UnitedHealth Premium program Case-mix, severity and risk

Use this document with the UnitedHealth Premium® program methodology document at **UnitedHealthPremium.uhc.com.** Please review all methodology documents to understand the entire Premium program methodology.

Overview

For both the safe, timely and effective quality care and efficient quality care measurements, the Premium program compares the physician's performance to a case-mix adjusted benchmark. Case-mix adjustment accounts for variations in the composition of the patients and cases each physician treats. The Premium program uses severity adjustment for patient episode costs and certain safe, timely and effective quality care measures and risk adjustment for patient total cost.

Safe, timely and effective quality care

Case-mix adjustment

Some recommended interventions may be more or less difficult to accomplish. For example, patients with diabetes are likely to obtain retinal exams at a lower rate than they obtain hemoglobin A1c blood tests because retinal exams take greater effort. Similarly, the rate of adverse reactions to one class of medications might be different from the rate of adverse reactions to another medication.

To establish the target benchmark, the Premium program determines the number of measures expected to be compliant at the 50th percentile compliance level. This is accomplished by first calculating the national compliance rate for each measure by unique combinations of:

- Premium specialty
- Patient population
- Condition or procedure
- Severity level (when applicable)

A minimum of 50 instances of each unique measure combination are required to calculate the national compliance rate.

The number of measures expected to be compliant is calculated by multiplying the national compliance rate for each measure by the number of those measures attributed to the physician. This adjusts for the physician's case-mix.

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Premium specialty

A separate compliance rate for each measure is established for each Premium specialty. For evaluation, multiple credentialed specialties may be combined into a single Premium specialty.

Patient population

A separate compliance rate for each measure is established for each population of patients enrolled in each of the following health plans:

- UnitedHealthcare commercial (including affiliate and partner plans)
- UnitedHealthcare Medicare Advantage
- UnitedHealthcare Community Plan (Medicaid)

Condition or procedure

A separate compliance rate for each measure is established for each condition or procedure.

Conditions and procedures are defined using Symmetry® EBM Connect® (EBM), Symmetry® Procedure Episode Groups® (PEG) and 3M™ All Patient Refined DRG (APR DRG) software.

Severity level

Surgical care measures include outcome measures such as complications and redos, and so it is necessary to account for patient severity in these cases. A separate compliance rate for each surgical care measure is established for each severity level, when applicable. Severity is determined using Symmetry® Procedure Episode Groups® (PEG), for outpatient procedures, and 3M™ All Patient Refined DRG (APR DRG), for inpatient procedures. Not all measures require severity adjustment because many measures apply regardless of the severity of a patient's condition. For example, medical evidence indicates that all patients with pharyngitis should be tested for group A streptococcus before antibiotic treatment regardless of the severity of their pharyngitis. Also, many medical measures account for severity or coexisting conditions through specific clinical exclusions.

Efficient quality care

Case-mix adjustment

To determine the target benchmark, the Premium program puts patient total costs and patient episode costs into "treatment sets" by unique combinations of:

- Premium specialty
- Condition or procedure (patient episode cost only)
- Care setting (inpatient or outpatient for patient episode cost only)
- Patient population (commercial, Medicare, Medicaid)
- Product/network
- Geographic area
- Inclusion of pharmacy cost
- Severity level (patient episode cost only)
- Risk level (patient total cost only)

Using these comparable treatment sets to establish the benchmark accounts for variations in the composition of the patients and cases each physician treats. A minimum of 20 patients or episodes are required for a treatment set to be included in a physician's efficient quality care evaluation.

Premium specialty

A separate treatment set is established for each Premium specialty. For purposes of evaluation, multiple credentialed specialties may be combined into a single Premium specialty.

Condition or procedure

A separate compliance rate for each measure is established for each condition or procedure.

Condition episodes

Condition episodes are defined using Symmetry® Episode Treatment Groups® (ETG). Conditions are defined using ETG units that differ from one another with respect to resource use. The ETG units used for patient episode cost measurement are condition (ETG base class) and treatment (ETG treatment indicator code, which shows with or without surgery/active treatment).

Procedure episodes

Procedure episodes are defined using Symmetry® Procedure Episode Groups® (PEG). Procedures are defined by anchor procedures, the major procedure performed and sub-procedure, if applicable. Inpatient procedure episodes are further classified using APR DRG (note: the Premium program combines some APR DRGs like chest pain and angina). The APR DRG classification system assigns each patient a base class for the underlying condition. The patients grouped into each base class are similar in terms of both clinical characteristics and the hospital resources they use.

Care setting

A separate treatment set is established for each procedure-based episode performed inpatient or outpatient, with the exception of lumbar surgery where severity level 1 procedures are combined based on diagnosis, irrespective of care setting.

Patient population

A separate treatment set is established for each population of patients enrolled in each of the following health plans:

- UnitedHealthcare commercial (including affiliate and partner plans)
- UnitedHealthcare Medicare Advantage
- UnitedHealthcare Community Plan (Medicaid)

Product/network

A separate treatment set is established for each product/network.

Geographic area

A separate treatment set established for each geographic area.

Geographic areas are defined using a specialty-specific health care market definition with the physician's Premium specialty and ZIP code(s) as the foundation.

Inclusion of pharmacy cost

A separate treatment set is established for patients and episodes with pharmacy cost included. Pharmacy cost is included for patient episode cost (condition episodes only) and patient total cost only when sufficient pharmacy claims information is available. When sufficient pharmacy claims information is not available, those episodes and patients are put into separate "without pharmacy" treatment sets. Pharmacy cost is only included during the time period that a patient had effective pharmacy and medical coverage. Pharmacy costs are not used for procedure episodes.

Severity level (patient episode cost only)

A separate treatment set is established for each episode severity level. The health care services required to diagnose, manage and treat a clinical condition can vary significantly across episodes. This variation derives from a number of sources, including differences in the practice of medicine across providers, differences in the price paid for medical services and differences in the underlying clinical characteristics of an episode. Severity adjustments account for the aspect of the variation in cost that can be explained by an episode's clinical characteristics. Specifically, the expected cost of an episode is based on clinical factors such as disease progression, comorbidities and other patient attributes that correlate with clinical need.

Condition episode severity

ETG is used to account for differences in condition episode severity by assigning a severity score to each episode. A higher severity score for an episode means a higher expected cost relative to other episodes of the same type. The severity score takes the following factors involved in the episode and gives them a weight:

- Patient age and gender (demographic weight)
- Comorbidities associated with the episode (comorbidity weight)
- Condition statuses (condition specificity, disease progression, etc.) associated with the episode (condition status weight)

These weights are episode-specific. For example, a 50-year-old male with asthma and congestive heart failure may receive different demographic weights for those 2 episodes. The episode of asthma with a comorbidity of diabetes can have a different comorbidity weight than the episode of congestive heart failure that also has a comorbidity of diabetes. ETG has separate condition status and comorbidity weights for age 65 and older. The weights are added to produce the overall severity score for the episode.

Based on the severity score, a severity level of 1 to 4 is assigned to each specific episode. The severity level indicates a ranking of the specific episode relative to the population of all episodes of that same type. The value of 1 indicates a less severe episode and the value 4 indicates the most severe episode. The severity levels are determined by analyzing the distribution of episodes using a large, nationally representative data set.

Procedure episode severity

3M APR DRG is used to account for differences in inpatient procedure episode severity. There are 4 severity of illness levels: 1 – minor, 2 – moderate, 3 – major and 4 – extreme. The underlying clinical principle of APR DRGs is that the patient severity of illness is highly dependent on the patient's underlying problem and that patients with high severity of illness are usually characterized by multiple serious diseases or illnesses. The evaluation of severity is disease-specific. As a result, the significance attributed to complicating or comorbid conditions is dependent on the underlying problem. For example, certain types of infections are considered a more significant problem in a patient who is immunosuppressed than in a patient with a fractured arm. High severity of illness is primarily determined by the interaction of multiple diseases.

To determine the patient severity of illness, APR DRG first determines the severity for each secondary diagnosis. Once the severity of each individual secondary diagnosis is established, APR DRG determines patient severity based on all of the patient's secondary diagnoses. The final patient severity level is determined by incorporating the impact of:

- Primary diagnosis
- Age
- Operating room procedures
- Non-operating-room procedures
- Multiple operating room procedures
- Combinations of categories of secondary diagnoses

For example, if peritonitis is present along with the acute choledocholithiasis, the patient may be considered an extreme severity of illness (level 4).

PEG is used to account for differences in outpatient procedure episode severity. A higher severity level for an episode, between 1 and 3, means a higher expected cost relative to other episodes of the same type. The evaluation of severity takes into consideration patient comorbidities and markers of disease severity identified for the ETG episode associated with each procedure episode.

The severity level takes the following factors involved in the procedure episode and gives them a weight. The weights are summed to produce the overall severity level for the episode.

- Patient age and gender (demographic weight)
- Condition statuses (condition specificity, disease progression, etc.) assigned to the ETG episode associated with the PEG episode (condition status weight)
- Comorbidities associated with the member and the procedure episode's PEG category (comorbidity weight)

The weights vary from one PEG category to the next. For example, the same member with 2 different procedure episodes (each with a different PEG category) would likely have a different demographic weight for each episode.

Risk level (patient total cost only)

A separate treatment set is established for each patient risk level. The health care services required to diagnose, manage and treat clinical conditions can vary significantly across patients. This variation derives from a number of sources, including differences in the practice of medicine across providers, differences in the price paid for medical services and differences in the underlying clinical characteristics of a patient's episodes. Patient risk defines that aspect of the variation in cost that can be explained by the clinical characteristics of a patient's episodes. In particular, this risk is the expected heath care costs or utilization of a patient.

Symmetry® Episode Risk Groups® (ERG) accounts for differences in patient risk using ETG episodes as markers of risk rather than the diagnoses from individual medical encounters. By using episodes, the focus is placed on the key information describing a patient's underlying medical condition rather than the individual services provided in its treatment. Risk evaluation techniques can vary depending on the characteristics of the patient population being measured. For patient total cost measurement, the models incorporated into ERG are designed for the under-age-65 commercial patient population. Separate models are developed for each premium specialty for patients with and without pharmacy costs included to allow risk evaluation to be performed using a consistent methodology across all similar patients.

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The fundamental building blocks of ERG are a patient's ETG episodes of care, which represent the unique occurrences of a medical condition or disease and the health care services involved in diagnosing and managing their treatment. The nature and mix of the included episodes provide a clinical profile for a patient that serve as a marker of his or her current need for medical care. Once the relevant patient episodes are identified (refer to the **Patient Total Cost** document for an explanation of which patient episodes are used for patient total cost measurement), the ERG risk score is calculated as follows:

Translate ETGs to ERGs: Episodes for each patient are categorized into ERGs. The ERGs are markers of patient risk and represent ETG episodes of similar clinical and risk characteristics.

Generate ERG profile: The mix of ERGs provide a clinical profile for a patient. Patients can be assigned zero, one or more ERGs. Patients with multiple medical conditions would have multiple ERGs.

Calculate ERG risk score: Using predetermined weights for each Premium specialty category based on the inclusion or exclusion of pharmacy costs, and the patient's ERG profile, a risk score is computed. A patient's risk score is the sum of the weights attached to each ERG observed in the patient's ERG profile.

Based on the patient's risk score, a patient's risk level is determined, which indicates a ranking of the patient relative to the population of all patients for the Premium specialty category and pharmacy cost status. The number of levels varies by Premium specialty category with a value of 1 indicating a lower risk patient. The risk level values are established by analyzing the distribution of patient risk scores using a large nationally representative data set.

Important notes about the UnitedHealth Premium Program

The information from the UnitedHealth Premium program is not an endorsement of a particular physician or health care professional's suitability for the health care needs of any particular member. UnitedHealthcare does not practice medicine nor provide health care services. Physicians are solely responsible for medical judgments and treatments supplied. A Premium Care Physician designation does not guarantee the quality of health care services members will receive from a physician and does not guarantee the outcome of any health care services members will receive.

The fact that a physician doesn't have a Premium Care Physician designation doesn't mean the physician doesn't provide quality health care services. All physicians in the UnitedHealthcare Network have met certain minimum credentialing requirements. Regardless of whether a physician has received a Premium Care Physician designation, members have access to all physicians in the UnitedHealthcare Network, as further described under the member's benefit plan.

There are various reasons why a physician may not be designated as a Premium Care Physician. A physician may not receive a Premium Care designation because that physician has not been evaluated for a Premium Care designation. This occurs when a physician does not practice in a specialty that is evaluated by the Premium program, or when a physician's evaluation is in process. It also occurs when a physician does not have enough health plan claims data to be evaluated, but it is not an indicator of the total number of patients treated by the physician, or the number of procedures performed by the physician. Rather, it reflects the statistical requirements of the Premium program, which includes only health plan claims associated with specific Premium program measures and relevant to the physician's specialty. In some cases, there may not be enough data to complete the analytic process from a statistical standpoint.

UnitedHealthcare informs members that designations are intended only as a guide when choosing a physician and should not be the sole factor in selecting a physician. As with all programs that evaluate performance based on analysis of a sample, there is a risk of error. There is a risk of error in the claims data used in the evaluation, the calculations used in the evaluation, and the way the Premium program determined that an individual physician was responsible for the treatment of the patient's condition. **Physicians have the opportunity to review this data and submit a reconsideration request.**

UnitedHealthcare uses statistical testing to compare a physician's results to expected or normative results. There is a risk of error in statistical tests when applied to the data and a result based on statistical testing is not a guarantee of correct inference or classification. We inform members that it is important that they consider many factors and information when selecting a physician. **We also inform our members that they may wish to discuss designations with a physician before choosing him or her, or confer with their current physician for advice on selecting other physicians.**

The information contained in this document is subject to change.

Learn more

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