

## Total Cost of Care and Resource Use Frequently Asked Questions (FAQ)

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Email: [TCOCMeasurement@HealthPartners.com](mailto:TCOCMeasurement@HealthPartners.com) for questions.

### Contents

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[Attribution](#)

[Missing Data](#)

[Risk Adjustment](#)

[Benchmarks](#)

[Multiple Data Sources](#)

[TCRRV™](#)

[Billed vs. Paid](#)

[Payer Type](#)

[Other](#)

[Licensing](#)

[Pharmacy](#)

### Attribution

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#### What attribution method is recommended for HealthPartners' Total Cost of Care (TCOC) measures?

HealthPartners tested multiple common attribution methods discussed in the [Attribution Use in Total Cost of Care Technical Paper](#), all of which had similar results. HealthPartners utilizes method B summarized below.

The HealthPartners attribution approach attributes members to the provider that provides the largest percentage of primary care office visits as determined by the specialty of the servicing physician during the performance measurement period. In the event of a tie, the provider with the most recent visit will be attributed to the member. This is one of the most inclusive of all the attribution methods.

- ~70% of members are attributed using most primary care office visits.
- ~15% are non-users.
- ~15% are emergency department (ED), specialty, primary care in the inpatient setting, or pharmacy only users.

#### Why attribute patients?

The goal of attribution is to create a comparable peer group of providers to evaluate their effectiveness at managing TCOC and Resource Use.

### **Why was a minimum panel size of 600 used for reporting?**

HealthPartners has tested the TCOC measures at various n sizes; however, they are NQF endorsed at the 600 panel size. We recommend a minimum panel size of 600 attributed members for reliable cost comparisons and sufficient data size for available quality and patient experience measurement. Our reliability testing has determined that results are technically reliable at a minimum data size of 150 members. The n size chosen will depend on the intended use and level of scrutiny given to the measure (e.g. more reliability/larger n required to support TCOC contracts vs. less reliable/lower n required to support provider practice improvement efforts).

### **What considerations are needed to ensure attribution produces reliable and unbiased results?**

Some attribution models that try to be too inclusive tend to introduce bias toward providers that are more present in a hospital setting, as a disproportionate number of their patients will have been treated in a hospital setting. Similarly, including specialties beyond primary care introduces a bias to provider groups with more specialists, as patients that seek specialty care typically have a higher and more intensive use rate.

Other considerations include:

- Market dynamics impacting access (e.g. open access, closed model).
- Primary care penetration.
- Provider group dynamics (e.g. large systems, large group practices, small group, solo practitioners).
- Note that TCOC and Resource Use results are not impacted by product design mix within the data set.

### **What is the impact on attribution for patients that receive care from specialists only (i.e. no primary care services)?**

Patients seeking specialty only care are not attributed via the HealthPartners primary care attribution methodology (which is recommended not required for TCOC measures). Note that approximately 15% do not use primary care and another 15% of members do not use health care services. Therefore, these patients are not attributed.

Note the following regarding NQF endorsed criteria for TCOC and Resource Use:

- TCOC is a patient centered model.
- OB/GYNs are considered primary care providers.
- 9 months of enrollment is an important criteria to ensure sufficient diagnoses for accurate risk assessment.
- Minimum data size of 600 attributed members is recommended for a reliable cost comparisons and sufficient data size for available quality and patient experience measurement. Reliability testing has determined that results are technically reliable at a minimum data size of 150 members.

## Benchmarks

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### Does HealthPartners create benchmark data?

HealthPartners does not calculate predetermined benchmarks nationally or locally, as individual markets/organizations need to apply consistent logic and calibrations to create valid comparative results (for example, risk adjustment would need to be commonly applied for any results to be compared). However, the methodology does compare each individual analysis group (e.g. provider group, geographic region) to the overall score which in essence can be used as your benchmark.

## Billed vs. Paid

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### Is the paid amount absolutely required?

- The paid amount is not necessarily required for the Resource Use measure, but without it, you will need to create a proxy for paid by multiplying the billed amount by an estimated discount factor. For all non-normal TCRRV applications (should be less than 5% of data), paid amount is used as a proxy for TCRRVs.

### Are billed amounts listed in the upper and lower limits of the TCRRV™ code table samples?

The upper and lower limits in the [TCRRV™ code table samples](#) are the billed amount. The billed amount is used to facilitate accurate TCRRV™ application (i.e. checking for data errors such as incorrect units at the line level) and does not represent the TCRRV™ relativities within or across service components.

### Would the paid amount distribution between settings be valid in a multi-payer dataset?

This depends upon if you have a multi-payer dataset that is strictly commercial or combined (commercial, Medicare and/or Medicaid). Within commercial payers the distribution between settings would be similar. However, when crossing between commercial, Medicare or Medicaid, there will be differences in the distribution between settings. We address questions about payer types more in the [Payer](#) section of this FAQ.

### How important is it to have the billed amounts for accuracy threshold determination for TCRRVs™?

The billed amount is not necessarily required for the Resource Use measure; however, you will need to make an adjustment to your input data so the TCRRV™ application (TCRRV™ grouper) will work properly. Since the billed amount is used to evaluate the accuracy of the TCRRV™ assignment, you will need to estimate the billed amount on the data using the amount paid.

- If you know the discount rate by place of service (i.e. inpatient, outpatient, professional or pharmacy) you can back into a factor and apply that to the paid amount to estimate billed. For example, a 60% discount rate would create a 1.67 factor (i.e. 1 divided by 0.6).
- If you don't have access to the discount rates in the data (i.e. you do not have billed amount at any level on the data), you can estimate the factors and then fine tune them by trial and error until the percent of services that falls outside the high and low thresholds are relatively equal (i.e. +/- 2.5%).



## **Are the TCRRV™ units calibrated across settings (inpatient, outpatient, professional, pharmacy) using the paid or billed amount?**

The TCRRV™ limits are calibrated to the billed amount to facilitate accurate application, while the actual TCRRVs™ are calibrated to the paid amount to achieve a uniform price across all components of care (inpatient, outpatient, professional and pharmacy).

### **What is the billed amount?**

- The billed amount in the documentation means the provider charged amount. It should be the value that is directly off the medical claim form populated directly from a provider/hospital's charge master.
- Most plans or users have this value on the commercial data as it is widely used in many applications (employer discount rate calculations).

### **Why use billed amount and not paid amount?**

- The billed amount is only used to accurately apply the TCRRVs™ to account for data errors.
- The billed amount is a more accurate way to evaluate unit errors at the line level as the billed amount is required at the line level (unlike paid which can all be combined into one line).
- If the billed amount on a claim line is outside the upper and lower limits, then the paid amount is used to estimate the TCRRVs™. We use the paid to ensure the TCRRVs™ are not applied to a line item that was not paid. If a line item was not paid, we do not want to assign a TCRRV™.

### **If a user does not have the billed amount, should they use the reimbursement amount multiplied by a factor?**

If you do not have a reliable billed amount, then you can estimate it using the reimbursement amount multiplied by a factor. The typical discount rate should be around 60%, so that means the factor is 1.67 (calc: 1/0.6). If you know the typical discount rates by inpatient, outpatient, and professional, then you should use those to generate the factors. If you do not know the discount rates, then you can use a trial and error method until you get the number of high and low line counts to equal by place of service (i.e. 2% high, 96% normal, and 2% low).

## **Licensing**

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### **What licensing agreement is needed if the user is performing TCOC and Resource Use measurement *on their own*?**

Complete the [Your own use licensing form](#) and read and accept the [TCRRV™ terms and conditions](#).

### **What licensing agreement is needed if the user is working with a vendor who will be implementing TCOC and Resource Use measurement *on their behalf* (vendor/client)?**

Complete the [Vendor/Client use \(third party\) licensing form](#) and read and accept the [TCRRV™ terms and conditions](#). Return Exhibit A to [TCOCMeasurement@HealthPartners.com](mailto:TCOCMeasurement@HealthPartners.com) prior to use.

## **How should HealthPartners' TCOC be referenced in external documents?**

This work is based on the patented algorithm of **HealthPartners, Inc. (Bloomington, MN)** and is used with their permission.

## **Missing Data**

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### **What if the outpatient data only has revenue codes and no CPT codes?**

The TCRRV™ grouper requires both the revenue and CPT code fields for outpatient data to apply TCRRVs™ most effectively.

- If you do not have CPTs available on outpatient data, the standard grouper process will assign the default value. Since the default process uses the paid amount as a proxy for TCRRVs this introduces price into the resource use measure.

### **Is it critical to use the same approach for missing data elements across multiple data sources?**

Yes, it is critical to use a common and consistent approach when benchmarking across data sources is desired. The TCRRV™ application software provided by HealthPartners uses a common input file approach to standardize the data.

### **Is the "~" (tilde character) required for missing data?**

No, this is not required.

### **Is the paid amount absolutely required?**

- The paid amount is not necessarily required for the Resource Use measure, but without it, you will need to create a proxy for paid by multiplying the billed amount by an estimated discount factor.

### **How important is it to have the billed amounts for accuracy threshold determination for TCRRVs™?**

The billed amount is not necessarily required for the Resource Use measure; however, you will need to make an adjustment to your input data so the TCRRV™ application (TCRRV™ grouper) will work properly. Since the billed amount is used to evaluate the accuracy of the TCRRV™ assignment, you will need to estimate the billed amount on the data using the amount paid.

- If you know the discount rate by place of service (i.e. inpatient, outpatient, professional, or pharmacy) you can back into a factor and apply that to the paid amount to estimate billed. For example a 60% discount rate would create a 1.67 factor (i.e. 1 divided by 0.6).
- If you don't have access to the discount rates of the data (i.e. you do not have billed amount at any level on the data), you can estimate the factors and then fine tune them by trial and error until the percent of services that falls outside the high and low thresholds are relatively equal (i.e. +- 2.5%).

**If a user does not have the billed amount, should they use the reimbursement amount multiplied by a factor?**

Yes, if you do not have a reliable billed amount, then you can estimate it using the reimbursement amount multiplied by a factor. The typical discount rate should be around 60%, so that means the factor is 1.67 (calculation =  $1/0.6$ ). If you know the typical discount rates by inpatient, outpatient and professional, then you should use those to generate the factors. If you do not know the discount rates, then you can use a trial and error method until you get the number of high and low line counts to equal by place of service (i.e. 2% high, 96% normal, and 2% low).

## **Multiple Data Sources**

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**If different data sources use varying methodologies, what impact will that have on the comparisons?**

The methodology and criteria need to be consistently applied across multiple data sources (e.g. minimum enrollment, risk adjustment, cost truncation level).

**Is it critical to use the same approach for missing data elements across multiple data sources?**

Yes, it is critical to use a common and consistent approach when benchmarking across data sources is desired. The TCRRV™ application software provided by HealthPartners uses a common input file approach to standardize the data.

**Can different risk adjusters be used across multiple data sources?**

No, HealthPartners does not recommend using multiple risk adjusters across data sources. Comparing results across risk groupers does not produce valid results for two reasons.

1. The relative risk between the populations using the different risk adjusters cannot be evaluated since each risk grouper uses its own relative weight scale.
2. The underlying process by which the risk groupers assess expected resource consumption (risk) varies (e.g. the relative weight given to a patient with diabetes versus a patient with hypertension will be different between two risk groupers).

**What should be considered if using data sets for different time frames?**

Comparing across time periods introduces variation that creates inconsistency in the drivers of TCOC and Resource Use (e.g. new technology, medications brand/generic, legislation).

When applying TCRRVs™ across multiple years, HealthPartners recommends that the year of the TCRRV™ set used matches the year of the most current data within the analysis.

The [weight factor\(s\) \(pg 18\)](#) are applied to the user's billed and paid amounts prior to the application of the TCRRVs™. The user will need to match the TCRRV™ set and data year for their specific application to the list below to determine the factors to utilize. If the TCRRV™ set matches the year of data, no factor needs to be applied.



This step is necessary as TCRRV™ sets need to be consistent to the user's year of data. The adjusted factor for billed and paid amounts should only be used for the TCRRV™ application process and should not be used in any analysis.

### **What options are available for multiple data sources that do not have access to full pharmacy data?**

The TCOC and Resource Use measures are designed to accommodate members that have no pharmacy coverage as they calculate medical and pharmacy components separately. The results are summed creating the Total Cost of Care and Total Resource Use measures. If a provider's percentage of members with a pharmacy carve out is too high (between 70% and 100%), they can be compared to a medical only benchmark. However, this is not desirable as the impact of pharmacy management within TCOC is lost.

### **Is there a way to create user defined paid adjustment factors (Data Driven TCRRVs™) to illustrate the price variations throughout the data?**

The [TCRRV™ application software \(pgs 8-9\)](#) allows users to create data-driven TCRRVs™ (user defined paid adjustment factors). HealthPartners highly recommends users to do this as it will highlight the price variations.

### **Does the model account for varying numbers of ICDs submitted?**

It is preferred to use the largest number of ICD diagnosis code positions for risk assessment (typically to a max of 5 positions). However, it is more important that all data sources submit the same number of diagnosis code positions.

For benchmarking across multiple data sources, the number of diagnosis code positions need to be limited to the data source with the least available to ensure comparable risk assessment.

## **Payer Type**

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### **The technical guidelines specify "commercial" for the product. Does the Total Cost of Care (TCOC) calculation only apply to the commercial line of business?**

The TCOC and Resource Use measures were endorsed by the National Quality Forum (NQF) for a commercial population; however, we have successfully developed and deployed a Medicaid TCOC model in our market with only a few minor modifications to the commercial TCOC methodology. The modifications include adjustments to the risk adjustment weight calibrations, reduction in the number of months required to meet continuous enrollment and sub-product adjustments. We also feel that the measure could be calibrated to meet the needs of the Medicare population.

### **Why did HealthPartners seek endorsement for commercial only?**

We sought endorsement for the TCOC and Resource Use measures at the commercial level because we had the most experience with this data. We have recently developed a Medicaid model to be used alongside our commercial model. Regarding Medicare, we have a Medicare cost product and do not receive complete claims data to apply and test the methods; however, we still believe these measures have applicability for Medicare.

**Do you believe the measure would be valid if used on a dataset containing a mix of product types? For example, applying the measure to combined commercial AND Medicare data?**

We do not believe the results would be valid if the commercial and Medicare data was combined and processed using a standard risk assessment process. The commercial and Medicare population utilize resources very differently therefore the risk assessment process will need to account for these variances. In addition, in our experience with a Medicaid model, while the TCRRVs™ may be the same, other factors, such as enrollment, payment rates, and benefit designs create performance variances in the models. If a combined commercial and Medicare process was developed it would have to control for many factors. If it was absolutely necessary to combine the results one option would be to calculate the measures separately (on each population) and then case mix adjust the results to an aggregate number to control for variations in population distributions.

*One question the user would want to consider is how valuable is a blended TCOC value provider? Would a consumer make an informed decision on a blended value when they are only in a single product?*

## **Pharmacy**

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### **Can TCOC and Resource Use be run without pharmacy?**

Technically, the user can run TCOC and Resource use without pharmacy. However, it is preferred to include pharmacy if possible as without pharmacy, the measures would not be considered NQF endorsed and would actually only be Total *Medical* Cost of Care or Resource Use.

### **How are specialty drugs considered in the calculations?**

Specialty drugs are included in the measures.

### **What options are available for multiple data sources that do not have access to full pharmacy data?**

The TCOC and Resource Use measures are designed to accommodate members that have no pharmacy coverage as they calculate medical and pharmacy components separately. The results are summed creating the Total Cost of Care and Total Resource Use measures. If a provider's percentage of members with a pharmacy carve out is too high (between 70% and 100%), they can be compared to a medical only benchmark. However, this is not desirable as the impact of pharmacy management within TCOC is lost.

### **The pharmacy process only uses NDC codes, does that mean the pharmacy macro is only for pharmacy claims and that pharmacy service administered in the hospital should be included in facility claims file?**

Yes, medications provided while in hospitals are billed by the hospital on a 1450 claim form. The medications billed in an outpatient department are also billed by the hospital and will have a CPT code associated with them (i.e. J codes).



## Risk Adjustment

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### How does the user gain an understanding about the ACG software?

HealthPartners provides [risk adjustment specifications](#) used within the TCOC measures as well as the [ACG technical reference guide](#). For further details, HealthPartners advises users to reach out to [DST Systems, Inc.](#)

### How is the ACG software utilized within TCOC?

HealthPartners uses the ACG grouper for concurrent risk adjustment in a two step process.

1. The data is run through the ACG grouper where it outputs a person level file that includes an ACG cell assigned to each member.
2. Then merge on the concurrent ACG cell risk weights by ACG cell. The user has the option to create their own risk weights or use the national commercial weights that are included in the software.

### How are year to year comparisons done? If the user scores a population this year (e.g. commercial members in 5 states) and then scores another population next year (e.g. updated commercial members in those same 5 states), how does the user know whether the overall cost of care is going up or down? How do you judge the risk level of two distinct annual populations relative to each other?

ACGs are a cell based risk adjustment system that can be independently run on various input years which allows for multiple years to be compared as long as the risk weights are held constant.

### Can other risk adjusters be used with TCOC and Resource Use measures (other than ACGs)?

TCOC and Resource Use measures were endorsed by the National Quality Forum (NQF) using Johns Hopkins' Adjusted Clinical Groups (ACGs). However, HealthPartners has performed additional reliability and validity testing to support organizations that utilize other risk adjusters. The purpose of these analyses is to show that other risk adjusters produce reliable and valid TCOC results. For testing results, review the [Scientifically Tested](#) section on the [TCOC website](#).

### Can multiple risk adjusters be utilized across multiple data sources? How will this impact the reliability of comparing across the data sources?

HealthPartners does not recommend using multiple risk adjusters across multiple data sources. Comparing results across risk groupers does not produce valid results for two reasons:

1. The relative risk between the populations using the different risk adjusters cannot be evaluated since each risk grouper uses its own relative weight scale.
2. The underlying process by which the risk groupers assess expected resource consumption (risk) varies (e.g. the relative weight given to a patient with diabetes versus a patient with hypertension will be different between two risk groupers).

**What groupers are required for TCRRV™ application?**

- Inpatient: MS-DRG grouper is required (any version)
- Outpatient: APC grouper is not required. Addendum B of the CMS federal register is used as a look-up table using the APC weights and status code, which identifies how to classify and process the claim line.
- Professional: No grouper required
- Pharmacy: No grouper required

**Does the TCRRV™ analytic process need to be done anew with each dataset or are the TCRRV™ values predetermined and readily applied?**

The TCRRV™ files are predetermined and they are ready to be applied.

**The TCRRV™ grouper code requires inputs of “units” for facility-outpatient and professional. Is this the number of services provided having the same procedure code?**

Yes, units refers to the number of services provided having the same procedure code.

**Does the TCRRV™ grouper accept more than one procedure modifier code?**

The program only accepts 1 modifier code because this is the code that will indicate/impact resource consumption (e.g. 26 – indicates professional component only, while a TC represents the technical component). The remaining 3 modifier codes are not required.

**Does the measure include costs for home health, hospice, skilled nursing facility, durable medical equipment, and stays in long-term care facilities? If so, which of the four TCRRV™ files would you apply to facility charges for these settings?**

The Total Cost of Care and Total Resource Use measures include all services consumed by the patient inclusive of home health, hospice, skilled nursing facility, durable medical equipment, and stays in long-term care facilities.

Home health services and durable medical equipment are included in the professional TCRRV™ file.

Skilled nursing facility, hospice and long term care services are handled through the inpatient TCRRV™ application methodology rather than through the actual TCRRV™ files. Since there are no standard weighting systems for these services and significant variation in billing practices exist, the methodology does not specifically try to standardize price, but rather estimates the resources consumed. To do this, the paid amount on the claim is multiplied by a factor that makes it relative to the other TCRRVs™.

In development, we found this method to be the most accurate given the state of today's billing practices for these services. This was the best approach without over-fitting the model for services that do not represent a significant portion of the average member's total cost of care and therefore do not drive the variation in total cost of care.

### **Is there a way to create user defined paid adjustment factors (adjusted TCRRVs™) to illustrate the price variations throughout the data?**

The [TCRRV™ application software \(pgs 8-9\)](#) allows users to create market-driven adjusted TCRRVs™ (user defined paid adjustment factors). HealthPartners highly recommends users to do this as it will highlight the price variations.

### **How does a user apply TCRRVs™ to multiple years for trending purposes?**

When applying TCRRVs™ across multiple years, HealthPartners recommends that the year of the TCRRV™ set used matches the year of the most current data within the analysis.

The [weight factor\(s\) \(pg 18\)](#) are applied to the user's billed and paid amounts prior to the application of the TCRRVs™. The user will need to match the TCRRV™ set and data year for their specific application to the list below to determine the factors to utilize. If the TCRRV™ set matches the year of data, no factor needs to be applied.

This step is necessary as TCRRV™ sets need to be consistent to the user's year of data. The adjusted factor for billed and paid amounts should only be used for the TCRRV™ application process and should not be used in any analysis.

### **How are the upper and lower TCRRV™ bounds determined?**

HealthPartners uses a national database to produce an expected range of billed amounts per day/unit for each underlying code. This expected range is quite wide and is not an indicator of an outlier, rather an indicator of an error in the underlying unit field.

### **How are the TCRRV™ flags assigned?**

The TCRRV™ flag is designed to inform the user on how the TCRRV™ grouper evaluates the user's claim (or service). The flag is broken down into three types of indicators.

1. High, low, or normal – These flag are assigned when the grouper was able to apply a TCRRV™ and determine if the service was within the normal thresholds.
2. No Match, No Units, No Days – These flags indicate that the claim did not have the necessary information needed to apply the TCRRVs™ using the base unit; therefore, the TCRRV™ was default based on the amount paid X a factor that creates a value that is in-line with the standard TCRRVs™.
3. Incidental – The outpatient component has a unique indicator that determines if a service line is incidental to the major procedure performed during a single visit. If it is determined that the service line was incidental to the major procedure the incidental service line's TCRRV™ is set to zero as the resources consumed are included in the major procedure. If there is no major procedure on the claim, the entire claim is defaulted using the amount paid X an outpatient factor which creates a value that is in-line with the standard outpatient TCRRVs™.

## What do the TCRRV™ flag values mean?

The TCRRV™ flags are defined with the [TCRRV™ application user guide \(pgs 10-11\)](#).

- **Inpatient** – Assigned at the admission level.
- **Outpatient** – Assigned at the encounter level.
- **Professional** – Assigned at the service line level.
- **Pharmacy** – Assigned at the prescription level.

All claims that are not normal have their TCRRVs™ set through the default process, which is calculated by Allowed Amount x TCRRV™ Calibration Factor that estimates resource use.

TCRRV™ Flag	Definition
No LOS (inpatient only)	No length of stay is assigned to the encounter/admission.
Incidental (outpatient only)	The entire encounter is comprised of incidental services
No Billed	There is zero billed but the encounter has an allowed amount greater than zero.
No Units (not for inpatient)	The entire encounter has no units.
No Match	There is not a corresponding code in the TCRRV™ table.
No Days (pharmacy only)	The service line has no days.
No Code (professional only)	The service line has no code or an invalid code.
Low	The TCRRV™ assigned is considerably lower than the resources consumed.
High	The TCRRV™ assigned is considerably higher than the resources consumed.
Normal	The TCRRV™ assigned is within the normal range.

For example, if the TCRRV™ flag is high, this would indicate that the claim is likely to have consumed more resources than the amount of TCRRVs™ that would be assigned through the normal process. Since the claim is not within the normal range, the TCRRV™ process assigns through the default process, which is a factor applied to the allowed amount.

## How are the TCRRV™ weights derived?

The HealthPartners TCRRV™ grouper assigns values for all inpatient, outpatient, professional, and pharmacy services. To establish relativity within each care setting, the grouper utilizes the CMS relative weighting systems—inpatient MS-DRGs, outpatient APCs and RVUs, and professional RVUs. For service-types that do not have CMS weights (i.e. pharmacy), weights are imputed based on the average cost-per-weight using a large national commercial database.

To establish relativity across care settings, the grouper calibrates each weight scale with an “average-paid-per-weight” value for each setting. Because they are relative within and across settings, TCRRVs function like any other monetary field.

Beyond the development process outlined above, HealthPartners employs an additional technique to ensure that TCRRVs™ are relative across categories, regardless of care setting. Some services (like radiology, lab work, select surgeries/same-day surgeries) require similar resources, whether performed in a hospital, office, or outpatient setting. The grouper “targets” these services, and re-calibrates their TCRRVs™ to reflect a uniform resource value.

For instance, EEGs (electroencephalogram) require the same amount of resources, whether performed in an outpatient hospital or a free standing clinic. The TCRRV™ assignment process identifies outpatient EEG services and, deviating from the category-specific logic outlined above, assigns them the same resource value that professional EEGs receive. This ensures that all like-services are consistently measured, and that TCRRVs™ remain additive, across settings.

### **How are the “average-paid-per-weight” calculated?**

The “average-paid-per-weight” is used to create the relativity between the components of care (i.e. inpatient, outpatient, professional, pharmacy) by doing the following:  $TCRRV^{TM} = TCRRV^{TM} \text{ Calibration Factor} \times \text{Allowed Amount}$ .

1. Create an “average-paid-per-weight” (i.e. calibration factor) for each weight system using the national database.
2. Multiple the “average-paid-per-weight” by the weight for each of the underlying codes within the weight system, which increases its value to a standardized paid amount.
3. Once that’s done for all the weight systems, then the standardized paid amounts (i.e. TCRRV™) are relative to each other and can be added to one another.

When a weight system is not available an average-paid-per-unit is developed for each code, which in turn becomes the TCRRV™. When the user multiplies the TCRRV™ (i.e. average-paid-per-unit by code) by the units on their data, the value becomes a standardized paid amount relative to all the other TCRRVs™.

## **Other**

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### **Is there a way to estimate the confidence intervals for Total Cost of Care and Resource Use measures (i.e. TCI (Total Cost Index) and RUI (Resource Use Index)) based on data size?**

The TCOC and Resource Use measures are considered full population measures; therefore, confidence intervals are not appropriate given there is no sampling error. To review the supporting information on the measures consistency and accuracy, please refer to our reliability and validity testing documentation on our [TCOC website](#) within the [Scientifically Tested](#) section.

### **Is the “Total Cost” in the numerator of the total price formula (total cost/total TCRRV™) based on allowed dollars, and not billed dollars?**

The total cost used is based on allowed dollars.

### **What groupers are required for TCRRV™ application?**

- Inpatient: MS-DRG grouper is required (any version).
- Outpatient: APC grouper is not required. Addendum B of the CMS federal register is used as a look-up table using the APC weights and status code, which identifies how to classify and process the claim line.
- Professional: No grouper required; use RBRVs using CMS RVU.
- Pharmacy: No grouper required; use median amount for per day per NDC.

**How important is it that all data sources use the same DRG?**

TCOC and Resource Use measures use MS-DRGs (any version can be used).

**Does the model account for varying numbers of ICDs submitted?**

- It is preferred to use the largest number of ICD diagnosis code positions for risk assessment (typically to a max of 5 positions); however, it is more important that all data sources submit the same number of diagnosis code positions.
- For benchmarking across data sources, the number of diagnosis code positions need to be limited to the data source with the least available to ensure comparable risk assessment.

**Should the APC repricing method be applied to all services in a claim with an APC payment, or just the APC-paid services themselves?**

The outpatient data needs to be submitted to the TCRRV™ group at the claim line level. The TCRRV™ process assigns resources to the defining service of the outpatient visit and accounts for the incidental or ancillary services (by assigning zero TCRRVs™). The services that are not incidental or ancillary to the defining service are considered an independent service and continue through the TCRRV™ process to be assigned an appropriate number of resources.

**Does a user need to translate outpatient revenue codes to CPT codes? For example, revenue code 710 (recovery room) – in an outpatient/ambulatory surgical setting. Will this merge to any TCRRV™ weight? Is the intent for these outpatient facility revenue codes to pass through the other steps in the method and just get a multiplier against allowed amount?**

The TCRRV™ grouper will address specific revenue codes to determine if their resource consumption is included in a major procedure that took place during a visit. In the case of a recovery room, that service should always be billed with a major procedure; therefore, the recovery room line item will receive zero TCRRVs™ as the resources are included in the major procedure. If the revenue code is independent of the major procedure then the default TCRRV™ process will be applied to the claim line.

**Why are high cost claimants not removed from the data (but rather truncated)?**

High cost members are not removed to hold providers accountable for the full population and all the care that is provided. However, we know that all risk adjusters become less effective (lower  $R^2$ ) in explaining the risk of members when their costs surpass a certain threshold of spend. Since these two points are in conflict, we determine that truncation is an acceptable balance rather than removing them from the provider's panel.