this material aspect of actuarial practice relating to CCRCs.
Response	The reviewers believe that the wording here and in section 3.8, Selection of Actuarial Assumptions, accommodates the potential variation between communities noted above, and made no change.

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Section 3.6.1, Future Periodic Fees	
Comment	One commentator indicated that it may be appropriate to reference consideration of ability of the resident to pay future periodic fees and any appropriate allowance for bad debt or consideration of facility practices in the event a resident is unable to pay.
Response	The reviewers believe that the wording in section 3.9, Benevolence Funds and Financial Assistance Subsidies, which discusses the need to consider the impact of residents who do not pay the full scheduled fees, adequately addresses the issue raised and made no change.
Section 3.6.3, Physical Property for Assets Currently in Service	
Comment	One commentator asked if the cost of capital is defined.
Response	The reviewers note that the cost of capital is described in section 3.6.3 and made no change.
Comment	One commentator indicated that the use of cost of capital at the time the asset was originally put into service is not appropriate in current state of practice since the intent of imputing interest is to provide a mathematical estimate of earnings on these fixed assets. The commentator doesn't see using prior year's cost of capital as any better than current year's cost of capital. The commentator suggests that the assumption made for this value should be that the actuary may use a value consistent with the time the asset was placed in service or one based on the current economic environment.
Response	The reviewers agree with this comment and made the appropriate change.
Comment	One commentator indicated that practicing actuaries use one of two methods for defining the level of depreciation expenses for fixed assets and their corresponding current actuarial value. One method assumes level dollar depreciation expenses and the other assumes increasing dollar depreciation expenses. The two methods generate different results. In some cases, the actuarial opinion would be different depending on the depreciation method used. This can be problematic to regulators as well as to client CCRCs who switch between actuaries. It is suggested the ASOP should state which method is preferable after careful consideration of all factors.
Response	The reviewers believe this is a matter of actuarial judgment and made no change.
Section 3.6.6, Future Refunds	
Comment	One commentator questioned the actuarial treatment of refund provisions that are identical but where payment timing may vary due to legal terminology of the residency agreement such as: (a) unconditionally refundable and typically paid immediately or within 120 days after contract termination, (b) refundable contingent upon reoccupancy and the proceeds from the next resident's advance fee, or (c) refundable upon resale of resident's unit as in a cooperative contract. The issue is whether actuarially the refund liabilities should be the same for all three contract options if the intent and practice of management in regard to payment of refunds is the same for all provisions, i.e., all are paid shortly after contract termination regardless of whether the reoccupancy or resale has occurred. In other words, if three communities offered refunds based on one of the above three provisions, but make payments in the same manner, the resulting actuarial liabilities should not be different.
Response	The reviewers agree with the comment and revised the guidance to also include consideration of the CCRC's actual payment procedure for refunds.
Section 3.6.7, Value of Long-Term Debt	
Comment	One commentator suggested changing the last sentence to the following in order to provide for variable debt: "The present value of long-term debt may be different than the amount on the accounting balance sheet depending on the relationship between the discount rate and the actual or expected interest rate of the debt."
Response	The reviewers agree and changed the sentence as suggested.

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Section 3.7, Cash Flow Projections	
Comment	One commentator questioned including the revenue from non-residents living at the health center. The influx of residents to the health center means eviction of non-residents and the loss of revenue needs to be considered. If hospice services will be offered on premises it will call for cost and anticipated revenue assumptions, and if not, the loss of revenue needs to be considered.
Response	The reviewers believe that it is appropriate to include the revenue from non-residents in the health center since operating expenses include the expense of beds occupied by non-residents. The projected cash flows follow the projected population movements, so as residents displace non-residents in the health center, the revenue projections automatically reflect this change.
Comment	One commentator disagreed with the inclusion of the last paragraph in this section referring to ASOP No. 7, <i>Analysis of Life, Health, or Property/Casualty Insurer Cash Flows</i> . The commentator stated that CCRC practice is so far removed from that of insurance companies that this requirement is unnecessary and bordering on irrelevant. The commentator states that there are too many differences to recommend this to actuaries practicing in the CCRC area.
Response	While the reviewers agree with the commentator about the limited applicability of ASOP No. 7 to CCRCs, the reference is appropriate because an actuary would only apply the guidance that is applicable.
Section 3.8, Selection of Actuarial Assumptions	
Comment	One commentator indicated that the description of assumptions in section 3.8 appears to focus on static assumptions and asks if the ASOP should allow for dynamic assumptions and analysis.
Response	The reviewers believe the current wording is flexible enough to allow dynamic assumptions if the actuary chooses to use them and made no change.
Comment	One commentator noted that the anticipation of withdrawal trend assumptions should be carefully thought out as such a notion is contrary to a going concern model.
Response	The reviewers agree that the withdrawal assumption, as with any assumption, should be carefully considered, but believe that a withdrawal trend is not contrary to the going concern model.
Section 3.8.2, Trend Assumptions for Fees and Expenses	
Comment	One commentator indicated that the last sentence of the second paragraph seems redundant. The commentator indicates that the first sentence of the second paragraph defines the standard, and if the actuary does not follow any standard they need to disclose and justify.
Response	The reviewers consider using a different trend assumption for the periodic fees versus the operating expenses as a significant issue and wanted there to be no ambiguity about the need to disclose such a difference, and made no change.
Comment	One commentator disagreed with the use of “trend assumptions” when referencing inflation and fee increase assumptions in this section. The commentator states that the use of the word “trend” in this context is confusing. Actuaries must make assumptions regarding future “increases” in monthly and advance fees. Such increases will be the result of decisions made by management at the CCRC and this isn’t thought of as a “trend.” Actuaries must also make assumptions regarding expense inflation. The term “inflation” is much more widely understood than “trend” in the context of future expense increases.
Response	The reviewers note that section 2.22, Trend, defines trend as applying to revenues, costs or actuarial assumptions. Therefore, the reviewers believe the current wording is appropriate and made no change.
Section 3.8.3, Investment and Discount Rate Assumptions (now Investment Rate and Discount Rate Assumptions)	
Comment	One commentator suggested that the investment rate assumptions should state that investment performance includes both earnings as well as appreciation in investment values.
Response	The reviewers consider the wording sufficiently flexible to accommodate the actuary’s judgment in developing an appropriate investment rate and made no change.

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Section 3.8.5, Going-Concern Assumption	
Comment	One commentator indicated that it is presumed that the prevailing assumption should be the “going concern” model, yet the security of residents’ interests in these lifetime contracts is clearly the paramount public interest issue. Residents are induced to pay large proportions of their retirement assets in expectation that they will receive lifetime care in accordance with the terms of their contracts. The “going concern” standard does not seem adequate to protect the vulnerability of residents from the specter of the financial failure of the CCRC on which they are dependent, so to the extent that those dependencies are inherent in the CCRC, an assurance of solvency on a “liquidation” basis should be interwoven with “going concern” analysis to maximize the probability that the enterprise will endure to be able to fulfill the contractual expectations of the residents for the full duration of their lives.
Response	The reviewers believe the three conditions discussed in section 3.2, Determination of Satisfactory Actuarial Balance, are the appropriate measures to evaluate the financial condition of a CCRC.
Section 3.8.6, Reasonableness of Assumptions	
Comment	One commentator indicated that the choice of assumptions is critical to the mathematical modeling which lies at the core of actuarial practice. Consequently, actuaries are expected to be proficient in showing, good judgment in the choice of assumptions, including adapting assumption sources, for example, published mortality tables, to the particulars of a specific case. Accordingly, it is desirable that, as proposed, actuaries be continuously admonished that all assumptions be reasonable under the circumstances of their use and actuaries should document in their communications the basis for their judgments that any particular set of assumptions (or any individual assumption within an assumption set) is the right choice for the particular application.
Response	The reviewers agree and consider that the wording in the ASOP supports the above comments.
Comment	<p>The transmittal memorandum of the exposure draft asked if the proposed language asking the actuary to take into consideration the level of surplus and any margins for uncertainty included in the actuarial assumptions was appropriate.</p> <p>One commentator indicated that the consideration of the level of surplus and the margins for uncertainty seem appropriate. This allows the actuary to consider the impact of assumption refinement as compared to materiality of outcome.</p> <p>Another commentator indicated that using “margins for uncertainty” is not appropriate for setting assumptions for CCRC financial and actuarial projections. Population projections, actuarial cash flow projections, the actuarial balance sheet, and the new entrant (cohort) pricing analysis should be based on best-estimate assumptions. The commentator asks how the actuary is to determine which direction to change a particular assumption to add a “margin for uncertainty.” For example, higher mortality will produce higher refund liabilities but could also produce lower health care liabilities. So, would the mortality margin be positive or negative? The use of such margins would result in confusion and problems in interpretation of the results of key actuarial analyses for CCRCs. All CCRC financial analyses should be based on best estimate assumptions with no margins added or subtracted. The mechanism for dealing with uncertainty is surplus on the actuarial balance sheet, surplus on the new entrant (cohort) pricing analysis, and positive cash flows. The existence of such surpluses and positive cash flows provides the “margins” for uncertainty. Actuaries routinely recommend that CCRCs achieve certain target levels of such surpluses. Sensitivity testing may also be performed to determine if there is adequate surplus or cash flows under particular scenarios.</p>
Response	The reviewers believe that the current wording is flexible enough to accommodate using assumptions with or without margins together with the level of surplus available to provide for adverse fluctuations to demonstrate satisfactory actuarial balance.

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Section 3.9, Benevolence Funds and Financial Assistance Subsidies	
Comment	One commentator asked what if a client is not able to provide any data relative to anticipated benevolence.
Response	The reviewers believe that the actuary should use professional judgment to reflect any anticipated benevolence based on the information that is available and disclose what, if any, level of benevolence was reflected in the analysis.
Section 3.10, For-Profit CCRCs	
Comment	The transmittal memorandum of the exposure draft asked if the addition of sections 3.9, 3.10, and 3.11 were appropriate. Two commentators responded that they were appropriate. One commentator suggested combining sections 3.10 and 3.11, Equity or Cooperative CCRCs, into a single section entitled “Ownership Considerations.”
Response	The reviewers believe it is clearer to retain these two issues as separate sections and made no change.
Comment	One commentator suggested that a potential income tax liability be stated and included in the projections.
Response	The reviewers agree with the suggestion and added “potential income tax liability” to the list of issues to be considered.
Comment	One commentator indicated that the comment about capital expenditures funded by the owner is unclear. The commentator asks if this is suggesting that these shouldn’t be a liability for the actuarial balance sheet and cohort pricing. If so, then they shouldn’t be counted as an asset either. The commentator asks if this is suggesting they be treated as a gift.
Response	The reviewers note that ownership arrangements vary and the handling of capital expenditures may also vary. The reviewers do not believe there should be one prescribed way of handling capital expenditures in For-Profit CCRCs and this determination should be left to the actuary’s professional judgment.
Section 3.11, Equity or Cooperative CCRCs	
Comment	One commentator questioned the meaning of this section. The issue in regard to a cooperative CCRC is (1) whether they should be handled as a combination of cooperative and service components in actuarial analysis or (2) whether an actuary can simply review the service component and ignore the cooperative element. It is suggested that the ASOP include a more detailed statement on the preference in regard to how this organization should be modeled in an actuarial study.
Response	The reviewers note that arrangements of equity and cooperative CCRCs vary. The reviewers do not believe there should be one prescribed way of handling these arrangements and this determination should be left to the actuary’s professional judgment.
Section 3.13, External Restrictions	
Comment	One commentator suggested that the list of external sources be extended to loan covenants. Another commentator indicated that the meaning of this section is not clear. If such restrictions generate results that are not in satisfactory actuarial balance, then the actuary cannot give a positive opinion. In particular, what is anticipated by lender imposed restrictions since condition 3 only requires that cash balances be positive, and the commentator points out that lenders are likely to require a high cash balance.
Response	The reviewers believe that relevant lender-imposed restrictions should be considered and modified the language to clarify this point.

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SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1.1, Actuarial Data, Assumptions, and Methods	
Comment	One commentator indicated that since actuaries serve generally as advisors, all communications should be sufficiently clear and candid so that any person who may rely on the actuary’s work is able to examine the actuary’s judgments critically to determining if they are appropriate for the intended use. This requires a high standard of documentation and requires that actuaries be able to explain their methods, assumptions, judgments and opinions in terms that non-actuaries readily follow and evaluate. Section 4 as drafted makes clear that actuaries are to document their work with exemplary completeness. However, the section omits any requirement that the actuary explain the basis for the choice of assumptions, methodologies, etc. and such explanation should be part of any complete communication.
Response	The reviewers believe that such explanation should not be required as a part of this communication and note that section 3.15, Documentation, requires the appropriate documentation, and made no change.
Comment	One commentator indicated that the specific listing of documentation in section 4.1.1 seems redundant with ASOP No. 41, <i>Actuarial Communications</i> . In addition, many of the items listed in section 4.1.1 may not be applicable depending on the assignment. For example, an assignment involving only a population projection would not include the items mentioned in section 4.1.1(b), (e), (f), (g), (h), and (j).
Response	The reviewers acknowledge there may be some redundancy with ASOP No. 41 but decided that since CCRC analysis involves issues that may not be familiar to all actuaries it was preferable to list the key items that should be discussed. Since the items to be included in the actuarial communication depend on the purpose of the communication, the reviewers changed the first sentence of section 4.1.1 to refer to applicable items.
Comment	One commentator suggested changing item 4.1.1(k) to “any material changes in assumptions or methods from the most recent prior analysis.”
Response	The reviewers agree and changed the sentence as suggested.
Section 4.1.2, Results of Conditions for Satisfactory Actuarial Balance and Qualification of Opinion (now Assignments Involving an Opinion on Satisfactory Actuarial Balance)	
Comment	One commentator suggested changing the title of section 4.1.2 to “Assignments Regarding Opinion of Satisfactory Actuarial Balance” or something similar, in order to clarify that the section is limited in scope to specific assignments. As worded, the ASOP would require development of the three tests for any actuarial communication.
Response	The reviewers agree and changed the title for section 4.1.2 to “Assignments Involving an Opinion on Satisfactory Actuarial Balance.”
Comment	One commentator questioned the use and implication of “or declining” in paragraph 4.1.2(c). The commentator asks over what period would the cash balances need to decline (any two consecutive years or over the total projection period). The commentator indicates that there may be situations where it may be perfectly appropriate to have slow declining balances or have temporary declines followed by a plateau.
Response	The reviewers agree that in certain circumstances declining cash and investment balances may not pose any implications, but believe the actuary should comment on the cause of the decline, and made no change.
Section 4.3, Deviation from Standard (now Deviation)	
Comment	One commentator indicated that section 4.3.1, Material Deviations to Comply with Applicable Law, does not address the obligation that we have as professionals to try to ensure that laws with actuarial implications are properly crafted.
Response	While the reviewers agree with the assertion that laws with actuarial implications should be properly crafted, the reviewers believe that this issue is outside of the scope of the ASOP.

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Comment	One commentator questioned the meaning of principal in the next to last sentence of section 4.3.2, Other Material Deviations. The commentator asks if this is the principal in the actuary’s own firm.
Response	The reviewers refer the commentator to section 2.7, Principal, of ASOP No. 41. Principal refers to the client or employer of the actuary, and the facts and circumstances of the situation will determine which is the principal.
Appendix 2 (now Appendix 1)	
Comment	The transmittal memorandum of the exposure draft asked if the material in appendix 2 was appropriate for inclusion in this ASOP. One commentator indicated that including appendix 2 was appropriate. Another commentator suggested that the material in appendix 2 was more appropriate for publication for peer review and discussion on a standalone basis. An ASOP—which may be used by a skilled trial lawyer in a deposition or trial to undermine the valid judgments of a qualified actuary—is not the best forum for such material.
Response	The reviewers note that much of this material was included in previous versions of this ASOP and that the exposure process provided ample opportunity for peer review of the material in appendix 2.
Comment	One commentator suggested revising the first sentence referring to “and also a significant cost to the residents of the CCRC.” Residents don’t typically have ownership of fixed assets, so, it is a cost of operating the CCRC.
Response	The reviewers consider the current wording appropriate and made no change.