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CMS-HCC Risk Score Accuracy Improves Clinical Outcomes among Medicare Advantage Enrollees

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Abstract

The coding of Hierarchical Condition Categories (HCCs) is tantamount for CMS' reimbursing private plans that participate in the Medicare Advantage (MA) program. HCCs are associated with disease states with higher future medical costs. The CMSHCC payment mode provides MA plans with prospective, monthly, risk-adjusted or disease-based payments centers, based on the concept that recompense should reflect the disease and related cost burdens of the pertinent population. Much has been written about whether HCC coding creates a financial incentive for plans and their contracted providers to exaggerate the disease status of MA enrollees. In this brief report, one independent physician group with over 20 years' experience in fiduciary risk assumption not only improved its risk scoring processes but also used these scores as an efficacious population health management tool. As demonstrated, independent of generating further revenue, accurate CMS-HCC risk scores can have an important role in population-based health care delivery and promulgate high-value healthcare.

Keywords: Best practices; Capitation payment methods; Disease management; Healthcare delivery risk adjustment; Medicare advantage

Precis

The CMS-HCC payment model for Medicare Advantage has been much maligned for increasing health plan profitability without benefit to providers or enrollees. In this case report, the utility of CMS-HCC risk scores in improving population-focused health even when there is no resultant increase in CMS-generated funding.

Summary Statement

This case reports adds to the literature on how CMS-HCC risk scores in a full-risk capitation model is a useful population-focused analytical tool for promulgating high-value healthcare.

- One independent physician group with a long history of risk-contracting has surpassed many of the national benchmarks on quality and financial performance measures.

- Key to its outstanding performance is the implementation of critical pathways based on CMS-HCC risk scores.

- Despite fastidious surveillance of CMS-HCC risk scores, risk scores declined because the overall health of its Medicare Advantage population actually improved.

- The physician practice's financial viability and overall health of its Medicare Advantage population improved with implementation of CMS-HCC risk scores as a population health management tool.

Introduction

Background

By combining Part A and Part B benefits into one benefit structure (Part C), Medicare Advantage (MA) provides an alternative to traditional fee-for-service (FFS) Medicare (TM). MA has been a commercial success, currently enrolling 18.7 million (32.1%) of all Medicare beneficiaries and accounting for $204.7 billion (28.8%) of Medicare's 2018 projected gross spending budget [1,2]. For over a decade, MA has used the CMS-Hierarchical Condition Categories (CMS-HCC) payment model to reimburse private plans (Medicare Advantage Organizations or MAOs) with prospective, monthly, risk-adjusted or health-based capitated payments for the care of MA enrollees. CMS adopted the CMS-HCC payment model with the concept that MAO recompense should reflect the disease and related cost burdens of the pertinent population and thus fundamentally changed how MAOs have been reimbursed [3,4]. In return for providing healthcare benefits to MA enrollees during the calendar year (CY), CMS recompenses MAOs risk-adjusted payments in the following payment year (PY)-based on a competitive bidding process against a county benchmark rate for Part A and Part B services, Medicare Stars healthcare quality ratings, and CMS-HCC's risk adjustment factor (RAF) [5].

How MA providers document and code HCCs adds considerable variability to these prospective payments. For example, based on calculations derived from CMS' most recently published benchmark rates for Denver (CO) for CY2018; each 0.1 RAF has an estimated valuation of $81.91 per member per month (PMPM) for MAOs' receiving no Medicare Stars quality bonus payment, $87.37 PMPM for achieving the 3.5% quality bonus or $89.81 PMPM for the 5% bonus [6,7]. If providers document and code for a specific complication of diabetes mellitus (DM) in CY2018, an MAO in Denver could anticipate a risk-adjusted revenue in 2019 (PY2018) that is over threefold greater ($260.47-285.60 PMPM or $3125.69-3427.15 per member per year [PMPY]) than if DM were coded without any specified complication ($85.19-93.40 PMPM or $1022.24-1120.83 PMPY). Assuming that the necessary administrative infrastructure and provider network for optimal population health management are in place, a fiduciary incentive thus exists to enroll the sickest

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beneficiaries. Moreover, the CMS-HCC model operationally reminds primary care providers that "to know fully many of the most important diseases a [physician] must be familiar with their manifestations in many organs [8]. Indeed, one paper recently demonstrated how coding to the highest specificity by a MA provider group in Portland with a full-risk capitation agreement optimized outpatient resource utilization, lowered both hospital-based services, and improved survival [9]. Similarly, in the Denver metropolitan area, New West Physicians (NWP) has "focused on risk contracting, particularly through Medicare Advantage, from the beginning [10]. New West Physician (NWP) employs 118 providers and has a total staff of 375 persons, with 18 clinical locations in the Denver metropolitan area. All of NWPs 14,000 MA patients are enrolled in a single HMO-type plan (Contract #H0609) [11]. The total enrollment has varied little over the past 5 years with an annual growth rate of approximately 5%. NWP's ability to deliver high-value healthcare, compared with various national benchmarks, is summarized in Table 1. As detailed below, an interrelationship between CMS-HCC documentation and the intensity of services provided results in such high-value care.

CMS-HCC RAF in population-based healthcare management

A study on hospitalized patients suggested that CMS-HCC RAF outperformed the Charlson and Elixhauser indices in predicting mortality [12]. With regard to office-based care, one independent physician group in Portland (OR) used RAF to risk stratify MA enrollees who best could be treated with intensive office-based care [9]. Population-focused care was standardized with: (1) a triage system so that frail, complex patients (as determined by higher RAF scores) had immediate access to their primary care physicians or nurse practitioners; (2) a critical pathway facilitated scheduling clinic visits within days following hospital discharges since appointment dates proposed by hospital-based physicians often were overdue; and (3) scheduling members with specific HCCs-such as heart failure (HF),

chronic obstructive pulmonary disease (COPD) and DM- at regular intervals since elective office visits by members with these HCCs often were prodromal of imminent hospital-based services. This clinical practice transformation reduced total hospital-based services by 11.7% and improved survival by 6% [9].

With regard to office-based providers, NWP clinicians are given quarterly reports of their patients in the top-quartile of RAF scores. Many of these patients are complex but well-managed while others have one time expensive conditions with little need for ongoing case management. Nevertheless, a subset of these patients can be identified and referred for intensive case management. For such patients, in addition to enhanced coordination across the entire care team, a high-risk case manager and social worker are assigned. Office practice managers also are provided a quarterly report of all senior patients who are overdue for an annual wellness visit (AWV), which not only ensures care continuity but also captures quality measures, medication adherence, and ongoing case management needs. In terms of hospital-based care, NWP's hospitalist team submits HCC codes encountered during admission. These hospital-derived HCCs, in addition to other predictive analytics such as the LACE Index, may shift a patient toward enhanced case management after discharge.

## Programs to improve CMS-HCC RAF accuracy and their effect over time

HCC coding is an onerous task for physicians, especially with each revision of the CMS-HCC model. For the current model (V22), 8,667 of the 69,823 (12.4%) ICD-10-CM codes are grouped into 79 HCCs [9]. At NWP, a course on evidenced based medicine (EBM) and online modules for each major HCC are required training for newly hired physicians and remain available for established clinicians. Because HCC documentation and coding activities do not rollover to the following year, clinicians must recapture these conditions every year in face-to-face visits with MA enrollees. NWP's electronic health record system flags past HCC codes, facilitating physician identification of pertinent codes during face-to-face visits. Each physician then receives his own quarterly RAF report which documents each patient's HCC coded in the previous but not yet recaptured in the current year, patients with no HCC submitted, and patients without an AWV. Physicians whose panel of MA enrollees have an average RAF score in the lower tercile of NWP physicians receive remedial training, and average RAF scores determine a portion of the physician utilization bonus.

Figure 1 demonstrates the average RAF scores for NWP's MA patients. Despite the implementation of the aforementioned processes, over the five-year period, there is a downward trend in the average RAF. Given its recapture processes, the decline in RAF scores cannot be attributed to clinician or administrative oversight. Given the stability of its MA population, it is unlikely an accelerated "churn rate" is responsible although this phenomenon of reducing potential healthcare expenditures has been identified within accountable care organizations [13]. As detailed in Table 1, the most likely explanation for this declining RAF score is improved medical management of the sickest patients. Nationally, in the Medicare population, HF is the second most common reason for hospital admissions, and COPD ranks sixth [14]. At NWP, HF is not even in the top-ten reasons for admission, and COPD ranks seventh. In fact, 40% of NWP MA hospital admissions are for elective surgical procedures.

		New West Physicians	National
Quality Performance			
	Medicare Stars (MA)	4.5	4.0[1]
	Medicare Stars (Part D)	5	3.55[1]
	Beneficiaries with Hypertension Control (<140/90)	82%	54%[2]
	Diabetic Beneficiaries with HbA1c Control (<8%)	72.6%	70.4%[3]
Financial Performance			
	Medical Loss Ratio	71%	94.3%[4]
	Bed Days/Thousand	732	1,725[5]
	30 Days All Cause Readmissions	7.2%	17.3%[6]

Table 1: Performance measures for new west physicians, compared with national rates.

1. Centers for Medicare and Medicaid Services. 2017 Stars Rating

2. Yoon SS, Fryar CD, Carroll MD. Hypertension prevalence and control among adults: United States, 2011-2014. NCHS data brief, no 220. Hyattsville, MD: National Center for Health Statistics. 2015

3. Centers for Disease Control and Prevention. Age-Adjusted Percentage with A1c<7% or A1c<8% or A1c>9% Among Adults with Diagnosed Diabetes, United States, 1988-1994 to 1999-2006

4. Centers for Medicare and Medicaid Services. Medical Loss Ratio. Public Use File for CY 2014

5. Apprise Health Insights. Medicare Days per 1,000 Patients

6. Barrett ML, Wier LM, Jiang HJ, Steiner CA. All-Cause Readmissions by Payer and Age, 2009-2013. HCUP Statistical Brief #199. December 2015. Agency for Healthcare Research and Quality, Rockville, MD
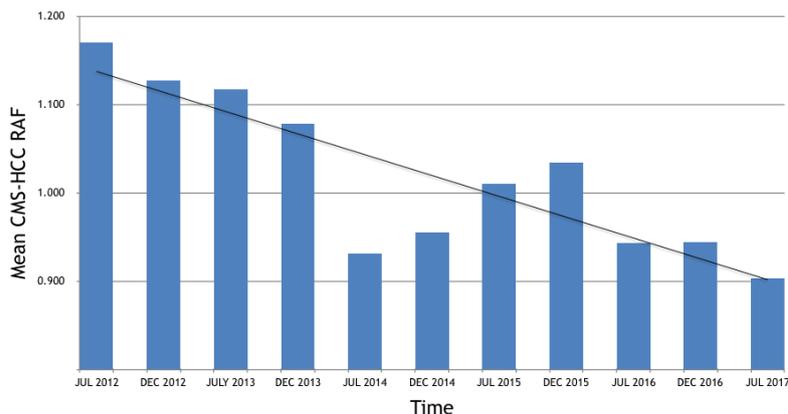
Figure 1: A linear trend line demonstrates the continual decline in mean RAF despite several processes to ensure optimal HCC coding and documentation. The drop in mean RAF in 2014 was due, in large part, updates to the CMS-HCC model which eliminated many high frequency diagnoses (including Old Myocardial Infarction; Chronic Kidney Disease, Stage 1-3, Peripheral Neuropathy) and many others (including Dementia).

Discussion and Conclusion

This case study provides another example of the efficacy of CMS-HCC RAF on population-focused healthcare. NWP has a significant mentoring process and remedial training for physician HCC documentation and coding. It also uses information technology to simplify HCC coding and documentation for its physicians, as do many physician practices. Several commentators have argued that MAOs and their contracted providers exploit these tools in order to inflate CMS' payments. These arguments are based on untried empiric assumptions without analyzing full claims encounter data among statistically similar populations [15-17]. Even among statistically similar MA enrollees within a single metropolitan area and subscribed to the same MAO, RAF scores can be quite disparate among different provider groups [9]. Moreover, in order to mitigate for any coding intensity associated with the CMS-HCC payment methodology, federal statutes already mandate that recalibration of the model occurs every two years so that the "typical" FFS Medicare beneficiary's total RAF is 1.00 [4,5].

Therefore, when compared with such a TM beneficiary, a healthier MA enrollee's total RAF would be less than 1.00 and a sicker one's would be greater than 1.00. Despite this recalibration methodology, adjusting CMS-HCC payments with additional complex computational acrobatics has been proposed [16,17]. These commentators overlook that the larger issue may not be accurate HCC recognition within MA, but rather diagnostic and coding laxity within TM: Concerns about coding intensity in MA plans would be minor if coding in FFS were relatively complete, because in that case there would be little opportunity for MA plans to legitimately increase risk scores through efforts at increasing diagnostic reporting. However, FFS coding is known to be both incomplete and variable. Incomplete coding is evidenced by lack of persistence in coding of chronic conditions. For instance, among Medicare beneficiaries diagnosed with quadriplegia in one year, only 61% had a diagnosis of quadriplegia reported in the subsequent year [18]. Although its actuarial predictive value generally improves with each revision of the CMS-HCC model, the model also is subject to the non-clinical concerns of CMS administrators, thereby lowering its predictive value for some conditions and not identifying HCCs at their most early, preventive stages. For example, although direct costs for dementia are estimated at $183 billion and dementia HCCs are highly predictive for such expenditures [19,20]. These HCCs were removed in the 2014 model "due to concerns about the specificity of coding [21]. Similarly, although treatment of early stages

of chronic kidney disease delays and even halts the progression toward expensive renal replacement therapies, CMS also "removed the lower-severity kidney disease HCCs, including Chronic Kidney Disease (CKD) stage 3, CKD stages 1-2 or unspecified; unspecified renal failure; and nephritis [21-24].

NWP's mean RAF scores dropped from 1.0938 in 2012 to 0.9037 in 2017 (Figure 1). If the "average" TM beneficiary has a RAF score of 1.00, then this 2012 RAF score is close to the empiric assumptions that "8 percent-is the estimate of the effects of differential Medicare Advantage coding [16]. However, as shown in this report, the empiric assumption that RAF scores would continue to rise at this rate is fatally flawed [16]. As of December 2016, Optum assists 27 private health plan clients on over 600 MA plans while housing demographic, full encounter claims, and CMS administrative data on 9.5 million MA members (52% of all MA enrollees). In addition, through monitoring risk-adjustment and healthcare quality activities of over 12,000 provider groups contracted with these MAO clients, knowledge of different MAO-provider arrangements also exists. Many of these contracted medical groups note how their RAF scores plateau.

At NWP, RAF scores actually lowered, presumably because their MA patients got healthier. Nevertheless, NWP maintains its financial viability in the face of a declining average RAF score through the rigorous elimination of wasteful care. Nationally, between 25% and 42% of TM beneficiaries receive low-value healthcare services, which have been demonstrated to improve neither health outcomes nor quality of life, annually accounting for $1.9-$8.5 billion [25]. Under full-risk capitation arrangements in MA alternative payment models, physicians must be particularly vigilant. Through a process known as Bench to Bedside, NWP minimizes its low-value services and maximizes application of EBM. Because only 54.9% of all Americans 54.9% of recommended care and the lag time for adoption of EBM guidelines averages 5 years, Bench to Bedside is designed to have NWP providers advance EBM practice guidelines within 6 to 12 week of publication [26,27]. Key to such EBM is the accurate identification of the specific subset of MA enrollees who would benefit from such standards of care. Accurate CMS-HCC RAF scores thus are essential to NWP's overall population-focused health management. Based on the above, the health of MA enrollees improves precisely because CMS-HCC payment model incentivizes physicians to document specifically those conditions associated with increased future expenditures and then to treat

proactively those HCCs in the most cost-effective manner [8,28,29]. Meanwhile, the other two-thirds of Medicare beneficiaries participate in TM without any true incentives to identify and then efficaciously treat HCCs. This coding laxity among TM's various payment programs may explain previously reports on low-value healthcare in TM [25,30].

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