MILLIMAN REPORT

eviCore healthcare

Evaluation of the eviCore SAVE℠ Methodology Used in the Medical Oncology and Radiation Oncology Programs

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I. EXECUTIVE SUMMARY

Cigna, through its subsidiaries Express Scripts and eviCore healthcare (collectively referred as eviCore), engaged Milliman to review the eviCore SAVE[SM] (Savings Analysis Verified Empirically) methodology. eviCore uses the eviCore SAVE[SM] methodology to estimate savings attributable to interventions through its Medical Oncology and Radiation Oncology utilization management programs. Health plans and employer clients enroll in these programs with the intent to lower the cost of care and improve health outcomes for oncology patients by determining optimal treatment regimens. eviCore has offered these programs since 2009 and is seeking to expand adoption of these programs to help its clients and their members.

We conclude the eviCore SAVE[SM] methodology is fundamentally sound as of the date of this report. Our conclusion encompasses the following statements:

- The material drivers of potential savings are captured within the eviCore SAVE[SM] methodology.
- All identified drivers of the allowed cost change between the base year and the contract year were appropriately categorized as either within or outside eviCore's management control.
- The eviCore SAVE[SM] methodology is sufficiently flexible to estimate savings for clients of widely varying cancer prevalence rates, cancer types, plan types, and prior utilization management programs.
- The new and expanded indication drugs lists are complete, accurate, and consistent with industry standard sources. eviCore also has mature processes for maintaining those lists and keeping them current.
- The estimated savings are clinically based, and the level of detail at which these savings are calculated (i.e., at the procedure and diagnosis code level) is appropriate.
- The implementation of the methodology is accurate and aligns with the program requirements set by eviCore to measure the savings.

We developed a framework for independently evaluating the oncology allowed costs and the eviCore SAVE[SM] adjustment factors used to determine the potential savings to arrive at this conclusion. We also identified ways to improve upon the eviCore SAVE[SM] methodology and limitations of our analysis. While eviCore reflected many of these improvements within the eviCore SAVE[SM] methodology, some of these were not reflected due to the unavailability of supporting data or an immaterial effect on the savings estimate.

As described in more detail in the "Considerations" section of this report, anyone interpreting results of the eviCore SAVE[SM] methodology should be aware that the estimated savings are:

- Measured from the allowed cost, which is shared by the client, patients, and other parties, rather than from the net cost to the client alone.
- Computed relative to whatever utilization management programs were in effect during the baseline year.
- Potentially diminished in accuracy as the contract year draws farther from the baseline year and may require a methodology to account for this in long term savings reporting.
- Most appropriately interpreted when radiation therapy, physician-administered drugs, and pharmacy drugs are presented together.
- Dependent on credible, complete client claims and membership data.
- Less credible if the number of treated cancer patients in the client population is small.

We prepared this report for eviCore and grant permission to release this report in its entirety. However, Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this report. Milliman recommends any recipient of this report be aided by its own actuary or other qualified professional when reviewing the report. Use of this report is voluntary and should not be relied upon to make any specific business decisions. Materials may not be reproduced without the express written consent of Milliman.

This analysis is an independent review of the eviCore SAVE[SM] methodology. Neither Milliman, nor the authors, endorse any products or programs in general, including the eviCore SAVE[SM] methodology.

II. BACKGROUND

eviCore developed the Medical Oncology and Radiation Oncology programs in 2013 and 2009, respectively, to help health plan, employer, and other payer clients lower costs associated with the treatment of eligible cancer patients. Both programs are intended to help lower costs through clinical decision support, peer-to-peer education, and utilization management. eviCore developed the eviCore SAVE[SM] methodology in 2017 to estimate savings for each client. The eviCore SAVE[SM] methodology estimates what the allowed cost would have been for pre-identified therapies in the absence of eviCore's programs (i.e., the "adjusted cost"), with the difference between this adjusted baseline cost and the actual cost adjusted for unauthorized spend representing the estimated savings.

The identification of members and their claims within each program is triggered by pre-defined diagnoses and procedures. Below is a brief description of each program:

- ***Medical Oncology Program*** – Manages utilization of medical oncology medications. The Medical Oncology program uses distinct factors in the eviCore SAVE[SM] methodology for drugs covered under the medical and pharmacy benefits due to inherent differences between those categories.

- ***Radiation Oncology Program*** – Manages utilization of radiation treatments.

The eviCore SAVE[SM] methodology is eviCore's approach to estimating savings attributable to the Medical Oncology and Radiation Oncology programs. The eviCore SAVE[SM] methodology provides a framework general enough to be applicable to both programs, yet allows for flexibility to consider therapy differences inherent to each program.

The eviCore SAVE[SM] methodology uses a baseline cost specific to each client, based on eligible therapies incurred one year prior to program initiation (i.e., the baseline period). eviCore uses client-specific data from the baseline period and the contract period to estimate several factors reflecting oncology related cost drivers outside eviCore's management control. The eviCore SAVE[SM] methodology then applies these factors to the baseline cost to produce the adjusted baseline cost, which is eviCore's estimate of what contract year costs would have been in the absence of eviCore's management. The actual contract year cost is adjusted to exclude services denied through a prior authorization which were nevertheless paid by the client. Estimated savings are based on allowed costs and calculated for the contract year using the formula:

(Estimated Savings) = (Adjusted Baseline Cost) – (Adjusted Contract Year Cost)

Many of the oncology factors are common to each program. We describe each factor and how they adjust each component affecting cost:

- ***Unit Cost Deviation*** – Cost inflation or deflation.

- ***Patient Treatment Prevalence*** – Change in the prevalence of treated cancers in the client population.

- ***Treatment Days*** – Change in the number of visits per treated patient (medical benefit drugs only).

- ***Pharmacy Days Supply*** – Change in the number of days' supply of prescription medications filled per treated patient (pharmacy benefit drugs only).

- ***Cancer Type Mix*** – Variation in the types of cancer present in the client population.

- ***New, Ramp-Up, and Expanded Indication*** – Marketplace changes in the use of new therapies ("New, Ramp-Up, and Expanded Radiation Modalities" for Radiation Oncology).

- ***Denial Savings*** – Savings from denials of inappropriate authorization requests on new, ramp-up, and expanded indication therapies.

- ***Savings Offset for Subsequent Authorizations*** – Cost of treatments authorized in place of the denied new, ramp-up and expanded indication treatments where the impact of the denial is measured as "Denial Savings". This factor reduces the Denial Savings to the net impact of the inappropriately requested therapy and the replacement therapy subsequently approved.

After completion of the contract year and sufficient runout, eviCore presents the estimated savings attributable to each program separately to demonstrate the value to each client. eviCore presents savings on a per-member, per-month (PMPM) basis and in total using membership in the contract period.

eviCore engaged Milliman to review the eviCore SAVE[SM] methodology for its Medical Oncology and Radiation Oncology programs. Our review included an assessment of the methodology and provided considerations to strengthen the methodology and the accuracy of results. This report documents the conclusions from our review and considerations related to the eviCore SAVE[SM] methodology.

III. ASSESSMENT OF THE EVICORE SAVE[SM] METHODOLOGY

The basic framework of the eviCore SAVE[SM] methodology is common to the Medical Oncology and Radiation Oncology programs. With few exceptions, the models for each program are mathematically equivalent. For simplicity, our evaluation describes the model utilized to measure the impact of the Medical Oncology program related to medical benefit drugs, but all remarks apply correspondingly to the Radiation Oncology program model as well, subject to the appropriate changes.

The basic structure of the eviCore SAVE[SM] methodology is fundamentally sound. Every change driving the difference in oncology allowed costs between the baseline period and contract year falls into one of two categories:

- eviCore explicitly deems the change to be outside its management control and adjusts baseline period costs to normalize for the change.
- eviCore explicitly accepts the change as being under eviCore's management control.

We believe the eviCore SAVE[SM] methodology captures the key drivers of changes in allowed costs. To support our review, we developed a separate and independent framework for identifying the components of allowed cost. We compared our list to the components identified by eviCore. We then analyzed the drivers of change in costs for each component from the baseline period to the contract year.

A FRAMEWORK FOR MODELING ONCOLOGY ALLOWED COST SAVINGS

We developed and employed a systematic framework for modeling oncology allowed costs to analyze the approach of the eviCore SAVE[SM] methodology. This framework helps ensure all potential changes to allowed costs are considered and categorized as being within or outside eviCore's management control. It also helps detect and avoid overlapping adjustments, while enabling eviCore to recognize when savings might be understated or overstated due to lack of data for appropriate adjustments.

In both the baseline year and the contract year, a certain number of cancer patients, whose illnesses fall into a variety of cancer types, are responsible for incurring costs from several treatments (HCPCS codes), typically over multiple visits. These allowed costs are completely determined by:

1. The total number of treated cancer patients.
2. The distribution of patients among various cancer types.
3. The average number of visits for each treatment.
4. The average cost per visit for each treatment.
5. The pattern of treatments used for patients in each cancer type.

No change to allowed costs between the baseline year and the contract year can occur without affecting at least one of these five constituent components. The eviCore SAVE[SM] methodology adjusts for items (1) through (4) as they are either outside of eviCore's control or otherwise reflected in the computation.

Item (5), the pattern of treatments used for the cancer types, is largely under eviCore's control, and the eviCore SAVE[SM] methodology attributes all changes to the pattern of treatments to eviCore's management activities, with two exceptions:

- ***Increased Use of Expansion Drugs*** – Medical advancements may lead to new medical oncology drugs, increased adoption of existing drugs, and the use of existing drugs for new indications (expansion drugs). The increased use of these drugs would likely have occurred without eviCore's influence and is therefore, considered part of the adjusted baseline against which savings are measured.

- ***Unauthorized Spend*** – The client may pay for a treatment that was not authorized by eviCore. In this situation, the contract year actual allowed cost is typically higher than it would have been if eviCore's recommendations had been followed. The eviCore SAVE[SM] methodology identifies and removes unauthorized claims from the contract year to reflect the greater savings that would have been achieved if eviCore's recommendation had been followed.

From our analysis, all material drivers of changes in allowed spend have been considered and appropriately allocated either within or outside eviCore's management. These categories may be refined or adjusted as eviCore's programs and the eviCore SAVE[SM] methodology evolve over time.

OBSERVATIONS ON THE EVICORE SAVE[SM] METHODOLOGY

Although we found the eviCore methodology to be sound, appropriately implemented, and complete regarding the capture of all material drivers of changes in allowed cost, we believe there are some areas where the eviCore SAVE[SM] methodology could be improved over time as more data becomes available. We list these areas below.

- Potential savings due to redirecting patients to lower cost drugs cannot be identified due to a lack of reliable data indicating the provider's plan for treatment before engaging in eviCore's utilization management process. This leads to understated savings. Similarly, the sentinel effect for increased use of expansion drugs is not measurable due to a lack of available data, leading to understated savings for these patients.

- Because treatment costs vary greatly for different diseases, the eviCore SAVE[SM] methodology classifies patients into eviCore-defined cancer groups using ICD-9 and ICD-10 diagnosis codes. We do not see any bias of this classification towards higher or lower savings estimates. However, eviCore could improve this mapping, particularly for secondary diagnosis codes for metastasis, by prioritizing diagnosis codes from physician evaluation and management visits over codes from other visits. Cancers of the same general type could be further distinguished by severity factors, such as metastasis or patient age.

- When a client pays for treatment not authorized by eviCore's management programs, the cost of this treatment represents additional savings eviCore would have obtained for the client, but which was not realized at the client's discretion. eviCore claims the full amount of this treatment as savings, even though the patient would likely have undergone an alternate treatment instead. Although there is no standard approach to estimate these hypothetical costs of the alternate treatment, they are not accounted for in eviCore's current methodology. Although the savings may be slightly overstated, we believe the bias is immaterial because unauthorized spend itself is quite small, typically constituting less than one percent of allowed costs.

- The regular release of generic equivalents for brand drugs and biosimilar competitors to biologics has a noticeable downward impact on allowed medical oncology spend. Although eviCore's management programs likely increase the rate of adoption of generic drugs and biosimilars, there is no practical, comprehensive way to distinguish eviCore's influence from background marketplace changes. Savings associated with increased adoption of generic drugs is eliminated from the savings analysis, while the differential between biologic and biosimilar drugs is included. Thus, savings related to eviCore's impact on generic adoption could be understated while the impact on biosimilar adoption could be overstated. These impacts have offsetting effects on the estimated savings.

CONSIDERATIONS

As eviCore and its clients interpret and rely on the results of the eviCore SAVE[SM] methodology, the following considerations should be kept in mind:

- The eviCore SAVE[SM] methodology estimates savings on an allowed cost basis. It does not consider member cost sharing, reinsurance, various forms of pharmaceutical rebates, provider risk-sharing arrangements, and any taxpayer share of government programs, all of which affect the net financial impact to eviCore's clients. Although these items are outside eviCore's control and represent insurance plan design factors, they may impact the realized savings for each eviCore client.

- In particular, if eviCore helps steer members towards clinically appropriate drugs for which the client receives significant manufacturer rebates, those rebates will not be reflected in the results of the Medical Oncology savings analysis. In this situation, the estimated savings to the client could be understated.
- The eviCore SAVE[SM] methodology typically takes as its baseline cost a client's experience in the year prior to contracting with eviCore. Thus, the savings measured is relative to any utilization management program the

client used before eviCore. Hence, some of the savings achieved by eviCore (relative to what allowed costs would have been if the client had used no oncology management program) may not be recognized by the eviCore SAVE[SM] methodology. This has the effect of understating the estimated savings when clients have prior utilization management programs in place.

- The more time between the contract year and the base period (the last year before eviCore's management began), the more variation exists between the adjusted base period allowed cost PMPM and the contract period allowed cost PMPM. This could diminish the accuracy of the eviCore SAVE[SM] methodology for estimating savings for long-term clients of eviCore.

- The eviCore SAVE[SM] methodology does not capture the effect of costs shifting among radiation therapy, physician-administered drugs, and pharmacy drugs. This could cause misleading results when one of these categories of therapy is presented in isolation. Although it is uncommon for eviCore to shift patients between radiation and drug therapy types, redirection of patients from a physician-administered drug to a pharmacy drug would increase savings on physician-administered drugs but decrease savings on pharmacy drugs. As long as the categories of therapy are presented together, the total savings would be appropriately estimated.

- Reliability of the eviCore SAVE[SM] methodology calculation depends on the credibility and completeness of client claims and membership data. If client data is inaccurate, incomplete, or unreliable, the savings calculated by the eviCore SAVE[SM] model will also be unreliable.

- If the number of treated cancer patients in the client population is too small, the factors calculated will be more heavily influenced by random variation, and the eviCore SAVE[SM] model will produce less reliable estimates of savings. The quantity of available data should be considered at all relevant levels of calculation for the baseline period and the contract year.

- eviCore believes it may have some influence in lowering the number of visits per patient, but there is no data to distinguish this influence from background trend in visits per patient. As a result, the Medical Oncology program eviCore SAVE[SM] analysis may understate savings if eviCore does have an influence.

IV. DATA, METHODOLOGY, AND LIMITATIONS

This section describes the data and other information we relied on when evaluating the eviCore SAVE[SM] methodology for the oncology programs, along with the approach and limitation of our evaluation.

DATA AND SUPPORTING INFORMATION

eviCore provided Medical Oncology and Radiation Oncology documentation. This included documents and slides describing the eviCore SAVE[SM] methodology and challenges identified through questioning of eviCore developers. eviCore also provided additional detail on disease cancer groupings and medications approved for new indications.

In addition, eviCore provided sample data sets of current clients, the code used to process the data, and the resulting Excel models demonstrating the final savings to the clients.

METHODOLOGY

Our approach for evaluating the eviCore SAVE[SM] methodology was multifaceted and involved several steps. We applied a similar approach to each oncology program, as each model had similarities. In summary, we:

- Reviewed the eviCore SAVE[SM] methodology for general reasonableness.

- Compared the methodology implemented with the descriptions of the eviCore SAVE[SM] methodology in client-facing documents.

- Analyzed the development of allowed costs on a theoretical basis, looking for contributing factors omitted by the eviCore SAVE[SM] methodology or correlated factors in the eviCore SAVE[SM] methodology.

- Reran the eviCore SAVE[SM] methodology wherever possible on client data sets to replicate eviCore's calculations and identify nuances from edge cases in the methodology.

- Recreated portions of the Medical Oncology eviCore SAVE[SM] methodology using simplified, hypothetical data sets. This allowed us to isolate expected changes in the data and verify those changes were captured appropriately in the output of the model.
- Reviewed the mapping of diagnosis codes to cancer types and the New Drug and New Indication Tracker for completeness and accuracy compared to industry standard sources.
- Reviewed the New Drug / Ramp-Up / Expanded Indication factor methodology in the Pharmacy model for clinical appropriateness.
- Discussed the eviCore SAVE[SM] methodology in detail with the eviCore team.

LIMITATIONS

This review did not include access to authorization and membership databases within eviCore, so we were unable to directly investigate the approach for categorizing members into cancer types, summarizing denials, and summarizing unauthorized spend. However, we reviewed the code for reasonableness and relied upon eviCore's descriptions of its databases and the processes employed.

This review also did not include direct access to the Radiation Oncology code used in eviCore's production environment, so we were similarly unable to run and investigate thoroughly the entire Radiation Oncology code. Instead, eviCore walked through the code providing explanations of each step. We also ran and investigated portions of the Radiation Oncology code using intermediate data sets provided by eviCore.

V. CAVEATS, LIMITATIONS AND QUALIFICATIONS

We, Todd M. Wanta and Troy M. Filipek, are Consulting Actuaries with Milliman, Inc., are members of the American Academy of Actuaries, and meet the Qualification Standards of the Academy to render the actuarial opinion contained herein. To the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

The information in this report is intended for the use of eviCore to provide our evaluation of the eviCore SAVE[SM] methodology for estimating savings from eviCore's Medical Oncology and Radiation Oncology programs. It may not be appropriate, and should not be used, for other purposes.

This report may be distributed to eviCore's existing and prospective clients. If shared externally, the report must be shared in its entirety unless otherwise approved by Milliman. We do not intend this information to benefit, or create a legal liability to, any third party, even if we permit the distribution of our work product to such third party.

In completing this evaluation, we relied on information provided by eviCore, which we reviewed for reasonableness, but accepted without audit. If any of this information is inaccurate or incomplete, the contents of this report along with many of our conclusions may likewise be inaccurate or incomplete. eviCore's actual results will differ from modeled projections due to factors such as differing populations, changes in oncology treatment, and fluctuations in cost. eviCore should monitor emerging results and take corrective actions when necessary and allowed by regulation.

This report contains the review and opinions of the authors and not necessarily that of Milliman. Neither Milliman nor the authors endorse any products or programs in general, including eviCore's Medical Oncology and Radiation Oncology programs.

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