

MILLIMAN REPORT

# Impacts of regulatory options in determination of qualifying payment amounts under the No Surprises Act

Commissioned by UnitedHealth Group (UHG)

September 15, 2021

Jason Karcher, FSA, MAAA  
Actuary and Health Policy Consultant

Cory Gusland, FSA, MAAA  
Principal and Consulting Actuary



15800 W. Bluemound Road  
Suite 100  
Brookfield, WI 53005  
USA  
Tel +1 262 784 2250  
Fax +1 262 923 3680

[milliman.com](http://milliman.com)





## Table of Contents

<b>I. EXECUTIVE SUMMARY</b>	<b>1</b>
<b>II. BACKGROUND</b>	<b>4</b>
SURPRISE BILLS ENTER THE PUBLIC DISCUSSION	4
STATE SOLUTIONS	4
FEDERAL ACTION – THE NO SURPRISES ACT	5
THE REACH OF THE NO SURPRISES ACT	6
<b>III. KEY DEFINITIONS IN OUR QPA ANALYSIS</b>	<b>8</b>
WHICH CONTRACTED RATES ARE WE MEASURING?	8
HOW ARE WE MEASURING CONTRACTED RATE LEVELS?	8
HOW DO WE ESTIMATE FINANCIAL EFFECTS OF POTENTIAL PARAMETER SELECTIONS?	9
WHICH SERVICES DO WE INCLUDE?	9
<b>IV. DEFINING “SAME REGION”</b>	<b>10</b>
GEOGRAPHIC REGION COHORT CLASSIFICATIONS QUALITATIVE DISCUSSION	10
GEOGRAPHIC REGION COHORT CLASSIFICATIONS ANALYSIS	11
<b>V. DEFINING “SAME OR SIMILAR SPECIALTY”</b>	<b>14</b>
SPECIALTY CLASSIFICATION	14
SPECIALTY COHORT CLASSIFICATIONS ANALYSIS	14
<b>VI. DEFINING “SAME OR SIMILAR SERVICE”</b>	<b>17</b>
SERVICE CLASSIFICATION	17
SERVICE COHORT CLASSIFICATION ANALYSIS	18
<b>VII. ADDITIONAL CONSIDERATIONS</b>	<b>20</b>
IMPLICATIONS FOR INDEPENDENT DISPUTE RESOLUTION	20
INFLUENCE ON PAYMENT RATES AND HEALTH PLAN PREMIUMS	20
CHANGING PROVIDER NETWORKS	20
IMPLICATIONS FOR PLAN AND PROVIDER COMPETITION	20
IMPLICATIONS OF AND CONSIDERATIONS FOR EXTERNAL DATABASES	21
<b>VIII. METHODOLOGY AND DATA SOURCES</b>	<b>22</b>
<b>IX. CAVEATS AND LIMITATIONS</b>	<b>23</b>

### APPENDIX A - Defining "median contracted rate"

## I. EXECUTIVE SUMMARY

In late 2020, the U.S. Congress passed the No Surprises Act, which provided patient protections regarding certain “surprise billing” activities in private market health coverage. For select settings and service categories with historically high incidence of surprise bills, new processes were enacted to create more predictable patient out-of-pocket costs and assist issuers and health plans (payers) and providers without a payment contract to reach an agreement regarding payment.<sup>1</sup> While consumer advocates and other stakeholders view this law as a big step forward, the statutory language required regulation to provide clarity on key process parameters, with significant remaining implications for payers, providers, and health plan enrollees. Since conducting our analysis and the original drafting of this report, the U.S. Department of Health and Human Services (HHS) issued an interim final rule (IFR) detailing requirements related to surprise billing that provides additional clarity on regulatory process parameters.<sup>2</sup>

The No Surprises Act eliminates balance-bills for most emergency services, services obtained at in-network facilities from out-of-network providers, and out-of-network air ambulance services. If payers and providers cannot agree on acceptable payment for a protected service, independent dispute resolution (IDR) is used to determine payment for the service. The protections of the No Surprises Act revolve around the qualifying payment amount (QPA). As defined in Section 2799A–1(a)(3)(E) of the Public Health Service Act, the QPA is the median of the contracted rates recognized by the insurer or plan for the same or a similar item or service provided by a provider in a same or similar specialty in the same geographic region. The QPA is used to adjudicate member cost sharing and is the key benchmark used in the independent dispute resolution process available for providers and payers who cannot reach agreement on payment through direct negotiations. Key items left to HHS to spell out include definitions of the following:

- Median contracted rate
- The “cohort” for sampling median contract rates (e.g., “same or similar service,” “same or similar specialty,” “same region”)

Within the IFR, HHS made key decisions on the above items that will have direct implications on healthcare service prices. In order to better understand the implications of HHS’s decisions for these two key items, at the request of UnitedHealth Group, we simulated QPA calculations using our proprietary data asset with over 78 million member life years. We reviewed various cohort definitions—unique combinations of region, specialty, and service—and analyzed contracted rate observations<sup>3</sup> within each cell of a given cohort. We compared the median contracted rate to current average in-network payment rates, a common measure of the potential change to payment rates. We analyzed the distribution of this potential payment change to understand how many cells could see significant payment changes relative to prevailing payment rates. We also identified what portion of surprise bill volume occurs in cells with five or fewer contracted rate observations to understand how a given cohort definition may interact with the law’s sufficient data standard. Please note, we conducted this analysis prior to publication of the IFR. While our analysis does not precisely align with what ultimately was published in the IFR, it provides insights into the expected implications of the IFR, as well as potential options that HHS may consider as it reviews comments and finalizes provisions of this rule. Figure 1 summarizes these high-level quantitative elements of our analysis of cohort-related variation.

<sup>1</sup> The No Surprises Act does not preempt state regulation of payment amounts under existing state surprise bill.

<sup>2</sup> 86 FR 36872.

<sup>3</sup> There are multiple options for how contracted rates may be evaluated, as outlined in Appendix A.

**FIGURE 1: SUMMARY OF EFFECTS OF VARYING DEFINITIONS OF REGION, SPECIALTY, AND SERVICE COHORTS ON THE CALCULATION AND CREDIBILITY OF QPA<sup>†</sup>**

	AVERAGE POTENTIAL PAYMENT CHANGE ACROSS ALL CELLS	PERCENTAGE OF CELLS WITH AT LEAST 10% CHANGE IN POTENTIAL PAYMENT	PERCENTAGE OF SURPRISE BILL ALLOWED AMOUNTS IN CELLS WITH 5 OR FEWER OBSERVATIONS
<b>Varying definitions of same geographic region<sup>††</sup></b>			
ACA Rating Area	-13%	30%	17%
CMS Locality	-16%	37%	7%
State	-16%	39%	5%
<b>Varying definitions of same or similar specialty<sup>†††</sup></b>			
CMS Specialty Code	-15%	30%	11%
Surprise Billing-Based Specialty Classification	-16%	39%	5%
<b>Varying definitions of same or similar service<sup>††††</sup></b>			
Procedure Code	-12%	24%	11%
Procedure Family	-16%	39%	5%

<sup>†</sup> The results in these tables reflect variation holding different elements constant, using a broad definition of other cohort parameters and a contract-level median of self-funded group payment rates as a percentage of Medicare fee schedules. Please refer to Figure 3 through Figure 8 and surrounding discussion below for more details. Note that the coarsest definition in each of these three areas shows the same set of region, specialty, and service definitions.

<sup>††</sup> The IFR established a definition of region tied to the metropolitan statistical area (MSA) as published by the U.S. Census Bureau. We anticipate this will most closely resemble results for ACA rating area.

<sup>†††</sup> The IFR established a definition of similar specialty determined by specialty code, to the extent that the payer varies contracts by specialty code. We anticipate this will most closely resemble our surprise billing-based specialty classification, as many payers do not vary contracts by specialty.

<sup>††††</sup> The IFR established a definition of similar services defined by procedure codes with further refinements for certain modifiers and for unit-based services. We anticipate this will most closely resemble results for procedure codes.

As indicated by Figure 1, our analysis yielded the following key findings:

- Geography represents one of the greatest opportunities for regulators to influence credibility of medians.** The law requires payers to have “sufficient data” to calculate the QPA associated with a service. When geographic regions become too narrowly defined, an increasing number of services lose enough volume that they may be unable to meet a given credibility standard. In the aggregate, varying geographic definitions has modest effects on the overall potential financial impact of the QPA and the number of cells with large potential shifts in provider payment.
- Service and specialty both present opportunities to simplify administration, but simplification only generates modest improvements in QPA credibility.** There are a tremendous variety of healthcare services and provider types. However, using the specific service and specialty to distinguish each and every QPA cohort may not appropriately reflect how services are valued and paid in the commercial market, so some consolidation is likely appropriate. Relative to geographic region, consolidating specialty and service tends to have less influence on credibility and the same or less influence on overall payment levels while creating more variability in the QPA relative to prevailing payment rates.
- The QPA is lowest overall when cohorts of region, specialty, and service are more broadly defined.** In most situations, the median contracted rate is lower than the average payment rate made for a given cohort. This can vary from 3% lower to 16% lower than average payment rates in aggregate, with greater reductions associated with broader classification definitions.
- If service payments made by a payer to providers converge toward the QPA, payer health costs could decrease by up to 3% to 16% on average for services covered by the No Surprises Act.** Because the QPA is lower than average payment rates in aggregate, overall health spending for affected services is likely to decrease, as payment rates for both in-network and out-of-network services are expected to converge toward the QPA (including increases in rates for certain in-network providers). The reduction of 3% to 16% will grow over time relative to historical levels of payment trend, because the QPA is indexed to the consumer price index for all urban consumers (CPI-U), which has typically grown at least 1% to 4% slower<sup>4</sup> than healthcare prices in recent years.

<sup>4</sup> See Figure 9 below for a comparison of CPI-U to two alternative growth metrics that are tied to medical care costs.

- **If service payments made by a payer to providers converge toward the QPA, overall healthcare expenditures (including plan premiums and member cost sharing) could decrease by up to \$15 billion to \$40 billion.**<sup>5</sup> These savings assume that payment levels for services in surprise settings converge to the QPA. As a consequence, larger potential savings result when the QPA is further from current average payment levels, such as when out-of-network balance bills and/or outlier rates skew averages. Potential savings may be offset to some degree by the additional costs associated with the independent dispute resolution process.

In addition to these key observations regarding definition of cohorts, our analysis identified the following key findings regarding other elements of the regulation.

- **Defining what constitutes a contracted rate observation boils down to a choice between use of payer contracting information or paid claims.** The term “contracted rate” can be defined based on availability of a service (the payer contract with a provider)—or the performance of a service (the paid claim). In statutory context, payer contracts represent a plain reading of the text of the law. In the IFR, HHS defines contracted rate based on the payer’s unique contracts with a provider, facility, or provider group (so that multiple providers in a provider group or facility only count once toward the median).
- **Use of external databases introduces additional complexities for regulators if relied upon.** The IFR shows a distinct preference for the use of payer data over external data. However, the statute requires payers to utilize an external database (such as a state all-payer claims database or a third-party claims database) when the payer lacks sufficient data to calculate a QPA. External databases contain a broader mix of payers, and the resulting mix of contracted rates and contract structures is likely to be materially different from a payer’s own mix of contracts. In the interim final rule, regulators outlined requirements for third-party databases and their use by plans.<sup>6</sup> These requirements are designed to ensure that the database is capable of producing an independent and appropriate QPA while limiting the ability for payers to choose different databases for different services in pursuit of the lowest medians.
- **Measuring contracted rates relative to uniform or universal measurement unit, such as the Medicare fee schedules, produces a more stable QPA than a straight measurement of cost.** While service costs are quantified in money, they can be difficult to compare when grouping similar services or across geographies. Using a relative value unit measurement will enable cohort definitions that include a greater variety of contracted rates, which in turn enables more credible median contracted rate calculations. The IFR calls for use of total cost as the measurement, but specifies narrowly defined service groupings for most services, so using allowed amounts rather than a percentage of median may be appropriate. For other services (referred to as unit-based services in the rule, which include anesthesia services and air ambulance mileage), the IFR calls for a relative value conversion using an appropriate measure prior to calculation of the median.

The financing of healthcare services in the United States is relatively complex. Complex systems often necessitate complex regulatory frameworks. Additionally, provider-payer contracting dynamics and surprise billing practice patterns vary significantly across geographic regions. The key parameters being finalized by HHS are all interrelated, requiring further consideration as methodologies are developed and implemented. Furthermore, the rules are likely to have a variety of downstream implications with a reasonable assumption being that payment rates for services in protected settings will converge to the QPA in some markets.

<sup>5</sup> Based on Milliman analysis and estimates of total national spending per projected 2019-2028 National Health Expenditures as published by CMS. Amounts are measured in 2019 dollars.

<sup>6</sup> The description begins at 86 FR 36895.

## II. BACKGROUND

One of the most impactful innovations in health coverage in the 20<sup>th</sup> century was the provider network. By contracting with preferred providers, plans were able to bring increased certainty to service costs and shift utilization to higher-quality and/or lower-cost providers. However, as with many innovations, the provider network introduced its own inefficiencies. Members were now exposed to the risk of out-of-network services and, when they obtained a service from a non-preferred provider, they did not enjoy the protection of the negotiated rate. Because there was no contractual arrangement with the payer, these providers could bill the member for the balance of the cost of the service over what the plan offered to pay. Balance-bills can present a significant financial hardship to the members that receive them, thus they are prohibited or strongly limited in federal healthcare programs, such as Medicare and Medicaid. However, until recently there were no formal federal patient protections from balance-bills in the commercial health market. Moreover, in certain situations—emergency care, or when receiving a procedure from an out-of-network provider at an in-network facility—members could become exposed to balance-bills that they were unable to avoid, hence the term “surprise” bills.

### SURPRISE BILLS ENTER THE PUBLIC DISCUSSION

In the last part of the 2010s, consumer advocates and other health publications began circulating some of the more egregious surprise billing cases.<sup>7</sup> This brought the issue to the public eye and led to the consideration of several potential solutions to surprise billing at the federal level. While federal legislators deliberated over the economic and consumer implications of different approaches, several states moved ahead with their own consumer protections. However, roughly 56% of private health coverage is provided via self-funded arrangements, which are largely exempt from state regulation of the health benefit plan due to ERISA. This dynamic means that a federal solution was necessary for most Americans enrolled in private health coverage to limit or eliminate surprise bills.

### STATE SOLUTIONS

As of May 2021, 33 states have passed legislation to address the issue of surprise billing.<sup>8</sup> While some states have had regulations in place for many years, several states have only recently implemented surprise billing laws, including Georgia, Nebraska, Ohio, and Virginia—all of which have laws that took effect in January 2021. These laws vary by state, but can be categorized by which services are covered under regulation. Almost every state with surprise billing laws regulates balance-bills in the emergency department setting, with the one exception (Minnesota). Most states also regulate balance-bills for nonemergency care received in a hospital included in their health plan’s network. Many states do not address ground ambulance services. Lastly, no state limits surprise billing associated with air ambulances due to air ambulance exemption from state regulation.

States with laws limiting or eliminating surprise billing frequently have a payment standard used to define what constitutes an acceptable payment and/or a dispute resolution process as part of their regulation of surprise services. Arbitration is used for dispute resolution in some states, including California, New Jersey, New York, and Washington. States may employ different methods of benchmarking to provide a basis for allowed costs when adjudicating services and/or to determine what constitutes reasonable costs under arbitration. Benchmarks in California, Colorado, and Washington are based on actual claims paid by the insurer. Other states, including New Mexico, New York, and Texas, rely on Fair Health data, a third-party database, to determine costs. Based on public documentation published by Fair Health, it is unclear whether amounts calculated using Fair Health are weighted by provider or by service.

Some states use geography as a factor in their benchmarks. California, Colorado, and Washington use Patient Protection and Affordable Care Act (ACA) rating areas to determine benchmarks for allowed costs under their surprise billing laws. Physician specialty considerations are also considered by some states, but there is little consistency in how this is applied. In cases where specialty is considered, anesthesiology is usually handled separately from other physicians, in large part due to the specialty’s unique fee schedule relative value system. States that use the Fair Health data typically do not distinguish by specialty.

<sup>7</sup> One prominent example is the Kaiser Health News/NPR bill of the month collaboration that has explored many surprise bills over the past few years. See [Bill Of The Month | Kaiser Health News \(khn.org\)](https://khn.org/news/tag/bill-of-the-month/) at <https://khn.org/news/tag/bill-of-the-month/>.

<sup>8</sup> The Commonwealth Fund frequently publishes information on surprise bills, including this survey of state surprise billing protections. See [State Balance-Billing Protections | Commonwealth Fund](https://www.commonwealthfund.org/publications/maps-and-interactives/2021/feb/state-balance-billing-protections) at <https://www.commonwealthfund.org/publications/maps-and-interactives/2021/feb/state-balance-billing-protections>.

While states cannot regulate self-funded group health plans, Maine, New Jersey, Nevada, Virginia, and Washington permit self-funded employers to opt in to state protections. The wide variation in state-led approaches is suggestive of the broad interest in addressing the issue of surprise billing. However, it also creates a challenging patchwork of protections for multistate health plans and payers, and leaves the door open for a broader, more uniform set of protections.

## FEDERAL ACTION – THE NO SURPRISES ACT

In December 2020, federal legislators included the No Surprises Act as part of the annual federal funding bill, the Consolidated Appropriations Act of 2021.<sup>9</sup> The No Surprises Act provides surprise billing protections in several key settings that result in surprise billing, starting January 1, 2022. These protections target the commercial market only and do not preempt existing state laws. We provide a high-level summary of the protections below:

### Protections in emergency care settings

When patients in commercial health plans receive out-of-network emergency care, they cannot be balance-billed. Cost sharing for emergency care services provided at out-of-network facilities will be determined using in-network cost-sharing requirements, based on the QPA.

### Protections for ambulance services

The same protection extends to all air ambulance services, but not to ground ambulance services. The No Surprises Act calls for a study of ground ambulances and balance-billing, but stops short of implementing any protections, one of the few notable exceptions where consumers can still receive unanticipated or unavoidable balance-bills.

### Protections at in-network facilities

In most cases, the Act provides patients with the same protections for services rendered at an in-network facility. There is a disclosure process by which certain out-of-network providers can obtain permission to balance-bill the patient, but this is limited to situations where the patient has an in-network alternative available and consents to receive out-of-network care.<sup>10</sup> This consent process must be completed at least 72 hours before the services are rendered, and is limited to patient-selectable providers, which categorically excludes several specialties. This represents a very robust protection for consumers receiving care at in-network facilities.

### The QPA

The protections of the No Surprises Act revolve around the QPA. At its core, the QPA is the median of the contracted rates recognized by the issuer or plan for the same or a similar item or service provided by a provider in a same or similar specialty in the same geographic region. The QPA is used to adjudicate member cost sharing and is the key benchmark used in the independent dispute resolution process.

The QPA is the focus of the following sections of this report.

### Provider payments for services

Once the out-of-network provider submits a bill to the payer, the payer must make an initial payment within 30 days. Following this, the payer and the provider can negotiate for another 30 days. When a service is covered by existing state surprise billing protections, the amount the plan must pay is determined in accordance with that law. Otherwise, payers and providers may utilize a “baseball style” arbitration system (the IDR process) focused around the QPA if they fail to reach agreement after the informal 30-day negotiation period. Regulatory considerations surrounding the independent dispute resolution process will be addressed in a future report.

### Interim final rule

HHS published an interim final rule (IFR) on July 13, 2021, titled “Requirements Related to Surprise Billing; Part I,” which implements details surrounding provider billing and the QPA. The rules require that services must be covered without prior authorization, regardless of a provider being an in-network provider, and regardless of another term of condition of coverage other than exclusion, coordination or benefits, or affiliation or waiting period.

<sup>9</sup> The No Surprises Act is Title I of Division BB of H.R. 133. Full text of the legislation can be downloaded from [Text - H.R.133 - 116th Congress \(2019-2020\): Consolidated Appropriations Act, 2021 | Congress.gov | Library of Congress at https://www.congress.gov/bill/116th-congress/house-bill/133/text](https://www.congress.gov/bill/116th-congress/house-bill/133/text).

<sup>10</sup> Section 102 of the No Surprises Act states that ancillary services (which generally include emergency medicine, anesthesiology, pathology, radiology, neonatology, and services provided by assistant surgeons, hospitalists, and intensivists) cannot be exempted from balance-billing protections under the consent process.



Service costs for covered services are determined using a state all-payer model agreement if applicable.<sup>11</sup> If not, then the cost is the amount determined pursuant to any applicable state protections. If neither applies (such as in the case of air ambulance services), the lesser of the QPA and the billed charge is used.

The IFR specifies how median contracted rates are to be determined. While the exact definitions vary in certain instances,<sup>12</sup> in general the QPAs are calculated within a given metropolitan statistical area (MSA), for a given procedure code (including modifiers where the payment varies for a given modifier), and for a given specialty (to the extent that the payer varies contracting terms by specialty type). Within each of these cohorts, the QPA is the median rate contracted by the payer (counting contracts with a facility or provider group as a single contract) as of January 31, 2019.

The IFR also specifies a sufficient information standard. Medians are determined to represent a valid QPA when at least three distinct contracts are represented. In MSAs that fail to meet this standard, the rule calls for fallback options to increase the likelihood that payer contract data is utilized.

The IFR specifies how a QPA for new services and services with insufficient information should be determined, and creates standards for utilization of external databases.

As an interim final rule, the rule has a comment period, which extends through September 7, 2021. The rule specifically requests comment on several items, but comments may be submitted on any provision of the rule.

The IFR also implements accompanying balance-billing prohibitions for covered services, establishes public notice requirements for providers and a complaint process for patients, and provides more clarity on determining out-of-network rates. As required by the No Surprises Act, HHS will continue to release more rules covering the IDR process, transparency measures, air ambulances, and enforcement.

## THE REACH OF THE NO SURPRISES ACT

There has been a significant amount of research surrounding potential surprise bills. One prominent estimate suggests that billed charges for out-of-network services are about 139% higher than allowed amounts for in-network services.<sup>13</sup> Moreover, the out-of-network billing that can result in surprise bills is most common in emergency medicine, pathology, radiology, anesthesiology, behavioral health, and cardiovascular specialists.<sup>14</sup> While this research is useful to show the prevalence and potential consumer cost of surprise bills, there is little available data regarding actual consumer spending on surprise bills. There is much anecdotal evidence of surprise bills being reduced or eliminated, but little broad data regarding actual collection rates for balance-billed amounts. These collection rates are what determines actual healthcare spending.

Economic considerations suggest that providers who engage in balance-billing receive total payments that are at least equal to average in-network payment rates. One evaluation of a limited set of claims indicated that in-network emergency care providers collect about 52% of billed charges while out-of-network emergency care providers collect about 65% of billed charges<sup>15</sup>—in other words, out-of-network providers actually collect (and consumers spend) roughly 25% more for emergency care services than in-network providers. A significant portion of this amount is collected directly from patients through balance-billing. Based on our analysis, the average amount paid by a plan to an out-of-network emergency care provider (including member cost sharing, but excluding any balance-billed amounts) is slightly lower than the amount paid to an in-network provider. This implies that, relative to in-network costs, patients could pay an additional 25% to 30% of the average in-network allowed rate in balance-bills on top of the cost sharing required by their plans, which provides an economic rationale for why providers may remain out-of-network despite the current negative publicity surrounding balance-bills.

Healthcare settings regulated by the No Surprises Act (emergency services, nonemergency air ambulance services, and services at in-network facilities) reflect approximately 18% of overall healthcare utilization under private health insurance coverage, and approximately 81% of total surprise bill costs. The financial effects of eliminating most surprise

<sup>11</sup> The agreement must “[apply] with respect to the plan or issuer; the nonparticipating provider or nonparticipating emergency facility; and the item or service” per 45 CFR 149.430. Similar limitations are put on state protections as well.

<sup>12</sup> Air ambulance services use a broader geographic definition, while anesthesia services and air ambulance mileage are normalized to determine a unit price prior to calculation of the median.

<sup>13</sup> Cooper, Z., Morton, F.S., & Shekita, N. (September 2017). [Surprise! Out-of-Network Billing for Emergency Care in the United States](https://zackcooper.com/sites/default/files/paper-files/w23623.pdf). Zackcooper.com. Retrieved August 27, 2021, from <https://zackcooper.com/sites/default/files/paper-files/w23623.pdf>.

<sup>14</sup> Biniek, J.F. et al. [How often do providers bill out of network?](https://healthcostinstitute.org/out-of-network-billing/how-often-do-providers-bill-out-of-network) Health Care Cost Institute. Retrieved August 27, 2021, from <https://healthcostinstitute.org/out-of-network-billing/how-often-do-providers-bill-out-of-network>.

<sup>15</sup> Adam I. Biener, Benjamin L. Chartock, Christopher Garmon, and Erin Trish (2021). [Emergency Physicians Recover A Higher Share Of Charges From Out-Of-Network Care Than From In-Network Care](https://doi.org/10.1177/0263223221101111), *Health Affairs* 40:4, 622-628.

bills will affect both member out-of-pocket spending and health plan responsibility, and can be understood best as consisting of two pieces—the direct effect of elimination of the member’s balance-bill and the economic implications of the QPA on health spending.

### **The cost of eliminating surprise bills**

Currently, member cost sharing for surprise bills is based on a plan’s out-of-network benefit, which is typically much less generous than the in-network benefit. Most legislation that seeks to eliminate the issue of surprise bills (including the No Surprises Act) shifts cost sharing for surprise services to the in-network benefit. In the absence of changes to amounts paid by plans, this reduction in member spending then becomes the plan’s responsibility, leading to a small increase in plan premium. Based on Milliman claims data, plan-allowed amounts for surprise billed services were only about 1% below reimbursement for in-network services as a percentage of Medicare. If we assume that plan-allowed amounts for former surprise bills remained comparable to in-network levels, our data shows that overall patient medical expenditures would drop by just over 1% (including balance-billed amounts). At the same time, plan premiums would still increase by about 0.1% due to the decreased member cost sharing. As such, the simple elimination of balance-bills puts modest upward pressure on overall health spending—potentially \$1 billion per year in overall cost across commercial market coverage. However, the dynamics of surprise billing can have a significant effect on contracted rates. As such, most surprise billing legislation (again including the No Surprises Act) contains measures that reduce the total amounts paid to out-of-network providers, which can have a significantly larger effect.

### **The value of standardizing payments to out-of-network providers in surprise bill settings**

The No Surprises Act bases out-of-network allowed amounts on the median contract rate rather than directly aligning them with average rates currently paid for these services. As we discuss later in this report, medians tend to be lower than averages, which will put greater downward pressure on payment rates for out-of-network providers. Furthermore, the ability for plans and providers to engage in strategic contracting suggests that contracted payment rates are likely to converge toward this amount as well.<sup>16</sup> *If the payment rate for services in covered settings (both in-network and out-of-network) converges to align with the QPA, then overall healthcare expenditures (including plan premiums and member cost sharing) could be lower by \$15 billion to \$40 billion in terms of 2019 dollars, or about 1% to 3% of total private market healthcare spending.* Savings would be expected to be smaller if the QPA is closer to current average payment, but will be offset to some degree by any costs and inefficiencies surrounding the independent dispute resolution process.

These savings ultimately accrue to the benefit of consumers, employers, payers, and the federal government, but come at the expense of higher cost healthcare providers. The ultimate impact of the No Surprises Act on health plan premiums and member spending is highly dependent on several key parameters that define the QPA. These considerations are the primary focus of the next sections of this report.

<sup>16</sup> This consideration is a standard feature of federal cost estimates for surprise billing legislation, as outlined by the CBO. See [H.R. 2328 \(cbo.gov\)](https://www.cbo.gov/system/files/2019-09/hr2328.pdf) at <https://www.cbo.gov/system/files/2019-09/hr2328.pdf>.

### III. KEY DEFINITIONS IN OUR QPA ANALYSIS

Understanding the relationship of the QPA to current prevailing payment rates in the market is key to understanding the impact of the No Surprises Act on overall healthcare spending. In order to perform this quantitative analysis, we must first understand the answers to a few key questions. In this section, we discuss these considerations at a high level, but a deeper discussion of considerations surrounding median contracted rates can be found in Appendix A of this paper.

#### WHICH CONTRACTED RATES ARE WE MEASURING?

While the phrase median contracted rate sounds straightforward, there is room for interpretation based on the perspective from which contracted rates are observed. Three primary alternatives are:

- **Contract level:** Measure each payer's contracts at the level of the entity with which they contract, so that a health system, a provider group, and an independent practitioner each represents a single observation, regardless of claims volume or number of providers included.
- **Provider level:** Measure each provider's contract, so that each facility or provider represents a single observation, regardless of claims volume. This measure gives more weight to large provider groups and health systems than a contract-level measurement.
- **Volume-weighted:** Measure each service performed for a patient. This measure gives more weight to providers (both facility and physician) who perform more services.

In Appendix A, we look at considerations related to these three metrics in more detail. In general, we illustrate contract medians in the remainder of this report as it represents arguably the plainest reading of the statutory language. As mentioned earlier, since completing our analysis, HHS elected a contract-level median in the IFR.

#### HOW ARE WE MEASURING CONTRACTED RATE LEVELS?

In addition, we note that rates can be measured in terms of dollars and cents or as a relative value, such as a percentage of Medicare fee schedules. In Appendix A, we show relative effects of these choices, and note here that a dollars and cents measure is particularly unsuited for any approach that groups services of differing value into a single cohort prior to calculating a median. As such, we focus on a relative value measurement—specifically percentage of Medicare payments.

While there is significant debate around the appropriateness of Medicare fee schedules for services, over 94% of claims by volume can be adjudicated against Medicare fee schedules. As long as the relative values of services included in a given cohort of region, specialty, and service are appropriate when measured against Medicare fee schedules, the multiple of Medicare reimbursement represents a useful comparison between those services and permits grouping similar services of differing intensities. To the extent that services can be grouped and compared more easily, this may result in more credible calculated medians.

However, complications may occur if services across different fee bases are grouped together, particularly where the commercial market values these services differently. One prominent example of this would be anesthesia services—most published literature indicates that commercial payments for anesthesiologists are over 300% of Medicare payments.<sup>17</sup> However, at least some of this dynamic appears to be the result of the initial calibration of anesthesia services under the Medicare Physician Fee Schedule for 1992.<sup>18</sup> As such, grouping anesthesia services with other services in a Medicare-based relative value measurement has the potential to generate an inappropriate QPA due to issues with the underlying Medicare payment systems.

We note that the IFR generally uses a dollars and cents measurement in the determination of medians. However, the methodology uses a relatively precise specification for service, which avoids the bulk of the additional variability we observed using an actual cost measurement. Additionally, the IFR uses a relative value measurement for what it refers

<sup>17</sup> In October 2020, the Government Accountability Office collected analyses of anesthesia payment rates in the commercial market which collected numerous such observations. [Anesthesia Services: Differences between Private and Medicare Payments Likely Due to Providers' Strong Negotiating Position \(gao.gov\)](#)

<sup>18</sup> The California Society of Anesthesiologists produced a report that discusses how Medicare determined the value of anesthesia services relative to other physician services and outlines potential issues. [http://www.csahq.org/docs/default-source/history-of-anesthesia-articles/history-articles/pauker-a-history-of-rbrvs-part2-2006.pdf?sfvrsn=d864c146\\_2](http://www.csahq.org/docs/default-source/history-of-anesthesia-articles/history-articles/pauker-a-history-of-rbrvs-part2-2006.pdf?sfvrsn=d864c146_2)

to as “unit-based services”—anesthesia services and air ambulance mileage. Anesthesia services are typically paid using the American Society of Anesthesiology’s relative value scale and a base conversion factor, and the IFR requires the QPA for anesthesiology services to be calculated using a median conversion factor and this relative value scale. Similarly, for air ambulance mileage codes (A0435 and A0436), the QPA is determined on the median contracted cost per mile.

## HOW DO WE ESTIMATE FINANCIAL EFFECTS OF POTENTIAL PARAMETER SELECTIONS?

One of the primary expectations of most surprise billing reforms is that payment rates in regulated settings will converge toward any benchmarks included in the related regulation. For the No Surprises Act, the QPA represents a target level of payment through its prominent inclusion in the independent dispute resolution process as the main cost measurement to be used by arbitrators. Federal legislators settled on a median-based measurement. Medians are intended to eliminate the influence that outliers might have relative to a mean. Relative to the median value, claims distributions tend to have larger magnitude high-value outliers than low-value outliers—a result of allowed amounts being restricted to positive amounts and positive amounts having no theoretical limit. This situation typically results in median payment rates that are lower than average payment rates. The difference between these two values, medians and means, has been used as a key component of analysis of surprise bill legislation by the Congressional Budget Office (CBO), and is the primary driver of federal savings projected by the CBO.<sup>19</sup> As a result, our primary metric in the remainder of this paper is targeted at this potential payment change. We illustrate the percentage change in payments that might result from payment rates shifting from current average payment rates to the calculated QPA. We refer to this quantity as the QPA potential payment change (PPC). A PPC of 5% would indicate that the QPA is 5% higher than market average payment rates and could result in a 5% increase in medical costs in that region, specialty, and service. Conversely, a PPC of -10% would indicate that the QPA is 10% lower than average market payments, and could result in a 10% decrease in health spending in that region, specialty, and service. When weighting each individual PPC by allowed amounts, we can determine the potential overall impact of a combination of cells.

## WHICH SERVICES DO WE INCLUDE?

We focus our analysis on services in key surprise settings—emergency settings, anesthesiology services, and air ambulance services. Collectively, these services form about 15% of overall medical claims, but 60% of surprise bills. The QPAs for these services (outlined in Figure 2) are slightly lower than the QPA calculated for other settings.

**FIGURE 2: POTENTIAL PAYMENT REDUCTION FOR KEY SURPRISE BILL SETTINGS AND ACROSS ALL SERVICES FOR TWO POTENTIAL DEFINITIONS OF “CONTRACTED RATE,” WITH RATES MEASURED AS A PERCENTAGE OF MEDICARE PAYMENTS**

	CONTRACT	VOLUME-WEIGHTED
All services	-4%	-3%
Key surprise settings	-7%	-8%
Difference	-3%	-5%

In Figure 2, we see that the PPC for key surprise settings is somewhat lower than the overall PPC regardless of median definition, which indicates that key surprise settings have higher cost outliers than other settings relative to the average payment rate. This also means that we may see greater overall payment reductions in these key surprise settings as a result of the No Surprises Act. Private equity firms have indicated that they use the threat of surprise bills to negotiate higher contracted rates,<sup>20</sup> one of the key complaints that led to legislation.<sup>21</sup> These higher contracted rates are likely one of the drivers of the lower PPC and the corresponding greater potential reduction in payment rates. These higher rates also mean that a greater portion of the available savings are focused on these key surprise bill settings, and so we focus our remaining analysis on these services specifically.

<sup>19</sup> The CBO’s analysis of H.R. 2328 in 2019 (coincidentally also named the No Surprises Act), notes that surprise billing legislation changes result from changes to payment rates as a result of legislated payment rates under the bill. See <https://www.cbo.gov/system/files/2019-09/hr2328.pdf>.

<sup>20</sup> Sullivan, P. & Easley, J. (October 17, 2019). Private equity firm defends itself on ‘surprise’ medical billing in letter to House. The Hill. Retrieved August 27, 2021, from <https://thehill.com/regulation/healthcare/466384-private-equity-firm-defends-itself-on-surprise-medical-billing-in>.

<sup>21</sup> House Committee on Energy & Commerce (November 21, 2019). It’s time for Congress to protect patients from surprise medical bills. Press release. Retrieved August 27, 2021, from <https://energycommerce.house.gov/newsroom/in-the-news/its-time-for-congress-to-protect-patients-from-surprise-medical-bills>.

## IV. DEFINING “SAME REGION”

The language of the No Surprises Act defines a clear system for grouping contracted rates in the determination of the QPA. However, the definitions underlying this system provided in the No Surprises Act are not precise, and there is room for significant variation in the definitions of region, specialty, and service. In this section, we focus on potential regulatory interpretations of the “same region.”

### GEOGRAPHIC REGION COHORT CLASSIFICATIONS QUALITATIVE DISCUSSION

The statutory text of the No Surprises Act explicitly calls for federal regulators to solicit input on the definition of region from the National Association of Insurance Commissioners (NAIC), which provided this input in a letter of March 11, 2021.<sup>22</sup> The NAIC indicated a preference for the rating areas used for individual and small group coverage provided pursuant to the ACA, but there are other options, each with its own benefits and drawbacks.

#### ACA rating area

As noted by the NAIC, while the ACA’s rating areas are only used in the individual and small group markets, most insurers are familiar with them and could apply them to any noncompliant individual or small group market coverage, or even large group coverage. Additionally, rating areas were created to facilitate premium variation, but the ACA’s risk adjustment program nominally means that this variation excludes differences in morbidity between different rating areas, so that premium variation would be driven by other factors, such as service utilization pattern differences and the regional cost of services. This created a nominal incentive for states to determine regions in a way that organized each state into similar groupings, and many states did so. But it is equally clear that several states did not—notably both Florida and South Carolina have enumerated rating areas for each county in the state. Another interesting example is New Jersey, which utilizes separate rating area definitions in the individual and small group market.

The number of state residents in each ACA rating area can vary meaningfully—urban rating areas are more likely to have a meaningful number of members, thus more claims observations, while rural rating areas with lower enrollment may be less likely to meet sufficient data standards and rely on external databases for the QPA. In general, the ACA rating area can still be thought of as one of the most refined definitions to group similar costs. However, it may be too refined in many cases to generate sufficient data, particularly for regions where a carrier’s networks may be less robust.

#### CMS locality

The Centers for Medicare and Medicaid Services (CMS) establishes several fee schedules, and these fee schedules generate a de facto variation in regional reimbursement levels. While these localities may not be as well understood by all insurers, they are still understood by many insurers due both to previously mentioned use of Medicare fee schedules to determine contracted rates, as well as broad health plan participation in the Medicare Advantage program. CMS locality also generally produces fewer issues with insufficient data, as the definition is less granular than ACA rating areas. Of course, there are exceptions. For example, California has more localities than rating areas. On the other end of the spectrum, CMS locality is applied at the state level in 34 states,<sup>23</sup> meaning that there is no variation in region between rural and urban areas in these states—one of the elements that must be taken into account by federal regulators. A more expansive regional classification may be addressed to some degree by use of a relative value scale that reflects the difference between rural and urban services—something that the Medicare fee schedules frequently do.<sup>24</sup>

#### State

It could also be feasible to use statewide region cohort classifications, particularly if contracted rate observations are measured using an appropriate relative value scale. The coarseness of this definition provides the fewest potential issues with sufficient data, but enhances the importance of appropriateness in the incorporation of regional variation in the payment relative value scale.

<sup>22</sup> NAIC (March 11, 2021). Letter to Jeffrey D. Grant, Acting Director, Center for Consumer Information and Insurance Oversight (CCIIO). Retrieved August 27, 2021, from <https://www.naic.org/documents/cms-suprise-bill-geographical-regions.pdf>.

<sup>23</sup> Currently, CMS localities are tied to MSA in California, and California currently has more metropolitan statistical areas than the ACA has rating areas. See [Medicare PFS Locality Configuration | CMS at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Locality](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Locality).

<sup>24</sup> This becomes less viable if the relative values determined by the fee schedules do not align well with prevailing commercial reimbursement levels in the commercial market. Paul Houchens, Fritz Busch, and Lindsay Kotecki noted this exact dynamic in Colorado facility reimbursement in the individual market. See [Analysis of Colorado HB 21-1232 Impact on Healthcare Provider Reimbursement and Consumer Premiums at https://www.milliman.com/-/media/milliman/pdfs/2021-articles/5-27-21-analysis-colorado-hb-21-1232-impact-healthcare-provider-reimbursement-consumer-premiums.ashx](https://www.milliman.com/-/media/milliman/pdfs/2021-articles/5-27-21-analysis-colorado-hb-21-1232-impact-healthcare-provider-reimbursement-consumer-premiums.ashx).

## Other options

Other potential geographic region variations include county and metropolitan statistical area (MSA). As county is in most cases more refined than ACA rating area, it seemed unsuitable for consideration in this analysis—as we will see later, there are already significant challenges with observation granularity and sufficient data at the ACA rating area. We also considered MSA, which reflects the aforementioned difference between rural and urban settings, but the ability of and refusal by states to elect MSAs as a basis for their rating areas suggests that it does not provide a reasonable stratification of regions by cost profile.

Since conducting the analysis, HHS selected to use an MSA-based definition as the region in the IFR for most services, diverging from the suggestion of the NAIC. While this does not align exactly with any of the definitions we evaluated, we anticipate that this will line up most closely with ACA rating area of the three definitions reviewed. The ACA based the number of state ACA rating areas on the number of MSAs in a state,<sup>25</sup> so it strikes a similar level of granularity compared to the other options.

The IFR permits multiple fallback options as well. Where a payer does not have sufficient data in a given MSA in a state (meaning at least three contracts), then the payer must calculate the median across all MSAs in the state. If the payer still cannot meet the three-contract minimum at a state level, then the payer must use all MSAs in the census division (or in the case of a non-MSA area, all non-MSA areas in the census division).<sup>26</sup> These broader definitions will be more in line with the state definition of our three definitions below. We note that we have not reviewed relative values of a census division-level median calculation, which is coarser than any of the definitions we reviewed. However, we note, neighboring states within the same census division can have significantly different reimbursement patterns, and a total cost metric that leverages information from a neighboring state in a given census division may produce a QPA that is significantly lower or higher than prevailing payment rates in the state in which the service occurs. Still, we anticipate that this definition will result in most services (and almost all services that currently lead to surprise bills) meeting the regulation's three-contract minimum.

## GEOGRAPHIC REGION COHORT CLASSIFICATIONS ANALYSIS

Using the Milliman Consolidated Health Sources Database (CHSD) national commercial claims data, we analyzed the effects of various “same region” definitions. Definitions analyzed included ACA rating area (most granular), CMS locality, and state (least granular). In this section and those that follow, we continue to utilize the QPA potential payment change (PPC) to understand the potential impacts of each option on healthcare costs. We similarly limit ourselves to the self-funded market, and measure observations using Medicare fee schedules to determine a relative value. While we focus on the contract definition of contracted rate observation, we also discuss volume-weighted observations where appropriate.

Figure 3 shows the distribution of the PPC across every cohort under the three definitions of region. Below the table we summarize other cohort definitions held constant.

<sup>25</sup> The U.S. Census Bureau updates MSAs each year. Each MSA has at least 50,000 residents and includes counties that are tied to the MSA via commuting and other economic ties. Most states include counties that are not part of an MSA, which we refer to as the non-MSA area.

<sup>26</sup> Air ambulances always use the census division-level MSA area vs. the non-MSA area definition for region.

**FIGURE 3: AVERAGE QPA POTENTIAL PAYMENT CHANGE BY GEOGRAPHIC REGION CLASSIFICATION DEFINITION FOR A CONTRACT-LEVEL RELATIVE VALUE MEDIAN**

	GRANULAR COHORT			COARSE COHORT		
	ACA RATING	AREA CMS LOCALITY	STATE	ACA RATING	AREA CMS LOCALITY	STATE
Composite PPC	-7%	-10%	-11%	-13%	-16%	-16%
<b>PPC Ratio Band</b>						
<-20%	*	7%	7%	12%	17%	18%
-20% to -10%	9%	5%	5%	7%	10%	10%
-10% to -5%	3%	5%	5%	6%	7%	7%
-5% to -2%	3%	4%	4%	5%	6%	6%
-2% to +2%	73%	67%	65%	50%	41%	39%
+2% to +5%	3%	4%	4%	5%	5%	5%
+5% to +10%	3%	3%	3%	4%	5%	5%
+10% to +20%	5%	6%	6%	4%	4%	5%
>+20%	*	*	*	6%	6%	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Cohort Information</b>						
Number of cohorts	4,321,499	2,608,302	2,081,491	877,226	382,558	269,113
<i>Specialty Definition</i>	<i>Specialty Code</i>		<i>Surprise Classification</i>			
<i>Service Definition</i>	<i>Procedure Code</i>		<i>Procedure Family</i>			
* PPC values below the 5 <sup>th</sup> percentile are included in the same band as the 5 <sup>th</sup> percentile, and PPC values above the 95 <sup>th</sup> percentile are included in the same band as the 95 <sup>th</sup> percentile.						

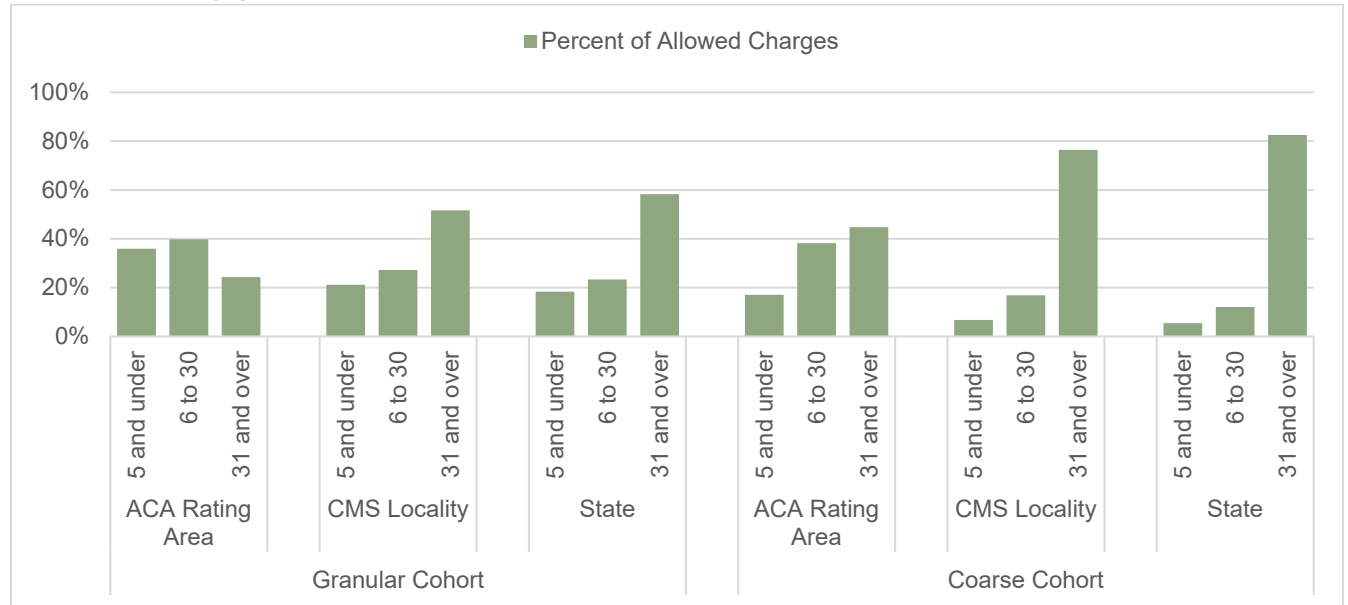
There are two key observations that arise from Figure 3 regarding a contract-based QPA.

- The PPC shows potential savings of 7% to 11% for key surprise services using a granular definition of specialty and service, while potential savings increase to 13% to 16% using a coarse definition of specialty and service. Savings at the higher end are achieved with broader geographic region classifications.
- There is more variation in the PPC when coarser definitions of specialty and service are used, as well as when using a broader geographic region classification. This relative spread of PPC values suggests that there may be greater utilization of independent dispute resolution when cohorts are coarser.

We reviewed these same statistics for a volume-weighted median. Overall PPC values were within 1% to 2% of contract-level medians, as were patterns, though we note there was broader dispersion of PPC values when using a volume-weighted median—suggesting that a volume-weighted median could also trigger greater use of IDR.

As we noted in our discussion of potential definitions of “median contracted rate,” these medians are applied to surprise services. Figure 4 illustrates the distribution of surprise services volumes by cohort credibility—in other words, the portion of potential surprise services that may be associated with a credible QPA and the portion of potential surprise services that may be less likely to have a credible QPA.

**FIGURE 4: DISTRIBUTION OF POTENTIAL SURPRISE BILL ALLOWED AMOUNTS BY CREDIBILITY OF ASSOCIATED COHORTS UNDER ALTERNATE GEOGRAPHIC REGION CLASSIFICATION AND GRANULAR VS. COARSE SERVICE AND SPECIALTY COHORT DEFINITIONS**



As would be anticipated, adopting a less granular definition of region has significant effects on the proportion of less credible surprise billed services. Switching to a volume-weighted median provides greater reductions to the proportion of less credible surprise billed services. Only 20% of surprise bills come from cohorts with five or fewer observations at the ACA rating area definition, using more granular service and specialty definitions, while just 5% of observations meet this threshold when the state is used in conjunction with coarse definitions of service and specialty.

This graphic is not meant to imply that a cohort with five or fewer observations does not represent sufficient data or that a cohort with six or more observations does. In particular, a higher number of services, such as the 30-service standard used in Colorado, may be appropriate if a volume-weighted median is used. A provider contract-weighted median represents many services for each contract observation, where observations in a volume-weighted median represent a single service. At the same time, this distribution clearly illustrates that more granular definitions are more likely to result in cohorts that are unable to meet the final standard for sufficient data. Of the three parameters, the definition of same region has the greatest influence on sufficient data analysis, suggesting that a broad geographic region definition provides federal regulators the greatest opportunity to affect when payers may or may not have sufficient data to calculate the QPA for services regulated by the No Surprises Act.



## V. DEFINING “SAME OR SIMILAR SPECIALTY”

As with geographic region classifications for establishing cohorts, the definitions provided in the No Surprises Act were not precise, and there was room for significant variation in the definition of same or similar specialty. The IFR specified that a provider in a “same or similar specialty” is defined as the practice specialty of a provider, as identified by the plan or issuer consistent with the plan’s or issuer’s usual business practice, with air ambulance services being considered a single provider specialty.<sup>27</sup> Many payers do not distinguish contracts by provider specialty; therefore, we anticipate this will typically align more closely with the surprise specialty classification analyzed below. However, payers who do consider provider specialty when contracting will see variation more in line with the CMS specialty code below.

### SPECIALTY CLASSIFICATION

The deep knowledge required to effectively provide many types of medical care creates a need for provider specialists, with many facility types, provider specialties, and even provider subspecialties in modern healthcare, each with a distinct focus area. While there is room for a wide range of potential classification schemes, we have focused on two distinct classifications in this report.

#### CMS specialty code

CMS publishes a detailed list of over 100 classifications of facilities and providers. This list enumerates meaningful distinctions among different providers by areas of practice or facility capabilities. However, these classifications largely represent differences in educational requirements, rather than an economic variation. Additionally, provider contracts are not likely to explicitly take the full degree of specialty variation into account. There is some natural variation by specialty, but this may take the form of the services provided under the contract. And certain specialties may have very limited representation in a given region, limiting the ability for market forces to influence contracted rates.

#### Surprise specialty classification

We further classified CMS specialty codes into broad groupings, retaining functional variations in facility classification while grouping professionals into primary and specialty care, with separate classifications for the specialties most commonly associated with surprise billing: anesthesiology, radiology, pathology, and surgery. These groupings align reasonably well with commercial reimbursement rates and structures and broaden the pool of observations within given cohort definitions for region and service. Care must be exercised when both a broad specialty classification and service classification is utilized—this may force comparisons between combinations of similar service providers and similar services that lose their apparent similarity when aggregating across both dimensions, although the use of surprise billing classification limits this effect to some degree.

#### Other elements to consider

Many relative value schemes in essence ignore provider specialty as well, choosing to focus on the resources required of the medical procedure in lieu of the provider education because scope of practice considerations place a de facto specialty requirement on services rendered in many cases. While the statutory language clearly calls for the QPA to distinguish between different specialties, this consideration is not common in states. In the few states that distinguish between provider specialties and have fully specified regulations, variation among physicians is typically limited to anesthesiologists and in a couple cases radiologists, with other specialty distinctions ignored by the regulatory structure.

### SPECIALTY COHORT CLASSIFICATIONS ANALYSIS

Using the Milliman CHSD national commercial claims data we analyzed the effects of various “similar specialty” definitions. Definitions analyzed included CMS specialty code (most granular) and surprise specialty classification (least granular).

Figure 5 shows the national average of the PPC across every cohort under each specialty definition. Below the table we summarize other cohort definitions held constant.

<sup>27</sup> Interim Final Rule <https://www.cms.gov/files/document/cms-9909-ifc-surprise-billing-disclaimer-50.pdf>

**FIGURE 5: AVERAGE QPA POTENTIAL PAYMENT CHANGE BY SPECIALTY CLASSIFICATION DEFINITION FOR A CONTRACT-LEVEL RELATIVE VALUE MEDIAN**

	GRANULAR COHORT		COARSE COHORT	
	SPECIALTY CODE	SURPRISE CLASSIFICATION	SPECIALTY CODE	SURPRISE CLASSIFICATION
Composite PPC	-7%	-9%	-15%	-16%
<b>Distribution by PPC band</b>				
<-20%	*	6%	13%	18%
-20% to -10%	9%	5%	8%	10%
-10% to -5%	3%	4%	6%	7%
-5% to -2%	3%	4%	5%	6%
-2% to +2%	73%	67%	50%	39%
+2% to +5%	3%	4%	4%	5%
+5% to +10%	3%	3%	4%	5%
+10% to +20%	5%	7%	9%	5%
>+20%	*	*	*	6%
<i>Total</i>	100%	100%	100%	100%
<b>Cohort Information</b>				
Number of cohorts	4,321,499	3,635,500	490,816	269,113
<i>Region Definition</i>	<i>ACA Rating Area</i>		<i>State</i>	
<i>Service Definition</i>	<i>Procedure Code</i>		<i>Procedure Family</i>	
* PPC values below the 5 <sup>th</sup> percentile are included in the same band as the 5 <sup>th</sup> percentile, and PPC value above the 95 <sup>th</sup> percentile are included in the same band as the 95 <sup>th</sup> percentile.				

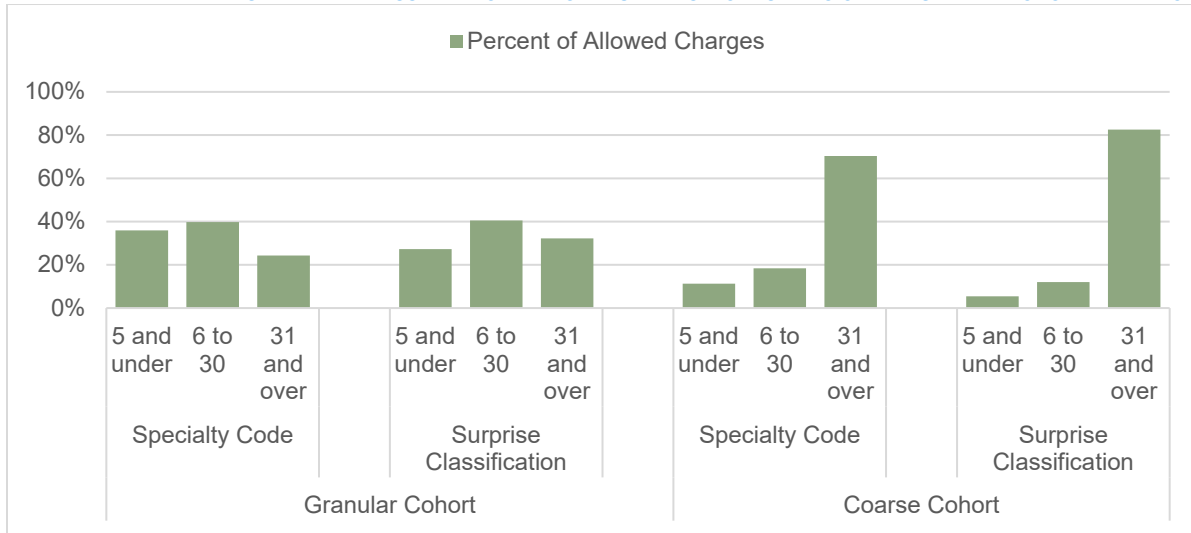
Figure 5 suggests the following key observations:

- Changing the definition of same or similar specialty has limited influence on the potential overall savings, increasing potential savings by only 1% to 2%
- Using a coarser definition of region and service, the PPC shows increased potential savings of 7% to 8%, a significantly larger impact than obtained by varying the specialty definition
- As with region classifications, a finer definition of specialty results in greater consistency of the PPC, which may reduce utilization of IDR

As we observed for region variation, the primary effect of shifting to a volume-based median was an increase in the spread of the PPC, which could lead to increased utilization of the IDR process.

Figure 6 illustrates the distribution of surprise services by cohort credibility. Updating specialty cohort definitions from more granular to more coarse has some influence on the overall proportion of surprise bills that are associated with credible medians. However, the differences are much smaller than those associated with a broader region variation. In combination with the reduced savings impact, this suggests that the QPA is not very sensitive to how specialty is classified. This aligns with the general tendency of commercial insurers to not vary payment rates meaningfully by specialty, if at all, for a given type of service in a given region.

**FIGURE 6: DISTRIBUTION OF POTENTIAL SURPRISE BILL ALLOWED AMOUNTS BY CREDIBILITY OF ASSOCIATED COHORTS UNDER ALTERNATE SPECIALTY CLASSIFICATION AND GRANULAR VS. COARSE REGION AND SERVICE COHORT DEFINITIONS**



## VI. DEFINING “SAME OR SIMILAR SERVICE”

### SERVICE CLASSIFICATION

There are many ways to account for services provided, but over the past decades the rise of electronic reporting systems and accompanying standardization of claims input (including notable requirements on reporting pursuant to HIPAA has permitted the market to focus on several standards in claims systems:

- Inpatient services can typically be assigned to diagnosis-related groups (DRGs)
- Non-inpatient services are similarly typically classified by ambulatory patient classification (APC) or Medicare’s Health Care Procedure Code System (HCPCS) system, which includes the American Medical Association’s current procedural terminology (CPT) system

Given the general level of familiarity of payers and providers with the above procedure coding systems, we have used these service definitions as the building blocks of our analysis, and have focused on two options, though we note that not all services are billed by providers or paid by payers according to these standards.

The IFR generally defines services at a procedural code level, including any modifiers for which the payer contract includes separate rates. Additionally, the IFR requires that separate medians be calculated for modifiers 26 and TC, which represent the professional and technical components of laboratory tests when billed separately. This is more granular than the most granular option we analyzed (detailed procedure codes), but we anticipate results will still be comparable to the procedure code level. Our results illustrated below outline a relative value measurement, which should account for the innate cost difference between these two components.

For anesthesia services and air ambulance mileage codes (referred to as unit-based services), medians are calculated using a relative value scale. As anesthesia services are typically paid using a conversion factor and the American Society of Anesthesiology’s relative value scale, a median conversion factor is determined in place of a median total cost. Similarly, for air ambulance mileage, a median cost-per-mile is used in place of a median total cost. For these services, we anticipate that results will be more comparable to our procedure family classification illustrated below.

We note that HHS could provide additional clarity regarding other costs paid on a unit basis, such as injectable medications. We anticipate that HHS intends payers to calculate a median cost per unit for these services, and apply the number of units to this median cost. However, the number of units is not technically a code modifier, which creates some potential room for confusion as billing may only include one line item for all units of a medication. This may cause payers to conclude that they must calculate a median actual cost that includes payments for multiple different dosages.

#### Detailed procedure codes

As procedure payment amounts vary by detailed code, we considered a methodology that groups payments by these codes. There are variations within each set of procedure codes, but the codes by design group similar services into single classifications that typically receive the same payment rate in many contracts. However, there are a large number of valid procedure codes—over 17,000 HCPCS codes alone were valid in 2019—not all of which may be used frequently by a given provider specialty or in a given region. Anesthesia provides an interesting example here, particularly in that most anesthesia services are billed using a system of service classifications and relative value units published by the American Society of Anesthesiologists. While there are numerous anesthesia codes, some covering anesthesia time and that may be used infrequently, they all can be assigned to a common base payment, or conversion factor, after adjusting for the relative values of these services. Thus, measuring anesthesia services at a procedure code level would be likely to lead to more issues with sufficient data without creating any additional precision in the measured median observations. This specific structure is somewhat unique to anesthesiologists, but the general concern with data sufficiency is a prominent issue when procedure codes are used to classify services.

#### Procedure code families

We grouped service codes into the following families of similar procedure codes, with a mapping provided by UnitedHealth Group. This classification retains relative granularity on services classified by DRG and APC, but groups 17,514 procedure codes into 56 distinct procedure code families. While this avoids many of the potential granularity issues, these procedure code families contain services of significantly different intensities that would receive significantly different payments in practice. A decision to utilize procedure code families should only be considered if contracted rate observations are measured using a relative scale, such as Medicare. This places significant importance on the relative value scale chosen, and may be less appropriate for issuers or providers whose 2019 contracts did not align with the relative value scale utilized.

### Other options considered

As noted previously, services can be paid for using a variety of different payment structures. There are multiple variations of APCs and DRGs, and the 10th iteration of the International Classification of Diseases (ICD-10) contains an even more precise procedure code definition. However, the key challenge in service classification is how the classification responds to services with lower utilization, and other options considered do not meaningfully improve the analysis along this dimension. The broad familiarity of Medicare's procedure coding system to payers and providers makes it a natural baseline, though we note that roughly 6% of commercial market services cannot be adequately classified under these systems and alternative considerations would need to be made for these services.

### SERVICE COHORT CLASSIFICATION ANALYSIS

Using the Milliman CHSD national commercial claims data we analyzed the effects of various "same or similar service" definitions. Definitions analyzed included CMS specialty code (most granular) and surprise specialty classification (least granular).

Figure 7 shows the national average of the QPA potential payment change across every cohort under each service definition. Below the table we summarize other cohort definitions held constant.

**FIGURE 7: AVERAGE QPA POTENTIAL PAYMENT CHANGE BY SPECIALTY CLASSIFICATION DEFINITION FOR A CONTRACT-LEVEL RELATIVE VALUE MEDIAN**

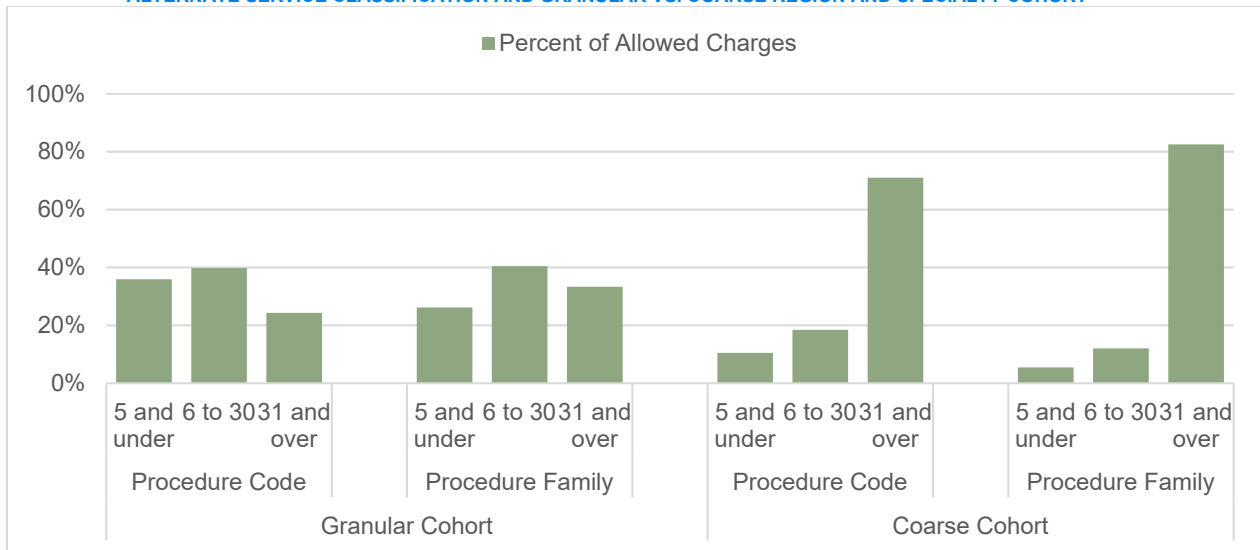
	GRANULAR COHORT		COARSE COHORT	
	PROCEDURE CODE	PROCEDURE FAMILY	PROCEDURE CODE	PROCEDURE FAMILY
Composite PPC	-7%	-11%	-12%	-16%
<b>Distribution by PPC band</b>				
<-20%	*	9%	9%	18%
-20% to -10%	9%	6%	7%	10%
-10% to -5%	3%	5%	6%	7%
-5% to -2%	3%	5%	5%	6%
-2% to +2%	73%	60%	56%	39%
+2% to +5%	3%	4%	4%	5%
+5% to +10%	3%	4%	4%	5%
+10% to +20%	5%	9%	8%	5%
>+20%	*	*	*	6%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
<b>Cohort Information</b>				
Number of cohorts	4,321,499	1,308,939	1,487,525	269,113
<i>Region Definition</i>	<i>ACA Rating Area</i>		<i>State</i>	
<i>Specialty Definition</i>	<i>Specialty Code</i>		<i>Surprise Classification</i>	
* PPC values below the 5 <sup>th</sup> percentile are included in the same band as the 5 <sup>th</sup> percentile, and PPC values above the 95 <sup>th</sup> percentile are included in the same band as the 95 <sup>th</sup> percentile.				

Figure 7 gives us the following key observations:

- Shifting from a narrow definition of "same or similar service" to a broader definition may reduce healthcare spending on affected services by about 4% under both granular and coarse definitions of region and specialty
- Shifting from granular to coarse definitions of region and specialty produces about 5% greater potential reduction in healthcare spending on affected services
- As with the other classifications, a more granular definition for service cohort results in greater stability in the QPA, which could reduce IDR utilization

As we noted in our discussion of different definitions of "median contracted rate," these medians are applied to surprise services. Figure 8 illustrates the distribution of surprise services by cohort credibility.

**FIGURE 8: DISTRIBUTION OF POTENTIAL SURPRISE BILL ALLOWED AMOUNTS BY CREDIBILITY OF ASSOCIATED COHORTS UNDER ALTERNATE SERVICE CLASSIFICATION AND GRANULAR VS. COARSE REGION AND SPECIALTY COHORT**



Adjusting procedure code definitions shows modest decreases in the number of less credible medians, with a much sharper decrease associated with switching from granular region and specialty to a coarser definition of region and specialty.

## VII. ADDITIONAL CONSIDERATIONS

In addition to the key variations regarding measurement of the median and cohort definition, the QPA will have influence on many elements of commercial health markets including the appeal of arbitration, payment rate and premium growth, and provider and payer competition.

### IMPLICATIONS FOR INDEPENDENT DISPUTE RESOLUTION

While a full discussion of arbitration is beyond the scope of this report, the IDR process plays a role in the evaluation of the QPA. Because the QPA is the baseline payment considered when IDR is invoked, it is important that the QPA provide a meaningful measure of service cost. Significant variation between the QPA and prevailing commercial rates for services within a cohort will create incentives for both payers and providers to engage the IDR process to obtain better payment terms. On the other hand, consistency between the QPA and prevailing commercial rates will give both parties incentive to determine a mutually agreeable payment rate and avoid the additional IDR-related expenses.

### INFLUENCE ON PAYMENT RATES AND HEALTH PLAN PREMIUMS

While the determination of the QPA may not have an immediate impact on negotiated rates in the short term, in the long term negotiated rates may converge toward the QPA—whether lower or higher than current prevailing rates.

The indexing of the QPA to CPI-U is also likely to put long-term downward pressure on payment rates. Figure 9 illustrates recent values CPI-U relative to two additional measures—the consumer price index for medical services (CPI-M) and the growth in per capita premiums for employer-sponsored coverage as measured by the national health expenditure accounts (which is the ACA's premium growth index).

**FIGURE 9: TRENDS IN COMMON INDEXES USED IN FEDERAL SETTINGS**

METRIC	2015	2016	2017	2018	2019	2020
Consumer Price Index – All Urban Consumers	0.1%	1.3%	2.1%	2.4%	1.8%	1.2%
Consumer Price Index – Medical Care	2.6%	3.8%	2.5%	2.0%	2.8%	4.1%
Growth in Per Capita Health Premiums for Employee-Sponsored Insurance	3.7%	4.6%	3.3%	5.2%	4.6%	5.1%

Both CPI-U and CPI-M are, at some level, aspirational goals relative to recent growth in costs in employer-sponsored care. However, their incorporation into the QPA will give payers additional leverage to reduce payment rates in settings that could lead to surprise bills protected under the No Surprises Act.

### CHANGING PROVIDER NETWORKS

Networks historically evolve over time, as payers seek to retain or improve their competitive position and providers seek to attract a large enough patient pool to maintain or expand their practices. Additionally, networks accommodate retirements, new practices, and practice consolidations. Over time, the pool of providers who contract with a plan in 2019 will become increasingly different from the pool of providers who are under contract in future years. This opens another question with regards to the QPA—should it be based on all providers under contract in 2019, or only those who remain part of the plan network? The median contracted rate accepted in 2019 may not be one that a current provider list would have accepted back in 2019. On the other hand, requiring the QPA to be restated based on current provider lists would create incentives for payers to remove higher-priced providers from networks to lower the median while creating similar incentives for lower-cost providers to leave networks in order to increase the median.

### IMPLICATIONS FOR PLAN AND PROVIDER COMPETITION

The No Surprises Act is likely to be successful in eliminating most surprise bills. However, as with most policy proposals it is likely to have unintended consequences, one of which is the possibility of limiting competitive pressures. A payer whose contracted payment rates were 10% lower than its competitors in 2019 would enjoy a lower QPA and, because incentives are likely to keep payment rates with the trended QPA, this payer may be more likely to retain its

reimbursement advantage. At the same time, the limited ability of providers to encourage lower-cost payers to raise reimbursement levels coupled with lower inflation gives providers less flexibility to accept lower reimbursement from other payers without more careful consideration of the business case for those rates and the longer-term sustainability of their medical practice.

## IMPLICATIONS OF AND CONSIDERATIONS FOR EXTERNAL DATABASES

Should a payer have insufficient data for purposes of establishing the QPA, payers may need to rely on an external database. External databases can include state all-payer claims databases and databases maintained by third parties. State all-payer claims databases have the advantage of local relevance and can better reflect state-specific market dynamics, and the No Surprises Act includes funding for states to establish their own such databases. However, these databases typically consist of claims observations and would not typically contain specific contracting information. Given the IFR's definition of an observed contract rate (payer provider contracts), values determined from third-party claims databases may introduce some variation to the IDR process. Lastly, as these databases are typically established by states, participation by self-insured groups may be limited.<sup>28</sup> Ultimately, the IFR shows preference for payer data as indicated by the low three-contract threshold for sufficient data and the availability of multiple geographic region fallback options. In particular, the availability of a census division-level MSA median (or non-MSA median for services rendered outside of an MSA) shows a significant preference for payer data over specific market data.

Like state all-payer claims databases, third-party databases typically consist of claims actually paid by the health plans contributing data. While none include the entire commercial market, many include significant portions of a given market. Companies currently collecting claims data include Fair Health, the Health Care Cost Institute, Truven, and Milliman. These claims databases align well with a service cost median as described above, but reporting data typically does not include specific provider/payer contract information at the claim line level. Additionally, different databases may have different methods for ensuring data integrity, consolidating varying data contributor sources, processing and grouping claim line level details, and addressing costs of services performed under a capitation agreement or a value-based contract. While it is possible in some instances to infer contracts from payment rates and provider information (as has been done in this report), this consideration adds a degree of difficulty to the process and will inherently exclude providers the insurer contracts with that do not perform specific services. As noted previously, states that use a claims database and clearly explain their methodologies typically use a volume-weighted unit of observation and a service cost measure, though they may not all look for a median.

In addition, different third-party databases collect claims from different contributors, which means that calculated values could be meaningfully different in regions where contracting behavior varies significantly among payers. Each database likely has variation in how representative it is of each regional market, and databases may face various data use limitations that restrict the transparency or availability of values produced by the database. Heavy reliance on third-party databases, potentially as a result of a narrow QPA cohort definition, may introduce additional comparability, credibility, and consistency challenges in calculating the QPA. The IFR requires payers to be consistent with their choice of a third-party database in order to prevent payers from "shopping" for the third-party database that produces the lowest QPA for a given service.

---

<sup>28</sup> The Supreme Court has ruled that states cannot compel third-party administrators to submit claims for self-funded groups to a state all-payer claims database due to ERISA preemption. As noted earlier, self-funded groups make up 61% of the employer market and about 56% of all private coverage.



---

## VIII. METHODOLOGY AND DATA SOURCES

All quantitative analysis in this report relied upon Milliman's Consolidated Health Cost Guidelines™ Sources Database (CHSD) as our primary data source. Analysis was limited to commercial group and individual experience for the 2019 calendar year. Services with insufficient provider information to determine a provider location or specialty were excluded, as were services that could not be adjudicated under any of the Medicare fee schedules. Finally, we excluded group contracts for which we could not identify group size or funding status. The resulting data set contains health plan claims services for approximately 59 million person years.

Surprise bills were identified from CHSD for services classified as air ambulances, ground ambulances, and emergency room services, and for facility services with an in-network facility component and at least one out-of-network component using a combination of network status, place of service, and procedure codes.

The medians were calculated based on various definitions for region, specialty, and service type. When determining potential aggregation approaches, we used the data fields available in CHSD, and publicly available categorizations, such as ACA rating area and CMS locality.

- Region: Provider ZIP Codes were used to assign claims to state, ACA rating area, and CMS locality.
- Specialty grouping: CMS specialty codes, CHSD's standard specialty codes, CHSD's standard with higher-level groupings for primary and specialty care providers, and CHSD's standard with identification of specialties most associated with surprise bills were all considered as specialty groupings.
- Service type: Medicare APCs, DRGs, and HCPCS from CHSD were used to identify service type. We relied on a UnitedHealth Group service classification file for a more granular definition of service type.

Each median was calculated on a claim volume-weighted, provider NPI-weighted, and contract entity-weighted basis. The claim volume-weighted basis considers each specific paid healthcare service claim in the median calculation. The provider NPI-weighted basis combines national provider identifier and total service payment to impute the number of distinct provider contracts. The contract entity basis is determined by grouping national provider identifiers into distinct contracting entities using a combination of contract entity data provided by UnitedHealth Group and data in the Medicare Provider Enrollment, Chain, and Ownership System (PECOS).

Members were attributed to each of the four regulatory markets using contract information in CHSD. Claims were then assigned to the regulatory market based on the market of the member associated with the claim. For each cohort definition analyzed, claims were grouped by cohort and market and observations were aggregated to each of the three weighting levels. Medians were then calculated using allowed amounts and percentage of Medicare payments (allowed amount / Medicare allowed amount). These values were then compared to the average value for the cohort to determine the QPA potential payment change. Aggregate impacts were determined by weighting the QPA potential payment change by in-network allowed amounts within the cohort.

---

## IX. CAVEATS AND LIMITATIONS

The authors of this report are consulting actuaries for Milliman, Inc. Jason Karcher and Cory Gusland are members of the American Academy of Actuaries, and meet the qualification standards of the American Academy of Actuaries to perform the analysis supporting this report.

The material in this report represents the opinion of the authors and is not representative of the views of Milliman. As such, Milliman is not advocating for, or endorsing, any specific policy changes to the commercial market surprise billing regulations in this report.

This report was prepared for the internal use of UnitedHealth Group and should not be distributed, in whole or in part, to any external parties without the prior written permission of Milliman. We do not intend this information to benefit, or create a legal liability to, any third party, even if we grant permission to distribute this information to such third party.

Milliman has developed certain models to estimate the values included in this report. The intent of the models was to illustrate the potential impacts of potential varying regulatory definitions under federal surprise billing reforms on service costs in the commercial market. We have reviewed the models, including their inputs, calculations, and outputs, for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP).

The models rely on data and information as input to the models. We have relied upon data contributed by a broad range of commercial health plan sponsors and accepted it without audit. We have reviewed this data for reasonableness. There is no single comprehensive source that estimates provider payment levels or health plan premiums in the commercial market. As such, we connected publicly available aggregate totals to plan and region-specific costs to determine median contract rates under a variety of scenarios. To the extent that the data and information relied upon is not accurate, or is not complete, the values provided in this report may likewise be inaccurate or incomplete.

The figures presented in this report are designed to provide information regarding the estimated financial impact of various definitions of key terms in the No Surprises Act. Future healthcare costs are highly uncertain and will likely vary from our current estimates and will depend on market dynamics, a plan's regional makeup, and many other external factors.

This report is designed to assist UnitedHealth Group in better understanding how the QPA calculated under the No Surprises Act may vary as a result of key regulatory decisions to be made by HHS. This information may not be appropriate, and should not be used, for other purposes. The terms of the October 1, 2015, Master Services Agreement between Milliman and United HealthCare Services, Inc., an affiliate of UnitedHealth Group, apply to this report and its use.

# APPENDIX A

## Defining “median contracted rate”

The No Surprises Act defines the QPA as the “median of the contracted rates” within a given cohort of “similar services” provided by a “provider in...[a] similar specialty” in the “same region.” In this section, we focus on what could be meant by the first component—the median contracted rate. We address possible definitions of the three components in this report above, which we will refer to as “cohort” definitions going forward.

Some elements of the No Surprise Act are clear—measurements are determined independently for each of the four identified insurance markets (individual coverage, small group insurance, large group insurance, and self-funded group coverage) administered by a given payer. The definitions of the markets themselves align with existing federal regulations. Amounts are typically based on contract rates as of January 31, 2019, and, once established, are trended forward using the consumer price index for all urban consumers (CPI-U). Starting in 2023, the amounts will be based on the previous year’s contract rates trended forward with the CPI-U, although there is uncertainty on whether the statute permits annual rebasing thereafter and when such rebasing might apply.

At the same time, the statutory language leaves significant room for interpretation in the key parameters—even some of the most basic elements. The core terms “median” and “contracted rate” are straightforward on the surface. However, in order to calculate a median one first needs to understand what constitutes a “contracted rate” observation. While the concept of a median is mathematically simple, the language is not clear enough to specify a measurement approach. This vagueness is further complicated by the statutory consideration of “sufficient data.” This general situation is not unusual—statutory language frequently leaves significant decisions in the hands of appropriate regulatory authorities—but the range of potential decisions (and potential variability of outcomes) complicates analysis of the effects of the law.

*Note: Subsequent to conducting our review and analysis, HHS released the IFR and defined “median contracted rate” consistent with what we refer to as “contract level” and “actual cost” below.*

### WHAT CONSTITUTES A “CONTRACTED RATE,” OR PAYMENT OBSERVATION?

Mathematically, a median is the middle number in a sorted list of numbers. For purposes of establishing the “median of the contracted rates” that is the QPA, this median would be the middle payment observation in a sorted list of payment observations for a particular medical service. In this sense, a median represents a reasonable proxy for a commercially acceptable rate—in some sense, half of the market will accept this amount as payment in full. But what values should be counted as observations in the list? In the case of the No Surprises Act, there are three potential ways of defining a contracted rate observation that appear to fit within the confines of the statute:

- **Payer contracts (or contract-level):** A contracted rate between an issuer or payer and a provider contracting entity would count as a single observation, regardless of how many individual providers are covered in the contract or how many services are provided. If a payer had 15 contracts in a region, this would equate to 15 observations.
- **Provider contracts (or provider-level):** One level deeper than a payer contract, each individual provider would count as a payment rate observation regardless of how many services are provided by each individual provider. For example, if a payer has a contract with a medical group that has 100 individual providers, this would equate to 100 observations.
- **Service payments (or volume-weighted):** One level deeper than provider contract, each individual service counts as a single observation. Extending on the previous example, if the medical group averaged 15 procedures per provider for a given service, there would be 1,500 observations (100 individual providers X 15 procedures / individual provider).

#### Payment observation at a payer contract level

As implied by the name, a median calculated at the payer contract level is payer-focused—it represents the median rate a payer offers to a contracting entity. Payers typically negotiate in-network payment amounts with health systems, healthcare facilities, physician groups, and other ancillary healthcare service providers (e.g., laboratories). In most cases, individual physicians only negotiate directly with payers when they own an independent practice. A payer contract measure aligns well with the statutory verbiage “contracted rate recognized by the [payer]...as the total maximum payment.” The unit of measurement is consistent with the payer’s internal contracting process. Further, the specification of an amount “as of January 31, 2019” (i.e., at a particular point in time) is more consistent with contract terms rather than with actual service payment amounts. Additionally, this approach would advantage payers that might be facing contracting challenges in markets with high provider consolidation.

Two potential operational challenges arise from a payer contract-level definition. First, commercial contracts with multispecialty groups and facilities are frequently specialty-agnostic, which would raise challenges to determine which contracts should be included for services involving specific specialties as described in the statute. Second, provider

# APPENDIX A

## Defining “median contracted rate”

contracts are typically proprietary, and not publicly available or published in third-party databases. As such, third-party databases may not be able to align well with a payer contract median, which could result in meaningful variation among amounts calculated from these databases in situations where the payer does not have sufficient data for a given cohort. These differences could create additional uncertainty in payer pricing, as rates are less likely to be consistent with the payer’s contracts. This could in turn put a small amount of upward pressure on premiums. We note that some states currently permit use of an alternate geographic region in order to facilitate use of rate data from the state’s preferred data source to avoid this issue. Generally, payers will be better able to predict costs when the QPA is based on their own experience, and regulations should keep this consideration in mind as they develop credibility standards and determine what constitutes sufficient data.

The contract-level median is, in essence, the median rate offered by a payer—half of their contracts are paid at a lower rate and half of their contracts are paid at a higher rate.

### **Payment observation at a provider contract level**

Using a provider-based contract measure maintains the clear tie to “contracted rate” while creating a clearer tie to an individual provider’s specialty and acceptable payment level. As noted above, payers do not typically vary contracted rates by specialty and may face challenges aligning contract terms with providers and provider specialties, especially where a specific provider is part of more than one provider group. However, this definition is reasonably consistent with reporting requirements under the Transparency in Coverage Final Rule, which requires most commercial health plans to publish negotiated rates starting in January 2024. A provider contract definition still retains the potential disconnect from any QPA determined from third-party databases. In general, there are more provider contracts than payer contracts, and use of a provider contract measure would give more weight to large provider groups and hospital systems than a “contract-level” median, which could result in higher medians in areas where larger provider groups have used their size to negotiate higher payment rates.

The provider-level median represents the median rate a given physician or facility will accept to perform the service—half of contracted physicians (or facilities) are paid a lower rate, and half of contracted physicians (or facilities) are paid at a higher rate.

### **Payment observation at a service level, or “volume-weighted”**

Using actual payments for in-network services represents a third potential type of observation. By limiting to in-network payments, the amounts represent contracted rates, and per contract terms. These amounts are recognized as payment in full. Service payments are the amount found in third-party databases, so such a definition would be replicable to at least some degree for services for which the payer has insufficient data available. However, scoping the contracted rates to be as of January 31, 2019, presents a challenge for adjudicated claims, which happen throughout the year. The time period for payment observations would, therefore, need to be defined, opening up additional regulatory considerations. Contrary to the contract-level and provider-level observation units described above, service payment observations can typically be linked to specialty data. Despite these benefits, service payment observation unit definition could be problematic in markets where there has been significant market consolidation. Larger provider groups under the same contract would generate more volume, and likely drive the median, which could, in turn, lead to atypically higher payment. This could create a strong incentive for smaller providers to seek arbitration of an anticipated high median rate compounding the impact of a consolidated market. Despite this drawback, this is used in many states with surprise billing protections, likely due to the practicality and ability to rely on third-party databases.

A volume-weighted median represents the median cost of a service received by a patient in-network. Half of in-network services performed were paid at a lower rate than this amount and half historically are paid at a higher rate.

### **What are implications of these definitions?**

Each of these three options represents a viable approach to defining an observation—all can reasonably be characterized as contracted rates. We outline the implications with a simple example. Suppose a payer has claims as shown in Figure 10 in a given cohort cell.

# APPENDIX A

## Defining “median contracted rate”

FIGURE 10: SAMPLE CLAIMS IN AN EXAMPLE REGION, SPECIALTY, AND SERVICE CELL

CLAIM NUMBER	PROVIDER GROUP	PROVIDER ID	CONTRACTED	ALLOWED AMOUNT
1	A	A01	Y	150
2	A	A01	Y	150
3	A	A02	Y	150
4	A	A03	Y	150
5	B	B01	N	160
6	C	C01	Y	186
7	C	C01	Y	186
8	C	C01	Y	186
9	C	C01	Y	186
10	C	C01	Y	186

The average payment for in-network services is 170. But we see different behavior for each of these medians, as shown in Figure 11. Figure 11 also shows the QPA that would have applied to Provider B, who is out-of-network, and we illustrate Provider B01’s potential payment change if total payment is set at the QPA.

FIGURE 11: MEDIAN CONTRACTED RATES UNDER DIFFERENT DEFINITIONS OF CONTRACTED RATE AND IMPACT ON OUT-OF-NETWORK ALLOWED AMOUNTS

MEDIAN DEFINITION	MEDIAN	PROVIDER B01 PAYMENT EFFECT
Contract	168	5% increase
Provider	150	6.3% decrease
Volume-Weighted	186	16.3% increase

There are two key observations to note in Figure 11.

- **The results shown are highly dependent on the distribution of claims.** Simply switching the contracted rates for Provider Group A and C in Figure 10 would not affect the contract median, but would swap the provider and volume-weighted medians (and their impacts on Provider B01). This highlights the potential sensitivity of results in any specific situation to the definition of median contracted rate.
- The change to our out-of-network provider’s claim does not reflect the elimination of any amounts that would have been balance-billed prior to the No Surprises Act, so the amount received by the provider could be different from what’s shown above.

While definition of a contracted rate observation is one element open for regulatory discussion, it does not constitute the full extent of the uncertainty—once we know the quantity to measure, what units do we use for the measurement?

### HOW ARE CONTRACTED RATE OBSERVATIONS MEASURED?

There are two basic mechanisms that can be used to measure the amount.

- **Service cost:** An absolute dollar amount reflecting payment for a particular healthcare service.
- **Relative value of the service:** Payment rate expressed as a cost relative to some widely used benchmark. While there are a variety of potential relative value scales one of the most common approaches is the payment rate divided by Medicare fee-for-service (FFS) payment, which is also known as the “percentage of Medicare” amount.

#### Service cost

Arguably the most natural reading of the statutory text would be to measure the actual cost of the item or service being provided in money. These amounts are ultimately what is reported in payer claims systems and represent the consumer’s experience of medical costs. However, many payer contracts do not enumerate explicit cost for each item or service covered by the contract. Rather, payer contracts describe how to calculate the actual cost that is used in adjudication. Service cost can be a less appropriate measurement if the regulatory region/service/specialty cohorts are sufficiently broad, requiring the aggregation of services that have meaningfully different costs (e.g., grouping multiple procedures from a given service category beyond a specific procedure, grouping of rates across rural and suburban regions). In these situations, the median cost calculated and used as the QPA may no longer be representative of a payment rate for a contracted service involved in a payment dispute. On the other hand, a narrow definition that limits classes of services or specialties by the recognized amount is more likely to result in situations where the number of

## APPENDIX A

### Defining “median contracted rate”

available observations fails to be large enough to constitute sufficient data. The IFR elected to use a service cost measurement for most services.

#### Service relative value

Many payer contracts are based on some type of relative value schema. Rather than directly enumerate costs, service payments are determined relative to a predefined set of benchmark rates or relative value units. One widely used method of establishing relative value weights is the use of various Medicare fee schedules. Use of Medicare fee schedules to determine relative service values is not equivalent to using these schedules to compare commercial market payments. Rather, these schedules would be used to compare the value of the QPA relative to a contested payment amount in a given cohort. As long as any chosen relative value schema reasonably measures the relative value of services within a cohort in the commercial market, a median based on the schema will retain these relativities.

A percentage of Medicare approach has an advantage of putting similar services on a more comparable basis than service cost when calculating a median. For example, the Office Visit codes of 99211 through 99215 represent office visits that differ solely based on the time spent with a patient. They do have an increasing dollar amount for each code, making them poor candidates to combine for a single median calculation if actual service cost is used as the measurement. However, when related to Medicare reimbursement for the same codes, the resulting percentages of Medicare are typically much more comparable, and the inherent similarity of these services supports a combined median calculation that increases the credibility of the data for the calculation. Medicare fee schedules have the distinct advantage of being widely understood and immediately available. At the same time, it is clear that Medicare places different values on services relative to the commercial market, as evidenced by the wide range of payment rates as a percentage of Medicare. Other relative value systems may be more appropriate, but the statutory requirement for prompt regulation limits options available for use in the initial years of market regulation to scales that are presently available. The IFR elected to use the American Society of Anesthesiologists’ relative value scale for anesthesia services, and a per mile cost for air ambulance mileage services, which are reasonable relative value scales for these services given current commercial contracting practices.

Despite the widespread practice of using Medicare FFS as a basis for comparing different reimbursement rates, many contracts are developed without direct consideration of Medicare fee schedules. This would create a disconnect between a contract valuation relative to Medicare, particularly where the contract terms describe meaningfully different relative values between differing services. As an example, there are many ways to calculate the reimbursement for inpatient hospital services. Diagnosis-related groups (DRGs) are common, but there are several different types of DRGs—Medicare DRGs, All-Payer DRGs, and All-Payer Refined DRGs to name three prominent examples—and each may determine different values for the same service. As such, it is important to note that, while we do consider contract rates in terms of percentages of Medicare, this should not be construed as an implication that percentage of Medicare is the “right” way to measure contracts. We use it for convenience and broad applicability, but note that other relative value systems may be more appropriate for measurement of contracted rates should regulators consider median contracted rates using a relative value basis.

#### WHAT CONSTITUTES SUFFICIENT DATA?

The effectiveness of the regulatory regime will be determined in large part by how appropriately it determines costs for services—a QPA that consistently represents a reasonable amount will encourage both plans and payers to avoid arbitration and its related costs. However, a sufficient level of detail is at odds with the concept of sufficient data. The more precisely, or narrowly, the QPA is defined, the more limited the number of payment observations. A median of three observations can certainly be calculated, but three observations may not be likely to represent a meaningful proxy for the commercial value of the given service.

Given the many dynamics present in healthcare pricing, it is hard to determine quantitatively what would constitute a statistically valid sample from which to calculate a median. As one example, in Colorado, the state has established a minimum count of 30 observations in order to use a given median at the most precise level, using a broader fallback for services with fewer incidents. In this report, we discuss the trade-off of definitional granularity and precision of costs against data sufficiency and statistical appropriateness of calculated medians. In our analysis, assuming a volume-weighted methodology for payment rate observations, we focus on services within three bands—five or fewer observations, six to 30 observations, and 31 or more observations. These cohorts are based on professional judgment, informed in part by Colorado’s standard. Cohorts with five or fewer observations would be less likely to be robust enough to determine a statistically representative median, while cohorts with 31 or more observations are more likely to determine a statistically representative median. While this classification does not represent a statistically robust method for determining the validity of computed medians, it does allow us to examine in broad terms how many cohorts may face challenges in terms of significant data and what portion of overall claims and surprise claims this may represent.

## APPENDIX A

### Defining “median contracted rate”

We note that there is little available precedent as to what would constitute sufficient data for contract-level or provider-level measures. However, there are significantly fewer contracts or providers than services. As such, each individual observation may represent far more data points. This implies that the minimum number of observations could be and likely should be lower for these definitions of payment observation than for a volume-weighted median.

#### HOW DO THE DIFFERENT PAYMENT OBSERVATION DEFINITIONS AFFECT CREDIBILITY?

For any given cohort, there are typically more services provided than the number of unique physicians or facilities. Similarly, there are more physicians and facilities than provider groups and hospital systems contracting with a payer to provide a given service. As such, we would typically anticipate fewer potential credibility issues with a volume-weighted median, assuming that the number of observations required under each definition remains unchanged. We evaluated the degree of this effect for two cohort definitions outlined in Figure 12. For the following figures in this appendix, we refer to these two cohorts as the “granular cohort,” which uses more granular defined definitions of region, specialty, and service, and the “coarse cohort,” which uses broader classifications of region, specialty, and service.

**FIGURE 12: COHORT DEFINITIONS FOR EVALUATION OF DEFINITION AND MEASUREMENT OF CONTRACTED RATE OBSERVATIONS**

LABEL IN FIGURES	REGION DEFINITION	SPECIALTY DEFINITION	SERVICE DEFINITION	UNIQUE COMBINATIONS
Granular Cohort	ACA Rating Area	Specialty Code	Procedure Code	11.7 million
Coarse Cohort	CMS Locality	Surprise Specialty Classification	Procedure Family	565,000

We note that the same number of services, providers, and contracts are represented, and as expected, there is a noticeable decrease in the number of cohorts with five or fewer observations and six to 30 observations, accompanied by a significant increase in the number of cohorts with at least 30 observations. This pattern holds when reviewing against where this credibility matters—the volume of surprise bills. It holds across all three potential median measurements.

As would also be anticipated, the percentage of cells and the proportion of surprise bill allowed amounts also increases across these cells. However, it is important to note that this is not a sign of increased credibility—the same volume of services contracted and services rendered is represented. Figure 13 shows some key statistics regarding the number of cells and surprise bills.

**FIGURE 13: OBSERVATIONS UNDER DIFFERING DEFINITIONS OF MEDIAN CONTRACTED RATE**

MEDIAN CONTRACTED RATE	FREQUENCY	PERCENTAGE OF CELLS		PERCENTAGE OF SURPRISE BILL ALLOWED AMOUNT	
		GRANULAR	COARSE	GRANULAR	COARSE
Volume-Weighted	31 and above	13%	24%	65%	95%
Contract-Level	6 and above	13%	34%	62%	96%

Roughly the same number of cells meet the 31 observations threshold under a volume-weighted metric as meet a six observations threshold under a contract measurement. This illustrates how the number of observations that would generate a statistically representative median is related to the total universe of observable events—there are more claims than providers, for example, so a credibility standard for volume-weighted definition would almost certainly need to be higher than an equivalently reliable definition of credibility for a provider definition. We note that the IFR uses an even lower threshold than discussed here, with a minimum threshold of three or more contracts. Further, the geographic fallback means that sufficient data evaluation will likely be closer to the coarse cohort definition than the granular cohort definition. Under this definition, most cells and almost all current surprise bills are likely to have sufficient data.

#### HOW DO DIFFERENT PAYMENT OBSERVATION DEFINITIONS AFFECT MEDIAN VALUES?

As discussed in Section III, the QPA potential payment change (PPC) is a common measure of the potential financial impact of surprise billing legislation. By calculating the percentage difference from the median observation to the average, we can estimate the potential change in payments under a given payment standard. Where the PPC is significantly different from 0% indicates more disruption in market payment rates, and a wider range of PPC values suggests less stability in the definition relative to prevailing payment rates.

Figure 14 illustrates the composite PPC under a volume-weighted and a contract-weighted measure for our two different cohort structures, where observations are measured as a percentage of Medicare.

## APPENDIX A

### Defining “median contracted rate”

**FIGURE 14: COMPOSITE QPA POTENTIAL PAYMENT CHANGE FOR A CONTRACT- AND VOLUME-WEIGHTED DEFINITION OF CONTRACTED RATE OBSERVATION FOR A GRANULAR AND A COARSE COHORT DEFINITION**

COHORT DEFINITION	CONTRACT	VOLUME-WEIGHTED
Granular (ACA rating area/specialty code/procedure)	-4%	-3%
Coarse (CMS locality/surprise provider classification/procedure family)	-9%	-11%

Figure 14 suggests that there is not much difference in average impacts based on how payment observation is defined—the PPC is 1% to 2% different overall, suggesting that the choice could reduce health plan spending for these services by up to 1% to 2%—but the results can vary significantly at the individual cohort level. Figure 15 illustrates the range of variation in the PPC.

**FIGURE 15: RANGE OF QPA POTENTIAL PAYMENT REDUCTIONS FOR A CONTRACT- AND VOLUME-WEIGHTED DEFINITION OF CONTRACTED RATE OBSERVATION FOR A GRANULAR AND COARSE COHORT DEFINITION**

	GRANULAR COHORT DEFINITION		COARSE COHORT DEFINITION	
	CONTRACT	VOLUME-WEIGHTED	CONTRACT	VOLUME-WEIGHTED
Lowest 5% of cohorts	Below -17%	Below -20%	Below -51%	Below -64%
Middle 70% of cohorts	-2% to +1%	-4% to +3%	-24% to +5%	-30% to +4%
Highest 5% of cohorts	Above +11%	Above +14%	Above +22%	Above +18%

While there is relatively little movement in the PPC in aggregate, when switching from a contract-level observation to a volume-weighted observation, there is significantly more variation between cohorts—coarser cohorts create more opportunities for the median to vary meaningfully from prevailing rates, and result in large positive and negative PPC values. This suggests that a coarser cohort definition would create significantly more disruptive shifts in payments for coarse cohort definitions relative to granular cohort definitions—with the lowest 5% of cohorts seeing a potential 64% reduction in payments in a coarse cohort definition using volume-weighted medians.

Contract-level observations (and provider-level observations) produce slightly more concentrated results, thus are less likely to produce shifts in payment that are as disruptive. We also note that some market disruption is likely appropriate, especially where market forces have been distorted to produce unreasonably high or unreasonably low payment rates in certain situations. Ultimately, the definition of region, service, and specialty cohorts plays a larger role in the relative accuracy of results, even when using a relative value as opposed to dollars and cents. Cohort definitions are explored further in Sections IV, V, and VI of the report. As noted elsewhere, the IFR selected a contract-level median.

#### HOW DOES AN ACTUAL SERVICE COST MEASUREMENT COMPARE TO A RELATIVE VALUE SCALE MEASUREMENT?

In the prior two sections, we focused on measurements using a percentage of Medicare fee schedules. But as noted previously, the statute could easily be read to refer to an actual cost metric. Figure 16 shows parallel summary information about PPC values under contract-level and volume-weighted medians when measured using actual cost.

**FIGURE 16: RANGE OF QPA POTENTIAL PAYMENT CHANGE USING ACTUAL COST FOR A CONTRACT- AND VOLUME-WEIGHTED DEFINITION OF CONTRACTED RATE OBSERVATION FOR GRANULAR AND COARSE COHORT DEFINITIONS**

	GRANULAR COHORT DEFINITION		COARSE COHORT DEFINITION	
	CONTRACT	VOLUME-WEIGHTED	CONTRACT	VOLUME-WEIGHTED
Actual cost average PPC	-42%	-8%	-67%	-24%
Lowest 5% of cohorts	Below -65%	Below -28%	Below -84%	Below -64%
Middle 70% of cohorts	-30% to +0%	-7% to +2%	-62% to +0%	-36% to +0%
Highest 5% of cohorts	Above +0%	Above +14%	Above +2%	Above +11%

Comparing the magnitude and volume of changes in Figure 16 we can immediately see that there are larger and more varied results when using an actual cost metric as opposed to a relative value metric. This dynamic is exacerbated as cohorts grow less granular—the diversity of costs within most classifications and the prevalence of lower-intensity/lower-cost services within cohorts creates results that vary quite significantly from prevailing payment rates. An actual cost measurement is reasonably well aligned with a relative value measurement in a volume-weighted scenario for a more granular set of definitions—with the greatest benefit arising from granular procedure cohorts.



## APPENDIX A

### Defining “median contracted rate”

However, as we can see above, even this fails to hold when using a contract-level contracted rate observation definition. This suggests strongly that an actual cost metric would not be a stable predictor of costs for the qualifying amount. *If regulators wish to create broader definitions of region, specialty, or service to increase both credibility of medians and use of payer data, then contracted rates should be measured using a relative value scale that provides appropriate relative values within each cohort measure.* We note that the IFR uses an actual cost metric, but defines same service at a level that is somewhat more refined than our granular cohort definition. However, as noted, the contract-weighted actual cost PPC shows more variability than a relative value scale. It is unclear how HHS’s refinements to reflect modifiers and unit-based services will influence the values shown in Figure 16.

#### HOW DO ANALYSIS RESULTS CHANGE ACROSS REGULATORY MARKETS?

We reviewed results for the four distinct regulatory markets and found that our above conclusions tend to hold across markets, though the exact impact may vary to some degree. One notable element we observed was related to the use of the contract-level or provider-level median measured as a percentage of Medicare in the individual market. Unlike most other median observations, using a contract median in the individual market can result in medians that are meaningfully higher than current average in-network payment rates. This is likely driven by the prevalence of narrow network plans, where payers leverage patient volume associated with limited networks to obtain more favorable payment rates. This practice results in high-volume/low-cost observations. When these observations are deduplicated by a provider-level or contract-level payment observation methodology, the remaining list becomes more heavily weighted with higher-cost providers, resulting in medians that lie above the mean payment rate.

In most other situations, medians are, at least in the aggregate, lower than means. Mathematically, this situation is indicative of an imbalance of high-cost outliers (common with distributions that are limited on the low end, such as a \$0 payment, but not limited on the high end). They bring up the average observed value while other parts of the market are more closely clustered around the median observation. This situation may also suggest the economic idea that providers may seek to leverage their appeal or their market power for higher contracted rates for care provided under employer coverage. This leverage is the result of factors that tend to drive higher utilization of these providers—resulting in means that are higher than medians. The difference is not always particularly large, but it is the general rule across cohort and observation definitions. For the remainder of this appendix we focus our discussion on the self-funded market, as it is the largest of the four regulatory markets. In general, the results and patterns discussed in the remainder of the paper hold across all four regulatory markets.

#### HOW SIMILAR ARE RESULTS IN DIFFERENT AREAS OF THE COUNTRY?

Using a combination of U.S. Census divisions and existing state marketing groups, we divided the United States into 18 distinct regions, shown in Figure 17.

# APPENDIX A

## Defining “median contracted rate”

FIGURE 17: MAP OF U.S. REGIONAL SUBDIVISIONS

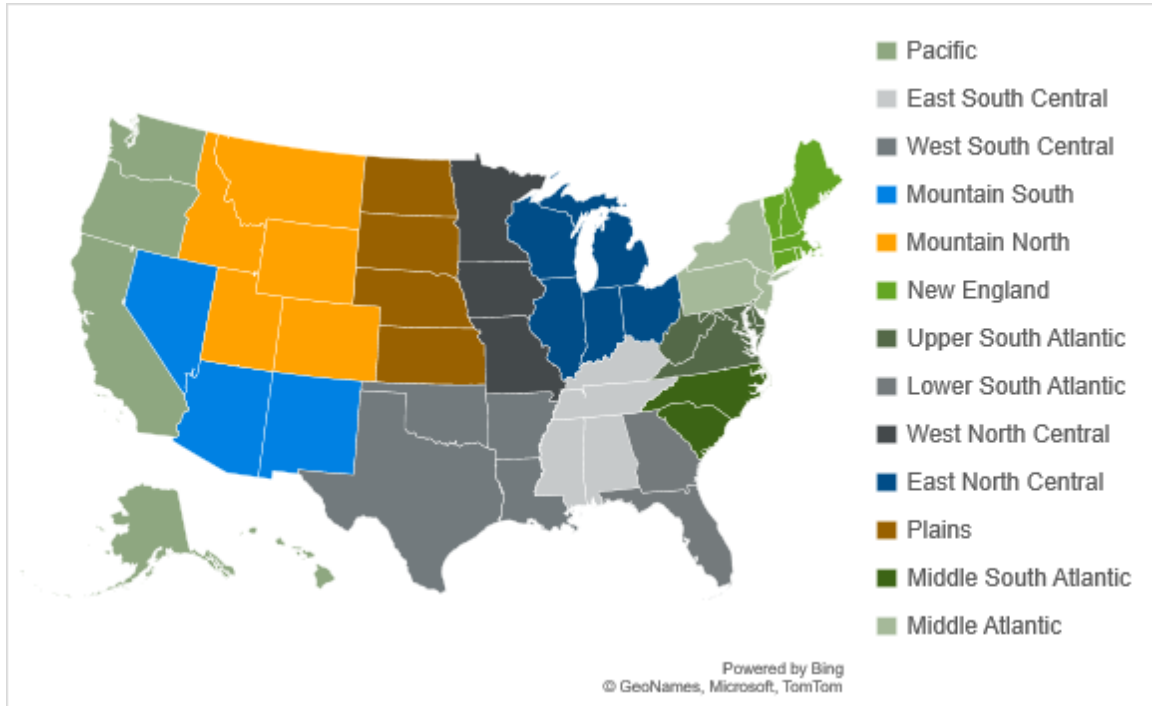


Figure 18 illustrates the variation in composite PPC and the range of PPC observations by cohort across geographic regions for self-funded coverage.

FIGURE 18: REGIONAL VARIATION IN QPA POTENTIAL PAYMENT CHANGE FOR A CONTRACT-LEVEL MEDIAN AND A VOLUME-WEIGHTED MEDIAN USING A GRANULAR DEFINITION OF COHORTS

REGION	PPC FOR A CONTRACT-LEVEL MEDIAN				PPC FOR A VOLUME-WEIGHTED MEDIAN			
	COMPOSITE	LOWEST 5%	MIDDLE 70%	HIGHEST 5%	COMPOSITE	LOWEST 5%	MIDDLE 70%	HIGHEST 5%
East North Central	-4%	Below -17%	-2% to +0%	Above +11%	-7%	Below -20%	-4% to +2%	Above +14%
East South Central	-1%	Below -14%	-2% to +1%	Above +11%	-3%	Below -17%	-3% to +3%	Above +14%
Lower South Atlantic	-2%	Below -17%	-2% to +1%	Above +12%	1%	Below -21%	-4% to +3%	Above +15%
Middle Atlantic	-6%	Below -21%	-5% to +1%	Above +12%	6%	Below -22%	-6% to +3%	Above +15%
Middle South Atlantic	-1%	Below -15%	-1% to +1%	Above +13%	-2%	Below -19%	-3% to +3%	Above +15%
Mountain North	4%	Below -11%	-0% to +0%	Above +9%	-5%	Below -16%	-2% to +3%	Above +13%
Mountain South	-3%	Below -21%	-4% to +0%	Above +10%	-3%	Below -25%	-5% to +2%	Above +13%
New England	-5%	Below -19%	-4% to +1%	Above +12%	-1%	Below -21%	-5% to +3%	Above +15%
Pacific	-7%	Below -20%	-4% to +1%	Above +11%	-6%	Below -23%	-5% to +3%	Above +15%
Plains	1%	Below -6%	-0% to +1%	Above +8%	-1%	Below -11%	-1% to +2%	Above +11%
Upper South Atlantic	-3%	Below -15%	-2% to +1%	Above +10%	-3%	Below -16%	-3% to +3%	Above +14%
West North Central	0%	Below -13%	-1% to +1%	Above +10%	-2%	Below -16%	-3% to +3%	Above +12%
West South Central	-7%	Below -16%	-2% to +1%	Above +12%	-5%	Below -21%	-3% to +3%	Above +15%
<b>Overall</b>	<b>-4%</b>	<b>Below -17%</b>	<b>-2% to +1%</b>	<b>Above +11%</b>	<b>-3%</b>	<b>Below -20%</b>	<b>-4% to +3%</b>	<b>Above +14%</b>

Regional variation is a key consideration in the evaluation of healthcare costs. In aggregate, however, there is relatively little variation in the PPC—suggesting that market contracting dynamics for payer and providers are similar enough that reforms may have similar effects in the aggregate. Using a volume-weighted median generally results in a similar overall level of potential savings by region as a contract-level median, though it is higher in some regions and lower in others. In regions with a higher PPC using a volume-weighted median (such as the Lower South Atlantic region, the Middle Atlantic, and New England), this increase is indicative of providers with both higher costs and higher volumes—in other words, areas where typically market forces give providers additional leverage. In areas where contract-level medians are higher (such as the East North Central region or the Mountain North region), the reverse dynamic is true—providers with higher volume tend to have lower prices.

# APPENDIX A

## Defining “median contracted rate”

However, we note that the experience of these regulations will vary more meaningfully at the local level. The conclusion to draw from Figure 18 is that these variations are not intrinsic to regions, but rather to more local market contracting dynamics. Elements, such as provider consolidation and the purchase of health practices by private equity firms that seek to leverage market power (and in some cases encourage surprise billing) to increase practice profits,<sup>29</sup> will both distort average contracted rates and volume-weighted medians. But these considerations are often offset by situations where the QPA potential payment change is even lower than normal. Healthcare is in many ways a local experience, and each set of decisions will create winners and losers as a federal system is unlikely to resolve. While the QPA may be calculated in the same way for all cohorts, individual cohorts in a given market will be affected based on considerations and market conditions specific to that cohort.

### DO THESE RELATIONSHIPS HOLD ACROSS SETTINGS WHERE SURPRISE BILLING MAY BE MORE COMMON?

The analysis and results described above have considered a broad scope of services. However, surprise billing is not uniformly spread across all different types of services. In order to simplify further analysis and focus on settings where surprise bills are more likely to be experienced, and thus the QPA is more likely to be used, we examined a smaller, focused data set limited to emergency services, anesthesia services, and air ambulance services. As is expected, while these claims represent only about 15% of total in-network allowed amounts for medical services in our data, they represent roughly 60% of all surprise bills. Figure 19 shows the PPCs of this focused data set compared to the full data set.

**FIGURE 19: COMPARISON OF QPA POTENTIAL PAYMENT CHANGE FOR ALL CLAIMS AND FOR SETTINGS WHERE SURPRISE BILLING IS MORE COMMON BY DEFINITION OF CONTRACTED RATE OBSERVATION AND GRANULARITY OF COHORT**

ANALYSIS SET	GRANULAR COHORT DEFINITION		COARSE COHORT DEFINITION	
	CONTRACT	VOLUME-WEIGHTED	CONTRACT	VOLUME-WEIGHTED
Full Data Set	-4%	-3%	-9%	-11%
Focus Data Set	-7%	-8%	-16%	-13%

The focused data set shows PPCs that are similar to, but lower than, the PPCs for the full data set. Ranges particularly for the middle 70% of cohort observations fall into similar ranges as identified in Figure 15 above, though PPC outliers tend to be of greater magnitude, especially for a contract-level definition of observation. One key takeaway here is that overall impacts on all commercial healthcare services are similar to a data set focused on settings where surprise bills occur, but the dynamics at play in this more focused data set accentuate the potential savings associated with federal surprise billing reform. As such, the main body of the report uses this focused data set to better understand how definitions affect the QPA that will be used in practice under the No Surprises Act.

<sup>29</sup> The Hill summarized a letter sent by one private equity firm to Congress that addressed this issue. See [Private equity firm defends itself on ‘surprise’ medical billing in letter to House | The Hill at https://thehill.com/regulation/healthcare/466384-private-equity-firm-defends-itself-on-surprise-medical-billing-in](https://thehill.com/regulation/healthcare/466384-private-equity-firm-defends-itself-on-surprise-medical-billing-in).



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

[milliman.com](http://milliman.com)

#### **CONTACT**

**Cory Gusland**  
[cory.gusland@milliman.com](mailto:cory.gusland@milliman.com)

**Jason Karcher**  
[jason.karcher@milliman.com](mailto:jason.karcher@milliman.com)

© 2021 Milliman, Inc. All Rights Reserved. The materials in this document represent the opinion of the authors and are not representative of the views of Milliman, Inc. Milliman does not certify the information, nor does it guarantee the accuracy and completeness of such information. Use of such information is voluntary and should not be relied upon unless an independent review of its accuracy and completeness has been performed. Materials may not be reproduced without the express consent of Milliman.

---