Will prescription drugs be the savior of the insurance exchanges in the Patient Protection and Affordable Care Act (PPACA)? That’s probably too much to ask. But a decision by the Obama administration to incorporate drug utilization data into the risk assessment used to determine the size of revenue transfers between marketplace insurers is meant to stem the exodus of companies from that marketplace.

The Centers for Medicare and Medicaid Services (CMS) wants to create 12 drug utilization categories (RXC) to supplement what are called hierarchical condition categories (HCCs), essentially medical codes for each patient that the CMS uses to calculate risk scores for each plan. The CMS hopes that by testing a handful of combined categories, using prescription data for the first time, the risk scores will be more accurate. Those risk scores are important because they dictate whether a plan with less-healthy members receives additional revenue from plans with healthier-than-average members.

Qualified health plans (QHPs) offer insurance on the state and federal marketplace exchanges. Risk adjustment is supposed to keep QHPs honest, ostensibly making it more difficult to design plans that mostly appeal to healthy (read: less costly, so more profitable) patients. The flip side is that struggling plans, some of which are now leaving the state and federal marketplaces, will be better compensated for making broader formularies available.

“All parties interested in this proposal agree it will improve accuracy of plan payments,” says Caroline Pearson, Senior Vice President at Avalere Health. “But there are still a lot of details left out, including which drugs go into each RXC, and the way you do that matters a lot.” For example, one RXC is composed of immune suppressants and immunomodulators. It is paired with HCCs that include rheumatoid arthritis and specified autoimmune disorders. Pearson notes, for example, that if both the brand-name biologic products and generic methotrexate are in that RXC, that would reduce the payment accuracy of the model changes.

Patient advocacy groups believe that adding RXCs to HCCs will force QHPs to broaden their formularies. “Some QHPs do not cover all of the single-tablet regimens and curative hepatitis C medications that are commonly prescribed and recommended in clinical treatment guidelines,” says Michael Ruppal, Executive Director of The AIDS Institute. “To the extent that a risk-adjustment model incorporates prescription drug utilization, it will compensate plans that cover high-cost medications for their enrollees.”

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The change will go into effect in 2018, and the technical details are still being worked out. But the CMS proposal to make an initial foray into adding drug utilization data to medical data to formulate risk scores for plans is meant to stabilize the leakage of insurance co-ops out of the marketplace and to better protect new plans and smaller plans with less clinical data. However, larger companies such as Aetna, Humana, and United Healthcare, which are dropping plans in some states, also approve of the addition of drug utilization data to the risk-assessment model of the Department of Health and Human Services (HHS).

Criticism of Current Risk-Adjustment Model

A number of groups have criticized the current risk-assessment methodology. Last February, Al Redmer Jr., the Maryland Insurance Commissioner, told a congressional subcommittee that CareFirst BlueCross BlueShield’s share of the marketplace in his state had plummeted from 91% to 57% as new carriers started offering plans. “These carriers have the potential to continue, but their ability to do so is severely jeopardized by the adverse and perhaps fatal financial impact caused by the technical shortcomings of the current risk-adjustment and risk-corridor programs,” he told the House Oversight and Government Reform Subcommittee on Health Care, Benefits, and Administrative Rules. The risk-corridor program (which limits losses and gains beyond an allowable range) expires at the end of this year. Redmer explained:

The risk-adjustment formula is of concern to state regulators because it has proven to place newer carriers at a distinct disadvantage. For example, the risk-adjustment formula quantifies an enrollee’s health status based on age, sex, and diagnoses recorded during the course of the year. New carriers have very limited information on the health status or previous claims history of the applicants. Therefore, the carrier’s population may appear healthier than it actually is if some diagnoses are not captured, which may result in improper risk-adjustment payments.

According to the CMS, the 2014 risk-adjustment transfer amounts were especially volatile for small insurers, with many having to pay out amounts in excess of 10% of their aggregate premium revenues. The Choices Coalition, made up of relatively small insurers, states: “A payment that is both very large and very unpredictable is a significant problem for any health plan but particularly difficult to manage for smaller plans.”

Insurers, too, have been critical of the current risk-assessment model. Anthem argues: “Our primary and overarching comment is that the existing risk-adjustment program threatens to destabilize the market by creating incentives that subject each insurer’s risk pool to continued deterioration. The
current program, on average, overcharges issuers for young and/or healthy individuals and generally overcompensates issuers for higher-risk members. This imbalance is not in the long-term interest of the program because the incentive creates a worse risk pool that results in higher premiums for consumers.”

**Broad Support for Adding Prescription Data**

There is near unanimity among players in the marketplace exchanges that the addition of prescription information will make the risk-assessment model more sensitive. “We support a pharmacy model that would both augment or impute missing diagnoses and also use pharmacy data to predict the severity of conditions,” says UnitedHealthcare. “Even though CMS already captures information about illness severity from diagnosis, prescription drug data could help to refine the severity of the illness within a single HCC. We believe that both of these markers foster the program’s goal to reduce issuers’ incentives to avoid high-cost enrollees.”

The fact that the HCCs do not account for prescriptions makes them a skewed measure on which to base risk scores, given the expense of some specialty drugs and the way they affect a QHP’s finances. Part of the concern is that some plans decline to make expensive drugs available as a way of warding off the membership of high-cost individuals with serious chronic diseases. Those QHPs that do offer those same expensive drugs may have high risk scores, leading to an outflow of risk payments, even though their formularies are broad and inclusive. They therefore may have to subsidize another plan in the state with a very narrow, restrictive formulary with a similar HCC-based risk score.

When Andy Slavitt, Acting Administrator of the CMS, appeared before a House committee in mid-April, Republicans batted him with questions about the perceived weaknesses of the QHPs operating in the PPACA marketplaces. Slavitt went to great lengths to underline the perceived successes of the plans—more people with insurance and relatively high satisfaction rates—before explaining some of the changes the Obama administration has recently made and is in the process of making, all with the hopes of making the marketplaces more attractive to both consumers and fleeing insurance companies.

Slavitt’s list of improvements was topped by changes to the risk-assessment methodology. The addition of drug utilization data on a test basis will be one of the big changes.

**The HHS Proposal**

The CMS proposes to base the RXCs on United States Pharmacopeia (USP) classifications, instead of its original plan to base them on the American Hospital Formulary Service Pharmacologic-Therapeutic Classification, which is published by the Board of the American Society of Health-System Pharmacists (ASHP). The problem with the ASHP classification is that its mappings from National Drug Codes (NDCs) are proprietary, so the CMS decided to use the USP classifications. NDC codes are classified into 153 USP therapeutic classes. The HHS selected the 12 RXC-HCC pairs based on seven principles, such as that each pair had to be “clinically meaningful,” should predict total medical and drug expenditures, and “should have adequate sample sizes to permit accurate and stable estimates of expenditures.”

Based on these considerations, the HHS came up with two types of RXC-HCC pairs to integrate into the adult risk-adjustment model. Ten will be used to impute a diagnosis and calibrate the severity of the condition and two only as an indication of severity (Table 1). The 10 RXCs with imputation potential have three levels of incremental predicted costs (diagnosis only, prescription drug only, both diagnosis and prescription drug). So, for example, if a plan member is diagnosed with disease X one year and is prescribed drug Y, he or she would get a certain risk score, which would be aggregated with the other individual risk scores of plan members. But the next year, maybe that same plan member will not get an X diagnosis but will still be taking drug Y. He or she would get the same risk score as the prior year.

The drug-diagnosis pairs can include more than one HCC. For example, the list in the proposed rule includes one of the 12 HCC “labels” devoted to potential diabetes drug-diagnosis relationships that includes three HCCs (diabetes with acute complications, diabetes with chronic complications, and diabetes without complications) that are grouped together in the model estimation. Their HCCs are 019, 020, and 021, respectively. They are paired with RXC 6a, in which the drugs include “antidiabetic agents, except insulin and metformin only.” RXC 6a can be interpreted as an indication that the individual should have a diagnosis of one of these three diabetes HCCs. That particular RXC is labeled “imputation/severity,” as are nine others, while two are labeled “severity” only. The “severity” possibility allows the plan to give two members with the same diagnosis—i.e., 019—different risk scores if one is taking a more advanced drug in category 6a, meaning he or she is more advanced in his or her sickness, and thus is more “costly.”

In addition, an RXC can be linked in the model to more than one HCC, and vice versa. For example, RXC 8 (immune suppressants and immunomodulators) has an imputation/severity relationship with HCC 056 (rheumatoid arthritis and specified autoimmune disorders), and also has a severity-only relationship with HCC 048 (inflammatory bowel disease).

When the CMS first broached its plans last March in a white paper, it suggested it could use one of four different modeling approaches to integrate prescription drug data with HCCs. This gets mind-bogglingly technical. One option was to impute risk regardless of how a disease condition is identified, that is, by either diagnosis or by drug utilization. A second was modeling by severity, meaning that only if a drug class and a specific diagnosis are present would the model predict incremental costs beyond the diagnosis alone. A third approach would be drug-dominant, meaning that when a drug is utilized a diagnosis is imputed, so the predicted expenditures should be the same irrespective of whether the diagnosis is reported. A fourth method, which the CMS terms flexible/generalized, is a hybrid approach that allows for different predictions for diagnosis only, drug only, and diagnosis and drug combination groups.

Many insurance companies supported the imputation model. Anthem says, “The imputation-only model allows issuers to fill in those gaps where diagnoses may be missing in the medical claims data.” Additional benefits of the imputation-only model include that the factors under this model tend to be more stable, it is less susceptible to gaming of discretionary prescribing, and it is the simplest of the four proposed approaches, which...
Advantage risk-adjustment model uses diagnoses from 2016 to predict 2017 costs. The HHS-HCC model uses diagnoses from 2017 to predict 2017 costs. In Medicare Advantage, the government uses risk adjustment to increase or decrease the per-member payments to each plan. Payments are not reduced or increased compared to other plans’ risk scores. It is a little difficult for plans in the PPACA marketplace to predict whether they will be making payments or receiving payments, because that determination is based on how their costs compare to other plans in the same state. That in turn makes it difficult to set premiums that recoup costs and earn the QHP a reasonable profit.

How Current Risk Assessments Work

The current PPACA risk-assessment program was established as a means of discouraging plans from formulating benefits in a way that discouraged the less-healthy members of the “pool” from joining a particular plan. That is called “adverse selection.” Two of those (risk corridors and risk reinsurance) expire at the end of 2016. Only the risk-adjustment program will remain. The agency currently assigns risk scores for all marketplace plans based on HCCs. Those scores are basically a cumulative look at the health of a plan’s members, based on medical claims data. That basically yields a statistic telling the CMS how healthy, on average, a plan’s members are compared to a baseline for other plans in the state. Healthy plans are dunned, with that revenue distributed to less-healthy plans. But the risk-adjustment methodology has been criticized.

Risk adjustment has been used in public programs—notably Medicare and Medicaid—since 2004 and 1997, respectively. The methodology the CMS uses for Medicare Advantage is similar to the one it uses for the marketplace plans. But there are significant differences. For example, the Medicare Advantage risk-adjustment model uses diagnoses from 2016 to predict 2017 costs. The HHS-HCC model uses diagnoses from 2017 to predict 2017 costs. In Medicare Advantage, the government uses risk adjustment to increase or decrease the per-member payments to each plan. Payments are not reduced or increased compared to other plans’ risk scores. It is a little difficult for plans in the PPACA marketplace to predict whether they will be making payments or receiving payments, because that determination is based on how their costs compare to other plans in the same state. That in turn makes it difficult to set premiums that recoup costs and earn the QHP a reasonable profit.

Risk Adjustment in Health Insurance Is Not New

When the marketplaces went into operation in 2014, they did so with three risk programs meant to prevent “adverse selection.” Two of those (risk corridors and risk reinsurance) expire at the end of 2016. Only the risk-adjustment program will remain. The agency currently assigns risk scores for all marketplace plans based on HCCs. Those scores are basically a cumulative look at the health of a plan’s members, based on medical claims data. That basically yields a statistic telling the CMS how healthy, on average, a plan’s members are compared to a baseline for other plans in the state. Healthy plans are dunned, with that revenue distributed to less-healthy plans. But the risk-adjustment methodology has been criticized.

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Diagnoses are grouped into HCCs and assigned a numeric value that represents the relative expenditures a plan is likely to incur for an enrollee with a given category of medical diagnosis. If an enrollee has multiple, unrelated diagnoses (such as prostate cancer and arthritis), both HCC values are used in calculating the individual risk score. In addition, if an adult enrollee has certain combinations of illnesses (such as a severe illness and an opportunistic infection), an interaction factor is added to the calculation.

### Table 1 Drug-Diagnosis Pairs Chosen for Hybrid Risk-Adjustment Models

<table>
<thead>
<tr>
<th>RXC</th>
<th>RXC Label</th>
<th>HCC</th>
<th>HCC Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hepatitis C antivirals</td>
<td>037C, 036, 035, 034</td>
<td>Chronic hepatitis C, cirrhosis of liver, end-stage liver disease, and liver transplant status/complications</td>
</tr>
<tr>
<td>2</td>
<td>HIV/AIDS antivirals</td>
<td>001</td>
<td>HIV/AIDS</td>
</tr>
<tr>
<td>3</td>
<td>Antiarrhythmics</td>
<td>142</td>
<td>Specified heart arrhythmias</td>
</tr>
<tr>
<td>4</td>
<td>End-stage renal disease phosphate binders</td>
<td>184, 183, 187, 188</td>
<td>End-stage renal disease; kidney transplant status; chronic kidney disease, stage 5; chronic kidney disease, severe (stage 4)</td>
</tr>
<tr>
<td>5</td>
<td>Anti-inflammatories for inflammatory bowel disease</td>
<td>048, 041</td>
<td>Inflammatory bowel disease, intestine transplant status/complications</td>
</tr>
<tr>
<td>6a</td>
<td>Antidiabetic agents, except insulin and metformin only</td>
<td>019, 020, 021, 018</td>
<td>Diabetes with acute complications, diabetes with chronic complications, diabetes without complications, pancreas transplant status/complications</td>
</tr>
<tr>
<td>6b</td>
<td>Insulin</td>
<td>019, 020, 021, 018</td>
<td>Diabetes with acute complications, diabetes with chronic complications, diabetes without complications, pancreas transplant status/complications</td>
</tr>
<tr>
<td>7</td>
<td>Multiple sclerosis agents</td>
<td>118</td>
<td>Multiple sclerosis</td>
</tr>
<tr>
<td>8</td>
<td>Immune suppressants and immunomodulators</td>
<td>056, 057, 048, 041</td>
<td>Rheumatoid arthritis and specified autoimmune disorders, systemic lupus erythematosus and other autoimmune disorders, inflammatory bowel disease, intestine transplant status/complications</td>
</tr>
<tr>
<td>9</td>
<td>Cystic fibrosis agents</td>
<td>159, 158</td>
<td>Cystic fibrosis, lung transplant status/complications</td>
</tr>
<tr>
<td>10</td>
<td>Ammonia detoxicants</td>
<td>036, 035, 034</td>
<td>Cirrhosis of liver, end-stage liver disease, liver transplant status/complications</td>
</tr>
<tr>
<td>11</td>
<td>Diuretics, loop and select potassium-sparing</td>
<td>130, 129, 128</td>
<td>Congestive heart failure, heart transplant, heart assistive device/artificial heart</td>
</tr>
</tbody>
</table>

AIDS = acquired immunodeficiency syndrome; HCC = hierarchical condition category; HIV = human immunodeficiency virus; RXC = drug utilization category.

Has value as CMS first introduces drug utilization into the model. What Anthem meant was that some members come to a health plan without any diagnoses and don’t see a physician right away—in some cases not for a long time. However, that view was not unanimous. For example, CareSource believes that the flexible hybrid model would be best. The CMS blessed the flexible hybrid model in the proposed rule.

continued on page 725
person’s individual risk score. Finally, if the enrollee is receiving subsidies to reduce his or her cost-sharing, an induced utilization factor is applied to account for induced demand. Plans with enrollees who receive cost-sharing reductions under the PPACA receive an adjustment because cost-sharing reductions may induce demand for health care and are not otherwise accounted for in the other premium stabilization programs.

The HCC-based methodology has weaknesses, however. It doesn’t always uncover the full range of a patient’s issues. Some physicians might be hesitant to record conditions with stigmas. Clinical diagnostic reporting systems may focus on the diagnosis under current treatment, and not record the full set of a patient’s underlying conditions. A significant percentage of marketplace plan-holders flit in and out of the market, sometimes changing plans, sometimes dropping insurance temporarily. When they exit the marketplace, data on their treatment do not exist. So when they return to the marketplace, the full extent of their “health situation” is not clear. One benefit of drug utilization data is that they are much easier to tap into and can be “found” for patients even when they are outside the marketplace. Those prescription data provide clues about previously unknown health conditions.

In addition, HCCs do not measure the progression of a disease. Normally, the sicker someone gets, the more expensive his or her treatment becomes. Drug utilization may provide insights into the progression of an illness as a patient moves from first-line to second-line treatments and so on.

Potential Flaws of Adding Drug Utilization Data

Including drug utilization in risk assessment opens the door to potential problems. It may encourage companies to prescribe inexpensive drugs included in therapeutic classes that are statistically linked to high total medical expenditures. In that way, a small cost to the insurance plan could bring a relatively large increase in revenue. A corollary here is that physicians, ostensibly encouraged directly or indirectly by the plan, could prescribe a drug for a patient for whom that drug may be called for—or may not be—because the patient is at the outer edge of the clinical indication.

Then, of course, there is the possibility that plans might decide it is in their best financial interests to avoid managing drug utilization, or to look less kindly on nondrug treatments, or to lean toward use of the specific drug therapeutic classes linked to getting them payments in risk adjustment.

Another potential issue is that prescription data are available only for outpatient use, not for inpatient hospitalization. Hospitalized patients may appear to be less severely ill as a result. Moreover, some QHPs have lower prescribing rates than others. That is especially true for plans covering individuals in rural areas with low access to pharmacies. Those plans would incorrectly appear to have healthier populations, and they would pay higher risk charges or receive lower risk payments.

Then there is the formulary variability within plans of different colors. The most expensive plans at the platinum and gold levels might appear to have much higher drug utilization because their formularies are much more complete, and their copays and deductibles are low. They may be much less likely than a plan at the bronze level to use utilization management tools, such as prior authorization and step therapy, which help keep costs in line. So members of a gold plan might appear to be much sicker, based on the drug data, than those in a bronze plan. But that is not necessarily so.

To the layman, this 12 RXC model appears incredibly complex and seems to leave plenty of room for interpretation. “You have to be an actuary to understand this,” one pharmaceutical official says. However, it is unusual for a CMS rulemaking to attract the kind of unanimous support this one has. Everyone thinks it is a good idea to add prescription drug data to the risk-adjustment model. “I love that CMS is taking this first set of RXCs for a test drive,” says one industry official. “They are not implying their model is perfect but acknowledging there is room for further refinement.”

REFERENCES


Prescription Drug Data Might Help Protect Obamacare

continued from page 691