Society of Actuaries

Long Term Care Intercompany

Experience Study – Aggregate Database

2000-2011 Report

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TOWERS WATSON

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Section 1: Background and Scope

Towers Watson Delaware, Inc. ("Towers Watson") assisted the Society of Actuaries ("SOA") in a multi-phase project with an objective of creating experience basic tables for long term care ("LTC") business in the United States utilizing data gathered by the SOA from 22 LTC carriers in the industry, representing over 80% of the inforce policies. Phase 1 of this project was to assess the quality of data submitted to the SOA by certain LTC carriers (the "Participants") to determine its suitability to support the creation of LTC experience basic tables. The data was submitted for the study period of 2000-2011. The recommendation at the conclusion of Phase 1 was to move forward with experience studies for claim incidence, claim termination, and claim utilization. In Phase 2 we developed aggregate databases of experience results for each of the studies.

This report describes the approach taken to develop the aggregate database for each study and provides definitions for each of the data elements provided in the aggregate databases.

Note that the databases provided to the SOA in conjunction with this report have not been altered to adhere to any Safe Harbor rules application. Rather, the data selected for the study and any resulting analyses have been provided in a form consistent with data received, while every effort was made to preserve the confidentiality of individual Participants.

This report is intended to provide certain actuarial information and analyses that would assist a qualified professional in interpreting experience data and developing model assumptions for long term care products.

Section 2: Aggregate Database Description

Aggregate databases of claim incidence, claim termination, and claim utilization were developed for the qualifying Participants from Phase 1 of the project.

Each experience study is discussed separately below. The aggregate databases can be found in the following files:

- Claim incidence.xlsx
- Claim termination.xlsx
- Claim utilization.xlsx

2.1 Claim Incidence

The probability of a policyholder incurring a claim is referred to as claim incidence. This is a key morbidity assumption for long term care modeling, which is measured from new claim counts and exposure life years.

To develop a claim incidence study we identified in Phase 1 the following critical data elements which are either critical to the calculation of the claim incidence rate or a key risk factor by which claim incidence rates vary.

Phase 1 Critical Data Elements for Claim Incidence Study	
Issue Date	Coverage
Date of Birth	Benefit period
Gender	Elimination Period
Underwriting Class	Claim Incurred Date
Underwriting Type	Claim Type
Marital Status	Paid Amount

Of the 22 Participants, 12 companies satisfied these criteria and included in this aggregate database.

Section 2.1.1 below described how the data was used to develop claim incidence rates.

The claim incidence study includes nearly 15 million years of total life exposure and over 172 thousand claims for the Participants whose data qualified.

Although certain risk factors, such as attained age and gender, are critical to setting claim incidence assumptions the aggregate database includes a more expansive list of policy and benefit characteristics by which experience can be measured. Section 2.1.2 below provides descriptions of those characteristics that are available in the aggregate database for claim incidence.

2.1.1 Calculations

Claim incidence rate is calculated as the number of claims divided by exposure. Two measures of exposure were developed: total life basis and active life basis. Total life exposure is calculated as the number of days during the exposure period (January 1, 2000 to December 31, 2011) between the policy effective date and termination date. There is no adjustment for the period of time on claim. Active life exposure is calculated as the total life exposure reduced for the period of time on claim.

The claim count for each policy was provided within the policy table received from each Participant. Any claims that started prior to the exposure point were removed from the claim count as the incidence rate is intended to measure the probability of a new claim occurring. For policies identified with more than one claim, aggregation of claims occurred when service dates overlapped or were within six months of each other. This six month test was applied to each of the studies to ensure a common definition of a unique claim.

2.1.2 Data Definitions

Below please find a description of the data included in the claim incidence aggregate database:

1. Gender: Policyholder is male or female.

2. IssueYear: The year in which the policy became effective.

3. IncurredAgeBucket: Age of policyholder when the claim began. Grouped into 5 year age bands.

4. PolicyYear: Policy duration in years.

5. Marital_Status: Policyholder status at policy issue. If no indicator is provided, then the presence of a spousal discount qualifies policyholder as “married” status for this field

6. Prem_Class: Underwriting class as identified by the company. Includes preferred (P), standard (S), and substandard (SS).

7. Underwriting_Type: Type of underwriting conducted at policy issue (guaranteed issue, full underwriting, etc.).

8. Region: Information was consolidated into 4 regions by states (Midwest, Northeast, South, West, and unknown).

9. NH_Orig_Daily_Ben_Bucket: Original daily benefit for nursing home claims grouped into <$100, $100-199, $200+, and Unknown.

10. ALF_Orig_Daily_Ben_Bucket: Original daily benefit for assisted living facility claims grouped into <$100, $100-199, $200+, and Unknown.

11. HHC_Orig_Daily_Ben_Bucket: Original daily benefit for home health care claims grouped into <$100, $100-199, $200+, and Unknown.

12. Cov_Type_Bucket: Type of coverage for policyholder. Can be comprehensive or other.

13. NH_Ben_Period_Bucket: Benefit period of the policyholder bucketed into year groups of <1, 1-2, 3-4, 5+, Unlimited, and Unknown for nursing home claims.

14. ALF_Ben_Period_Bucket: Benefit period of the policyholder bucketed into year groups of <1, 1-2, 3-4, 5+, Unlimited, and Unknown for assisted living claims.

15. HHC_Ben_Period_Bucket: Benefit period of the policyholder bucketed into year groups of <1, 1-2, 3-4, 5+, Unlimited, and Unknown for home health claims.

16. NH_EP_Bucket: Elimination period of the policyholder bucketed into 0, 20, 30, 60, 90/100, >100, and Unknown for nursing home claims.

17. ALF_EP_Bucket: Elimination period of the policyholder bucketed into 0, 20, 30, 60, 90/100, >100, and Unknown for assisted living facility claims.

18. HHC_EP_Bucket: Elimination period of the policyholder bucketed into 0, 20, 30, 60, 90/100, >100, and Unknown for home health care claims.

19. Count_NH: Original claim identified as Nursing Home.

20. Count_ALF: Original claim identified as Assisted Living Facility.

21. Count_HHC: Original claim identified as Home Health Care.

22. Count_Unk: Original claim type is unknown.

23. IssueAgeBucket: Age of policyholder when the policy was issued. Grouped into 5 year age bands.

24. State: Issue state of policy.

25. TQ Status: Policy identified by company as tax qualified, non-tax qualified, or unknown.

26. Infl_Rider: Inflation rider of the policy grouped into inflation, guaranteed purchase option, none and unknown.

27. RateIncreaseFlag: Indicates whether or not this policy has ever had a rate increase. Does not specify when or magnitude of the rate increase.

2.2 Claim Termination

The probability that an existing claim will cease is referred to as claim termination. Claim termination typically occurs due to recovery or death. This is a key morbidity assumption for long term care modeling, which is developed from claim incurred dates, service dates, and termination dates.

To develop a claim termination study we identified in Phase 1 the following critical data elements which are either critical to the calculation of the claim termination rate or a key risk factor by which claim termination rates vary.

Phase 1 Critical Elements for Claim Termination Study	
Issue date	Coverage
Date of birth	Benefit period
Gender	Elimination period
Claim end date	Claim incurred date
Claim termination cause	Claim type
Paid amount	Service dates

Of the 22 Participants, 13 companies satisfied these criteria and included in this aggregate database.

2.2.1 Calculations

The development of claim termination rates relies on data received in the claim payment file from each Participant, such as claim incurred date, service dates, and claim end date. A list of unique claims was identified based on company code, policy number coverage identifier, and claim incurred date. In the event that a policy had multiple claims separated by six months or less, we combined those claims into a single claim in the experience study for consistency with the claim incidence study

Due to inconsistencies in how claim incurred date was defined in the data received from each Participant, we assigned a claim incurred date to all unique claims equal to the earliest service date less the elimination period. This assignment ensures consistency across all the data gathered.

A total claim termination rate is provided and also a breakdown between recoveries and deaths. We have reviewed the split between claim recoveries and claim deaths for reasonableness, but are reliant on the data coding quality of each qualifying Participant.

Claim exposure is measured from the time of minimum service date to the maximum service date. Exposure is not considered during the elimination period.

Note that claimants identified as benefit exhaustions are not included in the termination counts but these claims are included in the exposure calculations.

2.2.2 Data Definitions

Below please find a description of the data included in the claim termination rate aggregate database:

1. GroupIndicator: Type of policy that was issued (group or individual insurance policy).
2. IncurredAgeBucket: Age at beginning of claim grouped into 5 year age bands.
3. ClaimType: Original site of care for claim (NH, ALF, HHC or Unknown).
4. Gender: Policyholder is male or female.
5. Diagnosis_category: Initial diagnosis category of the claimant.
6. ClaimDuration: Length of claim in months.
7. TQ Status: Policy identified by company as tax qualified, non-tax qualified, or unknown.
8. Zip3_Code: 3 digit zip code of claimant.
9. Cov_Type_Bucket: Type of coverage for policyholder (comprehensive or other).
10. Max_ben_bucket: Benefit period of the policyholder bucketed into year groups of <1, 1-2, 3-4, 5+ (limited), Unlimited, and Unknown for each major care setting (NH, ALF, and HHC).
11. Region: Information was consolidated into 4 regions by states (Midwest, Northeast, South, West, and Unknown).
12. EP_Bucket: Elimination period of the claimant bucketed into 0, 20, 30, 60, 90/100, >100, and Unknown for the particular claim setting.
13. IncurredYear: Year in which the claim began.
14. Infl_Rider_Bucket: Inflation rider of the policy grouped into inflation, guaranteed purchase option, none, and unknown.
15. StateAbbr: Issue state of the policy.

2.3 Claim Utilization

Some long term care policies reimburse claimants on actual incurred benefit amounts subject to a maximum daily benefit and some policies have indemnity policy form language. For the policies that have reimbursement provisions the amount of the reimbursement relative to the maximum daily benefit is referred to as claim utilization. This is a key morbidity assumption for modeling long term care policies with reimbursement provisions. For policies with indemnity policy form language this assumption is not required.

We identified in Phase 1 the following critical data elements which are either critical to the calculation of the claim utilization rates or a key risk factor by which claim utilization rates vary.

Phase 1 Critical Elements for Claim Utilization Study	
Issue date	Coverage
Date of birth	Benefit period
Benefit payment type	Inflation option
Claim type	Elimination period
Claim service type	Claim incurred date
Paid amount	Gender

Of the 22 Participants, 18 companies satisfied these criteria and included in this aggregate database.

2.3.1 Calculations

The source of the data and manipulation of the data for the claim utilization study is very similar to the claim termination analysis. The same criteria were used to determine unique claims and claim exposure.

Once the claim exposure was determined, the reimbursed amounts and maximum daily amounts are required to determine the claim utilization rate. The maximum daily benefit was calculated at the policyholder level based on the election of the benefit inflation option and the time of the claim. The maximum will continue to inflate while a policyholder is on claim. We calculated maximum daily benefits for all claimants where we had enough information about the policy language to do so. We were not able to obtain schedules for policies with

guaranteed purchase options (GPO's). As a result these claims were excluded from the analysis, but from our experience these exclusions should not impact the overall results of the study. The claim utilization study includes over $7 billion dollars of paid claims.

2.3.2 Data Definitions

Below please find a description of the data included in the claim utilization rate aggregate database:

1. GroupIndicator: Type of policy that was issued (group or individual insurance policy).
2. IncurredAgeBucket: Age at beginning of claim grouped into 5 year age bands.
3. AttainedAgeBucket: Claimant age at time payment was made.
4. ClaimType: Original site of care for claim (NH, ALF, HHC, or Unknown).
5. CalYear: Calendar year in which payment was made.
6. Gender: Policyholder is male or female.
7. Diagnosis_category: Initial diagnosis category of the claimant.
8. ClaimDuration: Length of claim in months.
9. TQ Status: Policy identified by company as tax qualified, non-tax qualified, or unknown.
10. Zip3_Code: 3 digit zip code of claimant.
11. Cov_Type_Bucket: Type of coverage for policyholder (comprehensive or other).
12. Max_ben_bucket: Benefit period of the policyholder bucketed into year groups of <1, 1-2, 3-4, 5+ (limited), Unlimited, and Unknown for each major care setting (NH, ALF, and HHC).
13. Region: Information was consolidated into 4 regions by states (Midwest, Northeast, South, West, and Unknown).
14. EP_Bucket: Elimination period of the claimant bucketed into 0, 20, 30, 60, 90/100, >100, and Unknown for the particular claim setting.
15. Infl_Rider_Bucket: Inflation rider of the policy grouped into inflation or none,. Unknown and guaranteed purchase options are excluded as maximum daily benefit patterns were not accessible.

16. StateAbbr: Issue state of the policy

17. Daily_Ben_Bucket_Inflated: Maximum daily benefit at the time of claim payment . In the case where a policy has inflation, this benefit is inflated to the beginning of the service dates for each payment .

Section 3: Reliances

In developing this report, Towers Watson relied upon data and information supplied by the SOA and the Participants both in writing and in discussions. For each Participant this information includes, but is not limited to:

- Completed questionnaire on long term care incidence/lapse/mortality experience
- Data submission for claim incidence, claim termination, and policy termination
- LIMRA Report on data checks
- MIB Reports on data checks

Section 4: Participating Companies

Allianz
Berkshire Life
CalPERS
Continental Casualty (CNA)
Fortis
Genworth Financial
John Hancock
Lincoln Benefit Life
Mass Mutual
MetLife
Mutual of Omaha
United of Omaha
New York Life Insurance Company
Northwestern Mutual
Penn Treaty
Prudential
Senior Health
State Farm
Thrivent AAL
Thrivent LB
Transamerica-Aegon
UNUM