Professional Liability Insurance Component

On January 1, 2000, the Centers for Medicare & Medicaid Services (CMS) implemented resource-based professional liability insurance (PLI) relative value units (RVUs). With this implementation and final transition of the resource-based practice expense (PE) relative values on January 1, 2002, components of the resource-based relative value scale (RBRVS) are no longer based on historical charges. This overview explains the previous payment methodology for PLI expense and discusses the implementation of resource-based PLI relative values.

Data Used to Assign Charge-Based PLI RVUs

The Omnibus Budget Reconciliation Act (OBRA) of 1989 approach to valuing the PE component was also utilized in creating PLI relative values. To distribute PLI RVUs among services, the OBRA 89 method applies the average PLI expense percentage for each specialty to the 1991 average Medicare approved amount for each service. For example:

- For a service that only family practitioners provide and for which the average Medicare payment in 1991 was $100, the PLI proportion for family physicians (3.9%) is multiplied by the $100 average approved amount. The PLI expense component of the service would be assigned 3.9 (initial dollar) RVUs.
- For a service that only neurosurgeons provide and for which the average Medicare payment in 1991 was $1000, the PLI proportion for neurosurgeons (7.6%) is multiplied by the $1000 average approved amount. The PLI expense component of the service would be assigned 76 (initial dollar) RVUs.

For services provided by physicians in more than one specialty, each specialty's PLI expense proportion is multiplied by the proportion of claims for the service that the specialty submits, as follows:

- For a service that is provided 70% of the time by neurosurgeons and 30% of the time by orthopedic surgeons, the neurosurgeons' PLI proportion (7.6%) is multiplied by 70% and the orthopedic surgeons' PLI proportion (7.4%) is multiplied by 30%. The sum of these two products becomes the PLI proportion for the service:

$$(7.6\% \times 0.70) + (7.4\% \times 0.30) = 7.5\%$$

This PLI expense proportion is then multiplied by the $1000 average approved amount:

$$(7.5\% \times \$1000) = \$75$$

The PLI expense component of the service would be assigned 75 (initial dollar) RVUs.

Because anesthesia services are not divided into work, PE, and PLI RVUs, CMS computed the proportions of total payments for anesthesia that were comparable to these three components for other services. The portion of the anesthesiology conversion factor (CF) reflecting the work component was reduced by 42%. As for other services, to maintain a Medicare contribution comparable to the contribution under customary, prevailing, and reasonable (CPR), the portion of the CF reflecting PLI was not reduced.

The CMS based the 1992 PLI RVUs on 1989 charge data "aged" to reflect 1991 payment rules because those were the most recent data available. For the 1992 payment schedule, actual 1991 charge data were used to recalculate the PLI RVUs for some codes for which CMS had imputed values the previous year. For services with insufficient charge data and for new codes, CMS developed crosswalks to predecessor codes, where possible. Since 1993, CMS has used a similar process to establish values for such codes.

Creating Resource-Based PLI Relative Values

In its 1996 and 1997 Annual Reports, the Physician Payment Review Commission (PPRC) called for Congress to revise current law to allow for the development of resource-based PLI RVUs. Further, the PPRC recommended that CMS be directed "to collect data on risk groups and relative insurance premiums across insurers" that could be used in the resource-based component. The AMA generally supported the PPRC's risk-of-service approach but identified a few -issues that warrant further investigation. The AMA called for additional study to determine the extent to which relative premiums and classification methods differ across areas and insurers and to determine whether significant differences exist in liability premiums across physicians in a particular specialty resulting from differences in service mix. The Medicare Payment Advisory Commission (MedPAC) has also supported basing PLI RVUs not only on the physician specialty but also on the type of service. MedPAC contended that the research demonstrates that even within a specialty, the risk of malpractice claims varies according to procedure invasiveness.

The Balanced Budget Act of 1997 required the development of resource-based PLI RVUs by January 1, 2000. CMS contracted with KPMG Consulting to provide support in developing PLI RVUs and published their review of this report, along with proposed PLI RVUs, in their July 22, 1999, *Notice of Proposed Rulemaking*. CMS finalized this proposal, with relatively few changes, in the November 2, 1999, Final Rule. In the November 1, 2000, Final Rule, CMS utilized updated premium data to derive new PLI RVUs.

CMS has computed the new resource-based PLI RVUs using actual professional liability premium data and current Medicare payment data on allowed services and charges, work relative value units, and specialty payment percentages. As stated, MedPAC had previously recommended that CMS base the new PLI RVUs on procedure-specific actual malpractice claims. CMS did not use this approach as this type of data was not available, and it is not possible to correlate claims paid to a specific Current Procedural Terminology (CPT®) code when a combination of services is performed. In the 1999 Final Rule, CMS encouraged MedPAC to further develop its idea, particularly as it relates to the statutory requirement to develop resource-based PLI RVUs, and submit its further analysis in comments to further Medicare Physician Payment Schedule (MFS) notices.

CMS is required to update the PLI relative values no less than every five years. The PLI RVUs were updated with new premium data in 2005, 2010, 2015, 2020, and 2023.

For CY 2020, the statutorily required five-year review of the PLI RVUs coincided with the required three-year review of the geographic practice cost indices (GPCIs). GPCIs account for geographic differences in PLI costs. CMS adjusts the GPCIs every three years based on actual PLI premium data, so a sudden increase in PLI costs in a particular region of the country may not be reflected for several years. Considering that the PLI premium data used to update the GPCIs are the same data used to determine the specialty-level risk factors for the calculation of PLI RVUs, CMS finalized a proposal to align the update of PLI premium data with the update to the PLI GPCIs to every three years. Thus, the next mandated review and update of both PLI RVUs and the GPCIs was completed for 2023. CY 2026 will be the next mandated review.

For CY 2020, CMS also finalized several refinements to the PLI RVU methodology for premium data collection including using a broader set of state insurer filings beyond those listed as "physician" and "surgeon" and utilizing partial and total imputation when CMS specialty names are not distinctly identified in the insurer filings. The mappings for partial imputation utilize the longstanding mappings of the regulatory impact table included in all MFS *Federal Register* notices. The mappings for total imputation continue to crosswalk many nonphysician provider specialties to the lowest physician specialty. In previous years, CMS relied on a crosswalk methodology to develop PLI RVUs for any specialty without premium data from at least 35 states. For CY 2020, the methodological changes resulted in the Agency no longer using the crosswalk methodology since the 35-state threshold no longer has relevance.

For CY 2023, CMS changed the PLI methodology from using risk-factor scores, which benchmarked each specialty to the physician specialty with the lowest premiums (which was allergy and immunology up until CY 2022), to risk index scores that benchmark each specialty's premiums to the volume-weighted average of all specialties. In the CY 2023 MFS Proposed Rule, CMS noted that the change to a risk index does not change the actual PLI RVUs. However, CMS had proposed PLI RVUs that would have reduced radiology's overall allowed charges by 2% and radiation oncology's overall allowed charges by 1%, in contrast to radiology's and nuclear medicine's PLI risk premiums having had increased by 9% for CY 2023. The AMA and RUC identified a technical error causing a $110 million PLI RVU reduction for all codes with the professional component/technical component split and alerted CMS of the issue. In the Final Rule, CMS recognized this error and has restored these PLI RVUs, averting radiology PLI payment reductions.

For CY 2023, CMS successfully implemented a long-standing RUC recommendation, which was first made to CMS in 2009, to collect premium rates for all non-physician health care professionals and other non-physician Medicare professionals that were formerly crosswalked to the lowest physician specialty. Through CY 2022, when CMS did not have sufficient premium data for a specialty, their practice was to crosswalk the data for those specialties to the data from the physician specialty with the lowest premiums, ie, allergy and immunology (2022 premium rate of $8,874). RUC has consistently maintained that a risk factor linked to a physician specialty is too high for many of the non-physician health care professions and other non-physician Medicare specialty codes. CMS finalized specialty-specific premiums for allied health professions for CY 2023, with a majority of them being assigned annual premium rates of less than $500 per year.

CMS described the data collection process for the CY 2023 update as generally following the process used for the CY 2020 update with minor methodologic improvements and further success in collecting specialty-specific data. CMS will continue to work with RUC and interested stakeholders to improve the premium data collection process.

The steps in CMS' calculation of PLI RVUs are as follows:

Step 1 A preliminary national average professional liability premium is calculated for each specialty and mapped to the county level. In the CY 2016 MFS Final Rule, CMS adopted a weighting method based on share of total US population. Thus, the specialty premium for each county is multiplied by its share of the total US population, not by the total RVU per county as was the case in 2015. This calculation is then divided by the average PLI GPCI across all counties for each specialty to yield a normalized national average premium for each specialty. Premiums are for a $1 million/$3 million mature claims-made-policy (a policy covering claims made rather than services provided during the policy term).

Step 2 Risk factors (nonsurgical and surgical) are calculated for each specialty by dividing the national average premium for each specialty by the national average premium for the volume-weighted average premium for all specialties.

Premium service risk groups are utilized to subdivide some specialties that have premium rates that differ for surgery, surgery with obstetrics, and nonsurgery, and therefore, reflect differences in PLI risk within the specialty. For most specialties that do not clearly delineate into service-risk groups, all services performed by the specialty receive the same risk factor.

CMS applied the surgical risk factors to CPT codes 10000 through 69999 and the nonsurgical risk factor to all others. In the November 2, 1999, Final Rule CMS acknowledged that certain codes in the "nonsurgical" section of CPT may indeed be invasive and, therefore, be valued based on the surgical risk index. CMS changed to surgical risk index for the cardiology catheterization, angioplasty, and electrophysiology codes. Starting in 2015, this list of codes was updated to contain injection procedures used in conjunction with cardiac catheterization. In the case of OB/GYN services, the higher obstetric premiums and risk factors were used for services that were obstetrical services, while the lower gynecology risk factor was used for all other services.

In CY 2020, CMS assigned technical component (TC) only (TC-only) services the lowest physician-specialty risk factor as a crosswalk. Even with the methodologic change to risk index in CY 2023, CMS continues to use the lowest physician-specialty risk factor for TC-only services.

Step 3 PLI RVUs are calculated for each CPT code. The percentage of a specific service provided by each specialty is multiplied by the specialties' risk index, and the product is then summed across specialties by service. This yields a specialty-weighted PLI RVU that is then multiplied by the physician work RVU for that code to account for differences in risk-of-service. In instances in which the work RVU equals zero, CMS retains the current professional liability RVUs. Beginning in 2016, CMS began using the last three years of an individual code's Medicare utilization to determine the specialty mix. However, there were still low-volume codes (Medicare utilization under 100) that CMS has identified as having an inappropriate specialty mix. Under these circumstances, CMS previously would identify an appropriate crosswalk. In CY 2018, CMS began to implement a long-sought RUC recommendation to use service-level overrides based on the expected specialty, instead of the claims-based specialty mix, to determine the specialty mix for low-volume procedures. These service-level overrides are used to determine the specialty for low-volume procedures for both PE and PLI. If a code has zero Medicare utilization in the last three years, the service will also be assigned a service-level override.

Step 4 The calculated PLI RVUs are then rescaled for budget neutrality as required by the statute. This final step adjusts for relativity by rescaling the proposed PLI RVUs so that the total proposed resource-based PLI RVUs are equal to the total current resource-based PLI RVUs. Scaling by the ratio of the pools of the proposed and current PLI and work RVUs is necessary to maintain the work RVUs for individual services from year to year while also maintaining the overall relationship between work, PE, and PLI RVUs.

In the CY 2011 Final Rule, CMS proceeded with rebasing the Medicare Economic Index (MEI) and adjusting the RVUs to align the RVU shares with the rebased MEI weights. CMS did not make an adjustment directly to the work RVUs; instead, the PE RVUs were increased by an adjustment factor of 1.181, and the malpractice RVUs were increased by an adjustment factor of 1.358. As the professional liability component is only 4.30% of the total payment amount, the initial impact in the 2011 MEI rebasing was minimal. Due to rebasing in 2011, many of the PLI RVUs increased to account for the increase in the cost-share weight percentage PLI received (3.90 to 4.30%). These increases were administered in a budget-neutral fashion. CMS again revised the MEI in the 2014 Final Rule. However, the PLI component maintained its total weight of total payment at 4.30%. This percentage is maintained in the Final Rule for 2024.

As explained in the previous methodology, the following is an example of how a PLI RVU will be calculated for a CPT code:

The percentage of a specific service to be performed by each specialty is determined from the Medicare utilization data. Except for E/M services, CMS only includes specialty premium data for those specialties that account for at least 5% of the total utilization for the past three years.

CPT Code XXXXX	Family practice	20%
	Dermatology	50%
	Plastic surgery	30%

This percentage is then multiplied by the specialty's risk index value.

CPT Code XXXXX (deemed to be "surgical")

Family practice	0.20 × 1.53 = 0.306
Dermatology	0.50 × 1.19 = 0.595
Plastic surgery	0.30 × 2.10 = 0.630

The products for all specialties for the procedure are then summed, yielding a specialty-weighted PLI RVU reflecting the weighted professional liability costs across all specialties for that procedure.

CPT Code XXXXX 1.531 This number will then be multiplied by the procedure's work RVU to account for differences in risk-of-service.

CPT Code XXXXX 1.531 × 2.50 (work RVU) = 3.8275

PLI RVU is adjusted for budget-neutrality factor, which was the 0.025 used in the initial implementation, divided by 0.0414 to account for the CY 2023 methodology change from using risk premiums scores benchmarked to the lowest physician specialty to using a risk index benchmarked to the volume-weighted premium amount for all specialties.

CPT Code XXXXX 3.8275 × (0.025/0.414) = 0.231 PLI RVU

PLI RVU is adjusted for MEI rescaling factor last updated in CY 2011.

CPT Code XXXXX 0.231 × 1.358 = 0.31 PLI RVU

An increase in PLI expenses incurred by physicians can be reflected in Medicare payments in three different ways. For example, if PLI costs increase for most specialties, these increased expenses would be reflected in the annual update to the MEI, which is used to update the Medicare CF. These increased costs would have the potential to increase the CF, which would then lead to increased payments for all physicians. Alternatively, if a particular specialty experiences increased PLI costs, those changes would most likely only be reflected in the relative values every three years when CMS updates the three-year average of professional liability premium data.

PLI RVUs for New and Revised Services

In the CY 2018 MFS Final Rule, CMS finalized a proposal to eliminate the general use of a PLI-specific specialty-mix crosswalk for new and revised codes. CMS will continue to consider specific recommendations regarding specialty mix assignments for new and revised codes, particularly in cases where coding changes are expected to result in differential reporting of services by specialty, or where the new or revised code is expected to be low volume. Absent such information, the specialty mix assumption for a new or revised code would derive from the analytic crosswalk in the first year, followed by the introduction of actual claims data, which is consistent with the approach for developing PE RVUs.

Major Improvements and Continued Concerns Regarding PLI Relative Value Methodology

In 2002, RUC created a new PLI workgroup to review the CMS methodology utilized to compute PLI relative values and to offer suggestions for improvement. The PLI workgroup has offered several suggestions for improvements, and CMS has adopted many of these recommendations to improve the PLI RVU methodology.

For example, during the mandated five-year reviews of the PLI RVUs, CMS has considered several recommendations submitted by RUC.

2005

- CMS improved the utilization data by removing assistant-at-surgery claims from the data set.
- RUC expressed concern that the PLI RVUs could inappropriately be inflated or deflated based on incorrectly reported specialty classifications listed for performing a particular service. In response to this recommendation, CMS implemented a 5% specialty threshold, in which liability data will be excluded for any specialty performing less than 5% of the service except for evaluation and management services, as all physicians report evaluation and management services.
- CMS revised the risk factor for several nonphysician provider specialties to a risk factor of 1.00 because of a recommendation made by RUC and its PLI workgroup. In 2019, CMS will continue to crosswalk non–MD/DO specialties to the lowest MD/DO risk factor specialty, Allergy Immunology. RUC maintains that a risk factor linked to a physician specialty is too high for many of the nonphysician health care professions.
- RUC and its PLI workgroup recommended, and CMS agreed, that a number of professions that were assigned to the average for the all physicians risk factor should be removed from the calculation of professional liability insurance RVUs.
- RUC began to include in its recommendations for new and revised codes recommended PLI relative value crosswalks.

2010

- As a result of RUC recommendations, CMS announced the implementation of the second review and update of the professional liability insurance RVUs. For 2010, PLI RVUs were based on actual CY 2006 and CY 2007 professional liability insurance premium data, CY 2008 Medicare payment data on allowed charges, and CY 2008 geographic adjustment data for professional liability insurance premiums. In the past, the premium data collected only included the top 20 physician specialties. For 2010, CMS included premium data for all physician specialties.
- CMS developed PLI RVUs for technical component services.
- CMS began assigning 0.01 PLI RVUs to physician services that currently have no PLI RVUs associated with them.
- CMS started crosswalking gynecological oncology to general surgery and surgical oncology, instead of medical oncology.
- CMS started crosswalking maxillofacial surgery and oral surgery to plastic surgery, instead of allergy/immunology.

2015

- CMS implemented the third review and update of the PLI RVUs. Beginning in 2015, CMS updated the PLI RVUs using actual 2011 and 2012 PLI premium data, 2013 Medicare payment and utilization data, and 2015 work RVUs and GPCIs.
- CMS implemented a RUC recommendation to assign for individual services with Medicare utilization under 100 a dominant specialty, consistent with a specialty that could be reasonably expected to furnish the service.
- CMS added injection procedures used in conjunction with cardiac catheterization as part of the class of non-surgical services that receive surgical risk factors. The complete CMS listing of Invasive Cardiology Services Outside of Surgical HCPCS Code Range Considered Surgery currently contains 81 codes and can be found on the CMS.gov website

2020

- CMS implemented the fourth comprehensive review and update of PLI RVUs for CY 2020. PLI RVUs are based on actual CY 2017 PLI premium data; CY 2018 Medicare payment and utilization data; higher of the CY 2020 proposed work RVUs or the clinical labor portion of the direct PE RVUs); and CY 2020 GPCIs. As part of the review, the agency finalized a proposal to update the PLI RVUs every three years from this point forward to align with the required updates to the GPCIs.
- CMS made several refinements to its premium rate data collection process and therefore was able to finalize its proposal to use the most recent data for the CY 2020 PLI RVUs. This marked an improvement from CY 2018 when CMS did not finalize its proposal due to concerns expressed by RUC and others regarding sufficiency of the premium data. RUC continues to support improvements in data collection efforts such that updated premium data is obtained for all Medicare physician specialties, other health care professionals and facility providers, in all fifty states.
- CMS acquired premium data for five nonphysician health care professions that were formerly crosswalked, including anesthesiologist assistants, chiropractors, optometrists, certified nurse midwives, and certified registered n*urse anesthetists* (CRNAs). For all other non–MD/DO specialties, CMS continues to crosswalk to the lowest physician specialty risk factor of allergy/immunology. RUC has consistently maintained that a risk factor linked to a physician specialty is too high for many of the nonphysician health care professions.
- CMS finalized a proposal to assign a risk factor of 1.00, which corresponds to the lowest physician specialty risk factor of allergy/immunology, to TC-only services. RUC is opposed to mapping these services to a physician specialty when the services are clearly not performed by a physician and conveys its continued concern with the data collection process.
- As recommended by RUC, CMS finalized a proposal in the CY 2018 Final Rule to use a list of expected specialties instead of the claims-based specialty mix for low volume services (fewer than 100 allowed services in the Medicare claims data), which also includes no volume services, and apply these overrides for both the PE and PLI valuation process. The complete Anticipated Specialty Assignment for Low Volume Services list is available for comment annually as part of the NPRM. RUC has encouraged CMS to ensure that the list of expected specialties is correctly and consistently applied for the low volume service-level overrides each year.

2023

- CMS implemented the fifth comprehensive review and update of PLI RVUs for CY 2023. PLI RVUs are based on actual CY 2020 PLI premium data; CY 2020 Medicare payment and utilization data; higher of the CY 2023 proposed work RVUs or the clinical labor portion of the direct PE RVUs; and CY 2023 GPCIs.
- Through CY 2022, when CMS did not have sufficient premium data for a specialty, their practice was to crosswalk the data for those specialties to the data from the physician specialty with the lowest premiums, ie, allergy and immunology (2022 premium rate of $8,874). RUC has consistently maintained that a risk factor linked to a physician specialty is too high for many of the non-physician qualified health care professionals (QHPs) and other non-physician Medicare specialty codes. CMS has proposed specialty-specific premiums for all non-physician specialties using actual premium data for CY 2023 (with a majority of QHP specialties receiving premium amount below $1000). Thus, for the first time, CMS has collected premium data for all non-physician QHPs, as well as independent diagnostic testing facilities (IDTFs) and clinical laboratories, meeting a long-standing RUC recommendation.
- CMS changed the PLI methodology from using risk-factor scores, which benchmarked each specialty to the physician specialty with the lowest premiums (which was allergy and immunology up until CY 2022), to risk index scores that benchmark each specialty's premiums to the volume-weighted average of all specialties. CMS stated this change was not intended to have an impact on PLI RVUs.

Combining Work, Practice Expense, and PLI RVUs

The sum of the work, PE, and PLI RVUs for each service is the total RVUs for the service. Adding the sum of the product of the work RVUs to the PE RVUs and PLI RVUs and then multiplying this sum for all of these services by the annual CF yields the full unadjusted Medicare payment schedule. The unadjusted payment schedule is the full schedule with no geographic practice cost adjustment. It includes the 80% that Medicare pays and the 20% patient coinsurance.