Medical Professional Liability Reserving 101 –
Common Reserving Techniques and Considerations

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1

Background

- This presentation focuses primarily from the perspective of a company or consulting actuary evaluating a book of physician MPLI business.
- Could be modified for other books of business recognizing differences in underlying exposures
  - Large deductibles and SIRs
  - Different exposure types (e.g. occupied beds)

2

Steps for Physician MPLI Reserve Analysis

- Data Identification and Organization
- Business Segmentation
- Operational Review
  - Management initiatives
  - External influences
  - Reinsurance
- Method Selection
- Diagnostic Testing
- Range of Reasonable Estimates

3

Key Actuarial Standards for Reserving

- ASOP 43 – Property/Casualty Unpaid Estimates
  - Actuarial central estimate = expected value over range of reasonably possible outcomes
- ASOP 23 – Data Quality
- ASOP 41 – Actuarial Communications
- Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Reserves
  - Comprehensive list of "considerations"

4

Data Identification and Organization

- MPLI unique in its continued use of a variety of coverage triggers
  - Claims Made: Coverage based on date the claim was reported. Most common form of MPLI coverage.
  - Occurrence: Coverage based on date the injury occurred. Oldest form but still used in many states.
  - Tail: Coverage for claims reported after end of claims made coverage on injuries occurring while claims made coverage was in effect. Usually required whenever Claims Made is offered.
  - Prepaid Tail: Coverage for claims occurring while insured under Prepaid Tail, but reporting period is unlimited.

5

Business Segmentation

- Geography
  - State most common due to differences in MPLI laws, attorney involvement, and jury disposition
  - May combine states having similar characteristics
- Product type
  - Physicians, HPL, other facilities
- Coverage type
  - Different claim triggers demand separate analyses due to differences in exposure periods
    - Claims made = Report year, Occurrence = Accident year
    - Prepaid tail presents unique issues but common treatment is accident year (tail claims covered in IBNR)
- Program differences (captives, profit sharing, retrospective rated)

6

Data Types - Exposures

- For physicians MPLI:
  Mature class 1 equivalents =
  Doctor years x
  Class or specialty factor x
  Territory factor x
  Step factor for claims made/occurrence
- Similar for hospitals except usually adjusted to occupied bed equivalent instead of physician equivalent
- On level earned premium can be used as a proxy for exposures if exposures are difficult to extract or calculate

7

Data Types - Claims

- Losses
  - Common to layer losses for analysis
  - Often tied to reinsurance levels
- ALAE/DCC
- Claim counts
  - Reported claims
  - Claims closed with payment (CWP)
    - Claims with indemnity payment (CWI)
    - Claims with expense only (CEO)
  - Claims closed without payment (CNP)

8

Operational Changes and External Influences

- Common to interview key managers in claims, underwriting, executive management
- Examples from mid 2000s:
  - Impact of significant price increases:
    - Many companies observed shift toward lower policy limits
    - Depending on price competitiveness, may have also seen decreased renewals in jurisdictions with largest increases
  - Impact of increased reinsurance costs:
    - Companies voluntarily reduced limits offered
  - Shift between coverage types
    - Occurrence insureds either being forced or opting for claims made policies.
  - Stronger case reserves
    - Decline in frequency led to fewer claims per adjuster who were able to establish better estimates earlier.

9

Operational Changes and External Influences

- Recent trends in MPLI needing explanation
  - Favorable decline in reported frequency
    - Common explanations: tort reform, increased awareness of impact on health costs, less aggressive trial bar, patient safety initiatives
    - Should we expect it to continue or deteriorate?
    - If assume fewer non-meritorious claims, need to assume higher severity or % of claims closing with indemnity
  - Flattening severity
    - Common explanations: more aggressive claims handling
    - Hard to expect it to continue – medical cost inflation alone 3-4%
    - Should check underlying injury type for trends

10

Reinsurance Considerations

- Standard reinsurance
  - Excess (per claim or occurrence)
  - Quota share
- Other provisions
  - Event covers
  - AADs (Average Annual Deductibles)
  - Extra contractual obligations/Excess of policy limits
  - Swing rated reinsurance
  - "Awards"-made
- Patient Compensation Fund limits
- Recent trends
  - Higher attachment points for per claim excess
  - Elimination of swing rated reinsurance covers
  - Commutations of old years programs or troubled reinsurers

11

Method Selection

- Commonly used methods
  - Paid and reported development
    - Useful for more stable books
  - Frequency times Severity
    - Better estimates for less mature periods
  - Bornhuetter-Ferguson using premiums, claims, or exposures
    - Requires quality a priori expectations
  - Berquist and Sherman
    - Recent trends in case adequacy and payment patterns lead to more common usage
    - Be careful with adjustments when data is volatile
  - Backward recursive
    - Development of claims made case reserves

12

Development Methods Have Limitations

- Long tail of MPLI claims leads to large link ratios being applied to low values of paid or incurred losses for immature development periods (i.e. highly leveraged)
- Few partial payments means development factors can be influenced in the tail on both the size and timing of claim.
- Typical limitations of link ratio methods apply
  - Changes in deductibles/retentions/limits
  - Claim philosophy

13

MPLI Industry Data Sources

- Competitor Filings
  - Great source for LDFs, ILFs, loss costs, relativities
  - State DOIs or Ratefilings.com
- National Practitioner Data Bank (www.npdb-hipdb.hrsa.gov)
  - Claims and losses by specialty and state
- Closed Claim Databases
  - Several states and PIAA
- Annual Statements
- Medical Liability Monitor Rate Survey
- Aon/ASHRM HPL and Physician Liability Benchmark Analysis

14

Diagnostic Tests

- Implied frequency
  - Reported claims per exposure
    - Are recent years consistent with expectations?
  - Percentage of claims closing with indemnity/expense
    - Consistent with prior years?
    - Increasing or decreasing trend?
- Implied severity
  - Trend consistent with expectations?
  - Future paid claims consistent with prior years?
  - Isolate ALAE vs. loss trends: ALAE trending higher than loss in many jurisdictions
- Calendar year measures
  - IBNR to case ratios
  - Reserves per future paid claim

15

Reserve Ranges

- Uses
  - 10K disclosures for public companies
  - Confidence level estimates for funding (e.g. hospital SIRs)
  - Evaluation of materiality standards for Statements of Actuarial Opinion
- Common Approaches
  - Stochastic reserving (e.g. GLM, individual claim models)
  - Range of method estimates
  - Varying actuarial assumptions for development, frequency, severity, etc.
  - Range based on % difference from reserves
  - Bootstrapping
- ASOP 43 requires disclosure of type of range being produced

16

Public Company Disclosures

17

Typical Reserve Disclosures in SEC 10Ks

- Item 1A – Risk Factors
  - Usually a disclosure of reasons why reserves could be inadequate
- Item 7 - Management Discussion & Analysis (MD&A) "Critical Accounting Estimates"
  - Description of reserving methods
  - Explanation of results and incurred losses from prior periods
  - Reserve ranges/variability
  - 10 year reserve development table
- Financial Statements including Notes
  - Significant Accounting Policies section usually includes roll forward and other reserve summaries

18

Public MPLI Writers (2010 SEC 10K)

ProAssurance (NYSE: PRA)

- List of methods
  - Paid and reported development
  - Bornhuetter-Ferguson
  - Average paid and reported development
  - Backward recursive
- Range
  - Aggregate loss distributions
  - Disclosed 60% and 80% confidence estimates

19

Public MPLI Writers (2010 SEC 10K)

First Professionals (NASDAQ: FPIC)[1]

- List of methods
  - Paid and reported development
  - Bornhuetter-Ferguson
  - Frequency/severity
  - Berquist-Sherman
  - Backward recursive
- Range
  - Developed by varying frequency, severity, timing of future payments, inflationary trends, % of claims paid

[1]First Professionalism was purchased by The Doctors Company in 2011.

20

Public MPLI Writers (2009 SEC 10K)

American Physicians (NASDAQ: ACAP)[2]

- List of methods
  - Paid and reported development
  - Bornhuetter-Ferguson
  - Frequency/severity
- Range
  - Developed from range of method estimates

[2]American Physicians was purchased by The Doctors Company in 2010.

21

Questions About Current/Future MPLI Reserve Estimates

- 2004-2009 marked unprecedented (and many ways unexplained) decline in claim frequency
  - Will frequency continue to decline?
  - Report years 2009/10 indicate higher frequency levels – will this trend continue?
- Same period saw leveling or declining severity
  - Given medical cost CPI runs around 4% annually, difficult to assume severity costs will stay level.
- Above trends led to significant reserve redundancy – however much of redundancy has been released in recent years.
- Uncertainty regarding impact of healthcare reform on reserve estimates

22

Thank You!

23