Hierarchical condition categories (HCCs) and the shift to value-based reimbursement
Executive summary

The Centers for Medicare & Medicaid Services (CMS) is moving aggressively to shift healthcare payments from the traditional volume-based fee-for-service model towards value-based payment models, also called value-based reimbursement (VBR). This shift is focused on reducing the cost of health care in the U.S. while also giving healthcare providers incentives to improve their quality of care. These models require a risk-adjustment methodology, so payment can be adjusted based on the burden of illness of each individual.

This paper begins with an overview of the VBR shift in the U.S. healthcare system and the role of hierarchical condition categories (HCCs) in the new VBR models.

And because the shift to VBR has such strong potential to disrupt the healthcare industry—both payers and providers—the paper concludes with the best-practice approach that 3M Health Information Systems (3M) recommends for an integrated health system interested in accurately capturing HCCs across a broad patient population.

Shifting from volume to value: CMS’ four categories of payment models

In January 2015, the U.S. government took a big swing in an effort to move the U.S. healthcare system off of its decade’s old grip on the traditional fee-for-service payment model. The U.S. Department of Health and Human Services (HHS) set a series of payment reform targets for Medicare, designed to base a greater percentage of Medicare payments on quality or value, rather than tie payment to the volume of services rendered.

Understanding these payment reform targets requires a review of the framework that HHS put together to classify payment models into one of four payment model categories. The four categories provide a roadmap of sorts on how to progressively move from strictly fee-for-service with no link to quality, towards population-based payment models. Figure 1 describes the four categories.

The intention behind the four categories is described in the CMS press release:

“Moving from category 1 to category 4 involves two shifts:
1. Increasing accountability for both quality and total cost of care.
2. A greater focus on population health management as opposed to payment for specific services.”

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee-for-service with no link of payment to quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Limited in Medicare fee-for-service</td>
</tr>
<tr>
<td></td>
<td>Majority of Medicare payments are now linked to quality</td>
</tr>
<tr>
<td>Category 2</td>
<td>Fee-for-service with a link of payment to quality</td>
</tr>
<tr>
<td></td>
<td>Hospital value-based purchasing</td>
</tr>
<tr>
<td></td>
<td>Readmissions/Hospital-acquired Condition (HAC) Reduction Program</td>
</tr>
<tr>
<td></td>
<td>Merit-based Incentive Payment System (MIPS)</td>
</tr>
<tr>
<td>Category 3</td>
<td>Alternative payment models built on fee-for-service architecture</td>
</tr>
<tr>
<td></td>
<td>Accountable care organizations (ACOs)</td>
</tr>
<tr>
<td></td>
<td>Medical homes</td>
</tr>
<tr>
<td></td>
<td>Bundled payments (e.g., CMS Comprehensive Care for Joint Replacement)</td>
</tr>
<tr>
<td>Category 4</td>
<td>Population-based payment</td>
</tr>
<tr>
<td></td>
<td>Eligible Pioneer ACOs in years 3-5</td>
</tr>
</tbody>
</table>

Figure 1. The four CMS categories of payment models
CMS Quality Payment Program targets and timelines

The CMS Quality Payment Program has set several targets for the percentage of Medicare payments that will be tied to quality or value through an alternative payment model in one of the four defined categories.

The 2016 goals call for:
- 30 percent of Medicare payments to be processed through payment models that fall into categories two through four
- 85 percent through payment models that fall into categories three and four

In 2018, those goals become 50 percent and 90 percent respectively.² Figure 2 provides a quick visual of these targets and timelines.

In March 2016, HHS announced that it had already met 2016 goals with an estimated 30 percent of Medicare payments now tied to alternative payment models that reward the quality of care over quantity of services provided through payment models in categories two through four.³ HHS and CMS are also actively seeking participation by commercial payers to work toward similar goals.

Healthcare industry groups are following suit, recognizing the need to accelerate the adoption of more VBR models and setting similar targets. According to an announcement by the Healthcare Transformation Task Force:

“The Health Care Transformation Task Force, whose members include six of the nation’s top 15 health systems and four of the top 25 health insurers, challenged other providers and payers to join its commitment to put 75 percent of their business into value-based arrangements that focus on the Triple Aim of better health, better care and lower costs by 2020.”⁴

The bottom line: Momentum is building to accelerate the transition to more comprehensive VBR programs. Going forward, it is unlikely there will be one predominant VBR program used by all payers and providers; instead, multiple models will be deployed to cover the various patient and population types present in the U.S. today.
The many models of VBR

As shown in figure 3, a variety of different models will be put into place for different care settings and different patient types. The models include:

- **Capitated payment** is used by Medicare Advantage and several commercial payers as a means to control cost and shift risk to providers. Capitated payments encourage better care coordination by paying one risk-adjusted sum to a health system to provide all the care and services that a patient requires for the year.

- **Bundled payments** are used by Medicare to pay all costs for specific patient episodes (such as the costs for a knee or hip replacement, the two highest volume procedures for Medicare beneficiaries today). Medicare’s bundled payment program started with hip and knee replacements and has expanded to also include a cardiology bundle. The list of conditions that will be covered under this program will continue to expand over time.

- **Pay-for-performance and quality reporting programs** combine fee-for-service payments with a link to quality performance. These programs monitor provider performance in meeting certain quality standards over set periods of time and then adjust payments upward (i.e., reward) or downward (i.e., penalize) based on how providers perform in meeting the pre-set quality standards. Examples include:
  - CMS’ Value-Based Purchasing (VBP) for inpatient hospitals
  - MIPS for providers in the outpatient/office setting

- **Shared savings and shared risk models** are geared more towards ACO-type health systems where payers set certain cost targets for health systems. The systems either reward for staying below those targets or penalize for going over.

- **Fee-for-service**

  | Annual capitated payment (e.g., Medicare Advantage) |
  | Bundled payment/Episodes (e.g., CMS CJR) |
  | Pay-for-performance/Quality (e.g., VBP/MACRA) |
  | Shared savings (e.g., MSSP Model 1) |
  | Shared risk (e.g., MSSP Model 3) |

*Figure 3. VBR comes in many shapes and sizes*
What are hierarchical condition categories (HCCs) and what is their role in VBR?

CMS developed HCCs to adjust Medicare capitated payments for Medicare Advantage (Part C) plans based on the health expenditure risk of their enrollees. HCCs were also developed for the commercial payer market using the CMS HCC methodology as a starting point, but modifications were added for the different age ranges found in the commercial patient population.

An HCC is a category of disease type (e.g., congestive heart failure) with multiple individual ICD-10 diagnoses that map to that HCC category. Each HCC has its own relative Risk-Adjustment Factor (RAF) score based on complexity of the disease; this functions similarly to the weighting of the diagnosis-related groups (DRGs) for acute inpatient payments. In addition, each patient receives a Demographic RAF score based on their age, sex and whether the patient is community-based or living in a skilled nursing facility (SNF).

The HCC and RAF model also includes interaction factors for certain conditions. An interaction factor indicates the simultaneous presence of several conditions. This can lead to higher expected costs than would normally be calculated if separate increments were added for each condition alone.

An example of the interaction factor is the presence of congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD) as illustrated in figure 4.
Hierarchical condition categories (HCCs) and the shift to value-based reimbursement

Example of some of the 46 diagnoses under CMS HCC 85

<table>
<thead>
<tr>
<th>CMS HCC #</th>
<th>HCC category</th>
<th>HCC description</th>
<th>ICD-10 code</th>
<th>ICD-10 description</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Heart</td>
<td>Congestive heart failure (CHF)</td>
<td>I50.20</td>
<td>Unspecified systolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.21</td>
<td>Acute systolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.22</td>
<td>Chronic systolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.23</td>
<td>Acute on chronic systolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.30</td>
<td>Unspecified diastolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.31</td>
<td>Acute diastolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.32</td>
<td>Chronic diastolic (congestive) heart failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I50.33</td>
<td>Acute on chronic diastolic (congestive) heart failure</td>
</tr>
</tbody>
</table>

Figure 4. A sample of how an HCC relates to ICD-10 diagnosis codes

In summary, HCCs:

- Function as a way of risk-adjusting a patient based on the medical complexity of the patient’s conditions
- Are currently used in Medicare Advantage plans and other commercial capitated payment models as a way of calculating annual payments
- Have also been considered by the industry for use as a means of risk-adjusting patients and payments under other VBR programs, such as CMS’ bundled payments in the Comprehensive Care for Joint Replacement (CJR) program

Research: HCC applicability and risk adjustment evaluation in the CMS CJR program

A recent study conducted by the University of Michigan’s Institute for Healthcare Policy and Innovation evaluated payment rewards and penalties for hospitals in Michigan under the Medicare Comprehensive Joint Replacement (CJR) Program. The study showed that improvements could be made before the CJR program is rolled out more broadly.\(^5\)

Hip and knee replacements are the most common inpatient surgery for Medicare beneficiaries, often requiring long rehabilitation and recovery periods. The cost and quality for these joint replacement surgeries vary widely among providers, which creates an opportunity for CMS to impact the industry by incentivizing hospitals to provide higher quality surgeries at lower costs.

Under the CJR program, Medicare sets a bundled payment amount for the full range of care provided to a hip or knee replacement patient from the date of admission to the hospital through 90 days after discharge from the hospital. Rather than paying individual bills for parts of that care (e.g., the operation, hospital stay, etc.) and care after the hospitalization (e.g., physician therapy), the total cost of care is rolled up into one set amount. Reconciliation payments then reduce payments to hospitals if their spending is above a target (i.e., penalties) and increase payments if spending is below a target (i.e., incentives).

The University of Michigan researchers found that hospitals with sicker patient populations tend to be penalized more than hospitals with less medically complex patient populations under the CJR program guidelines. Granted, this study was a simulation that modeled the impacts of this program as if it were applied to all hospitals in Michigan, but the results are nevertheless pretty telling.

In this study, researchers found that every time a hospital’s patient population complexity increased one standard deviation from the mean, it ended up incurring a penalty of $827 per CJR episode (see figure 5).
When taking into account the varying levels of patient complexity that different hospitals handle by applying a risk adjustment model to these patients, some hospitals ended up keeping over $100,000 per year that they would have otherwise lost without the risk adjustment.

This amount may seem small when compared with many hospitals’ annual budgets, but if this bundled payment model moves beyond joint replacement episodes into other episodes of care—such as cardiac surgeries or events—the numbers could easily grow.

Patient complexity is a key component that must be considered in any new VBR and care model. HCCs have proven effective under Medicare Advantage and, with increased research and application, will go a long way towards standardizing how programs that aim to transform healthcare delivery and payment can account for patient complexity and ensure success for all providers.

**Pop quiz**

**Question:** Can you guess what risk-adjustment methodology the University of Michigan researchers used in their study?

**Answer:** HCCs.

Although CMS uses HCCs as a risk-adjustment and payment methodology in its Medicare Advantage programs, the agency did not use HCCs for the CJR program’s initial roll-out, since it had not been fully validated for orthopedic bundles yet. The Michigan research study could advance the idea of HCCs becoming heavily used for CJR.

![Figure 5. University of Michigan researchers measured population complexity and penalty costs](image-url)
Hierarchical condition categories (HCCs) and the shift to value-based reimbursement

HCC sources and exclusions

In the CMS model, used for Medicare Advantage capitated payments, HCCs are assigned via hospital and physician diagnoses from any of the following five sources:

1. Principal hospital inpatient
2. Secondary hospital inpatient
3. Hospital outpatient
4. Physician
5. Clinically trained non-physician (e.g., psychologist, podiatrist, etc.)

It should be noted that the HCC model is designed as a payment system, and certain choices were made to exclude diagnoses from several sources because of their unreliability in contributing definitive diagnoses or their lack of adequately contributing to the predictive power of the model. Diagnoses from the following sources are not used in HCC calculations:

- Skilled nursing facilities
- Hospice
- Home health providers
- Laboratory
- Radiology
- Durable medical equipment providers

HCCs were also designed as a risk adjustment system to facilitate reimbursement models based on predicted healthcare service expenditures. There are other risk adjustment models that use data sources beyond the CMS HCC model that may prove more beneficial for in-depth population and case management activities. Using additional risk adjustment methodologies can be a powerful complement to HCCs by providing more in-depth risk stratification. A relevant example is the 3M™ Clinical Risk Groups (CRGs), which are clinically based and can provide a link between the clinical and financial aspects of care and population management.
HCC case study: HCCs and RAF scores in capitated payment and the impact of diagnosis documentation

To illustrate how HCCs and RAF scores work, the following example illustrates how a healthcare system might be paid for managing the care of a patient under a capitated annual payment model, such as Medicare Advantage.

Year: 2015

A 78-year-old male, Walter, lives at home with his wife and manages multiple chronic conditions.

In 2015, over the course of two primary care visits and a visit to his cardiologist, six diagnoses were documented that fell under the HCC categories shown in figure 6. Several conditions also resulted in an additional RAF score for an interaction factor based on increased complexity when these conditions are present together.

At the end of 2015, Walter has a total RAF score of 3.003.

<table>
<thead>
<tr>
<th>2015 Risk Adjustment Factor (RAF) score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnoses documented/billed during visits in 2015</td>
</tr>
<tr>
<td>Demographic score: 2015</td>
</tr>
<tr>
<td>HCC 18: Diabetes w/retinopathy</td>
</tr>
<tr>
<td>HCC 22: Morbid obesity</td>
</tr>
<tr>
<td>HCC 40: Rheumatoid arthritis</td>
</tr>
<tr>
<td>HCC 85: Dilated cardiomyopathy</td>
</tr>
<tr>
<td>HCC 107: Abdominal aortic aneurysm w/o rupture</td>
</tr>
<tr>
<td>HCC 111: COPD</td>
</tr>
<tr>
<td>HCC interaction score: CHF – COPD</td>
</tr>
<tr>
<td>HCC interaction score: Diabetes – CHF</td>
</tr>
<tr>
<td>Total RAF score</td>
</tr>
</tbody>
</table>

Figure 6. How Sample Patient Walter’s RAF score was calculated for the year 2015
Hierarchical condition categories (HCCs) and the shift to value-based reimbursement

Year: 2016

In 2016, Walter has only seen his primary care provider once for a check-in and has no other visits scheduled. The only diagnoses documented during the visit were his diabetes, obesity and COPD. The obesity, however, was not specified as “morbid obesity” as it was in 2015, and so it does not qualify as an HCC. Morbid obesity does count as an HCC under the CMS model.

If the end of 2016 arrives and no other diagnoses are captured for Walter, his total RAF score would be 0.906. Because the provider did not fully document and bill for all of the patient’s chronic conditions, there is a drop in the RAF score of 2.097 (see figure 7).

<table>
<thead>
<tr>
<th>2016 Risk Adjustment Factor (RAF) score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnoses documented/billed during visits in 2016</td>
</tr>
<tr>
<td>Demographic score: 2016</td>
</tr>
<tr>
<td>HCC: Diabetes w/o complication</td>
</tr>
<tr>
<td>Obesity (no HCC)</td>
</tr>
<tr>
<td>HCC 111: COPD</td>
</tr>
<tr>
<td><strong>Total RAF score</strong></td>
</tr>
<tr>
<td>2016 missing RAF score</td>
</tr>
</tbody>
</table>

Figure 7. How Sample Patient Walter’s RAF score was calculated for the year 2016

3.003 vs. 0.906: Why does this matter?

Annual capitated payment under programs such as Medicare Advantage is based on a formula similar to the one illustrated in figure 8. Health plans negotiate a baseline monthly per member (patient) per month (PMPM) payment, with $800 being a common amount used by many plans.

This baseline payment is then risk-adjusted by multiplying it by each patient’s RAF score, with scores above 1.000 resulting in payments above $800. **The higher the RAF score, the higher the payment.**

In short:
- This health plan would be paid $1,678 less per month for Walter in 2016 vs. 2015
- This equates to more than $20,000 difference in annual payment
- Complete and accurate HCC capture is crucial to effectively managing payment under capitated payment programs

Using the HCC and RAF model in both Medicare and commercial programs can be expected to expand as the shift from volume-based fee-for-service continues to move towards more VBR programs in the coming years.

<table>
<thead>
<tr>
<th>2015</th>
<th>$800 Monthly baseline payment per patient</th>
<th>$2,402 Monthly individual patient payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.003 Individual Risk Adjustment Factor (RAF) score</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2016</th>
<th>$800 Monthly baseline payment per patient</th>
<th>$724 Monthly individual patient payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.906 Individual Risk Adjustment Factor (RAF) score</td>
<td></td>
</tr>
</tbody>
</table>

Figure 8. Example of a common formula used to calculate annual capitated payment under programs such as Medicare Advantage
HCCs and diagnosis specificity: When does it matter?

As described earlier, multiple ICD-10 diagnoses can be mapped to any given HCC. *Figure 4* illustrates how CMS HCC 85, congestive heart failure (CHF), maps to 46 different diagnoses under that HCC. If any one of the 46 CHF ICD-10 diagnoses is documented and billed for a patient, it counts towards that HCC.

Adding specificity, such as clarifying that a patient has “acute on chronic CHF” versus stating that the patient has just “CHF,” would not impact the HCC or RAF score.

However, for chronic kidney disease (CKD), additional specificity does matter, because a diagnosis of Stage 4 CKD, Stage 5 CKD or End-Stage Renal Disease (ESRD) are counted as an HCC, whereas CKD unspecified and CKD Stages 1, 2 or 3 are not HCC diagnoses.

*Figure 9* shows the most common diagnoses in which specificity does and does not matter, which differs from the frequency that specificity impacts Medicare’s DRG payment system.

For clinical providers, the biggest impact on HCC capture for payment and risk adjustment comes from reviewing all applicable chronic diagnoses to make certain they are adequately documented and billed for each payment year.

### Diagnosis specificity impact on CMS HCCs and RAF scores

<table>
<thead>
<tr>
<th>Specificity impact</th>
<th>Diagnoses</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional specificity does <strong>not</strong> change the HCC/RAF score</td>
<td>- Secondary cancers&lt;br&gt; - Malnutrition&lt;br&gt; - Hepatic failure unspecified&lt;br&gt; - Cirrhosis&lt;br&gt; - Chronic hepatitis&lt;br&gt; - Osteomyelitis&lt;br&gt; - Osteonecrosis&lt;br&gt; - Rheumatoid arthritis&lt;br&gt; - Schizophrenia&lt;br&gt; - Epilepsy&lt;br&gt; - Respiratory failure&lt;br&gt; - Atrial fibrillation/flutter&lt;br&gt; - COPD&lt;br&gt; - Emphysema&lt;br&gt; - Heart failure</td>
<td>- Severe, moderate, mild and unspecified malnutrition all fall under HCC 21 “Protein-Calorie Malnutrition”&lt;br&gt; - 27 different ICD-10 codes related to respiratory failure fall under HCC 84 “Cardio-Respiratory Failure and Shock,” including acute, chronic, acute and chronic, and unspecified respiratory failure</td>
</tr>
<tr>
<td>Additional specificity <strong>does</strong> change the HCC/RAF score</td>
<td>- Diabetes&lt;br&gt; - Angina&lt;br&gt; - Pneumonia&lt;br&gt; - Renal failure unspecified&lt;br&gt; - Chronic kidney disease unspecified&lt;br&gt; - Pressure ulcer unspecified</td>
<td>- Chronic kidney disease stages 1, 2 and 3 are not classified as HCCs; however, stage 4 (HCC 136), stage 5 (HCC 137) and ESRD are HCCs&lt;br&gt; - There are different HCCs for diabetes with acute complications (HCC 17), chronic complications (HCC 18) and without complications (HCC 19)</td>
</tr>
</tbody>
</table>

*Figure 9*. The most common diagnoses in which specificity does and does not matter for HCCs.
Hierarchical condition categories (HCCs) and the shift to value-based reimbursement

3M’s best practice model: Capturing HCCs for a broad patient population

For large, integrated health networks, the continued linking of more reimbursement to quality and value emphasizes not only the importance of managing patients across the entire continuum of care, but also having complete documentation and accurate coding across that same continuum.

The acute hospital setting has long been a focus for clinical documentation improvement (CDI) efforts and investments in coding capabilities. However, the majority of patient encounters now occur in a physician office or clinical setting, so having the right training, processes and tools in place across all care settings becomes ever more important to achieving success under VBR.

Where does the process fall short?

Documenting and coding for complete patient diagnosis information across care settings often falls short in the following areas:

- Clinicians do not document all relevant conditions for each patient, and thus these conditions are not coded and do not capture the most accurate HCCs
- Clinicians document a patient’s relevant conditions but do not code for the condition, leaving HCC diagnoses in unstructured text in clinical documents
- Patients in an attributed population for a health system do not come in for a visit during the required time period, so there is no opportunity to capture relevant diagnoses for these patients

How can the process be strengthened?

The following steps pose important questions and describe the process that 3M recommends to organizations that want to consistently capture the most complete HCC and RAF scores for a broad patient population.

The processes required to consistently code to the highest appropriate HCC category and RAF score for each patient stretch from office administrators, coders, CDI staff and—especially—to the clinical provider’s electronic health record (EHR) workflow.

**Step 1: Evaluate the current state**

To help an organization acquire the processes and tools needed to capture HCCs for a broad patient population, the following questions should be addressed:
Does the organization’s current clinical documentation and coding reflect accurate HCC risk scores for the patient population based on relevant diagnoses?

Where are the gaps in capturing these diagnoses?

With the majority of patient encounters occurring outside the acute hospital setting, has the organization evaluated its clinical documentation in the office and ambulatory settings?

Are physicians capturing complete historical and chronic diagnosis information on their patients?

Do physicians have efficient and clear information on key diagnoses necessary to address and document care for each patient?

Are documented diagnoses being submitted for billing?

Are coding processes sufficient for capturing all relevant HCC diagnoses?

A comprehensive assessment of the current state of HCC capture—including data analysis and medical record review—is critical to understanding where an organization may have gaps in its processes. This assessment can help identify specific areas to improve HCC capture and revenue opportunities.

**Step 2: Train your staff on HCCs**

HCCs and their usage in healthcare payment programs may be new concepts for physicians, coders, and other office staff. A baseline level of knowledge is important for all stakeholders, and designing role-appropriate education programs is a significant part of a sustainable, successful program.

An HCC training plan should be put in place to educate physicians, coders, CDI professionals, and physician office staff, so that they all understand HCCs and their role in payment programs.

**Step 3: Implement accurate retrospective coding for complete diagnosis capture**

While providers usually capture a great deal of diagnosis information for their patients in their visit notes, when providers enter their own billing codes, often diagnoses that have been documented are not included in the final bill for that visit. If diagnoses are not included in the bill sent to a payer, they are not counted towards that patient’s HCC total for the year.

Typically, upwards of 80 percent of patient encounters that occur with an integrated health system occur in physician offices and clinics. These visits usually involve physicians doing their own coding for the visits, with few coders or auditors sitting between the physician’s coding and the bill going to a payer. Thus, there are few checks in place to make certain all documented diagnoses are sent to the payer to capture the complete patient diagnosis picture.

A computer-assisted coding (CAC) system is a valuable tool for improving coding completeness and quality in the physician office and clinic setting. An effective CAC system can analyze both visit notes and codes submitted from a provider billing system as well as evaluate procedure and Evaluation and Management (E&M) coding to check that billing is complete and accurate.

Implementing accurate coding processes across the continuum of care—from the inpatient to outpatient and office settings—helps establish a comprehensive process that can capture complete and accurate HCC and RAF scores for a broad patient population.

**Step 4: Begin data aggregation and analysis**

To accurately and completely capture HCC diagnosis information for an entire patient population, it is important to understand the patient population’s baseline HCCs and RAF scores. Ideally the starting point for this should be the aggregation of two years’ worth of claims data from all care settings—inpatient, outpatient, and office. This claims data is then used to establish each patient’s HCC baseline and annual RAF score.

Establishing each patient’s baseline enables organizations to monitor ongoing claims for every new patient visit or encounter and also know in a given year what HCC diagnoses have been documented and which are yet to be documented. In short, a health system can determine what HCC diagnoses are still missing for each patient at any given point in time. These missing diagnoses can then be used to drive reports and workflows for reviewers, office administrators, and clinical providers.

**Step 5: Involve care managers and outpatient CDI reviewers**

Monitoring and analyzing ongoing claims for every patient encounter means there can be a running tally in a given year of the HCC diagnoses that have been documented. In addition, an organization can identify the HCC diagnoses that are still missing for each patient at any given point in time.

Adding in a cross-reference with a scheduling or appointment feed can generate reports that identify those patients without scheduled visits who should be brought in so that their HCC diagnoses can be documented and billed. This approach also helps identify
patients with scheduled visits, so weekly or daily worklists can be created for care managers to help them review cases before a patient is seen.

If care managers or outpatient CDI reviewers have a system that allows them to communicate with each other, office administrators, scheduling staff and providers, they can more easily send messages or notifications within the clinician’s EHR workflow and thus facilitate case review.

**Step 6: Engage administrative office staff**

Patient scheduling and coordination are fundamental to ensuring all relevant patients are seen by providers for the visits needed to manage their care, improve health quality and make certain all relevant diagnoses are documented and submitted each year.

In any given year, patients with diagnoses that would count towards an HCC are not seen for a visit in any healthcare setting; thus, there is no opportunity for any clinical provider to document these diagnoses in that year. However, when it is possible to review a list of patients with undocumented HCC diagnoses and identify the patients who do not have visits scheduled during the remainder of the year, an organization can make sure those patients are seen for appropriate office visits, either with their associated specialists or as part of a well-patient check-up program. This type of patient-level population management also helps improve care coordination and HCC status tracking.

**Step 7: Include clinical provider EHR workflows**

The responsibility for capturing complete HCC diagnosis information for an entire patient population ultimately belongs to the clinical providers, who lead busy lives at work, managing complex patient populations daily. However, it is essential that they document and submit each patient’s complete medical diagnosis picture. Diagnosis guidance provided within the clinical providers’ EHR workflow can serve as a reference as they evaluate, document and bill for each patient visit to ensure the HCC-linked diagnoses are captured for each patient.

With the majority of patient encounters in a health system occurring in the office and clinic setting, this is also where the majority of diagnosis documentation and capture occur. Giving providers the tools, information and processes needed to appropriately capture all relevant patient diagnoses (while being sensitive to the already heavy workloads they face) is vital to a successful program.

The objective should be to minimize rework required of documenting clinicians by providing them with diagnosis guidance at the start of a patient visit to help inform and support their assessments, documentation and coding. Unobtrusive guidance built into a clinician’s EHR documentation workflow can be a valuable tool that enables providers to document and code once on each patient’s complete clinical diagnosis picture without requiring time-consuming retrospective rework.
Conclusion

HCCs, RAFs and VBR are just a few of the recent challenges in a steady stream of change flooding the healthcare industry. The transition from fee-for-service to VBR will not happen overnight or in the blink of an eye. For a while, providers and payers will be straddling the volume- and value-based worlds and trying to succeed on several fronts.

Our experience has taught us that the best practice steps outlined in this paper can work, and we have synchronized the following products and services to help:

- **Hierarchical Condition Category (HCC) Services from 3M** can comprehensively assess your organization’s current state of HCC capture rates through a claims data analysis and medical record review and also deliver customized, role-specific training on HCCs for your organization based on your assessment.

- **The 3M™ CodeRyte™ CodeAssist™ System**, our professional computer-assisted coding (CAC) solution for the physician office and clinic setting, analyzes both visit notes and codes submitted from a provider’s billing system to capture the documented diagnoses and include them in the final bill; it also evaluates procedure and E&M codes, so billing is accurate and fully supported by the visit’s documentation.

- For inpatient and outpatient encounters, the **3M™ 360 Encompass™ System** integrates CAC, CDI, concurrent quality metrics and analytics into one application to capture, analyze and advance patient information across the care continuum.

- With the **3M™ 360 Encompass™ System—Patient Insights**, case managers, outpatient CDI reviewers, office administrators, scheduling staff and physicians have a communication system that facilitates messaging and notifications that can also be made available within your EHR workflow.

For more than 30 years, 3M has been working with providers, payers and government agencies to anticipate and navigate the always volatile healthcare landscape, and today is no exception. We are ready now to help our clients straddle the chasm between volume and value and then make that critical leap to VBR. We provide healthcare data aggregation, analysis and strategic services that help clients save money, improve performance and achieve higher quality care.
Hierarchical condition categories (HCCs) and the shift to value-based reimbursement

Sources


3 HHS press release from March 3, 2016, entitled “HHS reaches goal of tying 30 percent of Medicare payments to quality ahead of schedule” is available as of January 2017 at http://bit.ly/1VTue39


5 Abstract from Health Affairs entitled “Medicare’s New Bundled Payment For Joint Replacement May Penalize Hospitals That Treat Medically Complex Patients” is available as of January 2017 at http://bit.ly/2beNs4O

6 An article entitled “Risk Adjustment of Medicare Capitation Payments Using the CMS-HCC Model” from the Summer 2004 issue of Health Care Financing Review (Volume 25, Number 4) is available as of January 2017 at http://go.cms.gov/2fEeipS


Learn more

For more information on how 3M software and services can assist your organization, contact your 3M sales representative, call us toll-free at 800-367-2447, or visit us online at www.3m.com/his.