Optum® Actuarial Toolbox

Proven, sophisticated and market-leading actuarial models for health plans and benefits consultants

In recent years, the health care landscape has shifted tremendously, prompting health actuaries to face new challenges. With health care reform comes the need for innovation and a requirement to comply with new regulatory laws. Optum® has built a strong reputation in the health care industry by developing sophisticated tools and models for health plans and consultants to deliver value-added services to their clients. The Optum Actuarial Toolbox is a comprehensive suite of tools that meets a diverse set of needs and provides solutions to health actuaries that can support many product lines, market segments and populations.

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The Optum Actuarial Toolbox is comprised of models tailored to the commercial and Medicare populations. The tools cover several product lines including medical, prescription drug and dental, and are used to support the small group and large group markets for both self-funded and fully insured populations. The Optum tools are built on a database of multi-payer national data. Each model is reviewed and updated annually to reflect the most appropriate trends and demographics.

The toolbox is currently used by health plans, consultants and third-party administrators to model expected health care cost and utilization as well as measure the efficiency of certain providers. Optum also utilizes many of these models internally to assist in developing solutions for clients.

Solutions to address health care challenges

Actuaries are called upon to evaluate and estimate uncertain risks. These models are sensitive to underlying assumptions, and typically rely on historical experience as a source. Health plans and benefit consultants face challenges in developing complex models either due to lack of data, expertise or resources. Optum has leveraged its subject-matter expertise and comprehensive claims database to develop a robust suite of tools and actuarial models that provide organizations with the solutions they need to support their customers with confidence.

These solutions and tools include:

- **Comprehensive Benefit Pricing Model (CompPricer)** — benefit relativity tool that develops allowed and net PMPM claim costs by service category
- **Rx Pricing Model 65plus** — models the Rx costs and utilization based on underlying prescription drug plan design coverage for the 65+ demographic
- **Minimum Value Tool** — provides support to determine whether a plan design meets the minimum value requirement to comply with the government mandate
- **Incurred But Not Reported (IBNR) Model** — helps health plans and consultants manage the data and analyze future expected claim liabilities
- **Employer Stop Loss Model (ESLM)** — projects specific and aggregate stop loss premium rates tailored to the employer's risk profile
- **Excess of Loss Rating Model** — models specific excess of loss claims for hospital and/or physician services
- **Comprehensive Medicare Coordination Model (CMCM)** — develops benefit plan relativities for Medicare Supplemental plans for Medicare-eligible retirees
- **Dental Rate Model (DRM)** — flexible rating model to help meet the changing needs of the dental marketplace
- **Dental Profiling Tool** — compares provider practice patterns and helps identify fraud

Comprehensive Benefit Pricing Model (CompPricer)

Health plans and consultants need a flexible tool to model the impact of benefit plan changes. Whether developing plan relativities or calculating rates, the user needs to have the ability to evaluate the specific demographics of the cohort being priced.

By leveraging this tool, users can model relativities for benefit changes and new plan designs. Users have the ability to focus on a specific benefit change at the service category level to show its overall impact to rates.

Model features:
- Cost-sharing parameters can be specified by a variety of service categories for medical and prescription drug benefits
- Based on data from a multi-payer, national commercial database of more than 20 million lives
- Claims are re-adjudicated in a sample database to develop an estimate of expected claim costs, resulting in a more accurate estimate than a factor or table-driven model
- Ability to model multiple networks and plan designs simultaneously
- Ability to vary degree of medical management
- Flexibility to override default assumptions
- Ability to run multiple plans through the model using batch functionality
- Optum Minimum Value (MV) and Actuarial Value (AV) add-on feature that calculates MV and AV in accordance with U.S. Department of Health & Human Services' calculators and American Academy of Actuaries' guidance for non-standard plan designs

Rx Pricing Model 65plus

With the costs of retiree health care rising, plan sponsors need a tool to help them quickly model changes in plan design to keep benefit costs within budget and equitable. Retirees have much higher pharmacy costs than active members in a regular commercial population. It is crucial that the model they rely on for cost estimates accurately represents the underlying population. The Optum Rx Pricing Model 65plus effectively fulfills all of these needs for countless retiree groups and brokers/consultants.

The Optum Rx Pricing Model 65plus provides the ability to model Rx-only plans for a retiree cohort. The tool is flexible in allowing the user to override default assumptions, census and demographic information.

Model features:
- Retail and mail-order dispensing fees and percent of average wholesale price by drug tier
- Utilization and unit cost trends by drug tier
- Ability to model multiple plan designs simultaneously and customize copays, min/max copays and coinsurance levels by Rx tier
- Ability to model multiple dispensing fees, discounts and trend information
- Claims are re-adjudicated based on benefit design, resulting in a better estimate of relativities than a standard continuance table
- Batch functionality for bulk testing

Minimum Value Tool

Health plans offering coverage to groups with 50 or more eligible employees are required to state whether the plan being offered meets minimum value, which is defined under the Patient Protection and Affordable Care Act (ACA) as the plan's share of total allowed cost of benefits provided under the plan. The government-issued calculator (provided by U.S. Department of Health & Human Services) does not accommodate all plan features and requires plans to make calculations outside of the government-issued tool.

The Optum MV tool is expanded to include additional inputs as well as the standard inputs in the government-issued tool. Actuarially derived adjustment factors and methodologies are used to determine minimum value for non-standard plan designs. All adjustments are made in accordance with the American Academy of Actuaries' guidelines.

Model features:
- Automatically calculates out-of-model adjustments for non-standard plan designs
- User-friendly and intuitive interface that does not require technical expertise
- Non-standard plan design features accommodated in Optum MV:
  - o Copays after deductible
  - o Copays on outpatient facility and professional services
  - o Includes benefits not captured in HHS MV calculator, such as inpatient professional services and outpatient therapeutic services
  - o Rx coinsurance plan designs with min/max copays
- Batch functionality for bulk testing

IBNR Model

As a result of the Sarbanes–Oxley Act, there has been increased scrutiny on financial reporting and more pressure on actuaries to deliver reliable estimates of claim reserves. Additionally, health plans and consultants face tight turnaround times from the time data becomes available, to when IBNR estimates are due for financial reporting purposes.

The Optum IBNR Model has an Excel front-end that utilizes an Access database for storage of claim lags and assumptions used to develop reserve estimates. It has the capability to calculate reserves using multiple methods, which enables the actuary to choose the method(s) most suited to the plan being estimated.

Model features:
- Back-end database capability to store/retrieve assumptions, claim lags and results
- Ability to load lags in various formats — incurred vs. paid or paid vs. incurred, ascending or descending months
- Capability to calculate reserves using multiple methods
- Ability to blend up to three (3) methods
- Built in regression model, which develops PMPMs for most recent non-credible months
- Projection module that estimates IBNR liability up to three (3) months after valuation date
- Prediction interval for reserve estimate which is based on confidence level and credibility threshold input by the user

Employer Stop Loss Model (ESLM)

The Patient Protection and Affordable Care Act (ACA) has prompted employers to consider more cost effective funding options to reduce costs. As the number of self-insured plans increases, there will be greater demand for stop loss insurance as employers look for ways to mitigate financial exposure. Employers will look to brokers and consultants for support in determining the optimal stop loss solution.

ESLM is a comprehensive tool that allows users to price specific and aggregate stop loss. The model builds stop loss rates from the ground up, which allows for more sensitive scenario testing of attachment points, demographics and managed care network assumptions. The model can be used by stop loss carriers for rate development as well as by brokers/consultants to design an optimal stop loss strategy or to benchmark stop loss carrier rates for their customers.

Model features:
- Ability to weight actual employer claim experience with manual rates using suggested credibility factors
- Shows buildup of how stop loss rates are developed
- Ability to benchmark reinsurance carrier stop loss rates
- Inclusion of employer group characteristics:
  - Location
  - Industry
  - Care management levels
- Shows the expected number of claimants by threshold

Excess of Loss Rating Model

Health plans or reinsurers who offer specific excess of loss coverage need a way to effectively evaluate the claims cost associated with the underlying population and provider contracts. With such large deductibles, the credibility of an insurer's own experience is often not adequate to use as a manual rate.

This particular model helps plans, reinsurers, managing general underwriters and providers effectively evaluate and underwrite their excess of loss claim risk. It provides the ability to develop excess of loss costs for all service categories combined, or to drill down on physician-only and hospital-only service categories. In addition, the model can evaluate several different insured populations including commercial, Medicare and Medicaid.

Model features:
- Physician-only excess of loss coverage
  - Developed from managed care data as opposed to indemnity experience or modifications to employer stop loss data
  - Ability to rate pharmaceutical services, including application of daily and annual maximums on a combined basis
  - Capable of handling situations where a provider has capitation agreements with multiple providers
- Hospital-only excess of loss coverage
  - Refinements and updates to the specific excess of loss pricing methodology
  - Updated pricing of non-inpatient coverage
- All services excess of loss coverage

Comprehensive Medicare Coordination Model (CMCM)

Plans need a way to efficiently and accurately determine the rate impact on the post-65 population for benefit changes, shifts in trend, changes in demographics and adverse selection under various Medicare integration methods.

The CMCM Model prices health benefits for a Medicare-eligible population in coordination with Fee-For-Service (FFS) Medicare using various Medicare integration methods. Users have the ability to manually adjust default assumptions and member cost-sharing across benefit categories. The model is intended for pricing benefits for Medicare-eligible retirees and does not encompass Medicare beneficiaries under the age of 65.

Model features:
- Medicare coordination methods available include Coordination of Benefits (COB), Exclusion, Carve-out and No Integration
- Adjustable claims experience based on multiple medical service categories
- Model recommends estimated cost for benefits not typically covered by FFS Medicare
- User overrides available to customize plan experience for the following:
  - o Utilization and trend
  - o Demographics
  - o Adverse selection factors
- Non-Medicare covered benefits

Dental Rate Model (DRM)

With the passage of the Patient Protection and Affordable Care Act (ACA), actuaries need reliable benchmarks and continuance tables to independently evaluate adult and pediatric rates. Additionally, as plans compete for this commercial population, rate models need to address innovative plan designs.

The DRM from Optum offers flexibility and functionality for health plan actuaries and underwriters to calculate normative dental rates for current and emerging dental benefit design options in specific geographic markets. By combining real data with enhanced functionality, the model enables improved pricing to set the right rate for the right group. It uses both dynamic and static continuance tables classified by various combinations to allow for a more accurate development of rates based on user-specified demographics and factors.

Model features:
- Rating of multiple plans and benefits simultaneously for either premium development or rate relativity
- Flexible employee census allows for groups with employees in multiple locations
- Distinct adult and pediatric rate development including pediatric medically necessary orthodontics
- Allows for coinsurance or copays, plan or out-of-pocket maximums
- Calculates actuarial values for different benefit levels
- Uses network penetration and discounts representative of the local market
- Predicts usage of network dentists based on market and plan design

Dental Profiling Tool

Dental benefit plans need the ability to benchmark cost and utilization patterns to identify potential fraud issues allowing for better and more informed decisions on recruiting and network management. With the introduction of narrow networks, plans will need to compare providers and utilize tools to select the most cost-efficient providers.

The Dental Profiling Tool identifies a provider's practice patterns, quantifying costs and utilization, and compares them to geographic peers and the market as a whole. The tool uses claims data and produces both high-level and detailed results. Geared towards clinicians, actuaries and organizations that need to benchmark cost and utilization, this tool helps users identify potential outliers.

Model features:
- Utilization report
  - o Comparison of various procedures performed, patients observed by the provider and office visits observed
  - o Compares and ranks all dentists to both regional and peer group
- Fee report
  - o Contains multiple categories of services
  - o Submitted and allowed discounts for all dentists compared to their peer group
- Region report
  - o ZIP code analysis reports for utilization and fees
  - o Additional filters for specialty
- Market extract report

Optum is poised to help health plans position themselves for lasting success. Together, we can modernize the health care system and measurably improve the health of individuals and populations. You can rely on Optum for the knowledge, expertise and comprehensive solutions needed to navigate today's health care market and ensure success.

Contact us for more information or to schedule a presentation.

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