



SOCIETY OF ACTUARIES

**SOA 09 Annual Meeting & Exhibit
October 25-28, 2009**

**Session 56 PD, Do Your LTC Claim Reserves
Measure Up?**

Moderator:

David E. Kerr, ASA, MAAA

Presenters:

David E. Kerr, ASA, MAAA

David Mercier

Shawna A. Meyer, FSA, MAAA

Do Your LTC Claim Reserves Measure Up?

**Panel Discussion Session # 56
2009 SOA Annual Meeting**

**Boston – October 27, 2009
8:30 – 10:00**

Your Panel

**David Kerr, ASA, MAAA
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**Shawna Meyer, FSA, MAAA
Corporate Vice President, New York Life**

**David Mercier
Director of Long Term Care Claims, LifePlans, Inc.**

Overview of Presentations

- **David Kerr**
 - Types of claims and corresponding reserves
 - Defining and adjudicating a claim
 - Data integrity
 - Other factors influencing reserves
 - Tools to monitor and test reserves
- **Shawna Meyer**
 - Building continuance tables for the DLR
 - IBNR reserve
- **David Mercier**
 - Claims administration perspective

Do Your LTC Claim Reserves Measure Up?

David Kerr

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Types of LTC Claims

- **Nursing Home**
- **Home Health Care**
- **Assisted Living Facility**
- **Ancillary Benefits**
- **Alternate Care**

What Constitutes a New Claim?

- **How do you define a new claim?**
- **How do you determine eligibility status?**
- **How do you determine incurred date?**
- **When do you start to reserve for a claim?**
- **How do you know when to set up a new claim or continue an older claim for insureds who receive recurring care?**

Claim Development Process

- 1. Actual or potential disability.**
- 2. Phone call or claim form.**
- 3. Set up claim on system.**
- 4. Request supporting documents/medical records.**
- 5. On-site assessment by care manager.**

Claim Development Process (cont.)

- 6. Approve or deny.**
- 7. Is elimination period satisfied?**
- 8. Determine plan of care.**
- 9. Make payments.**
- 10. Ongoing adjudication to determine if claim should remain open.**

When Should a Claim be Closed?

- **Very important to have consistent procedures.**
- **The DLR reserve is released when a claim closes. Want to avoid claims moving on and off the claim register.**
- **Do not close until it is determined that the insured is no longer receiving covered care AND all required payments have been made.**
- **Closing a claim prematurely can result in reserve deficiencies.**

Inactive Claims

- **Inactive claims are those claims that are in open status, but have not received any recent activity.**
- **Keeping the claim status current is the goal, but claims often become inactive even under best practices.**
- **Is the claim just inactive, or should it be closed?**
- **Should not close an inactive claim until it is known for sure that no liability exists under the claim.**
- **Adjustment factors for inactive claims.**

Types of Claim Reserves

- **Disabled Life Reserve (DLR)**
 - Future amounts due on known open claims.
- **ICOS Reserve**
 - Past amounts due on known open claims.
- **Pending Reserve**
 - Past and future amounts due on claims reported but not yet adjudicated.
- **IBNR Reserve**
 - Past and future amounts due on claims incurred but not yet reported.

Types of Claim Reserves (cont.)

- **Closed But Expected to Reopen Reserve (CBER)**
 - Future amounts due on claims currently “closed” that are expected to reopen in the future.
- **Loss Adjustment Expense Reserve (LAE)**
 - Future cost associated with adjudicating claims
- **Litigation Reserve**
 - Estimate of costs to settle claims in litigation
- **Waiver of Premium Reserve (WOP)**
 - Estimate of future value of waived premiums.

Disabled Life Reserve (DLR)

- Typically the largest portion of the total claim reserve.
- Represents the estimated present value of future payment amounts on open claims.
- Includes claims that have already received payment.
- Can include reported claims that have not yet received a payment (Pending Claim Reserve).
- Usually estimated using a seriatim method.
- Different assumptions for different types of claims and different types of products.

ICOS Reserve

- Typically the smallest portion of the total claim reserve.
- Represents the value of amounts due, but not yet paid, on open claims for past services rendered.
- Valued from time of last payment up to valuation date.
- Common for all open claims to have both a DLR and an ICOS reserve.
- Usually estimated using a seriatim method.
- Can be estimated as the number of unpaid days times the daily benefit.

Pending Reserve

- Held on claims that have been reported, but not yet adjudicated (i.e. claims without payment).
- Some claims, once adjudicated, will close without payment. Others will become active claims with liability.
- Can be included with the DLR or, alternatively, estimated as part of the IBNR.
- If included with the DLR, usually includes an assumption for the percentage of claims that will either close without payment or remain open with liability.
- Usually estimated using a seriatim (claim-by-claim) method if included with the DLR.
- Different assumptions for different types of claims and different types of products.

IBNR Reserve

- Held on claims that are expected to have already been incurred, but not yet reported.
- Can also include claims reported, but not yet paid (pending claims).
- Typical method is to use a claim lag approach and estimate the IBNR claim count. The claim count is multiplied by an estimated average size per claim.
- Different assumptions for different types of claims and/or different types of products.
- Can also estimate the IBNR reserve using an estimated loss ratio approach.

Closed But Expected to Reopen Reserve (CBER)

- **Some claims, after they have been closed with no expected future liability, will reopen after the valuation date.**
- **This can occur even when proper claims adjudication procedures have been followed.**
- **These claims are not assigned a new incurred date.**
- **Using historical patterns of reopen claims, this reserve can be estimated in dollars, or as a claim count that is multiplied by an average amount per claim.**
- **Can be a significant portion of the total claim reserve when claims are closed prematurely.**

Other Claim Reserves

- **LAE Reserve – Estimate of the future cost to adjudicate claims represented in the reserve.**
- **Litigation Reserve – Estimate of the cost to settle litigation on claims.**
- **Waiver of Premium Reserve - May be required when a policy on claim includes a premium waiver benefit. Represents the future value of all waived premiums while on claim.**

The Importance of Reliable Claim Data

- **Data integrity is very important. It is critical to review data, and identify and correct potential problems.**
- **Claim reserve is only as accurate as the underlying claim data.**
- **Is the necessary data being collected? Is the volume of data credible?**
- **Reliance upon in-house administration, reinsurers and TPAs.**
- **Knowledge base can vary depending on the size of carrier, size of LTC block and resources assigned to the business.**

Data to Establish the Reserve

- **Age of the claimant at the valuation date.**
- **Claim duration (valuation date minus incurred date).**
- **Gender of claimant.**
- **Benefit (dollar pool or days) and Elimination periods.**
- **Type of claim (NH, HHC, ALF, Other).**
- **Cause of claim (diagnosis, cognitive, non-cognitive)**
- **Type of product (NH only, HHC only, Comprehensive).**

Data to Establish the Reserve

- **Benefit structure (indemnity or expense, inflation, restoration, waiver of premium, etc.).**
- **Amount already paid.**
- **Daily benefit.**
- **Last date of service and payment.**
- **Remaining benefit.**
- **Number of claims paid by incurred date and paid date (IBNR).**

Common Problems in Claims Databases

- **Incurred dates not recorded correctly.**
- **Splitting one claim into two claims or merging two claims into one claim.**
- **Dates of service do not correspond to payment dates and incurred dates.**
- **Payments incorrectly assigned to the wrong claim.**
- **More than one claim open on a policy.**
- **Maximum benefit exceeded.**

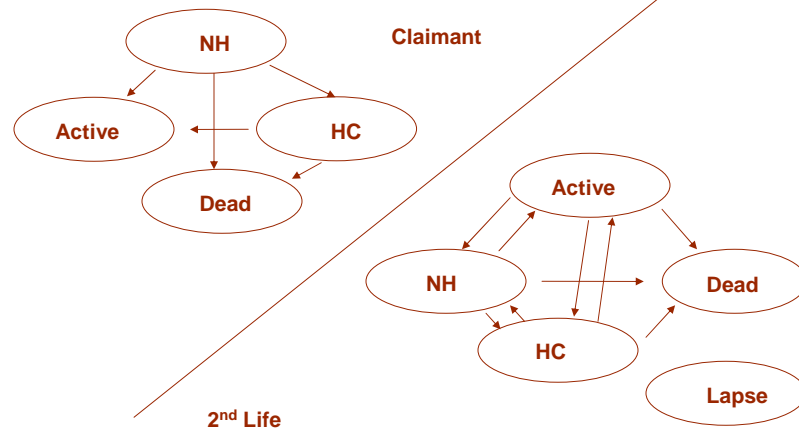
Common Problems in Claims Databases

- Data changes from month to month.
- Inflation benefit not calculated correctly.
- Open claim register not up to date.

Other Factors Influencing Claim Reserves Claim Termination Rates

- The degree to which active care management is established will affect the emerging claim termination experience.
- Assumptions for claim termination are typically established by age, gender, type of claim, claim duration and by diagnosis (where credible data is available).
- Experience in claim “tail” where little credible data exists. Mortality improvement over time has had a significant influence. The reserve is very sensitive to changes in assumptions in the later claim durations.

Other Factors Influencing Claim Reserves Claim Migration



GAAP - Statutory - Tax

- No standard valuation morbidity assumption.
- Use best estimate assumptions.
- Different discount rates.
- Margins for adverse deviation may be different.

Actuarial Tools

- **Claim termination studies**
- **Roll-forward analysis and retrospective reserve tests**
- **Claim backlog reports**
- **Care management reports**
- **Loss ratio and claim cost trends**
- **Models – DLR, IBNR, CBER**
- **Judgment and common sense**

Conclusions.....Challenges to Maintain Adequate Claim Reserves

- **LTC claim reserve process is complex with many features.**
- **Establishing and maintaining active claims management is key to limit unwarranted liability.**
- **Integrity of claims data. Constantly need to monitor, test and refine the underlying assumptions.**
- **Balancing sufficient reserves and corporate profit objectives.**

Do Your LTC Claim Reserves Measure Up?

Shawna Meyer

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Building Continuance Tables

- **Probability of remaining on claim for a set period of time**

Example of Continuance Table

Months	Disabled Age				
	55	65	75	85	95
0	1	1	1	1	1
1	90.0%	88.2%	86.4%	84.7%	83.0%
2	85.0%	83.3%	81.6%	80.0%	78.4%
3	70.0%	68.6%	67.2%	65.9%	64.6%
4	69.4%	68.1%	66.7%	65.4%	64.1%
5	68.9%	67.5%	66.2%	64.8%	63.5%
6	68.3%	67.0%	65.6%	64.3%	63.0%
7	67.8%	66.4%	65.1%	63.8%	62.5%
8	67.2%	65.9%	64.6%	63.3%	62.0%
9	66.7%	65.3%	64.0%	62.7%	61.5%
10	66.1%	64.8%	63.5%	62.2%	61.0%
11	65.6%	64.2%	63.0%	61.7%	60.5%
12	65.0%	63.7%	62.4%	61.2%	60.0%

Overall Approach

- Calculate continuance directly – should vary by disabled age
- Alternatively calculate mortality rates and recovery rates separately
 - This approach has some projection advantages
 - Mortality will vary by attained age
 - Recovery varies by duration of claim

Data Issues

- **Make sure you understand the data**
 - ASOP #23
- **Examples:**
 - Elimination period
 - Definition of incurred date
 - Policy Provisions
- **Meet with claim examiners and IT**

Issues to Address Before you Begin

- **Before you start must make some decisions:**
 - Not necessarily a right answer
 - Always depends on how the results will be used
- **Examples:**
 - Transitions between types of services
 - Breaks in coverage
 - Elimination Period
 - Diagnosis Groups
 - Definition of Incurred Date

Example

If only current facility is known

- If only current type of care is known then termination rates will likely be overstated for HHC and understated for NH
- Example:
 - A claimant receives home health care for 2 years and then moves to a NH facility for 3 months before the claim is terminated
 - Another claimant receives home health care for 1 year before the claim terminates
 - For HHC the correct termination rates in the first year is 50%, but the data will produce 100%

Example (cont.)

If only current facility is known

- What is the correct rate for NH?
 - Depends how you define the duration of the claim
 - If duration of the claim starts over when the claim transfers then the first year termination is 100%
 - If you establish the duration from incurral then the first year termination is 0% (no data)

Breaks in Coverage

- **How will you handle breaks in service**
 - **Discontinuity in care**
 - **Should this be treated as one continuous claim?**
 - **Should the claim be considered open during the period where no care is provided?**
 - **When a claim closes will you hold a contingent reserve for possible reopen?**
 - **Need clear communication with claim department**

Variables for Continuance Table

- **Keys for varying continuance assumption:**
 - **Type of care**
 - **Disabled Age**
 - **Gender**
 - **Diagnosis (Cognitive vs. Non-Cognitive)**
 - **More??**
- **May be driven by credibility (especially in the tail)**

Formulas

- For a given claim duration (t) the persistency factor is equal to:

$$\text{Persistency Factor}(t) = \frac{\text{ClaimsEnd}(t)}{\text{ClaimsBegin}(t)}$$

ClaimsEnd(t) = Number of claims still active at duration (t)

ClaimsBegin(t) = Number of claims active at duration (t-1) and could persist to duration (t) before the end of the study period

- **Continuance Factor(t) =**
Continuance Factor (t-1) * Persistency Factor (t)

Exposure Period

- Always use both open and closed claims
- If only closed claims are used results will be skewed
- Similar to lapse or mortality calculation
- Cases where a claim cannot persist to time (t) before the end of the study period:
 - Benefit exhaustion
 - Incurred less than (t) number of months before the end of the study period

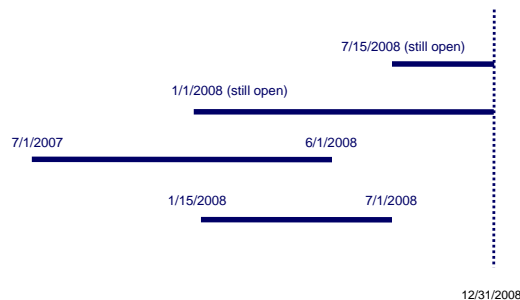
Benefit Exhaustion

- **Claims that end due to benefit exhaustion should not be counted in the numerator or the denominator for the next duration after the claim ends**
 - They are not continuing their claim
 - They are not able to continue the claim t number of months
 - If included in the denominator this would overstate the termination rate for that duration

Example

- **Claim Duration: 6 months**
- **Four claims incurred during study period:**

Inc Date	End Date	Length of claim
7/15/2008	open	5.5
1/1/2008	open	12
7/1/2007	6/1/2008	11
1/15/2008	7/1/2008	5.5



End	Begin
0	0
1	1
1	1
0	1

- **Persistency Factor = 2/3**

Related Studies

- **Salvage/Utilization/Claim intensity (Pool of Money only)**
 - **Varies by**
 - Type of claim
 - Duration of claim
 - Calendar period
 - Policy Provisions
 - Outlook for inflation
 - Don't forget your inflation protection riders
- **Transition between types of care**

Claims other than Fully Open

- **Incurred but not reported – no information**
- **Notification – very little information**
- **Pending – some information may be available**
- **Approved no payment – some information may be available**
 - **May be in elimination period**
 - **Some companies consider this fully open and calculate case reserve**

Calculation of Reserves for Claims not Fully Open

- Lag Factor Calculation
- Calculate Average Incurred Claim per (pending claim, inforce policies, etc)
- Loss Ratio Method
- Calculate case reserves and apply a factor for the probability that claim will become fully open
 - Must have enough information to calculate case reserve
 - Will not work for IBNR

Lag Factor for IBNR

- Calculate total incurred by incurred date and reported lag where:
 - Total incurred = paid claims + claim reserve present valued to incurred date
 - Reported lag = number of months between claim incurral and reported date
- OR calculate factors based on number of claims and apply an average severity
- Must decide when claims are considered “complete”
- Most recent months of incurrals will be difficult due to large variances
- This method produces useful metrics like loss ratio, incurred claim per inforce, etc.

Lag Factor Example

Total Estimated Incurred Claims by Incurred Date and Reported Lag												
Incurred Date	Report Lag											
	1	2	3	4	5	6	7	8	9	10	11	12
Jan-08	4.0	1.7	1.1	1.0	0.1	0.0	0.1	-	0.0	0.0	-	-
Feb-08	4.2	1.9	1.4	1.3	0.2	0.0	-	0.1	0.0	0.1	0.0	
Mar-08	3.5	1.1	1.1	1.2	0.1	0.1	-	0.0	-	0.0		
Apr-08	3.3	1.8	1.4	1.5	0.3	0.2	1.0	-	0.0			
May-08	3.4	0.8	1.3	1.4	0.4	0.3	0.1	0.0				
Jun-08	3.6	1.3	1.5	2.4	1.5	1.5	1.3					
Jul-08	3.2	1.7	1.6	3.3	2.7	3.2						
Aug-08	5.1	2.5	2.7	6.8	7.0							
Sep-08	3.3	1.2	1.3	4.8								
Oct-08	3.8	1.1	2.0									
Nov-08	4.0	3.2										
Dec-08	3.3											

Lag Factor Example (cont.)

Accumulated Incurred Claim Estimate by Report Lag												
Incurred Date	Report Lag											
	1	2	3	4	5	6	7	8	9	10	11	12
Jan-08	4.0	5.7	6.8	7.9	8.0	8.0	8.1	8.1	8.1	8.2	8.2	8.2
Feb-08	4.2	6.1	7.5	8.8	9.0	9.0	9.0	9.1	9.2	9.3	9.3	
Mar-08	3.5	4.6	5.8	6.9	7.0	7.1	7.1	7.1	7.1	7.2		
Apr-08	3.3	5.1	6.5	8.0	8.3	8.5	9.5	9.5	9.5			
May-08	3.4	4.2	5.5	6.9	7.3	7.6	7.6	7.7				
Jun-08	3.6	4.9	6.4	8.8	10.2	11.7	13.0					
Jul-08	3.2	4.9	6.4	9.7	12.5	15.7						
Aug-08	5.1	7.6	10.3	17.1	24.1							
Sep-08	3.3	4.5	5.7	10.5								
Oct-08	3.8	4.9	6.9									
Nov-08	4.0	7.2										
Dec-08	3.3											
Average		144%	129%	139%	117%	108%	105%	100%	100%	101%	100%	100%

Lag Factor Example (cont.)

Complete the Triangle												
	Report Lag											
Incurred Date	1	2	3	4	5	6	7	8	9	10	11	12
Jan-08	4.0	5.7	6.8	7.9	8.0	8.0	8.1	8.1	8.1	8.2	8.2	8.2
Feb-08	4.2	6.1	7.5	8.8	9.0	9.0	9.0	9.1	9.2	9.3	9.3	9.3
Mar-08	3.5	4.6	5.8	6.9	7.0	7.1	7.1	7.1	7.1	7.2	7.2	7.2
Apr-08	3.3	5.1	6.5	8.0	8.3	8.5	9.5	9.5	9.5	9.6	9.7	9.7
May-08	3.4	4.2	5.5	6.9	7.3	7.6	7.6	7.7	7.7	7.8	7.8	7.8
Jun-08	3.6	4.9	6.4	8.8	10.2	11.7	13.0	13.0	13.1	13.2	13.2	13.2
Jul-08	3.2	4.9	6.4	9.7	12.5	15.7	16.4	16.5	16.6	16.7	16.8	16.8
Aug-08	5.1	7.6	10.3	17.1	24.1	26.1	27.4	27.5	27.6	27.8	27.9	27.9
Sep-08	3.3	4.5	5.7	10.5	12.3	13.3	14.0	14.0	14.1	14.2	14.2	14.2
Oct-08	3.8	4.9	6.9	9.6	11.2	12.2	12.7	12.8	12.8	13.0	13.0	13.0
Nov-08	4.0	7.2	9.3	12.9	15.1	16.3	17.1	17.2	17.3	17.4	17.5	17.5
Dec-08	3.3	4.8	6.1	8.5	10.0	10.8	11.3	11.4	11.4	11.5	11.5	11.5

Lag Factor Example Summary

	IBNR Reserves	Total Incurred	Earned Prem	Loss Ratio
Jan-08	\$ -	\$ 8.2	\$ 19.6	41.7%
Feb-08	\$ -	\$ 9.3	\$ 19.8	47.1%
Mar-08	\$ 0.0	\$ 7.2	\$ 20.0	35.9%
Apr-08	\$ 0.1	\$ 9.7	\$ 21.6	44.6%
May-08	\$ 0.1	\$ 7.8	\$ 23.4	33.3%
Jun-08	\$ 0.3	\$ 13.2	\$ 25.3	52.4%
Jul-08	\$ 1.1	\$ 16.8	\$ 27.3	61.4%
Aug-08	\$ 3.8	\$ 27.9	\$ 29.5	94.8%
Sep-08	\$ 3.7	\$ 14.2	\$ 31.8	44.7%
Oct-08	\$ 6.1	\$ 13.0	\$ 34.4	37.8%
Nov-08	\$ 10.3	\$ 17.5	\$ 37.1	47.0%
Dec-08	\$ 8.2	\$ 11.5	\$ 40.1	28.8%
Total	\$ 33.7	\$ 156.3	\$ 329.9	47.4%

Average IBNR per Inforce

- Calculate total incurred by incurred date for claims reported after the valuation date but incurred prior to the valuation date
- Divide by inforce as of the valuation date
- Average historically over some period and apply to current inforce
- Must be careful when mix is changing (duration, average age, etc.)

Average IBNR per Inforce Example

Total Incurred Claims Reported After Incurred Year			
Incurred Year	Total Incurred (in millions)	Inforce	IBNR
			Per Inforce
1992	5.0	30,780	\$ 162.44
1993	5.8	33,858	\$ 169.83
1994	6.3	37,244	\$ 169.83
1995	7.5	40,968	\$ 183.72
1996	7.8	45,065	\$ 173.70
1997	8.3	49,571	\$ 167.39
1998	9.6	54,528	\$ 176.52
1999	10.2	59,981	\$ 170.10
2000	11.7	65,979	\$ 177.83
2001	12.0	72,577	\$ 164.90
2002	13.4	79,835	\$ 167.89
2003	15.4	87,818	\$ 175.53
2004	17.1	96,600	\$ 177.12
2005	17.5	106,260	\$ 164.24
2006	18.5	116,886	\$ 158.27
2007	16.2	128,575	\$ 125.66
2008	11.2	141,432	\$ 79.45

Loss Ratio Method

- **IBNR = Loss Ratio * Earned Premium – Known Incurred Claims**
- **Could calculate negative IBNR during a bad period**
- **Stable Loss Ratios and Earnings**
- **May mask true experience**
- **Usually only used for new block of business where little is known**
- **Often used for most recent incurrals in combination with other methods**

Do Your LTC Claim Reserves Measure Up?

David Mercier

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Pre – Claim

- **Triage**
 - What is the current condition?
 - Is this really a claim?
- **Claim Intake**
 - Past and current treating providers
 - Coordinating benefits
 - Co-morbid conditions
 - Current ADL/IADL and Cognitive status
 - What do you think is the projected duration of services?

Claim Adjudication

- **Policy review**
- **In-person assessments**
- **Underwriting file**
- **Provider qualification**
- **Provider document review**
- **Plan of care development/review**
- **Reassessment/Recertification schedule**

Post – Decision “Set the Expectation”

- **Communicate decision**
- **Monthly facility calls**
- **Updated assessment**
 - **Telephonic**
 - **In person**
 - **Announced or unannounced**
- **Current provider documentation**

Benefit Payment

- **Ensure that all charges are validated**
- **Review bill against plan of care**
- **Review bills for inconsistencies**

What happened?

- But you haven't paid a claim in 6 weeks...
- You doubled the weekly benefit payment...
- I thought that claim was closed...

Q & A

??????