At Cigna, we strive to help our customers get healthy and stay healthy. One vital way we achieve this goal is by identifying customer health and wealth opportunities and engaging customers in programs, products and services that will help meet those opportunities.

Cigna is revolutionizing the way we use predictive modeling to identify customers and engage with them. In addition, rather than using only traditional telephone interactions to define engagement, we’re focusing on a customer’s individual health journey within a multi-modality world. This new concept is called the Cigna Health Matters Score, which integrates the relevant information we have about our customers to optimize their interactions with Cigna.

The Cigna Health Matters Score is a predictive modeling tool that calculates the optimal way to connect with customers. It allows us to:

1. Prioritize a customer’s health risk(s).
2. Predict the optimal outreach modality (phone or email) for customers.
3. Guide customers to a preferred health program (online or telephone coaching) to improve engagement.

Offered by: Cigna Health and Life Insurance Company, Connecticut General Life Insurance Company or their affiliates.
TRADITIONAL PREDICTIVE MODELING

Predictive modeling is the use of statistical methods to predict the probability of a future event, based on current or past information. Traditional predictive models in the health insurance industry are typically aligned with a telephone program delivery. However, in today’s multi-modality world, limiting predictive modeling to coaching by phone limits our ability to fully engage a customer using their personal behaviors and preferences. In the future, predictive modeling will take into account multiple clinical programs and routing modalities that are more reflective of people’s actual habits.

Current model – Risk-based stratification for telephone/online for all others

Claims
Lab data
Health assessment
Biometrics

High risk

Telephone coaching (online tools used as additional support/supplement)

Low risk

Self-directed (online tools used as primary)

Cigna Health Matters Score

At Cigna, we’re transforming the way we use predictive modeling to help customers by implementing the Cigna Health Matters Score. This tool:

➤ Provides a comprehensive view of a customer’s health and wealth opportunities (e.g. save money on generic drugs).
➤ Determines the top clinical triggers or risks.
➤ Identifies the optimal method of outreach and engagement modality to route the customer.
➤ Aligns customers to appropriate available resources based on individual health opportunities, preferences, and clinically appropriate programs or services.
➤ Provides additional actionable information on highest impact opportunities to our health coaches within the HealthEview® clinical platform.
➤ Balances clinical guidelines and applicable plan design.

OPTIMIZING CUSTOMER INSIGHTS

The Cigna Health Matters Score integrates all of the relevant information we have about a customer into a single score, and determines the appropriate path to optimize their interactions with Cigna. A person’s score is a composite measure of risk, cost, opportunity, avoidance, behavior change and engagement.

To calculate this score, we combine our traditional predictive modeling data sources with nontraditional data sources, such as customer preferences - actual or predicted.

Available customer insights include:

➤ Demographic
  - Age and gender
➤ Geographic
  - Neighborhood and location characteristics, census statistics
➤ Psychographic
  - Hobbies, interests and attitudes

TRADITIONAL PREDICTIVE MODELING DATA SOURCES

The Cigna Health Matters Score is built on the foundation of traditional predictive modeling. Cigna uses multiple predictive tools to continually review customer data to predict a likely future health event.

Our predictive tools mine the wealth of information available through our integrated plan coverage and systems. These include:

➤ Medical claims
➤ Pharmacy claims
➤ Demographic data
➤ Lab results
➤ Behavioral health data
➤ Disease categorizations, such as Episode Treatment Groups (ETG) and Episode Risk Groups (ERG)
CALCULATING THE SCORE
The Cigna Health Matters Score incorporates three components:

1. **Value of coaching opportunity (attribute)** – An attribute is one of the inputs used for the total Health Matters Score calculation. Attributes include existing or new condition predictive models, pharmacy data and other inputs. We target customers for coaching and clinical intervention because of an identified clinical, quality or cost opportunity.
   
   *Example:* Switching from a brand prescription drug to a generic; or closure of a clinical gap in care.

2. **Targeted impact** – Each intervention has a goal, such as 100% change (smoking cessation) or a 50% reduction (gap in care).

3. **Probability of success** – This is the likelihood that a specific customer will change his or her behavior using the optimal modality.

<table>
<thead>
<tr>
<th>Value of coaching opportunity</th>
<th>Targeted impact</th>
<th>Probability of success</th>
<th>Health Matters Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>$200</td>
<td>50%</td>
<td>50%</td>
<td>50</td>
</tr>
</tbody>
</table>

The Cigna Health Matters Score is calculated for all coaching opportunities (attributes) for every customer across every modality. The total Health Matters Score is the sum across all opportunities. For example:

**Total Health Matters Score is 700**

<table>
<thead>
<tr>
<th>Opportunity #1:</th>
<th>Claims-based future risk score</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Opportunity #2: Diabetes predictive model score</td>
<td>100</td>
</tr>
<tr>
<td>+</td>
<td>Opportunity #3: Brand to generic Rx change opportunity score</td>
<td>200</td>
</tr>
<tr>
<td>+</td>
<td>Opportunity #4: Gaps in care score</td>
<td>350</td>
</tr>
<tr>
<td>=</td>
<td>Total score of all opportunities: Health Matters Score</td>
<td>700</td>
</tr>
</tbody>
</table>

**OPTIMAL MODALITY**
Cigna offers several modalities to engage with customers on their health journey, including coaching by phone and digital health tools. Predictive models determine which modality is likely to result in a better outcome for the customer. The optimal modality is the one with the highest probability of success in changing a customer’s behavior. An optimal modality recommendation is assigned to each opportunity. The Health Matters Score output and modality recommendation is used in the clinical program design to coordinate outreach with the most appropriate products, programs or services for which a customer is predicted to have the best outcome.

**WHAT HEALTH COACHES SEE**
Health coaches see the total Health Matters Score as well as a breakdown of up to five coaching and/or cost improvement opportunities. This will help coaches support customers in a more personalized, preference-based way.
Benefits of the Score

The Health Matters Score helps us prioritize outreach and better target customers to the right health programs in the ways they most prefer. A person’s Health Matters Score is dynamic. The data, corresponding score, and optimal modality recommendation continually evolve with a customer’s health journey. This allows us to modify our engagement strategy as each customer’s health status and available insights change and as the Health Matters Score is used to align customers with optimal product, programs, services and modalities. In turn, this supports higher customer health engagement and satisfaction. This helps drive better health outcomes, higher productivity and controlled medical costs.

Developing the Cigna Health Matters Score

The conceptual design brings together multiple clinical targeting algorithms and their historical impact on an individual’s health. The components have been tested over several years, most recently as part of a pilot in 2014. The pilot used rigorous analytic and evaluation methodologies to assess the effectiveness of the Health Matters Score and its impact on product performance. We established processes to continually monitor performance, outcomes and opportunities for improvement as the Health Matters Score is used across our book of business beginning on 1/1/2015.

SUMMARY

The design and construction of the Cigna Health Matters Score is complete. We will continually validate and revise the features of this tool. We will use what we learn, comparing outcomes to design specifications and refining our process as we move into the future. Ultimately, our goal is to revolutionize the way we identify and engage individuals, creating an optimal approach for outreach and health engagement.

*Cigna Health Matters Score, patent pending, file date August 4, 2014.