HealthWorks AI
Gift Of Time

Leveraging Analytics to out-maneuver competition in Medicare Advantage

6 things to do AFTER the CMS releases competitor plan information

Executive Summary

As we approach the Annual Enrollment Period, Medicare Advantage Organizations are grappling with what they can do to outsmart their competitors based on their plan information. How can they rapidly leverage CMS's (Center for Medicaid and Medicare Services) information to make significant in-flight changes to their market strategy? What would be the critical time periods and what are the critical interventions this information could lead to?

While most product market decisions are made well before the onset of the AEP period, leaders in the Medicare Advantage segment are realizing that there is much to be done after CMS reveals competitor information. The Golden Weeks after CMS's big reveal are critical to the success of MAPD plans in the marketplace. Multiple decisions hinge on payers' access to and analysis of competitor plans- this particularly includes any in-flight changes to their marketing communication to target the right customers based on gaps in the marketplace. Other decisions such as broker communications, channel strategy and messaging, community events, all of these can be customized based on where payer's plans rank relative to their competitors. Quick analysis of CMS data after the big reveal can help Payers react quickly to their Actual product competitiveness and not their Expected competitiveness. Speed of execution is critical, and the need of the hour is insights@speedofbusiness.

This whitepaper provides an overview of week-level actionability of competitor information, the decisions payer organizations may address as well as the benefits of such decisions. It indicates how payers can analyze this information in a time-bound manner to react faster to new product/competitive information and to exploit opportunities and close real or perceived gaps to stand out in the marketplace.

The HealthWorksAI™ Solution provides Payer organizations the ability to

- Understand and communicate the new market reality and react faster than the competition to threats and opportunities
- Utilize unbiased third-party view of plan benefit strengths and weaknesses to validate or update anticipated growth
- Adjust go-to-market strategies on your actual competitiveness rather than expected competitiveness

Prepping for AEP period

The onset of October is an important milestone in the calendars of Medicare Advantage payers, for this is when senior citizens make their choice on the Health care plan they would enroll into for the coming year. The Annual Election Period or the Open Enrollment Period which extends from October 15th till December 7th every year is the time where seniors can choose, change or drop their Medicare Advantage or/ and Part D plans.

Payers spend months planning for the launch of the AEP season. The preparation of the Medicare Advantage Plan bid – which includes the details of the plan itself, the counties it serves, the benefits package or Part C coverage, pharmaceutical coverage or Part D package, provider network linkages, costs, deductibles and member premiums - is a key activity that kicks off the Medicare product cycle. Prior to this, marketers would have spent many months identifying and tagging their current customers and prospects persona to create the right plan that would hit the sweet-spot for this audience. Once the bid is finalized, plans move onto detailing their marketing activities – delivering marketing communications that build brand image, focus on product differentiation and help target the right segment with the right message. Apart from the different media outreach programs, sales channels get activated, and broker communication gets crystallized.

None of this preparation, however, allows for competitor information to be built into these programs. The first week of October, the CMS, which oversees the federal health programs, releases the details of all Medicare Advantage plans at each county level. Payers are now able to observe the benefits offered by their competitor plans, as well as use this data to analyze who their closest competitor is. The release of this information in first week of October is a game-changer for payers. While payers cannot go back and change their plans or their benefits basket, they now can clearly visualize their plan's competitiveness in the market and target audience that their specific plans cater to.

Unlike traditional payers who fritter away this opportunity, leaders in the MAPD space are seeing the advantages offered by the Golden Weeks after the CMS's big reveal as an opportunity and redesigning their processes around this insight. This decreases their reaction time and provides just-in-time actionability.

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The Golden Weeks for actionability

Payers utilize this competitor information released in early October to modify their tactics through the AEP.

First week — Second week — Third week

Analysis of market competitiveness:

After the release of plan information, payers can analyse whether their plans are more competitive or less competitive compared to other plans in the county. This is typically the activity in the First Golden Week.

Broker Messaging:

The marketing communication that goes out to Broker networks may also be substantially changed following the information released in October. Brokers may be advised to reach out to certain segments of clients or target existing customers or prospects more intensively.

In-flight changes to marketing spend:

Based on the plan competitiveness, in-flight changes may be made to optimize marketing spends. Digital media tends to be the easiest to ramp up and ramp down given the speed and precision of this media. direct mailers/ e-mail, social media etc. may be modified following release of plan competitiveness information.

Community events:

Messaging in community events may also undergo a change due to newer/different targeting, allowing for a near real-time assembly of sales kits based on the leads targeted. Customer service, sales and marketing efforts around community outreach programs can be coordinated based on plan competitiveness and plan features.

Facility-level adjustments:

CMS uses well-defined risk adjustment methods to allow CMS to pay plans for the risk of the beneficiaries they enroll, instead of an average amount for Medicare beneficiaries. Predicting the enrollments at a county X plan level will allow payers to decide on facility level adjustments and re-balance field marketing across geographies that best adjust for plan cost and risk in each county for the payer.

Field Marketing adjustments:

Based on actual plan competitiveness, re-balance field marketing across geographies by adjusting reps, events and promotions. Experiment with daily "pop-ups" to react to competitor presence and to emphasize our geographic advantages.

Engaging experience:

Establishing a relevant and engaging experience for new members is more important than ever. Re-work the initial experience to understand their focus on utilizing benefits and preventative screening to not only improve Star scores but to also engage their members and demonstrate value early in the relationship. These efforts can pay rich dividends in terms of improved retention rates down the road

Building just-in-time actionable insights on the Medicare Advantage market space requires a fair degree of skill and expertise – which is what HealthWorksAI™ platform brings to the Medicare Payer's repertoire. CMS releases Medicare Advantage plan data in the first week of October, and within 72 hours, HealthWorksAI™ assists Medicare Insurers in obtaining market and plan competitiveness insights and activate actionability.

The Methodology

A combination of deep domain knowledge in Medicare coupled with state of art machine learning tools and hundreds of hours of product building expertise go into making HealthWorksAI™ the go-to platform to ascertain plan and market competitiveness.

The analytical engine behind HealthWorksAI™ platform is a deep learning algorithm that utilizes multiple sources of data to mimic consumer choice in Medicare Advantage (MA only as well as MA-PD). The output is the number of enrollments that each plan can hope to obtain at the end of the AEP period, given the plan attributes and the markets it serves.

The model itself is multi-tier model where Medicare eligibles and enrollees are forecasted by county by disease using population health scores generated for the county using the HealthWorksAI DiseaseIndex. This forecasted figure is used next in a parametric plan competitiveness model where the relative ranking of different benefit buckets is ascertained at a county-plan combination. A benefit-level model is next used to evaluate the impact of various benefit variable combinations on the plan benefit-type attribute (To follow from the above example, the implicit value of each attribute, the number of trips, one-way or two-way, car or airlift, each of this is analyzed within the transport benefit-type model).

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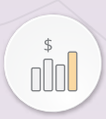
Age, income and disabled profiles of Medicare Eligible population; top five chronic diseases morphed into a disease index based on CMS data; number of physicians and hospitals who serve given diseases within a county; a density index of physicians per Medicare Eligible and Medicare enrolled by disease	**Population Health Indicators**		 **HealthWorksAI** DiseaseIndex & Medicare Eligible Projection	• Use Population Health Data to create a forecast factor • Forecast Medicare Advantage eligible population using Population Health and income projections
County level data which considers the size of the county, growth rate in Medicare Eligibles, growth rate in Medicare Advantage enrollment, market maturity and competitiveness of plans in the county, wage rates and income rates proxied by FFS rates	**County level indicators**		 **County Cluster Model**	• Group counties similar in size, enrollments and other market characteristics are clustered; also accounts for Medicare regions and for FFS rates; also incorporates market power of competitors in the county and stickiness to plans
Attributes of Medicare Advantage plans including premiums and costs, all deductibles, co-pays and co-insurances, all benefit offered by the plan down to tier level granularity as well as the Part-D drug coverage with Star ratings and OOPC costs	**Plan cost & benefit features**		 **Plan Competitiveness model & Benefit-level model**	• All premiums, MOOP, costs and deductibles are utilized in this model • The relative ranking of different benefit buckets and formulary buckets is ascertained at a county-plan combination level • Evaluate the impact of various benefit variable combinations on the plan benefit-type attribute (e.g.: Is 24 ambulance trips on transport more valuable than 48 trips)
Drug & formulary coverage; provider network and pharmacy network are considered as input variables by counties	**Formulary information**		 **Network Analysis**	• Network (Hospital and Physician) impact added on request
Payer level characteristics which includes organization-level fixed effects to capture brand identity and competitive power; size and coverage attributes including number of old and new plans, number of best selling plans, stickiness factor and shopper indices.	**Payer characteristics**		 **Ensemble Model to predict enrollments**	• Based on benefit buckets, formulary, county level variables, HealthWorksAI DiseaseIndex. • Output is an enrollment prediction at each plan/county combination•

The Methodology & Data Modelling Stages

For the plan-benefit models, a top-down approach that derives the value of each benefit-type (transportation, ambulatory, In-patient, out-patient etc.) within the first-stage model followed by breaking this down into the impact of each granular benefit attribute in a second-level model. This simulates customer choice criteria in a complex multi-attribute set. Customers are likely to evaluate whether ambulance and cardio benefits exist in the first stage, before trading off on the benefits, copay and deductible in the next stage. The enrollment predictions are the result of an ensemble approach utilizing deep-learning algorithm including clustering, bagging and random forest technique.

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Innovations in modelling

To identify likely number of shoppers, a stickiness factor is applied to incorporate differential benefits as well as time series trends. A market share model is built for validating the number of shoppers identified.

Payer pedigree is also considered: payers at national or regional level, or well-entrenched payers in a county, have higher levels of brand identity and stickiness.

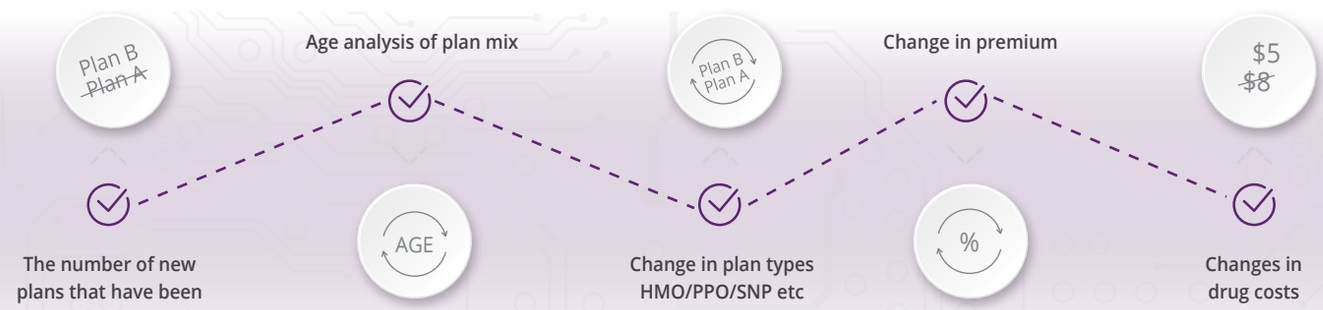
HealthWorksAI StabilityIndex™ allows to compare whether markets have significantly changed to impact the state of Medicare in time HMO, PPO, SNP and MMP plans are plans are modelled separately at a Plan county level

SNP models which dual-eligible and for a specific category of vulnerable population has differential weightages for benefit buckets to account for their special status.

County level population and income growth are forecast to get better estimates of penetration of Medicare Advantage.

Validation

Since, forecasts are built across years, market stability across the years is an important component in estimating enrollments. If Costs and deductibles have changed significantly across years, there may be higher prediction uncertainty. To account for this, the HealthWorksAI StabilityIndex™ allows to compare whether markets have significantly changed across five parameters (a) The number of new plans that have been launched in the county (b) Age analysis of plan mix (c) Change in plan types HMO/PPO/SNP etc (d) Change in premium (e) Changes in drug costs. The models are cross-validated both within and across the years using a lock-down control sample. Two types of cross-validations are used. A 70/30 lockdown sample is utilized where plan-benefits and enrollments are predicted using 70% plans for the year and validated on 30% of the random sample in the same year. Since the prediction model is built on the first year to predict for the next enrollment year, cross-year validations are also performed where a 70% random sample slice across both years is used for the modelling exercise and the rest 30% is the validation sample. This technique is effective and yields us a very high predictive power (MAPE of less than 4% overall). Models are validated at different slices –accuracy of county level prediction, year-on-year prediction accuracy, plan county level accuracy, accuracy pertaining to different county/plan sizes (large, medium and small plans), accuracy by organization by region, new plan accuracy.



The resulting model is highly accurate for large plans, medium plans and at the organizational level. The model is very stringent in being able to show large movements of enrollments based on better benefits in Part C and D and captures shopper behavior based on plan attributes quite well. New plans are slightly lower on accuracy (Mean average percent error of 7%); small plans have varying accuracies due to base effect.

The usage of both parametric methods and deep learning methods allows for a unique focus on both the explanatory power of the model (where business domain sense is built in for actionability) as well as on predictive power of the model courtesy the deep learning framework. Time series elements account for the continuing impact of growth factors or plan competitiveness across years, helping capture consistency in estimated value of different benefit types. An elegant model that is simple yet powerful, this modelling engine provides all the insights that power HealthworksAI platform.

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The **HealthWorksAI™** tool

The results of the model are incorporated into HealthWorksAI portal, allowing for insights to be generated.

Specifically, HealthWorksAI Platform assists Medicare Insurers with answering some of the following questions:

a) Rank the factors that lead to higher plan performance in a specific county. For instance, which are the top 5 factors that influence purchase behaviour in Alameda county?
b) Quantify the impact of these critical factors. It helps answer questions such as - what is the impact of a 1% increase in my MOOP on market share and enrollments?
c) Simulate plan features. If my competitors increased their drug deductibles and our firm kept it at the current level, is there likely to be a material impact on enrollments?
d) Get a quick birds eye view of all competitor analysis. How many plans are there in the Boulder county, and which organisations do they belong to? What is the market share of the top 5 plans by enrollments in the state of MA?
e) Obtain a sneak peek into the prospects. How many people do we expect to be added into Medicare eligible by County/State, and what is the likely income of the 60-65 age group? What lifestyle concerns does this demographic face?

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HOW WE CAN HELP

HealthWorksAI experts have worked with our partners to create solutions giving them the edge they need. Leverage our infrastructure and experience to dive deep into your data, starting with your consumers' level of engagement. We'll measure and optimize your marketing initiatives, and create targeted and relevant solutions using machine learning and neural network AI. Contact HealthWorksAI™ to get started.

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