

# Claim Reserve Estimation Workbook (CREW)

Claim Reserve Estimation Workbook (CREW™), Milliman's powerful tool for estimating incurred but not paid (IBNP) medical claim liabilities, helps our clients develop accurate reserve estimates and monitor their businesses at a high level. CREW performs a series of actuarial-based claim reserve calculations using historical, client-specific claims and exposure data.

## A BETTER MONITORING TOOL WITH MORE ACCURATE ESTIMATES

CREW stands out from the pack with its efficient, flexible Microsoft Excel®-based template that uses a single, simple to use workbook. The flow of the calculations can be easily understood by actuaries and nonactuaries alike. CREW can accommodate unusual claim payment patterns as well as changing enrollments, benefits, unit costs, and other key factors like changes in capitation and provider contracts. The result? A more accurate estimate.

In addition to estimating reserves, CREW's reporting features make it an exceptional management tool. For example, CREW will:

- Summarize claims and calculate loss ratios by incurred month, quarter, and calendar year
- Analyze incurred claim trend and reflect seasonal patterns including working day adjustments by service category
- Calculate restated reserve levels using claim run-out data
- Sensitivity-test best estimates against alternative assumptions
- Graph results to better display estimates
- Summarize results from several reserve types to identify patterns and outliers

CREW makes the data load process easy by color coding all input areas and protecting other areas so that formulas cannot be overwritten. The program incorporates dialogue boxes in the input areas to help the user quickly set up trend assumptions, experience credibility, and other key variables. CREW includes a robust print feature and monthly update mechanism that saves the user time and effort.

## FLEXIBLE APPROACH SUPPORTS UNIQUE CLIENT NEEDS

CREW is founded on two approaches. First, it mathematically models monthly claims lag patterns and uses these patterns to develop monthly incurred claim estimates. The user has several options to easily modify and test a range of possible assumptions using this "lag" method. Then, it develops incurred claim estimates by projecting historical costs on a unit cost basis (e.g., member months, inpatient days or admissions, employee months, or claims/incidents). The final incurred claim estimates are based on a blending of these two methods. The IBNP reserve estimate is the incurred claim estimates less claims paid to date.

CREW's flexibility allows the user insight and education as you proceed through the decision making process of setting various factors and trend assumptions. CREW can develop IBNP estimates for as many separate service categories as required in one workbook (e.g., hospital inpatient, other hospital, physician, pharmacy). Each category is supported by its own worksheet, which contains several exhibits. Each exhibit represents a step in the IBNP estimation process or a monitoring report summary, such as rolling trends or completion pattern analysis.

CREW is designed so that the user can easily test and document the sensitivity of different sets of assumptions on the resulting IBNP estimate—a critical feature because reserve estimates are sensitive to the assumptions used.

## CLIENT FOCUS OFFERS TIMELY SUPPORT

Milliman consultants provide training and ongoing support for CREW users. In our thorough, half-day training session, we give CREW users a comprehensive understanding of how to use this tool, typically using the client's data as part of the process. While some of our clients prefer that we perform their IBNP analyses from start to finish, others use CREW on their own and turn to Milliman as a second-opinion resource when complex situations arise.

When a client is familiar with CREW, Milliman consultants can respond to reserving questions quickly and easily explain why month to month changes are occurring.

We can offer timely results with little or no data processing and loading issues. Reserve estimates are often made under tight deadlines, so our ability to respond rapidly is reassuring to our clients.

## SUMMARY

Developing reasonable IBNP estimates and monitoring financial results are important functions for all risk taking organizations. Reserve estimates always require sound judgment. CREW provides a consistent structure for developing IBNP estimates and allowing the user time to focus on what's most important each month.

## Client Point of View

CREW is popular with health plans, provider organizations, large employers, and ACOs. Any entity with claim run out risk and reserve estimation needs benefits from CREW. The following quotes are from past CREW clients with very different needs. The first example was a startup plan with unusual health benefits.

“ Using Milliman's CREW model, we were able to easily manage our difficult claim development issues brought on by rapidly growing membership, changes in claim systems, and several benefit design adjustments. CREW is perfect for our continuously changing environment. ”

This second client was a small local HMO. The plan administrator wrote:

“ We started out having access to an actuary through our claims administrator, who prepared monthly reserves for us. When we switched administrators, those services were no longer available. We needed to continue to prepare monthly reserve estimates, but could not afford to employ a full-time actuary.

We talked to Milliman staff and they made us aware of their CREW model. For minimal startup costs, which included training on the CREW model, we were able to use Milliman's expertise without the price of monthly consulting costs. It is extremely user-friendly and macro driven, so after inputting the monthly lags for paid claims and some minor review of factors, the reserves are calculated. The reserve results are consistently in line with expectations and supply a level of reliance that provides a comfort level to our owners. ”



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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