

Diabetes Measure

Draft Cost Measure Methodology Appendices

Summer 2020 Field Testing



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1.0 Introduction

This document contains additional details on the measure constructions framework for the Diabetes measure and should be reviewed along with the Diabetes Draft Cost Measure Methodology document, which details the methodology for the measure, and with the Diabetes Draft Measure Codes List file, which contains the medical codes used in constructing the measure. These documents have been shared as part of the Summer 2020 Field Testing.

Appendix A. Detailed Illustration of Trigger Event and Episode Construction

This appendix provides a simplified¹ example of the chronic condition episode construction framework. Step 1 describes how to identify a patient receiving care for their chronic disease, Step 2 illustrates how to determine the total length of care between a patient and a clinician group, and Step 3 describes how to construct an episode.

Step 1. Identify the patient receiving Diabetes care

In Figure A-1 below, a trigger event, identified by a pair of eligible services, determines the start or continuation of a clinician group's management of a patient's chronic disease. A trigger event is identified by a pair of Part B Physician/Supplier claims billed by the same clinician group practice within 180 days of one another. This pair of services includes:

- i. A trigger claim that is a "primary care" evaluation and management (E&M) code with a relevant chronic condition diagnosis, and
- ii. A confirming claim that is either another "primary care" E&M code with a relevant chronic condition diagnosis, or a chronic condition-related Current Procedural Terminology/Healthcare Common Procedure Coding System (CPT/HCPCS) code for related services with a relevant chronic condition diagnosis.

A trigger event opens a one-year long attribution window from the point of the trigger claim. The attribution window defines a time period during which the patient's chronic disease care will be monitored by a clinician group.

Figure A-1. Trigger Event & Attribution Window

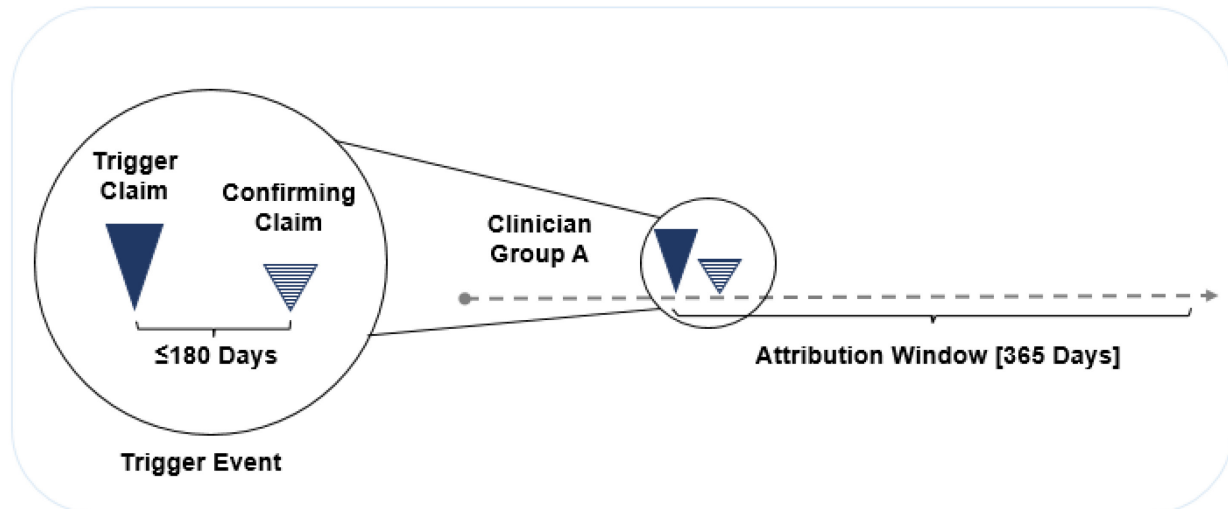


Figure A-1 illustrates a trigger event and the resulting attribution window for a patient with a chronic disease. For example, a patient is presenting to a new clinician. During these visits, the following claims were billed by the same clinician group practice:

- **Trigger claim:** For the initial visit, the clinician group bills CPT/HCPCS code 99204 (office/outpatient visit)* and confirms the patient's type 1 diabetes diagnosis.

¹ For more detailed examples of chronic condition episode construction, please refer to Appendix C.

- **Confirming claim:** Following the initial visit, the patient returns to the same clinician group 20 days later to receive additional services. For this second visit, the clinician bills chronic condition-related CPT/HCPSC code G0108 (diabetes self-management training)* for the patient's type 1 diabetes.

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Given that (i) the first claim was a “primary care” E&M code with a relevant chronic condition diagnosis, (ii) the second claim was a chronic condition-related CPT/HCPSC code with a relevant chronic condition diagnosis, and (iii) the 2 services were billed within 180 days of one another by the same clinician group practice, these 2 claims are considered a trigger event that indicates the beginning of the clinician-patient relationship.

Step 2. Identify the total length of care between a patient and a clinician group

After the patient receiving care for their chronic condition and the clinician group responsible for that patient's care are identified, the total length of care between the patient and the clinician group is determined. Specifically, when there is evidence of a continuing clinician-patient relationship (indicated by reaffirming claims), the attribution window is extended.

A reaffirming claim is either a “primary care” E&M code with a relevant chronic condition diagnosis or a chronic condition-related CPT/HCPSC code with a relevant chronic condition diagnosis. For example, a reaffirming claim could be CPT code 99212 (office/outpatient visit)*.

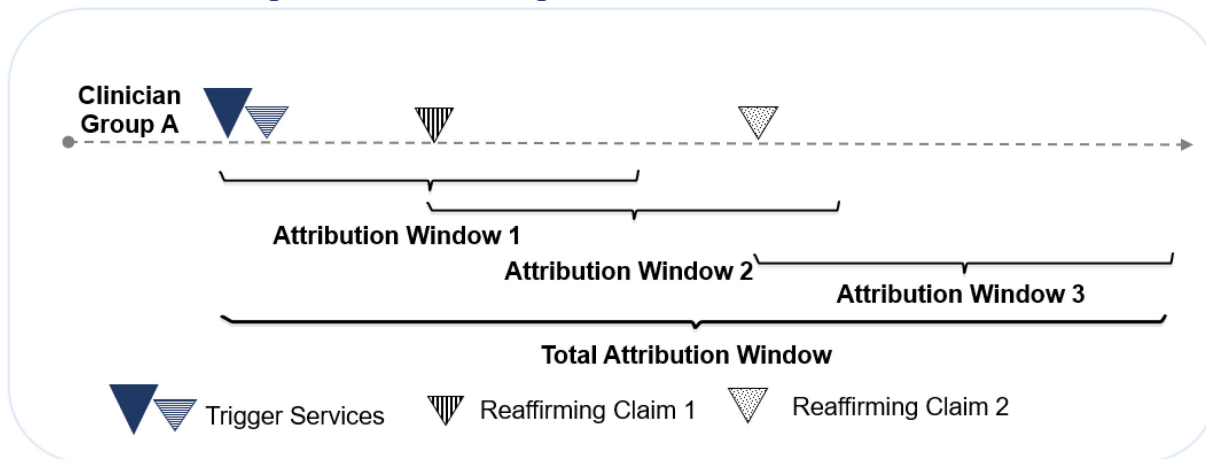
*AMA CPT Code Description Licensing: Codes and descriptions included are from the Current Procedural Terminology (CPT®) Copyright 2017 American Medical Association. All rights reserved.

As shown in Figure A-2 below:

- Reaffirming claim 1 occurs 6 months into attribution window 1 and extends that attribution window by 1 year (until the end of attribution window 2).
- Reaffirming claim 2 occurs 9 months into attribution window 2 and extends that attribution window by another year (until the end of attribution window 3).

Once all reaffirming claims are identified, the total period of time of the clinician-patient relationship is defined as the period covered by the 3 attribution windows, beginning with the trigger claim and concluding 1 year after the final reaffirming claim. For this example, the total attribution window is 27 months long.

Figure A-2. Reaffirming Claims & Total Attribution Window



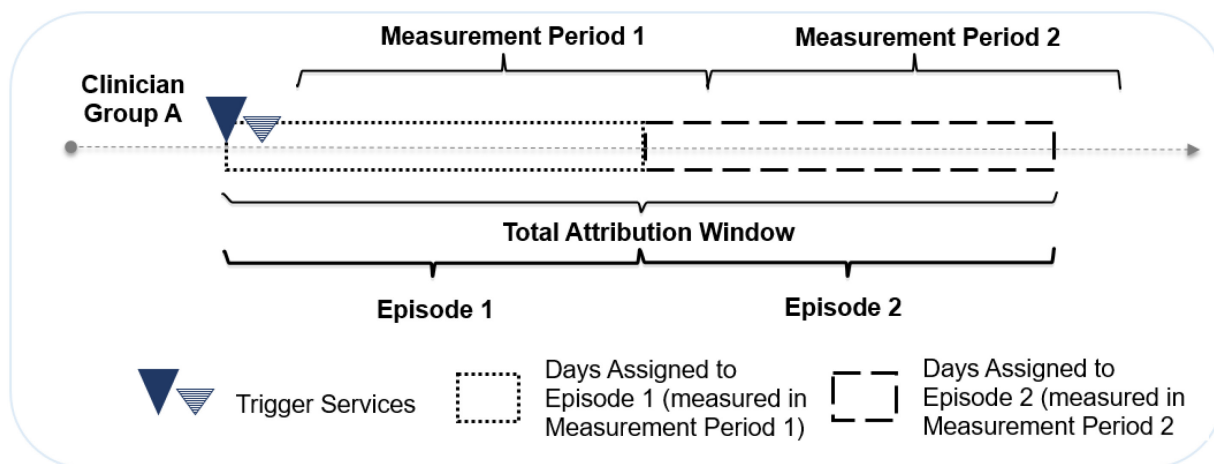
Step 3: Define an Episode

After the total length of care between the clinician group and the patient is identified, it is divided into episodes to ensure that the clinician can be evaluated in different measurement periods.² Episodes are assessed in the measurement period in which they conclude and only include days not previously measured in preceding measurement periods.

In Figure A-3 below:

- Episode 1 is a one-year long portion of the total attribution window that starts on the day of the trigger claim. Since episode 1 ends in measurement period 1, the associated costs (represented by the round-dotted rectangle) are measured in measurement period 1.
- Episode 2 is a one-year long portion of the total attribution window that starts the day after episode 1 ends. Since episode 2 ends in measurement period 2, the associated costs (represented by the long-dashed rectangle) are measured in measurement period 2.

Figure A-3. Episode Windows



² A measurement period is a static year-long period (calendar year) in which a clinician or clinician group will be measured.

Appendix B. Sub-Grouping Methodology

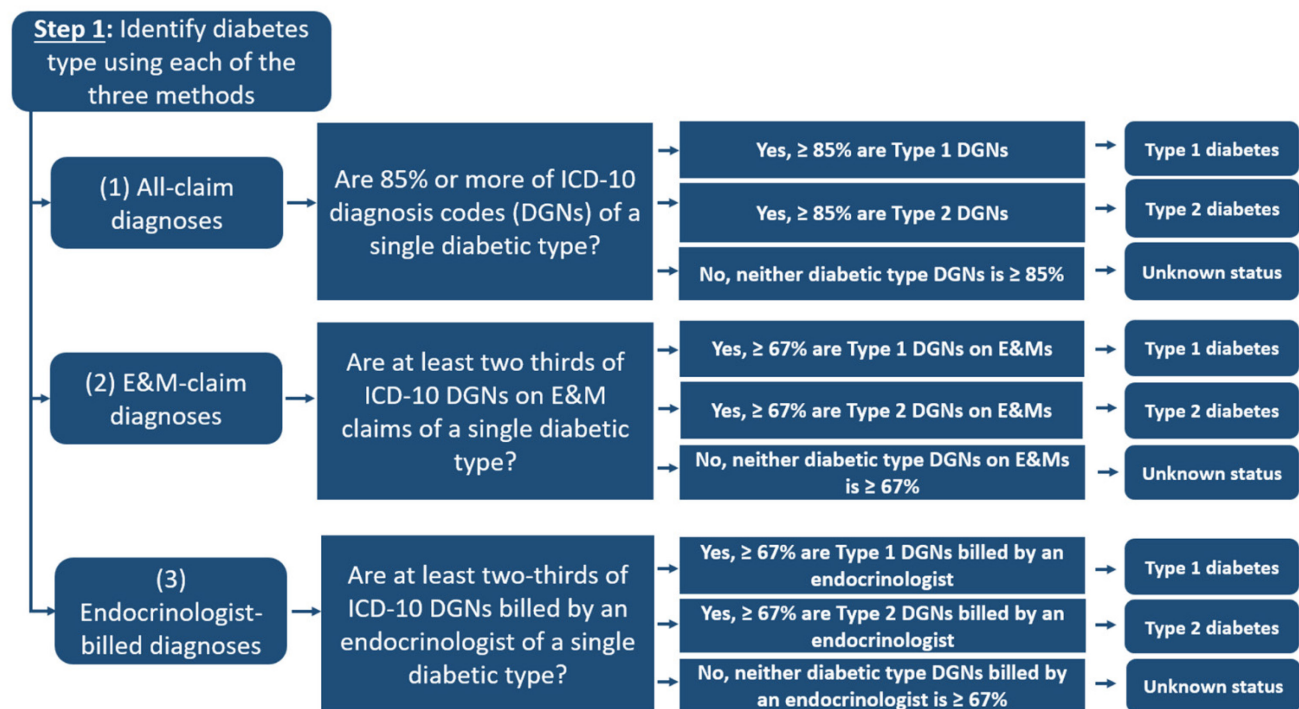
This appendix describes the sub-group specifications to categorize patients into 2 sub-groups: Type 1 Diabetes and Type 2 Diabetes.

Sub-grouping stratifies the cost measure to predict expected cost among patients with a specific clinical condition. Sub-groups are exhaustive and mutually exclusive, and are based on characteristics that have distinct effects on patient cost across all risk adjusters.

The Diabetes measure includes a robust claims-based methodology to identify patients with type 1 diabetes diagnoses and type 2 diabetes diagnoses. The methodology combines results from 3 independent methods that focus on different claims-based markers of type 1 or type 2 diabetes found during the time period between the earliest episode start date and the latest episode end date for a particular measurement period. Combining these 3 methods (all-claim diagnoses, E&M claim diagnoses, and endocrinologist-billed diagnoses) provides greater confidence in the overall determination and reduces the chance of misclassification from using individual methods alone. Figures B-1 and B-2 illustrate the 2 steps for the sub-grouping methodology for the Diabetes measure.

Step 1 identifies diabetes type using each of the 3 methods (all-claim diagnoses, E&M claim diagnoses, and endocrinologist-billed diagnoses), which classify a patient as having type 1 diabetes, type 2 diabetes, or an unknown status.

Figure B-1. Diabetes Sub-Grouping Methodology – Step 1



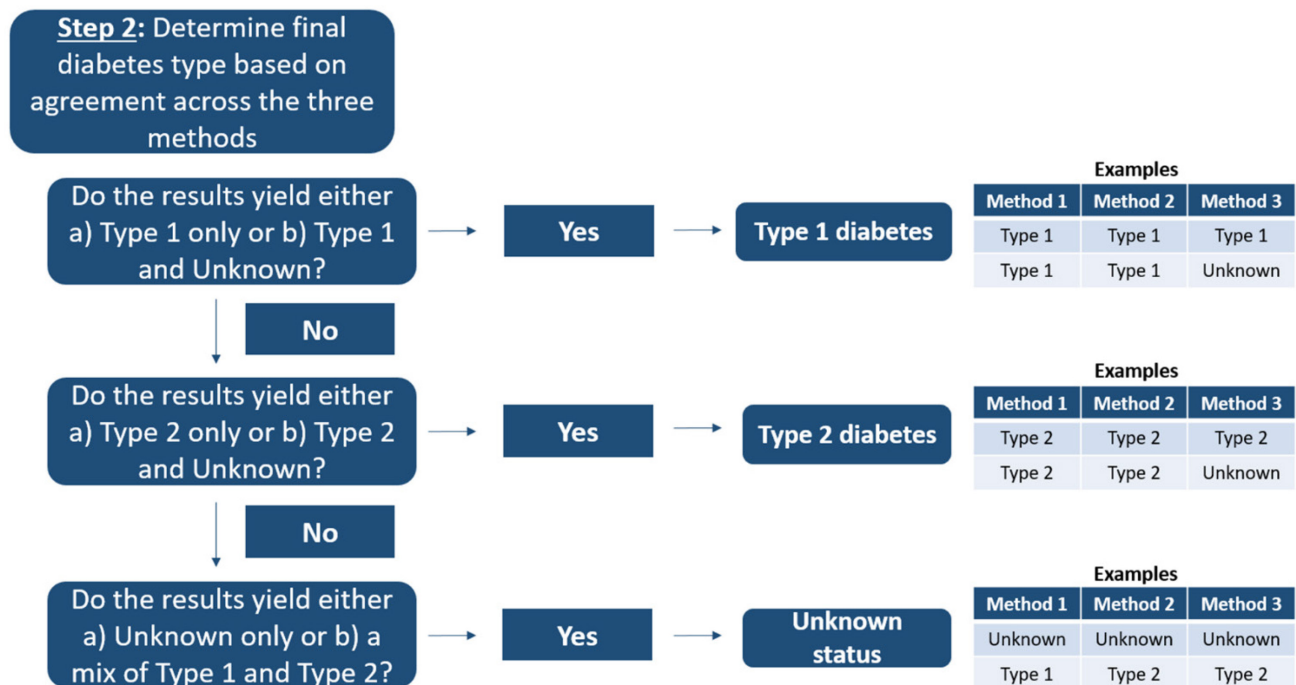
For example:

- On all Medicare claims, a patient had 90% of their type 1 or type 2 diagnoses listed as type 2 diabetes ICD-10 diagnoses codes, which identifies a type 2 diabetes disease.
- On all E&M claims, the patient had 70% of their type 1 or type 2 diagnoses listed as type 2 diabetes ICD-10 diagnoses codes, which identifies a type 2 diabetes disease.

- Finally, on all endocrinologist-billed claims, the patient had 90% of their type 1 or type 2 diagnoses listed as type 2 diabetes ICD-10 diagnoses codes, which identifies a type 2 diabetes disease.

Step 2 determines a final diabetes type classification based on agreement across the 3 methods from Step 1.

Figure B-2. Diabetes Sub-Grouping Methodology – Step 2



Based on the example provided in Step 1, the 3 methods did not yield either a type 1 diabetes only or a type 1 diabetes and unknown result, but there was complete agreement across the 3 methods on a type 2 diabetes disease. Therefore, the patient would be placed into the Type 2 Diabetes sub-group.

Appendix C. Measure Construction and Calculation

This appendix provides additional details on how (i) an episode is constructed and attributed to a particular measurement period, (ii) how days are assigned to an episode, and (iii) how the measure score is calculated.

C.1 - Episode Construction Examples

The figures below provide examples of how episodes are constructed and attributed to a particular measurement period. Overall, an episode's window is defined based on:

- Whether the patient-clinician relationship during the measurement period was continuous; and
- The amount of claims data that has not been assessed in preceding measurement periods.

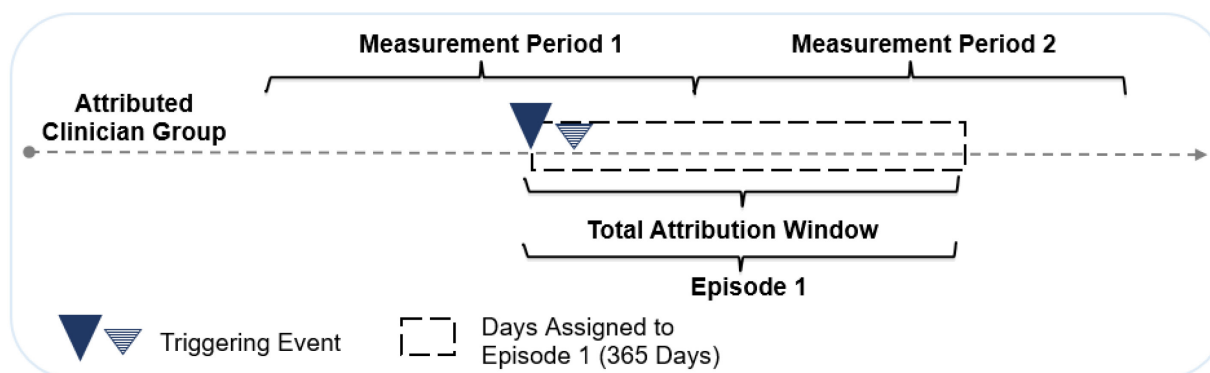
These examples also show how days are assigned to episodes. Assigned days are used as a weighting factor at the measure score calculation step, where the observed to expected ratio of each episode is weighted by the number of assigned days to that episode and then averaged over all episodes attributed to the clinician or clinician group. Therefore, to ensure fair comparison, longer episodes are given more weight during measure calculation than shorter episodes.

Episode Window 1. 365 Days; Same Number of Assigned Days

Figure C-1 illustrates an episode for a chronic disease that is 365 days long. This episode begins during the first measurement period with a pair of triggering services that opens a one-year long attribution window that extends into the second measurement period. While a reaffirming service would have extended the relationship between the patient and the attributed clinician, the absence of a reaffirming claim ends this clinician-patient relationship after 365 days. Therefore, in this example, the length of the total attribution window and the episode are the same.

- **Measurement Period 1:** Costs will not be assessed during measurement period 1 because there was not a year's worth of claims data to assess during this measurement period.
- **Measurement Period 2:** Costs will be assessed during measurement period 2 because the episode ended in measurement period 2 and contained a year's worth of claims data that have not been previously assessed.
 - Since none of the days were previously assessed, all 365 days would be assigned to episode 1 and would be used as a weighting factor at the measure score calculation step.

Figure C-1. Episode Window (365 Days; Same Number of Assigned Days)

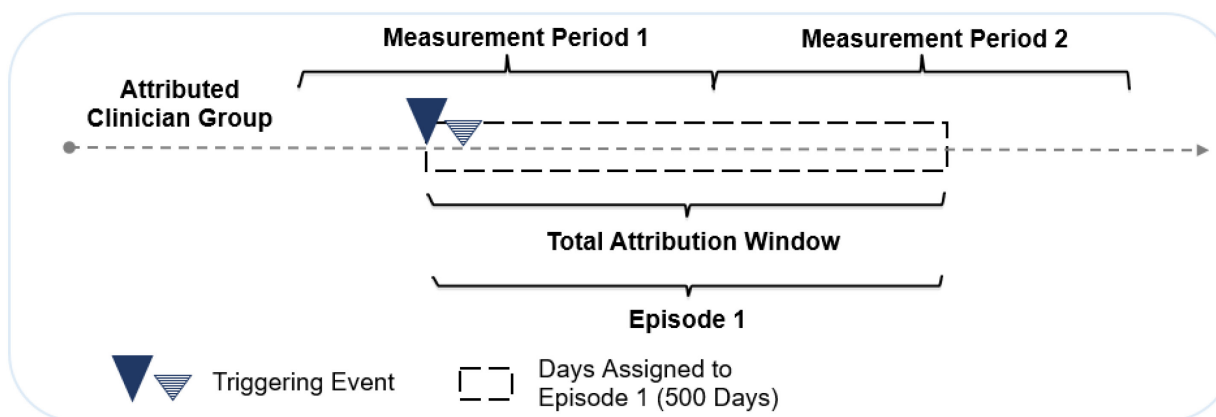


Episode Window 2. 366 to 729 days; Same Cost Assignment Period

Figure C-2 illustrates an episode for a chronic disease that is longer than 365 days.³ This episode begins during measurement period 1, contains 1 reaffirming claim that extends the initial attribution window, and ends 500 days after the trigger claim during measurement period 2.

- **Measurement Period 1:** Costs will not be assessed during measurement period 1 because of the absence of a year's worth of claims data to assess during this measurement period.
- **Measurement Period 2:** Costs will be assessed during measurement period 2 because the episode ended in measurement period 2 and contained a year's worth of claims data that have not been previously assessed.
 - Since none of the days were previously assessed, all 500 days would be assigned to episode 1 and would be used as a weighting factor at the measure score calculation step.

Figure C-2. Episode Window (366 to 729 days; Same Number of Assigned Days)



³ Episodes can be up to 729 days long. At 730 days, the patient's episode would be split into 2 distinct 365-day long episodes because there would be a year's worth of claims data available in each episode.

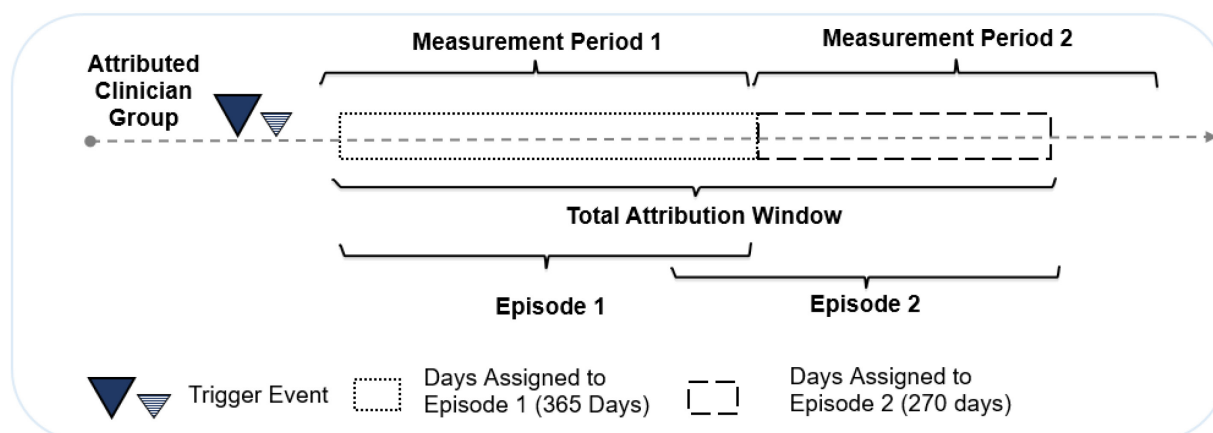
Episode Window 3. 365 Days; Different Cost Assignment Period

Figure C-3 depicts how episodes without sufficient claims data are constructed and how days not previously assessed are assigned to those episodes.

In this example, the total attribution window begins with a pair of trigger services billed before measurement period 1 and ends 635 days (approximately 20 months) later, when the clinician-patient relationship ends during measurement period 2.

- **Measurement Period 1:** Costs will be assessed during measurement period 1 because episode 1 ended in measurement period 1 and contained a year's worth of claims data that have not been previously assessed. Since none of the days were previously assessed, all 365 days would be assigned to episode 1.
- **Measurement Period 2:** There is not a year's worth of claims data between the end of episode 1 and the end of the total attribution window. Therefore, the start date of episode 2 is set as 365 days prior to the end of the total attribution window, and falls during episode 1.
 - Since the costs during the days where episodes 1 and 2 overlap have already been assessed during measurement period 1, only the days occurring **after** the episode 1 end date will be assigned to episode 2 (approximately 270 days). These 270 days will be used as a weighting factor at the measure score calculation step.

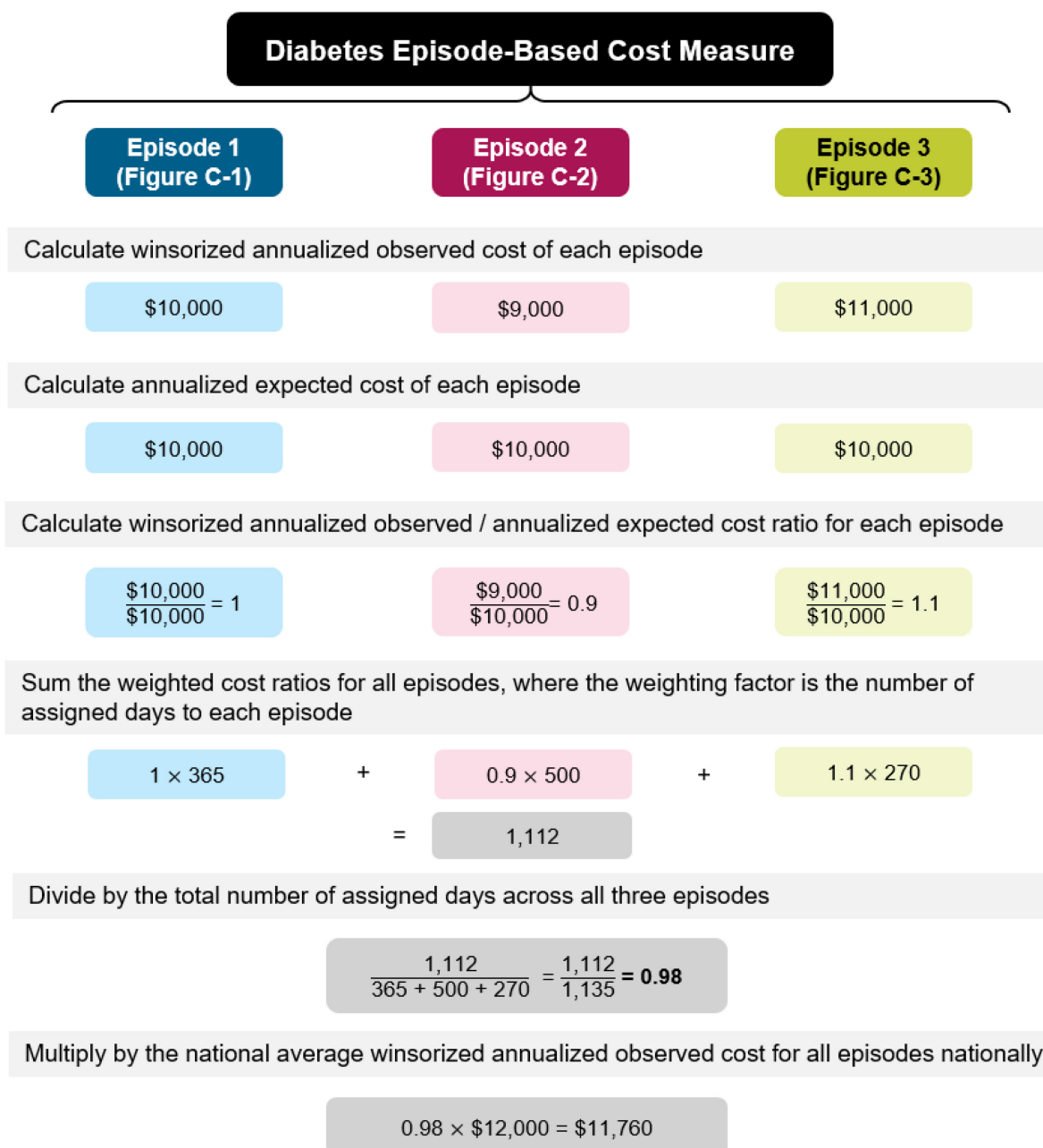
Figure C-3. Episode Window (365 Days; Different Number of Assigned Days)



C.2 - Measure Calculation Example for Measurement Period 2

Sub-section C.2 shows how the measure score is calculated during measurement period 2, using the examples illustrated in sub-section C.1. Figure C-4 below provides an illustrated example of measure calculation, using an example measure where the clinician group has only 3 attributed episodes for demonstration purposes.

Figure C-4. Diabetes Episode-Based Cost Measure Calculation Steps



Appendix D. Illustration of Attribution to Individual Clinicians (TIN-NPI)

This appendix provides a detailed illustration of the attribution methodology at the TIN and TIN-NPI levels.

Step 1. Attribute TIN-NPI

Once an episode for a chronic disease has been defined, it is attributed to the:

- TIN that billed the trigger services (trigger claim and confirming claim) for the total attribution window, and to the
- TIN-NPI(s) within the attributed TIN that billed at least 30% of “primary care” E&M codes with a relevant chronic condition diagnosis and/or chronic condition-related CPT/HCPCS codes for related services with a relevant chronic condition diagnosis on Part B Physician/Supplier claim lines during the episode.

Figure D-1. TIN-NPI Attribution

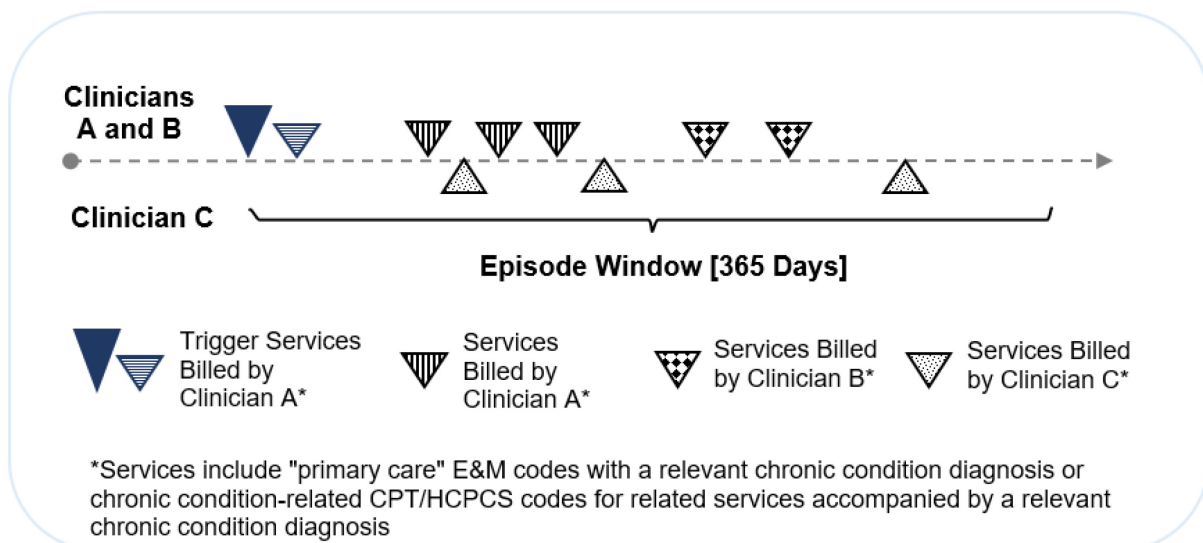


Figure D-1 illustrates a scenario in which 3 clinicians (A, B, and C) within an attributed clinician group (TIN 1) have billed services during a patient's episode window. Within the episode window, there are a total of 10 services billed across the 3 clinicians. Each of these services is uniquely marked depending on the clinician that billed the service. For simplicity, these services only include those billed as “primary care” E&M codes with a relevant chronic condition diagnosis or chronic condition-related CPT/HCPCS codes for related services with a relevant chronic condition diagnosis.

TIN level attribution: TIN 1 is attributed the episode because it billed both of the patient's trigger services.

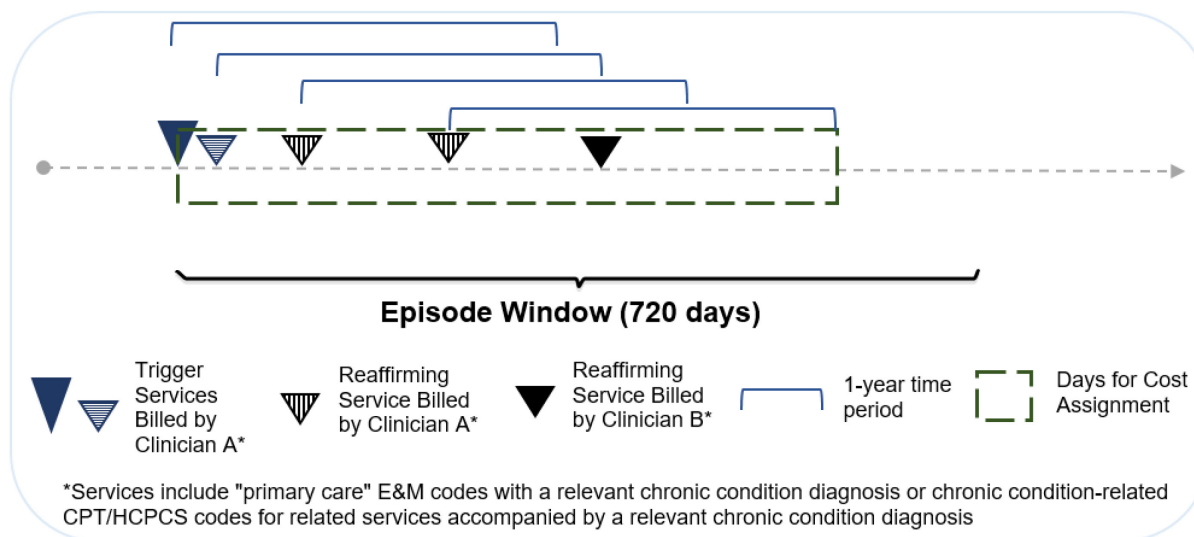
TIN-NPI level attribution: Clinician A bills 5 qualifying services (5/10, 50%), Clinician B bills 2 services (2/10, 20%), and Clinician C bills 3 services (3/10, 30%) during the episode window.

- Clinicians A and C met the 30% threshold, so they are attributed this episode.⁴ Clinician B did not meet the 30% threshold, so it is not attributed this episode.

Step 2. Assign Days to Attributed TIN-NPI

This section provides a detailed explanation of how days are assigned at the TIN-NPI level. Since different clinicians tend to take care of a patient at different times during an episode, this methodology helps determine the number of days during which each attributed TIN-NPI is responsible for the patient's care.

Figure D-2. TIN-NPI Attribution & Assignment of Days



In Figure D-2 above, a 720-day episode is attributed to TIN 1. Within the TIN, there are 2 clinicians: Clinician A and Clinician B. Clinician A billed the trigger services and the 2 reaffirming services, and Clinician B billed 1 reaffirming service during the episode. For simplicity, only the trigger services and the reaffirming services ("primary care" E&M codes with a relevant chronic condition diagnosis or chronic condition-related CPT/HCPSC codes for related services with a relevant chronic condition diagnosis) are shown in the diagram.

Assignment of days at the TIN-NPI level: Clinician A billed 80% of qualifying services, so it is attributed this episode. Clinician B only billed 20% of qualifying services, so it is not attributed this episode. The number of assigned days during which Clinician A was responsible for the patient's care are determined as follows:

- **Identify** one-year long time periods from every (i) trigger service and (ii) reaffirming service billed by Clinician A (represented by the blue brackets).
- **Determine** the number of days where those windows and the episode window overlap. In the example shown above, those days are represented with the green rectangle (approximately 680 days).

These 680 days will be used as a weighting factor at the measure score calculation step.

⁴ In the preliminary version of the specifications, Clinician C would be attributed the measure along with Clinician A. This methodology may be revised after the Summer 2020 Field Testing.