# Prediction Tools
## Frequently Asked Questions

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### 1. What does the "Avoidable Hospital Events (Pre-AH)" score mean?

This score represents the risk that a particular individual will have an inpatient hospital admission or emergency department (ED) visit for one of ten potentially avoidable conditions in the near future. Individuals with higher risk scores are more likely to incur an avoidable hospital event in the coming months than individuals with lower risk scores. This score is based on the Hilltop Pre-AH Model™, which uses over 200 risk factors spanning five domains: conditions, utilization, demographics, pharmacy, and environmental characteristics.

### 2. How is the Avoidable Hospital Events (Pre-AH) score different from the HCC tier?

The HCC tier is based on the CMS HCC risk score, which is based on a model that uses diagnosis codes and a limited set of demographic information from a base year in order to predict *expenditures* over the following year. In contrast, the "Avoidable Hospital Events (Pre-AH)" score captures the risk that an individual will incur an avoidable hospital event in the coming months, using information about each patient's socio-demographic, biologic, diagnostic, and health care utilization history, as well as any relevant environmental risk factors.

### 3. What does the "Severe Diabetes Complications (Pre-DC)" score mean?

This score represents the risk that a particular individual will have an inpatient hospital admission or ED visit for severe complications of type 2 diabetes in the near future. Individuals with higher risk scores are more likely to incur severe type 2 diabetes complications in the coming months than individuals with lower risk scores. This score is based on the Hilltop Pre-DC Model™, which uses over 200 risk factors spanning five domains: conditions, utilization, demographics, pharmacy, and environmental characteristics.

### 4. What does the "Hospice Eligibility and Advanced Care Planning (Pre-HE)" score mean?

This score represents the risk of eligibility for hospice for a particular individual. Individuals with higher risk scores are more likely to be appropriate candidates for hospice care than individuals with lower risk scores; these scores and the accompanying reasons for risk are intended to provide care teams with information that can guide the sensitive and difficult conversations about end-of-life care with patients and their families. This score is based on the Hilltop Pre-HE Model™, which uses over 200 risk factors spanning five domains: conditions, utilization, demographics, pharmacy, and environmental characteristics.

### 5. What's the difference between the "Avoidable Hospital Events (Pre-AH)" and the "Severe Diabetes Complications (Pre-DC)" score?

The Avoidable Hospital Events (Pre-AH) score is optimized to identify those hospital events that should be preventable with timely, high-quality primary care. The underlying conditions span several different

disease states, including diabetes. These are not necessarily the most medically severe conditions, but they have been deemed by the Agency for Healthcare Research and Quality to be potentially preventable. The Severe Diabetes Complications (Pre-DC) score, however, is calibrated to capture hospital events for severe complications of type 2 diabetes and spans six domains of complications. There is relatively little overlap in the two outcomes—avoidable hospital events and severe type 2 diabetes complications—and the scores capture conceptually distinct risk profiles.

### 6. Why does a certain patient have a very high score?

Each risk score is a function of approximately 200 risk factors based on a patient's clinical history, demographics, and geographic factors. The relationship between each risk factor and the likelihood of having a given outcome is estimated in historical data, and those relationships are then applied to current data. If a patient has a very high risk score, then it is likely that he or she has several risk factors that have a large contribution to risk.

### 7. What is the best way to use these risk scores?

Providers now have access to multiple sets of risk scores that capture distinct risk profiles for their patients. These scores are intended to augment clinical judgement so that users can easily identify the patients at the highest risk of incurring a future avoidable hospital event, the patients at the highest risk of incurring hospital care for severe type 2 diabetes complications, or the patients with the highest likelihood of being appropriate candidates for hospice care. Providers can use these prioritized lists in addition to their clinical judgement to design individualized care plans.

### 8. How often should I check these risk scores?

These scores will be updated once per month, usually mid-month.

### 9. How should I interpret the "reasons for risk"?

The reasons for risk are the top actionable risk factors underlying each patient's predicted risk of incurring a given outcome. It is important to note that these are not necessarily causal; that is, just because a patient has a certain risk factor does not mean that the risk factor *causes* her to have increased risk. However, these risk factors have been statistically validated as being strongly *associated* with increased risk of incurring a given outcome—for example, an avoidable hospital event—and can equip providers and care managers with a useful starting point in the delivery of advanced primary care to high-risk patients.

### 10. Who should I ask when I have a question?

First, please consult the documentation in the "help" tab. The risk scores and underlying models are addressed extensively in the full technical documentation on CRISP. Please submit any questions to mdh.pcmodel@maryland.gov. If you are transmitting PHI via email, please be sure to use your organization's digital encryption service.

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