



Strategies for the Management of the Monthly Medical Insurance Valuation Process



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Focus

- On affect on monthly valuation of Health Care Reform in the USA
- On an international level - Example of calculating monthly liability when new and material uncertainty is introduced into insurance plans



Key Post-2014 ACA Provisions

- ACA – Affordable Care Act
- Health Insurance Exchanges
- Guaranteed/Individual Mandate
- Risk Adjusters
- Compressed Rating Factors

Minimum Loss Ratio and Metal Levels

- Minimum Loss Ratio (MLR) of 80%
- Metal Levels for Benefit Plans on Exchanges -
Based on percent of Actuarial Value (AV) of
Essential Health Benefits
 - Platinum (90% AV)
 - Gold (80% AV)
 - Silver (70% AV)
 - Bronze (60% AV)



Choices For a Small Group for Medical Insurance in 2014

- Small group – less than 51 employees
- Benefit Plan
 - On Government Exchange – no underwriting – from private insurers
 - Direct from insurer
 - On private exchange
 - Professional employer organization (PEO) - underwritten

Small Group - Transition Issues For 2014

- In at least one state, small group exchange effective March 1, 2014, not January 1, 2014
- Extension of contracts until December 2014

Small Group – Other Issues

- Full time employee – works at least 30 hours (also an issue for large employers)
- Subsidies for lower income employees
- Move to less rich benefit plans
 - Silver Plan – 70% actuarial value
 - Catastrophic plans for younger employees

Small Group On Exchange

- Benefit plans offered on State Exchange in the State of Maryland (as an example)
 - All carriers – one metal level
 - All metal levels of one carrier

Valuation Actuary's Challenge

- Calculate monthly liability in this environment of more change than previously experienced

Definition

- IBNR – Incurred But Not Reported – Monthly medical claims liability

IBNR

- Most probably first place where actual experience being different than projected experience will come out
- March 2014 – third monthly and first quarterly IBNR calculation after January 1, 2014
- Standard initial experience analysis would not begin at least until July 2014 (Rate filings for 2015 due in April 2015 is most probably causing additional analysis of January 2014 enrollment)

January 2014 Change

- Relatively large shift in members between benefit plans

Products Affected

- Most Probably Affected – Individual, small group
- Materially Affected?
 - Large group
 - Medicaid
 - Medicare



For Months With More Paid Claims

- Often for start with months at least 3 months back – for instance, in calculating March 2014 IBNR, applicable for incurred months of December 2013 and prior
- Completion Factor Method – Future payments based on a percentage of past payments
 - For instance, if 90% of claims paid after 4 months
 1. If \$900,000 of claims paid –
 1. Then $IBNR = \$900,000 / 0.9 - \$900,000 = \$100,000$
 - If \$1,000,000 of claims paid –
 - Then $IBNR = \$1,000,000 / 0.9 - \$1,000,000 = \$111,111$

Limitations of Completion Factor Method

- If you pay claims faster, IBNR will increase, while in fact, actual unpaid claims decrease
- Since the completion factor method is based on a chain ladder method – no underlying probability distribution defined

Alternate Method to Completion Factor Method

- Simple Paid Claims Method (Lynch) – Average of paid claims after a given lag
- For instance, if \$100,000 is paid after lag 4, then the IBNR for lag 4 is \$100,000, independent of what was paid in first 4 months
 - Can adjust for membership and trend
 - Automatically adjusts for catastrophic claims already paid

For More Recent Months

- As an example, if calculating March 2014 IBNR, applicable to February 2014 and March 2014
- Start with standard trending methods and introduce known changes
 - For example, if expected claims due to new enrollment is down 10%, make this adjustment from model used
 - Introduce relatively easy-to-understand calculation such as weekday/weekend factors

Months Between Longer Lag and Shorter Lag Methods

- In our example, January 2014 when calculating March 2014 IBNR
- Combination of methods used for December 2013 and February 2014

Weekday/Weekend Example

- Assumes cost for weekday/weekend is 35% of weekday
- Want to approximate claims appropriately given that February has 28 weekdays and March 2014 has 10 weekend days (March 2013 had 9 weekend days and March 2012 had 8 weekend days)

Weekday/Weekend Example

			Weekend/		
		Workdays	Holidays	Total	Weight
September	2013	20	10	23.50	0.91
October	2013	23	8	25.80	1.00
November	2013	19	11	22.85	0.89
December	2013	20	11	23.85	0.92
January	2014	21	10	24.50	0.95
February	2014	20	8	22.80	0.88
March	2014	21	10	24.50	0.95

Weekday/Weekend Example

- Assumes cost for weekday/weekend is 35% of weekday
- Want to approximate claims appropriately given that February has 28 weekdays and March 2014 has 10 weekend days (March 2013 had 9 weekend days and March 2012 had 8 weekend days)

For 1q, 2014

- Use Loss Ratio Methods For Calculating Incurred Claims
 - Example of method you may find beneficial even if not used in recent past
 - For instance, if you priced the products assuming an 85% claims/premium ratio – for every \$100 in premium in 1q, 2014, you assume \$85 in claims
 - May derive good estimates from this method
 - Key issue: If products on new Health Exchanges where enrollment is uncertain and underwriting is not permitted, actual incurred loss ratio may end up being significantly different from projected

Key to Managing IBNR in 2014

- Plan ahead as to what exceptions will be
- Combination of actuarial models and market knowledge

2014

Planning Ahead

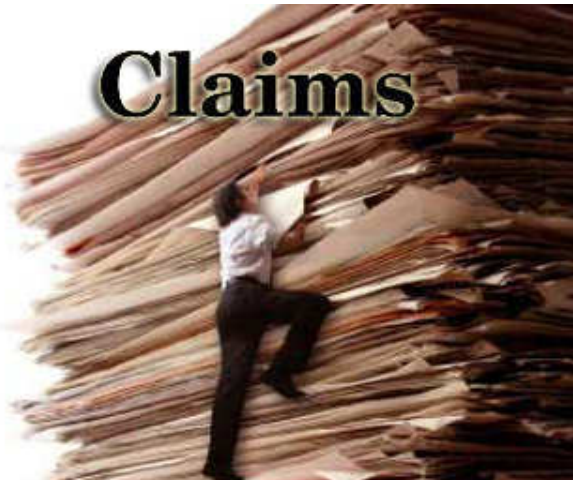
- Prototype Calendar of When You Expect Reasonably Good Data
 - Membership by benefit plan, Rx claims – February 2014
 - Paid Medical claims – April 2014
 - Preliminary costs by benefit plan – August 2014

Planning Ahead

- Disaggregation vs. Aggregation of Data
 - Aggregated enough for each model to be statistically credible
 - Dis-aggregated enough to have the data you need
 - As an example, states with different approaches to exchanges

Claim Processing Issues

- New Benefit Plans
- New Logic for Processing Claims
- New Members
- Can we plan/manage for potential claim and member processing issues?



Key Organizational Issues

- Corporate requests for “good” estimates on effect of ACA before good data available
- Technical issues with large restatements of IBNR from initial months of 2014
 - Margin re-statement
 - Over-compensating in subsequent months
 - More aggressive or conservative
 - Increased scrutiny, checks

For January, February, and March 2014 (1q, 2014)

- How much did block of business change in first quarter of 2014?
- Changes include new demographics and benefit plans
- If you under-estimate changes – may not analyze changes sufficiently
- If you over-estimate changes – may introduce models that may make IBNR more complex than necessary

How much change was there in 1q 2014?

- For IBNR purposes, change might not be material to add additional analysis.
- Technical measurements include:
 - Coefficient of Deviation (CoD) – Standard deviation/mean – In terms of IBNR estimates, the greater the coefficient of variation, the greater the probability that actual claim runout will be materially different from the best estimate
 - Average age of claim paid – if changing material in the first quarter of 2014, could be sign of claim payment issues

How much change was there in 1q 2014?

- Market Knowledge
 - By March 2014, should/may have some good knowledge of overall expected experience in 2014

March 2014 IBNR

- Quarter-end IBNR with significant “noise” in data
- Assume standard method used is completion factor method for lags 3 and greater and trend method for most recent 2 months (Current month is defined as Lag 1)
- With limited time to calculate month-end IBNR, actuary aims to use limited number of alternate methods in calculations
- Over next few slides, system that likely could be used in limited timeframe is discussed

March 2014 IBNR - Change in Reviewing January

- If material change effective January 2014, then, even though January is lag 3, it may be best to analyze it as a recent month, as opposed to initially relying on completion factor method

Additional IBNR Calculations

- Premium Deficiency Reserves – when future premium are not expected to cover future claims and expenses
- Minimum Loss Ratio Requirements – where refunds are required when claims/premium is below a given percentage
- For business that is mostly new effective January 1, may not have enough information to reflect this without relatively large probability of restatement in a subsequent quarter

Problem That Remains and Needs to be Managed

- You cannot put a confidence interval into a balance sheet.
 - Clearly state assumptions in IBNR and forecasts.
 - Emphasize re-statements of IBNR as percentage of IBNR or revenue, as opposed to just dollar amounts.

Question for Discussion

- What key issues do you expect in calculating IBNR in the first quarter of 2014 in the USA?
- Can you describe similar times when IBNR was calculated in a month of great uncertainty?

