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Medicare Advantage Hierarchical Condition Categories: Updated Study Results

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In January 2011, we published an article in *Health Watch* summarizing a study we completed regarding the number of Hierarchical Condition Categories (HCCs) per Medicare Advantage (MA) member using 2009 members and 2008 diagnoses. One of the goals we had for that study was to help MA plans identify a "baseline" for expected number of HCCs for their population as well as a potential "upper limit" to identify where their coding was relative to their peers. With the implementation of the Affordable Care Act (ACA) for MA plans entering its second year in 2013 and the resulting impact on payment rates from both the fee-for-service (FFS) phase-in and changes in star ratings, the pressure on MA plans to ensure that their risk scores appropriately reflect the health status of their population continues to increase.

The Centers for Medicare & Medicaid Services (CMS) assigns a risk score to every MA member based on the member's characteristics, including age, gender, disability status, Medicaid status and "health" status. The majority of revenue received by MA plans is based on the risk scores of their members, and the health status is the primary variable in the calculation of the risk score. The health status of the member is based on the "diseases" the member had in the prior year. CMS determines the diseases/HCCs each member has based on ICD-9 diagnosis codes. A member is flagged with an HCC if an ICD-9 diagnosis code has been submitted by MA plans (or fee-for-service providers) to CMS for the prior year that maps to the HCC. For example, ICD-9 code 250.00 (diabetes mellitus without mention of complication) maps to HCC 19.

The CMS risk adjustment model for the vast majority of MA members has 70 unique HCCs with an additive risk adjustment factor assigned to each HCC. (CMS uses a different model for end-stage renal disease (ESRD) members that has 87 HCCs.) If a member has the 250.00 ICD-9 code submitted (and has no other diabetes-related ICD-9 code), then that member's risk score would increase by 0.162 (for the 2009–2012 models) or 0.127 (for the 2013 model). This would result in an additional payment to a typical MA plan of between $80 and $100 per member per month (PMPM). Hence, identifying and submitting all appropriate ICD-9 diagnosis codes to CMS results in a higher risk score for the member and an increased payment to the MA plan.

The Revenue Opportunity in Accurate Diagnostic Coding

Ensuring that all appropriate diagnoses for its members are submitted to CMS is very important, as this is one of only a few areas where an MA plan can affect its revenue. With the implementation of the ACA, star ratings also have a significant impact on revenue; however, there is little opportunity to retroactively impact star ratings. Because CMS allows MA plans 13 months after the end of the year to submit diagnoses, MA plans CAN review physician and hospital charts, submit additional diagnoses to CMS and receive a retroactive payment for those diagnoses. Reviewing charts, however, requires paying coders as well as cooperation from the physicians and hospitals to allow the coders access to their charts. Hence, MA plans want to make sure that the cost of chart review is reasonable relative to the expected increase in revenue. Understanding where the MA plan's diagnosis coding effort stands relative to the average or the upper limit of its competitors is therefore important in determining what should be the level of investment in chart review.

To help determine the upper limit as well as variations in the market, we reviewed data for more than 50 unique CMS contract numbers (H numbers) that included more than 800,000 unique members. These totals are a slight decrease from our previous analysis due to the exclusion of several clients from the prior analysis. The current analysis is based on 2010 members and their 2009 diagnoses (which is an update from the prior analysis, which focused on 2009 members and 2008 diagnoses). The results are focused primarily on coordinated care plans (local HMOs, local PPOs and regional PPOs). The results exclude private fee-for-service (PFFS) plans, chronic and institutional special needs plans (SNPs), and members who are flagged as institutional ESRD. In addition, we excluded new enrollees because they do not have any published HCC information.

Study Results

The HCC analysis revealed a number of characteristics that can help an MA plan evaluate whether the current risk scores for its population (or segments of its population) justify the cost of additional chart review. Key findings include:

- **Dual-eligible (i.e., eligible for Medicare and Medicaid) members have a significantly higher number of HCCs than non-dual-eligible members.**
  This result is the same as in our previous study. On average, non-dual-eligible members (non-duals) have 1.50 HCCs, while dual-eligible members (duals) have 1.89 HCCs. These numbers reflect a slight increase for non-duals and a slight decrease for duals from our previous study.

- **The average number of HCCs varies meaningfully by organization, even after normalizing for age/gender and geography.**
 In organizations at the 25th percentile, non-duals have 1.33 HCCs and duals have 1.79 HCCs. In organizations at the 75th percentile, non-duals have 1.57 HCCs and duals have 2.01 HCCs. For non-duals, organizations at the 75th percentile have about 18 percent more HCCs per member than organizations at the 25th percentile. For duals, organizations at the 75th percentile have about 12 percent more HCCs per member than organizations at the 25th percentile. Assuming an average risk score increase of 0.35 per HCC, this would indicate a difference in risk scores of 0.09 for non-duals and 0.08 for duals between organizations at the 25th and 75th percentiles. Exhibit 1 summarizes the average number of HCCs for non-duals and duals at the 25th, 50th and 75th percentiles, as well as the overall weighted average for all plans. These results are consistent with our prior study.

- **The number of HCCs increases steadily as members age.**
  From age 67 to 77, the average number of HCCs for both non-dual males and females increases by about 50 percent. The increase is less dramatic for duals (closer to 10 percent) because they have more HCCs initially. Exhibit 2 provides a detailed summary of the average number of HCCs by age and gender

Exhibit 1
Milliman Medicare Clients
2011 HCC Survey Results
Coordinated Care Plan Members (1)
Includes All 70 HCCs (2)

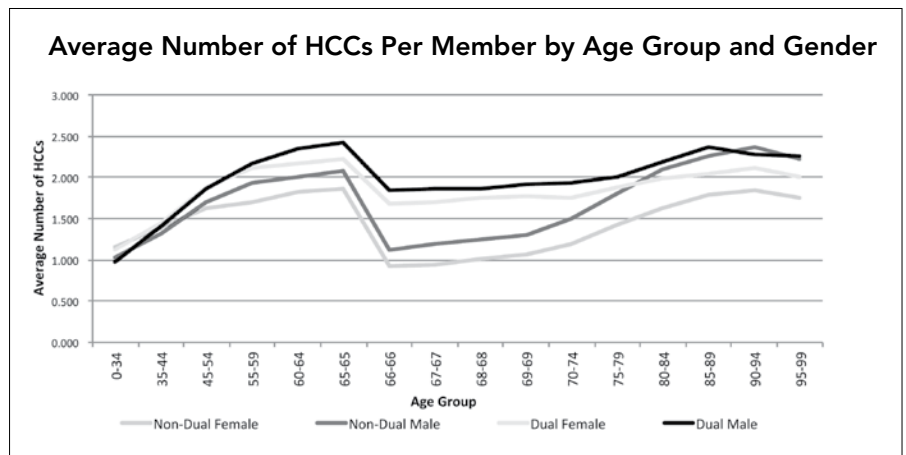Average Number of HCCs Per Member by Percentile Based on CMS Contract
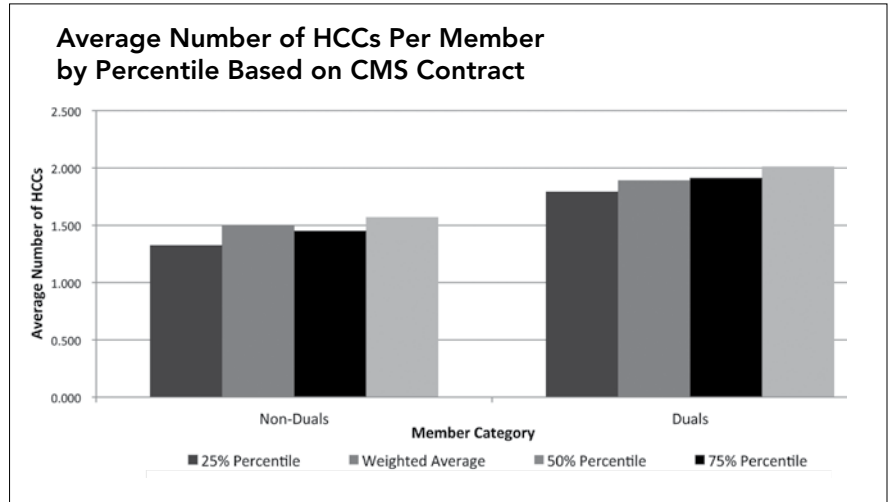
(1) Excludes Chronic SNP, Institutional SNP, and PFFS Members and New Enrollee, Institutional, and ESRD members.

(2) Percentiles and Weighted Averages are after normalizing for age/gender and region.

Exhibit 2
Milliman Medicare Clients
2011 HCC Survey Results
Coordinated Care Plan Members (1)
Includes All 70 HCCs (2)

Average Number of HCCs Per Member by Age Group and Gender

(1) Excludes Chronic SNP, Institutional SNP, and PFFS Members and New Enrollee, Institutional, and ESRD members.

Exhibit 3
Milliman Medicare Clients
2011 HCC Survey Results
Coordinated Care Plan Members (1)
Includes All 70 HCCs

Average Number of HCCs Per Member by Region
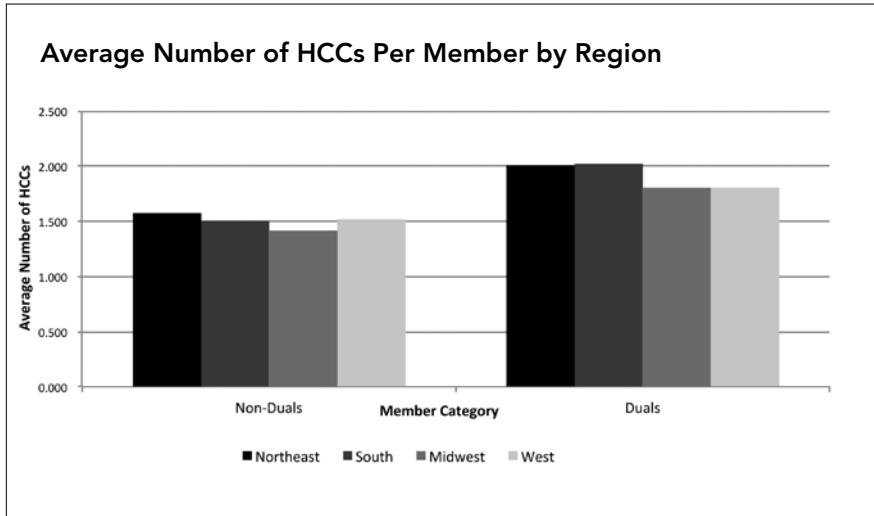
(1) Excludes Chronic SNP, Institutional SNP, and PFFS Members and New Enrollee, Institutional, and ESRD members.

(2) Regions are based on the U.S. census definitions.

for non-duals and duals. The decrease in average HCCs at age 66 is due to the inclusion of members eligible for Medicare due to age as opposed to disability. The data through age 65 is for disabled members only. The data does not include "aged" members in the age-65 bucket since most members who become eligible for Medicare by turning 65 do not have the required 12 months of historical diagnosis data to determine their HCCs. These results are consistent with our prior study.

• **Non-dual males have more HCCs than non-dual females.**
The average number of HCCs for non-dual males is about 20 percent greater than the average for non-dual females. Dual males and females have approximately the same number of HCCs. These results are consistent with our prior study.

• **Geographic location does not have a significant impact on the average number of HCCs.**
The average number of HCCs in our current study is NOT materially impacted by the

geographic location of the members (which is a significant change from our prior study). Unlike in the prior study, the spread between regions is only about 10 percent. Part of the reduction in the difference by region may be a change in plans that contributed to the study, but we also believe this indicates that coding efforts can result in appropriate diagnosis submission throughout the country. Exhibit 3 provides a summary of the variation in HCCs by region.

• **Individual disease states also vary by age/ gender and geographic location, although not at the same magnitude as HCCs in total.**

What Should MA Plans Be Reviewing?

Based on the data we reviewed for this study, MA plans need to first understand their current membership mixes in order to understand their potential for finding "missing" diagnoses. Key questions for an MA plan to ask are:

• Is the MA plan seeing a significant difference in the number of HCCs between dual and non-dual members? If not, it may want to focus on the coding for dual members because we would expect that dual members would have more HCCs and those members would be more likely to have "missing" diagnoses in this situation. If the gap for an MA plan is wider than the gap in Exhibit 1, then focusing on non-dual members is likely the best place to start.

• Is the plan seeing an increase in the average number of HCCs by age? How much of an increase? If the increase is significant, then focusing on younger (and potentially newer) members may be better than focusing on older members, and vice versa if there is little increase by age.

Other Considerations

With the likely implementation of Risk Adjustment Data Validation (RADV) audits going forward, plans should also ensure that they have sufficient documentation for their submitted diagnoses. While submitting all appropriate diagnoses is a key for financial performance, if your plan is at the upper end of the expected number of HCCs, reviewing members with diagnoses who do not have other indications that they have a specific disease (i.e. members with

a diabetes HCC who do not have any diabetic supplies filled during the year) may be necessary. While this may not have any immediate impact on revenue, it may assist in reducing risk from a RADV audit, potentially identifying members with a disease who are not following an appropriate drug regimen, and ultimately help control medical costs.

Key Methodological Considerations

Please note the following important information in reviewing and interpreting these results:

- For many of the plans included in this analysis, we received the "final" Model Output Report (MOR) data file, which includes all 2009 diagnoses submitted through January 2011. Where available, this was the source of determining the HCCs for members included in the analysis. For plans that did not provide the "final" MOR file, we relied on MOR data from July through December of 2010. Any final Risk Adjustment Processing System (RAPS) data submissions would not be included for plans that did not provide "final" MORs, in which case their HCC counts may be slightly understated depending on the additional RAPS data submissions between March 2010 and January 2011.

- Because we did not observe significant differences in the overall average number of HCCs between employer group and individual members, we included both individual and employer group members in the analysis.

- The data included in this report was accumulated across organizations with different corporate structures (e.g., staff model HMOs versus independent practice associations), different membership volume/demographics/geographic location and other pertinent differences. Hence, the information may not be directly comparable to any specific organization. The survey authors did not verify the accuracy or completeness of the data included in the analysis. However, the data is considered fairly representative as a whole, such that reasonable conclusions may be drawn from it.

- In order to make the data more comparable, we also "normalized" the average number of HCCs included in the percentile exhibit for age/gender and geography. For example, all plans in the West had their average numbers of HCCs adjusted by the West geographic factor before being assigned a percentile. ■