Risk Adjustment: Retrospective Chart Chase

By Dale Cap

PROGRAM OVERVIEW

Retrospective Chart Chase is a method that commercial and Medicare Advantage plans use to capture coding gaps and improve risk score accuracy. Although it is often a look-back program for Medicare Advantage plans, it is also an effective concurrent program that can be applied to both commercial and Medicare Advantage.

As noted, the goal is to identify coding gaps for the population of interest. A coding gap consists of the following:

- Persistent conditions, and
- suspected conditions.

A persistent condition is a diagnosis that maps to a hierarchical condition category (HCC) that has been documented in previous years but has yet to be documented in the current year. Note, it is important to filter out the acute conditions and account for hierarchal logic before pursing these codes in existing charts. In addition, for commercial plans, ensuring the condition still applies based on age, gender, and other characteristics is also important.

Suspect conditions on the other hand are those conditions identified via a predictive model (machine learning) for the member. This is typically based on a member's demographic information, drug patterns, lab results, past care, and other characteristics. A predictive model will then output a probability score as to whether they have a certain HCC.

HOW TO SUSPECT

Unlike persistent conditions, suspecting is a bit more complex. This requires a blend of actuarial and data science. Here the actuary would define the data elements, structure, and target

variables in the development of a predictive model. Leveraging the machine learning skills of a data scientist, they can then determine an appropriate model for the problem. The model will then need to be hyper parametrized (tuned) and trained using a k-fold cross validation process to ensure the model generalizes the problem (not over/under fitting). The variables of importance from the model (if interoperable) can then be provided with the results based upon an agreed evaluation metric (RMSE, AUC, LOGLOSS). The actuary can then review for reasonableness and start the control cycle process for refining future iterations.

CREATING THE LIST

Once the persistent and suspected conditions have been identified, the next step is to determine which charts are most likely to contain information supporting that condition. This can be done using Bayesian statistics, where we define the overall probability of a type of chart based on provider type, place of service, and other metrics given a condition exists. We can then look at each member given a condition identified from our list and choose the most probable chart type for that member.

In some cases, a member could have a significant number of charts. To avoid pulling all charts that fit the criteria and deteriorating the ROI of the program, it is important to start the process by grabbing the top "x" most likely charts. You will also need to

remove those charts that are not in the top "y" most likely charts. The appropriate parameters here can be determined based on past performance and success from other chart chase work.

ENHANCED SUSPECTING

Other enhancements to the suspecting model could include evolving graphs. Here we look at how members evolve over time with episodes of care, and where others ended up based on this same trajectory. The benefit of this work is not only to capture the existing diagnosis, but to identify emerging conditions pre-diagnosis and intervene in advance to help manage the members along their journey.

SECOND PASS

After the chart has been pulled and coded, the use of NLP and other technology can be applied to find possible diagnoses that the coder may have missed. This is done by ingesting the structured and unstructured chart information into a system and applying probabilistic methods via n-grams (sequence of words),

linguistics (meaning of phrases), and other techniques to uncover the supported codes.

SUMMARY

The following was an overly simplistic view on how to create a chart chase list for closing gaps.

Before pursuing this type of work internally, make sure the right competencies exist for carrying out the program. These include understanding how the risk adjustment program works, underlying data needed to model outcomes, what the impact of two-way-review could have on this process, as well as ensuring the technical capabilities exist to successfully suspect. ■

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