



SOCIETY OF ACTUARIES

Article from:

Reinsurance Section News

May 2005 – Issue 55



“AREN’T YOU GOING TO STOP AND ASK FOR DIRECTIONS?” A ROADMAP FOR REINSURANCE DEDUCTIBLE SELECTION

by *Mark R. Troutman*

Each health plan is unique, and different factors must be considered when making a decision regarding reinsurance deductibles. This overview offers considerations when selecting a medical excess deductible for commercial,

Medicare and Medicaid programs. It is more applicable for large payers, such as HMOs, rather than self-funded employers because there’s usually not enough claims data to warrant such analysis on any given employer group.

When selecting reinsurance, program managers should review national excess claim data, one’s own plan data, and perhaps data from similar plans. One important consideration: not all plans require the same reinsurance deductible; each plan looks at reinsurance for different reasons.

A key consideration in selecting a reinsurance deductible level is the number of expected claims. Table 1 on page five can be used to review expected frequency and severity of claims at various deductibles. These are only estimates, and plan variations can be expected due to random fluctuation. A plan should usually select a deductible level, that is expected to generate no more than five to 15 reinsurance claims per year. Otherwise, a higher number of claims begin to approach a predictable level. Specific stop-loss reinsurance is designed to cover unpredictable losses. Furthermore, there is always an additional cost to reinsurance represented by the expenses and profit charge of the reinsurer. Conversely, if the deductible level chosen is too low, the client pays margins needlessly on essentially predictable claims.

Table 1 is an illustrative claim distribution.

Based on the projections of expected claims (Table 1), and the suggested guideline of targeting five to 15 claims per year, a 100,000-member plan selecting comprehensive coverage should probably choose a deductible of \$250,000, all other considerations being equal, since it will result in roughly 10 expected claims. A plan selecting hospital-only coverage may wish to select a lower deductible of roughly \$150,000 to cover a similar number of expected claims. Certain types of covered services demonstrate more variability in costs. For instance, hospital services

CONTENTS

- 1 “AREN’T YOU GOING TO STOP AND ASK FOR DIRECTIONS?” A ROADMAP FOR REINSURANCE DEDUCTIBLE SELECTION
Mark R. Troutman
- 2 CHAIRPERSON’S CORNER: COMMUNICATION AND SOLUTION-FINDING
Michael E. Gabon
- 3 LETTERS TO THE EDITOR
- 7 SECURITIZATION OF LIFE INSURANCE
Dr. J. David Cummins
- 10 LIFE REINSURANCE – A VIEW THROUGH THE REAR VIEW WINDOW
Melville J. Young
- 12 OBESITY: THE NEXT SMOKING?
Ernest Eng and Ronald L. Klein
- 18 FOUNTAIN OF YOUTH VS. SUPERSIZE ME!
Dr. Lawrence Segel, M.D.
- 20 RATE CHANGES UNDER YEARLY RENEWABLE TERM REINSURANCE CONTRACTS – AN EMERGING ISSUE
James A. Shanman
- 22 “GETTING TO WOE SOME”
Rick Flaspöhler and Richard Jennings
- 26 A FOND FAREWELL TO OUR EDITOR
Ronald L. Klein

continued on page 4

“Aren’t You Going to Stop...” from page 1

show much more variability than professional (physician or surgeon) services. This is why many health plans choose to obtain only reinsurance for hospital services.

Individual Plan Considerations

Important considerations in deductible selection are:

- **Geographic location and provider contracts**—higher-cost locations and provider contracts will have more claims at various deductibles.
- **The provider-contracting strategy**—capitated services require no reinsurance protection unless the plan passes through the protection to the capitated providers.
- **The risk profile of a plan’s membership**—higher-risk individuals will have more claims at various deductibles.



- **The amount one is willing to pay for reinsurance coverage**—a reinsurance premium is an expense item subject to limited financial resources and a value proposition like anything else in business.
- **Risk tolerance**—this is perhaps the most important variable. Each person responsible for plan reinsurance purchasing must determine his or her own plan’s risk tolerance.

Risk tolerance is a function of many things:

- **Plan size**—smaller plans require more reinsurance initially since statistical variability is higher.
- **Coverage type**—claim types vary among commercial, Medicare and Medicaid populations. Medicaid plans, for example, are subject to higher neonatal risk than transplant risk.
- **The number of years that the product or managed-care program has been in existence**—as a plan matures, its risk tolerance typically increases, regardless of the size of the population. Maturity also allows the risk tolerance to become more comfortable with the plan’s operations.
- **The plan’s targeted and actual underwriting margin**—the plan’s capital base and profit prospects are important to protect with an appropriate specific stop-loss level.
- **The plan mission, financial strength and backing by parent, if any**—the larger the capital base and/or access to capital, the less reinsurance is usually purchased. Most publicly traded “chains” do not buy external reinsurance. Most small provider-owned plans do purchase reinsurance.
- **Individual attitude to risk and its consequences**—are you risk averse or not?

Commercial vs. Government Risk

The following are brief guidelines for catastrophic deductible selection based on various lines of business. Commercial members have a wide array of diagnoses making up their catastrophic claims given that this group represents all demographic segments of the population. However, government programs tend to produce populations with differing, but predictable, risk profiles due to consistent demographic and socioeconomic characteristics. The Medicare population tends to have a higher usage of medical resources and a higher frequency of claims at lower deductible levels. There’s a possibility, however, of a diminished incidence of claims at higher deductibles due to the absence of high-cost situations such as premature infants and most transplants. A plan must factor

Table 1—

Comprehensive Coverage – All Services

Deductible	Expected Number of Claims/1,000	Average Claim Size
\$10,000	N/A	N/A
\$15,000	N/A	N/A
\$20,000	N/A	N/A
\$25,000	12.9	\$31,000
\$50,000	4.1	\$53,000
\$75,000	1.8	\$69,000
\$100,000	0.9	\$90,000
\$125,000	0.6	\$103,000
\$150,000	0.4	\$115,000
\$200,000	0.2	\$144,000
\$250,000	0.1	\$156,000

these considerations in the higher per-member revenue associated with Medicare members when considering deductible selection.

Medicaid populations vary greatly by state, so the first step for a plan in this arena is to fully understand the nature of catastrophic risk based on Medicaid enrollment criteria and state risk-retention programs. Some states retain certain categories of risk to assist plans participating in its programs.

Consider the following examples:

- New York takes back neonatal risk for births under 1,200 grams.
- Florida takes back neonatal risk when the hospital stay extends beyond 45 days.
- Michigan has a program that allows the managed care plan to petition the state to take back the risk. The member actually has to request this, but there are advantages to the managed care plan and the member. The program is not specifically targeted for transplants, neonatal risk or other catastrophic injuries, but may include any of the above.

- Texas also offers a program to have certain risks returned to the state.
- California takes back almost all catastrophic conditions for Medicaid members.

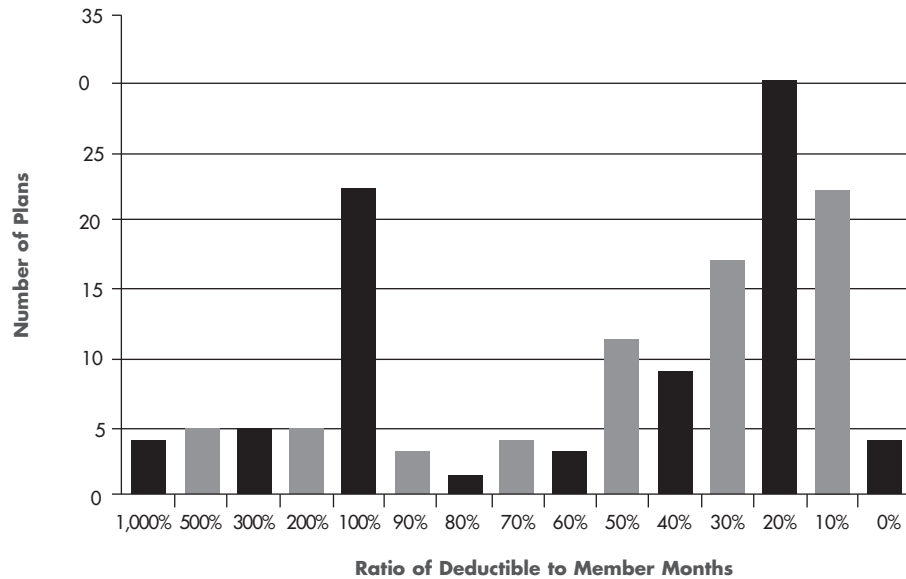
For a health plan participating in multiple lines of business, it is necessary to choose between a deductible based on the total block of members and deductibles for each individual segment. This decision should be driven by management expectations

ANOTHER USEFUL TOOL IS TO MODEL THE REINSURANCE COVERAGES BEING CONSIDERED RELATIVE TO THE PLAN'S OWN EXPERIENCE OVER THE LAST TWO TO THREE YEARS.

for each individual business segment. If each segment is expected to perform within certain boundaries on its own, then each will need a lower deductible selected for its particular membership size and type as opposed to looking at the entire risk pool.

continued on page 6

Table 2—
“Keeping up with the Joneses”—Most Frequent Deductible Ratios



Modeling Individual Plan Experience

Another useful tool is to model the reinsurance coverages being considered relative to the plan’s own experience over the last two to three years. Model a number of scenarios to learn the impact of different coverages upon financial results. Then choose the coverage that seems to optimize the balance between cost and stabilization of results.

In reviewing one’s own plan experience; it is helpful to examine it graphically. This model focuses on a plan’s own claim experience rather than on a theoretical distribution from broader actuarial data. An average daily maximum (ADM) is a per diem limit by the reinsurer to incent the plan to control hospital contracts and manage care within the network as much as possible. Review of one’s plan experience over three years indicates that a deductible of \$175,000 may be appropriate for this plan. It is helpful to see the frequency and severity of claims to determine what level of

deductible will cover a reasonable amount of the “peaks and valleys,” neither too high to provide too little coverage nor too low to trade dollars with the reinsurer, but “just right,” as Goldilocks would say.

When selecting a deductible level, it may be beneficial to see how other plans have gone through the selection process. Table 2 above is based upon the ratio of the deductible selected to the number of annual member months for the plan. There are many different types of members, geographical locations and coverage parameters selected, so it is expected that there will be some natural variation in this relationship, not to mention the individual risk tolerance positions of each client. Although this is a simplistic view of deductible selection, it is valuable for providing a general idea of the level of deductibles selected by a large number of HMOs.

It should be noted that most of the activity on the chart at 100 percent or greater is composed of

continued on page 28



Mark R. Troutman, FSA, MAAA, is president of Summit Reinsurance Services, Inc. in Fort Wayne, Ind. He can be reached at mtroutman@summit-re.com.

“Aren’t You Going to Stop...” from page 6

small plans or small segments of larger plans. Deductible levels were set higher than normal either because of current size and anticipated growth or due to other larger blocks of business with the same entity.

The data on the right side of the table are more representative of where HMO plans are selecting deductibles. Most of the activity is grouped from ratios of 10 percent to 30 percent. This means that the ratio of deductible to annual member months falls in this range. For example, a 50,000-member plan would have 600,000 annual member months and might be selecting a deductible of around \$120,000 or 20 percent of the number of member months. These observations are based primarily on hospital inpatient-only coverage and represent a mixture of commercial, Medicaid and some Medicare HMO business.

Although the deductible is a significant out-of-pocket cost, coverage should also be selected with other important criteria in mind. A properly structured reinsurance program will result in a high “coverage-efficiency ratio” of actual reimbursed claims relative to expected reimbursed claims (i.e. few “surprises”). This creates the most cost-effective benefit program by providing the best value for the premium. Key considerations include:

- Desire for hospital inpatient versus comprehensive cover
- Artificial per diem limitations such as an ADM cost limitation
- In-network versus out-of-network utilization issues

A PROPERLY STRUCTURED REINSURANCE PROGRAM WILL RESULT IN A HIGH “COVERAGE-EFFICIENCY RATIO” OF ACTUAL REIMBURSED CLAIMS.

- Outpatient and step-down facilities
- The contractual definitions of acute care, medical necessity and experimental procedures, which can lead to significant out-of-pocket costs if not structured appropriately. It is

highly desirable to select a reinsurance treaty that has no separate definitions for these items, but rather follows the form of the medical plan.

In conclusion, the following considerations can be drawn regarding deductible selection:

1. The best analysis for each deductible selection should take into consideration individual plan experience as well as a national claim distribution manual.
2. There are numerous individual plan considerations in selecting an HMO excess of loss deductible, such as type of membership (commercial or government program), geographical cost, plan-risk tolerance as well as plan size, ownership and budgetary considerations.
3. Most plans end up selecting a deductible that results in a deductible divided by annual member month’s ratio of 10 percent to 30 percent.

This roadmap was designed to assist with reinsurance deductible selection criteria. If you use some of these simple guidelines, you’ll definitely be in the driver’s seat! ✨

Copyright 2004 by the American Association of Health Plans